Military Command, Control, Communications, and Computers Executive Board

MC4EB

STANDARD SPECTRUM RESOURCE FORMAT (SSRF)

DATA EXCHANGE STANDARD

Version 3.1.0 as of 2014-09-16

SSRF

MC4EB Pub 8

Foreword

Purpose: This document defines standard data elements for automated exchange of radio-frequency (RF) spectrum-related data. Basic spectrum management transactions supported by this standard include:

1. RF equipment and antenna parameters
2. Spectrum supportability requests and associated host nation replies
3. Temporary and permanent frequency proposals and assignments
4. Frequency allotments
5. Joint Restricted Frequency Lists (JRFL)
6. Interference reports

Electronic Warfare and JCEOI transactions will be included in future releases.

Authority: This document is issued under the authority of DOD Directive 5100.35, Military Command, Control, Communications, and Computers Executive Board (MC4EB) with changes thereto.

Amendments and Review: This document will be reviewed by the Spectrum Operations Permanent Working Group (SOPWG) of the Frequency Panel (FP) and amendments will be issued by the Military Secretary, MC4EB, when appropriate. All changes to this document will be coordinated to ensure this standard remains aligned with the National Telecommunications and Information Administration (NTIA) Office of Spectrum Managements Data Dictionary (OSMDD) and the North Atlantic Treaty Organization (NATO) Spectrum Management Allied Data Exchange Format - eXtensible Markup Language (SMADEF-XML) standards.

Releasability: Unlimited. This document is approved for public release.

FOR THE CHAIRMAN:

THOMAS O'NEILL

CAPT, USNMC4EB Military

Secretary

Distribution:

See Master Distribution List

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I. Concept of Operations

1. General

The ultimate goal of spectrum operations is to ensure unhindered military access to the electromagnetic spectrum. This data-exchange standard supports the business processes needed to achieve this goal, however formulating and implementing actual business processes are the responsibility of the associated Community of Interest (COI).

2. Purpose

Standard Spectrum Resource Format (SSRF)-compliant systems are able to exchange spectrum data with the National Telecommunications and Information Administration (NTIA), the North Atlantic Treaty Organization (NATO), and with Combined Communications-Electronics Board (CCEB) nations.

3. Introduction

SSRF is based on the NATO Spectrum Management Allied Data Exchange Format-eXtensible Markup Language (SMADEF-XML) data standard. NTIA's Office of Spectrum Management Data Dictionary (OSMDD) is expected to also be compatible with SSRF and SMADEF-XML.

4. Legacy Standards

Various DoD spectrum-related data exchange standards have been developed, including:

* **SFAF:** The Standard Frequency Action Format (SFAF) is a line-oriented text format used by DOD, and by U.S. allies and coalition partners who use SPECTRUM XXI. SFAF files can be converted to SSRF.
* **GMF Card:** The Government Master File (GMF) Card is a line-oriented text format used by NTIA for frequency assignment data.
* **14 point format:** 14 Point is a line-oriented text message format used to exchange frequency assignment data in Partnership for Peace (PFP) Nations and some NATO Nations.
* **SMADEF:** The original line-oriented non-XML format used by NATO for both frequency assignment and spectrum supportability data.
* **DD Form 1494:** Form used for spectrum supportability by the U.S., both internally and with many allies. Also known as J/F 12.
* **Spectrum Certification System (SCS):** GUI and database used by DOD and NTIA to exchange spectrum supportability data.
* **Forms 33, 34, and 35:** Paper forms used by NTIA to collect, process, and distribute spectrum supportability data.
* **EL-CID Files:** Equipment Location - Certification Information Database (EL-CID) files are compressed archives of non-SSRF XML data and attachments used by NTIA and federal agencies to exchange spectrum supportability data.

The differences between these standards are significant and round trip translations are not possible without significant data loss or human intervention. This SSRF standard is intended to eliminate these issues.

5. Configuration Control

5.1 General

Changes to SSRF shall be coordinated with NTIA and with the NATO SMADEF working group. The Frequency Panel (FP) may recommend unilateral changes to SSRF.

The SOPWG is responsible for ensuring interoperability, in accordance with the SOPWG Terms of Reference.

5.2 Management of version numbers

The MC4EB Secretary shall approve and promulgate Frequency Panel-approved revisions and re-issue the document. SSRF versions use a three part format: MajorVersion.MinorVersion.Revision (e.g. 3.1.0)

Version Part	Rationale for Increment	Stable implementation
Major Version	1. Addition of a group of Data Items 2. Removal of a group of Data Items 3. Major re-organization of a group of Data Items 4. A change in policy or procedures	Not less than two years
Minor Version	Additions, deletions or modifications, such as: 1. Changing a Data Item or an Attribute from optional to mandatory, or from mandatory to optional 2. Changing the basic data type of a Data Item or an Attribute 3. Changing or adding a validation rule	Between 1 and 2 years
Revision	1. Editorials (typographical fixes, new text, remove text etc.) 2. Adding optional Data Items to a Complex Element 3. Adding national Data Items 4. Changing the facets of a Data Item, such as pattern, range or size increase, adding to or changing a code list, etc.	At least 6 months

5.3 Approval date versus implementation date

Tools based on different versions of SSRF may not be interoperable. Each approved version of SSRF contains the approval date on the cover page. The implementation date SHOULD be in accordance with the above table and allow a sufficient period of time to develop or purchase software tools to accommodate the new version of SSRF. Data suppliers may support multiple versions of SSRF.

5.4 National Elements

The SSRF standard contains a set of USA national data items that are not used in the NATO SMADEF standard. These data items are denoted by "US:" prefix on the XML tag. These elements MUST be removed from messages exchanged with NATO.

6. Edit Authority, Dataset Locking & Change Control

6.1 Edit Authority

Edit authority may be passed within an SSRF-compliant system, based on local business practices. Due to the nature of XML, edit authority is not enforceable when a dataset exits a system domain. Administrative controls are required to prevent inadvertent or unauthorized changes to datasets. The USA does NOT permit automated changes to data based solely on the contents of the ModAllowedBy data item in the Common complex element.

Example 1

An SSRF equipment certification record is created by a parametric data capture tool (e.g., Stepstone). The final record is referenced by a frequency assignment system. The frequency assignment system SHALL NOT change the original equipment certification record.

Example 2

A frequency proposal is sent from a proposal system (e.g., WIN-T, SPEED) to a frequency assignment system. During the internal frequency assignment approval process the receiving system MAY make changes to an internal copy of the proposal, but SHOULD NOT modify the original proposal message.

II. Core Data Elements

1. Introduction to Data Elements

Contents

Definitions

Namespace

The namespace designates which data exchange standard is being used. When exchanging data within the USA, the SSRF namespace should be declared as the first line in any XML message. When sending an XML message to NATO, the SMADEF namespace should be declared in the first line of the message, and any US-only Data Items should be removed.

- ***SSRF***
  <xs:schema xmlns="urn:us:gov:dod:standard:ssrf:3.1.0" xmlns:s="urn:us:gov:dod:standard:ssrf:3.1.0" xmlns:xs="http://www.w3.org/2001/XMLSchema" targetNamespace="urn:us:gov:dod:standard:ssrf:3.1.0" elementFormDefault="qualified">
- ***SMADEF***
  <xs:schema xmlns="urn:int:nato:standard:smadef:3.1.0" xmlns:s="urn:int:nato:standard:smadef:3.1.0" xmlns:xs="http://www.w3.org/2001/XMLSchema" targetNamespace="urn:int:nato:standard:smadef:3.1.0" elementFormDefault="qualified">

Domain

Simple type derived from an XML Schema atomic type, with facet restrictions; implemented in XSD as xs:simpleType with restrictions. A specific format can be defined once in the"domains.xsd" then reused for multiple data items sharing the same base type, total digits, fractional digits, minimum, and maximum values.

Data Item

A single occurrence of a data element within a complex element, with Attributes describing the entered data, as required. Data items may be declared globally for use throughout the SSRF standard via <ItemDef>, can be declared locally for use within a single complex element via <Item>, and globally declared Data Items can be referenced, within multiple complex elements, via <ItemRef>.

Attribute

An Attribute describes the data that is entered in a Data Item. For example, every SSRF Data Item that is filled MUST also have its <cls> Attribute filled, which indicates the security classification of the entered data.

Code List

Data Item format that allows a fixed set of data entry choices. Code Lists are defined in the lists.xsd file and are associated with Data Items in the ssrf.xsd file.

Group

Group of data items used in several complex elements. A Group can be optional or required. If an optional Group is used, then all Data Items required within the Group MUST be filled. An XML Group is globally declared via <GroupDef> and is locally referenced within a complex element via <GroupRef>.

Complex Element

A Complex Element is composed of Data Items, Attributes describing the entered data, Groups of Data Items, and references to other Datasets.

Dataset

Fundamental Complex Element that, in addition to its own Data Items and Attributes, also inherits all Data Items and Attributes from the Complex Element, Common.

Serial numbers and Datasets

The following codes MUST be used as the third part of the Serial of each dataset:

Code	Type of Dataset
AD	Administrative
AL	Allotment
AN	Antenna
AS	Assignment
CN	Contact
CP	Channel Plan
EX	External Reference
FD	Force Element Deployment
FE	Force Element
HD	Spectrum Supportability Reply (Host Nation Declaration)
IF	Interference Report
JA	Role
JR	JRFL
LO	Location
LS	Loadset
MS	Message
NT	Note
OR	Organisation
RP	Radiation Plan
RX	Receiver
SA	Satellite
SR	Spectrum Supportability Request
TA	Table of Allocations
TR	RF System
TX	Transmitter

Data Values - Forbidden Characters

* Data values MUST comply with the format specified for the data item. The item formats or patterns, as shown in this document, are enforced in the associated XML Schema. XML messages not well-formed (not compliant with the XML standard) or not valid (not compliant with the SSRF-XML Schema definition and SSRF-XML eXtensible Stylesheet Language Transformation (XSLT)) SHOULD be rejected by a SSRF-XML "compliant" system.
* Mixed upper and lower-case are permitted in any data entry, and should be maintained in data repository implementations, except for specific data items which must always be exchanged in uppercase.
* The units mentioned in the data item definitions are the units in which data MUST be exchanged. Software tools should allow the user to establish their own units in screen displays and output reports. For example, power is exchanged in dBW, which is in accordance with ITU procedures; however some organisations may choose to view and report power (at the user interface level) in watts, kilowatts or megawatts.
* The base character set of SSRF XML is UTF-8 (UCS Transformation Format 8-bit), a variable-width encoding that can represent every character in the Unicode character set. This is indicated by the first line of the ssrf.xsd file: ">?xml version="1.0" encoding="UTF-8"".
* Some characters are reserved for the start and end delimiters of XML tags and internal notations. The following characters are not allowed as data entries, but can be "escaped", (i.e. replaced by an equivalent string of characters) as follows:

Forbidden Character	Escape String
<	<
>	>
"	"
&	&

It is the responsibility of the software generating the SMADEF-XML documents to ensure that these characters are correctly "escaped".

Guide to Complex Elements

Each XML complex element is presented in the following format:

1. Each complex element begins on a new page with the complex element XML tag and full name.
2. A summary table describes each XML data item or attribute that belongs to that complex element.
   - For each data item or attribute, the table shows: its XML tag, its full name, its occurrence (required or optional), units, operating range, and data format.
   - If a complex element has only one data item, it is listed as "element content". Element content has NO XML tag.
   - At the bottom of the summary table, as needed, additional rows may display:
     . **Inherits From:** used where all data items and attributes are inherited from another complex element.
     . **Sub-Element of:** lists the "parent" complex element(s) of the current complex element.
     . **Sub-Elements:** lists the "child" complex element(s) of the current complex element.
     The possible numbers of occurrences follows the name of each sub-element:
     [0..1] means "between 0 and 1 occurrences" (i.e. optional and NOT repeatable);
     [0..n] means "between 0 and n occurrences" (i.e. optional and repeatable);
     [1..1] means "exactly 1 occurrence" (i.e. required and NOT repeatable);
     [1..n] means "between 1 and n occurrences" (i.e. required and repeatable).

   The data formats are indicated in the summary table as follows:

   - **Sx** is a character string of x characters maximum, **USx** is a Uppercase character string of x characters maximum (the attribute accepts only upper case characters).
   - **D** is a date value formatted in 10 characters as **`YYYY-MM-DD (year-month-day)`**. This format is compliant with the W3C Recommendation on XML Schema.
   - **DT** is a date / time value formatted in 20 to 24 characters as **`YYYY-MM-DDThh:mm:ss[.ddd]Z`** (year-month-day"T"hours:minutes:seconds.milliseconds"Z"), where the milliseconds part is optional. This format is compliant with the W3C Recommendation on XML Schema.
   - **Memo** is a free text value of unlimited length.
   - **UN(x)** is an unsigned (positive) integer number of maximum x digits
   - **SN(x)** is an integer number of maximum x digits (excluding minus sign)
   - **UN(x.y)** is a unsigned (positive) decimal number of maximum x digits (excluding decimal point as applicable) and with a maximum of y decimal digits.
   - **SN(x.y)** is a decimal number of maximum x digits (excluding minus sign and decimal point as applicable) and with a maximum of y decimal digits.
   - **double** is a number expressing either in floating point (e.g. 0.015) or scientific notation or using scientific notation (decimal number followed by an optional "E" for the power of 10, e.g. 1.5E-2 representing the same value 0.015).

   Types **UN** and **SN** may have a range constraint in the form [a .. b] meaning that the value MUST be between **a** and **b**, inclusive. Units may follow, in parentheses. Example: PolarisationAngle: UN(5,2) [0..360]*(deg)*.
3. The Description paragraph contains a brief description of the purpose of the complex element. If a diagram is included for the complex element, a hyperlink to the diagram will be displayed at the end of this section.
4. The Input Requirement paragraph contains data entry rules for each data item or attribute, and may contain examples. This information supplements the information contained in the summary table. Some data items or attributes are restricted to a defined set of values, or "Code List". In some cases, these lists come from official sources and should not be changed (e.g. the list of countries in Code List CAO). In other cases, values not in the Code List can be entered by selecting "Other" and adding a clarifying Remarks attribute. New values can be permanently added to Code Lists via a request to the SSRF governing body. Validation Rules that begin with [XSD] are implemented in the XML Schema and those that begin with [XSL] are validated in the eXtensible Stylesheet Language Transformation (XSLT). A list of possible errors is given below.
5. The Example paragraph contains one or several examples of typical entry; where items are inter-related, the examples show in general this relationship.

6. If necessary, general and/or national Notes.

Possible Validation Errors

[XSD ERR CODELIST]

The data item MUST contain one of the values from the specified code list. Any other value is not permitted.

[XSD ERR REGEX]

The data item format MUST comply with the specified regular expression.

[XSD ERR UNIQUE]

The value of the data item MUST be unique within the parent element, i.e. all other sibling items of the same name MAY NOT share the same value.

[XSD ERR RELATED]

The value of the data item MUST exactly match the value of the referenced data item within the same dataset (e.g. the Assignment/Link/StationConfig/StationID must match one of the Assignment/Station/StationID).

[XSD WRN RELATED]

The data item, or combination of data items, SHOULD refer to an existing dataset or data element in the data repository.

[XSL ERR DSTYPE]

The third part of the serial data item MUST equal the specified two-letter Dataset code.

[XSL ERR MINMAX]

The value of the current data item must be greater than (or equal to, as indicated) the value of the specified data item.

[XSL ERR CLS]

The security classification level of every data item within a dataset MUST be lower than or equal to the dataset overall classification.

Standard Attributes

Attribute Tag	Attribute Name	Occurrence	Format
availability ***(US)***	Data Availability	Opt	S30
cls	classification	Req	Code List CCL
extReferences	links to external references	Opt	List of UN6
idref ***(US)***	Data Item ID	Opt	S10
legacyReleasability ***(US)***	Legacy Releasability	Opt	MEMO
quality ***(US)***	Data Quality	Opt	S255
recommendedValue ***(US)***	Recommended Value	Opt	MEMO
remarks	Links to Dataset Remarks	Opt	List of UN6

Description

Standard Attributes are embedded in Common and apply to all data items.
Exception: Attributes remarks and extReferences *DO NOT APPLY* to elements Remarks and ExtReferenceRef.

Input Requirement

* **cls** *(Attribute)*: In attribute cls, enter the classification of the current data item. This attribute is REQUIRED on each data item, even if the classification is **"U"**.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CCL:**

Code	Meaning
U	Unclassified
R	Restricted (This classification SHALL NOT be used in USA-created datasets)
C	Confidential
S	Secret
T	Top Secret

* **remarks** *(Attribute)*: In attribute remarks, enter a list of Common/Remarks idx values applicable to the current data item.
* **extReferences** *(Attribute)*: In attribute extReferences, enter a list of Conmmon/ExtReferenceRef idx values applicable to the current data item.
* **legacyReleasability** *(Attribute)* ***(US)***: In attribute legacyReleasability (US) enter one or more special handling instructions in sentence format, not code format. For example, "Approved for public release; distribution is unlimited". Multiple special handling instructions are separated by "|" (i.e., ASCII character #124).
* **quality** *(Attribute)* ***(US)***: In attribute quality (US), enter one or more data quality indicator(s), separated by "|" (i.e., ASCII character #124), for the contents of the associated Data Item For example, "Outlier" | "Non-CodeList".
* **recommendedValue** *(Attribute)* ***(US)***: In attribute recommendedValue (US) enter a value that is most probably correct.
* **idref** *(Attribute)* ***(US)***: In attribute idref (US), enter a unique identifier for each Data Item in the Dataset. Within each Dataset, the idref value must be unique for every occurrence. If a received Dataset uses idrefs and it is expected that the Dataset will be exchanged, the idrefs should be considered required. If the receiving system is the permanent end of the line for the Dataset, the idrefs may be considered optional.
* **availability** *(Attribute)* ***(US)***: In attribute availability (US), enter data supporting legacy equipment certification business practice of entering "Unknown", "N/A", "Not Available" or "Not Applicable", when data is not available.

Example:

(Dummy classification for demonstration only). In this case, the power value is Unclassified, but the associated remark is Confidential releasable to three nations only.

```
<Transmitter cls="C">
  <Serial cls="U">USA::TX:2011-00001</Serial>
  <ExtReferenceRef cls="U" idx="1">USA::EX:12</ExtReferenceRef>
```

```
  <ExtReferenceRef cls="U" idx="2">FRA::EX:34</ExtReferenceRef>
  <Remarks cls="U" idx="1">This is a JTIDS Class 2H terminal</Remarks>
  <Other_Remarks/>
  <Remarks cls="C" release="USA GBR CAN" idx="12">All modes are limited to 200W</
Remarks>
  <Other_Transmitter_Elements/>
  <Power cls="U" extReferences="1 2" remarks="1 12">23</Power>
</Transmitter>
```

Address

Address

Data Item Tag	Data Item Name	Occurrence	Format
Description	Address Title	Opt	S100
AddressGrp		**Req**	
Street	Street Address	Opt	S255
CityArea	City or Area	Opt	S50
StateCounty	State/County	Opt	S50
PostCode	Zip Code/Post Code	Opt	S15
Country	Country/Area	Req	Code List CAO
Sub-Element Of:	Contact, Organisation, Role		

Description

Complex element Address contains the address of a Contact, Organisation or Role.

Input Requirement

* **Description**: In Data Item Description, enter the title for the address; for an Organisation, it can be the name of the specific Branch or office; for a Contact or a Role, it can be the job title associated to the address.
* **Address Information**: This group is REQUIRED.

  This group contains the name and full address of the location, organisation or individual.

  - **Street**: In Data Item Street, enter the street address.
  - **CityArea**: In Data Item CityArea, enter the city of the address or an operational area name.
  - **StateCounty**: In Data Item StateCounty, enter the state or other sub-national political area.
  - **PostCode**: In Data Item PostCode, enter the zip code or postal code portion of the address.
  - **Country**: In Data Item Country, enter the country or area code. Use a one to six alphabetic characters representing either an official country code, a regional body, a group of countries or a NATO Command.

    [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CAO (extract only):**

Code	Meaning
AFG	Afghanistan
FF	Africa
US-AL	Alabama
ALA	Åland Islands
US-AK	Alaska
ALB	Albania
DZA	Algeria
NT-ASC	Allied Submarine Command
ASM	American Samoa
AND	Andorra
...	...

Example

```
<Address>
  <CityArea cls="U">Annapolis</CityArea>
  <Country cls="U">USA</Country>
  <Description cls="U">Engineering Services Organization</Description>
  <PostCode cls="U">21402</PostCode>
  <StateCounty cls="U">Maryland</StateCounty>
  <Street cls="U">Turbot</Street>
</Address>
```

Administration

Administration

Data Item Tag	Data Item Name	Occurrence	Format
	Element Content	Req	Code List CAO
Sub-Element Of:	Variance		

Description

Complex element Administration contains the country for which this variance applies.

Input Requirement

In Data Item Administration, enter a country code for which this variance applies.

[XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CAO (extract only):**

Code	Meaning
AFG	Afghanistan
FF	Africa
US-AL	Alabama
ALA	Åland Islands
US-AK	Alaska
ALB	Albania
DZA	Algeria
NT-ASC	Allied Submarine Command
ASM	American Samoa
AND	Andorra
...	...

Administrative

Administrative Message

Data Item Tag	Data Item Name	Occurrence	Format
Action	Action	Req	Code List CDR
MessageRef	Message Reference	Opt	pattern (S29)
Inherits from:	Common		
Sub-Element Of:	SchemaRoot		
Sub-Elements:	CodeList [0..n] Dataset [0..n]		

Description

This element inherits attributes and sub-elements from element Common.

Complex element Dataset is used within an Administrative transaction to specify the identifier of the datasets on which the action must apply:

* It can be used to inform other data repositories that datasets have been deleted from a data repository;
* It can also be used to reject an incoming dataset which cannot be validated against the local repository, for example is it refers to unknown datasets.
* Automated local data repository changes are not permitted on US systems.

See Administrative Diagram

Input Requirement

[XSL ERR DSTYPE] Part 3 of the Serial reference (dataset type) MUST be "**AD**".

* **Action**: In Data Item Action, enter the action which triggered the transmission, or to be performed upon reception, of this dataset.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CDR:**

Code	Meaning
Code List Change	The dataset adds, deletes, or modifies Codes or Code Lists
Data Invalid	An invalid dataset was received (other than Missing refs).
Data Not Supported	The referenced dataset is not supported by the system.
Data Recall	The referenced dataset is being recalled.
Data Rejected	The received dataset does not fulfill the requirement.
Data Deleted	The referenced datasets should be removed from the recipient local repository
Missing Refs	The referenced dataset has been rejected because of missing cross-references.
Data Retired	The dataset is no longer Active, but may be reactivated at a future date

* **MessageRef**: In Data Item MessageRef enter the serial of the Message Dataset that is causing this response.

  [XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "**MS**".

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

Example

Rejecting an Assignment for which the recipient does not have the referenced Transmitter:

```
<Administrative cls="U">
  <Serial cls="U">DEU:NFA:DR:123</Serial>
  <MessageRef cls="U">DEU:NFA:MS:123</MessageRef>
  <EntryDateTime cls="U">2011-12-25T00:00:00Z</EntryDateTime>
  <Action cls="U">Missing Refs</Action>
  <Dataset>
    <Serial cls="U">USA::AS:456</Serial>
    <MissingRef cls="U">USA::TX:123</MissingRef>
  </Dataset>
```

```
</Administrative>
```

Allocation

Allocation

Attribute Tag	Attribute Name	Occurrence	Format
footnotes	Link to allocation usage notes	Opt	List of UN6
Data Item Tag	**Data Item Name**	**Occurrence**	**Format**
AllocatedService	Allocated Service	Req	Code List CSN
Priority	Priority	Req	Code List CPS
EffectiveDate	Effective Date	Opt	D
ExpirationDate	Expiration Date	Opt	D
AllocatedByFootnote	Allocated By Footnote	Opt	Code List CBO
Sub-Element Of:	FreqBand		
Sub-Elements:	ChannelPlanRef [0..n] StnClass [0..n] Variance [0..n]		

Description

Complex element Allocation contains the allocation of a specific frequency band to a specific radiocommunication service.

Input Requirement

* **footnotes** *(Attribute)*: In attribute footnotes, enter a list containing each Footnote index that is applicable to the current band Allocation. Each entry in the list should be separated by a blank space.
* **AllocatedService**: In Data Item AllocatedService, enter a radiocommunication service recognized by an administration that is allocated to this frequency band (e.g., "Fixed Service").

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CSN (extract only):**

Code	Meaning
Aeronautical Fixed Service	A radiocommunication service between specified fixed points provided primarily for the safety of air navigation and for the regular, efficient and economical operation of air transport.
Aeronautical Mobile (Off Route) Service	An aeronautical mobile service intended for communications, including those relating to flight coordination, primarily outside national or international civil air routes.
Aeronautical Mobile (Route) Service	An aeronautical mobile service reserved for communications relating to safety and regularity of flight, primarily along national or international civil air routes.
Aeronautical Mobile Service	A mobile service between aeronautical stations and aircraft stations, or between aircraft stations, in which survival craft stations may participate; emergency position-indicating radiobeacon stations may also participate in this service on designated distress and emergency frequencies.
Aeronautical Mobile-Satellite (OR) Service	An aeronautical mobile-satellite service intended for communications, including those relating to flight coordination, primarily outside national and international civil air routes.
Aeronautical Mobile-Satellite (R) Service	An aeronautical mobile-satellite service reserved for communications relating to safety and regularity of flight, primarily along national or international civil air routes.
Aeronautical Mobile-Satellite Service	A mobile-satellite service in which mobile earth stations are located on board aircraft; survival craft stations and emergency position-indicating radiobeacon stations may also participate in this service.
Aeronautical Radionavigation Service	A radionavigation service intended for the benefit and for the safe operation of aircraft.
Aeronautical Radionavigation-Satellite Service	A radionavigation-satellite service in which earth stations are located on board aircraft.
Amateur Service	A radiocommunication service for the purpose of self-training, inter-communication and technical investigation carried out by amateurs, that is, by duly authorised persons interested in radio technique solely with a personal aim and without pecuniary interest.
...	...

* **Priority**: In Data Item Priority, enter if this service is a primary or secondary use of this band. ("Permitted" SHOULD only be used if the priority is unknown.)

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CPS:**

Code	Meaning
Primary	
Secondary	
Permitted	
Other	If selected, a clarifying remark SHOULD be entered

* **EffectiveDate**: In Data Item EffectiveDate, enter the date by which the dataset is to be operational or effective.
* **ExpirationDate**: In Data Item ExpirationDate, enter the date at which the dataset will expire. The Expiration date should be less than five years from current date.
* **AllocatedByFootnote**: In Data Item AllocatedByFootnote, enter "Yes" if this service is allocated to this frequency band by footnote (i.e., the only indication this service is allowed in this band is a footnote). Additional restrictions might exist in the footnote(s).

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

Example

See FreqBand.

AllotFreq

Allotment Frequencies

Data Item Tag	Data Item Name	Occurrence	Format
FreqRangeGrp		**Req**	
FreqMin	Nominal or Minimum Frequency	Req	UN(16,9) [0..1.0E9]*(MHz)*
FreqMax	Maximum Frequency	Opt	UN(16,9) [0..1.0E9]*(MHz)*
PairedFreqMin	Paired Nominal or Minimum Frequency	Opt	UN(16,9) [0..1.0E9]*(MHz)*
TuningStep	Tuning Step	Opt	UN(16,9) [0..1.0E9]*(MHz)*
AllotChannel	Frequency Identifier	Opt	S6
Sub-Element Of:	Allotment		
Sub-Elements:	LocationRestriction [0..n]		

Description

Complex element AllotFreq defines a frequency or range of frequencies belonging to the Allotment.
In the case of an allotment for a duplex frequency range, the pairs of frequencies are derived from FreqMin, FreqMax, TuningStep and PairedFreqMin as follows:
(FreqMin + n * TuningStep, PairedFreqMin + n * TuningStep) with n varying from 0 until FreqMin + n * TuningStep = FreqMax.

Input Requirement

* **Frequency Range**: This group is REQUIRED.

  This group indicates a range of frequencies or a tuning range.

  - **FreqMin**: In Data Item FreqMin, enter the nominal frequency or minimum value of the frequency range.
  - **FreqMax**: In Data Item FreqMax, enter the maximum value of the frequencies in the range.

    [XSL ERR MINMAX] If FreqMax is used, it MUST be greater than FreqMin.

* **PairedFreqMin**: In Data Item PairedFreqMin, enter the nominal frequency or minimum value of the frequency range, for the paired frequency or frequency range when the allotment is for a duplex system.
* **TuningStep**: In Data Item TuningStep, enter the tuning increment.
* **AllotChannel**: In Data Item AllotChannel, enter a TACAN channel or net number

Example

See Allotment.

Allotment

Allotment

Data Item Tag	Data Item Name	Occurrence	Format
Title	Title	Opt	S100
UsageType	Type of Usage	Opt	Code List CUT
DateResponseRequired	Date Response Required	Opt	D
EffectiveDate	Effective Date	Req	D
ExpireReview		**Req**	
ExpirationDate	Expiration Date	Opt	D
ReviewDate	Review Date	Opt	D
Requirement	Description of Requirement	Opt	MEMO
Inherits from:	Common		
Sub-Element Of:	SchemaRoot		
Sub-Elements:	AllotFreq [1..n] Emission [0..n] LocationRef [1..n] POCInformation [0..n] Project [0..n]		

Description

This element inherits attributes and sub-elements from element Common.

Complex element Allotment is a group of frequencies given to a subordinate organisation for local management, for specific types of emissions, at a certain location, and for a specified period of time.
See Allotment Diagram

Input Requirement

[XSL ERR DSTYPE] Part 3 of the Serial reference (dataset type) MUST be "**AL**".

* **Title**: In Data Item Title, enter an identifying name for this Allotment or Assignment.
* **UsageType**: In Data Item UsageType, enter the type of assignment request or approved assignment/allotment. In Data Item case of a rejected or cancelled assignment/allotment, use an associated Remarks to indicate the reason.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CUT:**

Code	Meaning
Request Temporary	
Request Permanent	
Approved Temporary	
Approved Permanent	
Cancelled/Rejected	
Other	If selected, a clarifying remark SHOULD be entered

* **DateResponseRequired**: In Data Item DateResponseRequired, enter the date by which the frequency assignment or Spectrum Supportability Reply is required by the user in order to complete necessary advanced operation coordination.
* **EffectiveDate**: In Data Item EffectiveDate, enter the date by which the dataset is to be operational or effective.
* **ExpireReview**: This group is REQUIRED.

  - **ExpirationDate**: In Data Item ExpirationDate, enter the date at which the dataset will expire. The Expiration date should be less than five years from current date.
  - **ReviewDate**: In Data Item ReviewDate, enter the date by which the dataset is to be reviewed. The Review date should be less than five years from the effective date. In Data Item Spectrum Supportability datasets, this date indicate when the organisation responsible for re-initiating host coordination plans to resubmit a Spectrum Supportability request to the host nation for continued use of the equipment.

* **Requirement**: In Data Item Requirement, enter any amplifying information on the requirement.

Example

```
<Allotment cls="U">
  <Serial cls="U">USA::AL:123</Serial>
  <EntryDateTime cls="U">2011-12-25T00:00:00Z</EntryDateTime>
  <Title cls="U">Allotment Title Here</Title>
  <UsageType cls="U">Request Permanent</UsageType>
  <DateResponseRequired cls="U">2011-12-25</DateResponseRequired>
  <EffectiveDate cls="U">2012-01-01</EffectiveDate>
  <ExpirationDate cls="U">2106-01-01</ExpirationDate>
  <ReviewDate cls="U">2104-01-01</ReviewDate>
  <Requirement cls="U">Need reply ASAP</Requirement>
  <AllotFreq>
    <FreqMin cls="U">30</FreqMin>
    <FreqMax cls="U">35</FreqMax>
    <PairedFreqMin cls="U">5</PairedFreqMin>
    <TuningStep cls="U">0.050</TuningStep>
    <LocationRestriction cls="U">DEU::LO:25001</LocationRestriction>
  </AllotFreq>
  <Emission>
    <EmsClass cls="U">G1D</EmsClass>
    <NecessaryBw cls="U">2.5</NecessaryBw>
    <Power cls="U">1.2</Power>
  </Emission>
  <POCInformation>
    <Serial cls="U">USA:123:CN:98765</Serial>
    <Type cls="U">Project Engineer</Type>
    <Description cls="U">Bldg 120, Room 410</Description>
  </POCInformation>
  <LocationRef cls="U">DEU::LO:25</LocationRef>
</Allotment>
```

AntEfficiency

Antenna Efficiency

Data Item Tag	Data Item Name	Occurrence	Format
FreqRangeGrp		**Opt**	
FreqMin	Nominal or Minimum Frequency	Req	UN(16,9) [0..1.0E9]*(MHz)*
FreqMax	Maximum Frequency	Opt	UN(16,9) [0..1.0E9]*(MHz)*
Efficiency	Efficiency	Req	UN(4,2)[0..100]*(%)*
Sub-Element Of:	AntMode		

Description

Complex element AntEfficiency describes the antenna efficiency at various frequencies within the frequency range of the antenna.

Input Requirement

* **Frequency Range**: This group is OPTIONAL.

  This group indicates a range of frequencies or a tuning range.

  - **FreqMin**: In Data Item FreqMin, enter the nominal frequency or minimum value of the frequency range.
  - **FreqMax**: In Data Item FreqMax, enter the maximum value of the frequencies in the range.

    [XSL ERR MINMAX] If FreqMax is used, it MUST be greater than FreqMin.

* **Efficiency**: In Data Item Efficiency, enter the efficiency of the antenna within the frequency range which is being reported.

Example

```
<AntEfficiency>
  <FreqMin cls="U">225</FreqMin>
  <FreqMax cls="U">400</FreqMax>
  <Efficiency cls="U">60.4</Efficiency>
</AntEfficiency>
```

Notes

The efficiency should always be less than 100%. For example, the best case for a half-wave dipole is 96.8%.

AntFreqs

Antenna Frequencies

Data Item Tag	Data Item Name	Occurrence	Format
FreqRangeGrp		**Req**	
FreqMin	Nominal or Minimum Frequency	Req	UN(16,9) [0..1.0E9]*(MHz)*
FreqMax	Maximum Frequency	Opt	UN(16,9) [0..1.0E9]*(MHz)*
Bandwidth	Bandwidth	Opt	UN(16,9) [0..1.0E9]*(MHz)*
FreqUse	Frequency Use	Opt	Code List CAU
Sub-Element Of:	AntMode		

Description

Complex element AntFreqs contains the antenna's designed tuning range, or the discrete operating frequency.

Input Requirement

* **Frequency Range**: This group is REQUIRED.

  This group indicates a range of frequencies or a tuning range.

  - **FreqMin**: In Data Item FreqMin, enter the nominal frequency or minimum value of the frequency range.
  - **FreqMax**: In Data Item FreqMax, enter the maximum value of the frequencies in the range.

    [XSL ERR MINMAX] If FreqMax is used, it MUST be greater than FreqMin.

* **Bandwidth**: In Data Item Bandwidth, as an alternative to FreqMin/FreqMax, enter the total operating bandwidth of the Antenna centered around FreqMin.

* **FreqUse**: In Data Item FreqUse, enter the primary usage of the discrete configuration frequency or frequency range.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CAU:**

Code
Transmit Only
Receive Only
Transmit-Receive

Examples

Both examples reflect the same operating range:

```
<AntFreqs>
  <FreqMin cls="U">30</FreqMin>
  <FreqMax cls="U">90</FreqMax>
</AntFreqs>
```

A bandwidth of 60 MHz is +/-30 MHz around FreqMin:

```
<AntFreqs>
  <FreqMin cls="U">60</FreqMin>
  <Bandwidth cls="U">60</Bandwidth>
</AntFreqs>
```

AntGain

Antenna Gain

Data Item Tag	Data Item Name	Occurrence	Format
Calculated	Calculated Data Indicator	Opt	Code List CBO
Gain	Gain	Req	SN(6,3)*(dBi)*
Freq	Frequency	Opt	UN(16,9) [0..1.0E9]*(MHz)*
FrontToBackRatio	Front-to-back Ratio	Opt	UN(5,2)*(dB)*
Sub-Element Of:	AntMode		

Description

Complex element AntGain indicates the antenna gain, in decibels with reference to an isotropic source (dBi), in the direction of maximum radiation.

Input Requirement

This element is REQUIRED and repeatable. For a gain included in a range use two occurrences with no frequencies if the points where these gains occur are not known. Use several occurrences of Gain, including frequencies, to express the gain as a function of the frequency.

* **Calculated**: In Data Item Calculated, enter Yes to indicate that the data was calculated, or "No" if the data is issued from measurement. Leave blank if the origin of the data is not known.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **Gain**: In Data Item Gain, enter the antenna gain (in dBi - dB with reference to an isotropic source) in the direction of maximum radiation. For a negative gain (earth and space stations only), enter a dash before the value of the gain.
* **Freq**: In Data Item Freq, enter the frequency at which the gain is expressed.
* **FrontToBackRatio**: In Data Item FrontToBackRatio, enter the front-to-back ratio of the main beam to the back lobe.

Examples

A basic gain, regardless of the frequency:

```
<AntGain>
  <Gain cls="U">0</Gain>
</AntGain>
```

A complete entry:

```
<AntGain>
  <Gain cls="U">6.1</Gain>
  <Freq cls="U">230.525</Freq>
  <FrontToBackRatio cls="U">2</FrontToBackRatio>
</AntGain>
```

Notes

In order to be able to accommodate legacy data, a value of "-999.99" MAY be used in attribute gain as a gap filler, but only for legacy data which do not contain this information. The real value SHOULD always be used for new datasets and during the review of old datasets.

AntHardware

Antenna Hardware

Data Item Tag	Data Item Name	Occurrence	Format
FeedType	Antenna Feed Type	Opt	Code List CAF
LeadType	Antenna Lead Type	Opt	Code List CAL
ConnectorType	Antenna Connector Type	Opt	Code List CCN
FeedOrientation	Antenna Feed Orientation	Opt	S10
Sub-Element Of:	Antenna		

Description

Complex element AntHardware contains the physical parameters related to the antenna feed and lead.

Input Requirement

* **FeedType**: In Data Item FeedType, enter the element used to "illuminate" the reflector for an antenna unit.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CAF (extract only):**

Code	Meaning
Balun	
Cassegrain	
Eight Feed Horn Cluster	
Feed Horn Cluster	
Four Horn Cluster	
Conical	
Cutler	
Dipole	
Dipole Array	
Rotating Dipole	
...	...

* **LeadType**: In Data Item LeadType, enter the type of device used for conducting or guiding the radio-frequency energy from the transmitter or receiver to the antenna (e.g., continuous waveguide).

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CAL (extract only):**

Code	Meaning
Cable Air Dielectric	
Cable Coaxial	
Cable Flexible Coaxial	
Cable Rigid Coaxial	
Line Coplaner Strip	
Line Ladder	
Line Microstrip	
Line Surface-Wave	
Open Wire	
Twin Lead	
...	...

* **ConnectorType**: In Data Item ConnectorType, enter the type of connector used to attach the antenna to the equipment or the antenna to the transmission media that attaches the equipment to the antenna.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CCN (extract only):**

Code	Meaning
MC	
Micro-coaxial	
Micro-miniature coaxial	
MMX	

Neill-Concelman Bayonet	
Neill-Concelman Threaded	
Sub-Miniature version A	
Sub-Miniature version B	
Sub-Miniature version C	
Type N	
...	...

* **FeedOrientation**: In Data Item FeedOrientation, enter the orientation of the feed when looking in the direction of the boresight. Examples of orientations are right, left, center, up, down, up-left, up-right, down-left, down-right.

Example

```
<AntHardware>
  <ConnectorType cls="U">Neill-Concelman Threaded</ConnectorType>
  <FeedOrientation cls="U">down-right</FeedOrientation>
  <FeedType cls="U">Eight Feed Horn Cluster</FeedType>
  <LeadType cls="U">Waveguide Semirigid</LeadType>
</AntHardware>
```

AntMode

Antenna Mode

Data Item Tag	Data Item Name	Occurrence	Format
ModeInfo		**Req**	
ModeID	Mode Identifier	Req	S20
Description	Mode Description	Opt	S100
ModeUse	Mode Use	Opt	Code List CAU
MotionType	Antenna Motion Type	Opt	Code List CAD
SectBlanking	Sector Blanking	Opt	Code List CBO
Pol		**Opt**	
PolarisationType	Type of Polarisation	Req	Code List CPO
PolarisationAngle	Polarisation Angle	Opt	UN(5,2) [0..360]*(deg)*
HorzScan		**Opt**	
HorzScanSpeed	Horizontal Scan Speed	Opt	UN(7,2)*(deg/s)*
HorzScanRate	Horizontal Scan Rate	Opt	UN(4)*(scans/min)*
HorzScanType	Horizontal Scan Type	Opt	Code List CAS
HorzScanSector	Horizontal Scan Sector	Opt	UN(5,2) [0..360]*(deg)*
VertScan		**Opt**	
VertScanSpeed	Vertical Scan Speed	Opt	UN(7,2)*(deg/s)*
VertScanRate	Vertical Scan Rate	Opt	UN(4)*(scans/min)*
VertScanType	Vertical Scan Type	Opt	Code List CAS
VertScanAngleMin	Vertical Scan Minimum Angle	Opt	SN(4,2) [-90..90]*(deg)*
VertScanAngleMax	Vertical Scan Maximum Angle	Opt	SN(4,2) [-90..90]*(deg)*
RotationDirection	Rotation Direction	Opt	Code List CRD
RotationRate		**Opt**	
RotationRateMin	Minimum or Nominal Rotation Rate	Req	UN(7,2)*(deg/s)*
RotationRateMax	Maximum Rotation Rate	Opt	UN(7,2)*(deg/s)*
Beamwidth		**Opt**	
HorzBwMin	Minimum or Nominal Horizontal Beamwidth	Opt	UN(5,2) [0..360]*(deg)*
HorzBwMax	Maximum Horizontal Beamwidth	Opt	UN(5,2) [0..360]*(deg)*
VertBwMin	Minimum or Nominal Vertical Beamwidth	Opt	UN(5,2) [0..360]*(deg)*
VertBwMax	Maximum Vertical Beamwidth	Opt	UN(5,2) [0..360]*(deg)*
BeamType	Beam Type	Opt	Code List CBD
MaxPower	Maximum Allowed Power	Opt	SN(10,7)*(dBW)*
PortIsolation	Port Isolation	Opt	SN(6,3)*(dB)*
ModeName ***(US)***	Mode Name	Opt	S40
Sub-Element Of:	Antenna		
Sub-Elements:	AntEfficiency [0..n] AntFreqs [0..n] AntGain [0..n] AntPattern [0..n] ObservedLobeAnalysis [0..n] ***(US)*** ObservedPolarisationAnalysis [0..n] ***(US)*** ObservedScanAnalysis [0..n] ***(US)*** VSWR [0..n]		

Description

Complex element AntMode contains the technical characteristics of one antenna mode.
See AntMode Diagram
See ObservedPolarisationAnalysis Diagram
See ObservedScanAnalysis Diagram

Input Requirement

* **Mode Information**: This group is REQUIRED.

  - **ModeID**: In Data Item ModeID, enter a short name for the mode; this name should be a meaningful identification of the mode, but it can also be automatically generated in some systems. The Name MUST be unique within the dataset and SHOULD NOT be modified during the entire lifetime of the dataset.

    [XSD ERR UNIQUE] Each value of this data item MUST be unique within the parent element.

  - **Description**: In Data Item Description, enter a description of the operational mode; this description should be a meaningful explanation of the mode main characteristics.

* **ModeUse**: In Data Item ModeUse, indicate if the mode is used for transmit, receive, or both transmit and receive.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CAU:**

Code
Transmit Only
Receive Only
Transmit-Receive

* **MotionType**: In Data Item MotionType enter the general category for the movement of a scanning or tracking antenna.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CAD:**

Code	Meaning
Directional	The antenna radiates towards a fixed direction
Non-Dir Or Omni	Non-Directional Or Omnidirectional (the direction cannot be determined or the radiation is non directional)
Rotating	The antenna rotates at a fixed rate
Sector Scan H	Scanning horizontally through a limited sector
Sector Scan V	Scanning vertically through a limited sector
Steerable	Fixed direction but steerable in the reference plane
Tracking	Tracking that can observe a moving object
Other	If selected, a clarifying remark SHOULD be entered

* **SectBlanking**: In Data Item SectBlanking, enter "Yes" if sector blanking is possible and "No" if it is not possible.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **Pol**: This group is OPTIONAL.

  - **PolarisationType**: In Data Item PolarisationType, enter the principal orientation of the electric field of the electromagnetic wave for an antenna.

    [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CPO (extract only):**

Code	Meaning
45-degrees	
Left-hand circular	
Right-hand circular	
Dual	
Elliptical	
Elliptic left	
Elliptic right	
Horizontal linear	
Horizontal and vertical	
Linear	
...	...

- **PolarisationAngle**: In Data Item PolarisationAngle, enter the angle of the electric field vector measured counter-clockwise from the equatorial plane as referenced from the boresight or typical static positioning of the antenna.

* **HorzScan**: This group is OPTIONAL.

This group contains the method about how the antenna beam is steerable in the horizontal axis, the portion of a circle that can be scanned by the antenna, the horizontal scan rate and the number of horizontal scans per minute.

- **HorzScanSpeed**: In Data Item HorzScanSpeed, enter the number of degrees per second the antenna is capable of scanning. It is not necessarily the "Sector Scanned" figure times the degrees per second. If a significant portion of time is spent vertically scanning in between horizontal sweeps, the horizontal scan rate will be lower than if the antenna were horizontally scanning all the time.
- **HorzScanRate**: In Data Item HorzScanRate, enter the number of complete scans the antenna is capable of making each minute.
- **HorzScanType**: In Data Item HorzScanType, enter the antenna horizontal scanning capability.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CAS (extract only):**

Code	Meaning
360 Degrees Rotating	
Bi-Directional Sector	
Conical	
Electronic Scan (360 Degrees)	
Electronic Scan (Sector)	
Fixed	
Fixed-3 Axis Stabilised	
Helical	
Horizontal	
Lobing	
...	...

- **HorzScanSector**: In Data Item HorzScanSector enter the maximum horizontal sector the antenna can scan (enter 360 for a full rotation).

Example:

```
<HorzScanSpeed cls="U">90</HorzScanSpeed>
<HorzScanRate cls="U">15</HorzScanRate>
<HorzScanType cls="U">Horizontal</HorzScanType>
```

* **Vertical Scan**: This group is OPTIONAL.

This group contains the method about how the antenna beam is steerable in the vertical axis, the minimum and maximum limits of the vertical sector scanned in degrees referenced to the horizon, the vertical scan speed and the number of vertical scans per minute.

- **VertScanSpeed**: In Data Item VertScanSpeed, enter the number of degrees of vertical scan per second. If an antenna does a horizontal scan per second as part of a raster scan and drops down one degree after each sweep, it is scanning vertically at one degree per second. If the same antenna completed a scan in 30 seconds the vertical scan speed would be 2 degrees per minute.
- **VertScanRate**: In Data Item VertScanRate, enter the number of complete vertical scans per minute. If the antenna does a horizontal scan per second as part of a raster scan and drops down one degree after each sweep, it is scanning vertically at one degree per second. If the same antenna completed a scan in 30 seconds the vertical scan rate would be 2 scans per minute.
- **VertScanType**: In Data Item VertScanType, enter the antenna vertical scanning capability.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CAS (extract only):**

Code	Meaning
360 Degrees Rotating	

Bi-Directional Sector	
Conical	
Electronic Scan (360 Degrees)	
Electronic Scan (Sector)	
Fixed	
Fixed-3 Axis Stabilised	
Helical	
Horizontal	
Lobing	
...	...

- **VertScanAngleMin**: In Data Item VertScanAngleMin, enter the minimum limit of the vertical arc scanned relative to the horizontal.
- **VertScanAngleMax**: In Data Item VertScanAngleMax, enter the maximum limit of the vertical arc scanned relative to the horizontal.

  [XSL ERR MINMAX] If VertScanAngleMax is used, it MUST be greater than VertScanAngleMin.

* **RotationDirection**: In Data Item RotationDirection, enter the antenna direction of rotation or motion.

[XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CRD:**

Code
Clockwise
Counter-Clockwise

* **RotationRate**: This group is OPTIONAL.

- **RotationRateMin**: In Data Item RotationRateMin, enter the nominal or minimum antenna rotation rate.
- **RotationRateMax**: In Data Item RotationRateMax, enter if applicable, the maximum antenna rotation rate.

  [XSL ERR MINMAX] If RotationRateMax is used, it MUST be greater than RotationRateMin.

* **Beamwidth**: This group is OPTIONAL.

- **HorzBwMin**: In Data Item HorzBwMin, enter the minimum or nominal horizontal beamwidth.
- **HorzBwMax**: In Data Item HorzBwMax, enter the maximum horizontal beamwidth for beamwidths which vary with the frequency.

  [XSL ERR MINMAX] If HorzBwMax is used, it MUST be greater than HorzBwMin.
- **VertBwMin**: In Data Item VertBwMin, enter the minimum or nominal vertical beamwidth.
- **VertBwMax**: In Data Item VertBwMax, enter the maximum vertical beamwidth for beamwidths which vary with the frequency.

  [XSL ERR MINMAX] If VertBwMax is used, it MUST be greater than VertBwMin.
- **BeamType**: In Data Item BeamType, enter one of the codes describing the shape or type of the antenna main beam.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBD:**

Code	Meaning
Cardioid	
Cosecant Squared	
Elliptical	
Fan	
Hyperbolic	
Omni	
Pencil	
Shaped Beam	
Single Symmetrical Lobe	

Other	If selected, a clarifying remark SHOULD be entered

* **MaxPower**: In Data Item MaxPower, enter the maximum level of input power.
* **PortIsolation**: In Data Item PortIsolation, enter the power ratio between the signal injected into one port and the power returned by the other port .
* **ModeName *(US)***: In Data Item ModeName (US), enter a short name for the mode.

Example

```
<AntMode>
  <ModeID cls="U">SURVEILLANCE</ModeID>
  <MotionType cls="U">Rotating</MotionType>
  <PolarisationType cls="U">Vertical linear</PolarisationType>
  <RotationRateMin cls="U">30</RotationRateMin>
  <other_AntMode_elements/>
</AntMode>
```

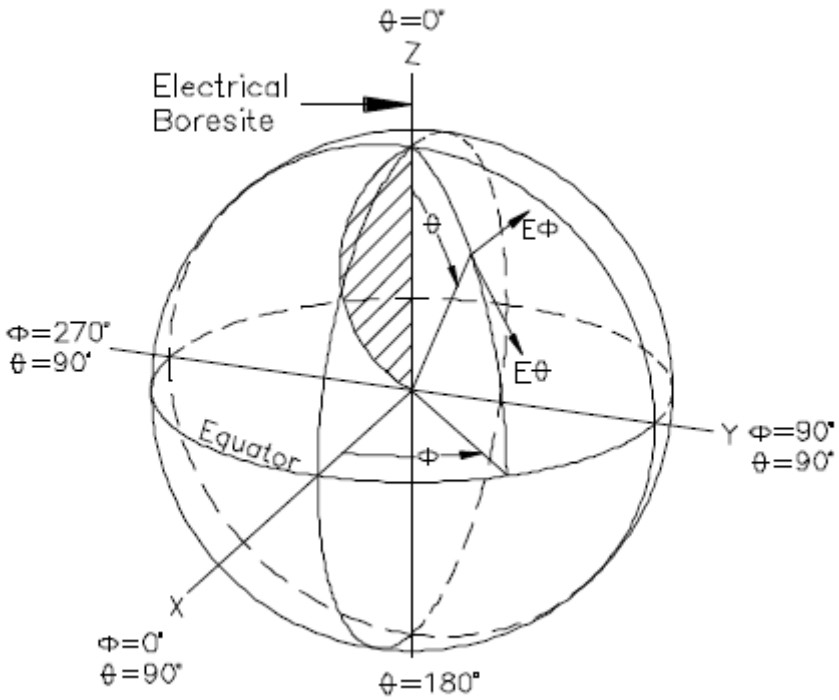
AntPattern

Antenna Pattern

Data Item Tag	Data Item Name	Occurrence	Format
Type	Radiation Pattern Type	Opt	Code List CAP
Calculated	Calculated Data Indicator	Opt	Code List CBO
CutType	Pattern Cut Type	Opt	Code List CTP
CutAngle	Pattern Cut Angle	Opt	UN(5,2) [0..180]*(deg)*
Sub-Element Of:	AntMode		
Sub-Elements:	AntPatternPoint [1..n]		

Description

Complex element AntPattern contains an antenna pattern diagram on a specific plane. General pattern cuts can be defined by a spherical coordinate system with the electrical boresite of the antenna oriented in the direction of the Z-axis. At different values of phi, pattern cuts can be taken with theta as the dependent variable. These will be great circle cuts through the main-beam peak.



Input Requirement

This element is OPTIONAL and repeatable.

* **Type**: In Data Item Type, enter the polarisation code for the antenna pattern.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CAP (extract only):**

Code	Meaning	Extended
Azimuth	Pattern in the horizontal plane	Basic
Elevation	Pattern in the vertical plane	Basic
Other	If selected, a clarifying remark SHOULD be entered	Basic
...	...	...

* **Calculated**: In Data Item Calculated, enter Yes to indicate that the data was calculated, or "No" if the data is issued from measurement. Leave blank if the origin of the data is not known.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **CutType**: In Data Item CutType enter the type of the pattern cut. A Theta cut holds Phi constant while varying Theta. A Phi cut holds Theta constant while varying Phi, where Theta is the angle off the boresight and Phi is the rotation angle about the boresight.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CTP:**

Code	Meaning
PHI	Rotation angle about the boresight
THETA	Angle off the boresight

* **CutAngle**: In Data Item CutAngle, enter the angle of the pattern cut. It is the value of Phi for a Theta cut and the value of Theta for a Phi cut.

Example

```
<AntPattern>
  <Type cls="U">Azimuth</Type>
  <Calculated cls="U">Yes</Calculated>
  <AntPatternPoint>
    <Dir cls="U">180</Dir>
    <Gain cls="U">40.1</Gain>
  </AntPatternPoint>
  <AntPatternPoint/>
</AntPattern>
```

AntPatternPoint

Antenna Pattern Point

Data Item Tag	Data Item Name	Occurrence	Format
Dir	Antenna Radiation Pattern Direction	Req	UN(5,2) [0..360]*(deg)*
Gain	Antenna Radiation Pattern Gain	Req	SN(5,2)*(dB)*
Sub-Element Of:	AntPattern		

Description

Complex element AntPatternPoint contains a single point of the antenna radiation pattern, defined by a direction and gain.

Input Requirement

This element is REQUIRED and repeatable.

* **Dir**: In Data Item Dir, enter the direction in degrees in reference to the pointing angle of the antenna set to zero.
* **Gain**: In Data Item Gain, enter the amount of gain for the direction relative to the main beam gain.

Example

See example in element AntPattern.

Antenna

Antenna

Data Item Tag	Data Item Name	Occurrence	Format
Generic	Generic indicator	Req	Code List CBO
AntType	Antenna Type	Req	Code List CAT
PhArrayNumMainBeams	Number of Main Beams in the Phased Array	Opt	UN(3)
PhArrayNumElements	Number of elements in the Phased Array	Opt	UN(5)
Dimension		**Opt**	
Shape	Antenna Shape	Opt	Code List CRS
Diameter	Antenna Diameter	Opt	UN(6,2)*(m)*
HorzDimension	Horizontal Dimension	Opt	UN(6,2)*(m)*
VertDimension	Vertical Dimension	Opt	UN(6,2)*(m)*
Aperture		**Opt**	
ApertureDiameter	Aperture Diameter	Opt	UN(6,2)*(m)*
HorzAperture	Horizontal Aperture	Opt	UN(6,2)*(m)*
VertAperture	Vertical Aperture	Opt	UN(6,2)*(m)*
Sidelobe		**Opt**	
HorzSidelobeSuppressed	Horizontal Sidelobe is Suppressed	Opt	Code List CBO
HorzSidelobeAz	Horizontal Sidelobe Azimuth	Opt	UN(5,2) [0..360]*(deg)*
HorzSidelobeAttenuation	Horizontal Sidelobe Attenuation	Opt	UN(5,2)*(dB)*
VertSidelobeSuppressed	Vertical Sidelobe is Suppressed	Opt	Code List CBO
VertSidelobeElev	Vertical Sidelobe Elevation	Opt	SN(5,2) [-180..180]*(deg)*
VertSidelobeAttenuation	Vertical Sidelobe Attenuation	Opt	UN(5,2)*(dB)*
Inherits from:	Common		
Sub-Element Of:	SchemaRoot		
Sub-Elements:	AntHardware [0..n] AntMode [0..n] Nomenclature [0..n] POCInformation [0..n] UsingCountries [0..n] ***(US)***		

Description

This element inherits attributes and sub-elements from element Common.

Complex element Antenna is the XML root for all parameters of an Antenna. It also contains various technical parameters of the antenna.
See Antenna Diagram

Input Requirement

[XSL ERR DSTYPE] Part 3 of the Serial reference (dataset type) MUST be "**AN**".

* **Generic**: In Data Item Generic, enter "Yes" to indicate that the dataset describes typical parameters of a waveform or standard signal, or a generic antenna model, rather than a specific equipment model.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **AntType**: In Data Item AntType, enter the type of antenna.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CAT (extract only):**

Code	Meaning	Extended
Blade		Basic

Cassegrain		Basic
Collinear Array		Basic
Dipole		Basic
Dipole Array		Basic
Dipole Stacked		Basic
Discone		Basic
Helical		Basic
Horn		Basic
Log Periodic		Basic
...	...	...

* **PhArrayNumMainBeams**: In Data Item PhArrayNumMainBeams, enter the number of main beams in the phased array antenna.
* **PhArrayNumElements**: In Data Item PhArrayNumElements, enter the number of antenna elements in the phased array antenna.
* **Dimension**: This group is OPTIONAL.
  - **Shape**: In Data Item Shape, enter a code used to describe the general shape of the antenna reflector.

    [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CRS (extract only):**

Code	Meaning
Boxed Slot	
Cavity	
Clamshell	
Cone	
Corner	
Curved Convergent	
Cylindrical	
Double Corner	
Elliptical	
Horn	
...	...

  - **Diameter**: In Data Item Diameter, enter the physical diameter of the antenna.
  - **HorzDimension**: In Data Item HorzDimension, enter the linear horizontal dimension of the antenna.
  - **VertDimension**: In Data Item VertDimension, enter the linear vertical dimension of the antenna.
* **Aperture**: This group is OPTIONAL.
  - **ApertureDiameter**: In Data Item ApertureDiameter, enter the cross-section of an antenna radiation pattern in the direction of highest gain.
  - **HorzAperture**: In Data Item HorzAperture, enter the horizontal cross-section of the antenna radiation pattern in the direction of highest gain.
  - **VertAperture**: In Data Item VertAperture, enter the vertical cross-section of the antenna radiation pattern in the direction of highest gain.
* **Sidelobe**: This group is OPTIONAL.

  This group of items describes the worst case sidelobe attenuation (these values will normally vary between modes, but typically only the worst case data is available).

  - **HorzSidelobeSuppressed**: In Data Item HorzSidelobeSuppressed enter if the sidelobe has been suppressed. Enter Yes (if the sidelobe is suppressed) or No (sidelobe not suppressed).

    [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

- **HorzSidelobeAz**: In Data Item HorzSidelobeAz, enter the direction of the sidelobe in reference to the direction of maximum gain
- **HorzSidelobeAttenuation**: In Data Item HorzSidelobeAttenuation, enter the amount of suppression relative to the main beam gain of the antenna.
- **VertSidelobeSuppressed**: In Data Item VertSidelobeSuppressed enter whether a portion of the radiation from an antenna outside of the main beam has been suppressed or eliminated.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

- **VertSidelobeElev**: In Data Item VertSidelobeElev enter the first sidelobe in the vertical plane. Enter the clockwise angular difference (in degrees) between the centre line of the main beam gain and the sidelobe.
- **VertSidelobeAttenuation**: In Data Item VertSidelobeAttenuation, enter the attenuation of the sidelobe relative to the main beam gain

Example

```
<Antenna cls="U">
  <Serial cls="U">TUR::AN:123</Serial>
  <EntryDateTime cls="U">2011-12-25T00:00:00Z</EntryDateTime>
  <Generic cls="U">No</Generic>
  <AntType cls="U">Billboard</AntType>
  <Nomenclature>
    <Name cls="U">XYZ</Name>
  </Nomenclature>
  <AntMode>
    <All_AntMode_elements/>
  </AntMode>
</Antenna>
```

AsgnAllotOwner *(US)*

Asgn Allot Owner

Data Item Tag	Data Item Name	Occurrence	Format
Description	Description	Opt	S18
OwnerType	Owner Type	Req	Code List UOW
OwnerOrgRef	Owner Organisation Serial	Opt	pattern (S29)
Sub-Element Of:	Assignment		

Description

Complex element AsgnAllotOwner (US) contains the serial of the owning, or originating, organisation.

Input Requirement

* **Description** : In Data Item Description (US), enter the name of an individual or organization related to the frequency assignment.
* **OwnerType** : In Data Item OwnerType (US), enter the relationship of an individual or organization to the frequency assignment.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List UOW (extract only):**

Code	Meaning
Agency	
Unified Command	
Unified Command Service	
Bureau	
Major Command	
Subcommand	
Installation Frequency Manager	
Operating Unit	
Area AFC/DoD AFC/ Other Organizations	
Requestor	
...	...

* **OwnerOrgRef**: In Data Item OwnerOrgRef (US), enter the serial of the owning, or originating, Organisation. This definitively identifies the owning agency when there is a possibility that multiple entities are listed in a text string name. This identifier can be unambiguously linked to an internal directory of organizations.

  [XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "**OR**".

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

AsgnFreqBase

Assignment Frequency or Frequency Range

Data Item Tag	Data Item Name	Occurrence	Format
FreqRangeGrp		**Req**	
FreqMin	Nominal or Minimum Frequency	Req	UN(16,9) [0..1.0E9]*(MHz)*
FreqMax	Maximum Frequency	Opt	UN(16,9) [0..1.0E9]*(MHz)*
RefFreq	reference Frequency	Opt	UN(16,9) [0..1.0E9]*(MHz)*
FreqUse	Frequency Use	Opt	Code List CAU
Inherited by:	Freq, FreqOld		
Sub-Element Of:	Tuning		

Description

Complex element AsgnFreqBase indicates a single frequency or a range of frequencies.

Input Requirement

* **Frequency Range**: This group is REQUIRED.

  This group indicates a range of frequencies or a tuning range.

  - **FreqMin**: In Data Item FreqMin, enter the nominal frequency or minimum value of the frequency range.
  - **FreqMax**: In Data Item FreqMax, enter the maximum value of the frequencies in the range.

    [XSL ERR MINMAX] If FreqMax is used, it MUST be greater than FreqMin.

* **RefFreq**: In Data Item RefFreq, enter the reference frequency of a suppressed or reduced carrier sideband. This item only applies to a single frequency and should not be used with a range.

* **FreqUse**: In Data Item FreqUse, enter the primary usage of the discrete configuration frequency or frequency range.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CAU:**

Code
Transmit Only
Receive Only
Transmit-Receive

Example

```
<Freq>
  <FreqMin cls="U">225</FreqMin>
  <FreqMax cls="U">400</FreqMax>
</Freq>
```

Assets

Owned Equipment / Force Elements

Data Item Tag	Data Item Name	Occurrence	Format
Serial	Equipment/FE Reference	Req	pattern (S29)
Authorised	Authorised Quantity	Opt	UN(9)
Available	Available Quantity	Opt	UN(9)
Sub-Element Of:	ForceElement		

Description

Complex element Assets indicates the authorised and available quantity of the equipment, RF systems, or other Force Elements used or owned by the Force Element.

Input Requirement

* **Serial**: In Data Item Serial, enter a reference to a Transmitter, Receiver, Antenna, RFSystem used by this ForceElement, or to a ForceElement carried by or belonging to this ForceElement.

  [XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "**AN** or **TX** or **RX** or **TR** or **FE**".

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

* **Authorised**: In Data Item Authorised, enter the authorised quantity of the referenced equipment or system.
* **Available**: In Data Item Available, enter the available quantity of the referenced equipment or system.

Example

```
<Assets>
  <Serial cls="U">USA:AF:FE:123</Serial>
  <Authorised cls="U">10</Authorised>
  <Available cls="U">5</Available>
</Assets>
```

Assigned

Assigned Frequency

Data Item Tag	Data Item Name	Occurrence	Format
Quality	Quality	Opt	UN(1)
Colour		**Opt**	
ColourWord	Colour Word	Opt	S20
ColourNum	Colour Number	Opt	UN(2)
ITURegistration		**Opt**	
ITURegStatus	ITU Registration Status	Opt	Code List CIR
ITURegDate	ITU Registration Date	Opt	D
ITURegNum	ITU Registration Number	Opt	US10
NavAidsChannel	Navigation Aid Channel	Opt	pattern (S4)
NetNum	Net Number	Opt	pattern (S6)
ITURegComments ***(US)***	ITU Regulatory Comments	Opt	MEMO
Sub-Element Of:	Link		
Sub-Elements:	Freq [0..n] FreqOld [0..n]		

Description

Complex element Assigned contains the assigned frequency(ies), channel or net number; it can also contain the old frequency.

Input Requirement

* **Quality**: In Data Item Quality, enter an application-specific measure of the quality for the assigned frequency. FOR UHF AMS assignments performed at NATO HQ via the NUFAS application, this measure ranges from 0 (best quality) to 3 (high risk of interference), and a value 4 means the assigned has been forced whilst it lays outside of the UHF AMS resource.
* **Tactical Information**: This group is OPTIONAL.
  - **ColourWord**: In Data Item ColourWord, enter the Colour Word associated to the assigned frequency. A tactical colour word is a series of alpha characters that can be used to identify frequencies and nets. These words are usually listed in the Air Tasking Order (ATO) to prevent inadvertent disclosure of classified information.
  - **ColourNum**: In Data Item ColourNum, enter a Colour Number associated to the assigned frequency. These numbers are usually listed in the Air Tasking Order (ATO) to prevent inadvertent disclosure of classified information.
* **ITU Registration**: This group is OPTIONAL.
  - **ITURegStatus**: In Data Item ITURegStatus, enter the status of the Assignment ITU-R registration.

    [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CIR:**

Code	Meaning
Not requested-Security	Registration with ITU-R not requested for security reasons
Not required	Registration with ITU-R not required
Outside Rules	Not notified to ITU-R due to the rules laid down in the ITU regulations
Pending	Pending notification to ITU-R
Registered	Registered with ITU-R
Registered on Insistence	Registration with ITU-R on an insistence basis
Registered-Needs modification	Registered with ITU-R but needs to be modified
Required	Registration with ITU-R is required

Unfavourable	Notified to ITU-R but received unfavourable findings and therefore not registered in the International Frequency List (IFL)

- **ITURegDate**: In Data Item ITURegDate, enter the date the frequency assignment was registered with the International Telecommunication Union (ITU) Radiocommunication Bureau (BR).
- **ITURegNum**: In Data Item ITURegNum, enter the registration number assigned by the International Telecommunication Union (ITU) Radiocommunication Bureau (BR).

* **NavAidsChannel**: In Data Item NavAidsChannel, for TACAN and DME assignments, enter the channel number of the allocated pair of radio frequencies assigned for use by Air / Ground / Air radionavigation facilities such as: TACAN, VORTAC, DME, MLS/DME, etc ... as follows:
  001 through 126 "X"
  001 through 126 "Y"
  018 through 056 "W"
  017 through 119 "Z"
  Leading zeros are required.

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[0-1][0-9]{2}(X|Y|W|Z)"

* **NetNum**: In Data Item NetNum enter the net number in the format PXXXnn where 'P' is either A for HAVE QUICK II or B for SATURN, XXX is in the range 000 through 999, and nn is one of the following four modes: **00** - sub-band hopping mode (only for SATURN) **25** - full-band hopping mode (HAVE QUICK II and SATURN) **50** - SATURN mode **75** - SATURN mode.

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[AB][0-9]{3}(00|25|50|75)"

* **ITURegComments** ***(US)***: In Data Item ITURegComments (US), enter amplifying comments related to registering an assignment with the International Telecommunication Union (ITU) Radiocommunication Bureau (BR).

Example

```
<Assigned>
  <Freq>
    <FreqMin cls="U">265.575</FreqMin>
    <TAD cls="U">HE125</TAD>
  </Freq>
</Assigned>
```

Assignment

Assignment

Data Item Tag	Data Item Name	Occurrence	Format
Title	Title	Opt	S100
UsageType	Type of Usage	Opt	Code List CUT
DateResponseRequired	Date Response Required	Opt	D
EffectiveDateTime	Effective Date/Time	Req	DT
ExpireReviewDT		**Req**	
ExpirationDateTime	Expiration Date/Time	Opt	DT
ReviewDate	Review Date	Opt	D
Period	Periodicity of Use	Opt	Code List CTI
TimeFrame		**Opt**	
Seconds	Seconds	Opt	pattern (S40)
Minutes	Minutes	Opt	pattern (S40)
Hours	Hours	Opt	pattern (S40)
DaysOfMonth	Days Of Month	Opt	pattern (S40)
Months	Months	Opt	pattern (S40)
DaysOfWeek	Days Of Week	Opt	pattern (S40)
Years	Years	Opt	pattern (S40)
Duration	Duration	Opt	UN(4)*(min)*
Processing	Processing	Opt	Code List CPI
Emergency	Emergency Indicator	Opt	Code List CBO
AssignmentAuthority	Assigning Authority	Opt	Code List CHN
Requirement	Description of Requirement	Opt	MEMO
NumSystems	Number of Systems	Opt	UN(9)
AgencyActionNum ***(US)***	Agency Action Number	Opt	S12
AgencyComments ***(US)***	Agency Comments	Opt	MEMO
AgencySerialNum ***(US)***	Agency Serial Number	Opt	S12
AssignmentDate ***(US)***	Assignment Date	Opt	D
COCOMGroup ***(US)***	COCOM Group	Opt	S8
ControlRequestNum ***(US)***	Control Request Number	Opt	S15
CoordinationComments ***(US)***	Coordination Comments	Opt	MEMO
DataSource ***(US)***	Data Source	Opt	Code List UDA
FCCFileNum ***(US)***	FCC File Number	Opt	S22
FMSCNum ***(US)***	FMSC Number	Opt	S14
FrequencyActionOfficer ***(US)***	Frequency Action Officer	Opt	S3
ListSerialNum ***(US)***	List Serial Number	Opt	S12
NATOPooledFrequencyCode ***(US)***	NATO Pooled Frequency Code	Opt	Code List UPF
NATOPooledFrequencyNum ***(US)***	NATO Pooled Frequency Number	Opt	UN(4)
OriginalAssignmentDate ***(US)***	Original Assignment Date	Opt	D
RoutineAgendaItem ***(US)***	Routine Agenda Item	Opt	Code List URI
SupplementaryDetails ***(US)***	Supplementary Details	Opt	MEMO
TypeOfService ***(US)***	Type Of Service	Opt	Code List UTY
UsageCode ***(US)***	Usage Code	Opt	Code List UUC
UsageFrequency ***(US)***	Usage Frequency	Opt	Code List UUF
UsagePercentage ***(US)***	Usage Percentage	Opt	UN(3) [0..100]*(%)*
UserNetCode ***(US)***	User Net Code	Opt	S6
PrimaryStation ***(US)***	Primary Station	Opt	Code List CBO
Inherits from:	Common		
Sub-Element Of:	SchemaRoot		
Sub-Elements:	AsgnAllotOwner [0..n] ***(US)*** CircuitRemarks [0..n] ***(US)*** Configuration [1..n] CoordinationData [0..n] ***(US)***		

	DocketNum [0..n] ***(US)*** HostDocketNum [0..n] ***(US)*** Link [1..n] OffTheShelfEquipment [0..n] ***(US)*** POCInformation [0..n] PreviousAuthorization [0..n] ***(US)*** Project [0..n] RecordNote [0..n] ***(US)*** RelatedRef [0..n] Station [1..n] StatusLog [0..n] ***(US)*** SysOfStation [0..n]

Description

This element inherits attributes and sub-elements from element Common.

Complex element Assignment is the XML root for all parameters of a system of assignments.
See Assignment Diagram
See Station Diagram

Input Requirement

[XSL ERR DSTYPE] Part 3 of the Serial reference (dataset type) MUST be "**AS**".

* **Title**: In Data Item Title, enter an identifying name for this Allotment or Assignment.
* **UsageType**: In Data Item UsageType, enter the type of assignment request or approved assignment/allotment. In Data Item case of a rejected or cancelled assignment/allotment, use an associated Remarks to indicate the reason.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CUT:**

Code	Meaning
Request Temporary	
Request Permanent	
Approved Temporary	
Approved Permanent	
Cancelled/Rejected	
Other	If selected, a clarifying remark SHOULD be entered

* **DateResponseRequired**: In Data Item DateResponseRequired, enter the date by which the frequency assignment or Spectrum Supportability Reply is required by the user in order to complete necessary advanced operation coordination.
* **EffectiveDateTime**: In Data Item EffectiveDateTime, enter the date and UTC time when the Assignment will be operational, formatted as yyyy-mm-ddThh:mm:ssZ (year-month-day, "T" for time, hour:minute:seconds Zulu). To indicate a real effective time, use values 00:00:01Z to 24:00:00Z. The value 00:00:00Z is reserved to indicate that time is not an issue.
* **ExpireReviewDT**: This group is REQUIRED.
  - **ExpirationDateTime**: In Data Item ExpirationDateTime, enter the date and UTC time that this Assignment will expire. The Expiration date should be less than five years from the effective date.
  - **ReviewDate**: In Data Item ReviewDate, enter the date by which the dataset is to be reviewed. The Review date should be less than five years from the effective date. In Data Item Spectrum Supportability datasets, this date indicate when the organisation responsible for re-initiating host coordination plans to resubmit a Spectrum Supportability request to the host nation for continued use of the equipment.
* **Period**: In Data Item Period, enter the general period on a daily basis when the frequency assignment frequencies will be either guarded (monitored) or used for transmission.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CTI:**

Code	Meaning

Continuous	Continuously 24 hours per day
Day	Day time
Night	Night time
Transition	Transition period
Intermittent	Intermittently throughout 24 hours
Once	Once
Other	If selected, a clarifying remark SHOULD be entered

* **Time Frame**: This group is OPTIONAL.

This group defines a schedule of operation for time-related datasets. Each item (except duration) may contain:
. A single number;
. A range (start and stop, separated with an hyphen "-"); optionally, a range may be followed by a step (oblique stroke "/" followed by a number); the full range may be represented by the asterisk "*";
. A list of numbers and/or ranges, separated by commas ",";
. An attribute with value "*" may be omitted.

- **Seconds**: In Data Item Seconds,enter the seconds of hour [0-59]

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "(([1-5]?\d(-[1-5]?\d(/\d+)?)?)|(*/\d+))(,([1-5]?\d(-[1-5]?\d(/\d+)?)?)|(,*/\d+))*"

- **Minutes**: In Data Item Minutes, enter the minutes of an hour [0-59].

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "(([1-5]?\d(-[1-5]?\d(/\d+)?)?)|(*/\d+))(,([1-5]?\d(-[1-5]?\d(/\d+)?)?)|(,*/\d+))*"

- **Hours**: In Data Item Hours, enter the hours of a day [0-23] (UTC time).

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "(([12]?\d(-[12]?\d(/\d+)?)?)|(*/\d+))(,([12]?\d(-[12]?\d(/\d+)?)?)|(,*/\d+))*"

- **DaysOfMonth**: In Data Item DaysOfMonth, enter the day of month [1-31].

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "(([123]?\d(-[123]?\d(/\d+)?)?)|(*/\d+))(,([123]?\d(-[123]?\d(/\d+)?)?)|(,*/\d+))*"

- **Months**: In Data Item Months, enter the month of year [1-12].

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "((1?\d(-1?\d(/\d+)?)?)|(*/\d+))(,(1?\d(-1?\d(/\d+)?)?)|(,*/\d+))*"

- **DaysOfWeek**: In Data Item DaysOfWeek, enter the weekday [0-7 where 0 and 7 are for Sunday, 1 for Monday, etc].

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "(([0-7](-[0-7](/\d+)?)?)|(*/\d+))(,([0-7](-[0-7](/\d+)?)?)|(,*/\d+))*"

- **Years**: In Data Item Years, enter the 4-digit year [1900..2100].

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "(([12]\d{3}(-[12]\d{3}(/\d+)?)?)|(*/\d+))(,([12]\d{3}(-[12]\d{3}(/\d+)?)?)|(,*/\d+))*"

- **Duration**: In Data Item Duration, enter the number of minutes for which an event will live.

Examples:

possible values for the ***Hours*** *item:*

8	*one value: 08h00Z*
5,6,9	*multiple values: 05h00Z, 06h00Z, 09h00Z*
5-8	*range between 05h00Z and 08h00Z inclusive*
****/2***	*stepped, every other hour. 00h00Z (midnight), 02h00Z, 04h00Z, etc*
3-12/3	*stepped range, every third hour: 03h00Z, 06h00Z, 09h00Z, and 12h00Z*

Transmission for 2 minutes every 10 minutes from 9am to 5pm every weekday for 2007:

```
<Minutes>*/10</Minutes>
<Hours>9-17</Hours>
<DaysofWeek>0-4</DaysofWeek>
```

```
<Years>2007</Years>
<Duration>2</Duration>
```

On the 5-minute mark, every third hour, only on days of the work week (Mon-Fri)

```
<Minutes>5</Minutes>
<Hours>*/3</Hours>
<DaysofWeek>1-5</DaysofWeek>
```

On the 20 and 50-minute marks every hour, every month except June, only on days of the work week (Mon-Fri)

```
<Minutes>20,50</Minutes>
<Months>1-5,7-12</Months>
<DaysofWeek>1-5</DaysofWeek>
```

* **Processing**: In Data Item Processing, enter if the frequency assignment is to be approved at the national or international level.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CPI:**

Code	Meaning
International Approval	The dataset is outside national boundaries; however, it must be processed to national or international level authority for approval
Local Approval	The dataset is within national boundaries; however, it need not be processed to national level authority for approval
National Approval	The dataset is to be processed to national level authority for approval
Outside National Boundaries	The dataset is outside national boundaries and need not be processed to national level authority for approval
Other	If selected, a clarifying remark SHOULD be entered

* **Emergency**: In Data Item Emergency, enter "Yes" if the system may be used in a case of emergency..

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **AssignmentAuthority**: In Data Item AssignmentAuthority, enter the user acceptance of host-nation or NATO HQ frequency nominations.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CHN:**

Code	Meaning
Host nominations acceptable	Host Nation Nominations are acceptable.
NATO HQ-assigned	The frequency is preassigned by NATO headquarters (NHQC3S/SC3IB).
NUFAS-assigned	The frequency was assigned by the NATO UHF Frequency Assignment Software (NUFAS) at NHQC3S/SC3IB.
User-assigned	The frequency was preassigned by the user.

* **Requirement**: In Data Item Requirement enter any amplifying information about the requirement.
  USA: Enter Agency remarks which, while pertinent to the frequency assignment, are not intended to be part of the application processed through the Interdepartment Radio Advisory Committee (IRAC). These remarks, therefore, will be excluded from the Government Master File (GMF).

* **NumSystems**: In Data Item NumSystems, enter the total number of systems that are expected to use this Assignment.

* **AgencyActionNum *(US)***: In Data Item AgencyActionNum (US), enter the "An" identifier used to track transactions.

* **AgencyComments *(US)***: In Data Item AgencyComments (US), enter the Agency remarks in the applications processed through the Interdepartment Radio Advisory Committee (IRAC). These remarks will be included in the Government Master File (GMF).

* **AgencySerialNum *(US)***: In Data Item AgencySerialNum (US), enter the externally-assigned unique identifier of a frequency assignment.

* **AssignmentDate *(US)***: In Data Item AssignmentDate (US), enter the date the assignment was most recently authorized.

* **COCOMGroup *(US)***: In Data Item COCOMGroup (US), enter PACOM to identify a grouping of frequencies having a like or similar use. Enter EUCOM to identify the function number(s) used by the Frequency Management Sub-Committee (FMSC) to specify the operational use of frequencies.
* **ControlRequestNum *(US)***: In Data Item ControlRequestNum (US), enter the control or request identifier that allows subordinate organizations to track specific frequency applications.
* **CoordinationComments *(US)***: In Data Item CoordinationComments (US), enter the Comments related to the external coordination of a frequency assignment.
* **DataSource *(US)***: In Data Item DataSource (US), enter the source or organization from which the data record was received.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List UDA:**

Code	Meaning
FMSC/MRFL data from NATO	
Industry Canada	
Federal Communications Commission	
Frequency Resource Record System	
Government Master File	
International Telecommunication Union	
Radio Astronomy data from the National Research Council	
Other	If selected, a clarifying remark SHOULD be entered

* **FCCFileNum *(US)***: In Data Item FCCFileNum (US), enter the file number assigned by the Federal Communications Commission (FCC), issued to non-government stations operating on government frequencies or government stations operating on nongovernment frequencies, which is unique to each FCC license.
* **FMSCNum *(US)***: In Data Item FMSCNum (US), enter the assignment serial number as registered in the Frequency Management Subcommittee (FMSC) Master Radio Frequency List (MRFL).
* **FrequencyActionOfficer *(US)***: In Data Item FrequencyActionOfficer (US), enter a MILDEP code identifying the person or group responsible for the frequency assignment.
* **ListSerialNum *(US)***: In Data Item ListSerialNum (US), enter the agency list serial number of a Government Master File (GMF) record representing a group or area assignment. It brings into use, by a particular station or stations, a frequency authorised under a group assignment or authorised for communications with nongovernment stations.
* **NATOPooledFrequencyCode *(US)***: In Data Item NATOPooledFrequencyCode (US), enter the Type Special Assignment for the frequency assignment.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List UPF:**

Code	Meaning
Air/ground/air	
Air to air	
Air/ground/air pool	
Other	If selected, a clarifying remark SHOULD be entered

* **NATOPooledFrequencyNum *(US)***: In Data Item NATOPooledFrequencyNum (US), enter the a Frequency Management Sub-committee (FMSC) assigned code number identifying the type and nationality of a frequency pool.
* **OriginalAssignmentDate *(US)***: In Data Item OriginalAssignmentDate (US), enter the date the frequency assignment was originally authorized.

* **RoutineAgendaItem *(US)***: In Data Item RoutineAgendaItem (US), enter the type of National Telecommunications and Information Administration (NTIA) Frequency Assignment Subcommittee (FAS) agenda on which the application will be processed. This value is computer-generated by NTIA for its internal processing of frequency assignment applications. It is an output data item only. Possible values include:
R - Routine Application
A - AAG Application
M - MAG Application
If this XML element does not exist, the application is a “Regular Application”.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List URI:**

Code	Meaning
Routine Application	
Regular Application	
Aeronautical Assignment Group (AAG) Application	
Marine Assignment Group (MAG) Application	
Other	If selected, a clarifying remark SHOULD be entered

* **SupplementaryDetails *(US)***: In Data Item SupplementaryDetails (US), enter amplifying information that would facilitate processing. This includes, but is not limited to, the following items:
1) Doppler shift, if a significant factor in the particular system,
2) a general description of the assignment requirement (applies to experimental stations),
3) sounder justification,
4) coordination data, and
5) refer to National Telecommunications and Information Administration (NTIA) manual, Chapter 9, for further details.

* **TypeOfService *(US)***: In Data Item TypeOfService (US), enter the type of service or circuit involved.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List UTY (extract only):**

Code	Meaning
Simplex	
Duplex	
Semiduplex	
Simplex Net	
One Directional Transmission	
Broadcast	
Simultaneous Broadcast	
Radionavigation	
Radiolocation	
Reception Only	
...	...

* **UsageCode *(US)***: In Data Item UsageCode (US), enter the usage and category of circuits.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List UUC:**

Code	Meaning
Wartime circuits required to be operated or to be ready for operation in Peacetime	
Wartime circuits that have a limited capability in peacetime for exchanging traffic	

between the planned terminals	
Required for wartime only	
Required for occasional and temporary usage for training exercises or maneuver purposes	
Required for the deployment phase of contingency operations	
Required for the employment phase of contingency operations	
Required for peacetime only	
Other	If selected, a clarifying remark SHOULD be entered

* **UsageFrequency *(US)***: In Data Item UsageFrequency (US), enter the general amount of time when the frequency assignment frequencies will be either guarded (monitored) or used for transmission.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List UUF:**

Code	Meaning
Regular, not limited to workweek	
Regular, workweek	
Occasional, not limited to workweek	
Occasional, workweek	
Other	If selected, a clarifying remark SHOULD be entered

* **UsagePercentage *(US)***: In Data Item UsagePercentage (US), enter the percentage of time the transmitter equipment is in use during the scheduled hours of operation..

* **UserNetCode *(US)***: In Data Item UserNetCode (US), enter a unique code that identifies the specific user of the frequency, i.e., the command, activity, unit, project, etc.

* **PrimaryStation *(US)***: In Data Item PrimaryStation (US), enter whether this station is the station of primary regulatory interest.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

Example

```
<Assignment cls="U">
  <Serial cls="U">NLD::AS:123</Serial>
  <EntryDateTime cls="U">2011-12-25T00:00:00Z</EntryDateTime>
  <EffectiveDateTime cls="U">2011-12-28T00:00:00Z</EffectiveDateTime>
  <Function cls="U">AIR OPS</Function>
  <Configuration>
    <ConfigID cls="U">CONFIG1</ConfigID>
    <TxRef>
      <Serial cls="U">NLD::TX:444</Serial>
    </TxRef>
  </Configuration>
  <Station>
```

```
    <StationID cls="U">STATION1</StationID>
    <LocSatRef cls="U">NLD::LO:111</LocSatRef>
    <ServiceVolumeLocRef cls="U">NLD::LO:222</ServiceVolumeLocRef>
    <ServiceVolumeHeight cls="U">10000</ServiceVolumeHeight>
  </Station>
  <Link>
    <LinkID cls="U">LINK1</LinkID>
    <StationConfig>
      <Type cls="U">Transmit-Receive</Type>
      <ConfigID cls="U">CONFIG1</ConfigID>
      <StationID cls="U">STATION1</StationID>
    </StationConfig>
    <Assigned>
      <Freq>
        <FreqMin cls="U">256.275</FreqMin>
      </Freq>
    </Assigned>
  </Link>
</Assignment>
```

AtWaypoint

At Waypoint

Data Item Tag	Data Item Name	Occurrence	Format
WaypointIdx	Waypoint Index	Req	UN(6)
DateTime	Date/Time	Req	DT
Speed	Speed at Waypoint	Opt	UN(7,2)*(km/h)*
Sub-Element Of:	FEDeployment		

Description

Complex element AtWayPoint defines a point in time at which a Force Element is at a given waypoint along a route. A route is a geographical object described as a series of points, which have been recorded in a Location dataset. A Force Element will follow a route composed of all or a subset of the Points defined in the Location, and may reach each of these points in any order: the timestamp associated with the Waypoint will define the order of visit of the points.

Input Requirement

* **WaypointIdx**: In Data Item WayPointIdx, enter the sequential index of a Point within the referenced Location. Some points of the Location may be omitted, and are not necessarily visited in the order they are defined in the Location. For example a Location might have 10 Points; however, a Force Element may use a route passing successively by points 3, 1, 10, and 7.
* **DateTime**: In Data Item DateTime, enter the date and time that the force element is at the selected waypoint.
* **Speed**: In Data Item Speed, enter the speed of the force element along a straight route or to the next waypoint. The speed MUST be entered in km/h (software tools may have an option to display the speed in nmi/h for ships and aircrafts, but the transmitted data is standardised in km/h).

Example

```
<AtWaypoint>
  <WaypointIdx cls="U">1</WaypointIdx>
  <DateTime cls="U">2012-01-01T15:00:00Z</DateTime>
</AtWaypoint>
```

Baseband

Baseband

Data Item Tag	Data Item Name	Occurrence	Format
ModFreqMin	Minimum Modulating Frequency	Opt	UN(16,9) [0..1.0E9]*(MHz)*
ModFreqMax	Maximum Modulating Frequency	Opt	UN(16,9) [0..1.0E9]*(MHz)*
SignalType	Signal Type	Opt	Code List CMO
BitDuration	Bit Duration	Opt	UN(12,6)*(us)*
OOKPattern	On-Off Key Pattern	Opt	S100
SignalDurationMax ***(US)***	Maximum Signal Duration	Opt	UN(12,6)*(us)*
SignalDurationMin ***(US)***	Minimum Signal Duration	Opt	UN(12,6)*(us)*
SignalSequenceDesc ***(US)***	Signal Sequence Description	Opt	S100
SignalShape ***(US)***	Signal Shape	Opt	Code List USS
Sub-Element Of:	RxMode, TxMode		

Description

Complex element Baseband defines the parameters of the modulating or received signal.

Input Requirement

* **ModFreqMin**: In Data Item ModFreqMin, enter the minimum modulating frequency measured:
  - for a transmitter, on the low side of the spectrum signature at the -3 dB point before the baseband signal begins the up-conversion process;
  - for a receiver, at the -3 dB point on the low frequency side of the receiver baseband, after detection but prior to de-multiplexing or demodulation.
* **ModFreqMax**: In Data Item ModFreqMax, enter the maximum modulating frequency:
  - for a transmitter, measured on the high side of the spectrum signature at the -3 dB point before the baseband signal begins the up-conversion process;
  - for a receiver, frequency that can be recovered and demodulated by the receiver. Typically, this frequency should have 3-dB attenuation relative to the least attenuated demodulated or multiplexed signal.

  [XSL ERR MINMAX] If ModFreqMax is used, it MUST be greater than ModFreqMin..
* **SignalType**: In Data Item SignalType, enter the type of modulation.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CMO (extract only):**

Code	Meaning
8-Tone	
16-Tone	
32-Tone	
AM Clear Voice	
AM Secure Voice	
ASK/OOK	
Audio FSK	
Binary FSK	
Binary Phase Shift Key	
Code Division Multiplex	
...	...

* **BitDuration**: In Data Item BitDuration, enter the period of elapsed time, per bit instance, before change of states.

* **OOKPattern**: In Data Item OOKPattern, enter a text description of the on-off keying (OOK) pattern. Example: (3 on, 3 off, 3 on, 4 off,...)
* **SignalDurationMax *(US)***: In Data Item SignalDurationMax (US), enter the maximum time value for how long the tone persists in the baseband.

  [XSL ERR MINMAX] If SignalDurationMax is used, it MUST be greater than SignalDurationMin..
* **SignalDurationMin *(US)***: In Data Item SignalDurationMin (US), enter the minimum time value for how long the tone persists in the baseband.
* **SignalSequenceDesc *(US)***: In Data Item SignalSequenceDesc (US), enter the pattern of occurrence of sub-signals. (Example:beep, beep, pause, bip, pause…) If using SignalDuration, entries in ToneName MUST match the descriptive names used here.
* **SignalShape *(US)***: In Data Item SignalShape (US), enter the basic shape of the signal.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List USS:**

Code	Meaning
Gaussian	
Ramp	
Sawtooth	
Sinusoidal	
Square	
Other	If selected, a clarifying remark SHOULD be entered

Example

```
<Baseband>
  <ModFreqMin cls="U">0.0003</ModFreqMin>
  <ModFreqMax cls="U">0.0034</ModFreqMax>
  <SignalType cls="U">FM Clear Voice</SignalType>
</Baseband>
```

Blanking

Blanking

Data Item Tag	Data Item Name	Occurrence	Format
AzStart	Start Azimuth	Opt	UN(5,2) [0..360]*(deg)*
AzStop	Stop Azimuth	Opt	UN(5,2) [0..360]*(deg)*
ElevStart	Start Elevation	Opt	SN(4,2) [-90..90]*(deg)*
ElevStop	Stop Elevation	Opt	SN(4,2) [-90..90]*(deg)*
Sub-Element Of:	StationConfig		

Description

Complex element Blanking contains the start and stop angles of a horizontal and/or vertical sector that is blanked.

Input Requirement

* **AzStart**: In Data Item AzStart, enter the start azimuth angle for the blanked sector. Use "0" or "360" for true north.
* **AzStop**: In Data Item AzStop, enter the stop azimuth angle for the blanked sector. Use "0" or "360" for true north.
* **ElevStart**: In Data Item ElevStart, enter the start elevation angle for the blanked sector. Use "-90" for straight down and "90" for directly overhead.
* **ElevStop**: In Data Item ElevStop, enter the stop elevation angle for the blanked sector. Use "-90" for straight down and "90" for directly overhead.

Example

```
<Blanking>
  <AzStart cls="U">25</AzStart>
  <AzStop cls="U">35</AzStop>
</Blanking>
```

CaseNum

Case Number

Data Item Tag	Data Item Name	Occurrence	Format
Country	Country/Body issuing the case number	Opt	Code List CAO
Type	Case Number Type	Opt	S20
Identifier	Case Number	Req	S20
Sub-Element Of:	Common, Configuration		

Description

Complex Element CaseNum provides the capability to store multiple identifiers for a Dataset.

Input Requirement

* **Country**: In Data Item Country, enter the nation or body who provided or assigned the case number.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CAO (extract only):**

Code	Meaning
AFG	Afghanistan
FF	Africa
US-AL	Alabama
ALA	Åland Islands
US-AK	Alaska
ALB	Albania
DZA	Algeria
NT-ASC	Allied Submarine Command
ASM	American Samoa
AND	Andorra
...	...

* **Type**: In Data Item Type, enter a text identifying the type of case number (national file, exercise name, etc).
* **Identifier**: IIn Data Item Identifier, enter the associated identifying number for the Dataset.

Example

```
<CaseNum>
  <Country cls="U">NLD</Country>
  <Identifier cls="U">JWID 2002</Identifier>
</CaseNum>
```

Channel

Channel

Data Item Tag	Data Item Name	Occurrence	Format
Name	Name	Opt	S50
User	User	Opt	S50
Sub-Element Of:	ChannelPlan		
Sub-Elements:	ChannelFreq [1..n]		

Description

Complex element Channel provides the frequency, and optionally the name or number, of a channel within a channel plan.

Input Requirement

* **Name**: In Data Item Name, enter the name of this channel (e.g., "Video carrier, Sound carrier, Nicam Sound carrier").
* **User**: In Data Item User, enter a specific user of this channel in the channel plan.

Example

See ChannelPlan.

ChannelFreq

Channel Frequency

Data Item Tag	Data Item Name	Occurrence	Format
	Element Content	Req	UN(16,9) [0..1.0E9]*(MHz)*
Sub-Element Of:	Channel		

Description

Complex element ChannelFreq contains one frequency in the channel plan.

Input Requirement

In Data Item ChannelFreq enter one frequency in the channel plan.

ChannelPlan

Channel Plan

Data Item Tag	Data Item Name	Occurrence	Format
Name	Name	Req	S100
Inherits from:	Common		
Sub-Element Of:	SchemaRoot		
Sub-Elements:	Channel [1..n]		

Description

This element inherits attributes and sub-elements from element Common.

Complex element ChannelPlan describes the plan for the channel set.
See ChannelPlan Diagram

Input Requirement

[XSL ERR DSTYPE] Part 3 of the Serial reference (dataset type) MUST be "**CP**".

* **Name**: In Data Item Name, enter the name of this channel plan (e.g., "Plan for Wireless Microphones in the Band 162-174 MHz").

Example

```
<ChannelPlan>
  <Channel>
    <Name cls="U">Channel Plan One</Name>
    <User cls="U">Channel Master</User>
    <ChannelFreq cls="U">200</ChannelFreq>
  </Channel>
  <Channel>
    <Name cls="U">Channel Plan Seven</Name>
    <User cls="U">Channel Meister</User>
    <ChannelFreq cls="U">400</ChannelFreq>
  </Channel>
</ChannelPlan>
```

ChannelPlanRef

Channel Plan Reference

Data Item Tag	Data Item Name	Occurrence	Format
	Element Content	Req	pattern (S29)
Sub-Element Of:	Allocation, TOA		

Description

Complex element ChannelPlanRef refers to a ChannelPlan.

Input Requirement

In Data Item ChannelPlanRef, enter the serial of the referenced ChannelPlan.

[XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "**CP**".

[XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

Example

```
<ChannelPlanRef cls="U">GBR::CP:123</ChannelPlanRef>
```

CircuitRemarks

Circuit Remarks

Data Item Tag	Data Item Name	Occurrence	Format
	Element Content	Req	S40
Sub-Element Of:	Assignment		

Description

Complex element CircuitRemarks (US) contains general information about the network and equipment used to support a specific frequency assignment or assignments.

Input Requirement

In Data Item CircuitRemarks (US), enter the Any additional data to be submitted by the applicant that cannot be accommodated in any of the other data items in the Government Master File (GMF).

ClsDerived *(US)*

ClsDerived

Data Item Tag	Data Item Name	Occurrence	Format
Date	Derivative Classification Date	Req	D
Title	Derivative Classification Document Title	Req	S30
Org	Derivative Classification Publishing Organization	Req	S30
Sub-Element Of:	SecurityClass		

Description

Complex element ClsDerived (US) contains the derived security classification from one or more data information sources.

Input Requirement

* **Date**: In Data Item Date (US), enter the date of the source document.
* **Title**: In Data Item Title (US), enter the title of the source document.
* **Org**: In Data Item Org (US), enter the publishing organization of the source document.

Example

```
<ClsDerived>
  <Date>1993-08-15</Date>
  <Title>B-1B SCG</Title>
  <Org>OC-ALC/LAB</Org>
</ClsDerived>
```

Code

Code

Data Item Tag	Data Item Name	Occurrence	Format
Value	Code Value	Req	S50
Description	Entry Description	Opt	S255
Sub-Element Of:	CodeList		

Description

Complex element Code contains the information necessary to create or modify a code entry in the given code list.

Input Requirement

* **Value**: In Data Item Value, enter the unique code entry within the code list.
* **Description**: In Data Item Description, the long text name of the code entry or a brief description of the entry to be created or modified.

Example

See element CodeList.

CodeList

Code List

Data Item Tag	Data Item Name	Occurrence	Format
Action	Action Required	Req	Code List CAC
CodeListCode	Code List 3-letter Code	Req	US3
EffectiveDate	Effective Date	Req	D
Description	New Code List Description	Opt	MEMO
Origin	Originating Country/Body	Opt	Code List CAO
Sub-Element Of:	Administrative		
Sub-Elements:	Code [0..n]		

Description

Complex element CodeList contains the actions necessary to create or delete a code entry in a given Code List.

Input Requirement

* **Action**: In Data Item Action, enter the intended type of modification to the given code list.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CAC:**

Code
Add Code
Add List
Delete Code
Delete List

* **CodeListCode**: In Data Item CodeListCode, enter the three-letter code of an existing Code List to be modified, or an unused three-letter code in the case of the creation of a new Code List.
* **EffectiveDate**: In Data Item EffectiveDate, enter the date by which the dataset is to be operational or effective.
* **Description**: In Data Item Description, enter the description of the intended contents of new code list, and the element(s) where it will be used.
* **Origin**: In Data Item Origin, enter the country or organisation which is using the modified or new code.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CAO (extract only):**

Code	Meaning
AFG	Afghanistan
FF	Africa
US-AL	Alabama
ALA	Åland Islands
US-AK	Alaska
ALB	Albania
DZA	Algeria
NT-ASC	Allied Submarine Command
ASM	American Samoa
AND	Andorra
...	...

Example

```
<CodeList>
  <Action cls="U">Add Code</Action>
  <CodeListCode cls="U">CAS</CodeListCode>
  <EffectiveDate cls="U">2011-12-25</EffectiveDate>
  <Code>
    <Value cls="U">Jerking</Value>
    <Description cls="U">Moving wildly in all directions</Description>
  </Code>
```

```
</CodeList>
```

Notes

It is not advisable to delete an existing code.

Comment

Comment

Attribute Tag	Attribute Name	Occurrence	Format
idx	Index	Req	UN(6)
Data Item Tag	Data Item Name	Occurrence	Format
	Element Content	Req	MEMO
Sub-Element Of:	CommentSource		

Description

Complex element Comment contains the comment provided by the Host Nation or Administration regarding an equipment supportability.

Input Requirement

In Data Item Comment, enter the comment provided by the Host Nation or Administration regarding equipment supportability.

* **idx** *(Attribute)*: In attribute idx, enter a unique index for each Comment used by this Dataset. Once an idx is used it SHOULD NOT be modified during the lifetime of the Dataset; e.g., an element with idx=2 will keep idx=2 even if the first occurrence (idx=1) is deleted.

Example

See CommentSource.

Notes

In the USA, for NTIA and the Spectrum Planning Subcommittee (SPS), the first Comment is the signing statement in the corresponding Section 4 or 5 respectively of the Certification of Spectrum Support page.

CommentSource

Comment Source

Data Item Tag	Data Item Name	Occurrence	Format
Source	Comment Source	Opt	S100
Author	Comment Author	Opt	S100
JobTitle	Author Job Title	Opt	S100
Date	Comment Date	Opt	D
Sub-Element Of:	SSReply		
Sub-Elements:	Comment [0..n]		

Description

Complex element CommentSource is used to provide comments to a SSRequest. It can also be used to certify supportability.

Input Requirement

* **Source**: In Data Item Source, enter the name of the organisation or authority that is the source of the comment. For example, MC4EB, SPS or NTIA.
* **Author**: In Data Item Author, enter the title (e.g., Ms., Dr.) and name of the individual that is the source of the comment.
* **JobTitle**: In Data Item JobTitle, enter the title or position of the comment author.
* **Date**: In Data Item Date, enter the date the comment was provided.

Example

```
<CommentSource>
  <Author cls="U">Barry Commenter</Author>
  <Date cls="U">2014-01-01</Date>
  <JobTitle cls="U">Big Kahuna</JobTitle>
  <Source cls="U">NTIA Redbook page 235</Source>
  <Comment cls="U" idx="1">Assignments will be granted on case-by-case basis.</
Comment>
</CommentSource>
```

Notes

For the USA,

* the Date for a Source of "SPS" is also the date the SPS official signed the Certification of Spectrum Support. The date for a Source of "NTIA" is the date the NTIA Certifying Official signed the Certification of Spectrum Support.
* For NTIA and the Spectrum Planning Subcommittee (SPS), the first Comment is the signing statement in the corresponding Section 4 or 5 respectively of the Certification of Spectrum Support page.

Common

Common

Attribute Tag	Attribute Name	Occurrence	Format
cls	classification	Req	Code List CCL
extReferences	links to external references	Opt	List of UN6
idref ***(US)***	Data Item ID	Opt	S10
legacyReleasability ***(US)***	Legacy Releasability	Opt	MEMO
quality ***(US)***	Data Quality	Opt	S255
recommendedValue ***(US)***	Recommended Value	Opt	MEMO
releasability	releasability markings	Opt	List of Code List CCY
remarks	Links to Dataset Remarks	Opt	List of UN6
Data Item Tag	**Data Item Name**	**Occurrence**	**Format**
Observation ***(US)***		**Opt**	
LastObservedBy	Last Observed By	Opt	S50
ObservedFirstDateTime	Initial Signal Detected Timestamp	Opt	DT
ObservedLastDateTime	Last Signal Detected Timestamp	Opt	DT
ApprovedBy ***(US)***	Last Approval Person	Opt	S50
ApprovedDateTime ***(US)***	Last Approval Timestamp	Opt	DT
Redacted ***(US)***	Redacted Data	Opt	Code List CBO
Initial		**Req**	
Serial	Dataset Identifier	Req	pattern (S29)
EntryDateTime	Entry Date/Time	Req	DT
EntryBy	Creator Role	Opt	pattern (S29)
Owner	Role which Owns the Dataset	Opt	pattern (S29)
LastChange		**Opt**	
LastChangeDateTime	Latest Modification Date/Time	Opt	DT
LastChangeBy	Last Modifier Role	Opt	pattern (S29)
LastReview		**Opt**	
LastReviewDate	Last Review Date	Opt	D
LastReviewBy	Last Review Person RoleRef	Opt	pattern (S29)
ModAllowedBy	Role Allowed to Modify	Opt	pattern (S29)
State	Dataset Status	Opt	Code List CSU
Description	General Dataset Description	Opt	S500
Inherited by:	Administrative, Allotment, Antenna, Assignment, ChannelPlan, Contact, ExternalReference, FEDeployment, ForceElement, IntfReport, JRFL, Loadset, Location, Message, Note, Organisation, RFSystem, RadiationPlan, Receiver, Role, SSReply, SSRequest, Satellite, TOA, Transmitter		
Sub-Elements:	CaseNum [0..n] ExtReferenceRef [0..n] Remarks [0..n] SecurityClass [0..1] ***(US)***		

Description

Complex element Common is the parent complex element for all Datasets.
See Common Diagram

Input Requirement

* **cls** *(Attribute)*: In attribute cls, enter the classification of the current data item. This attribute is REQUIRED on each data item, even if the classification is **"U"**.

[XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CCL:**

Code	Meaning
U	Unclassified
R	Restricted (This classification SHALL NOT be used in USA-created datasets)

C	Confidential
S	Secret
T	Top Secret

[XSL ERR CLS] All elements at all levels below the dataset MUST have a classification lower or equal to the classification indicated here.

* **releasability** *(Attribute)*: In attribute releasability, enter a list of country codes for which the current data item is releasable. For NATO, if this element is omitted, there is no releasability restriction for the data item. For the US, if this data item AND attribute US:legacy Releasability are both blank, there is no releasability restriction for the data item.
* **remarks** *(Attribute)*: In attribute remarks, enter a list of Common/Remarks idx values applicable to the current data item.
* **extReferences** *(Attribute)*: In attribute extReferences, enter a list of Conmmon/ExtReferenceRef idx values applicable to the current data item.
* **legacyReleasability** *(Attribute)* ***(US)***: In attribute legacyReleasability (US) enter one or more special handling instructions in sentence format, not code format. For example, "Approved for public release; distribution is unlimited". Multiple special handling instructions are separated by "|" (i.e., ASCII character #124).
* **quality** *(Attribute)* ***(US)***: In attribute quality (US), enter one or more data quality indicator(s), separated by "|" (i.e., ASCII character #124), for the contents of the associated Data Item For example, "Outlier" | "Non-CodeList".
* **recommendedValue** *(Attribute)* ***(US)***: In attribute recommendedValue (US) enter a value that is most probably correct.
* **idref** *(Attribute)* ***(US)***: In attribute idref (US), enter a unique identifier for each Data Item in the Dataset. Within each Dataset, the idref value must be unique for every occurrence. If a received Dataset uses idrefs and it is expected that the Dataset will be exchanged, the idrefs should be considered required. If the receiving system is the permanent end of the line for the Dataset, the idrefs may be considered optional.
* **Observation**: This group is OPTIONAL.

  This group of data items indicates the last date the subject signal was collected.

  - **LastObservedBy**: In Data Item LastObservedBy (US), enter the identifier of the person or entity who last observed this Dataset.

    [XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "**JA**".
  - **ObservedFirstDateTime**: In Data Item ObservedFirstDateTime (US), enter the date and time, based on Greenwich Mean Time (GMT), the subject signal was first collected.
  - **ObservedLastDateTime**: In Data Item ObservedLastDateTime (US), enter the date and time, based on Greenwich Mean Time (GMT), the subject signal was last collected.
* **ApprovedBy** ***(US)***: In Data Item ApprovedBy (US), enter the identifier of the designated expert who last approved or accepted the dataset.
* **ApprovedDateTime** ***(US)***: In Data Item ApprovedDateTime (US), enter the last date and time, based on Greenwich Mean Time (GMT), that the dataset was approved or accepted by a designated expert.
* **Redacted** ***(US)***: In Data Item Redacted (US), indicate if any original, or authoritative, data was omitted. Supports datasets which have some data withheld by the submitting agency; default is 'No'.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **Initial Data**: This group is REQUIRED.

  This group of data items must be entered as soon as the dataset is created.

  - **Serial**: The attribute serial is composed of four parts separated by colons (":"). The maximum total length is 29 characters (5+1+4+1+2+1+15).

. Part 1 is the Country and is always REQUIRED. It contains one to five alphabetic uppercase characters representing either the ITU country code or the NATO Command code identifying the originator or organisation responsible for maintaining the dataset, as listed in Code List CCY.

. Part 2 is the Organization Code and is OPTIONAL. It may contain one to four alphanumeric characters (no spaces or special characters) representing a code for an organization within the country or command. It will normally indicate the organization responsible for maintaining the dataset. Domain naming is left at the discretion of each country, but should be managed by a central authority in the country to allow deconfliction and uniqueness. It should enable the location in the data repository where this dataset information is stored. The Code List Category AG provides examples of possible organization codes. This list MUST be used by USA users, and MAY be used as guidance by other Nations.

. Part 3 is the Dataset Type and MUST contain a two-character code from the table in the Introduction section identifying the type of dataset (LO for a Location, etc).

. Part 4 is a Serial Identifier and is always REQUIRED. It contains one to fifteen alphanumeric characters (including spaces and special characters), whose meaning is left at the discretion of each domain manager.

[XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

- **EntryDateTime**: In Data Item EntryDateTime, enter the date and UTC Time the dataset was **initially** entered into the data repository (e.g., FRRS for USA, SMIR for NATO).
- **EntryBy**: In Data Item EntryBy, enter the serial of the Role which is creating the current dataset.

  [XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "**JA**".

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"
- **Owner**: In Data Item Owner, enter the serial of the Role which is responsible for the accuracy of the data content.

  [XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "**JA**".

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

* **Last Modification**: This group is OPTIONAL.

  This group of data items indicates the last editor of the dataset.

  - **LastChangeDateTime**: In Data Item LastChangeDateTime, enter the date and UTC Time the dataset was last modified.
  - **LastChangeBy**: In Data Item LastChangeBy, enter the serial of the Role which last modified the current dataset.

    [XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "**JA**".

    [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

* **Last Review**: This group is OPTIONAL.

  This group of data items indicates the last reviewer of the dataset.

  - **LastReviewDate**: In Data Item LastReviewDate, enter the last date that the dataset was reviewed.
  - **LastReviewBy**: In Data Item LastReviewBy, enter the Role reference serial of the person who last reviewed the dataset.

    [XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "**JA**".

    [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

* **ModAllowedBy**: In Data Item ModAllowedBy, enter the serial of the Role which is authorised to modify the current dataset. This data item MUST be used to transfer the authority to edit the dataset to another role

when crossing the boundaries between administrative domains (i.e. when exchanging data between different national / NATO systems).
Note: US Systems SHALL NOT permit automated updates of data via the ModAllowedBy data item.

[XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "**JA**".

[XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

* **State**: In Data Item State, enter the state of the dataset.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CSU:**

Code	Meaning
Active	
Inactive	
Other	If selected, a clarifying remark SHOULD be entered

* **Description**: In Data Item Description, enter a general description of the Dataset that is inheriting Common.

Example

Examples are available in inherited elements Transmitter, Receiver, Antenna, Assignment, etc.

ConfigEmission *(US)*

Configuration Emission

Data Item Tag	Data Item Name	Occurrence	Format
EmsClass	Class Of Emission	Opt	pattern (S5)
NecessaryBwMax	Maximum Necessary Bandwidth	Opt	UN(16,9) [0..1.0E9]*(MHz)*
NecessaryBwMin	Minimum Necessary Bandwidth	Opt	UN(16,9) [0..1.0E9]*(MHz)*
Sub-Element Of:	Configuration		

Description

Complex element ConfigEmission (US) specifies the emission bandwidths and classification symbols that a Configuration uses, which may be a subset of the linked components' capabilities.

Input Requirement

* **EmsClass**: In Data Item EmsClass, enter a three to five characters code, derived from the table below, representing the emission classification. If an "X" is used in any of the symbols, Remarks SHOULD be used to explain the nature of the signal.

First Symbol - Designates Type of Modulation of the Main Carrier
Unmodulated N - Emission of unmodulated carrier **Amplitude Modulated** A - Double sideband H - Single sideband, full carrier R - Single sideband, reduced or variable level carrier J - Single sideband, suppressed carrier B - Independent sidebands C - Vestigial sidebands **Angle-Modulated** F - Frequency modulation G - Phase modulation **Amplitude and Angle-Modulated** D - Main carrier is amplitude-modulated and angle-modulated simultaneously or in a preestablished sequence Pulse P - Sequence of unmodulated pulses K - Modulated in amplitude L - Modulated in width/duration M - Modulated in position phase Q - Carrier is angle-modulated during the period of the pulse V - Combination of the foregoing or is produced by other means **Combination** W - Cases not covered above in which an emission consists of the main carrier being modulated, either simultaneously or in a preestablished sequence, in a combination of two or more of the following modes: amplitude, angle, pulse **Other** X - Cases not otherwise covered - : Unknown (to be used only by legacy data)
Second Symbol - Designates the Nature of Signal(s) Modulating the Main Carrier
0 - No modulating signal 1 - A single channel containing quantised or digital information, not using a modulating subcarrier. (Excludes time-division multiplex) 2 - A single channel containing quantised or digital information, using a modulating subcarrier 3 - A single channel containing analogue information 7 - Two or more channels containing quantised or digital information 8 - Two or more channels containing analogue information

9 - Composite system with one or more channels containing quantised or digital information, together with one or more channels containing analogue information X - Cases not otherwise covered - : Unknown (to be used only by legacy data)
Third Symbol - Type of Information to be Transmitted
N - No information transmitted A - Telegraphy - for aural reception B - Telegraphy - for automatic reception C - Facsimile D - Data transmission, telemetry, telecommand E - Telephony (including sound broadcasting) F - Television (video) W - Combination of the above X - Cases not otherwise covered - : Unknown (to be used only by legacy data)
a In this context, the word "information" does not include information of a constant, unvarying, nature such as that provided by standard frequency emissions, continuous wave, pulse radars, etc. b A full explanation for the selection of the letter X shall be provided in Information unless the application is for a non-directional beacon in the bands 190-435 and 510-535 kHz.
Fourth Symbol - Designates the Details of Signal(s)
A - Two-condition code with elements of differing numbers and/or durations B - Two-condition code with elements of the same number and duration without error correction C - Two-condition code with elements of the same number and duration with error correction D - Four-condition code in which each condition represents a signal element of one or more bits E - Multi-condition code in which each condition represents a signal element of one or more bits F - Multi-condition code in which each condition or combination of conditions represents a character G - Sound of broadcasting quality (monophonic) H - Sound of broadcasting quality (stereophonic or quadraphonic) J - Sound of commercial quality (excluding categories defined for symbol K and L below) K - Sound of commercial quality with the use of frequency inversion or band splitting L - Sound of commercial quality with separate frequency modulated signals to control the level of demodulated signal M - Monochrome N - Color W - Combination of the above X - Cases not otherwise covered
Fifth Symbol - Designates the Nature of Multiplexing
N - None C - Code-division multiplex (includes bandwidth expansion techniques) F - Frequency-division multiplex T - Time-division multiplex W - Combination of frequency-division multiplex and time-division multiplex X - Other types of multiplexing

[XSD ERR REGEX] This data item MUST comply to the regular expression: "(A|B|C|D|F|G|H|J|K|L|M|N|P|Q|R|V|W|X|-)(0|1|2|3|7|8|9|X|-)(A|B|C|D|E|F|N|W|X|-)(A|B|C|D|E|F|G|H|J|K|L|M|N|W|X)?(C|F|N|T|W|X)?"

* **NecessaryBwMax**: In Data Item NecessaryBwMax (US), enter the maximum necessary bandwidth in the case of a range of values.

  [XSL ERR MINMAX] If NecessaryBwMax is used, it MUST be greater than NecessaryBwMin.

* **NecessaryBwMin**: In Data Item NecessaryBwMin (US), enter the necessary bandwidth which is defined as the value in MHz, for a given class of emission, the width of the frequency band which is just sufficient to ensure the transmission of information at the rate and with the quality required under specified conditions. This is approximately at the -20 dB level on an emission curve. When specifying a range of necessary bandwidths, enter the minimum necessary bandwidth.

ConfigFreq

Configuration Frequency

Attribute Tag	Attribute Name	Occurrence	Format
idx	Index	Req	UN(6)
Data Item Tag	**Data Item Name**	**Occurrence**	**Format**
FreqRangeGrp		**Req**	
FreqMin	Nominal or Minimum Frequency	Req	UN(16,9) [0..1.0E9]*(MHz)*
FreqMax	Maximum Frequency	Opt	UN(16,9) [0..1.0E9]*(MHz)*
InBand	In Band Indicator	Opt	Code List CBO
Priority	Priority	Opt	Code List CPS
ChannelSpacing ***(US)***	Channel Spacing	Opt	UN(16,9) [0..1.0E9]*(MHz)*
Duration ***(US)***	Frequency Dwell	Opt	UN(12,6)*(us)*
ConfigFreqUse ***(US)***	Frequency Usage	Opt	Code List UFU
Period ***(US)***	Jam Periodicity	Opt	UN(12,6)*(us)*
PulseWidth ***(US)***	Pulse Width	Opt	UN(12,6)*(us)*
Sub-Element Of:	Configuration		

Description

Complex element ConfigFreq indicates the set of frequencies that a configuration uses, which may be a subset of the frequencies that the linked components (Transmitter, Receiver, Antenna) are capable of.

Input Requirement

* **idx** *(Attribute)*: In attribute idx, enter a unique index for each discrete or ranged frequency used in this instance of the ConfigFreq complex element

  [XSD ERR UNIQUE] Each value of this data item MUST be unique within the parent element.

* **Frequency Range**: This group is REQUIRED.

  This group indicates a range of frequencies or a tuning range.

  - **FreqMin**: In Data Item FreqMin, enter the nominal frequency or minimum value of the frequency range.
  - **FreqMax**: In Data Item FreqMax, enter the maximum value of the frequencies in the range.

    [XSL ERR MINMAX] If FreqMax is used, it MUST be greater than FreqMin.

* **InBand**: In Data Item InBand, enter **"Yes"** if this frequency range is in compliance with the applicable Frequency Allocation Table. Enter “No” if any portion of the frequency range is not in compliance.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **Priority**: In Data Item Priority, enter if this spectrum use is Primary, Secondary or Permitted, as defined by the system use and the appropriate Administration Frequency Allocation Table/guidance.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CPS:**

Code	Meaning
Primary	
Secondary	
Permitted	
Other	If selected, a clarifying remark SHOULD be entered

* **ChannelSpacing *(US)***: In Data Item ChannelSpacing (US)- enter the amount of bandwidth allotted to each channel, measured as the spacing between center frequencies (or wavelengths) of adjacent channels.

* **Duration** ***(US)***: In Data Item Duration (US), enter the amount of time the frequency is being monitored or jammed.
* **ConfigFreqUse** ***(US)***: In Data Item ConfigFreqUse (US), enter the primary usage of the discrete configuration frequency or frequency range.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List UFU (extract only):**

Code	Meaning
BEACON	
BEACON, DOWNLINK	
BEACON, UPLINK	
CROSSLINK	
CROSSLINK RECEIVE	
CROSSLINK TRANSMIT	
CROSSLINK TRANSMIT/RECEIVE	
DOWNLINK	
Other	If selected, a clarifying remark SHOULD be entered
RECEIVE	
...	...

* **Period** ***(US)***: In Data Item Period (US), enter how often the frequency is being monitored or jammed.
* **PulseWidth** ***(US)***: In Data Item PulseWidth (US), enter the collected EW channel dwell for the Chirped Signal.

Example

```
<ConfigFreq>
  <FreqMax cls="U">3126</FreqMax>
  <FreqMin cls="U">3000</FreqMin>
  <idx cls="U">23</idx>
  <InBand cls="U">Yes</InBand>
  <Priority cls="U">Primary</Priority>
  <ChannelSpacing cls="U">25</ChannelSpacing>
  <Duration cls="U">.001</Duration>
  <FreqUse cls="U">TRANSMIT</FreqUse>
  <Period cls="U">23.6</Period>
  <PulseWidth cls="U">347</PulseWidth>
</ConfigFreq>
```

Notes

When referenced by SSRequest, the Frequency is used by every Tx, TxMode, and TxAntMode specified in the configuration to communicate with every Rx, RxMode and RxAntMode combination specified in the configuration. When referenced by RFSystem, the FreqUse indicator specifies if the Frequency is associated with Tx, TxMode, and TxAntMode data, Rx, RxMode and RxAntMode data, or with both.

Configuration

Configuration

Data Item Tag	Data Item Name	Occurrence	Format
ConfigID	Configuration Identifier	Req	S100
Description	Mode Description	Opt	S100
Repeater	Repeater Indicator	Opt	Code List CBO
NumUsers	Number of Users	Opt	UN(9)
EIRP		**Opt**	
EIRPMin	Minimum or Nominal EIRP	Opt	SN(10,7)*(dBW)*
EIRPMax	Maximum EIRP	Opt	SN(10,7)*(dBW)*
OOBJustification	Out-Of-Band Justification	Opt	MEMO
PowerLimit ***(US)***	Power Limit	Opt	SN(10,7)*(dBW)*
PowerType ***(US)***	Power Type	Opt	Code List CPT
SpectrumLink ***(US)***	Spectrum Link	Opt	Code List CBO
ConfigApprovedBy ***(US)***	Config Last Approval Person	Opt	S50
ConfigApprovedDateTime ***(US)***	Config Last Approval Timestamp	Opt	DT
ObservedFirstDateTime ***(US)***	Initial Signal Detected Timestamp	Opt	DT
ObservedLastDateTime ***(US)***	Last Signal Detected Timestamp	Opt	DT
LastObservedBy ***(US)***	Last Observed By	Opt	S50
LastReviewedBy ***(US)***	Last Reviewed By	Opt	S50
LastReviewedDateTime ***(US)***	Last Reviewed Timestamp	Opt	DT
Sub-Element Of:	Assignment, RFSystem, SSReply, SSRequest		
Sub-Elements:	CaseNum [0..n] ConfigEmission [0..n] ***(US)*** ConfigFreq [0..n] LoadsetRef [0..n] ***(US)*** Notation [0..n] ObservedERPAnalysis [0..n] ***(US)*** RxRef [0..n] TxRef [0..n] Usage [0..n]		

Description

Complex element Configuration defines the transmitter(s) and receiver(s) that communicate with each other over the specified frequencies using the specified transmitter, receiver, and antenna characteristics (i.e., the link characteristics). When referenced from RFSystem, a configuration defines a grouping of transmitter and/or receiver modes with antenna modes of a system to produce a specific functional capability (i.e., the box characteristics).
See Configuration Diagram

Input Requirement

This element is OPTIONAL and repeatable under HostNationConstraints element. If omitted, the SSReply is assumed to agree with every Configuration in the corresponding SSRequest. In case some configurations in SSRequest are not acceptable, use Configuration in HostNationConstraints to describe the accepted configurations (if necessary, modifying the information from the SSRequest).

* **ConfigID**: In Data Item ConfigID, enter a short name for the configuration; this name should be a meaningful identification of the configuration, but it can also be automatically generated in some systems. The identifier MUST be unique within the dataset and SHOULD NOT be modified during the entire lifetime of the dataset.

  [XSD ERR UNIQUE] Each value of this data item MUST be unique within the parent element.

* **Description**: In Data Item Description, enter a description of the operational configuration. This description should be a meaningful explanation of the configurations main characteristics.

* **Repeater**: In Data Item Repeater, enter **`"Yes"`** for each receiver location when a station in the fixed or mobile service is used primarily as a repeater.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **NumUsers**: In Data Item NumUsers, enter the number of users supported by the configuration. This data may be used to analyse spectrum usage.

* **EIRP**: This group is OPTIONAL.

  Group EIRP contains the Effective Isotropic Radiated Power (EIRP) radiated from the transmitter antenna. The EIRP is the sum of the power supplied to the antenna and the gain of the antenna, less the line loss, expressed in dBW.

  - **EIRPMin**: In Data Item EIRPMin, enter the minimum or nominal effective isotropic radiated power (EIRP) radiated from the transmitter antenna. It is the sum of the power supplied to the antenna and the gain of the antenna, less the line loss.

  - **EIRPMax**: In Data Item EIRPMax, enter the maximum effective isotropic radiated power (EIRP) radiated from the transmitter antenna. It is the sum of the power supplied to the antenna and the gain of the antenna, less the line loss.

    [XSL ERR MINMAX] If EIRPMax is used, it MUST be greater than EIRPMin.

* **OOBJustification**: In Data Item OOBJustification, enter the justification for out-of-band frequency use.

* **PowerLimit *(US)***: In Data Item PowerLimit (US), enter the power limit of the transmissions in this configuration.

* **PowerType *(US)***: In Data Item PowerType (US), enter the power type code for carrier, mean, or peak envelope power emitted. The power type code will depend on the type of emission of the transmitter equipment.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CPT:**

Code	Meaning
C8b	Use this entry for the submission of space data to the ITU if the maximum peak power and power density values are of type C8b.
Carrier	Carrier Power
Mean	Mean Power
PEP	Peak Envelope Power

* **SpectrumLink *(US)***: In Data Item SpectrumLink (US), enter whether the transmitter(s) communicate or interact with the receiver(s) in this Configuration, i.e. enters a link versus a box.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **ConfigApprovedBy *(US)***: In Data Item ConfigApprovedBy (US), enter the identifier of the designated expert who last approved or accepted the Configuration.

* **ConfigApprovedDateTime *(US)***: In Data Item ConfigApprovedDateTime (US), enter the last date and time, based on Greenwich Mean Time (GMT), that the Configuration was approved or accepted by a designated expert.

* **ObservedFirstDateTime *(US)***: In Data Item ObservedFirstDateTime (US), enter the date and time, based on Greenwich Mean Time (GMT), the subject signal was first collected.

* **ObservedLastDateTime *(US)***: In Data Item ObservedLastDateTime (US), enter the date and time, based on Greenwich Mean Time (GMT), the subject signal was last collected.

* **LastObservedBy *(US)***: In Data Item LastObservedBy (US), enter the identifier of the person or entity who last observed this signal configuration.

* **LastReviewedBy *(US)***: In Data Item LastReviewedBy (US), enter the identifier of the person who last reviewed this configuration.

* **LastReviewedDateTime *(US)***: In Data Item LastReviewedDateTime (US), enter the date and time, based on Greenwich Mean Time (GMT), the configuration was thoroughly reviewed.

Example

```xml
<Configuration>
  <ConfigID cls="U">1</ConfigID>
  <PowerLimit cls="U">6.9897</PowerLimit>
  <PowerType cls="U">Mean</PowerType>
  <Usage>
    <StnClass cls="U">MLP</StnClass>
    <RadioService cls="U">Land Mobile Service</RadioService>
  </Usage>
  <ConfigFreq>
    <FreqMin cls="U">150.05</FreqMin>
    <FreqMax cls="U">150.8</FreqMax>
  </ConfigFreq>
  <ConfigFreq>
    <FreqMin cls="U">162.0125</FreqMin>
    <FreqMax cls="U">173.2</FreqMax>
  </ConfigFreq>
  <ConfigFreq>
    <FreqMin cls="U">173.4</FreqMin>
    <FreqMax cls="U">174</FreqMax>
  </ConfigFreq>
  <TxRef>
    <Serial cls="U">USA:ESC:TX:KDF1FQ8J8B0E7E4</Serial>
    <TxAntModeRef>
      <Serial cls="U">USA:ESC:AN:KDF1FQ9AE1GKR9T</Serial>
    </TxAntModeRef>
  </TxRef>
  <RxRef>
    <Serial cls="U">USA:ESC:RX:KDF1FQ9A072QI78</Serial>
    <RxAntModeRef>
      <Serial cls="U">USA:ESC:AN:KDF1FQ9AE1GKR9T</Serial>
    </RxAntModeRef>
  </RxRef>
  <ConfigEmission>
    <EmsClass cls="U">F3E</EmsClass>
    <NecessaryBwMin cls="U">0.011</NecessaryBwMin>
  </ConfigEmission>
</Configuration>
```

Contact

Contact

Data Item Tag	Data Item Name	Occurrence	Format
EffectiveDate	Effective Date	Opt	D
ExpireReview		**Opt**	
ExpirationDate	Expiration Date	Opt	D
ReviewDate	Review Date	Opt	D
TitleRank	Title or Rank	Opt	S10
FirstName	First Name	Opt	S30
LastName	Last Name	Opt	S30
Inherits from:	Common		
Sub-Element Of:	SchemaRoot		
Sub-Elements:	Address [0..n] EMail [0..n] TelephoneFax [0..n]		

Description

This element inherits attributes and sub-elements from element Common.

Complex element Contact is the XML root for all parameters of a Contact.
See Contact Diagram

Input Requirement

[XSL ERR DSTYPE] Part 3 of the Serial reference (dataset type) MUST be "**CN**".

* **EffectiveDate**: In Data Item EffectiveDate, enter the date by which the dataset is to be operational or effective.
* **ExpireReview**: This group is OPTIONAL.
  - **ExpirationDate**: In Data Item ExpirationDate, enter the date at which the dataset will expire. The Expiration date should be less than five years from current date.
  - **ReviewDate**: In Data Item ReviewDate, enter the date by which the dataset is to be reviewed. The Review date should be less than five years from the effective date. In Data Item Spectrum Supportability datasets, this date indicate when the organisation responsible for re-initiating host coordination plans to resubmit a Spectrum Supportability request to the host nation for continued use of the equipment.
* **TitleRank**: In Data Item TitleRank, enter the contact title or rank e.g., Ms, Col, etc.
* **FirstName**: In Data Item FirstName, enter the first name of the contact individual.
* **LastName**: In Data Item LastName, enter the last name of the contact individual.

Example

```
<Contact cls="U">
  <Serial cls="U">USA:AF:CN:123</Serial>
  <EntryDateTime cls="U">2004-05-20T00:00:00Z</EntryDateTime>
  <FirstName cls="U">John</FirstName>
  <LastName cls="U">Doe</LastName>
  <TelephoneFax>
    <Number cls="U">(123)456.789</Number>
  </TelephoneFax>
</Contact>
```

ContactRef

Contact Reference

Data Item Tag	Data Item Name	Occurrence	Format
	Element Content	Req	pattern (S29)
Sub-Element Of:	Role		

Description

Comlex element ContactRef references a Contact.

Input Requirement

In Data Item ContactRef, enter the serial of the referenced Contact.

[XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "**CN**".

[XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

CoordinationData *(US)*

Coordination Data

Data Item Tag	Data Item Name	Occurrence	Format
CoordIndicator	Coordination Indicator	Req	Code List UCJ
HostComments	Host Comments	Opt	MEMO
Sub-Element Of:	Assignment		

Description

Complex element CoordinationData (US) contains Host Nation coordination information.

Input Requirement

* **CoordIndicator**: In Data Item CoordIndicator (US), enter the coordinating entity.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List UCJ:**

Code	Meaning
Canada	
Mexico	
NATO	
Host Nation	
NTIA Fas Members	
FAA	
DoD Joint Chiefs of Staff	
Other	If selected, a clarifying remark SHOULD be entered

* **HostComments**: In Data Item HostComments (US), enter the Comments from the coordinating entity.

Country

Applicable Country/Area

Data Item Tag	Data Item Name	Occurrence	Format
	Element Content	Req	Code List CAO
Sub-Element Of:	TOA		

Description

Complex element Country indicates the country or area for which this Table of Allocations is in force.

Input Requirement

In Data Item Country, enter the country or area code.

[XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CAO (extract only):**

Code	Meaning
AFG	Afghanistan
FF	Africa
US-AL	Alabama
ALA	Åland Islands
US-AK	Alaska
ALB	Albania
DZA	Algeria
NT-ASC	Allied Submarine Command
ASM	American Samoa
AND	Andorra
...	...

Example

```
<Country cls="U">USA</Country>
```

Curve

Curve

Attribute Tag	Attribute Name	Occurrence	Format
idx	Index	Req	UN(6)
Data Item Tag	**Data Item Name**	**Occurrence**	**Format**
Type	Curve Type	Req	Code List CCT
Calculated	Calculated Data Indicator	Opt	Code List CBO
FreqFactor	Curve Frequency Factor	Req	UN(3,1)
FreqConst	Curve Frequency Constant	Req	SN(16,9) [0..1.0E9]*(MHz)*
Bw	Curve Measurement Bandwidth	Opt	UN(16,9) [0..1.0E9]*(MHz)*
FreqMin	Lowest Frequency of the Curve	Opt	UN(16,9) [0..1.0E9]*(MHz)*
FreqMax	Highest Frequency	Opt	UN(16,9) [0..1.0E9]*(MHz)*
Sub-Element Of:	Receiver, Transmitter		
Sub-Elements:	CurvePoint [1..n]		

Description

Complex element Curve defines the type of curve. It contains an indication as to whether the values were measured or calculated, the numeric factor to be applied to the carrier frequency to find the abscissa of the curve, a frequency to be added to the carrier frequency to obtain the origin of the curve, and the measurement bandwidth. The absolute frequency of the point on the curve will be indicated by:
Freq = Freqcarrier * X + Freqconst + Freqoffset
where:

* Freqcarrier = assigned or tuned frequency for which the curve will apply
* X = value of freqFactor
* Freqconst = value of freqConst
* Freqoffset = value of offset in each CurvePoint

Input Requirement

All curves for all modes are stored at the Transmitter or Receiver level, and are referenced by the mode to which the curve applies. If a curve is entered and not referenced by any mode, it is NOT assumed to apply to all modes and therefore it is not used.

* **idx** *(Attribute)*: In attribute idx, enter a unique index for each Curve used by this Dataset. Once an idx is used it SHOULD NOT be modified during the lifetime of the Dataset; e.g., an element with idx=2 will keep idx=2 even if the first occurrence (idx=1) is deleted.

  [XSD ERR UNIQUE] Each value of this data item MUST be unique within the parent element.

* **Type**: In Data Item Type, enter a code defining the type of curve.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CCT:**

Code	Meaning
Filter	External filter between TxRx and Antenna
Selectivity-IF1	Receiver 1st intermediate frequency selectivity
Selectivity-IF2	Receiver 2nd intermediate frequency selectivity
Selectivity-IF3	Receiver 3rd intermediate frequency selectivity
Selectivity-IF4	Receiver 4th intermediate frequency selectivity
Selectivity-IF5	Receiver 5th intermediate frequency selectivity
Selectivity-Overall	Overall Selectivity
Selectivity-RF	Receiver radio-frequency selectivity
Tx RF Spectrum	Transmitter RF spectrum

* **Calculated**: In Data Item Calculated, enter Yes to indicate that the data was calculated, or "No" if the data is issued from measurement. Leave blank if the origin of the data is not known.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **FreqFactor**: In Data Item FreqFactor, enter a positive numeric multiplier of the carrier frequency. For example, enter 0 to define a curve around the IF, or 1 to define a curve around the carrier frequency.
* **FreqConst**: In Data Item FreqConst, enter a frequency offset (positive or negative).
* **Bw**: In Data Item Bw, enter the bandwidth measurement of the curve values.
* **FreqMin**: In Data Item FreqMin, enter the lowest value of the curve frequency range.
* **FreqMax**: In Data Item FreqMax, enter the highest value of the curve frequency range.

  [XSL ERR MINMAX] If FreqMax is used, it MUST be greater than FreqMin.

Example

```
<Curve idx="1">
  <Type cls="U">Tx RF Spectrum</Type>
  <Calculated cls="U">No</Calculated>
  <FreqFactor cls="U">1</FreqFactor>
  <FreqConst cls="U">0</FreqConst>
  <Bw cls="U">0.001</Bw>
  <CurvePoint>
    <Offset cls="U">0.025</Offset>
    <Level cls="U">-3</Level>
  </CurvePoint>
  <CurvePoint>
    <Offset cls="U">0.05</Offset>
    <Level cls="U">-20</Level>
  </CurvePoint>
  <CurvePoint>
    <Offset cls="U">0.1</Offset>
    <Level cls="U">-40</Level>
  </CurvePoint>
  <CurvePoint>
    <Offset cls="U">1</Offset>
    <Level cls="U">-60</Level>
  </CurvePoint>
</Curve>
```

CurvePoint

Curve point

Data Item Tag	Data Item Name	Occurrence	Format
Offset	Point Frequency Offset	Req	SN(16,9) [0..1.0E9]*(MHz)*
Level	Level	Req	SN(4,1) [-150..150]*(dB)*
Sub-Element Of:	Curve		

Description

Complex element CurvePoint contains the relative frequency to add to the curve origin to obtain the absolute frequency point on the curve, and the value in dB (relative to the carrier for a Tx characteristic, or relative to sensitivity for a Rx characteristic).

Input Requirement

This data element must be repeated for each couple (X, Y) of a curve.

* **Offset**: In Data Item Offset, enter a frequency difference (refer to data element Curve for use instructions). If the curve being defined is symmetric, then enter only positive offsets. If the curve is not symmetric (such as a SSB or vestigial sideband modulation spectrum) then enter the full curve including negative offsets. When defining the transmitter RF spectrum and the receiver RF and IF selectivity curves, enter as a minimum the points corresponding to the -3, -20, -40 and -60 dB values.
* **Level**: In Data Item Level, enter a dB value (refer to data element Curve for use instructions).

Example

See example under Curve.

DCSTrunk

DCS Trunk Identifier

Data Item Tag	Data Item Name	Occurrence	Format
	Element Content	Req	S6
Sub-Element Of:	Link		

Description

Complex element DCSTrunk (US) is the Defense Communications System (DCS) trunk identifier for a specific "trunked" system. The identifier is assigned by the Defense Information Systems Agency (DISA).

Input Requirement

In Data Item DCSTrunk (US), enter the Defense Communications System (DCS) trunk identifier assigned by the Defense Information Systems Agency (DISA).

Example

```
<DCSTrunk cls="U">56789</DCSTrunk>
```

Dataset

Dataset

Data Item Tag	Data Item Name	Occurrence	Format
Serial	Serial	Req	pattern (S29)
RetireDate	Retire Date	Opt	D
Reason	Reason	Opt	MEMO
Sub-Element Of:	Administrative		
Sub-Elements:	MissingRef [0..n]		

Description

Complex element Dataset is used within an Administrative transaction to specify the identifier of the datasets on which the action must apply.

Input Requirement

* **Serial**: In Data Item Serial, enter the serial of the referenced Dataset.

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

* **RetireDate**: In Data Item RetireDate, enter the date this Dataset goes out of force.

* **Reason**: In Data Item Reason, enter the reason linked to the Action performed on this dataset

DatasetRef

Element Content

Data Item Tag	Data Item Name	Occurrence	Format
	Element Content	Req	pattern (S29)
Sub-Element Of:	Message		

Description

Complex element DatasetRefs lists the serial for each primary Dataset included in a single Message.

Input Requirement

In Data Item DatasetRef, enter a single serial for each unique primary Dataset included in the Message.

[XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

Deployment

Deployment

Data Item Tag	Data Item Name	Occurrence	Format
Type	Type	Req	Code List CIN
Status	Status	Opt	Code List CSU
Sub-Element Of:	RFSystem, Receiver, Transmitter		
Sub-Elements:	Installation [0..n]		

Description

Complex element Deployment provides the general type of equipment deployment. For the detailed data, the appropriate force element and platforms elements should be referenced. Data element Deployment identifies the general category of how the equipment is deployed. For example an equipment may be deployed on an airborne platform, a ship or fixed land installation.

Input Requirement

* **Type**: In Data Item Type, enter the general deployment category for the equipment.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CIN (extract only):**

Code	Meaning
Air	
Amphibious	
Deep Space	
Handheld	
Land	
Land Fixed	
Land Mobile	
Manpack	
Missile	
Non Synchronous Orbit	
...	...

* **Status**: In Data Item Status, enter the status of the Deployment.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CSU:**

Code	Meaning
Active	
Inactive	
Other	If selected, a clarifying remark SHOULD be entered

Example

```
<Deployment>
  <Type cls="U">Air</Type>
</Deployment>
```

DetailedFunction

Detailed Function Identifier

Data Item Tag	Data Item Name	Occurrence	Format
	Element Content	Req	Code List UFN
Sub-Element Of:	Link		

Description

Complex element DetailedFunctionID (US) is the function identifier for an equipment in the link of a frequency assignment or group of frequency assignments.

Input Requirement

In Data Item DetailedFunction (US), enter the detailed function of the frequency assignment.

[XSD ERR CODELIST] This data item MUST use one of the codes from **Code List UFN (extract only):**

Code	Meaning
UNKNOWN	
A2C2S (Army Airborne Command & Control System)	
ACS (Aerial Common Sensor)	
ADMINISTRATIVE	
AEGIS	
A-EPLRS	
AERO CLUB	
AFATDS	
AFAUX/CAP (Air Force Auxiliary/Civil Air Patrol)	
AFSATCOM	
...	...

Example

```
<DetailedFunction cls="U">COMBATANT COMMAND/GENERAL OFFICER SUPPORT</
DetailedFunction>
```

DiagramEndpoint

Diagram End Point

Data Item Tag	Data Item Name	Occurrence	Format
IconType	IconType	Opt	Code List CIC
EndpointID	Endpoint ID	Req	S20
Description	Endpoint Description	Opt	S100
Name	Endpoint Name	Opt	S15
IconPosLeft	Left Icon Position	Opt	UN(6)*(twips)*
IconPosTop	Top Icon Position	Opt	UN(6)*(twips)*
PointToMultiPoint	PointToMultiPoint	Opt	Code List CBO
Sub-Element Of:	SSRequest		
Sub-Elements:	EndpointLocation [0..n]		

Description

Complex element DiagramEndpoint defines an instance of an icon on the diagram.

Input Requirement

* **IconType**: In Data Item IconType, enter the type of icon for the diagram endpoint.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CIC (extract only):**

Code	Meaning
Airborne	
Earth	
Fixed	
Land	
Land Mobile	
METAIDS Ground	
METAIDS Radar	
METAIDS Radiosonde	
Mobile Earth-Air	
Mobile Earth-Land	
...	...

* **EndpointID**: In Data Item EndpointID, enter an identifier for each icon on the diagram. Within a diagram, all EndPointIDs must be unique.

* **Description**: In Data Item Description, enter a human-readable description of a diagram endpoint.
* **Name** : In Data Item Name, enter a human-readable name of a diagram endpoint, or Station.
* **IconPosLeft** : In Data Item IconPosLeft, enter the X coordinate of the icon in twips. Twips are screen-independent units to ensure that the proportion of screen elements is the same on all display systems. A twip is defined as being 1/1440 of an inch, or 17.639 micrometres.
* **IconPosTop** : In Data Item IconPosTop, enter the Y coordinate of the icon in twips." to read, "In Data Item IconPosTop, enter the Y coordinate of the icon in twips. Twips are screen-independent units to ensure that the proportion of screen elements is the same on all display systems. A twip is defined as being 1/1440 of an inch, or 17.639 micrometres.
* **PointToMultiPoint**: In Data Item PointToMultiPoint, enter "Yes" if the diagram endpoint participates in point-to-multipoint links. Enter "No" if it participates in point-to-point links.
  Note for the USA: Required when operating between 932 and 935 MHz or 941 and 944 MHz.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

DiagramLine

Diagram Line

Data Item Tag	Data Item Name	Occurrence	Format
TxEndpointID	Tx Endpoint ID	Req	S20
RxEndpointID	Rx Endpoint ID	Req	S20
ConfigID	Configuration ID	Opt	S100
Sub-Element Of:	SSRequest		

Description

Complex element DiagramLine defines a line between two endpoints on the diagram.

Input Requirement

* **TxEndpointID**: In Data Item TxEndpointID, enter the Endpoint ID at the originating (transmitting) endpoint of a line on the diagram. There must be a corresponding DiagramEndpoint element with this name. Note there may be more than one line with the same originating and terminating endpoints if those lines reference different Configurations.

  [XSD ERR RELATED] This item MUST refer to an existing DiagramEndpoint within the dataset.

* **RxEndpointID**: In Data Item RXEndpointID, enter the Endpoint ID at the terminating (receiving) endpoint of a line on the diagram. There must be a corresponding DiagramEndpoint element with this name. Note there may be more than one line with the same originating and terminating endpoints if those lines reference different Configurations.

  [XSD ERR RELATED] This item MUST refer to an existing DiagramEndpoint within the dataset.

* **ConfigID**: In Data Item ConfigID, enter a reference to a Configuration associated with this line on the diagram.

  [XSD ERR RELATED] This item MUST refer to an existing Configuration within the dataset.

DocketNum

Docket Number

Data Item Tag	Data Item Name	Occurrence	Format
	Element Content	Req	S12
Sub-Element Of:	Assignment		

Description

Complex element DocketNum (US) contains the docket number from a prior data repository.

Input Requirement

In Data Item DocketNum (US), enter the reference number assigned by the Interdepartment Radio Advisory Committee (IRAC) to frequency applications submitted to the Frequency Assignment Subcommittee (FAS).

Downgrade *(US)*

Downgrade

Data Item Tag	Data Item Name	Occurrence	Format
Downcls	Downgrading Classification	Req	Code List CCL
Date	Downgrading Date	Req	D
DowngradeInfo	Downgrading Information	Opt	S200
Sub-Element Of:	SecurityClass		

Description

Complex element Downgrade (US) contains the downgrade security classification from one or more data information sources.

Input Requirement

* **Downcls**: In Data Item DownCls (US), enter the classification level of the dataset after downgrading.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CCL:**

Code	Meaning
U	Unclassified
R	Restricted (This classification SHALL NOT be used in USA-created datasets)
C	Confidential
S	Secret
T	Top Secret

* **Date**: In Data Item Date (US), enter the date of the permitted downgrading.
* **DowngradeInfo**: In Data Item DowngradeInfo (US), enter additional downgrading information, if any.

Example

```
<Downgrade>
  <DownCls>C</DownCls>
  <Date>1999-11-05</Date>
</Downgrade>
```

EMail

EMail

Data Item Tag	Data Item Name	Occurrence	Format
Preferred	Preferred Address	Opt	Code List CBO
Type	System or Network	Opt	S20
MaxCls	System Maximum Classification	Opt	Code List CCL
Address	Email Address	Req	S255
Sub-Element Of:	Contact, Organisation, Role		

Description

Complex element Email contains the email address of a Contact or Role.

Input Requirement

* **Preferred**: In Data Item Preferred, enter a code **"Yes"** for the preferred address(es) and a code **"No"** for the others. Automated tools SHOULD send all mails to this Contact to all its preferred addresses.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **Type**: In Data Item Type, enter the type of network hosting the e-mail address.
* **MaxCls**: In Data Item MaxCls, enter the highest classification that can be used for the email address.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CCL:**

Code	Meaning
U	Unclassified
R	Restricted (This classification SHALL NOT be used in USA-created datasets)
C	Confidential
S	Secret
T	Top Secret

* **Address**: In Data Item Address, enter the e-mail address.

Example

```
<EMail>
  <Preferred cls="U">Yes</Preferred>
  <Type cls="U">Internet</Type>
  <MaxCls cls="U">U</MaxCls>
  <Address>john.doe@abc.com</Address>
</EMail>
```

EarthStation

Earth Station

Data Item Tag	Data Item Name	Occurrence	Format
Name	Station Name	Opt	S50
Type	Station Type	Opt	Code List CEA
LocationRef	Location Reference	Opt	pattern (S29)
Sub-Element Of:	Satellite		

Description

Complex element EarthStation contains the name and type of an earth station used in a satellite network.

Input Requirement

* **Name**: In Data Item Name, enter the name of an associated earth station.
* **Type**: In Data Item Type, enter if this is a specific or typical earth station.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CEA:**

Code
Specific
Typical

* **LocationRef**: In Data Item LocationRef, enter the serial of the referenced Location.

  [XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "**LO**".

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

Example

```
<EarthStation>
  <Name cls="U">Kessler</Name>
  <Type cls="U">Specific</Type>
</EarthStation>
```

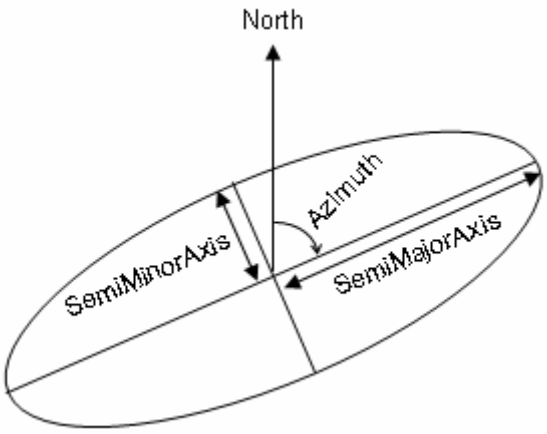
Ellipse

Ellipse

Attribute Tag	Attribute Name	Occurrence	Format
idx	Index	Req	UN(6)
Data Item Tag	**Data Item Name**	**Occurrence**	**Format**
Excluded	Shape is Excluded	Opt	Code List CBO
Coord		**Req**	
Lon	Longitude	Req	pattern (S11)
Lat	Latitude	Req	pattern (S10)
SemiMajorAxis	Semi Major Axis	Req	UN(9,4)[0..10000]*(km)*
SemiMinorAxis	Semi Minor Axis	Req	UN(9,4)[0..10000]*(km)*
Azimuth	Azimuth of the Major Axis	Req	UN(5,2) [0..360]*(deg)*
Altitude		**Opt**	
AltitudeMin	Minimum Altitude Above Ground Level	Opt	SN(7,2)*(m)*
AltitudeMax	Maximum Altitude Above Ground Level	Opt	SN(7,2)*(m)*
Sub-Element Of:	Location		

Description

Complex element Ellipse on the horizontal plane is defined by its semi-major and semi-minor axis and by the orientation (azimuth) of the semi-major axis.
This element SHALL NOT be used to describe a satellite orbit.



Input Requirement

* **idx** *(Attribute)*: In attribute idx, enter a unique integer index for the current ellipse within the geometric shape.

  [XSD ERR UNIQUE] Each value of this data item MUST be unique within the parent element.

* **Excluded**: In Data Item Excluded, enter "Yes" to indicate that the shape is to be excluded from the set. If omitted, a "No" SHOULD be assumed by processing applications, meaning that the shape is included by default.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **Coord**: This group is REQUIRED.

  In Data Item Lat, enter the geographical latitude (degrees, minutes, seconds and hemisphere N or S) of the Point or center of the Ellipse. Same remarks for seconds and leading zeros. enter N or S immediately following the seconds. The format is: ddmmss.hhH (where ".hh" is optional and H = N or S).

- **Lon**: In Data Item Lon, enter the geographical longitude (degrees, minutes, seconds, and hemisphere E or W) of the Point or center of the Ellipse. If the seconds are not known, use 00, except in the case of navigation aid systems, geostationary satellites, and microwave facilities where seconds are required. Use leading zeros as appropriate for degrees, minutes, or seconds. Degrees longitude require three digits. Seconds may have a decimal point followed by up to two decimals. enter E or W immediately following the seconds. The format is: **`dddmmss.hhH`** (where ".hh" is optional and H = E or W).

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "((((((0[0-9]{2})|(1[0-7][0-9]))([0-5][0-9]){2})(.[0-9]{1,2})?)|1800000)(E|W))|X"

- **Lat**: In Data Item Lat, enter the geographical latitude (degrees, minutes, seconds and hemisphere N or S) of the Point or center of the Ellipse. Same remarks for seconds and leading zeros. enter N or S immediately following the seconds. The format is: **`ddmmss.hhH`** (where ".hh" is optional and H = N or S).

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "((((((([0-8][0-9]))([0-5][0-9]){2})(.[0-9]{1,2})?)|900000)(N|S))|X"

* **SemiMajorAxis**: In Data Item SemiMajorAxis, enter the length of the semi-major axis of the ellipse.

  [XSL ERR MINMAX] SemiMajorAxis it MUST be greater than or equal to SemiMinorAxis.

* **SemiMinorAxis**: In Data Item SemiMinorAxis, enter the length of the semi-minor axis of the ellipse.

* **Azimuth**: In Data Item Azimuth, enter the angle of the semi-major axis in the horizontal plane, measured from true North.

* **Altitude AGL**: This group is OPTIONAL.

  - **AltitudeMin**: In Data Item AltitudeMin, enter the minimum or nominal height of the point above the terrain (also known as "above ground level" AGL).

  - **AltitudeMax**: In Data Item AltitudeMax, enter the maximum or nominal height of the point above the terrain (also known as "above ground level" AGL).

    [XSL ERR MINMAX] If AltitudeMax is used, it MUST be greater than AltitudeMin.

Example

```
<Ellipse>
  <AltitudeMax cls="U">20000</AltitudeMax>
  <AltitudeMin cls="U">3896.45</AltitudeMin>
  <Azimuth cls="U">357.8</Azimuth>
  <Excluded cls="U">No</Excluded>
  <idx cls="U">23</idx>
  <Lat cls="U">394217.12N</Lat>
  <Lon cls="U">792823.5W</Lon>
  <SemiMajorAxis cls="U">87.87</SemiMajorAxis>
  <SemiMinorAxis cls="U">67.89</SemiMinorAxis>
</Ellipse>
```

Emission

Authorised Emission

Data Item Tag	Data Item Name	Occurrence	Format
EmsClass	Class Of Emission	Opt	pattern (S5)
NecessaryBw	Necessary Bandwidth	Opt	UN(16,9) [0..1.0E9]*(MHz)*
Power	Maximum Power	Opt	SN(10,7)*(dBW)*
Sub-Element Of:	Allotment		

Description

Complex element Emission defines the limits of the authorized bandwidth and power within the allotment.

Input Requirement

* **EmsClass**: In Data Item EmsClass, enter a three to five characters code, derived from the table below, representing the emission classification. If an "X" is used in any of the symbols, Remarks SHOULD be used to explain the nature of the signal.

First Symbol - Designates Type of Modulation of the Main Carrier
Unmodulated N - Emission of unmodulated carrier **Amplitude Modulated** A - Double sideband H - Single sideband, full carrier R - Single sideband, reduced or variable level carrier J - Single sideband, suppressed carrier B - Independent sidebands C - Vestigial sidebands **Angle-Modulated** F - Frequency modulation G - Phase modulation **Amplitude and Angle-Modulated** D - Main carrier is amplitude-modulated and angle-modulated simultaneously or in a preestablished sequence Pulse P - Sequence of unmodulated pulses K - Modulated in amplitude L - Modulated in width/duration M - Modulated in position phase Q - Carrier is angle-modulated during the period of the pulse V - Combination of the foregoing or is produced by other means **Combination** W - Cases not covered above in which an emission consists of the main carrier being modulated, either simultaneously or in a preestablished sequence, in a combination of two or more of the following modes: amplitude, angle, pulse **Other** X - Cases not otherwise covered - : Unknown (to be used only by legacy data)
Second Symbol - Designates the Nature of Signal(s) Modulating the Main Carrier
0 - No modulating signal 1 - A single channel containing quantised or digital information, not using a modulating subcarrier. (Excludes time-division multiplex) 2 - A single channel containing quantised or digital information, using a modulating subcarrier 3 - A single channel containing analogue information 7 - Two or more channels containing quantised or digital information 8 - Two or more channels containing analogue information 9 - Composite system with one or more channels containing quantised or digital information, together with one or more channels containing analogue information X - Cases not otherwise covered

- : Unknown (to be used only by legacy data)
Third Symbol - Type of Information to be Transmitted
N - No information transmitted A - Telegraphy - for aural reception B - Telegraphy - for automatic reception C - Facsimile D - Data transmission, telemetry, telecommand E - Telephony (including sound broadcasting) F - Television (video) W - Combination of the above X - Cases not otherwise covered - : Unknown (to be used only by legacy data)
a In this context, the word "information" does not include information of a constant, unvarying, nature such as that provided by standard frequency emissions, continuous wave, pulse radars, etc. b A full explanation for the selection of the letter X shall be provided in Information unless the application is for a non-directional beacon in the bands 190-435 and 510-535 kHz.
Fourth Symbol - Designates the Details of Signal(s)
A - Two-condition code with elements of differing numbers and/or durations B - Two-condition code with elements of the same number and duration without error correction C - Two-condition code with elements of the same number and duration with error correction D - Four-condition code in which each condition represents a signal element of one or more bits E - Multi-condition code in which each condition represents a signal element of one or more bits F - Multi-condition code in which each condition or combination of conditions represents a character G - Sound of broadcasting quality (monophonic) H - Sound of broadcasting quality (stereophonic or quadraphonic) J - Sound of commercial quality (excluding categories defined for symbol K and L below) K - Sound of commercial quality with the use of frequency inversion or band splitting L - Sound of commercial quality with separate frequency modulated signals to control the level of demodulated signal M - Monochrome N - Color W - Combination of the above X - Cases not otherwise covered
Fifth Symbol - Designates the Nature of Multiplexing
N - None C - Code-division multiplex (includes bandwidth expansion techniques) F - Frequency-division multiplex T - Time-division multiplex W - Combination of frequency-division multiplex and time-division multiplex X - Other types of multiplexing

[XSD ERR REGEX] This data item MUST comply to the regular expression: "(A|B|C|D|F|G|H|J|K|L|M|N|P|Q|R|V|W|X|-)(0|1|2|3|7|8|9|X|-)(A|B|C|D|E|F|N|W|X|-)(A|B|C|D|E|F|G|H|J|K|L|M|N|W|X)?(C|F|N|T|W|X)?"

* **NecessaryBw**: In Data Item NecessaryBw, enter the necessary bandwidth which is defined as the minimum width of the frequency band sufficient to ensure the transmission of information at the required rate and quality. This is approximately at the -20 dB level on an emission curve..

* **Power**: In Data Item Power, enter the maximum authorised power in dBW, for the given class of emission.

Example

See Allotment.

EmsClass

Class Of Emission

Attribute Tag	Attribute Name	Occurrence	Format
explainInformationTypeX ***(US)***	Explain Information Type X	Opt	MEMO
explainModulationTypeX ***(US)***	Explain Modulation Type X	Opt	MEMO
explainNatureOfSignalX ***(US)***	Explain Nature Of Signal X	Opt	MEMO
Data Item Tag	**Data Item Name**	**Occurrence**	**Format**
	Element Content	Req	pattern (S5)
Sub-Element Of:	RxMode, TxMode		

Description

Complex element EmsClass identifies the emission classification symbols that define the baseband modulating characteristics of the emission designator. The emission classification consists of the three required symbols and the two optional symbols.

Input Requirement

In Data Item EmsClass, enter a three to five characters code, derived from the table below, representing the emission classification. If an "X" is used in any of the symbols, Remarks SHOULD be used to explain the nature of the signal.

First Symbol - Designates Type of Modulation of the Main Carrier
Unmodulated N - Emission of unmodulated carrier **Amplitude Modulated** A - Double sideband H - Single sideband, full carrier R - Single sideband, reduced or variable level carrier J - Single sideband, suppressed carrier B - Independent sidebands C - Vestigial sidebands **Angle-Modulated** F - Frequency modulation G - Phase modulation **Amplitude and Angle-Modulated** D - Main carrier is amplitude-modulated and angle-modulated simultaneously or in a preestablished sequence Pulse P - Sequence of unmodulated pulses K - Modulated in amplitude L - Modulated in width/duration M - Modulated in position phase Q - Carrier is angle-modulated during the period of the pulse V - Combination of the foregoing or is produced by other means **Combination** W - Cases not covered above in which an emission consists of the main carrier being modulated, either simultaneously or in a preestablished sequence, in a combination of two or more of the following modes: amplitude, angle, pulse **Other** X - Cases not otherwise covered - : Unknown (to be used only by legacy data)
Second Symbol - Designates the Nature of Signal(s) Modulating the Main Carrier
0 - No modulating signal 1 - A single channel containing quantised or digital information, not using a modulating subcarrier. (Excludes time-division multiplex) 2 - A single channel containing quantised or digital information, using a modulating subcarrier 3 - A single channel containing analogue information 7 - Two or more channels containing quantised or digital information 8 - Two or more channels containing analogue information

9 - Composite system with one or more channels containing quantised or digital information, together with one or more channels containing analogue information X - Cases not otherwise covered - : Unknown (to be used only by legacy data)
Third Symbol - Type of Information to be Transmitted
N - No information transmitted A - Telegraphy - for aural reception B - Telegraphy - for automatic reception C - Facsimile D - Data transmission, telemetry, telecommand E - Telephony (including sound broadcasting) F - Television (video) W - Combination of the above X - Cases not otherwise covered - : Unknown (to be used only by legacy data)
a In this context, the word "information" does not include information of a constant, unvarying, nature such as that provided by standard frequency emissions, continuous wave, pulse radars, etc. b A full explanation for the selection of the letter X shall be provided in Information unless the application is for a non-directional beacon in the bands 190-435 and 510-535 kHz.
Fourth Symbol - Designates the Details of Signal(s)
A - Two-condition code with elements of differing numbers and/or durations B - Two-condition code with elements of the same number and duration without error correction C - Two-condition code with elements of the same number and duration with error correction D - Four-condition code in which each condition represents a signal element of one or more bits E - Multi-condition code in which each condition represents a signal element of one or more bits F - Multi-condition code in which each condition or combination of conditions represents a character G - Sound of broadcasting quality (monophonic) H - Sound of broadcasting quality (stereophonic or quadraphonic) J - Sound of commercial quality (excluding categories defined for symbol K and L below) K - Sound of commercial quality with the use of frequency inversion or band splitting L - Sound of commercial quality with separate frequency modulated signals to control the level of demodulated signal M - Monochrome N - Color W - Combination of the above X - Cases not otherwise covered
Fifth Symbol - Designates the Nature of Multiplexing
N - None C - Code-division multiplex (includes bandwidth expansion techniques) F - Frequency-division multiplex T - Time-division multiplex W - Combination of frequency-division multiplex and time-division multiplex X - Other types of multiplexing

[XSD ERR REGEX] This data item MUST comply to the regular expression: "(A|B|C|D|F|G|H|J|K|L|M|N|P|Q|R|V|W|X|-)(0|1|2|3|7|8|9|X|-)(A|B|C|D|E|F|N|W|X|-)(A|B|C|D|E|F|G|H|J|K|L|M|N|W|X)?(C|F|N|T|W|X)?"

* **explainInformationTypeX** *(Attribute)* ***(US)***: In attribute explainInformationTypeX (US), enter a reference to a Remark that describes the Type of Information. This is required only when the 3rd symbol of the EmsClass is an "X" (Other).

* **explainModulationTypeX** *(Attribute)* ***(US)***: In attribute explainModulationTypeX(US), enter a reference to a Remark that describes the Type of Modulation. This is required only when the 1st symbol of the EmsClass is an "X" (Other).

* **explainNatureOfSignalX** *(Attribute)* ***(US)***: In attribute explainNatureOfSignalX (US), enter a reference to a Remark that describes the Nature of Signal. This is required only when the 2nd symbol of the EmsClass is an "X" (Other).

Examples

Within an equipment mode:

```
<EmsClass>J3E</EmsClass>
<EmsClass>P0NAN</EmsClass>
```

Within an interference Report:

```
<SourceEmsClass>A3E</SourceEmsClass>
```

EndpointLocation

Endpoint Location

Data Item Tag	Data Item Name	Occurrence	Format
AntennaHeight	Antenna Height	Opt	SN(7,2)*(m)*
Excluded	Excluded	Opt	Code List CBO
LocSatRef	Location or Satellite Reference	Opt	pattern (S29)
MinPointAngle	Minimum Pointing Angle	Opt	UN(5,2) [0..180]*(deg)*
SiteElevation	Site Elevation	Opt	SN(7,2)*(m)*
Sub-Element Of:	DiagramEndpoint		

Description

Complex element EndpointLocation defines locations where the diagram endpoint is allowed or forbidden from use.

Input Requirement

* **AntennaHeight**: In Data Item AntennaHeight, enter the antenna height above the ground level.
* **Excluded**: In Data Item Excluded, enter whether the referenced Location is included or excluded at this diagram endpoint.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **LocSatRef**: In Data Item LocSatRef, enter a reference to a geographic location or satellite associated with this diagram endpoint. Note for the USA: When coordinating with NTIA, a location is required for base stations and repeaters of trunking systems and satellite ground stations, and satellite orbital characteristics are required for space systems.

  [XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "**LO** or **SA**".

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

* **MinPointAngle**: In Data Item MinPointAngle, enter the minimum vertical pointing angle for satellite ground station antennas.
* **SiteElevation**: In Data Item SiteElevation, enter the site elevation of each base station and repeater in a trunking system.

ExtReferenceRef

External Reference Identifier

Attribute Tag	Attribute Name	Occurrence	Format
idx	Index	Req	UN(6)
Data Item Tag	Data Item Name	Occurrence	Format
	Element Content	Req	pattern (S29)
Sub-Element Of:	Common		

Description

Complex element ExtReferenceRef refers to an external reference defined in a dataset ExternalReference.

Input Requirement

In Data Item ExtReferenceRef, enter the serial of an existing external reference (defined in an ExternalReference). External References SHALL NOT be linked to Data Items that are not populated.

[XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "**EX**".

[XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

* **idx** *(Attribute)*: In attribute idx, enter a unique index for each External Reference used by this Dataset. Once an idx is used it SHOULD NOT be modified during the lifetime of the Dataset; e.g. an element with idx=2 will keep idx=2 even if the first occurrence (idx=1) is deleted..

  [XSD ERR UNIQUE] Each value of this data item MUST be unique within the parent element.

Example

(see also a more complete example in the standard metadata attributes)

```
<ExtReferenceRef idx="1" cls="U">USA::EX:12</ExtReferenceRef>
```

ExternalReference

External Reference

Data Item Tag	Data Item Name	Occurrence	Format
Type	Type of Reference	Opt	Code List CRE
Date	Date of Reference	Opt	D
Identifier	Reference Identifier	Opt	S50
AlternateIdentifier	Alternate Identifier	Opt	S50
Title	Full Title	Opt	S255
Author	Author of the Reference	Opt	S255
Organisation	Organisation that published the Reference	Opt	S50
DocumentCls	Document Classification	Opt	Code List CCL
ResourceLocator	Attached File Name or URL	Opt	S255
IsAttached ***(US)***	Is Attached	Req	Code List CBO
IsClassified ***(US)***	Is Classified	Opt	Code List CBO
ReferencedStage ***(US)***	Referenced Stage	Opt	Code List CSG
Repeat ***(US)***	Play Repeatedly	Opt	Code List CBO
Inherits from:	Common		
Sub-Element Of:	SchemaRoot		

Description

This element inherits attributes and sub-elements from element Common.

Complex element ExternalReference contains bibliographic or any other references applicable to the dataset except those placed in Derivative Classification Authority (Data element ClsDerived)..

Input Requirement

This element is OPTIONAL and repeatable.
Whenever possible, use occurrences of sub-elements ContactRef or OrganisationRef to indicate the person who authored the document or the message, and the name of the organisation which published the document. If the Contact and/or Organisation does not exist, use Author and/or organisation textual data items.

[XSL ERR DSTYPE] Part 3 of the Serial reference (dataset type) MUST be "**EX**".

* **Type**: In Data Item Type, enter the type of information referenced by this external reference.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CRE (extract only):**

Code	Meaning
CF299	C/F 299 Number
Contact Report	Contact Report: A brief report of a telephone call or a site visit
Contract	Contract Reference
Data Retrofit	Database Retrofit
Document	Document in any format not otherwise covered
ECSA	Equipment Characteristics / Space Archive
Email	Electronic Mail: any email not covered in one of the other specific categories, or any electronic media/transfer.
Eng Report	Engineering Report
EWIR	Electronic Warfare Integrated Reprogramming
FCC	Federal Communications Commission Filing: A document registered with the FCC.
...	...

* **Date**: In Data Item Date, enter the publication date of the external reference
* **Identifier**: In Data Item Identifier, enter the identifier for the information referenced by this External Reference, such as an ISBN number, card catalog ID or URI.
* **AlternateIdentifier**: In Data Item AlternateIdentifier, enter any alternate identifier for the document as needed.
* **Title**: In Data Item Title, enter the full title of the document.

* **Author**: In Data Item Author, enter the name of the author of the reference, if it cannot be covered by a ContactRef .
* **Organisation**: In Data Item Organisation, enter the name of the Organisation that published the Reference, if it cannot be covered by a Ref elt="OrganisationRef"/>.
* **DocumentCls**: In Data Item DocumentCls, enter the classification level of the Reference.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CCL:**

Code	Meaning
U	Unclassified
R	Restricted (This classification SHALL NOT be used in USA-created datasets)
C	Confidential
S	Secret
T	Top Secret

* **ResourceLocator**: In Data Item ResourceLocator, enter either the file name (including the extension) of the reference document when it is attached to the dataset, or an URL (Uniform Resource Locator) to find the document.
* **IsAttached *(US)***: In Data Item IsAttached (US), enter if the document, file or other "external" information is stored in attachment to this message.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **IsClassified *(US)***: In Data Item IsClassified (US), enter if the referenced information contains any classified data.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **ReferencedStage *(US)***: In Data Item ReferencedStage (US), enter the spectrum certification stage associated with this information.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CSG:**

Code
Conceptual
Developmental
Experimental
Operational

* **Repeat *(US)***: In Data Item Repeat (US), indicate if the attached file should be repeatedly viewed / listened to; default to No.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

Example

```
<ExternalReference cls="U">
  <Serial cls="U">USA:AF:EX:123</Serial>
  <Type cls="U">Document</Type>
  <Title cls="U">plan 5027</Title>
  <Organisation cls="U">PACOM</Organisation>
  <Date cls="U">2000-04-27</Date>
  <ResourceLocator cls="U">USA-AF-EX-123.PDF</ResourceLocator>
</ExternalReference>
```

Notes

* When this dataset is exported from the data repository the attachment file MAY automatically be exported with this dataset.
* When attaching a file, user SHOULD follow current national / NATO information security policies.
* The constitution of the package SHOULD follow the guidance given in [TBD] CONOPS paragraph 6.7.

FEDeployment

Force Element Deployment

Data Item Tag	Data Item Name	Occurrence	Format
FERef	Force Element Serial	Req	pattern (S29)
Type	Deployment Type	Req	Code List CFD
Num	Number of deployed Force Elements	Opt	UN(6)
TimeFrame		**Opt**	
Seconds	Seconds	Opt	pattern (S40)
Minutes	Minutes	Opt	pattern (S40)
Hours	Hours	Opt	pattern (S40)
DaysOfMonth	Days Of Month	Opt	pattern (S40)
Months	Months	Opt	pattern (S40)
DaysOfWeek	Days Of Week	Opt	pattern (S40)
Years	Years	Opt	pattern (S40)
Duration	Duration	Opt	UN(4)*(min)*
LocationRef	Location Reference	Opt	pattern (S29)
Inherits from:	Common		
Sub-Element Of:	SchemaRoot		
Sub-Elements:	AtWaypoint [0..n] Project [0..n]		

Description

This element inherits attributes and sub-elements from element Common.

Complex element FEDeployment describes the deployment of a force element to a location. Each deployment has a period of time for which the deployment is valid described by the start and end date/time.
See FEDeployment Diagram

Input Requirement

[XSL ERR DSTYPE] Part 3 of the Serial reference (dataset type) MUST be "**FD**".

* **FERef**: In Data Item FERef, enter the dataset identifier of the ForceElement being deployed.

  [XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "**FE**".

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

* **Type**: In Data Item Type, enter the type of deployment.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CFD:**

Code	Meaning
Location-Home	Home location of the force element
Location-Current	Physical location of the force element
Location-Planned	Planned location of the force element
Operating Area-Current	Operating area of the force element (typically a polygon / AOR)
Operating Area-Planned	Planned operating area
Route-Current	Current route
Route-Planned	Planned route
Other	If selected, a clarifying remark SHOULD be entered

* **Num**: In Data Item Num, enter the quantity of Force Element referenced in FERef.

* **Time Frame**: This group is OPTIONAL.

  This group defines a schedule of operation for time-related datasets. Each item (except duration) may contain:
  . A single number;

. A range (start and stop, separated with an hyphen "-"); optionally, a range may be followed by a step (oblique stroke "/" followed by a number); the full range may be represented by the asterisk "*";
. A list of numbers and/or ranges, separated by commas ",";
. An attribute with value "*" may be omitted.

- **Seconds**: In Data Item Seconds,enter the seconds of hour [0-59]

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "(([1-5]?\d(-[1-5]?\d(/\d+)?)?)|(*/\d+))(,([1-5]?\d(-[1-5]?\d(/\d+)?)?)|(,*/\d+))*"

- **Minutes**: In Data Item Minutes, enter the minutes of an hour [0-59].

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "(([1-5]?\d(-[1-5]?\d(/\d+)?)?)|(*/\d+))(,([1-5]?\d(-[1-5]?\d(/\d+)?)?)|(,*/\d+))*"

- **Hours**: In Data Item Hours, enter the hours of a day [0-23] (UTC time).

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "(([12]?\d(-[12]?\d(/\d+)?)?)|(*/\d+))(,([12]?\d(-[12]?\d(/\d+)?)?)|(,*/\d+))*"

- **DaysOfMonth**: In Data Item DaysOfMonth, enter the day of month [1-31].

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "(([123]?\d(-[123]?\d(/\d+)?)?)|(*/\d+))(,([123]?\d(-[123]?\d(/\d+)?)?)|(,*/\d+))*"

- **Months**: In Data Item Months, enter the month of year [1-12].

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "((1?\d(-1?\d(/\d+)?)?)|(*/\d+))(,(1?\d(-1?\d(/\d+)?)?)|(,*/\d+))*"

- **DaysOfWeek**: In Data Item DaysOfWeek, enter the weekday [0-7 where 0 and 7 are for Sunday, 1 for Monday, etc].

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "(([0-7](-[0-7](/\d+)?)?)|(*/\d+))(,([0-7](-[0-7](/\d+)?)?)|(,*/\d+))*"

- **Years**: In Data Item Years, enter the 4-digit year [1900..2100].

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "(([12]\d{3}(-[12]\d{3}(/\d+)?)?)|(*/\d+))(,([12]\d{3}(-[12]\d{3}(/\d+)?)?)|(,*/\d+))*"

- **Duration**: In Data Item Duration, enter the number of minutes for which an event will live.

Examples:

possible values for the ***Hours*** *item:*

8	*one value: 08h00Z*
5,6,9	*multiple values: 05h00Z, 06h00Z, 09h00Z*
5-8	*range between 05h00Z and 08h00Z inclusive*
****/2***	*stepped, every other hour. 00h00Z (midnight), 02h00Z, 04h00Z, etc*
3-12/3	*stepped range, every third hour: 03h00Z, 06h00Z, 09h00Z, and 12h00Z*

Transmission for 2 minutes every 10 minutes from 9am to 5pm every weekday for 2007:

```
<Minutes>*/10</Minutes>
<Hours>9-17</Hours>
<DaysofWeek>0-4</DaysofWeek>
<Years>2007</Years>
<Duration>2</Duration>
```

On the 5-minute mark, every third hour, only on days of the work week (Mon-Fri)

```
<Minutes>5</Minutes>
<Hours>*/3</Hours>
<DaysofWeek>1-5</DaysofWeek>
```

On the 20 and 50-minute marks every hour, every month except June, only on days of the work week (Mon-Fri)

```
<Minutes>20,50</Minutes>
<Months>1-5,7-12</Months>
<DaysofWeek>1-5</DaysofWeek>
```

* **LocationRef**: In Data Item LocationRef, enter the serial of the referenced Location.

  [XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "**LO**".

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

Example

```
<FEDeployment cls="U">
  <Serial cls="U">NLD::FD:123</Serial>
  <EntryDateTime cls="U">2011-12-25T00:00:00Z</EntryDateTime>
  <FERef cls="U">NLD::FE:222</FERef>
  <Type cls="U">Location-Current</Type>
  <Months cls="U">1-2</Months>
  <Years cls="U">2012</Years>
  <LocationRef cls="U">NLD::LO:333</LocationRef>
</FEDeployment>
```

Footnote

Footnote

Attribute Tag	Attribute Name	Occurrence	Format
idx	Index	Req	UN(6)
Data Item Tag	**Data Item Name**	**Occurrence**	**Format**
FootnoteType	Footnote Type	Req	Code List CTA
Identifier	Name	Req	S255
Text	Footnote Text	Req	MEMO
Sub-Element Of:	TOA		

Description

Complex element Footnote contains the text and identifier of a Footnote, FCC Rule Part Number, Band User (e.g., "Military", "Civil Support Team"), or Band Application (e.g., "Wind Profiler").

Input Requirement

* **idx** *(Attribute)*: In attribute idx, enter a unique index for each Footnote used by this Dataset. Once an idx is used it SHOULD NOT be modified during the lifetime of the Dataset; e.g., an element with idx=2 will keep idx=2 even if the first occurrence (idx=1) is deleted.

  [XSD ERR UNIQUE] Each value of this data item MUST be unique within the parent element.

* **FootnoteType**: In Data Item FootnoteType, enter the type or source of the Footnote.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CTA:**

Code	Meaning
Band Application	
Band User	
FCC Part	
Footnote-ITU	
Footnote-National	
Other	If selected, a clarifying remark SHOULD be entered

* **Identifier**: In Data Item Identifier, enter an identifier for this Footnote (e.g., US2, 5.441). This Data Item is optional if FootnoteType is Band User or Band Application.

* **Text**: In Data Item Text, enter the textual specification of the footnote, band user or band application.

Example

```
<Footnote cls="U" idx="007">
  <FootnoteType>Band Application</FootnoteType>
  <Identifier/>
  <Text>Sprocket 77</Text>
</Footnote>
<Footnote cls="U" idx="117">
  <FootnoteType>Footnote-National</FootnoteType>
  <Identifier>US251</Identifier>
  <Text>The band 12.75-13.25 GHz is also allocated to the space research (deep space)
(space-to-Earth) service for reception only at Goldstone, CA (35° 20' N, 116° 53'
W).</Text>
</Footnote>
<Footnote cls="U" idx="572">
  <FootnoteType>Footnote-ITU</FootnoteType>
  <Identifier>5.54</Identifier>
  <Text>Administrations conducting scientific research using frequencies below 9 kHz
are urged to advise other administrations that may be concerned in order that such
research may be afforded all practicable protection from harmful interference.</Text>
</Footnote>
```

```
<Footnote cls="U" idx="4545">
  <FootnoteType>FCC Part</FootnoteType>
  <Identifier>(90)</Identifier>
  <Text>Private Land Mobile</Text>
</Footnote>
```

ForceElement

Force Element

Data Item Tag	Data Item Name	Occurrence	Format
ReviewDate	Review Date	Opt	D
Type	Type	Req	Code List CFE
UIC	Unit Identification Code	Opt	S20
OwningCountry	Owning Country/Body	Opt	Code List CAO
OwningOrganisation	Owning Organisation	Opt	pattern (S29)
Role	Role	Opt	Code List CSR
Platform	Platform Type	Opt	Code List CET
MissionCode	Mission Code	Opt	Code List CMC
CmdLevel	Command Level	Opt	Code List CLC
Inherits from:	Common		
Sub-Element Of:	SchemaRoot		
Sub-Elements:	Assets [0..n] Nomenclature [1..n] POCInformation [0..n] StockNum [0..n] ***(US)***		

Description

This element inherits attributes and sub-elements from element Common.

Complex element ForceElement is used to describe any Unit or Platform that has the ability to transmit or receive RF signals.
See ForceElement Diagram

Input Requirement

[XSL ERR DSTYPE] Part 3 of the Serial reference (dataset type) MUST be "**FE**".

* **ReviewDate**: In Data Item ReviewDate, enter the date by which the dataset is to be reviewed. The Review date should be less than five years from the effective date. In Data Item Spectrum Supportability datasets, this date indicate when the organisation responsible for re-initiating host coordination plans to resubmit a Spectrum Supportability request to the host nation for continued use of the equipment.

* **Type**: In Data Item Type, enter if the Force Element is a Unit or a Platform.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CFE:**

Code
Specific Platform
Platform Class
Specific Weapon
Weapon Class
Unit

* **UIC**: In Data Item UIC, enter an organisational identifier that may be used to uniquely identify an organisation in operational planning systems and other non-spectrum information systems.

* **OwningCountry**: In Data Item OwningCountry, enter the owning country or body of the ForceElement.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CAO (extract only):**

Code	Meaning
AFG	Afghanistan
FF	Africa
US-AL	Alabama
ALA	Åland Islands
US-AK	Alaska
ALB	Albania
DZA	Algeria

NT-ASC	Allied Submarine Command
ASM	American Samoa
AND	Andorra
...	...

* **OwningOrganisation**: In Data Item OwningOrganisation, enter a reference to the organisation that owns the ForceElement.

  [XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "**OR**".

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

* **Role**: In Data Item Role, enter the code used to document the main role of the Force Element. This role may be used to derive what equipment (i.e., weapons systems, signal, platforms, etc.) the Force Element is authorised. Also referred to as the Table of Organisation and Equipment (TOE).

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CSR (extract only):**

Code	Meaning
AG/Band	
Air Defense	
Airborne Division	
Airmobile	
Armor	
Army	
Army Material Command	
Aviation	
Brigade Combat Team/IDIV	
Censorship	
...	...

* **Platform**: In Data Item Platform, enter the type of platform.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CET (extract only):**

Code	Meaning
Aircraft	
Air Drop	
Helicopter	
V/STOL	
Air Launched Missile	
Armored Land Vehicle	
Non-Tactical Land Vehicle	
Tactical Land Vehicle	
Surface Launched Missile	
Water Launched Missile	
...	...

* **MissionCode**: In Data Item MissionCode, enter the mission code representing the primary mission of the Force Element (e.g.,Training, Finance, etc).

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CMC (extract only):**

Code	Meaning
Admin and Special Services	
Armor/Antitank	
Artillery /Air and Space Defense	

Aviation Support	
Aviation/Anti-Aircraft	
Chemical/Ordnance	
Civil Affairs	
Civil Air Patrol	
Combat Support	
Communications	
...	...

* **CmdLevel**: In Data Item CmdLevel, enter the organisational level of the force element according to stratum, echelon or point at which authority or control is maintained.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CLC (extract only):**

Code	Meaning
Academy	
Accounts Control Section	
Activity	
Admission	
Agency	
Air Facility	
Air Patrol	
Air Station	
Annex	
Area	
...	...

Example

```
<ForceElement>
  <Serial cls="U">USA:NA:FE:123</Serial>
  <Type cls="U">PLatform</Type>
  <OwningCountry cls="U">USA</OwningCountry>
  <Identifier>
    <Level cls="U">Primary</Level>
    <Name cls="U">USS Nimitz</Name>
  </Identifier>
  <Assets_etc/>
</ForceElement>
```

Freq

Assignment Frequency or Frequency Range

Data Item Tag	Data Item Name	Occurrence	Format
FreqRangeGrp		**Req**	
FreqMin	Nominal or Minimum Frequency	Req	UN(16,9) [0..1.0E9]*(MHz)*
FreqMax	Maximum Frequency	Opt	UN(16,9) [0..1.0E9]*(MHz)*
RefFreq	reference Frequency	Opt	UN(16,9) [0..1.0E9]*(MHz)*
FreqUse	Frequency Use	Opt	Code List CAU
TAD	Tactical Air Designator	Opt	US5
LegacyNum	Legacy Number	Opt	S20
Inherits from:	AsgnFreqBase		
Sub-Element Of:	Assigned		
Sub-Elements:	NarrowBandPlanning [0..n] ***(US)*** PairedFreq [0..n] ***(US)***		

Description

This element inherits attributes and sub-elements from element AsgnFreqBase.

Complex element Freq indicates a single assigned frequency or an assigned range of frequencies.

Input Requirement

* **Frequency Range**: This group is REQUIRED.

  This group indicates a range of frequencies or a tuning range.

  - **FreqMin**: In Data Item FreqMin, enter the nominal frequency or minimum value of the frequency range.
  - **FreqMax**: In Data Item FreqMax, enter the maximum value of the frequencies in the range.

    [XSL ERR MINMAX] If FreqMax is used, it MUST be greater than FreqMin.

* **RefFreq**: In Data Item RefFreq, enter the reference frequency of a suppressed or reduced carrier sideband. This item only applies to a single frequency and should not be used with a range.

* **FreqUse**: In Data Item FreqUse, enter the primary usage of the discrete configuration frequency or frequency range.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CAU:**

Code
Transmit Only
Receive Only
Transmit-Receive

* **TAD**: In Data Item TAD, enter the TAD associated to the assigned frequency. A Tactical Air Designator is a series of alphanumeric characters that can be used to identify air/ground/air or air/air frequency channels to prevent inadvertent disclosure of classified information that can be used to identify air/ground/air or air/air frequency channels to prevent inadvertent disclosure of classified information.

* **LegacyNum**: In Data Item LegacyNum, enter a legacy reference number associated with the assigned frequency (provided mainly for SFAF to SMADEF-XML correspondence since several SFAF records may be grouped in a single SMADEF-XML Assignment).

Example

```
<Freq>
  <FreqMin cls="U">351.125</FreqMin>
  <LegacyNum cls="U">USAF11012345</LegacyNum>
</Freq>
```

FreqBand

Frequency Band

Attribute Tag	Attribute Name	Occurrence	Format
footnotes	Link to allocation usage notes	Opt	List of UN6
Data Item Tag	**Data Item Name**	**Occurrence**	**Format**
FreqMin	Minimum Frequency	Req	UN(16,9) [0..1.0E9]*(MHz)*
FreqMax	Maximum Frequency	Req	UN(16,9) [0..1.0E9]*(MHz)*
UseIndicator	Use Indicator	Opt	S40
Sub-Element Of:	TOA		
Sub-Elements:	Allocation [0..n]		

Description

Complex element FreqBand contains the allocation of a specific frequency band to radiocommunication services. It may also provide additional information such as the specification of the rights and responsibilities of a user.

Input Requirement

* **footnotes** *(Attribute)*: In attribute footnotes, enter a list containing each Footnote index that is applicable to the current band Allocation. Each entry in the list should be separated by a blank space.
* **FreqMin**: In Data Item FreqMin, enter the nominal frequency or minimum value of the frequency range.
* **FreqMax**: In Data Item FreqMax, enter the maximum value of the frequencies in the range.

  [XSL ERR MINMAX] FreqMax it MUST be greater than FreqMin.
* **UseIndicator**: In Data Item UseIndicator, enter the permitted uses of this band (e.g., "Government", "Non-government", etc).

Example

```
<FreqBand>
  <FreqMin cls="U">960</FreqMin>
  <FreqMax cls="U">1164</FreqMax>
  <Allocation>
    <AllocatedService cls="U">Aeronautical Mobile Service</AllocatedService>
    <Priority cls="U">Primary</Priority>
  </Allocation>
</FreqBand>
```

FreqConversion

Frequency Conversion

Data Item Tag	Data Item Name	Occurrence	Format
StageNum	Conversion Stage Number	Opt	UN(1) [1..5]
OscillatorTuning	Oscillator Tuning	Opt	Code List CLO
LOFreqMin	Minimum or Nominal LO Frequency	Opt	UN(16,9) [0..1.0E9]*(MHz)*
LOFreqMax	Maximum LO Frequency	Opt	UN(16,9) [0..1.0E9]*(MHz)*
IFMin	Nominal/Minimum Intermediate Frequency	Opt	UN(16,9) [0..1.0E9]*(MHz)*
IFMax	Maximum Intermediate Frequency	Opt	UN(16,9) [0..1.0E9]*(MHz)*
Sub-Element Of:	RxMode		

Description

Complex element FreqConversion contains the characteristics of a frequency conversion stage: intermediate frequency (IF) and local oscillator (LO) parameters..

Input Requirement

* **StageNum**: In Data Item StageNum, enter the position of the IF stage being described.
* **OscillatorTuning**: In Data Item OscillatorTuning, enter the relationship between the local oscillator frequency and the RF centre frequency.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CLO:**

Code
LO above or below RF
LO above RF
LO below RF

* **LOFreqMin**: In Data Item LOFreqMin, enter the nominal LO frequency or minimum value of the LO frequency range.
* **LOFreqMax**: In Data Item LOFreqMax, enter the maximum value of the LO frequencies.

  [XSL ERR MINMAX] If LOFreqMax is used, it MUST be greater than LOFreqMin.

* **IFMin**: In Data Item IFMin, enter the nominal intermediate frequency or minimum value of the intermediate frequency range.
* **IFMax**: In Data Item IFMax, enter the maximum value of the intermediate frequencies.

  [XSL ERR MINMAX] If IFMax is used, it MUST be greater than IFMin.

Example

```
<FreqConversion>
  <StageNum cls="U">3</StageNum>
  <OscillatorTuning cls="U">LO below RF</OscillatorTuning>
  <LOFreqMin cls="U">20</LOFreqMin>
  <IFMin cls="U">21.4</IFMin>
  <IFMax cls="U">70</IFMax>
</FreqConversion>
```

FreqOld

Previous Frequency or Frequency Range

Data Item Tag	Data Item Name	Occurrence	Format
FreqRangeGrp		**Req**	
FreqMin	Nominal or Minimum Frequency	Req	UN(16,9) [0..1.0E9]*(MHz)*
FreqMax	Maximum Frequency	Opt	UN(16,9) [0..1.0E9]*(MHz)*
RefFreq	reference Frequency	Opt	UN(16,9) [0..1.0E9]*(MHz)*
FreqUse	Frequency Use	Opt	Code List CAU
Inherits from:	AsgnFreqBase		
Sub-Element Of:	Assigned		

Description

This element inherits attributes and sub-elements from element AsgnFreqBase.

Complex element FreqOld indicates a previously assigned single frequency or range of frequencies.

Input Requirement

* **Frequency Range**: This group is REQUIRED.

  This group indicates a range of frequencies or a tuning range.

  - **FreqMin**: In Data Item FreqMin, enter the nominal frequency or minimum value of the frequency range.
  - **FreqMax**: In Data Item FreqMax, enter the maximum value of the frequencies in the range.

    [XSL ERR MINMAX] If FreqMax is used, it MUST be greater than FreqMin.

* **RefFreq**: In Data Item RefFreq, enter the reference frequency of a suppressed or reduced carrier sideband. This item only applies to a single frequency and should not be used with a range.

* **FreqUse**: In Data Item FreqUse, enter the primary usage of the discrete configuration frequency or frequency range.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CAU:**

Code
Transmit Only
Receive Only
Transmit-Receive

HostDocketNum

Host Docket Number

Data Item Tag	Data Item Name	Occurrence	Format
	Element Content	Req	S35
Sub-Element Of:	Assignment		

Description

Complex element HostDocketNum (US) contains the Host Nation docket number from a prior data repository.

Input Requirement

In Data Item HostDocketNum (US), enter the docket number assigned by the host (soil) country to the frequency authorization.

HostNation

Host Nation

Data Item Tag	Data Item Name	Occurrence	Format
	Element Content	Req	Code List CAO
Sub-Element Of:	SSRequest		

Description

Complex element HostNation indicates the host nations from which supportability is requested. If a SSRequest received by NATO has no HostNation entry, it will be assumed that this SSRequest is for all NATO Nations plus AUS and NZL (in accordance with the FMSC agreement).

Input Requirement

In Data Item HostNation enter the country code of the desired host nation. Use a one to six alphabetic characters representing either an official country code, a group of countries or a NATO Command.

[XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CAO (extract only):**

Code	Meaning
AFG	Afghanistan
FF	Africa
US-AL	Alabama
ALA	Åland Islands
US-AK	Alaska
ALB	Albania
DZA	Algeria
NT-ASC	Allied Submarine Command
ASM	American Samoa
AND	Andorra
...	...

Example

```
<HostNation cls="U">USA</HostNation>
```

Installation

Installation

Data Item Tag	Data Item Name	Occurrence	Format
	Element Content	Req	S40
Sub-Element Of:	Deployment		

Description

Complex element Installation identifies the specific platforms on which an equipment is installed, whether it is mounted at a fixed site atop a mountain, in a shelter, in a vehicle, aboard a helicopter, etc.

Input Requirement

In Data Item Installation, enter a platform upon which the system is mounted. All vehicles should be identified by their proper nomenclature. If the system is portable and not mounted in a vehicle, the platform user should be identified.

Example

```
<Installation cls="U">C-130 aircraft</Installation>
<Installation cls="U">carried by military police</Installation>
```

IntfReport

Interference Report

Data Item Tag	Data Item Name	Occurrence	Format
HelpRequired	Help Required	Opt	Code List CBO
IntfPeriod	Interference Period	Opt	Code List CTI
IntfStartDateTime	Interference Start Date/Time	Req	DT
IntfStopDateTime	Interference Stop Date/Time	Opt	DT
IntfDescr	Interference Description	Opt	MEMO
AffectedEquipment	Victim Equipment Description	Opt	S100
SourceFieldStrength	Field Strength	Opt	UN(6,1)*(dB)*
SourceLon	Longitude of the Source	Opt	pattern (S11)
SourceLat	Latitude of the Source	Opt	pattern (S10)
SourceAz	Source Azimuth	Opt	UN(5,2) [0..360]*(deg)*
SourceLocDescr	Location Description of the Source	Opt	S255
SourceFreqMin	Minimum/Nominal Source Frequency	Opt	UN(16,9) [0..1.0E9]*(MHz)*
SourceFreqMax	Maximum Source Frequency	Opt	UN(16,9) [0..1.0E9]*(MHz)*
SourceEmsClass	Emission Class of the interference source	Opt	pattern (S5)
SourceEmsBw	Emission Bandwidth of the interference source	Opt	UN(16,9) [0..1.0E9]*(MHz)*
VictimAsgnRef	Victim Assignment Serial	Opt	pattern (S29)
VictimSystem	Victim System	Opt	S100
VictimCountry	Country/Area of the Victim	Opt	Code List CAO
VictimLon	Longitude of the Victim	Opt	pattern (S11)
VictimLat	Latitude of the Victim	Opt	pattern (S10)
VictimLocDescr	Location Description of the Victim	Opt	S255
VictimFreqMin	Minimum/Nominal Victim Frequency	Req	UN(16,9) [0..1.0E9]*(MHz)*
VictimFreqMax	Maximum Victim Frequency	Opt	UN(16,9) [0..1.0E9]*(MHz)*
SatelliteName	Victim Satellite Name	Opt	S50
SatelliteChannel	Victim Satellite Channel	Opt	S50
SatelliteUplinkFreq	Victim Satellite Uplink Freq	Opt	UN(16,9) [0..1.0E9]*(MHz)*
PerformanceEffects	Effects On Performance	Opt	MEMO
Evaluation	Evaluation	Opt	Code List CJ1
Solution	Description of the Solution	Opt	MEMO
AffectedCSA ***(US)***	Affected CSA	Opt	Code List UAG
Characteristics ***(US)***	Characteristics	Opt	Code List UCH
GPSAffected ***(US)***	GPS Affected	Opt	Code List CBO
LocalEventID ***(US)***	Local Event ID	Opt	S20
NetCircuitsAffected ***(US)***	Net Circuits Affected	Opt	MEMO
NetsAffected ***(US)***	Nets Affected	Opt	MEMO
SATCOMPriority ***(US)***	SATCOM Priority	Opt	Code List UPR
SatelliteAffected ***(US)***	Satellite Affected	Opt	Code List CBO
SatelliteDownlinkPolarisation ***(US)***	Satellite Downlink Polarisation	Opt	Code List CPO
SatelliteHemisphere ***(US)***	Satellite Hemisphere	Opt	Code List CCO
SatelliteLongitude ***(US)***	Satellite Longitude	Opt	pattern (S11)
SatelliteTransponderID ***(US)***	Satellite Transponder ID	Opt	S50
SatelliteUplinkPolarisation ***(US)***	Satellite Uplink Polarisation	Opt	Code List CPO
Inherits from:	Common		
Sub-Element Of:	SchemaRoot		

Sub-Elements:	POCInformation [0..n]

Description

This element inherits attributes and sub-elements from element Common.

Complex element IntfReport contains information on a source and victim of an interference incident.
See IntfReport Diagram

Input Requirement

[XSL ERR DSTYPE] Part 3 of the Serial reference (dataset type) MUST be "**IF**".

* **HelpRequired**: In Data Item HelpRequired, enter whether the user needs technical assistance from another organisation to solve the interference. If not used, consider as "No".

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **IntfPeriod**: In Data Item IntfPeriod, enter how often the interference is experienced.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CTI:**

Code	Meaning
Continuous	Continuously 24 hours per day
Day	Day time
Night	Night time
Transition	Transition period
Intermittent	Intermittently throughout 24 hours
Once	Once
Other	If selected, a clarifying remark SHOULD be entered

* **IntfStartDateTime**: In Data Item IntfStartDateTime, enter the date/time the interference was first perceived.
* **IntfStopDateTime**: In Data Item IntfStopDateTime, enter the date/time the interference ceased.
* **IntfDescr**: In Data Item IntfDescr, describe the interference. Provide as much information as possible. State what actions you have taken so far to resolve the interference.
* **AffectedEquipment**: In Data Item AffectedEquipment, enter the nomenclature or description of equipment experiencing the interference.
* **SourceFieldStrength**: In Data Item SourceFieldStrength, enter the measured electromagnetic field strength.
* **SourceLon**: In Data Item SourceLon, enter the geographical longitude (degrees, minutes, seconds, and hemisphere E or W) of the source of the interference. If the seconds are not known, use 00. Use leading zeros as appropriate for degrees, minutes, or seconds. Degrees longitude require three digits. Seconds may have a decimal point followed by up to two decimals. Enter E or W immediately following the seconds. The format is: **dddmmss.hhH** (where ".hh" is optional and H = E or W).

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "((((((0[0-9]{2})|(1[0-7][0-9]))([0-5][0-9]){2})(.[0-9]{1,2})?)|1800000)(E|W))|X"

* **SourceLat**: In Data Item SourceLat, enter the geographical latitude (degrees, minutes, seconds and hemisphere N or S) of the source of the interference. Same remarks for seconds and leading zeros. Enter N or S immediately following the seconds. The format is: **ddmmss.hhH** (where ".hh" is optional and H = N or S).

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "((((((0[0-8][0-9]))([0-5][0-9]){2})(.[0-9]{1,2})?)|900000)(N|S))|X"

* **SourceAz**: In Data Item SourceAz, enter the measured azimuth of the source from the victim.
* **SourceLocDescr**: In Data Item SourceLocDescr, enter the approximate position the source, if exact coordinates are not known.

* **SourceFreqMin**: In Data Item SourceFreqMin, enter the nominal frequency of the interference, or the minimum frequency in case of a range.
* **SourceFreqMax**: In Data Item SourceFreqMax, enter the maximum frequency of the interference, in case of a range.
* **SourceEmsClass**: In Data Item EmsClass, enter a three to five characters code, derived from the table below, representing the emission classification. If an "X" is used in any of the symbols, Remarks SHOULD be used to explain the nature of the signal.

First Symbol - Designates Type of Modulation of the Main Carrier
Unmodulated N - Emission of unmodulated carrier **Amplitude Modulated** A - Double sideband H - Single sideband, full carrier R - Single sideband, reduced or variable level carrier J - Single sideband, suppressed carrier B - Independent sidebands C - Vestigial sidebands **Angle-Modulated** F - Frequency modulation G - Phase modulation **Amplitude and Angle-Modulated** D - Main carrier is amplitude-modulated and angle-modulated simultaneously or in a preestablished sequence Pulse P - Sequence of unmodulated pulses K - Modulated in amplitude L - Modulated in width/duration M - Modulated in position phase Q - Carrier is angle-modulated during the period of the pulse V - Combination of the foregoing or is produced by other means **Combination** W - Cases not covered above in which an emission consists of the main carrier being modulated, either simultaneously or in a preestablished sequence, in a combination of two or more of the following modes: amplitude, angle, pulse **Other** X - Cases not otherwise covered - : Unknown (to be used only by legacy data)
Second Symbol - Designates the Nature of Signal(s) Modulating the Main Carrier
0 - No modulating signal 1 - A single channel containing quantised or digital information, not using a modulating subcarrier. (Excludes time-division multiplex) 2 - A single channel containing quantised or digital information, using a modulating subcarrier 3 - A single channel containing analogue information 7 - Two or more channels containing quantised or digital information 8 - Two or more channels containing analogue information 9 - Composite system with one or more channels containing quantised or digital information, together with one or more channels containing analogue information X - Cases not otherwise covered - : Unknown (to be used only by legacy data)
Third Symbol - Type of Information to be Transmitted
N - No information transmitted A - Telegraphy - for aural reception B - Telegraphy - for automatic reception C - Facsimile D - Data transmission, telemetry, telecommand E - Telephony (including sound broadcasting) F - Television (video) W - Combination of the above X - Cases not otherwise covered - : Unknown (to be used only by legacy data)

a In this context, the word "information" does not include information of a constant, unvarying, nature such as that provided by standard frequency emissions, continuous wave, pulse radars, etc. b A full explanation for the selection of the letter X shall be provided in Information unless the application is for a non-directional beacon in the bands 190-435 and 510-535 kHz.
Fourth Symbol - Designates the Details of Signal(s)
A - Two-condition code with elements of differing numbers and/or durations B - Two-condition code with elements of the same number and duration without error correction C - Two-condition code with elements of the same number and duration with error correction D - Four-condition code in which each condition represents a signal element of one or more bits E - Multi-condition code in which each condition represents a signal element of one or more bits F - Multi-condition code in which each condition or combination of conditions represents a character G - Sound of broadcasting quality (monophonic) H - Sound of broadcasting quality (stereophonic or quadraphonic) J - Sound of commercial quality (excluding categories defined for symbol K and L below) K - Sound of commercial quality with the use of frequency inversion or band splitting L - Sound of commercial quality with separate frequency modulated signals to control the level of demodulated signal M - Monochrome N - Color W - Combination of the above X - Cases not otherwise covered
Fifth Symbol - Designates the Nature of Multiplexing
N - None C - Code-division multiplex (includes bandwidth expansion techniques) F - Frequency-division multiplex T - Time-division multiplex W - Combination of frequency-division multiplex and time-division multiplex X - Other types of multiplexing

[XSD ERR REGEX] This data item MUST comply to the regular expression: "(A|B|C|D|F|G|H|J|K|L|M|N|P|Q|R|V|W|X|-)(0|1|2|3|7|8|9|X|-)(A|B|C|D|E|F|N|W|X|-)(A|B|C|D|E|F|G|H|J|K|L|M|N|W|X)?(C|F|N|T|W|X)?"

* **SourceEmsBw**: In Data Item SourceEmsBw, enter the calculated or measured bandwidth of the interference source.

* **VictimAsgnRef**: In Data Item VictimAsgnRef, Enter the serial number of the assignment victim of the interference.

  [XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "**AS**".

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

* **VictimSystem**: In Data Item VictimSystem, enter the nomenclature or other identifier of equipment experiencing the interference.

* **VictimCountry**: In Data Item VictimCountry, enter the country or area where the victim of the interference is located.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CAO (extract only):**

Code	Meaning
AFG	Afghanistan
FF	Africa
US-AL	Alabama
ALA	Åland Islands
US-AK	Alaska
ALB	Albania
DZA	Algeria
NT-ASC	Allied Submarine Command
ASM	American Samoa
AND	Andorra
...	...

* **VictimLon**: In Data Item VictimLon, enter the geographical longitude (degrees, minutes, seconds, and hemisphere E or W) of the victim of the interference. If the seconds are not known, use 00. Use leading zeros as appropriate for degrees, minutes, or seconds. Degrees longitude require three digits. Seconds may have a decimal point followed by up to two decimals. Enter E or W immediately following the seconds. The format is: **`dddmmss.hhH`** (where ".hh" is optional and H = E or W).

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "((((((0[0-9]{2})|(1[0-7][0-9]))([0-5][0-9]){2})(.[0-9]{1,2})?)|1800000)(E|W))|X"

* **VictimLat**: In Data Item VictimLat, enter the geographical latitude (degrees, minutes, seconds and hemisphere N or S) of the victim of the interference. Same remarks for seconds and leading zeros. Enter N or S immediately following the seconds. The format is: **`ddmmss.hhH`** (where ".hh" is optional and H = N or S).

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "((((((([0-8][0-9]))([0-5][0-9]){2})(.[0-9]{1,2})?)|900000)(N|S))|X"

* **VictimLocDescr**: In Data Item VictimLocDescr, enter the approximate position the victim of the interference, if exact coordinates are not known.

* **VictimFreqMin**: In Data Item VictimFreqMin, enter the nominal or lower frequency used by the victim of the interference.

* **VictimFreqMax**: In Data Item VictimFreqMax, enter the upper frequency of the range, in case of an assignment over a frequency range.

* **SatelliteName**: In Data Item SatelliteName, enter the name of the satellite experiencing the interference.

* **SatelliteChannel**: In Data Item SatelliteChannel, enter the identifier of satellite channel experiencing the interference.

* **SatelliteUplinkFreq**: In Data Item SatelliteUplinkFreq, enter the satellite uplink frequency experiencing the interference

* **PerformanceEffects**: In Data Item PerformanceEffects, enter the effect the interference has on normal operations.

* **Evaluation**: In Data Item Evaluation, enter your best guess as to the cause of the interference.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CJ1:**

Code
Environmental
Interference
Intrusion
Jamming
Meaconing

* **Solution**: In Data Item Solution, enter what actions were taken to resolve the interference.

* **AffectedCSA *(US)***: In Data Item AffectedCSA (US), enter the responsible Combatant Commander for the geographic area where the interference occurred and/or the victim's organization.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List UAG (extract only):**

Code	Meaning
AFRICOM	
CENTCOM	
EUCOM	
JFCOM	
NORTHCOM	
PACOM	
SOCOM	
SOUTHCOM	
STRATCOM	
TRANSCOM	
...	...

* **Characteristics *(US)***: In Data Item Characteristics (US), enter the interference characteristics.

[XSD ERR CODELIST] This data item MUST use one of the codes from **Code List UCH (extract only):**

Code	Meaning
NOISE	
PULSED	
VOICE ENGLISH	
VOICE FOREIGN	
OTHERS NEARBY AFFECTED	
OTHERS FAR AWAY AFFECTED	
INTERFERENCE FOLLOWS WHEN I CHANGE	
GARBLED	
FRAME LOSS	
STEADY RECEIVE INDICATION (SRI)	
...	...

* **GPSAffected *(US)***: In Data Item GPSAffected (US), enter whether the interference affects GPS reception.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **LocalEventID *(US)***: In Data Item LocalEventID (US), enter the local event ID.
* **NetCircuitsAffected *(US)***: In Data Item NetCircuitsAffected (US), enter the network circuits affected by the interference.
* **NetsAffected *(US)***: In Data Item NetsAffected (US), enter the networks affected by the interference.
* **SATCOMPriority *(US)***: In Data Item SATCOMPriority (US), enter the satellite communication priority.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List UPR:**

Code	Meaning
Priority 1 Strategic Order	
Priority 2 Tasked Plan Execution	
Priority 3 Essential Operational Support	
Priority 4 Training	
Priority 5 VIP Support	
Priority 6 RDT&E and General	
Priority 7 Miscellaneous	
Other	If selected, a clarifying remark SHOULD be entered

* **SatelliteAffected *(US)***: In Data Item SatelliteAffected (US), enter whether the interference affects satellite reception.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **SatelliteDownlinkPolarisation *(US)***: In Data Item SatelliteDownlinkPolarisation (US), enter the polarisation of the satellite downlink signal.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CPO (extract only):**

Code	Meaning
45-degrees	
Left-hand circular	
Right-hand circular	
Dual	
Elliptical	
Elliptic left	
Elliptic right	
Horizontal linear	
Horizontal and vertical	
Linear	
...	...

* **SatelliteHemisphere** ***(US)***: In Data Item SatelliteHemisphere (US), enter the satellite hemisphere.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CCO (extract only):**

Code	Meaning
Global	
Eastern Hemisphere	
Western Hemisphere	
Northern Hemisphere	
Southern Hemisphere	
North-eastern Earth Quarter	
North-western Earth Quarter	
South-eastern Earth Quarter	
South-western Earth Quarter	
Narrow Beam	
...	...

* **SatelliteLongitude** ***(US)***: In Data Item SatelliteLongitude (US), enter the satellite longitude.

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "((((((0[0-9]{2})|(1[0-7][0-9]))([0-5][0-9]){2})(.[0-9]{1,2})?)|1800000)(E|W))|X"

* **SatelliteTransponderID** ***(US)***: In Data Item SatelliteTransponderID (US), enter the satellite transponder ID.

* **SatelliteUplinkPolarisation** ***(US)***: In Data Item SatelliteUplinkPolarisation (US), enter the polarisation of the satellite uplink signal.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CPO (extract only):**

Code	Meaning
45-degrees	
Left-hand circular	
Right-hand circular	
Dual	
Elliptical	
Elliptic left	
Elliptic right	
Horizontal linear	
Horizontal and vertical	
Linear	
...	...

JRFL

Joint restricted Frequency List

Data Item Tag	Data Item Name	Occurrence	Format
EffectiveDateTime	Effective Date/Time	Opt	DT
ExpireReviewDT		**Req**	
ExpirationDateTime	Expiration Date/Time	Opt	DT
ReviewDate	Review Date	Opt	D
TimeFrame		**Opt**	
Seconds	Seconds	Opt	pattern (S40)
Minutes	Minutes	Opt	pattern (S40)
Hours	Hours	Opt	pattern (S40)
DaysOfMonth	Days Of Month	Opt	pattern (S40)
Months	Months	Opt	pattern (S40)
DaysOfWeek	Days Of Week	Opt	pattern (S40)
Years	Years	Opt	pattern (S40)
Duration	Duration	Opt	UN(4)*(min)*
Inherits from:	Common		
Sub-Element Of:	SchemaRoot		
Sub-Elements:	JRFLEntry [1..n]		

Description

This element inherits attributes and sub-elements from element Common.

Complex element JRFL is the XML root for all parameters of a JRFL. It inherits attributes and sub-elements from element Common.
See JRFL Diagram

Input Requirement

[XSL ERR DSTYPE] Part 3 of the Serial reference (dataset type) MUST be "**JR**".

* **EffectiveDateTime**: In Data Item EffectiveDateTime, enter the date and UTC time when the Assignment will be operational, formatted as yyyy-mm-ddThh:mm:ssZ (year-month-day, "T" for time, hour:minute:seconds Zulu). To indicate a real effective time, use values 00:00:01Z to 24:00:00Z. The value 00:00:00Z is reserved to indicate that time is not an issue.

* **ExpireReviewDT**: This group is REQUIRED.

  - **ExpirationDateTime**: In Data Item ExpirationDateTime, enter the date and UTC time that this Assignment will expire. The Expiration date should be less than five years from the effective date.

  - **ReviewDate**: In Data Item ReviewDate, enter the date by which the dataset is to be reviewed. The Review date should be less than five years from the effective date. In Data Item Spectrum Supportability datasets, this date indicate when the organisation responsible for re-initiating host coordination plans to resubmit a Spectrum Supportability request to the host nation for continued use of the equipment.

* **Time Frame**: This group is OPTIONAL.

  This group defines a schedule of operation for time-related datasets. Each item (except duration) may contain:
  . A single number;
  . A range (start and stop, separated with an hyphen "-"); optionally, a range may be followed by a step (oblique stroke "/" followed by a number); the full range may be represented by the asterisk "*";
  . A list of numbers and/or ranges, separated by commas ",";
  . An attribute with value "*" may be omitted.

  - **Seconds**: In Data Item Seconds,enter the seconds of hour [0-59]

    [XSD ERR REGEX] This data item MUST comply to the regular expression: "(([1-5]?\d(-[1-5]?\d(/\d+)?)?)|(*/\d+))(,([1-5]?\d(-[1-5]?\d(/\d+)?)?)|(,*/\d+))*"

  - **Minutes**: In Data Item Minutes, enter the minutes of an hour [0-59].

[XSD ERR REGEX] This data item MUST comply to the regular expression: "(([1-5]?\d(-[1-5]?\d(/\d+)?)?)|(*/\d+))(,([1-5]?\d(-[1-5]?\d(/\d+)?)?)|(,*/\d+))*"

- **Hours**: In Data Item Hours, enter the hours of a day [0-23] (UTC time).

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "(([12]?\d(-[12]?\d(/\d+)?)?)|(*/\d+))(,([12]?\d(-[12]?\d(/\d+)?)?)|(,*/\d+))*"

- **DaysOfMonth**: In Data Item DaysOfMonth, enter the day of month [1-31].

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "(([123]?\d(-[123]?\d(/\d+)?)?)|(*/\d+))(,([123]?\d(-[123]?\d(/\d+)?)?)|(,*/\d+))*"

- **Months**: In Data Item Months, enter the month of year [1-12].

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "((1?\d(-1?\d(/\d+)?)?)|(*/\d+))(,(1?\d(-1?\d(/\d+)?)?)|(,*/\d+))*"

- **DaysOfWeek**: In Data Item DaysOfWeek, enter the weekday [0-7 where 0 and 7 are for Sunday, 1 for Monday, etc].

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "(([0-7](-[0-7](/\d+)?)?)|(*/\d+))(,([0-7](-[0-7](/\d+)?)?)|(,*/\d+))*"

- **Years**: In Data Item Years, enter the 4-digit year [1900..2100].

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "(([12]\d{3}(-[12]\d{3}(/\d+)?)?)|(*/\d+))(,([12]\d{3}(-[12]\d{3}(/\d+)?)?)|(,*/\d+))*"

- **Duration**: In Data Item Duration, enter the number of minutes for which an event will live.

Examples:

possible values for the ***Hours*** *item:*

8	*one value: 08h00Z*
5,6,9	*multiple values: 05h00Z, 06h00Z, 09h00Z*
5-8	*range between 05h00Z and 08h00Z inclusive*
****/2***	*stepped, every other hour. 00h00Z (midnight), 02h00Z, 04h00Z, etc*
3-12/3	*stepped range, every third hour: 03h00Z, 06h00Z, 09h00Z, and 12h00Z*

Transmission for 2 minutes every 10 minutes from 9am to 5pm every weekday for 2007:

```
<Minutes>*/10</Minutes>
<Hours>9-17</Hours>
<DaysofWeek>0-4</DaysofWeek>
<Years>2007</Years>
<Duration>2</Duration>
```

On the 5-minute mark, every third hour, only on days of the work week (Mon-Fri)

```
<Minutes>5</Minutes>
<Hours>*/3</Hours>
<DaysofWeek>1-5</DaysofWeek>
```

On the 20 and 50-minute marks every hour, every month except June, only on days of the work week (Mon-Fri)

```
<Minutes>20,50</Minutes>
<Months>1-5,7-12</Months>
<DaysofWeek>1-5</DaysofWeek>
```

Example

```
<JRFL cls="U">
  <Serial cls="U">NLD::JR:123</Serial>
  <EntryDateTime cls="U">2011-12-25T00:00:00Z</EntryDateTime>
  <JRFLEntry>
    <ProtectionCode cls="U">Protected</ProtectionCode>
    <Justification cls="U">distress frequency</Justification>
    <FreqMin cls="U">243</FreqMin>
```

```
    <Bandwidth cls="U">0.1</Bandwidth>
  </JRFLEntry>
</JRFL>
```

JRFLEntry

JRFL Entry

Data Item Tag	Data Item Name	Occurrence	Format
ProtectionCode	Protection Code	Req	Code List CPC
Priority	Priority	Opt	US2
Justification	Justification	Req	S255
ApprovalLevel	Approval Level	Opt	Code List CTS
TimeFrame		**Opt**	
Seconds	Seconds	Opt	pattern (S40)
Minutes	Minutes	Opt	pattern (S40)
Hours	Hours	Opt	pattern (S40)
DaysOfMonth	Days Of Month	Opt	pattern (S40)
Months	Months	Opt	pattern (S40)
DaysOfWeek	Days Of Week	Opt	pattern (S40)
Years	Years	Opt	pattern (S40)
Duration	Duration	Opt	UN(4)*(min)*
AsgnAllotRef	Assignment or Allotment Serial	Opt	pattern (S29)
FreqRangeGrp		**Opt**	
FreqMin	Nominal or Minimum Frequency	Req	UN(16,9) [0..1.0E9]*(MHz)*
FreqMax	Maximum Frequency	Opt	UN(16,9) [0..1.0E9]*(MHz)*
Bandwidth	Bandwidth	Opt	UN(16,9) [0..1.0E9]*(MHz)*
FreqUse	Frequency Use	Opt	Code List CAU
Sub-Element Of:	JRFL		
Sub-Elements:	JRFLEntryLocation [0..n] POCInformation [0..n] Project [0..n]		

Description

Complex element JRFLEntry defines the protection and priority codes for those nets (frequencies) that are listed in the Joint Restricted Frequency List (JRFL). A JRFL entry may either refer to an existing Assignment/Allotment (in this case, use the sub-element AsgnAllotRef) or to an arbitrary set of frequencies (in this case describe the frequency/range, its user, location and duration). In the case of an arbitrary set of frequencies, if multiple organisations are listed they will all use the same set of frequencies; if it is not the case, split the JRFL entry into several entries.

Input Requirement

* **ProtectionCode**: In Data Item ProtectionCode, indicate the type of JRFLEntry.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CPC:**

Code	Meaning
Guarded	Frequencies with interest to the Intelligence sections.
Protected	Frequencies that have importance to the operation, but may be jammed because of geographic or time separation.
Taboo	Safety of life, stop buzzer, etc. If priorities are used, Taboo should always be A1.

* **Priority**: In Data Item Priority, enter the assigned priority code consisting of a letter followed by a number in the range A1 through Z9, with A1 being the highest priority (all Taboo nets should be assigned an A1 priority code). This code is set at the local command level.

* **Justification**: In Data Item Justification, enter a description of the justification of why the JRFL entry is required, to support the spectrum manager.

* **ApprovalLevel**: In Data Item ApprovalLevel, enter the approval status of the JRFL entry.

[XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CTS:**

Code
Approved
For Review
Pending

* **Time Frame**: This group is OPTIONAL.

This group defines a schedule of operation for time-related datasets. Each item (except duration) may contain:
. A single number;
. A range (start and stop, separated with an hyphen "-"); optionally, a range may be followed by a step (oblique stroke "/" followed by a number); the full range may be represented by the asterisk "*";
. A list of numbers and/or ranges, separated by commas ",";
. An attribute with value "*" may be omitted.

- **Seconds**: In Data Item Seconds,enter the seconds of hour [0-59]

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "(([1-5]?\d(-[1-5]?\d(/\d+)?)?)|(*/\d+))(,([1-5]?\d(-[1-5]?\d(/\d+)?)?)|(,*/\d+))*"

- **Minutes**: In Data Item Minutes, enter the minutes of an hour [0-59].

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "(([1-5]?\d(-[1-5]?\d(/\d+)?)?)|(*/\d+))(,([1-5]?\d(-[1-5]?\d(/\d+)?)?)|(,*/\d+))*"

- **Hours**: In Data Item Hours, enter the hours of a day [0-23] (UTC time).

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "(([12]?\d(-[12]?\d(/\d+)?)?)|(*/\d+))(,([12]?\d(-[12]?\d(/\d+)?)?)|(,*/\d+))*"

- **DaysOfMonth**: In Data Item DaysOfMonth, enter the day of month [1-31].

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "(([123]?\d(-[123]?\d(/\d+)?)?)|(*/\d+))(,([123]?\d(-[123]?\d(/\d+)?)?)|(,*/\d+))*"

- **Months**: In Data Item Months, enter the month of year [1-12].

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "((1?\d(-1?\d(/\d+)?)?)|(*/\d+))(,(1?\d(-1?\d(/\d+)?)?)|(,*/\d+))*"

- **DaysOfWeek**: In Data Item DaysOfWeek, enter the weekday [0-7 where 0 and 7 are for Sunday, 1 for Monday, etc].

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "(([0-7](-[0-7](/\d+)?)?)|(*/\d+))(,([0-7](-[0-7](/\d+)?)?)|(,*/\d+))*"

- **Years**: In Data Item Years, enter the 4-digit year [1900..2100].

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "(([12]\d{3}(-[12]\d{3}(/\d+)?)?)|(*/\d+))(,([12]\d{3}(-[12]\d{3}(/\d+)?)?)|(,*/\d+))*"

- **Duration**: In Data Item Duration, enter the number of minutes for which an event will live.

Examples:

possible values for the ***Hours*** *item:*

8	*one value: 08h00Z*
5,6,9	*multiple values: 05h00Z, 06h00Z, 09h00Z*
5-8	*range between 05h00Z and 08h00Z inclusive*
****/2***	*stepped, every other hour. 00h00Z (midnight), 02h00Z, 04h00Z, etc*
3-12/3	*stepped range, every third hour: 03h00Z, 06h00Z, 09h00Z, and 12h00Z*

Transmission for 2 minutes every 10 minutes from 9am to 5pm every weekday for 2007:

```
<Minutes>*/10</Minutes>
<Hours>9-17</Hours>
<DaysofWeek>0-4</DaysofWeek>
<Years>2007</Years>
<Duration>2</Duration>
```

On the 5-minute mark, every third hour, only on days of the work week (Mon-Fri)

```
<Minutes>5</Minutes>
<Hours>*/3</Hours>
<DaysofWeek>1-5</DaysofWeek>
```

On the 20 and 50-minute marks every hour, every month except June, only on days of the work week (Mon-Fri)

```
<Minutes>20,50</Minutes>
<Months>1-5,7-12</Months>
<DaysofWeek>1-5</DaysofWeek>
```

* **AsgnAllotRef**: In Data Item AsgnAllotRef, enter the Serial reference of a related Assignment or Allotment.

  [XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "**AS** or **AL**".

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

* **Frequency Range**: This group is OPTIONAL.

  This group indicates a range of frequencies or a tuning range.

  - **FreqMin**: In Data Item FreqMin, enter the nominal frequency or minimum value of the frequency range.
  - **FreqMax**: In Data Item FreqMax, enter the maximum value of the frequencies in the range.

    [XSL ERR MINMAX] If FreqMax is used, it MUST be greater than FreqMin.

* **Bandwidth**: In Data Item Bandwidth, enter the width of the range (or band) of restricted frequency(s).

* **FreqUse**: In Data Item FreqUse, enter the intended usage of the frequency.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CAU:**

Code
Transmit Only
Receive Only
Transmit-Receive

Example

See example under JRFL

JRFLEntryLocation

JRFL Entry Location

Data Item Tag	Data Item Name	Occurrence	Format
Serial	Location Reference	Req	pattern (S29)
AntFeedpointHeight	Antenna Feedpoint Height	Opt	UN(5)*(m)*
Sub-Element Of:	JRFLEntry		

Description

Complex element JRFLEntryLocation defines the location where the use of a specific frequency or frequency range(s) is restricted in use.

Input Requirement

* **Serial**: In Data Item Serial, enter the serial of the referenced Location.

  [XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "**L0**".

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

* **AntFeedpointHeight**: In Data Item AntFeedpointHeight, enter the antenna feed point height above the terrain, in metres. In Data Item the case where the antenna is mounted pointing vertically to a reflector on the same structure, enter the height of the reflector above ground. If the Station is a flying object, this data represents the maximum altitude of the object above ground.

JammingAuthority *(US)*

Jamming Authority

Data Item Tag	Data Item Name	Occurrence	Format
JCACallSign	JCA Call Sign	Opt	S10
JCAFreq	JCA Net Frequency	Opt	UN(16,9) [0..1.0E9]*(MHz)*
JCALevel	Authorisation Level	Req	UN(2)
JCAState	Authorisation State	Req	Code List UWC
Sub-Element Of:	RadiationPlan		

Description

Complex element JammingAuthority (US) describes the Jamming Control Authority (JCA) authorisation information for the jamming plan and the controls affecting the level of authorisation.

Input Requirement

* **JCACallSign**: In Data Item JCACallSign (US), enter the unique net identifier for the JCA. If an active JCEOI is in effect, it SHOULD take precedence.
* **JCAFreq**: In Data Item JCAFreq (US), enter the frequency assigned to the JCA. If an active JCEOI is in effect, it SHOULD take precedence.
* **JCALevel**: In Data Item JCALevel (US), enter the required level of authorisation for the jamming plan.
* **JCAState**: In Data Item JCAState (US), enter an indication of the authorization condition for radiation of a jamming plan.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List UWC:**

Code	Meaning
Allowed	
Continue	
Denied	
Other	If selected, a clarifying remark SHOULD be entered

Example

See RadiationPlan.

JammingChannelProfile *(US)*

Jamming Channel Profile

Data Item Tag	Data Item Name	Occurrence	Format
ActivationPower	Activation Threshold	Opt	SN(6,3)*(dBm)*
ActivationTime	Activation Time	Opt	UN(12,6)*(us)*
CarrierWaveform	Carrier Waveform	Req	S100
CenterFreq	Center Frequency	Opt	UN(16,9) [0..1.0E9]*(MHz)*
ChannelSpacing	Channel Spacing	Opt	UN(16,9) [0..1.0E9]*(MHz)*
Direction	Sweep Direction	Opt	Code List ULD
Dwell	Dwell	Opt	UN(12,6)*(us)*
ExBlankingOn	External Blanking On	Opt	Code List CBO
FFTType	FFT Type	Opt	S20
FreqMax	Maximum Frequency	Opt	UN(16,9) [0..1.0E9]*(MHz)*
FreqMin	Minimum Frequency	Req	UN(16,9) [0..1.0E9]*(MHz)*
ObserveTime	Observe Time	Opt	pattern (S16)
OffsetFreq	Offset Frequency	Opt	UN(16,9) [0..1.0E9]*(MHz)*
RxDuration	Receive Duration	Opt	pattern (S16)
Signal	Signal	Req	S100
Techniques	Techniques	Opt	UN(5)
Threat	Threat	Opt	S100
TxDuration	Transmit Duration	Opt	pattern (S16)
Sub-Element Of:	Loadset		
Sub-Elements:	TimingDeconflictionProtocol [0..n]		

Description

Complex element JammingChannelProfile (US) describes the specific Loadset parameters for jamming a discrete frequency or frequency range.

Input Requirement

* **ActivationPower**: In Data Item ActivationPower (US), enter the signal level required to activate the loadset, for systems capable of selecting multiple power thresholds by sub-band or other region of interest.
* **ActivationTime**: In Data Item ActivationTime (US), enter the minimum time required to trigger the jammer after start of signal reception.
* **CarrierWaveform**: In Data Item CarrierWaveform (US), enter the waveform that will be used for the carrier of the jamming signal.
* **CenterFreq**: In Data Item CenterFreq (US), enter the middle frequency in the band.
* **ChannelSpacing**: In Data Item ChannelSpacing (US), enter the frequency increment between discrete channels.
* **Direction**: In Data Item Direction (US) enter the sweep direction from the center frequency.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List ULD:**

Code
Negative
Positive

* **Dwell**: In Data Item Dwell (US), enter the frequency range dwell time; how long a sweep pauses on a particular frequency before moving to next technique.
* **ExBlankingOn**: In Data Item ExBlankingOn (US), indicate if external blanking is enabled.

[XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **FFTType**: In Data Item FFTType (US), enter the form of the Fast Fourier Transform used (e.g., Integral, Serial, Discrete).
* **FreqMax**: In Data Item FreqMax (US), enter the target frequency range maximum value.
* **FreqMin**: In Data Item FreqMin (US), enter the target discrete frequency, or frequency range minimum value.
* **ObserveTime**: In Data Item ObserveTime (US), enter the time interval for the recording of received signals, in (0-999) hours, (0-59) minutes, and (0-999,999,999) nanoseconds (hhh.mm.sssssssss). Example: one microsecond is entered as 1,000 nanoseconds (000.00.000001000).

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[0-9]{3}.[0-5][0-9].[0-9]{9}"
* **OffsetFreq**: In Data Item OffsetFreq (US), enter the frequency offset relative to the center frequency of the channel.
* **RxDuration**: In Data Item RxDuration (US) enter the amount of time that the equipment will monitor the spectrum before initiating an action, in (0-999) hours, (0-59) minutes, and (0-999,999,999) nanoseconds (hhh.mm.sssssssss).

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[0-9]{3}.[0-5][0-9].[0-9]{9}"
* **Signal**: In Data Item Signal (US), enter the waveform information modulated, or impressed, on the carrier.
* **Techniques**: In Data Item Techniques (US) enter how many ramp techniques occur during the programmed frequency range dwell time.
* **Threat**: In Data Item Threat (US), enter a short description of the threat name or threat type.
* **TxDuration**: In Data Item TxDuration (US) enter the amount of time that the equipment will emit a jamming signal, in (0-999) hours, (0-59) minutes, and (0-999,999,999) nanoseconds (hhh.mm.sssssssss).

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[0-9]{3}.[0-5][0-9].[0-9]{9}"

Example

```
See Loadset.
```

JammingPerformance *(US)*

Jamming Performance

Data Item Tag	Data Item Name	Occurrence	Format
ActualEffect	Actual Effect	Opt	Code List UWA
ActualPerformance	Actual Performance	Opt	Code List UWB
ContinuousUpdate	Update Continuously	Opt	Code List CBO
DesiredEffect	Desired Effect	Opt	Code List UWA
DesiredPerformance	Desired Performance	Opt	Code List UWB
Sub-Element Of:	JammingTarget		

Description

Complex element JammingPerformance (US) describes Electronic Attack effectiveness and how severely a target's use of the spectrum is expected to be impacted and/or how well it actually was impacted, for a specific jamming mission.

Input Requirement

* **ActualEffect**: In Data Item ActualEffect (US), enter the actual impact a jamming mission had on a specific target area.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List UWA:**

Code	Meaning
Deception	deception the deliberate radiation, reradiation, alteration, suppression, absorption, denial, enhancement, or reflection of electromagnetic energy in a manner intended to convey misleading information to an enemy or to enemy electromagnetic-dependent weapons, thereby confusing, misleading, degrading or neutralizing the enemy's combat capability. EW deception manipulates the
Degradation	degradation refers to making an enemy incapable of performing the designated mission. It resembles disruption but is not as comprehensive in execution or impact. Degradation may confuse or delay the actions of an untrained enemy, but a trained operator can work around the effects. Like disruption, forces achieve degradation with electromagnetic jamming, electromagnetic deception, and electromagnetic intrusion. Degradation may be the best choice to stimulate the enemy to determine their response or for electronic attack conditioning.
Denial	denial is controlling the information an enemy receives via the electromagnetic spectrum and preventing the acquisition of accurate information about friendly forces. Denial uses traditional jamming techniques, expendable countermeasures, destructive measures, or network applications. These range from limited effects up to complete denial of usage.
Destruction	destruction is the elimination of targeted enemy systems. Various weapons and techniques -- ranging from conventional munitions and directed-energy weapons to network attacks -- can destroy jamming.
Disruption	disruption aims to confuse or delay enemy action. Disruption techniques interfere with the enemy's use of the electromagnetic spectrum to limit enemy combat capabilities. Disruption resembles denial but is not as comprehensive in execution or impact. A trained enemy operator can thwart disruption through electronic protection measures, such as procedures to counter communications jamming.
Intrusion	the intentional insertion of electromagnetic energy into transmission paths in any manner, with the objective of deceiving operators or causing confusion.
Masking	the controlled radiation of electromagnetic energy on friendly frequencies in a manner to protect the emissions of friendly communications and electronic systems against enemy electronic warfare support measures/signals intelligence without significantly degrading the operation of friendly systems.
Other	If selected, a clarifying remark SHOULD be entered

* **ActualPerformance**: In Data Item US:ActualPerformance (US), enter the assessed effectiveness of the service request.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List UWB:**

Code	Meaning
Fully Effective	100% of targets MUST be impacted
Not Effective	this choice SHOULD NOT be used for Required or Desired Performance)
Partially Effective	if selected, a minimum percentage SHOULD be entered in a Remark.
Other	If selected, a clarifying remark SHOULD be entered

* **ContinuousUpdate**: In Data Item ContinuousUpdate (US), enter if effectiveness data should be provided continually or just once.

[XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **DesiredEffect**: In Data Item DesiredEffect (US), enter the expected impact a jamming mission will have on a specific target area.

[XSD ERR CODELIST] This data item MUST use one of the codes from **Code List UWA:**

Code	Meaning
Deception	deception the deliberate radiation, reradiation, alteration, suppression, absorption, denial, enhancement, or reflection of electromagnetic energy in a manner intended to convey misleading information to an enemy or to enemy electromagnetic-dependent weapons, thereby confusing, misleading, degrading or neutralizing the enemy's combat capability. EW deception manipulates the
Degradation	degradation refers to making an enemy incapable of performing the designated mission. It resembles disruption but is not as comprehensive in execution or impact. Degradation may confuse or delay the actions of an untrained enemy, but a trained operator can work around the effects. Like disruption, forces achieve degradation with electromagnetic jamming, electromagnetic deception, and electromagnetic intrusion. Degradation may be the best choice to stimulate the enemy to determine their response or for electronic attack conditioning.
Denial	denial is controlling the information an enemy receives via the electromagnetic spectrum and preventing the acquisition of accurate information about friendly forces. Denial uses traditional jamming techniques, expendable countermeasures, destructive measures, or network applications. These range from limited effects up to complete denial of usage.
Destruction	destruction is the elimination of targeted enemy systems. Various weapons and techniques -- ranging from conventional munitions and directed-energy weapons to network attacks -- can destroy jamming.
Disruption	disruption aims to confuse or delay enemy action. Disruption techniques interfere with the enemy's use of the electromagnetic spectrum to limit enemy combat capabilities. Disruption resembles denial but is not as comprehensive in execution or impact. A trained enemy operator can thwart disruption through electronic protection measures, such as procedures to counter communications jamming.
Intrusion	the intentional insertion of electromagnetic energy into transmission paths in any manner, with the objective of deceiving operators or causing confusion.
Masking	the controlled radiation of electromagnetic energy on friendly frequencies in a manner to protect the emissions of friendly communications and electronic systems against enemy electronic warfare support measures/signals intelligence without significantly degrading the operation of friendly systems.
Other	If selected, a clarifying remark SHOULD be entered

* **DesiredPerformance**: In Data Item DesiredPerformance (US), enter the desired effectiveness of the service request. Example: the minimum percentage of known enemy command and control nodes that must be rendered inoperable for successful mission accomplishment.

[XSD ERR CODELIST] This data item MUST use one of the codes from **Code List UWB:**

Code	Meaning
Fully Effective	100% of targets MUST be impacted
Not Effective	this choice SHOULD NOT be used for Required or Desired Performance)
Partially Effective	if selected, a minimum percentage SHOULD be entered in a Remark.
Other	If selected, a clarifying remark SHOULD be entered

Example

See RadiationPlan.

JammingPlan *(US)*

Jamming Plan

Data Item Tag	Data Item Name	Occurrence	Format
Name	Jamming Plan Name	Opt	S100
NumFreqs	Frequency Count	Opt	UN(6)
Priority	Plan Priority	Req	Code List UWE
RequiredEffect	Required Effect	Opt	Code List UWA
RequiredPerformance	Required Performance	Opt	Code List UWB
StartDateTime	Start Timestamp	Opt	DT
StartLocationRef	Start Location Serial	Opt	pattern (S29)
StartTrigger	Start Trigger	Req	Code List UWF
StopDateTime	Stop Timestamp	Opt	DT
StopLocationRef	Stop Location Serial	Opt	pattern (S29)
StopTrigger	Stop Trigger	Req	Code List UWF
Version	Plan Version	Opt	S10
Level3Auth	Level 3 Authorisation Required	Req	Code List CBO
StandOffDist	Stand Off Distance	Opt	UN(9,4)*(km)*
Sub-Element Of:	RadiationPlan		
Sub-Elements:	JammingTarget [1..n]		

Description

Complex element JammingPlan (US) describes the start and stop conditions, priorities, desired effect, and desired effectiveness.

Input Requirement

* **Name**: In Data Item Name (US), enter a unique name (within the parent RadiationPlan) for the Jamming Plan.
* **NumFreqs**: In Data Item NumFreqs (US), enter the number of discrete frequencies or frequency ranges associated with this Jamming Plan. There SHOULD be one JammingTarget sub-element for each discrete frequency or frequency range.
* **Priority**: In Data Item Priority (US), enter the relative priority of the service request.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List UWE:**

Code	Meaning
High	
Low	
Medium	
Other	If selected, a clarifying remark SHOULD be entered

* **RequiredEffect**: In Data Item RequiredEffect (US), enter the desired effect of this service request.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List UWA:**

Code	Meaning
Deception	deception the deliberate radiation, reradiation, alteration, suppression, absorption, denial, enhancement, or reflection of electromagnetic energy in a manner intended to convey misleading information to an enemy or to enemy electromagnetic-dependent weapons, thereby confusing, misleading, degrading or neutralizing the enemy's combat capability. EW deception manipulates the
Degradation	degradation refers to making an enemy incapable of performing the designated mission. It resembles disruption but is not as comprehensive in execution or impact. Degradation may confuse or delay the actions of an untrained enemy, but a trained operator can work around the effects. Like disruption, forces achieve degradation with electromagnetic jamming, electromagnetic deception, and electromagnetic intrusion. Degradation may be the best choice to stimulate the enemy to determine their response or for electronic attack conditioning.

Denial	denial is controlling the information an enemy receives via the electromagnetic spectrum and preventing the acquisition of accurate information about friendly forces. Denial uses traditional jamming techniques, expendable countermeasures, destructive measures, or network applications. These range from limited effects up to complete denial of usage.
Destruction	destruction is the elimination of targeted enemy systems. Various weapons and techniques -- ranging from conventional munitions and directed-energy weapons to network attacks -- can destroy jamming.
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Intrusion	the intentional insertion of electromagnetic energy into transmission paths in any manner, with the objective of deceiving operators or causing confusion.
Masking	the controlled radiation of electromagnetic energy on friendly frequencies in a manner to protect the emissions of friendly communications and electronic systems against enemy electronic warfare support measures/signals intelligence without significantly degrading the operation of friendly systems.
Other	If selected, a clarifying remark SHOULD be entered

* **RequiredPerformance**: In Data Item RequiredPerformance (US), enter the desired effectiveness of the service request. Example: the minimum percentage of known enemy command and control nodes that must be rendered inoperable for successful mission accomplishment.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List UWB:**

Code	Meaning
Fully Effective	100% of targets MUST be impacted
Not Effective	this choice SHOULD NOT be used for Required or Desired Performance)
Partially Effective	if selected, a minimum percentage SHOULD be entered in a Remark.
Other	If selected, a clarifying remark SHOULD be entered

* **StartDateTime**: In Data Item StartDateTime (US), enter the date/time stamp when to initiate the jamming, if "Date/Time" is used in element StartTrigger. Entries must be equal to or later than RadiationPlan.StartDateTime, and less than RadiationPlan.StopDateTime.

* **StartLocationRef**: In Data Item StartLocationRef (US), enter the Location serial indicating the region associated with "Troops in Region" or "Troops Not in Region", in attribute StartTrigger.

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

* **StartTrigger**: In Data Item StartTrigger (US), enter the type of trigger that indicates when it is time to start jamming.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List UWF:**

Code	Meaning
Date/Time	
Never	
Signal Detected	
Signal Not Detected	
Troops in Contact	
Troops in Region	
Troops Not in Contact	
Troops Not in Region	
Other	If selected, a clarifying remark SHOULD be entered

* **StopDateTime**: In Data Item StopDateTime (US), enter the date/time stamp when to stop the jamming, if "Date/Time" is used in element StopTrigger. Entries must be after RadiationPlan.StartDateTime, and be equal to or less than RadiationPlan.StopDateTime.

* **StopLocationRef**: In Data Item StopLocationRef (US), enter the Location serial indicating the region associated with "Troops in Region" or "Troops Not in Region", in attribute StopTrigger.

[XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

* **StopTrigger**: In Data Item StopTrigger (US), enter the type of trigger that indicates when it is time to stop jamming.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List UWF:**

Code	Meaning
Date/Time	
Never	
Signal Detected	
Signal Not Detected	
Troops in Contact	
Troops in Region	
Troops Not in Contact	
Troops Not in Region	
Other	If selected, a clarifying remark SHOULD be entered

* **Version**: In Data Item Version (US), enter the current version of the Jamming Plan.

* **Level3Auth**: In Data Item Level3Auth (US), indicate if a request should go directly to third-level authorization. If "Yes" is entered, then for Radiation Plan approval, the JammingAuthority complex element MUST contain an entry; default is 'No'.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **StandOffDist**: In Data Item StandOffDist (US), enter the required distance from the jammer to non-threat equipment, in km.

Example

See RadiationPlan.

JammingTarget *(US)*

Jamming Target

Data Item Tag	Data Item Name	Occurrence	Format
AntStabilisation	Antenna Stabilisation Type	Opt	Code List UWG
Bearing	Target Bearing	Opt	UN(5,2) [0..360]*(deg)*
FreqMax	Maximum Frequency	Opt	UN(16,9) [0..1.0E9]*(MHz)*
FreqMin	Minimum Frequency	Req	UN(16,9) [0..1.0E9]*(MHz)*
Lat	Latitude	Opt	pattern (S10)
LoadsetRef	Loadset Serial	Opt	pattern (S29)
LocationRef	Target Location Serial	Opt	pattern (S29)
Lon	Longitude	Opt	pattern (S11)
PolarisationType	Polarisation	Opt	Code List CPO
Power	Power	Opt	SN(10,7)*(dBW)*
TargetID	Target ID	Opt	UN(5)
Sub-Element Of:	JammingPlan		
Sub-Elements:	JammingPerformance [0..n]		

Description

Complex element JammingTarget (US) describes the target location and identifies the jamming loadset to be used.

Input Requirement

* **AntStabilisation**: In Data Item AntStabilisation (US), enter the method by which the jamming antenna beam is focused.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List UWG:**

Code	Meaning
At Bearing	
At Point	
None	
Other	If selected, a clarifying remark SHOULD be entered

* **Bearing**: In Data Item Bearing (US), enter the bearing of the target in degrees referenced to the "boresight"# of the jammer equipment or the platform that the jammer equipment is mounted on.

* **FreqMax**: In Data Item FreqMax (US), enter the frequency range maximum value planned for denial of use.

  [XSL ERR MINMAX] If FreqMax is used, it MUST be greater than FreqMin.

* **FreqMin**: In Data Item FreqMin (US), enter the discrete frequency, or frequency range minimum value, planned for denial of use.

* **Lat**: In Data Item Lat (US), enter the geographic latitude of the target location, including hemisphere (H). The format for Lat is ddmmss[.hh]H (where H = N or S). Seconds may have a decimal point followed by up to two numerals. If seconds are not known, use 00, except in the case of navigation aid systems, geostationary satellites, and microwave facilities, where seconds MUST be entered. Degrees latitude requires two digits and should not exceed 90 degrees; enter N or S immediately following the seconds. Use leading zeros.

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "((((((([0-8][0-9]))([0-5][0-9]){2})(.[0-9]{1,2})?)|900000)(N|S))|X"

* **LoadsetRef**: In Data Item LoadsetRef (US), the serial of a Loadset dataset that contains the details to be used for this jamming instance.

  [XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "**LS**".

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

* **LocationRef**: In Data Item LocationRef (US), enter the unique reference of an existing Location dataset that describes the target location.

  [XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "**L0**".

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

* **Lon**: In Data Item Lon (US), enter the geographical longitude of the target location, including hemisphere (H). The format for Lon is dddmmss[.hh]H (where H = E or W). Seconds may have a decimal point followed by up to two numerals. If seconds are not known, use 00, except in the case of navigation aid systems, geostationary satellites, and microwave facilities, where seconds MUST be entered. Degrees longitude requires three digits and should not exceed 180 degrees; enter E or W immediately following the seconds. Use leading zeros.

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "((((((0[0-9]{2})|(1[0-7][0-9]))([0-5][0-9]){2})(.[0-9]{1,2})?)|1800000)(E|W))|X"

* **PolarisationType**: In Data Item PolarisationType (US), enter the antenna polarisation planned for the desired jamming instance. This value MUST come from Code List CPO.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CPO (extract only):**

Code	Meaning
45-degrees	
Left-hand circular	
Right-hand circular	
Dual	
Elliptical	
Elliptic left	
Elliptic right	
Horizontal linear	
Horizontal and vertical	
Linear	
...	...

* **Power**: In Data Item Power (US), enter the desired power value planned to be directed at the target.

* **TargetID**: In Data Item TargetID (US), enter a unique (within the parent JammingPlan) numeric identifier to distinguish one target from another.

Example

See RadiationPlan.

Link

Link

Data Item Tag	Data Item Name	Occurrence	Format
LinkID	Link Identifier	Req	S100
Function	Function	Opt	Code List CFN
IntermediateFunction ***(US)***	Intermediate Function	Opt	Code List UFN
MajorFunction ***(US)***	Major Function	Opt	Code List UFN
LinkName ***(US)***	Link Name	Opt	S25
Sub-Element Of:	Assignment		
Sub-Elements:	Assigned [0..n] DCSTrunk [0..n] ***(US)*** DetailedFunction [0..n] ***(US)*** StationConfig [1..n] Tuning [0..n]		

Description

Complex element Link identifies each link in a system of assignments. This is the top element of each Link. The exact definition of a link is very flexible and depends on the degree of accuracy needed for the assignment. A link can be very generic (one or several base stations serving an area or a volume with non-defined mobiles) to very accurate (such as one link for each radio-relay hop).
See Link Diagram

Input Requirement

* **LinkID**: In Data Item LinkID, enter a unique identifier for the link. This identifier should be a meaningful identification of the link, but may also be automatically generated. The identifier SHOULD NOT be modified during the lifetime of the dataset.

  [XSD ERR UNIQUE] Each value of this data item MUST be unique within the parent element.

* **Function**: Data item Function is not used by US, however, it is required when exchanging with NATO. US should use US:MajorFunction, US:IntermedFunction, and US:DetailedFunction, instead.
  NATO Definition: Enter the primary, intermediate and optionally detailed function identifiers of the frequency assignment. The primary identifier indicates the type of operations (ground, air, maritime, C3); the intermediate identifier indicates the function; the detailed identifier is not normally used, but may be used to indicate for example some specific system.
  US-Only: When sending data to SMADEF, enter UNKNOWN in Function If desired, add a Remark with US:MajorFunction, US:IntermedFunction, and US:DetailedFunction(s) separated by dashes. When receiving data from SMADEF, the contents SHOULD be parsed into US:MajorFunction, US:IntermedFunction, and US:DetailedFunction, in order of appearance.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CFN (extract only):**

Code	Meaning	Extended
UNKNOWN		Basic
AIR OPS		Basic
AIR OPS - AIR/AIR COMMS		Basic
AIR OPS - AIR/ GROUND/AIR COMMS		Basic
AIR OPS - AIR TRAFFIC CONTROL		Basic
AIR OPS - EXECUTIVE		Basic
AIR OPS - FLIGHT TEST		Basic
AIR OPS - NAVAIDS		Basic

AIR OPS - TELECOMMAND		Basic
AIR OPS - UAV	UAV = Unmanned Aerial Vehicle	Basic
...	...	...

* **IntermediateFunction *(US)***: In Data Item Intermediate Function (US), enter the intermediate function of the frequency assignment.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List UFN (extract only):**

Code	Meaning
UNKNOWN	
A2C2S (Army Airborne Command & Control System)	
ACS (Aerial Common Sensor)	
ADMINISTRATIVE	
AEGIS	
A-EPLRS	
AERO CLUB	
AFATDS	
AFAUX/CAP (Air Force Auxiliary/Civil Air Patrol)	
AFSATCOM	
...	...

* **MajorFunction *(US)***: In Data Item MajorFunction (US), enter the major (or primary) function of the frequency assignment.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List UFN (extract only):**

Code	Meaning
UNKNOWN	
A2C2S (Army Airborne Command & Control System)	
ACS (Aerial Common Sensor)	
ADMINISTRATIVE	
AEGIS	
A-EPLRS	
AERO CLUB	
AFATDS	
AFAUX/CAP (Air Force Auxiliary/Civil Air Patrol)	
AFSATCOM	
...	...

* **LinkName *(US)***: In Data Item LinkName (US), enter a human readable name of the link.

Example

```
<Link>
  <LinkID cls="U">LINK1</LinkID>
  <StationConfig>
    <Type cls="U">Transmit-Receive</Type>
    <ConfigID cls="U">CONFIG1</ConfigID>
    <StationID cls="U">STATION1</StationID>
  </StationConfig>
  <Assigned>
```

```
    <Freq>
      <FreqMin cls="U">256.275</FreqMin>
    </Freq>
  </Assigned>
</Link>
```

Loadset *(US)*

Loadset

Data Item Tag	Data Item Name	Occurrence	Format
KeyLoadProcedure	Key Loading Procedure	Opt	MEMO
MaxActiveFrames	Maximum Active Frames	Opt	UN(6)
MaxReactiveFrames	Maximum Reactive Frames	Opt	UN(6)
Mission	Threat Load Mission	Opt	S100
Name	Loadset Name	Req	S50
PrimaryFirmware	Primary Firmware	Opt	S50
ResetProcedure	Reset Procedure	Opt	MEMO
SecondaryFirmware	Secondary Firmware	Opt	S50
Software	Software	Opt	S50
Inherits from:	Common		
Sub-Element Of:	SchemaRoot		
Sub-Elements:	JammingChannelProfile [1..n]		

Description

This element inherits attributes and sub-elements from element Common.

Complex element LoadSet (US) describes the general system setup to be used under a specified set of conditions, typically related to jamming or frequency hopping.
See Loadset Diagram

Input Requirement

[XSL ERR DSTYPE] Part 3 of the Serial reference (dataset type) MUST be "**LS**".

* **KeyLoadProcedure**: In Data Item KeyLoadProcedure (US), enter the sequence pattern for initializing the jamming equipment.
* **MaxActiveFrames**: In Data Item MaxActiveFrames (US), enter the maximum number of active frames (data blocks currently in use directing equipment functionality) for a specific loadset.
* **MaxReactiveFrames**: In Data Item MaxReactiveFrames (US), enter the maximum number of reactive frames (data blocks planned to direct equipment functionality in response to a stimulus) for a specific loadset.
* **Mission**: In Data Item Mission (US), enter the task expected to be accomplished by the loadset.
* **Name**: In Data Item Name (US), enter the name of the loadset.
* **PrimaryFirmware**: In Data Item PrimaryFirmware (US), enter the mission-independent software that is "burned" and which stays resident on the RF jamming hardware.
* **ResetProcedure**: In Data Item ResetProcedure (US), enter the instructions for zeroing/sanitizing the jamming equipment to initial operating conditions.
* **SecondaryFirmware**: In Data Item SecondaryFirmware (US), enter alternate mission-independent software that is "burned" and which stays resident on the RF jamming hardware.
* **Software**: In Data Item Software (US), enter the mission-specific software that is loaded on the RF jamming hardware.

Example

```
<Loadset cls="U">
  <Serial cls="U">USA::LS:123</Serial>
  <EntryDateTime cls="U">2011-12-25T00:00:00Z</EntryDateTime>
  <KeyLoadProcedure cls="U">Sequential process using a permuter key unit </
KeyLoadProcedure>
  <MaxActiveFrames cls="U">5435</MaxActiveFrames>
  <MaxReactiveFrames cls="U">3476</MaxReactiveFrames>
  <Mission cls="U">Recurrent Dream</Mission>
```

```
  <Name cls="U">Band K Set 0000134</Name>
  <PrimaryFirmware cls="U">Barracuda Load Balancer</PrimaryFirmware>
  <ResetProcedure cls="U">Reboot network resync permuter key with network</
ResetProcedure>
  <SecondaryFirmware cls="U">SRX5308 Version 3.0.8-12</SecondaryFirmware>
  <Software cls="U">RBECS Version 2.8</Software>
  <JammingChannelProfile>
    <ActivationPower cls="U">-116</ActivationPower>
    <ActivationTime cls="U">345.45</ActivationTime>
    <CarrierWaveform cls="U"> OQPSK signal 20 MHZ in bandwidth</CarrierWaveform>
    <CenterFreq cls="U">387.54</CenterFreq>
    <ChannelSpacing cls="U">0.025</ChannelSpacing>
    <Direction cls="U">Positive</Direction>
    <Dwell cls="U">76.43</Dwell>
    <ExBlankingOn cls="U">Yes</ExBlankingOn>
    <FFTType cls="U"> Integral</FFTType>
    <FreqMax cls="U">3107.56</FreqMax>
    <FreqMin cls="U">2999.753</FreqMin>
    <ObserveTime cls="U">012.45.6785</ObserveTime>
    <OffsetFreq cls="U">0.00045</OffsetFreq>
    <RxDuration cls="U">012.034.7643</RxDuration>
    <Signal cls="U"> OQPSK signal 20 MHZ in bandwidth</Signal>
    <Techniques cls="U">2571</Techniques>
    <Threat cls="U">Perceived Global Warming</Threat>
    <TxDuration cls="U">001.24.4578</TxDuration>
    <TimingDeconflictionProtocol>
      <Description cls="U">Enter a description of the data.</Description>
      <Name cls="U">AD67</Name>
      <Period cls="U">0.000012</Period>
      <Ranking cls="U">Primary</Ranking>
      <Required cls="U">Yes</Required>
      <SyncMethod cls="U">RFC Simple Network Timing Protocol</SyncMethod>
      <TriggerOff cls="U">.0184</TriggerOff>
      <TriggerOn cls="U">.0001</TriggerOn>
    </TimingDeconflictionProtocol>
  </JammingChannelProfile>
</Loadset>
```

LoadsetRef

Loadset Reference

Data Item Tag	Data Item Name	Occurrence	Format
	Element Content	Req	pattern (S29)
Sub-Element Of:	Configuration		

Description

Complex element LocationRef references a Loadset dataset.

Input Requirement

In Data Item LoadsetRef (US), enter the identfying dataset serial number for the Loadset used in this configuration.

[XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "**LS**".

[XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

Location

Location

Data Item Tag	Data Item Name	Occurrence	Format
EffectiveDate	Effective Date	Opt	D
ExpireReview		**Opt**	
ExpirationDate	Expiration Date	Opt	D
ReviewDate	Review Date	Opt	D
Name	Location Name	Req	S100
AddressGrp		**Opt**	
Street	Street Address	Opt	S255
CityArea	City or Area	Opt	S50
StateCounty	State/County	Opt	S50
PostCode	Zip Code/Post Code	Opt	S15
Country	Country/Area	Req	Code List CAO
Inherits from:	Common		
Sub-Element Of:	SchemaRoot		
Sub-Elements:	Ellipse [0..n] LocationRef [0..n] POCInformation [0..n] Point [0..n] Polygon [0..n]		

Description

This element inherits attributes and sub-elements from element Common.

Complex element Location is used to describe a geographical location, polygonal or ellipse area, or a set of those. It inherits attributes and sub-elements from element Common.
To be meaningful, a Location SHOULD contain at least one of the sub-elements Point, Polygon, Ellipse or LocationRef.
See Location Diagram

Input Requirement

[XSL ERR DSTYPE] Part 3 of the Serial reference (dataset type) MUST be "**LO**".

* **EffectiveDate**: In Data Item EffectiveDate, enter the date by which the dataset is to be operational or effective.
* **ExpireReview**: This group is OPTIONAL.
  - **ExpirationDate**: In Data Item ExpirationDate, enter the date at which the dataset will expire. The Expiration date should be less than five years from current date.
  - **ReviewDate**: In Data Item ReviewDate, enter the date by which the dataset is to be reviewed. The Review date should be less than five years from the effective date. In Data Item Spectrum Supportability datasets, this date indicate when the organisation responsible for re-initiating host coordination plans to resubmit a Spectrum Supportability request to the host nation for continued use of the equipment.
* **Name**: In Data Item Name, enter the name of the location.
* **Address Information**: This group is OPTIONAL.

  This group contains the name and full address of the location, organisation or individual.
  - **Street**: In Data Item Street, enter the street address.
  - **CityArea**: In Data Item CityArea, enter the city of the address or an operational area name.
  - **StateCounty**: In Data Item StateCounty, enter the state or other sub-national political area.
  - **PostCode**: In Data Item PostCode, enter the zip code or postal code portion of the address.

- **Country**: In Data Item Country, enter the country or area code. Use a one to six alphabetic characters representing either an official country code, a regional body, a group of countries or a NATO Command.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CAO (extract only):**

Code	Meaning
AFG	Afghanistan
FF	Africa
US-AL	Alabama
ALA	Åland Islands
US-AK	Alaska
ALB	Albania
DZA	Algeria
NT-ASC	Allied Submarine Command
ASM	American Samoa
AND	Andorra
...	...

Examples

A simple fixed location:

```
<Location cls="U">
  <Serial cls="U">BEL::LO:111</Serial>
  <EntryDateTime cls="U">2011-12-25T00:00:00Z</EntryDateTime>
  <Name cls="U">Brussels National Airpt</Name>
  <Country cls="U">BEL</Country>
  <Point idx="1">
    <Lon cls="U">0050000E</Lon>
    <Lat cls="U">503600N</Lat>
    <TerrainElevation cls="U">50</TerrainElevation>
  </Point>
</Location>
```

A triangle

```
<Location cls="U">
  <Serial cls="U">BEL::LO:222</Serial>
  <EntryDateTime cls="U">2011-12-25T00:00:00Z</EntryDateTime>
  <Name cls="U">Melsbroek Approach</Name>
  <Country cls="U">BEL</Country>
  <Polygon idx="1">
    <PolygonPoint sequence="1">
      <Lon cls="U">0050000E</Lon>
      <Lat cls="U">503600N</Lat>
    </PolygonPoint>
    <PolygonPoint sequence="2">
      <Lon cls="U">0053000E</Lon>
      <Lat cls="U">503600N</Lat>
    </PolygonPoint>
    <PolygonPoint sequence="3">
      <Lon cls="U">0053000E</Lon>
      <Lat cls="U">504000N</Lat>
    </PolygonPoint>
  </Polygon>
</Location>
```

A composite area with a hole (doughnut):

```
<Location cls="U">
  <Serial cls="U">BEL::LO:333</Serial>
  <EntryDateTime cls="U">2011-12-25T00:00:00Z</EntryDateTime>
  <Name cls="U">BEL AF Training North</Name>
  <Country cls="U">BEL</Country>
  <Ellipse idx="1">
```

```
    <Excluded cls="U">Yes</Excluded>
    <Lon cls="U">0050000E</Lon>
    <Lat cls="U">503600N</Lat>
    <SemiMajorAxis cls="U">10</SemiMajorAxis>
    <SemiMinorAxis cls="U">10</SemiMinorAxis>
    <Azimuth cls="U">0</Azimuth>
  </Ellipse>
  <LocationRef cls="U">BEL::LO:222</LocationRef>
</Location>
```

LocationRef

Location Reference

Data Item Tag	Data Item Name	Occurrence	Format
	Element Content	Req	pattern (S29)
Sub-Element Of:	Allotment, Location		

Description

Complex element LocationRef references a Location dataset.

Input Requirement

In Data Item LocationRef, enter the serial of the referenced Location.

[XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "**L0**".

[XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

LocationRestriction

Location Restriction

Data Item Tag	Data Item Name	Occurrence	Format
	Element Content	Req	pattern (S29)
Sub-Element Of:	AllotFreq		

Description

Complex element LocationRestriction indicates a Location where the Allotment usage is forbidden.

Input Requirement

In Data Item LocationRestriction, enter the serial of a Location. This Location should be included in, or at least should intersect, the overall Allotment LocationRef.

[XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "**LO**".

[XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

Manufacturer

Manufacturer

Data Item Tag	Data Item Name	Occurrence	Format
Country	Country/Area	Opt	Code List CAO
Name	Manufacturer Name	Req	S100
Sub-Element Of:	Nomenclature		

Description

Complex element Manufacturer contains the manufacturer name of the equipment listed in the corresponding data entry in data element Nomenclature. Additionally the country in which the equipment is manufactured may be included.

Input Requirement

* **Country**: In Data Item Country, enter the country or area in which the Manufacturer has its Headquarters.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CAO (extract only):**

Code	Meaning
AFG	Afghanistan
FF	Africa
US-AL	Alabama
ALA	Åland Islands
US-AK	Alaska
ALB	Albania
DZA	Algeria
NT-ASC	Allied Submarine Command
ASM	American Samoa
AND	Andorra
...	...

* **Name**: In Data Item Name, enter the name of the company that manufactured the equipment. The manufacturer's name should be obtained from data plates on equipment whenever possible. This entry is optional when government nomenclature is entered in element Nomenclature. Use the phrase **"Intentionally not disclosed"** when the manufacturer is known but intentionally not listed (for the issue of internal security of the manufacturer); in this case a Remarks MAY be used to quantify the information to a level compatible with the dataset intended classification.

Example

```
<Manufacturer>
  <Country cls="U">USA</Country>
  <Name cls="U">MOTOROLA Corporation</Name>
</Manufacturer>
```

Message

Message

Data Item Tag	Data Item Name	Occurrence	Format
Name	Message Name	Opt	S40
SecondaryDatasets	Referenced Datasets included	Opt	Code List CBO
Inherits from:	Common		
Sub-Element Of:	SchemaRoot		
Sub-Elements:	DatasetRef [1..n]		

Description

This element inherits attributes and sub-elements from element Common.

Complex element Message describes the receipt and disposition of a group of Datasets in a single transmittal. The receiving system SHOULD verify the correct datasets were received. If a dataset fails validation, a separate Administrative dataset SHOULD be returned to the sender informing them of the error.
See Message Diagram

Input Requirement

[XSL ERR DSTYPE] Part 3 of the Serial reference (dataset type) MUST be "**MS**".

* **Name**: In Data Item Name, enter a human-readable name for the message.
* **SecondaryDatasets**: In Data Item SecondaryDatasets, indicate if datasets referenced by the primary dataset are included.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

Example

```
<Message cls="U">
  <Serial cls="U">TUR::MS:123</Serial>
  <EntryDateTime cls="U">2011-12-25T00:00:00Z</EntryDateTime>
  <Name cls="U">Results of Your 2012-01-05 Data Request</Name>
  <SecondaryDatasets cls="U">No</SecondaryDatasets>
  <DatasetRef cls="U">POL::AN:456</DatasetRef>
  <DatasetRef cls="U">DEU::AL:456</DatasetRef>
  <DatasetRef cls="U">NED::TX:456</DatasetRef>
  <DatasetRef cls="U">USA::RX:456</DatasetRef>
</Message>
```

MissingRef

Missing Reference Identifier

Data Item Tag	Data Item Name	Occurrence	Format
	Element Content	Req	pattern (S29)
Sub-Element Of:	Dataset		

Description

Complex element MissingRef allows the recipient of a message to signal the sender that a dataset referenced in the message was not known by the recipient.

Input Requirement

In Data Item MissingRef, enter the serial of a missing dataset.

[XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

NarrowBandPlanning *(US)*

Narrow Band Planning

Data Item Tag	Data Item Name	Occurrence	Format
ChangeDate	Change Date	Opt	D
NBFreq	Narrow Band Frequency	Opt	UN(16,9) [0..1.0E9]*(MHz)*
Sub-Element Of:	Freq		

Description

Complex element NarrowBandPlanning (US) describes a reduced bandwidth assignment for a single frequency or a range of frequencies.

Input Requirement

* **ChangeDate**: In Data Item ChangeDate (US), enter the date this record is expected to be updated to comply with narrow band transition pla
* **NBFreq**: In Data Item NBFreq (US), enter the transition frequency to comply with narrow band transition plans.

Nomenclature

Nomenclature

Data Item Tag	Data Item Name	Occurrence	Format
Type	Type	Opt	Code List CTO
Level	Level	Opt	Code List CNU
Name	Name	Req	S100
PhysicalUsage ***(US)***	Associated Usages	Opt	Code List US5
Sub-Element Of:	Antenna, ForceElement, RFSystem, Receiver, SSRequest, Satellite, Transmitter		
Sub-Elements:	Manufacturer [0..n]		

Description

Complex element Nomenclature identifies either the standard military, government, nomenclature or the commercial model number of an equipment. Each device or group of devices may have several types of nomenclatures, e.g. both a military nomenclature and a commercial model number.

Input Requirement

If available, the system nomenclature is preferred rather than the component nomenclature; however, either is acceptable.

* **Type**: In Data Item Type, enter the type of nomenclature (commercial, military, etc).

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CTO:**

Code	Meaning
Civilian/Commercial	
Generic	
Government	
Military	
Other	If selected, a clarifying remark SHOULD be entered

* **Level**: In Data Item Level, enter the level of nomenclature (primary, nickname, etc).

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CNU:**

Code
Primary
Alternate
Nickname
Pennant Number

* **Name**: In Data Item Name, enter the standard military nomenclature. If the unit does not have a military nomenclature, enter the manufacturer model number, or a short description.

* **PhysicalUsage *(US)***: In Data Item PhysicalUsage (US), indicate the type of vehicle or other entity that uses the equipment, or from which the subject signal emanates.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List US5:**

Code	Meaning
Associated Equipment	
Associated Platform	
Associated Unit	
Associated Weapon	
Other	If selected, a clarifying remark SHOULD be entered

Examples

A government nomenclature:

```
<Nomenclature>
  <Type cls="U">Government</Type>
  <Level cls="U">Primary</Level>
  <Name cls="U">AN/GRC-103(V)4</Name>
```

```
</Nomenclature>
```

A commercial handheld model number. A partial nomenclature such as "H23" is incomplete since it applies to a series of handheld units:

```
<Nomenclature>
  <Type cls="U">Civilian/Commercial</Type>
  <Level cls="U">Alternate</Level>
  <Name cls="U">H23FFN1130E</Name>
  <Manufacturer>
    <Name cls="U">MOTOROLA CORPORATION</Name>
  </Manufacturer>
</Nomenclature>
```

Notation

Notation

Data Item Tag	Data Item Name	Occurrence	Format
Code	Notation Code	Req	US20
Type	Type of Notation	Req	Code List CEN
Status ***(US)***	Notation Status	Opt	Code List UNT
Sub-Element Of:	Configuration		
Sub-Elements:	NotationTimeline [0..n] ***(US)*** PotentialVictims [0..n] ***(US)*** UsingCountries [0..n] ***(US)***		

Description

Complex element Notation contains the electronic identification for a pulsed or non-pulsed electromagnetic emission. It includes but is not limited to Communications Emitter Notation (CENOT) and Electronic Intelligence Notation (ELNOT).

Input Requirement

* **Code**: In Data Item Code, enter an alphanumeric combination that is used to identify a particular emission.
* **Type**: In Data Item Type, enter the type of Notation.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CEN:**

Code	Meaning
CENOT	
DIA Equipment Number	
ELNOT	
Interim identifier	
SPOT	
Emitter ID	
Other	If selected, a clarifying remark SHOULD be entered

* **Status *(US)***: In Data Item Status (US), enter the status of the future, prior, or associated, Notation.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List UNT:**

Code	Meaning
Active	
Associated	
Cancelled	
Future	
Incorporated	
Renotated	
Retired	
Other	If selected, a clarifying remark SHOULD be entered

Example

```
<Notation>
  <Code cls="U">869812</Code>
  <Type cls="U">ELNOT</Type>
  <Status cls="U">Active</Status>
  <NotationTimeline>
    <Code cls="U">869812</Code>
    <Status cls="U">Active</Status>
    <StatusChangeDateTime cls="U">2014-12-25T01:23:001Z</StatusChangeDateTime>
    <Type cls="U">ELNOT</Type>
  </NotationTimeline>
```

```
  <PotentialVictims>
    <Type cls="U">ELNOT</Type>
    <VictimName cls="U">Target 478</VictimName>
    <VictimNotation cls="U">B000Z</VictimNotation>
  </PotentialVictims>
  <UsingCountries>
    <CountryName cls="U">USA</CountryName>
    <Role cls="U">Source</Role>
  </UsingCountries>
</Notation>
```

NotationTimeline *(US)*

Notation Timeline

Data Item Tag	Data Item Name	Occurrence	Format
Code	Notation Code	Req	US20
Status	Notation Status	Opt	Code List UNT
StatusChangeDateTime	Notation Status Timestamp	Opt	DT
Type	Notation Type	Opt	Code List CEN
Sub-Element Of:	Notation		

Description

Complex element NotationTimeline (US) provides history information for a specific notation or signal.

Input Requirement

* **Code**: In Data Item Code (US), enter an alphanumeric combination that is used to identify a particular Notation/ Signal.
* **Status**: In Data Item Status (US), enter the status of the future, prior, or associated, Notation.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List UNT:**

Code	Meaning
Active	
Associated	
Cancelled	
Future	
Incorporated	
Renotated	
Retired	
Other	If selected, a clarifying remark SHOULD be entered

* **StatusChangeDateTime**: In Data Item StatusChangeDateTime (US), enter the timestamp when the prior, or associated, Notation achieved this Status.
* **Type**: In Data Item Type (US), enter the type of Notation.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CEN:**

Code	Meaning
CENOT	
DIA Equipment Number	
ELNOT	
Interim identifier	
SPOT	
Emitter ID	
Other	If selected, a clarifying remark SHOULD be entered

Example

See Notation.

Note *(US)*

Note

Data Item Tag	Data Item Name	Occurrence	Format
Administration	Administration	Opt	Code List CAO
EffectiveDate	EffectiveDate	Opt	D
ExpirationDate	Expiration Date	Opt	D
Name	Name	Opt	S100
Source	Source	Opt	S100
Inherits from:	Common		
Sub-Element Of:	SchemaRoot		

Description

This element inherits attributes and sub-elements from element Common.

Complex element Note (US) is the XML root for all parameters of a Note.

Input Requirement

[XSL ERR DSTYPE] Part 3 of the Serial reference (dataset type) MUST be "**NT**".

* **Administration**: In Data Item Administration (US), enter the nation or regulatory body that administers this note.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CAO (extract only):**

Code	Meaning
AFG	Afghanistan
FF	Africa
US-AL	Alabama
ALA	Åland Islands
US-AK	Alaska
ALB	Albania
DZA	Algeria
NT-ASC	Allied Submarine Command
ASM	American Samoa
AND	Andorra
...	...

* **EffectiveDate**: In Data Item EffectiveDate (US), enter the date this note comes in force.
* **ExpirationDate**: In Data Item ExpirationDate (US), enter the date this note goes out of force.
* **Name**: In Data Item Name (US), enter the externally-assigned name of the note.
* **Source**: In Data Item Source (US), enter the source or creator of the note.

Example

```
<Note>
  <Administration cls="U">USA</Administration>
  <EffectiveDate cls="U">2014-01-23</EffectiveDate>
  <ExpirationDate cls="U">2014-12-31</ExpirationDate>
  <Name cls="U">Target 743</Name>
  <Source cls="U">Joint Spectrum Center</Source>
</Note>
```

ObservedERPAnalysis *(US)*

ObservedERPAnalysis

Data Item Tag	Data Item Name	Occurrence	Format
Continuous	ERP Continuity	Opt	Code List CBO
ERPAdaptiveDriverDesc	ERP Driver Description	Opt	S500
ERPAdaptiveRuleDesc	ERP Driver Rule Description	Opt	S500
ERPPatternPeriod	ERP Pattern Period	Opt	UN(12,6)*(us)*
ERPPatternType	ERP Pattern Type	Opt	Code List US7
ERPActualMax	ERP Actual Max Value	Opt	SN(10,7)*(dBW)*
ERPActualMin	ERP Actual Min Value	Opt	SN(10,7)*(dBW)*
ERPChangeRate	ERP Change Rate	Opt	UN(6,4)*(dBW/s)*
ERPExtremeMax	ERP Extreme Max Value	Opt	SN(10,7)*(dBW)*
ERPExtremeMin	ERP Extreme Min Value	Opt	SN(10,7)*(dBW)*
ERPMean	ERP Mean Value	Opt	SN(10,7)*(dBW)*
ERPMedian	ERP Most Probable Value	Opt	SN(10,7)*(dBW)*
ERPSequenceDesc	ERP Sequence Description	Opt	S500
ERPStdDev	ERP Standard Deviation	Opt	SN(10,7)*(dBW)*
ERPStep	ERP Step	Opt	SN(10,7)*(dBW)*
NumObsPositions	Observed Position Count	Opt	UN(6)
NumObsValues	Observed Value Count	Opt	UN(6)
Sub-Element Of:	Configuration		
Sub-Elements:	ObservedERPValues [0..n]		

Description

Complex element ObservedERPAnalysis (US) contains data describing Effective Radiated Power (ERP) associated with an emitter or Notation.

Input Requirement

* **Continuous**: In Data Item Continuous (US), indicate whether pulse-to-pulse ERP variations are Discrete or Continuous. Discrete uses a finite number of fixed values separated by ranges of unused values. Continuous potentially uses an infinite number of values within one or more ranges.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **ERPAdaptiveDriverDesc**: In Data Item ERPAdaptiveDriverDesc (US), enter the condition which controls, or can be associated with, the signal ERP variations.

* **ERPAdaptiveRuleDesc**: In Data Item ERPAdaptiveRuleDesc (US), enter the rule which describes the signal ERP variations

* **ERPPatternPeriod**: In Data Item PattternPeriod (US), enter the time duration for one complete cycle of a repeating ERP sequence.

* **ERPPatternType**: In Data Item ERPPatternType (US), indicate whether ERP is unmodulated ERP variations are Patterned, Non-Patterned, or Adaptive.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List US7:**

Code	Meaning
Adaptive	variations are driven by an environmental condition (e.g., target range, target velocity, etc.)
Non-Patterned	variations do not repeat significantly to create a recognizable pattern.
Patterned	variations repeat significantly to create a recognizable pattern.
Unmodulated	indicated by a constant ERP.
Other	If selected, a clarifying remark SHOULD be entered

* **ERPActualMax**: In Data Item ERPActualMax (US), enter the highest discrete ERP value which is found in a single piece of a complete data (e.g., in a single intercept that contains the complete ERP characteristics of the signal).

  [XSL ERR MINMAX] If ERPActualMax is used, it MUST be greater than ERPActualMin.

* **ERPActualMin**: In Data Item ERPActualMin (US), enter the lowest discrete ERP value which is found in a single piece of a complete data (e.g., in a single intercept that contains the complete ERP characteristics of the signal).

* **ERPChangeRate**: In Data Item ERPChangeRate (US), enter the rate of change for ERP variations expressed in ERP change per unit of time.

* **ERPExtremeMax**: In Data Item ERPExtremeMax (US), enter the upper ERP value that represent 100% of the signal observed ERP values which were obtained from a statistical study of a data set.

  [XSL ERR MINMAX] If ERPExtremeMax is used, it MUST be greater than ERPExtremeMin.

* **ERPExtremeMin**: In Data Item ERPExtremeMin (US) enter the lower ERP value that represent 100% of the signal observed ERP values which were obtained from a statistical study of a data set.

* **ERPMean**: In Data Item ERPMean (US), enter the mean ERP value for a signal which changes ERP values on a non-patterned basis.

* **ERPMedian**: In Data Item ERPMedian (US), enter the observed ERP value, or the observed ERP values in the case of a signal with multiple discrete/individual ERP values, that the signal most often used based on a statistical study of a dataset.

* **ERPSequenceDesc**: In Data Item ERP SequenceDesc (US), enter the textual description of the observed algorithm for the sequence of variation for the ERP.

* **ERPStdDev**: In Data Item ERPStdDev (US), enter the standard deviation associated with the ERP Value data set that was used to calculate ERPMean.

* **ERPStep**: In Data Item ERPStep (US), enter the delta between the Most Probable observed ERP values of adjacent and discrete ERPs.

* **NumObsPositions**: In Data Item NumObsPositions (US), enter the number of discrete ERP dwell/pulse groups, for a pulsed signal, or ERP values at a constant ERP value, for a continuous wave (CW) signal, observed in a signal which contains multiple and discrete ERP values that change in a repeating ERP sequence.

* **NumObsValues**: In Data Item NumObsValues (US), enter the number of discrete ERP values observed for a signal which contains multiple and discrete ERP values.

Example

```
<ObservedERPAnalysis>
  <Continuous cls="U">Yes</Continuous>
  <ERPAdaptiveDriverDesc cls="U">Target Motion Tracking</ERPAdaptiveDriverDesc>
  <ERPAdaptiveRuleDesc cls="U">Required Pattern Collection</ERPAdaptiveRuleDesc>
  <ERPPatternPeriod cls="U">55</ERPPatternPeriod>
  <ERPPatternType cls="U">Non-Patterned</ERPPatternType>
  <ERPActualMax cls="U">99.54</ERPActualMax>
  <ERPActualMin cls="U">67.99</ERPActualMin>
  <ERPChangeRate cls="U">13</ERPChangeRate>
  <ERPExtremeMax cls="U">125.7</ERPExtremeMax>
  <ERPExtremeMin cls="U">55.88</ERPExtremeMin>
  <ERPMean cls="U">111.57</ERPMean>
  <ERPMedian cls="U">44.88</ERPMedian>
  <ERPSequenceDesc cls="U">Required Pattern Collection set A34</ERPSequenceDesc>
  <ERPStdDev cls="U">17</ERPStdDev>
  <ERPStep cls="U">1.666</ERPStep>
  <NumObsPositions cls="U">60</NumObsPositions>
  <NumObsValues cls="U">23</NumObsValues>
  <ObservedERPValues>
    <ERPDwell cls="U">589</ERPDwell>
    <ERPValue cls="U">128.55</ERPValue>
```

```
    <StatisticalIndicator cls="U">98</StatisticalIndicator>
  </ObservedERPValues>
</ObservedERPAnalysis>
```

ObservedERPValues *(US)*

ObservedERPValues

Data Item Tag	Data Item Name	Occurrence	Format
ERPDwell	ERP Dwell	Opt	UN(12,6)*(us)*
ERPValue	Observed ERP Value	Req	SN(10,7)*(dBW)*
StatisticalIndicator	ERP Statistical Indicator	Opt	UN(5,2) [0..100]*(%)*
Sub-Element Of:	ObservedERPAnalysis		

Description

Complex element ObservedERPValues (US) contains specific data artifacts that describe the Effective Radiated Power (ERP) associated with an emitter or Notation.

Input Requirement

* **ERPDwell**: In Data Item ERPDwell (US), enter the time duration for a complete dwell/group of pulses which all have the same discrete ERP value, or for a continuous wave at a constant ERP value.
* **ERPValue**: In Data Item ERPValue (US), enter the ERP values that represent 95% of the signal observed ERP values for each discrete ERP value which were obtained from a statistical study of a data set.
* **StatisticalIndicator**: In Data Item StatisticalIndicator (US), indicate how this specific data observation was used (e.g., 95% of the observed values). If this element is empty, then the value is assumed to be part of the 100% sample size.

Example

See ObservedERPAnalysis.

ObservedLobeAnalysis *(US)*

Observed Lobe Analysis

Data Item Tag	Data Item Name	Occurrence	Format
BeamType	Beam Type	Opt	Code List CBD
LobeID	Lobe Identifier	Req	S10
LobeName	Lobe Name	Opt	S25
LobeSymmetric	Symmetric Lobe	Opt	Code List CBO
Sub-Element Of:	AntMode		
Sub-Elements:	ObservedLobeValues [0..n]		

Description

Complex element ObservedLobeAnalysis (US) contains general data associated with observed Antenna sidelobes and backlobes.

Input Requirement

* **BeamType**: In Data Item BeamType (US), indicate the pattern beam type that best represents the general shape of the beam as it radiates from the antenna. The beam shape is a direct function of the radiating antenna shape and the beams are characterized by their shape (volume) in space so as to help determine how and where to measure mainbeam and sidelobe levels. Additionally. radar beam shapes are generally characteristic of the function of a particular radar.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBD:**

Code	Meaning
Cardioid	
Cosecant Squared	
Elliptical	
Fan	
Hyperbolic	
Omni	
Pencil	
Shaped Beam	
Single Symmetrical Lobe	
Other	If selected, a clarifying remark SHOULD be entered

* **LobeID**: In Data Item LobeID (US), enter a unique (within the AntMode) identifier for the Antenna lobe.
* **LobeName**: In Data Item LobeName (US), enter a name for the Antenna lobe. Examples: 1st Backlobe, 5th SideLobe, etc.
* **LobeSymmetric**: In Data Item LobeSymmetric (US), indicate whether the sidelobe is symmetric.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

Example

```
<ObservedLobeAnalysis>
  <BeamType>Cardioid</BeamType>
  <LobeID cls="U">213</LobeID>
  <LobeName cls="U">1st Backlobe</LobeName>
  <LobeSymmetric cls="U">Yes</LobeSymmetric>
  <ObservedLobeValues>
    <HorzBwMax cls="U">58.89</HorzBwMax>
    <HorzBwMin cls="U">45.23</HorzBwMin>
    <LobeValueAngleAccuracy cls="U">0.01</LobeValueAngleAccuracy>
```

```
    <LobeValueAngleHorz cls="U">179</LobeValueAngleHorz>
    <LobeValueAngleVert cls="U">178.23</LobeValueAngleVert>
    <LobeValueID cls="U">213</LobeValueID>
    <LobeValueLevel cls="U">47</LobeValueLevel>
    <LobeValueLevelAccuracy cls="U">12</LobeValueLevelAccuracy>
    <LobeValueName cls="U">1st Backlobe left</LobeValueName>
    <VertBwMax cls="U">82.34</VertBwMax>
    <VertBwMin cls="U">67.8</VertBwMin>
  </ObservedLobeValues>
</ObservedLobeAnalysis>
```

ObservedLobeValues *(US)*

Observed Lobe Values

Data Item Tag	Data Item Name	Occurrence	Format
HorzBwMax	Maximum Horizontal Beamwidth	Opt	UN(5,2)*(deg)*
HorzBwMin	Minimum Horizontal Beamwidth	Opt	UN(5,2)*(deg)*
LobeValueAngleAccuracy	Lobe Measurement Angle Accuracy	Opt	SN(5,2) [0..90]*(deg)*
LobeValueAngleHorz	Lobe Measurement Horizontal Angle	Opt	UN(5,2) [0..180]*(deg)*
LobeValueAngleVert	Lobe Measurement Vertical Angle	Opt	UN(5,2) [0..180]*(deg)*
LobeValueID	Lobe Measurement Identifier	Req	S10
LobeValueLevel	Lobe Measurement Power Level	Opt	UN(5,2) [0..150]*(dB)*
LobeValueLevelAccuracy	Lobe Measurement Level Accuracy	Opt	SN(5,2) [0..90]*(dB)*
LobeValueName	Lobe Measurement Name	Opt	S25
VertBwMax	Maximum Vertical Beamwidth	Opt	UN(5,2)*(deg)*
VertBwMin	Minimum Vertical Beamwidth	Opt	UN(5,2)*(deg)*
Sub-Element Of:	ObservedLobeAnalysis		

Description

Complex element ObservedLobeValues (US) contains azimuth and elevation angles, as well as power density levels associated with observed Antenna sidelobes or backlobes. Used to its full potential, a precise 3D picture of an Antenna sidelobe can be represented.

Input Requirement

* **HorzBwMax**: In Data Item HorzBwMax (US), enter the maximum angle of the horizontal component of the antenna mainbeam measured at the half-power (-3 dB) point of its maximum horizontal width.

  [XSL ERR MINMAX] If HorzBwMax is used, it MUST be greater than HorzBwMin.
* **HorzBwMin**: In Data Item HorzBwMin (US), enter the minimum angle of the horizontal component of the antenna mainbeam measured at the half-power (-3 dB) point of its maximum horizontal width.
* **LobeValueAngleAccuracy**: In Data Item LobeValueAngleAccuracy (US), enter the measurement accuracy of the LobeValueAngle(s) in degrees. Expressed as a (+/-) value.
* **LobeValueAngleHorz**: In Data Item LobeValueAngleHorz (US), enter the azimuth angle between the sidelobe LobeValueLevel and the mainbeam maximum power level.
* **LobeValueAngleVert**: In Data Item LobeValueAngleVert (US), enter the vertical angle between the sidelobe LobeValueLevel and the mainbeam maximum power level.
* **LobeValueID**: In Data Item LobeValueID (US), enter a unique (within the AntLobe) identifier for the Antenna lobe measurement.
* **LobeValueLevel**: In Data Item LobeValueLevel (US), enter the ratio of the mainbeam power level to the sidelobe power level, expressed as a positive value in dB.
* **LobeValueLevelAccuracy**: In Data Item LobeValueLevelAccuracy (US), enter the measurement accuracy of the LobeValueLevel value in dB. Expressed as a (+/-) value.
* **LobeValueName**: In Data Item LobeValueName (US), enter a name for the Antenna lobe measurement.
* **VertBwMax**: In Data Item VertBwMax (US), enter the maximum angle of the vertical component of the antenna mainbeam measured at the half-power (-3 dB) points of its maximum vertical width.

  [XSL ERR MINMAX] If VertBwMax is used, it MUST be greater than VertBwMin.
* **VertBwMin**: In Data Item VertBwMin (US), enter the minimum angle of the vertical component of the antenna mainbeam measured at the half-power (-3 dB) points of its maximum vertical width.

Example

See ObservedLobeAnalysis.

ObservedMOPAnalysis *(US)*

ObservedMOPAnalysis

Data Item Tag	Data Item Name	Occurrence	Format
MOPAdaptiveDriverDesc	MOP Adaptive Driver Description	Opt	S500
MOPAdaptiveDriverRuleDesc	MOP Adaptive Driver Rule Description	Opt	S500
MOPAMPercentModulation	MOP AM Percent Modulation	Opt	UN(2,1)*(%)*
MOPChangeRateAM	AM MOP Change Rate	Opt	SN(5,2)*(dB/us)*
MOPChangeRateCW	CW MOP Change Rate	Opt	UN(12,6)*(MHz/us)*
MOPChangeRateFM	FM MOP Change Rate	Opt	UN(12,6)*(MHz/us)*
MOPChangeRatePM	PM MOP Change Rate	Opt	UN(3,2)*(deg/us)*
MOPContinuous	MOP Continuous	Opt	Code List CBO
MOPID	MOP ID	Opt	S10
MOPMeanValueAM	AM MOP Mean Value	Opt	SN(5,2)*(dB)*
MOPMeanValueCW	CW MOP Mean Value	Opt	UN(12,6)*(MHz)*
MOPMeanValueFM	FM MOP Mean Value	Opt	UN(12,6)*(MHz)*
MOPMeanValuePM	PM MOP Mean Value	Opt	UN(3,2)*(deg)*
MOPNumElements	MOP Num Elements	Opt	UN(6)
MOPOffTime	MOP Off Time	Opt	UN(12,6)*(us)*
MOPOnTime	MOP On Time	Opt	UN(12,6)*(us)*
MOPPatternName	MOP Pattern Name	Opt	S50
MOPPatternPeriod	MOP Pattern Period	Opt	UN(12,6)*(us)*
MOPPatternType	MOP Pattern Type	Opt	Code List US7
MOPPulseDurationLink	MOP Pulse Duration Link	Opt	UN(12,6)*(us)*
MOPTimeBWProduct	MOP Time BW Product	Opt	UN(16,9)
MOPType	Mop Type	Opt	Code List USX
MOPValueMaxAM	AM MOP Value Max	Opt	SN(5,2)*(dB)*
MOPValueMaxCW	CW MOP Value Max	Opt	UN(12,6)*(MHz)*
MOPValueMaxFM	FM MOP Value Max	Opt	UN(12,6)*(MHz)*
MOPValueMaxPM	PM MOP Value Max	Opt	UN(3,2)*(deg)*
MOPValueMinAM	AM MOP Value Min	Opt	SN(5,2)*(dB)*
MOPValueMinCW	CW MOP Value Min	Opt	UN(12,6)*(MHz)*
MOPValueMinFM	FM MOP Value Min	Opt	UN(12,6)*(MHz)*
MOPValueMinPM	PM MOP Value Min	Opt	UN(3,2)*(deg)*
SignalType	Signal Modulation Type	Opt	Code List CMO
Sub-Element Of:	TxMode		
Sub-Elements:	ObservedMOPSweep [0..n]		

Description

Complex element ObservedMOPAnalysis (US) contains data describing the characteristic and pattern information for the Modulation impressed On the Pulse (MOP).

Input Requirement

* **MOPAdaptiveDriverDesc**: In Data Item MOPAdaptiveDriverDesc (US), enter the condition which controls, or can be associated with, the signal MOP variations.
* **MOPAdaptiveDriverRuleDesc**: In Data Item MOPAdaptiveDriverRuleDesc (US), enter the rule which describes the signal MOP variations.
* **MOPAMPercentModulation**: In Data Item MOPAMPercentModulation (US), enter the AM Percent Modulation is the ratio (expressed as a percentage) between the amplitude variation and the maximum amplitude
* **MOPChangeRateAM**: In Data Item US:MOPChangeRateAM (US), enter the change in amplitude within the pulse. Use of this element should agree with the selection made in US:ObservedMOPAnalysis.MOPType.

* **MOPChangeRateCW**: In Data Item US:MOPChangeRateCW (US), enter the change in continuous wave frequency within the pulse. Use of this element should agree with the selection made in US:ObservedMOPAnalysis.MOPType.
* **MOPChangeRateFM**: In Data Item US:MOPChangeRateFM (US), enter the change in frequency within the pulse. Use of this element should agree with the selection made in US:ObservedMOPAnalysis.MOPType.
* **MOPChangeRatePM**: In Data Item US:MOPChangeRatePM (US), enter the change in phase angle within the pulse. Use of this element should agree with the selection made in US:ObservedMOPAnalysis.MOPType.
* **MOPContinuous**: In Data Item US:MOPContinuous (US), indicate whether MOP or CW modulation is Discrete or Continuous.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **MOPID**: In Data Item US:MOPID (US), enter a unique identifier (within the TxMode) for the MOP data.
* **MOPMeanValueAM**: In Data Item US:MOPMeanValueAM (US), enter the average amplitude for a signal which changes on a non-patterned basis within a pulse. Use of this element should agree with the selection made in US:ObservedMOPAnalysis.MOPType.
* **MOPMeanValueCW**: In Data Item US:MOPMeanValueCW (US), enter the average continuous wave frequency for a signal which changes on a non-patterned basis within a pulse. Use of this element should agree with the selection made in US:ObservedMOPAnalysis.MOPType.
* **MOPMeanValueFM**: In Data Item US:MOPMeanValueFM (US), enter the average frequency for a signal which changes on a non-patterned basis within a pulse. Use of this element should agree with the selection made in US:ObservedMOPAnalysis.MOPType.
* **MOPMeanValuePM**: In Data Item US:MOPMeanValuePM (US), enter the average phase angle for a signal which changes on a non-patterned basis within a pulse. Use of this element should agree with the selection made in US:ObservedMOPAnalysis.MOPType.
* **MOPNumElements**: In Data Item US:MOPNumElements (US), enter the number of discrete FREQ/PHASE/AMP values transmitted in a patterned sequence (i.e., any repeated values are counted each time)
* **MOPOffTime**: In Data Item US:MOPOffTime (US), enter the duration of the state of the modulated waveform with the absence of energy.
* **MOPOnTime**: In Data Item US:MOPOnTime (US), enter the duration of the one on-time related to the binary form of amplitude modulation called on-off keying.
* **MOPPatternName**: In Data Item MOPPatternName (US), enter a freeform text name for the pattern (e.g., Phase Alpha).
* **MOPPatternPeriod**: In Data Item US:MOPPatternPeriod (US), enter the duration of one complete cycle of Frequency, Phase or Amplitude variations for a signal which changes on a patterned basis, within a pulse, for pulsed signals.
* **MOPPatternType**: In Data Item US:MOPPatternType (US), indicate whether MOP or CW characteristics are Patterned, Non-Patterned, Adaptive, or Unmodulated.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List US7:**

Code	Meaning
Adaptive	variations are driven by an environmental condition (e.g., target range, target velocity, etc.)
Non-Patterned	variations do not repeat significantly to create a recognizable pattern.
Patterned	variations repeat significantly to create a recognizable pattern.
Unmodulated	indicated by a constant ERP.
Other	If selected, a clarifying remark SHOULD be entered

* **MOPPulseDurationLink**: In Data Item US:MOPPulseDurationLink (US), enter the Discrete PD value which is associated with the selected MOP name (i.e., the name in the MOP Pattern List).
* **MOPTimeBWProduct**: In Data Item US:MOPTimeBWProduct (US), enter the time bandwidth product of the waveform (actual PD times instantaneous bandwidth).

* **MOPType**: In Data Item MOPType (US), indicate if the information imprinted on the pulse is modulated by amplitude (AM), frequency (FM), phase (PM), or is a continuous wave (CW).

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List USX:**

Code
Amplitude Modulation (AM)
Continuous Wave (CW)
Frequency Modulation (FM)
Phase Modulation (PM)

* **MOPValueMaxAM**: In Data Item US:MOPValueMaxAM (US), enter the maximum change in amplitude within the pulse. Use of this element should agree with the selection made in US:ObservedMOPAnalysis.MOPType.
* **MOPValueMaxCW**: In Data Item US:MOPValueMaxCW (US), enter the maximum change in continuous wave frequency within the pulse. Use of this element should agree with the selection made in US:ObservedMOPAnalysis.MOPType.
* **MOPValueMaxFM**: In Data Item US:MOPValueMaxFM (US), enter the maximum change in frequency within the pulse. Use of this element should agree with the selection made in US:ObservedMOPAnalysis.MOPType.
* **MOPValueMaxPM**: In Data Item US:MOPValueMaxPM (US), enter the maximum change in phase angle within the pulse. Use of this element should agree with the selection made in US:ObservedMOPAnalysis.MOPType.
* **MOPValueMinAM**: In Data Item US:MOPValueMinAM (US), enter the minimum change in amplitude within the pulse. Use of this element should agree with the selection made in US:ObservedMOPAnalysis.MOPType.
* **MOPValueMinCW**: In Data Item US:MOPValueMinCW (US), enter the minimum change in continuous wave frequency within the pulse. Use of this element should agree with the selection made in US:ObservedMOPAnalysis.MOPType.
* **MOPValueMinFM**: In Data Item US:MOPValueMinFM (US), enter the minimum change in frequency within the pulse. Use of this element should agree with the selection made in US:ObservedMOPAnalysis.MOPType.
* **MOPValueMinPM**: In Data Item US:MOPValueMinPM (US), enter the minimum change in phase angle within the pulse. Use of this element should agree with the selection made in US:ObservedMOPAnalysis.MOPType.
* **SignalType**: In Data Item SignalType (US), indicate the specific type of modulation used/detected.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CMO (extract only):**

Code	Meaning
8-Tone	
16-Tone	
32-Tone	
AM Clear Voice	
AM Secure Voice	
ASK/OOK	
Audio FSK	
Binary FSK	
Binary Phase Shift Key	
Code Division Multiplex	
...	...

Example

```
<ObservedMOPAnalysis>
  <MOPAdaptiveDriverDesc cls="U">Target Motion Tracking</MOPAdaptiveDriverDesc>
  <MOPAdaptiveDriverRuleDesc cls="U">Target Motion Tracking</
MOPAdaptiveDriverRuleDesc>
  <MOPAMPercentModulation cls="U">46.8</MOPAMPercentModulation>
  <MOPChangeRate cls="U">.034</MOPChangeRate>
  <MOPContinuous cls="U">Yes</MOPContinuous>
  <MOPID cls="U">67990</MOPID>
  <MOPMeanValue cls="U">23</MOPMeanValue>
```

```
  <MOPNumElements cls="U">672</MOPNumElements>
  <MOPNumElements cls="U">743</MOPNumElements>
  <MOPOffTime cls="U">590</MOPOffTime>
  <MOPOnTime cls="U">357</MOPOnTime>
  <MOPPatternName cls="U">Big View Sample 00067</MOPPatternName>
  <MOPPatternPeriod cls="U">0.0001</MOPPatternPeriod>
  <MOPPatternType cls="U">Non-Patterned</MOPPatternType>
  <MOPPulseDurationLink cls="U">0.001</MOPPulseDurationLink>
  <MOPTimeBWProduct cls="U">72.69</MOPTimeBWProduct>
  <MOPType cls="U">PM</MOPType>
  <MOPValueMax cls="U">16</MOPValueMax>
  <MOPValueMin cls="U">11</MOPValueMin>
  <SignalType cls="U">Doppler Frequency-Shift</SignalType>
  <ObservedMOPSweep>
    <MOPDutyCycle cls="U">99.2</MOPDutyCycle>
    <MOPFlyBackInterval cls="U">23678.23</MOPFlyBackInterval>
    <MOPNumElements cls="U">500</MOPNumElements>
    <MOPRepetionInterval cls="U">23693.23</MOPRepetionInterval>
    <MOPStep cls="U">32</MOPStep>
    <MOPSweepPeriod cls="U">0.04</MOPSweepPeriod>
    <ObservedMOPSequence cls="U"/>
    <MOPDutyCycle cls="U">12.5</MOPDutyCycle>
    <MOPNumElements cls="U">500</MOPNumElements>
    <MOPRepetionInterval cls="U">23691.23</MOPRepetionInterval>
    <MOPSequenceDesc cls="U">Required Pattern Collection set A34</MOPSequenceDesc>
    <MOPStep cls="U">34</MOPStep>
    <SequenceBitLength cls="U">432</SequenceBitLength>
    <ObservedMOPBits>
      <BitDuration cls="U">34.67</BitDuration>
      <BitRate cls="U">372</BitRate>
      <MOPDutyCycle cls="U">12.4</MOPDutyCycle>
      <MOPNumElements cls="U">492</MOPNumElements>
      <MOPRepetionInterval cls="U">23690.23</MOPRepetionInterval>
      <MOPStep cls="U">36</MOPStep>
      <ObservedMOPValues>
        <StatisticalIndicator cls="U">97</StatisticalIndicator>
        <MOPValueAM cls="U">35</MOPValueAM>
        <MOPValueCW cls="U">3024</MOPValueCW>
        <MOPValueFM cls="U">3096</MOPValueFM>
        <MOPValuePM cls="U">27</MOPValuePM>
      </ObservedMOPValues>
    </ObservedMOPBits>
  </ObservedMOPSweep>
</ObservedMOPAnalysis>
```

ObservedMOPBits *(US)*

ObservedMOPBits

Data Item Tag	Data Item Name	Occurrence	Format
MOPDutyCycle	MOP Duty Cycle	Opt	UN(4,2)[0..100]*(%)*
MOPNumElements	MOP Num Elements	Opt	UN(6)
MOPStepAM	AM MOP Step	Opt	UN(5,2)*(dB)*
MOPStepCW	CW MOP Step	Opt	UN(12,6)*(MHz)*
MOPStepFM	FM MOP Step	Opt	UN(12,6)*(MHz)*
MOPStepPM	PM MOP Step	Opt	UN(3,2)*(deg)*
MOPRepetionInterval	MOP Repetion Interval	Opt	UN(12,6)*(us)*
BitRate	Bit Rate	Opt	UN(10,3)*(kbit/s)*
BitDuration	Bit Duration	Opt	UN(12,6)*(us)*
Sub-Element Of:	ObservedMOPSequence		
Sub-Elements:	ObservedMOPValues [0..n]		

Description

Complex element ObservedMOPBits (US) describes the data format for the Amplitude (AM), Phase (PM), Frequency (FM) and/or Continuous Wave (CW) features of a signal impressed on a Pulse.

Input Requirement

* **MOPDutyCycle**: In Data Item US:MOPDutyCycle (US), enter as a percentage, the minimum or nominal ratio of the pulse duration to the pulse period.
* **MOPNumElements**: In Data Item US:MOPNumElements (US), enter the number of discrete FREQ/PHASE/AMP values transmitted in a patterned sequence (i.e., any repeated values are counted each time)
* **MOPStepAM**: In Data Item US:MOPStepAM (US), enter the difference between adjacent amplitude discrete power values, within a pulse. Use of this element should agree with the selection made in US:ObservedMOPAnalysis.MOPType.
* **MOPStepCW**: In Data Item US:MOPStepCW(US), enter the difference between adjacent continuous wave frequency discrete values, within a pulse. Use of this element should agree with the selection made in US:ObservedMOPAnalysis.MOPType.
* **MOPStepFM**: In Data Item US:MOPStepFM (US), enter the difference between adjacent frequency discrete values, within a pulse. Use of this element should agree with the selection made in US:ObservedMOPAnalysis.MOPType.
* **MOPStepPM**: In Data Item US:MOPStepPM (US), enter the difference between adjacent phase discrete values, within a pulse. Use of this element should agree with the selection made in US:ObservedMOPAnalysis.MOPType.
* **MOPRepetionInterval**: In Data Item MOPRepetionInterval (US), enter the overall interval which may include multiple Sweep Repetition Intervals (SRI). Fly-back times, and dead times.
* **BitRate**: In Data Item BitRate (US), enter the rate at which the signal exhibits a change of FREQ/PHASE/AMP; inverse of the minimum bit duration (e.g., a signal that has a .977 usec minimum bit has a bit rate of 1024 kbit/sec).
* **BitDuration**: In Data Item BitDuration (US), enter the shortest time interval (within a pulse for pulsed signals) that a discrete frequency, phase, or amplitude value stays at its state before changing to a new one.

Example

See ObservedMOPAnalysis.

ObservedMOPSequence *(US)*

ObservedMOPSequence

Data Item Tag	Data Item Name	Occurrence	Format
MOPDutyCycle	MOP Duty Cycle	Opt	UN(4,2)[0..100]*(%)*
MOPNumElements	MOP Num Elements	Opt	UN(6)
MOPStepAM	AM MOP Step	Opt	UN(5,2)*(dB)*
MOPStepCW	CW MOP Step	Opt	UN(12,6)*(MHz)*
MOPStepFM	FM MOP Step	Opt	UN(12,6)*(MHz)*
MOPStepPM	PM MOP Step	Opt	UN(3,2)*(deg)*
SequenceBitLength	Sequence Bit Length	Opt	UN(6)
MOPSequenceDesc	MOP Sequence Desc	Opt	S500
MOPRepetionInterval	MOP Repetion Interval	Opt	UN(12,6)*(us)*
Sub-Element Of:	ObservedMOPSweep		
Sub-Elements:	ObservedMOPBits [0..n]		

Description

Complex element ObservedMOPSequence (US) contains descriptive information about the sequencing used for the Modulation impressed On the Pulse (MOP).

Input Requirement

* **MOPDutyCycle**: In Data Item US:MOPDutyCycle (US), enter as a percentage, the minimum or nominal ratio of the pulse duration to the pulse period.
* **MOPNumElements**: In Data Item US:MOPNumElements (US), enter the number of discrete FREQ/PHASE/AMP values transmitted in a patterned sequence (i.e., any repeated values are counted each time)
* **MOPStepAM**: In Data Item US:MOPStepAM (US), enter the difference between adjacent amplitude discrete power values, within a pulse. Use of this element should agree with the selection made in US:ObservedMOPAnalysis.MOPType.
* **MOPStepCW**: In Data Item US:MOPStepCW(US), enter the difference between adjacent continuous wave frequency discrete values, within a pulse. Use of this element should agree with the selection made in US:ObservedMOPAnalysis.MOPType.
* **MOPStepFM**: In Data Item US:MOPStepFM (US), enter the difference between adjacent frequency discrete values, within a pulse. Use of this element should agree with the selection made in US:ObservedMOPAnalysis.MOPType.
* **MOPStepPM**: In Data Item US:MOPStepPM (US), enter the difference between adjacent phase discrete values, within a pulse. Use of this element should agree with the selection made in US:ObservedMOPAnalysis.MOPType.
* **SequenceBitLength**: In Data Item US: SequenceBitLength (US), enter the length of one sequence of a pattern of bits that been observed repeating.
* **MOPSequenceDesc**: In Data Item US:MOPSequenceDesc (US), enter a text description of the MOP sequence.
* **MOPRepetionInterval**: In Data Item MOPRepetionInterval (US), enter the overall interval which may include multiple Sweep Repetition Intervals (SRI). Fly-back times, and dead times.

Example

See ObservedMOPAnalysis.

ObservedMOPSweep *(US)*

ObservedMOPSweep

Data Item Tag	Data Item Name	Occurrence	Format
MOPDutyCycle	MOP Duty Cycle	Opt	UN(4,2)[0..100]*(%)*
MOPNumElements	MOP Num Elements	Opt	UN(6)
MOPStepAM	AM MOP Step	Opt	UN(5,2)*(dB)*
MOPStepCW	CW MOP Step	Opt	UN(12,6)*(MHz)*
MOPStepFM	FM MOP Step	Opt	UN(12,6)*(MHz)*
MOPStepPM	PM MOP Step	Opt	UN(3,2)*(deg)*
MOPFlyBackInterval	MOP Fly Back Interval	Opt	UN(12,6)*(us)*
MOPSweepPeriod	MOP Sweep Period	Opt	UN(12,6)*(us)*
MOPRepetionInterval	MOP Repetion Interval	Opt	UN(12,6)*(us)*
Sub-Element Of:	ObservedMOPAnalysis		
Sub-Elements:	ObservedMOPSequence [0..n]		

Description

Complex element ObservedMOPSweep (US) contains data describing the parametric information for the period of the Modulation on the Pulse sweep.

Input Requirement

* **MOPDutyCycle**: In Data Item US:MOPDutyCycle (US), enter as a percentage, the minimum or nominal ratio of the pulse duration to the pulse period.
* **MOPNumElements**: In Data Item US:MOPNumElements (US), enter the number of discrete FREQ/PHASE/AMP values transmitted in a patterned sequence (i.e., any repeated values are counted each time)
* **MOPStepAM**: In Data Item US:MOPStepAM (US), enter the difference between adjacent amplitude discrete power values, within a pulse. Use of this element should agree with the selection made in US:ObservedMOPAnalysis.MOPType.
* **MOPStepCW**: In Data Item US:MOPStepCW(US), enter the difference between adjacent continuous wave frequency discrete values, within a pulse. Use of this element should agree with the selection made in US:ObservedMOPAnalysis.MOPType.
* **MOPStepFM**: In Data Item US:MOPStepFM (US), enter the difference between adjacent frequency discrete values, within a pulse. Use of this element should agree with the selection made in US:ObservedMOPAnalysis.MOPType.
* **MOPStepPM**: In Data Item US:MOPStepPM (US), enter the difference between adjacent phase discrete values, within a pulse. Use of this element should agree with the selection made in US:ObservedMOPAnalysis.MOPType.
* **MOPFlyBackInterval**: In Data Item US:MOPFlyBackInterval (US), enter the time duration between the end of a continuous (linear) sweep and the beginning of the next continuous (linear) sweep. Flyback time is included in the Sweep Repetition Interval (SWI) but also may be reported separately.
* **MOPSweepPeriod**: In Data Item US:MOPSweepPeriod (US), enter the time duration from a point in the RF sequence (or continuous variation) to the like point in the next repeating RF sequence (or continuous variation).
* **MOPRepetionInterval**: In Data Item MOPRepetionInterval (US), enter the overall interval which may include multiple Sweep Repetition Intervals (SRI). Fly-back times, and dead times.

Example

See ObservedMOPAnalysis.

ObservedMOPValues *(US)*

ObservedMOPValues

Data Item Tag	Data Item Name	Occurrence	Format
MOPValueAM	Observed MOP AM Value	Opt	SN(5,2)*(dB)*
MOPValueCW	Observed MOP CW Value	Opt	UN(16,9) [0..1.0E9]*(MHz)*
MOPValueFM	Observed MOP FM Value	Opt	UN(16,9) [0..1.0E9]*(MHz)*
MOPValuePM	Observed MOP PM Value	Opt	UN(5,2)*(deg)*
StatisticalIndicator	Statistical Indicator	Opt	UN(5,2) [0..100]*(%)*
Sub-Element Of:	ObservedMOPBits		

Description

Complex element ObservedMOPValues (US) contains specific data artifacts that describe the Amplitude (AM), Phase (PM), Frequency (FM) and/or Continuous Wave (CW) features of a signal impressed on a Pulse.

Input Requirement

* **MOPValueAM**: In Data Item US:MOPValueAM (US), enter specific data that describes the Amplitude (AM) features of a signal impressed on a Pulse. Use of this element should agree with the selection made in US:ObservedMOPAnalysis.MOPType.
* **MOPValueCW**: In Data Item US:MOPValueCW (US), enter specific data that describes the Continuous Wave (CW) features of a signal impressed on a Pulse. Use of this element should agree with the selection made in US:ObservedMOPAnalysis.MOPType.
* **MOPValueFM**: In Data Item US:MOPValueFM (US), enter specific data that describes the Frequency (FM) features of a signal impressed on a Pulse. Use of this element should agree with the selection made in US:ObservedMOPAnalysis.MOPType.
* **MOPValuePM**: In Data Item US:MOPValuePM (US), enter specific data that describes the Phase (PM)features of a signal impressed on a Pulse. Use of this element should agree with the selection made in US:ObservedMOPAnalysis.MOPType.
* **StatisticalIndicator**: In Data Item StatisticalIndicator (US), indicate how this specific data observation was collected (e.g., 95% of the observed values). If this element is empty, then the value is assumed to be part of the 100% sample.

Example

See ObservedMOPAnalysis.

ObservedPolarisationAnalysis *(US)*

Observed Polarisation Analysis

Data Item Tag	Data Item Name	Occurrence	Format
AxialRatio	Axial Ratio	Opt	UN(5,2)*(dB)*
NumTiltAngleElements	Num Tilt Angle Elements	Opt	UN(6)
NumTiltAnglePositions	Num Tilt Angle Positions	Opt	UN(6)
PolarisationRotationRate	Polarisation Rotation Rate	Opt	UN(7,2)*(scans/min)*
PolarisationType	Polarisation Type	Opt	Code List CPO
PolarisationDirection	Polarisation Direction	Opt	Code List CRD
PolarisationSense	Polarisation Sense	Opt	Code List CRD
TiltAngleAdaptiveDriverDesc	Tilt Angle Adaptive Driver Description	Opt	S500
TiltAngleAdaptiveRuleDesc	Tilt Angle Adaptive Rule Description	Opt	S500
TiltAngleContinuous	Tilt Angle Continuous	Opt	Code List CBO
TiltAngleDuration	Tilt Angle Duration	Opt	UN(12,6)*(us)*
TiltAngleExtremeMax	Maximum Tilt Angle Extreme	Opt	SN(5,2)*(deg)*
TiltAngleExtremeMin	Minimum Tilt Angle Extreme	Opt	SN(5,2)*(deg)*
TiltAngleMean	Average Tilt Angle	Opt	SN(5,2)*(deg)*
TiltAngleMedian	Most Probable Tilt Angle	Opt	SN(5,2)*(deg)*
TiltAnglePatternPeriod	Tilt Angle Pattern Period	Opt	UN(12,6)*(us)*
TiltAnglePatternType	Tilt Angle PatternType	Opt	Code List US7
TiltAngleRangeMax	Tilt Angle Range Max	Opt	SN(5,2)*(deg)*
TiltAngleRangeMin	Tilt Angle Range Min	Opt	SN(5,2)*(deg)*
TiltAngleRate	TiltAngle Rate	Opt	SN(5,2)*(deg/s)*
TiltAngleSequenceDesc	Tilt Angle Sequence Description	Opt	S500
TiltAngleStdDev	Tilt Angle Standard Deviation	Opt	SN(5,2)*(deg)*
TiltAngleStep	Tilt Angle Step	Opt	SN(5,2)*(deg)*
Sub-Element Of:	AntMode		
Sub-Elements:	ObservedPolarisationValues [0..n]		

Description

Complex element ObservedPolarisationAnalysis (US) contains data describing the parametric information for the Polarisation and tilt angle information.

Input Requirement

* **AxialRatio**: In Data Item AxialRatio (US), enter the ratio of the polarisation ellipse major axis to its minor axis expressed in decibels.
* **NumTiltAngleElements**: In Data Item NumTiltAngleElements (US), enter the number of unique discrete tilt angle values.
* **NumTiltAnglePositions**: In Data Item NumTiltAnglePositions (US), enter the number of discrete Polarisation Tilt Angles used in a repeating Polarisation Tilt Angle sequence.
* **PolarisationRotationRate**: In Data Item PolarisationRotationRate (US), enter the number of times per second that the polarisation ellipse mechanically rotates through the same major axis tilt angle.
* **PolarisationType**: In Data Item PolarisationType (US), enter the polarisation of the radio wave referenced to the direction of propagation.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CPO (extract only):**

Code	Meaning
45-degrees	
Left-hand circular	
Right-hand circular	
Dual	
Elliptical	

Elliptic left	
Elliptic right	
Horizontal linear	
Horizontal and vertical	
Linear	
...	...

* **PolarisationDirection**: In Data Item PolarisationDirection (US), enter the direction in which the polarisation ellipse is mechanically rotating. The direction is relative to an observer standing behind the radiator and looking toward the direction of mainbeam propagation.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CRD:**

Code
Clockwise
Counter-Clockwise

* **PolarisationSense**: In Data Item PolarisationSense (US), enter the rotation direction of the radiated electromagnetic wave electric field (E-field) vector (E) relative to the direction of propagation. This is typically the opposite of Polarisation Direction.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CRD:**

Code
Clockwise
Counter-Clockwise

* **TiltAngleAdaptiveDriverDesc**: In Data Item TiltAngleAdaptiveDriverDesc (US), enter the condition which controls, or can be associated with, the signals Tilt Angle variations.
* **TiltAngleAdaptiveRuleDesc**: In Data Item TiltAngleAdaptiveRuleDesc (US), enter the rule which describes the signal Polarisation Tilt Angle variations.
* **TiltAngleContinuous**: In Data Item TiltAngleContinuous (US), enter whether the tilt angle variations are Discrete or Continuous. Discrete uses a finite number of fixed values separated by ranges of unused values. Continuous potentially uses an infinite number of values within one or more ranges.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **TiltAngleDuration**: In Data Item TiltAngleDuration (US), enter the time duration for a complete dwell/group of pulses which all have the same discrete Polarisation Tilt Angle value, or for a continuous wave at a constant Polarisation Tilt Angle value.
* **TiltAngleExtremeMax**: In Data Item TiltAngleExtremeMax (US), enter the upper end of the range of Polarisation Tilt Angle values that represent 100% of observed Tilt Angle values, from a statistical study of the data set.

  [XSL ERR MINMAX] If TiltAngleExtremeMax is used, it MUST be greater than TiltAngleExtremeMin.

* **TiltAngleExtremeMin**: In Data Item TiltAngleExtremeMin (US), enter the lower end of the range of Polarisation Tilt Angle values that represent 100% of observed Tilt Angle values, from a statistical study of the data set.
* **TiltAngleMean**: In Data Item TiltAngleMean (US), enter the average Polarisation Tilt Angle value for a signal which changes Polarisation Tilt Angle values on a non-patterned basis.
* **TiltAngleMedian**: In Data Item TiltAngleMedian (US), enter the observed Polarisation Tilt Angle value that the signal most often used, based on statistical study of the data set.
* **TiltAnglePatternPeriod**: In Data Item TiltAnglePatternPeriod (US), enter the time duration for one complete cycle of a repeating Polarisation Tilt Angle sequence
* **TiltAnglePatternType**: In Data Item TiltAnglePatternType (US), indicate whether Tilt Angle is unmodulated or Tilt Angle variations are Patterned, Non-Patterned, or Adaptive.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List US7:**

Code	Meaning

Adaptive	variations are driven by an environmental condition (e.g., target range, target velocity, etc.)
Non-Patterned	variations do not repeat significantly to create a recognizable pattern.
Patterned	variations repeat significantly to create a recognizable pattern.
Unmodulated	indicated by a constant ERP.
Other	If selected, a clarifying remark SHOULD be entered

* **TiltAngleRangeMax**: In Data Item TiltAngleRangeMax (US), enter the highest discrete Polarisation Tilt Angle value found in a single intercept that contains the complete Polarisation Tilt Angle characteristics.

  [XSL ERR MINMAX] If TiltAngleRangeMax is used, it MUST be greater than TiltAngleRangeMin.

* **TiltAngleRangeMin**: In Data Item TiltAngleRangeMin (US), enter the lowest discrete Polarisation Tilt Angle value found in a single intercept that contains the complete Polarisation Tilt Angle characteristics

* **TiltAngleRate**: In Data Item TiltAngleRate (US), enter the rate of change for Polarisation Tilt Angle variations expressed in Polarisation Tilt Angle changes per unit of time.

* **TiltAngleSequenceDesc**: In Data Item TiltAngleSequenceDesc (US), enter a free text description of the sequence of Polarisation Tilt Angle values.

* **TiltAngleStdDev**: In Data Item TiltAngleStdDev (US), enter the standard deviation of the data set used to calculate Polarisation Tilt Angle Mean fields.

* **TiltAngleStep**: In Data Item TiltAngleStep (US), enter the delta between the Most Probable Polarisation Tilt Angle values of adjacent and discrete Polarisation Tilt Angle values.

Example

```
<ObservedPolarisationAnalysis>
  <AxialRatio cls="U">15</AxialRatio>
  <NumTiltAngleElements cls="U">16</NumTiltAngleElements>
  <NumTiltAnglePositions cls="U">24</NumTiltAnglePositions>
  <PolarisationRotationRate cls="U">345</PolarisationRotationRate>
  <PolarisationType cls="U">Oblique, angled, crossed</PolarisationType>
  <PolarizationDirection cls="U">Counter-Clockwise</PolarizationDirection>
  <PolarizationSense cls="U">Counter-Clockwise</PolarizationSense>
  <TiltAngleAdaptiveDriverDesc cls="U">Target Motion Tracking</
TiltAngleAdaptiveDriverDesc>
  <TiltAngleAdaptiveRuleDesc cls="U">Required Pattern Collection</
TiltAngleAdaptiveRuleDesc>
  <TiltAngleContinuous cls="U">Yes</TiltAngleContinuous>
  <TiltAngleDuration cls="U">87.84</TiltAngleDuration>
  <TiltAngleExtremeMax cls="U">89.9</TiltAngleExtremeMax>
  <TiltAngleExtremeMin cls="U">-87.2</TiltAngleExtremeMin>
  <TiltAngleMean cls="U">43.7</TiltAngleMean>
  <TiltAngleMedian cls="U">0.12</TiltAngleMedian>
  <TiltAnglePatternPeriod cls="U">14.89</TiltAnglePatternPeriod>
  <TiltAnglePatternType cls="U">Non-Patterned</TiltAnglePatternType>
  <TiltAngleRangeMax cls="U">89.9</TiltAngleRangeMax>
  <TiltAngleRangeMin cls="U">-87.2</TiltAngleRangeMin>
  <TiltAngleRate cls="U">12</TiltAngleRate>
  <TiltAngleSequenceDesc cls="U">Vector to Target</TiltAngleSequenceDesc>
  <TiltAngleStdDev cls="U">0.01</TiltAngleStdDev>
  <TiltAngleStep cls="U">1.1</TiltAngleStep>
  <ObservedPolarisationValues>
    <StatisticalIndicator cls="U">97.2</StatisticalIndicator>
    <TiltAngleValue cls="U">56</TiltAngleValue>
  </ObservedPolarisationValues>
</ObservedPolarisationAnalysis>
```

ObservedPolarisationValues *(US)*

Observed Polarisation Values

Data Item Tag	Data Item Name	Occurrence	Format
StatisticalIndicator	Statistical Indicator	Opt	UN(5,2) [0..100]*(%)*
TiltAngleValue	Tilt Angle Value	Opt	SN(5,2)*(deg)*
Sub-Element Of:	ObservedPolarisationAnalysis		

Description

Complex element ObservedPolarisationValues (US) contains data describing the parametric information for the polarisation tilt angle specific values.

Input Requirement

* **StatisticalIndicator**: In Data Item StatisticalIndicator (US), indicate how this specific data observation was collected (e.g., 95% of the observed values). If this element is empty, then the value is assumed to be part of the 100% sample.
* **TiltAngleValue**: In Data Item TiltAngleValue (US), enter the observed Tilt Angle which provided the base data set used for statistical study.

Example

See ObservedPolarisationAnalysis.

ObservedPulseAnalysis *(US)*

ObservedPulseAnalysis

Data Item Tag	Data Item Name	Occurrence	Format
FallTime	Fall Time	Opt	UN(12,6)*(us)*
NumPDPositions	Num PD Positions	Opt	UN(6)
NumPDValues	Num PD Values	Opt	UN(6)
NumPRIElements	Num PRI Elements	Opt	UN(6)
NumPRIPositions	Num PRI Positions	Opt	UN(6)
PDAdaptiveRuleDesc	PD Adaptive Rule Description	Opt	S500
PDContinuous	PD Continuous	Opt	Code List CBO
PDDwellMax	PD Dwell Max	Opt	UN(12,6)*(us)*
PDDwellMin	PD Dwell Min	Opt	UN(12,6)*(us)*
PDExtremeMax	Maximum PD Extreme	Opt	UN(12,6)*(us)*
PDExtremeMin	Minimum PD Extreme	Opt	UN(12,6)*(us)*
PDMax	Maximum PD	Opt	UN(12,6)*(us)*
PDMean	Average PD	Opt	UN(12,6)*(us)*
PDMedian	PD Median	Opt	UN(12,6)*(us)*
PDMin	Minimum PD	Opt	UN(12,6)*(us)*
PDPatternPeriod	PD Pattern Period	Opt	UN(12,6)*(us)*
PDPatternType	PD Pattern Type	Opt	Code List US7
PDSequenceDesc	PD Sequence Description	Opt	S500
PDStdDev	PD Standard Deviation	Opt	UN(12,6)*(us)*
PDStep	PD Step	Opt	UN(12,6)*(us)*
PDTypicalMax	Maximum PD Typical	Opt	UN(12,6)*(us)*
PDTypicalMin	Minimum PD Typical	Opt	UN(12,6)*(us)*
PRFChangeRate	PRF Change Rate	Opt	UN(12,6)*(us/s)*
PRFExtremeMax	Maximum PRF Extreme	Opt	UN(7,2)*(pps)*
PRFExtremeMin	Minimum PRF Extreme	Opt	UN(7,2)*(pps)*
PRFMax	PRF Max	Opt	UN(7,2)*(pps)*
PRFMin	PRF Min	Opt	UN(7,2)*(pps)*
PRFTypicalMax	Maximum PRF Typical	Opt	UN(7,2)*(pps)*
PRFTypicalMin	Minimum PRF Typical	Opt	UN(7,2)*(pps)*
PRIAdaptiveDriverDesc	PRI Adaptive Driver Description	Opt	S500
PRIAdaptiveRuleDesc	PRI Adaptive Rule Description	Opt	S500
PRIAnomalousValues	PRI Anomalous Values	Opt	S500
PRIBasicClockPeriod	PRI Basic Clock Period	Opt	UN(12,6)*(us)*
PRIChangeRate	PRI Change Rate	Opt	UN(12,6)*(us/s)*
PRIContinuous	PRI Continuous	Opt	Code List CBO
PRICountdown	PRI Countdown	Opt	UN(6)
PRICountdownKey	PRI Countdown Key	Opt	UN(9)
PRIExtremeMax	PRI Extreme Max	Opt	UN(12,6)*(us)*
PRIExtremeMin	PRI Extreme Min	Opt	UN(12,6)*(us)*
PRIFramePeriod	PRI Frame Period	Opt	UN(12,6)*(us)*
PRIFrameRate	PRI Frame Rate	Opt	UN(16,9) [0..1.0E9]*(MHz)*
PRIGroupPulseSpacing	PRI Group Pulse Spacing	Opt	UN(12,6)*(us)*
PRIGroupSpacing	PRI Group Spacing	Opt	UN(12,6)*(us)*
PRIMean	Average PRI	Opt	UN(12,6)*(us)*
PRIMedian	PRI Median	Opt	UN(12,6)*(us)*
PRIMedianCountdowns	PRI Median Countdowns	Opt	S100
PRIPatternPeriod	PRI Pattern Period	Opt	UN(12,6)*(us)*
PRIPatternType	PRI Pattern Type	Opt	Code List US7
PRIPulsesPerGroup	PRI Pulses Per Group	Opt	UN(6)
PRISequenceDesc	PRI Sequence Description	Opt	S500
PRIStability	PRI Stability	Opt	UN(18,6)*(ppm)*

PRIStabilitySamplePeriod	PRI Stability Sample Period	Opt	UN(12,6)*(us)*
PRIStdDev	PRI Standard Deviation	Opt	UN(12,6)*(us)*
PRIStep	PRI Step	Opt	UN(12,6)*(us)*
PRISubframePeriod	PRI Subframe Period	Opt	UN(12,6)*(us)*
PRISubframeRate	PRI Subframe Rate	Opt	UN(16,9) [0..1.0E9]*(MHz)*
PRITimingShift	PRI Timing Shift	Opt	UN(12,6)*(us)*
PRITypicalMax	PRI Typical Max	Opt	UN(12,6)*(us)*
PRITypicalMin	PRI Typical Min	Opt	UN(12,6)*(us)*
RiseTime	RiseTime	Opt	UN(12,6)*(us)*
Sub-Element Of:	TxMode		
Sub-Elements:	ObservedPulseValues [0..n]		

Description

Complex element ObservedPulseAnalysis (US) contains data describing the specific characteristics of the pulse group, pulse sequence, and distinct pulse information.

Input Requirement

* **FallTime**: In Data Item FallTime (US), enter the time required for a pulse to fall from 90% to 10 percent of the mean peak amplitude of its voltage waveform/envelope.
* **NumPDPositions**: In Data Item NumPDPositions (US), enter the number of pulses (i.e., positions) in a repeating sequence of pulses which has multiple (2 or more) PD values.
* **NumPDValues**: In Data Item NumPDValues (US), enter the number of discrete PD values (i.e., elements) in a repeating sequence of pulses which has multiple (2 or more) PD values.
* **NumPRIElements**: In Data Item NumPRIElements (US), enter the number of discrete PRI values in a repeating sequence of discrete PRIs.
* **NumPRIPositions**: In Data Item NumPRIPositions (US), enter the number of time intervals between pulses or pulse groups, or the number of PRI dwell groups, in a repeating PRI sequence which uses discrete PRI values.
* **PDAdaptiveRuleDesc**: In Data Item PDAdaptiveRuleDesc (US), enter the rule which describes the signal PD variations (aka. modulation).
* **PDContinuous**: In Data Item PDContinuous (US), indicate whether pulse-to-pulse PD variations are Discrete or Continuous. Discrete uses a finite number of fixed values separated by ranges of unused values. Continuous potentially uses an infinite number of values within one or more ranges.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **PDDwellMax**: In Data Item PDDwellMax (US), enter the maximum time duration for a complete dwell/group of pulses which all have the same PD value.

  [XSL ERR MINMAX] If PDDwellMax is used, it MUST be greater than PDDwellMin.

* **PDDwellMin**: In Data Item PDDwellMin (US), enter the minimum time duration for a complete dwell/group of pulses which all have the same PD value.
* **PDExtremeMax**: In Data Item PDExtremeMax (US), enter the maximum PD value that represents 100% of observed values.

  [XSL ERR MINMAX] If PDExtremeMax is used, it MUST be greater than PDExtremeMin.

* **PDExtremeMin**: In Data Item PDExtremeMin (US), enter the minimum PD value that represents 100% of observed values.
* **PDMax**: In Data Item PDMax (US), enter the highest discrete PD value in a repeating sequence of pulses which has multiple PD values.

[XSL ERR MINMAX] If PDMax is used, it MUST be greater than PDMin.

* **PDMean**: In Data Item PDMean (US), enter the average PD of a signal which changes PD values on a non-patterned basis.
* **PDMedian**: In Data Item PDMedian (US), enter the PD value that the signal most often used, based on a statistical study.
* **PDMin**: In Data Item PDMin (US), enter the delta lowest discrete PD value in a repeating sequence of pulses which has multiple PD values
* **PDPatternPeriod**: In Data Item PDPatternPeriod (US), enter the time duration for one complete cycle of a repeating sequence of pulses which has multiple (2 or more) PD values; the time duration shall go from a point in one cycle to a like point in the next cycle.
* **PDPatternType**: In Data Item PDPatternType (US), Indicate whether PD is unmodulated or pulse-to-pulse PD variations are Patterned, Non-Patterned, or Adaptive.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List US7:**

Code	Meaning
Adaptive	variations are driven by an environmental condition (e.g., target range, target velocity, etc.)
Non-Patterned	variations do not repeat significantly to create a recognizable pattern.
Patterned	variations repeat significantly to create a recognizable pattern.
Unmodulated	indicated by a constant ERP.
Other	If selected, a clarifying remark SHOULD be entered

* **PDSequenceDesc**: In Data Item PDSequenceDesc (US), enter a free-text description of the PD Sequence.
* **PDStdDev**: In Data Item PDStdDev (US), enter the standard deviation of the data sample used to calculate PD Mean.
* **PDStep**: In Data Item PDStep (US), enter the Step between adjacent PD values; pertains to discrete PD variations.
* **PDTypicalMax**: In Data Item PDTypicalMax (US), enter the upper end of the range of PD values that represents 95% of observed values, from a statistical study.

  [XSL ERR MINMAX] If PDTypicalMax is used, it MUST be greater than PDTypicalMin.
* **PDTypicalMin**: In Data Item PDTypicalMin (US), enter the lower end of the range of PD values that represents 95% of observed values, from a statistical study
* **PRFChangeRate**: In Data Item PRFChangeRate (US), enter the rate of change for PD variations expressed as PD change per unit of time.
* **PRFExtremeMax**: In Data Item PRFExtremeMax (US), enter the minimum Observed PRF in the signal sample.

  [XSL ERR MINMAX] If PRFExtremeMax is used, it MUST be greater than PRFExtremeMin.
* **PRFExtremeMin**: In Data Item PRFExtremeMin (US), enter the minimum Observed PRF in the signal sample.
* **PRFMax**: In Data Item PRFMax (US), enter the highest discrete PRI value (convert PRI to PRF) which are found in a single intercept that contains the complete PRI characteristics for that specific data set.

  [XSL ERR MINMAX] If PRFMax is used, it MUST be greater than PRFMin.
* **PRFMin**: In Data Item PRFMin (US), enter the lowest discrete PRI value (convert PRI to PRF) which are found in a single intercept that contains the complete PRI characteristics for that specific data set.
* **PRFTypicalMax**: In Data Item PRFTypicalMax (US), enter the upper end of the range of PRF values that represents 95% of observed values, from a statistical study.

  [XSL ERR MINMAX] If PRFTypicalMax is used, it MUST be greater than PRFTypicalMin.
* **PRFTypicalMin**: In Data Item PRFTypicalMin (US), enter the lower end of the range of PRF values that represents 95% of observed values, from a statistical study
* **PRIAdaptiveDriverDesc**: In Data Item PRIAdaptiveDriverDesc (US), enter the condition which controls or can be associated with the signal PRI variations (aka, interpulse modulation changes).

* **PRIAdaptiveRuleDesc**: In Data Item PRIAdaptiveRuleDesc (US), enter the rule which describes the signal PRI variations (aka, interpulse modulation changes)
* **PRIAnomalousValues**: In Data Item PRIAnomalousValues (US), enter any regularly occurring signal values which do not fit in any of the other PRI related fields. For example Minimum Scheduling Interval (MSI) values, or Engagement Group Duration values can be documented in this field.. When used, the data shall be clearly described, so all users understand the meaning of the values.
* **PRIBasicClockPeriod**: In Data Item PRIBasicClockPeriod (US), enter the fundamental period of the emitter clock which is used to generate the subject signal PRIs
* **PRIChangeRate**: In Data Item PRIChangeRate (US), enter the PRI change per unit of time, measured over a significant portion of the waveform. This applies to Continuous PRI variations.
* **PRIContinuous**: In Data Item PRIContinuous (US), Indicate whether pulse-to-pulse PRI variations are Discrete or Continuous. Discrete uses a finite number of fixed values separated by ranges of unused values. Continuous potentially uses an infinite number of values within one or more ranges.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **PRICountdown**: In Data Item PRICountdown (US), enter the integer (aka, count or countdown) associated with the PRI Crystal value to provide the Pattern Period.
* **PRICountdownKey**: In Data Item PRICountdownKey (US), enter the integer (aka, count or countdown) used to generate the PRI from the PRI Crystal value.
* **PRIExtremeMax**: In Data Item PRIExtremeMax (US), enter the maximum observed PRI value, from a statistical study of a 100% data set.

  [XSL ERR MINMAX] If PRIExtremeMax is used, it MUST be greater than PRIExtremeMin.

* **PRIExtremeMin**: In Data Item PRIExtremeMin (US), enter the minimum observed PRI value, from a statistical study of a 100% data set.
* **PRIFramePeriod**: In Data Item PRIFramePeriod (US), enter the time difference between a point on the leading edge of the frame marker (or an alternate pulse in the frame), to the similar point on the leading edge of the frame marker (or the alternate pulse) in the next/consecutive frame.
* **PRIFrameRate**: In Data Item PRIFrameRate (US) , enter the rate of frame generation during the Pulse Repetition Interval. For example, 10 frames generated during a PRI of 1 us yields a PRI frame rate of 10 MHz.
* **PRIGroupPulseSpacing**: In Data Item PRIGroupPulseSpacing (US), enter the time difference between a point on the leading edge of the subframe marker (or an alternate pulse in the subframe), to the similar point on the leading edge of the subframe marker (or the alternate pulse in the subframe) in the next/consecutive frame.
* **PRIGroupSpacing**: In Data Item PRIGroupSpacing (US), enter the PRI between two groups of pulses which both have constant but different PRIs (aka, the PRI between consecutive PRI dwell groups).
* **PRIMean**: In Data Item PRIMean (US), enter the average PRI value for a signal which changes PRI values on a non-patterned basis.
* **PRIMedian**: In Data Item PRIMedian (US), enter the observed PRI value that the signal most often used based on statistical study of a data set.
* **PRIMedianCountdowns**: In Data Item PRIMedianCountdowns (US), enter the observed PRI Crystal Counts used to generate the PRIs used most often by the signal, based on statistical study of a data set.
* **PRIPatternPeriod**: In Data Item PRIPatternPeriod (US), enter the time duration for one complete cycle of a repeating PRI sequence.
* **PRIPatternType**: In Data Item PRIPatternType (US), enter whether the PRI is unmodulated or pulse-to-pulse PRI variations are Patterned, Non-Patterned, or Adaptive.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List US7:**

Code	Meaning
Adaptive	variations are driven by an environmental condition (e.g., target range, target velocity, etc.)

Non-Patterned	variations do not repeat significantly to create a recognizable pattern.
Patterned	variations repeat significantly to create a recognizable pattern.
Unmodulated	indicated by a constant ERP.
Other	If selected, a clarifying remark SHOULD be entered

* **PRIPulsesPerGroup**: In Data Item PRIPulsesPerGroup (US), enter the number of pulses in a pulse group.
* **PRISequenceDesc**: In Data Item PRISequenceDesc (US), enter a free text description of the PRI Sequence.
* **PRIStability**: In Data Item PRIStability (US), enter the variation of a mean PRI value measured from one time to another time
* **PRIStabilitySamplePeriod**: In Data Item PRIStabilitySamplePeriod (US), enter the time interval used to determine the PRI stability value.
* **PRIStdDev**: In Data Item PRIStdDev (US), enter the standard deviation associated with the data set used to calculate the values entered in the PRI Mean fields
* **PRIStep**: In Data Item PRIStep (US), enter the delta between the Most Probable observed PRI values of adjacent and discrete PRI.
* **PRISubframePeriod**: In Data Item PRISubframePeriod (US), enter the time difference between a point on the leading edge of the subframe marker (or an alternate pulse in the subframe), to the similar point on the leading edge of the subframe marker (or the alternate pulse in the subframe) in the next/consecutive frame.
* **PRISubframeRate**: In Data Item PRISubframeRate (US) , enter the number of subframes detected during each PRI Subframe period.
* **PRITimingShift**: In Data Item PRITimingShift (US), enter the PRI timing shift value, on Emitters with repeated timing shifts of a predictable magnitude, but not predictable timing.
* **PRITypicalMax**: In Data Item PRITypicalMax (US), enter the upper end of the range of PRI values that represent 95% of the signal observed PRI values, from a statistical study of a data set.

  [XSL ERR MINMAX] If PRITypicalMax is used, it MUST be greater than PRITypicalMin.
* **PRITypicalMin**: In Data Item PRITypicalMin (US), enter the lower end of the range of PRI values that represent 95% of the signal observed PRI values, from a statistical study of a data set.
* **RiseTime**: In Data Item RiseTime (US), enter the time required for a pulse to rise from 10% to 90 percent of the mean peak amplitude of the voltage pattern.

Example

```
<ObservedPulseAnalysis>
  <FallTime cls="U">.015</FallTime>
  <NumPDPositions cls="U">869</NumPDPositions>
  <NumPDValues cls="U">568</NumPDValues>
  <NumPRIElements cls="U">355</NumPRIElements>
  <NumPRIPositions cls="U">298</NumPRIPositions>
  <PDAdaptiveRuleDesc cls="U">Required Pattern Collection</PDAdaptiveRuleDesc>
  <PDContinuous cls="U">Yes</PDContinuous>
  <PDDwellMax cls="U">99.54</PDDwellMax>
  <PDDwellMin cls="U">65.43</PDDwellMin>
  <PDExtremeMax cls="U">6809</PDExtremeMax>
  <PDExtremeMin cls="U">6723</PDExtremeMin>
  <PDMax cls="U">6709</PDMax>
  <PDMean cls="U">6623</PDMean>
  <PDMedian cls="U">6690</PDMedian>
  <PDMin cls="U">6601</PDMin>
  <PDPatternPeriod cls="U">0.001</PDPatternPeriod>
  <PDPatternType cls="U">Non-Patterned</PDPatternType>
  <PDSequenceDesc cls="U">Required Pattern Collection set A34</PDSequenceDesc>
  <PDStdDev cls="U">276</PDStdDev>
  <PDStep cls="U">23</PDStep>
  <PDTypicalMax cls="U">698</PDTypicalMax>
  <PDTypicalMin cls="U">378</PDTypicalMin>
```

```
  <PRFChangeRate cls="U">3000</PRFChangeRate>
  <PRFExtremeMax cls="U">3129</PRFExtremeMax>
  <PRFExtremeMin cls="U">2790</PRFExtremeMin>
  <PRFMax cls="U">3102</PRFMax>
  <PRFMin cls="U">2703</PRFMin>
  <PRFTypicalMax cls="U">3019</PRFTypicalMax>
  <PRFTypicalMin cls="U">2783</PRFTypicalMin>
  <PRIAdaptiveDriverDesc cls="U">Target Motion Tracking</PRIAdaptiveDriverDesc>
  <PRIAdaptiveRuleDesc cls="U">Required Pattern Collection</PRIAdaptiveRuleDesc>
  <PRIAnomalousValues cls="U">Ground clutter introduced distortion</
PRIAnomalousValues>
  <PRIBasicClockPeriod cls="U">0.00001</PRIBasicClockPeriod>
  <PRIChangeRate cls="U">376</PRIChangeRate>
  <PRIContinuous cls="U">Yes</PRIContinuous>
  <PRICountdown cls="U">678</PRICountdown>
  <PRICountdownKey cls="U">342</PRICountdownKey>
  <PRIExtremeMax cls="U">200</PRIExtremeMax>
  <PRIExtremeMin cls="U">900</PRIExtremeMin>
  <PRIFramePeriod cls="U">0.001</PRIFramePeriod>
  <PRIFrameRate cls="U">500</PRIFrameRate>
  <PRIGroupPulseSpacing cls="U">2890</PRIGroupPulseSpacing>
  <PRIGroupSpacing cls="U">2581</PRIGroupSpacing>
  <PRIMean cls="U">500</PRIMean>
  <PRIMedian cls="U">472</PRIMedian>
  <PRIMedianCountdowns cls="U">6890</PRIMedianCountdowns>
  <PRIPatternPeriod cls="U">23</PRIPatternPeriod>
  <PRIPatternType cls="U">Non-Patterned</PRIPatternType>
  <PRIPulsesPerGroup cls="U">2386</PRIPulsesPerGroup>
  <PRISequenceDesc cls="U">Required Pattern Collection set A34</PRISequenceDesc>
  <PRIStability cls="U">0.0001</PRIStability>
  <PRIStabilitySamplePeriod cls="U">0.12</PRIStabilitySamplePeriod>
  <PRIStdDev cls="U">.0145</PRIStdDev>
  <PRIStep cls="U">23</PRIStep>
  <PRISubframePeriod cls="U">0.001</PRISubframePeriod>
  <PRISubframeRate cls="U">300</PRISubframeRate>
  <PRITimingShift cls="U">238</PRITimingShift>
  <PRITypicalMax cls="U">293</PRITypicalMax>
  <PRITypicalMin cls="U">587</PRITypicalMin>
  <RiseTime cls="U">.015</RiseTime>
  <ObservedPulseValues>
    <ObservedPDValue cls="U">573</ObservedPDValue>
    <ObservedPRFValue cls="U">512</ObservedPRFValue>
    <ObservedPRIValue cls="U">512</ObservedPRIValue>
    <StatisticalIndicator cls="U">97.2</StatisticalIndicator>
  </ObservedPulseValues>
</ObservedPulseAnalysis>
```

ObservedPulseValues *(US)*

ObservedPulseValues

Data Item Tag	Data Item Name	Occurrence	Format
ObservedPDValue	Observed PD Value	Opt	UN(12,6)*(us)*
ObservedPRFValue	Observed PRF Value	Opt	UN(7,2)*(pps)*
ObservedPRIValue	Observed PRI Value	Opt	UN(12,6)*(us)*
StatisticalIndicator	Statistical Indicator	Opt	UN(5,2) [0..100]*(%)*
Sub-Element Of:	ObservedPulseAnalysis		

Description

Complex element ObservedPulseValues (US) contains data describing the distinct Pulse values related to the Modulation Type.

Input Requirement

* **ObservedPDValue**: In Data Item ObservedPDValue (US), enter the observed PD data believed to be valid.
* **ObservedPRFValue**: In Data Item ObservedPRFValue (US), enter the observed PRF data believed to be valid.
* **ObservedPRIValue**: In Data Item ObservedPRIValue (US), enter the observed PRI data believed to be valid.
* **StatisticalIndicator**: In Data Item StatisticalIndicator (US), indicate how this specific data observation was collected (e.g., 95% of the observed values). If this element is empty, then the value is assumed to be part of the 100% sample.

Example

See ObservedPulseAnalysis.

ObservedRFAnalysis *(US)*

ObservedRFAnalysis

Data Item Tag	Data Item Name	Occurrence	Format
ChipRate	Chip Rate	Opt	UN(16,9) [0..1.0E9]*(MChip/s)*
DwellTime	Dwell Time	Opt	UN(12,6)*(us)*
FreqMax	Maximum Frequency	Opt	UN(16,9) [0..1.0E9]*(MHz)*
FreqMin	Minimum Frequency	Opt	UN(16,9) [0..1.0E9]*(MHz)*
GuardBand	Guard Band	Opt	UN(16,9) [0..1.0E9]*(MHz)*
InstantRFBW03	Instant RF BW 03	Opt	UN(16,9) [0..1.0E9]*(MHz)*
InstantRFBW06	Instant RF BW 06	Opt	UN(16,9) [0..1.0E9]*(MHz)*
InstantRFBW10	Instant RF BW 10	Opt	UN(16,9) [0..1.0E9]*(MHz)*
InstantRFBW20	Instant RF BW 20	Opt	UN(16,9) [0..1.0E9]*(MHz)*
NumRFChannels	Num RF Channels	Opt	UN(6)
NumRFElements	Num RF Elements	Opt	UN(6)
NumRFPositions	Num RF Positions	Opt	UN(6)
NumRFSimultaneous	Num RF Simultaneous	Opt	UN(6)
OperationalRFBW	Operational RF Bandwidth	Opt	UN(16,9) [0..1.0E9]*(MHz)*
RFAdaptiveDriver	RF Adaptive Driver	Opt	S500
RFAdaptiveRule	RF Adaptive Rule	Opt	S500
RFBasicClockPeriod	RF Basic Clock Period	Opt	UN(16,9) [0..1.0E9]*(MHz)*
RFChangeRate	RF Change Rate	Opt	UN(16,9)*(MHz/s)*
RFChannelFreqMax	Maximum RF Channel Frequency	Opt	UN(16,9) [0..1.0E9]*(MHz)*
RFChannelFreqMin	RF Channel Freq Min	Opt	UN(16,9) [0..1.0E9]*(MHz)*
RFCoherent	RF Coherent	Opt	Code List USY
RFContinuous	Continuous RF Signal	Opt	Code List CBO
RFFreqMax	Maximum RF Frequency	Opt	UN(16,9) [0..1.0E9]*(MHz)*
RFFreqMin	Minimum RF Frequency	Opt	UN(16,9) [0..1.0E9]*(MHz)*
RFMean	RF Mean	Opt	UN(16,9) [0..1.0E9]*(MHz)*
RFMedian	RF Median	Opt	UN(16,9) [0..1.0E9]*(MHz)*
RFPatternPeriod	RF Pattern Period	Opt	UN(12,6)*(us)*
RFPatternType	RF Pattern Type	Opt	Code List US7
RFRestFreq	RF Rest Freq	Opt	UN(16,9) [0..1.0E9]*(MHz)*
RFSequenceDesc	RF Sequence Description	Opt	S500
RFSlotDuration	RF Slot Duration	Opt	UN(12,6)*(us)*
RFFreqTolerance	RF Frequency Tolerance	Opt	UN(18,6)
RFFreqToleranceUnit	RF Frequency Tolerance Unit	Opt	Code List CFO
RFFreqToleranceInterval	RF Frequency Tolerance Interval	Opt	UN(12,6)*(us)*
RFStandardDeviation	RF Standard Deviation	Opt	UN(16,9) [0..1.0E9]*(MHz)*

RFTuningStep	RF Tuning Step	Opt	UN(16,9) [0..1.0E9]*(MHz)*
TuningStep	Tuning Step	Opt	UN(16,9) [0..1.0E9]*(MHz)*
Sub-Element Of:	TxMode		
Sub-Elements:	ObservedRFValues [0..n]		

Description

Complex element ObservedRFAnalysis (US) contains the statisical results of actual RF observations.

Input Requirement

* **ChipRate**: In Data Item ChipRate (US), enter the chip rate. Pertains mostly to spread spectrum.
* **DwellTime**: In Data Item DwellTime (US), enter the dwell time at any RF when the RF dwells at particular values for more than one pulse in a row.
* **FreqMax**: In Data Item FreqMax (US), enter the upper end of the range of RF values that represent 100% of observed signals.

  [XSL ERR MINMAX] If FreqMax is used, it MUST be greater than FreqMin.
* **FreqMin**: In Data Item FreqMin (US), enter the lower end of the range of RF values that represent 100% of observed signals.
* **GuardBand**: In Data Item GuardBand (US), enter the RF band between carriers which is not used. Pertains mostly to spread spectrum.
* **InstantRFBW03**: In Data Item InstantRFBW03 (US), enter the transmitter pulse bandwidth (burst or instantaneous) measured at the 3 dB points (min)
* **InstantRFBW06**: In Data Item InstantRFBW06 (US), enter the transmitter pulse bandwidth (burst or instantaneous) measured at the 6 dB points (min)
* **InstantRFBW10**: In Data Item InstantRFBW10 (US), enter the transmitter pulse bandwidth (burst or instantaneous) measured at the 10 dB points (min)
* **InstantRFBW20**: In Data Item InstantRFBW20 (US), enter the transmitter pulse bandwidth (burst or instantaneous) measured at the 20 dB points (min)
* **NumRFChannels**: In Data Item NumRFChannels (US), enter the number of channels into which the RF range of the emitter is divided.
* **NumRFElements**: In Data Item NumRFElements (US), enter the number of discrete RFs (channels) a multiple RF signal contains.
* **NumRFPositions**: In Data Item NumRFPositions (US), enter the number of RF values in a signal RF sequence before it repeats.
* **NumRFSimultaneous**: In Data Item NumRFSimultaneous (US), enter The number of frequencies simultaneously used by the emitter.
* **OperationalRFBW**: In Data Item OperationalRFBW (US), enter the delta (aka. separation) from the signals lowest-min RF value to its highest-max RF value; only pertains to signals which have RF changes between pulses or groups of pulses (aka. RF agile signals) or signals which use a changing RF continuous waveform (CW); e.g., a CW signal with a sweeping RF.
* **RFAdaptiveDriver**: In Data Item RFAdaptiveDriver (US), enter the condition controlling the choice of RF for Adaptive RF variations (e.g., least jammed frequency)
* **RFAdaptiveRule**: In Data Item RFAdaptiveRule (US), indicate how the RF is chosen for Adaptive RF variations.
* **RFBasicClockPeriod**: In Data Item RFBasicClockPeriod (US), enter the frequency divisor common to all RF separations (not necessarily to all RF) RF crystal is not always the same as the RF channelization (min).
* **RFChangeRate**: In Data Item RFChangeRate (US), enter the RF change per unit of time, measured over a significant portion of the waveform. Applies to Continuous RF variations.

* **RFChannelFreqMax**: In Data Item RFChannelFreqMax (US), enter the maximum RF channel values.

  [XSL ERR MINMAX] If RFChannelFreqMax is used, it MUST be greater than RFChannelFreqMin.

* **RFChannelFreqMin**: In Data Item RFChannelFreqMin (US), enter the minimum RF channel values.

* **RFCoherent**: In Data Item RFCoherent (US), indicate if the observed RF signal is coherent, non-coherent, or unknown.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List USY:**

Code	Meaning
Coherent	The standard deviation of the first phase difference is less than 10 degrees
Non-Coherent	The standard deviation of the first phase difference is more than 57 degrees
Other	If selected, a clarifying remark SHOULD be entered

* **RFContinuous**: In Data Item RFContinuous (US), enter whether pulse-to-pulse RF variations are Discrete or Continuous. Discrete uses a finite number of fixed values separated by ranges of unused values. Continuous potentially uses an infinite number of values within one or more ranges. Use Code List CBO. [XSD] The element US:RFContinuous MUST use Code List CBO.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **RFFreqMax**: In Data Item RFFreqMax (US), enter the typical highest RF value observed on a single intercept.

  [XSL ERR MINMAX] If RFFreqMax is used, it MUST be greater than RFFreqMin.

* **RFFreqMin**: In Data Item RFFreqMin (US), enter the typical lowest RF value observed on a single intercept.

* **RFMean**: In Data Item RFMean (US), enter the average RF of a signal which changes RFs on a non-patterned basis.

* **RFMedian**: In Data Item RFMedian (US), enter the most probable RF values.

* **RFPatternPeriod**: In Data Item RFPatternPeriod (US), enter the duration of one cycle of the pattern for patterned RF variations.

* **RFPatternType**: In Data Item RFPatternType (US), Indicate whether RF is unmodulated or pulse-to-pulse RF variations are Patterned, Non-Patterned, or Adaptive.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List US7:**

Code	Meaning
Adaptive	variations are driven by an environmental condition (e.g., target range, target velocity, etc.)
Non-Patterned	variations do not repeat significantly to create a recognizable pattern.
Patterned	variations repeat significantly to create a recognizable pattern.
Unmodulated	indicated by a constant ERP.
Other	If selected, a clarifying remark SHOULD be entered

* **RFRestFreq**: In Data Item RFRestFreq (US), enter the observed carrier or rest frequency when the modulation is off. Applies mostly to Electronic Attack (EA) signals.

* **RFSequenceDesc**: In Data Item RFSequenceDesc (US), enter a free text description of the RF Sequence.

* **RFSlotDuration**: In Data Item RFSlotDuration (US), enter the duration of a single time slot for the hop dwell. Applies mostly to spread spectrum.

* **RFFreqTolerance**: RF Frequency Tolerance In Data Item US: RFFreqTolerance (US), enter the drift in Hz or in ppm using the formula: Frequency tolerance (ppm) = Maximum drift (Hz) / Center frequency MHz). enter the units (Hz or ppm) in FreqToleranceUnit.

* **RFFreqToleranceUnit**: In Data Item FrequencyToleranceUnit (US), enter the units in which the Frequency Tolerance is expressed.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CFO:**

Code	Meaning
Hz	Hertz

ppm	parts per million

* **RFFreqToleranceInterval**: In Data Item RFFreqToleranceInterval (US), enter the time interval over which the RF stability measurements were taken.
* **RFStandardDeviation**: In Data Item RFStandardDeviation (US), enter the standard deviation of the data set used to calculate RF Mean.
* **RFTuningStep**: In Data Item RFTuningStep (US), enter the separation between the mean RF values of adjacent RFs in signal with discrete RF channels.
* **TuningStep**: In Data Item TuningStep (US), enter the spacing of RF used when channelization is indicated.

Example

```
<ObservedRFAnalysis>
  <ChipRate cls="U">346</ChipRate>
  <DwellTime cls="U">78.98</DwellTime>
  <FreqMax cls="U">3107.56</FreqMax>
  <FreqMin cls="U">2999.753</FreqMin>
  <GuardBand cls="U">2986</GuardBand>
  <InstantRFBW03 cls="U">24.79</InstantRFBW03>
  <InstantRFBW06 cls="U">45.64</InstantRFBW06>
  <InstantRFBW10 cls="U">56.83</InstantRFBW10>
  <InstantRFBW20 cls="U">99.76</InstantRFBW20>
  <NumRFChannels cls="U">300</NumRFChannels>
  <NumRFElements cls="U">355</NumRFElements>
  <NumRFPositions cls="U">890</NumRFPositions>
  <NumRFSimultaneous cls="U">248</NumRFSimultaneous>
  <OperationalRFBW cls="U">87.9</OperationalRFBW>
  <RFAdaptiveDriver cls="U">Target Motion Tracking</RFAdaptiveDriver>
  <RFAdaptiveRule cls="U">Required Pattern Collection</RFAdaptiveRule>
  <RFBasicClockPeriod cls="U">0.0001</RFBasicClockPeriod>
  <RFChangeRate cls="U">84</RFChangeRate>
  <RFChannelFreqMax cls="U">3107.56</RFChannelFreqMax>
  <RFChannelFreqMin cls="U">2999.753</RFChannelFreqMin>
  <RFCoherent cls="U">Non-Coherent</RFCoherent>
  <RFContinuous cls="U">Yes</RFContinuous>
  <RFFreqMax cls="U">3107.56</RFFreqMax>
  <RFFreqMin cls="U">2999.753</RFFreqMin>
  <RFMean cls="U">3094.56</RFMean>
  <RFMedian cls="U">3097.54</RFMedian>
  <RFPatternPeriod cls="U">0.001</RFPatternPeriod>
  <RFPatternType cls="U">Non-Patterned</RFPatternType>
  <RFRestFreq cls="U">3000.54</RFRestFreq>
  <RFSequenceDesc cls="U">Required Pattern Collection set A35</RFSequenceDesc>
  <RFSlotDuration cls="U">12.45</RFSlotDuration>
  <RFStability cls="U">ppm</RFStability>
  <RFStability cls="U">ppm</RFStability>
  <RFStabilityInterval cls="U">.00034</RFStabilityInterval>
  <RFStandardDeviation cls="U">.00023</RFStandardDeviation>
  <RFTuningStep cls="U">0.025</RFTuningStep>
  <TuningStep cls="U">0.025</TuningStep>
  <ObservedRFValues>
    <RFValue cls="U">3000</RFValue>
    <StatisticalIndicator cls="U">97.2</StatisticalIndicator>
  </ObservedRFValues>
</ObservedRFAnalysis>
```

ObservedRFValues *(US)*

ObservedRFValues

Data Item Tag	Data Item Name	Occurrence	Format
RFValue	RF Value	Opt	UN(16,9) [0..1.0E9]*(MHz)*
StatisticalIndicator	Statistical Indicator	Opt	UN(5,2) [0..100]*(%)*
Sub-Element Of:	ObservedRFAnalysis		

Description

Complex element ObservedRFValues (US) contains details of actual RF observations.

Input Requirement

* **RFValue**: In Data Item RFValue (US), enter the observed signals values
* **StatisticalIndicator**: In Data Item StatisticalIndicator (US), indicate how this specific data observation was collected (e.g., 95% of the observed values). If this element is empty, then the value is assumed to be part of the 100% sample.

Example

See ObservedRFAnalysis

ObservedScanAnalysis *(US)*

Observed Scan Analysis

Data Item Tag	Data Item Name	Occurrence	Format
ScansHorzContinuous	Continuous Horizontal Scan	Opt	Code List CBO
AzBoresightAngle	Azimuth Boresight Angle	Opt	SN(5,2)*(deg)*
AzScanChangeRate	Azimuth Scan Change Rate	Opt	UN(12,6)*(us/s)*
AzScanRateExtremeMax	Extreme Horizontal Scan Rate Max	Opt	UN(7,2)*(scans/min)*
AzScanRateExtremeMin	Extreme Horizontal Scan Rate Min	Opt	UN(7,2)*(scans/min)*
AzScanRateMean	Mean Horizontal Scan Rate	Opt	UN(7,2)*(scans/min)*
AzScanRateMedian	Most Probable Horizontal Scan Rate	Opt	UN(7,2)*(scans/min)*
AzScanSector	Azimuth ScanSector	Opt	UN(5,2)*(deg)*
AzScanSectorMax	Azimuth ScanSectorMax	Opt	UN(5,2)*(deg)*
AzScanVelocity	Azimuth ScanVelocity	Opt	UN(6,2)*(deg/s)*
ElevScanChangeRate	Vertical Scan Change Rate	Opt	UN(12,6)*(us/s)*
ElevScanRateExtremeMax	Extreme Vertical Scan Rate Max	Opt	UN(7,2)*(scans/min)*
ElevScanRateExtremeMin	Extreme Vertical Scan Rate Min	Opt	UN(7,2)*(scans/min)*
ElevScanRateMean	Mean Vertical Scan Rate	Opt	UN(7,2)*(scans/min)*
ElevScanRateMedian	Most Probable Vertical Scan Rate	Opt	UN(7,2)*(scans/min)*
ElevScanSector	Vertical Scan Sector	Opt	UN(5,2)*(deg)*
ElevScanSectorMax	Vertical Scan Sector Max	Opt	UN(5,2)*(deg)*
ElevScanVelocity	Vertical Scan Velocity	Opt	UN(6,2)*(deg/s)*
NumBeamPositionsPerScan	Num Beam Positions Per Scan	Opt	UN(6)
NumBeamPositionsTotal	Total Number of Beam Positions	Opt	UN(6)
NumBeamsPerRaster	Num Beams Per Raster	Opt	UN(6)
NumRastersPerCycle	Num Rasters Per Cycle	Opt	UN(6)
NumScanPositions	Number of Scan Positions	Opt	UN(6)
NumScanValues	Number of Scan Values	Opt	UN(6)
ScanAdaptiveDriverDesc	Scan Adaptive Driver Description	Opt	S500
ScanAdaptiveRuleDesc	Scan Adaptive Rule Description	Opt	S500
ScanAngleAzStart	Scan Angle Azimuth Start	Opt	SN(5,2)*(deg)*
ScanAngleAzStop	Scan Angle Azimuth Stop	Opt	SN(5,2)*(deg)*
ScanAngleElevStart	Scan Angle Elevation Start	Opt	SN(5,2)*(deg)*
ScanAngleElevStop	Scan Angle Elevation Stop	Opt	SN(5,2)*(deg)*
ScanDwell	Scan Dwell	Opt	UN(12,6)*(us)*
ScanDwellSequence	Scan Dwell Sequence	Opt	S500
ScanDwellTime	Scan Dwell Time	Opt	UN(12,6)*(us/s)*
ScanElevContinuous	Continuous Evlevation Scan	Opt	Code List CBO
ScanPatternType	Scan Pattern Type	Opt	Code List US7
ScanType	Antenna Scan Type	Opt	Code List US8
Sub-Element Of:	AntMode		
Sub-Elements:	ObservedScanValues [0..n]		

Description

Complex element ObservedScanAnalysis (US) contains data describing the collected Horizontal and Vertical Scan parameters as well as the Adaptive Driver information.

Input Requirement

* **ScansHorzContinuous**: In Data Item ScanHorzContinuous (US), indicate the if the scan azimuth progression is a continuous sweep.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **AzBoresightAngle**: In Data Item AzBoresightAngle (US), enter the position of the emitter Mainbeam (aka, Mainlobe) boresight referenced from true north for ground based fixed emitters, and the emitter defined centerline for other platforms (e.g., mobile, airborne, shipborne).
* **AzScanChangeRate**: In Data Item AzScanChangeRate (US), enter the rate of change for horizontal Scan Period variations expressed in Scan Period change per unit of time
* **AzScanRateExtremeMax**: In Data Item AzScanRateExtremeMax (US), enter the range of horizontal scan rate values that represent 100% of the signal observed Scan values obtained from a statistical study of a data set.

  [XSL ERR MINMAX] If AzScanRateExtremeMax is used, it MUST be greater than AzScanRateExtremeMin.
* **AzScanRateExtremeMin**: In Data Item AzScanRateExtremeMin (US), enter the range of horizontal scan rate values that represent 100% of the signal observed Scan values obtained from a statistical study of a data set.
* **AzScanRateMean**: In Data Item AzScanRateMean (US), enter the average horizontal scan rate value for a signal that changes horizontal scan rates on a non-patterned basis.
* **AzScanRateMedian**: In Data Item AzScanRateMedian (US), enter the horizontal scan rate that the signal most often used, based on a statistical study of a data set.
* **AzScanSector**: In Data Item AzScanSector (US), enter the total angular width in the horizontal plane (aka, azimuth) the subject emitter antenna mainbeam (aka, mainlobe) scans/covers in one complete scan.
* **AzScanSectorMax**: In Data Item AzScanSectorMax (US), enter the total angular width in the horizontal plane (aka, azimuth) the subject emitter antenna mainbeam (aka, mainlobe) is capable of scanning.
* **AzScanVelocity**: In Data Item AzScanVelocity (US), enter the horizontal angular speed (i.e., degrees per second) of the subject emitter Mainbeam (aka., mainlobe) scan referenced to a fixed point.
* **ElevScanChangeRate**: In Data Item Vertical Scan Change Rate (US), enter the rate of change for vertical Scan Period variations expressed in Scan Period change per unit of time
* **ElevScanRateExtremeMax**: In Data Item Extreme Vertical Scan Rate Max (US), enter the range of vertical scan rate values that represent 100% of the signal observed Scan values obtained from a statistical study of a data set.

  [XSL ERR MINMAX] If ElevScanRateExtremeMax is used, it MUST be greater than ElevScanRateExtremeMin.
* **ElevScanRateExtremeMin**: In Data Item Extreme Vertical Scan Rate Min (US), enter the range of vertical scan rate values that represent 100% of the signal observed Scan values obtained from a statistical study of a data set.
* **ElevScanRateMean**: In Data Item ElevScanRateMean (US), enter the average vertical scan rate value for a signal that changes vertical scan rates on a non-patterned basis.
* **ElevScanRateMedian**: In Data Item ElevScanRateMedian (US), enter the vertical scan rate that the signal most often used, based on a statistical study of a data set.
* **ElevScanSector**: In Data Item ElevScanSector (US), enter the total angular width in the vertical plane (aka, elevation) the subject emitter antenna mainbeam (aka, mainlobe) scans/covers in one complete scan.
* **ElevScanSectorMax**: In Data Item ElevScanSectorMax (US), enter the total angular width in the vertical plane (aka, elevation) the subject emitter antenna mainbeam (aka, mainlobe) is capable of scanning.
* **ElevScanVelocity**: In Data Item ElevScanVelocity (US), enter the vertical angular speed (i.e., degrees per second) of the subject emitter Mainbeam (aka., mainlobe) scan referenced to a fixed point.
* **NumBeamPositionsPerScan**: In Data Item NumBeamPositionsPerScan (US), enter the number of beam positions (aka., dwells) per scan cycle
* **NumBeamPositionsTotal**: In Data Item NumBeamPositionsTotal (US), enter the total number of unique array beam positions resulting from the frequency steps of a frequency scanning, phase changes, in phase scanning, or discrete time delays in time delay steering.
* **NumBeamsPerRaster**: In Data Item NumBeamsPerRaster (US), enter the number of beam positions necessary to complete one bar of the raster scan
* **NumRastersPerCycle**: In Data Item NumRastersPerCycle (US), enter the number of 360 degree scans (aka, turns) a component of a scan makes in the time it takes the Primary Scan to complete one complete cycle/scan.

* **NumScanPositions**: In Data Item NumScanPositions (US), enter the number of discrete values observed in a single repeating scan period sequence.
* **NumScanValues**: In Data Item NumScanValues (US), enter the number of discrete values observed in multiple repeating scan period sequences.
* **ScanAdaptiveDriverDesc**: In Data Item ScanAdaptiveDriverDesc (US), enter the condition which controls or can be associated with the signal Scan Period variations.
* **ScanAdaptiveRuleDesc**: In Data Item ScanAdaptiveRuleDesc (US), enter the rule which describes the signal Scan Period variations.
* **ScanAngleAzStart**: In Data Item ScanAngleAzStart (US), enter the maximum angle the subject emitter antenna mainbeam (aka., mainlobe) reaches in the horizontal plane (aka., azimuth).
* **ScanAngleAzStop**: In Data Item ScanAngleAzStop (US), enter the minimum angle the subject emitter antenna mainbeam (aka., mainlobe) reaches in the horizontal plane (aka., azimuth).
* **ScanAngleElevStart**: In Data Item ScanAngleElevStart (US), enter the maximum angle the subject emitter antenna mainbeam (aka., mainlobe) reaches in the vertical plane (aka., elevation).
* **ScanAngleElevStop**: In Data Item ScanAngleElevStop (US), enter the minimum angle the subject emitter antenna mainbeam (aka., mainlobe) reaches in the vertical plane (aka., azimuth).
* **ScanDwell**: In Data Item ScanDwell (US), enter the scan duration
* **ScanDwellSequence**: In Data Item ScanDwellSequence (US), enter the Sequence of dwell durations, with elevation and azimuth. Example: 20 deg hor, 15 deg elev, 5 second dwell, etc.
* **ScanDwellTime**: In Data Item ScanDwellTime (US), enter the time duration for a complete dwell/group of scan cycles which all have the same Scan Period Discrete value before changing to a different one.
* **ScanElevContinuous**: In Data Item ScanElevContinuous (US), indicate the if the scan elevation progression is a continuous sweep.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **ScanPatternType**: In Data Item ScanPatternType (US), indicate whether the Scan Period is unmodulated, Patterned, Non-Patterned, or Adaptive.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List US7:**

Code	Meaning
Adaptive	variations are driven by an environmental condition (e.g., target range, target velocity, etc.)
Non-Patterned	variations do not repeat significantly to create a recognizable pattern.
Patterned	variations repeat significantly to create a recognizable pattern.
Unmodulated	indicated by a constant ERP.
Other	If selected, a clarifying remark SHOULD be entered

* **ScanType**: In Data Item ScanType (US), indicate if the observed data was detected via a primary or secondary scan.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List US8:**

Code	Meaning
Primary	
Secondary	
Other	If selected, a clarifying remark SHOULD be entered

Example

```
<ObservedScanAnalysis>
  <ScansHorzContinuous cls="U">Yes</ScansHorzContinuous>
  <AzBoresightAngle cls="U">0.02</AzBoresightAngle>
  <AzScanChangeRate cls="U">14</AzScanChangeRate>
  <AzScanRateExtremeMax cls="U">500</AzScanRateExtremeMax>
```

```
  <AzScanRateExtremeMin cls="U">0.01</AzScanRateExtremeMin>
  <AzScanRateMean cls="U">34</AzScanRateMean>
  <AzScanRateMedian cls="U">12</AzScanRateMedian>
  <AzScanSector cls="U">47</AzScanSector>
  <AzScanSectorMax cls="U">23.9</AzScanSectorMax>
  <AzScanVelocity cls="U">41.3</AzScanVelocity>
  <ElevScanChangeRate cls="U">0.002</ElevScanChangeRate>
  <ElevScanRateExtremeMax cls="U">500</ElevScanRateExtremeMax>
  <ElevScanRateExtremeMin cls="U">0.01</ElevScanRateExtremeMin>
  <ElevScanRateMean cls="U">34</ElevScanRateMean>
  <ElevScanRateMedian O25cls="U">12</ElevScanRateMedian>
  <ElevScanSector cls="U">80</ElevScanSector>
  <ElevScanSectorMax cls="U">87</ElevScanSectorMax>
  <ElevScanVelocity cls="U">41.3</ElevScanVelocity>
  <NumBeamPositionsPerScan cls="U">567</NumBeamPositionsPerScan>
  <NumBeamPositionsTotal cls="U">98651</NumBeamPositionsTotal>
  <NumBeamsPerRaster cls="U">5956</NumBeamsPerRaster>
  <NumRastersPerCycle cls="U">3032</NumRastersPerCycle>
  <NumScanPositions cls="U">567</NumScanPositions>
  <NumScanValues cls="U">346</NumScanValues>
  <ScanAdaptiveDriverDesc cls="U">Target Motion Tracking</ScanAdaptiveDriverDesc>
  <ScanAdaptiveRuleDesc cls="U">Required Pattern Collection</ScanAdaptiveRuleDesc>
  <ScanAngleAzStart cls="U">0.01</ScanAngleAzStart>
  <ScanAngleAzStop cls="U">359.99</ScanAngleAzStop>
  <ScanAngleElevStart cls="U">-89.9</ScanAngleElevStart>
  <ScanAngleElevStop cls="U">89.9</ScanAngleElevStop>
  <ScanDwell cls="U">23.781</ScanDwell>
  <ScanDwellSequence cls="U">Scan Sample Repeat</ScanDwellSequence>
  <ScanDwellTime cls="U">3.45</ScanDwellTime>
  <ScanElevContinuous cls="U">Yes</ScanElevContinuous>
  <ScanPatternType cls="U">Non-Patterned</ScanPatternType>
  <ScanType cls="U">Primary</ScanType>
  <ObservedScanValues>
    <ScanValue cls="U">34.89</ScanValue>
    <StatisticalIndicator cls="U">97.2</StatisticalIndicator>
  </ObservedScanValues>
</ObservedScanAnalysis>
```

ObservedScanValues *(US)*

Observed Scan Values

Data Item Tag	Data Item Name	Occurrence	Format
ScanValue	Observed Scan Values	Opt	UN(6,2)*(deg/s)*
StatisticalIndicator	Ant Scan Statistical Indicator	Opt	UN(4,2)[0..100]*(%)*
Sub-Element Of:	ObservedScanAnalysis		

Description

Complex element ObservedScanValues (US) contains data describing the discrete scan rate values and supporting statistical information.

Input Requirement

* **ScanValue**: In Data Item ScanValue (US), enter the observed scan rate values
* **StatisticalIndicator**: In Data Item StatisticalIndicator (US), indicate how this specific data observation was used (e.g., 95% of the observed values). If this element is empty, then the value is assumed to be part of the 100% sample size.

Example

See ObservedScanAnalysis.

OffTheShelfEquipment

Off The Shelf Equipment

Data Item Tag	Data Item Name	Occurrence	Format
	Element Content	Req	S6
Sub-Element Of:	Assignment		

Description

Complex element OffTheShelfEquipment (US) defines the function of readily available equipment. It is often commercial equipment that provides a compatible function to DoD or government equipment.

Input Requirement

In Data Item OffTheShelfEquipment (US), enter if a specialized type of system/equipment used in the frequency assignment, as defined by the following choices: LMS, VOR1A, VOR1B, VOR2A, VOR2B, ILSLOC, or ILSGS.

Organisation

Organisation

Data Item Tag	Data Item Name	Occurrence	Format
EffectiveDate	Effective Date	Opt	D
ExpireReview		**Opt**	
ExpirationDate	Expiration Date	Opt	D
ReviewDate	Review Date	Opt	D
Name	Organisation Name	Opt	S100
AlternateName	Alternate Name	Opt	S100
Type	Organisation Type	Opt	Code List CTO
UIC *(US)*	Unit Identification Code	Opt	S20
Inherits from:	Common		
Sub-Element Of:	SchemaRoot		
Sub-Elements:	Address [0..n] EMail [0..n] RelatedOrganisation [0..n] RoleRef [0..n] TelephoneFax [0..n]		

Description

This element inherits attributes and sub-elements from element Common.

Complex element Organisation is the XML root for all parameters of an Organisation (service, agency, manufacturer, etc).
See Organisation Diagram

Input Requirement

[XSL ERR DSTYPE] Part 3 of the Serial reference (dataset type) MUST be "`OR`".

* **EffectiveDate**: In Data Item EffectiveDate, enter the date by which the dataset is to be operational or effective.
* **ExpireReview**: This group is OPTIONAL.
  - **ExpirationDate**: In Data Item ExpirationDate, enter the date at which the dataset will expire. The Expiration date should be less than five years from current date.
  - **ReviewDate**: In Data Item ReviewDate, enter the date by which the dataset is to be reviewed. The Review date should be less than five years from the effective date. In Data Item Spectrum Supportability datasets, this date indicate when the organisation responsible for re-initiating host coordination plans to resubmit a Spectrum Supportability request to the host nation for continued use of the equipment.
* **Name**: In Data Item Name, enter the full name of the organisation in the native language of the nation to whom the Organisation belongs. If this full name has also translations in other languages, use item AlternateName to add the translated name.
* **AlternateName**: In Data Item AlternateName, enter an alternate name or nickname for the organisation.
* **Type**: In Data Item Type, enter the type of organisation. If `"Other"` is used, a justification SHOULD be inserted using a remark.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CTO:**

Code	Meaning
Civilian/Commercial	
Generic	
Government	
Military	
Other	If selected, a clarifying remark SHOULD be entered

* **UIC *(US)***: In Data Item UIC, enter an organisational identifier that may be used to uniquely identify an organisation in operational planning systems and other non-spectrum information systems.

Example

```
<Organisation cls="U">
  <Serial cls="U">DEU:AF:OR:123</Serial>
  <EntryDateTime cls="U">2011-12-12T00:00:00Z</EntryDateTime>
  <Name cls="U">LUFTWAFFE</Name>
  <Address>
    <CityArea cls="U">Berlin</CityArea>
    <Country cls="U">DEU</Country>
  </Address>
</Organisation>
```

POCInformation

Point Of Contact

Data Item Tag	Data Item Name	Occurrence	Format
Type	POC Type	Req	Code List CCI
Serial	Serial of Referenced dataset	Opt	pattern (S29)
Description	POC Description	Opt	MEMO
Sub-Element Of:	Allotment, Antenna, Assignment, ForceElement, IntfReport, JRFLEntry, Location, RFSystem, Receiver, SSRequest, Station, Transmitter		

Description

Complex element POCInformation contains a reference to a Contact, Organisation or Role dataset.

Input Requirement

* **Type**: In Data Item Type, enter the function of the referenced Contact orOrganisation within the current dataset.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CCI (extract only):**

Code	Meaning
Submitter	
Reviewer	
Program Manager	
Project Engineer	
Point of Contact	
User	
Supplier	
Spectrum Manager	
Change Author	
Subject Matter Expert	
...	...

* **Serial**: In Data Item Serial, enter the dataset identifier of the Contact, Organisation, or Role.

  [XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "**CN** or **OR** or **JA**".

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

* **Description**: In Data Item Description enter free text Contact information for legacy applications. When building new records, enter the contact information in the structured Contact, Roleor Organisation dataset.

Example

```
<POCInformation>
  <Serial cls="U">USA:123:CN:98765</Serial>
  <Type cls="U">Project Engineer</Type>
  <Description cls="U">Bldg 120, Room 410</Description>
</POCInformation>
```

PairedFreq *(US)*

Paired Frequency

Data Item Tag	Data Item Name	Occurrence	Format
Freq	Frequency	Req	UN(16,9) [0..1.0E9]*(MHz)*
AssignmentRef	Assignment Reference	Opt	pattern (S29)
PairedASN	Paired Agency Serial Number	Opt	US12
PairedType	Paired Type	Opt	Code List UPU
Sub-Element Of:	Freq		

Description

Complex element PairedFreq (US) describes an associated frequency set for the repeater, duplex link or frequency diversity capability.

Input Requirement

* **Freq**: In Data Item Freq (US), enter the paired frequency for the repeater, duplex link or frequency diversity capability.
* **AssignmentRef**: In Data Item AssignmentRef (US), enter a reference to an Assignment that is paired with this AsgnAllot in a repeater, duplex link or frequency diversity capability.

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"
* **PairedASN**: In Data Item PairedASN (US), enter the agency serial number of the assignment that is paired with this Assignment in a repeater, duplex link or frequency diversity capability.
* **PairedType**: In Data Item PairedType (US), enter if the paired frequency is a transmitting repeater frequency, a receiving repeater frequency, a duplex pairing, frequency diversity or space diversity.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List UPU:**

Code	Meaning
Repeater Out	
Repeater In	
Duplex Pairing	
Frequency Diversity	
Space Diversity	
Other	If selected, a clarifying remark SHOULD be entered

Point

Point

Attribute Tag	Attribute Name	Occurrence	Format
idx	Index	Req	UN(6)
Data Item Tag	**Data Item Name**	**Occurrence**	**Format**
Excluded	Shape is Excluded	Opt	Code List CBO
Coord		**Req**	
Lon	Longitude	Req	pattern (S11)
Lat	Latitude	Req	pattern (S10)
TerrainElevation	Terrain Elevation	Opt	SN(7,2)*(m)*
Altitude		**Opt**	
AltitudeMin	Minimum Altitude Above Ground Level	Opt	SN(7,2)*(m)*
AltitudeMax	Maximum Altitude Above Ground Level	Opt	SN(7,2)*(m)*
Sub-Element Of:	Location		

Description

Complex element Point contains the coordinates (WGS 84) of point(s) that represent a fixed site. It contains also the terrain elevation, in metres above mean sea level (MSL) of this point. If the antenna installed at this point is located on a structure such as a tower or a building, the site elevation is specified as the ground elevation at the base of the structure.

Input Requirement

* **idx** *(Attribute)*: In attribute, idx, enter a unique, sequenced, integer index for each Point within the Location.

  [XSD ERR UNIQUE] Each value of this data item MUST be unique within the parent element.

* **Excluded**: In Data Item Excluded, enter "Yes" to indicate that the shape is to be excluded from the set. If omitted, a "No" SHOULD be assumed by processing applications, meaning that the shape is included by default.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **Coord**: This group is REQUIRED.

  In Data Item Lat, enter the geographical latitude (degrees, minutes, seconds and hemisphere N or S) of the Point or center of the Ellipse. Same remarks for seconds and leading zeros. enter N or S immediately following the seconds. The format is: ddmmss.hhH (where ".hh" is optional and H = N or S).

  - **Lon**: In Data Item Lon, enter the geographical longitude (degrees, minutes, seconds, and hemisphere E or W) of the Point or center of the Ellipse. If the seconds are not known, use 00, except in the case of navigation aid systems, geostationary satellites, and microwave facilities where seconds are required. Use leading zeros as appropriate for degrees, minutes, or seconds. Degrees longitude require three digits. Seconds may have a decimal point followed by up to two decimals. enter E or W immediately following the seconds. The format is: **`dddmmss.hhH`** (where ".hh" is optional and H = E or W).

    [XSD ERR REGEX] This data item MUST comply to the regular expression: "((((((0[0-9]{2})|(1[0-7][0-9]))([0-5][0-9]){2})(.[0-9]{1,2})?)|1800000)(E|W))|X"

  - **Lat**: In Data Item Lat, enter the geographical latitude (degrees, minutes, seconds and hemisphere N or S) of the Point or center of the Ellipse. Same remarks for seconds and leading zeros. enter N or S immediately following the seconds. The format is: **`ddmmss.hhH`** (where ".hh" is optional and H = N or S).

    [XSD ERR REGEX] This data item MUST comply to the regular expression: "((((((([0-8][0-9]))([0-5][0-9]){2})(.[0-9]{1,2})?)|900000)(N|S))|X"

* **TerrainElevation**: In Data Item TerrainElevation, enter the elevation of the base of the transmitting antenna structure above Mean Sea Level (MSL).
* **Altitude AGL**: This group is OPTIONAL.
  - **AltitudeMin**: In Data Item AltitudeMin, enter the minimum or nominal height of the point above the terrain (also known as "above ground level" AGL).
  - **AltitudeMax**: In Data Item AltitudeMax, enter the maximum or nominal height of the point above the terrain (also known as "above ground level" AGL).

    [XSL ERR MINMAX] If AltitudeMax is used, it MUST be greater than AltitudeMin.

Example

```
<Point idx="1">
  <Lon cls="U">0792823.5W</Lon>
  <Lat cls="U">394217.12N</Lat>
</Point>
```

Notes

In order to be able to accommodate legacy data, a value of "X" MAY be used in attributes lon and lat as a gap filler, but only for legacy data which do not contain this information. The real value SHOULD always be used for new datasets and during the review of old datasets. Datasets containing this value SHOULD NOT be exchanged internationally.

Polygon

Polygon

Attribute Tag	Attribute Name	Occurrence	Format
idx	Index	Req	UN(6)
Data Item Tag	**Data Item Name**	**Occurrence**	**Format**
Excluded	Shape is Excluded	Opt	Code List CBO
Altitude		**Opt**	
AltitudeMin	Minimum Altitude Above Ground Level	Opt	SN(7,2)*(m)*
AltitudeMax	Maximum Altitude Above Ground Level	Opt	SN(7,2)*(m)*
Sub-Element Of:	Location		
Sub-Elements:	PolygonPoint [3..n]		

Description

Complex element Polygon is a closed geometric shape on the surface of the Earth, defined by at least three points, used to describe an operational area or an excluded area.

Input Requirement

* **idx** *(Attribute)*: In attribute idx, enter a unique integer index for the current polygon within the Location.

  [XSD ERR UNIQUE] Each value of this data item MUST be unique within the parent element.

* **Excluded**: In Data Item Excluded, enter "Yes" to indicate that the shape is to be excluded from the set. If omitted, a "No" SHOULD be assumed by processing applications, meaning that the shape is included by default.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **Altitude AGL**: This group is OPTIONAL.

  - **AltitudeMin**: In Data Item AltitudeMin, enter the minimum or nominal height of the point above the terrain (also known as "above ground level" AGL).
  - **AltitudeMax**: In Data Item AltitudeMax, enter the maximum or nominal height of the point above the terrain (also known as "above ground level" AGL).

    [XSL ERR MINMAX] If AltitudeMax is used, it MUST be greater than AltitudeMin.

PolygonPoint

Polygon Point

Attribute Tag	Attribute Name	Occurrence	Format
sequence	Sequence index	Req	UN(6)
Data Item Tag	**Data Item Name**	**Occurrence**	**Format**
Coord		**Req**	
Lon	Longitude	Req	pattern (S11)
Lat	Latitude	Req	pattern (S10)
Sub-Element Of:	Polygon		

Description

Complex element PolygonPoint contains the coordinates (WGS 84) of point(s) that represent a vertex of the polygon. Polygon points are described in a clockwise direction. If the last point is different from the first point, it is assumed that they are connected to complete the boundary of the polygon.

Input Requirement

Data element PolyPoint contains the coordinates (WGS 84) of point(s) that represent a vertex of the polygon. Polygon points are described in a clockwise direction. If the last point is different from the first point, it is assumed that they are connected to complete the boundary of the polygon.

* **sequence** *(Attribute)*: In attribute sequence, enter a unique, sequenced, index for each point describing the current polygon.

  [XSD ERR UNIQUE] Each value of this data item MUST be unique within the parent element.

* **Coord**: This group is REQUIRED.

  In Data Item Lat, enter the geographical latitude (degrees, minutes, seconds and hemisphere N or S) of the Point or center of the Ellipse. Same remarks for seconds and leading zeros. enter N or S immediately following the seconds. The format is: ddmmss.hhH (where ".hh" is optional and H = N or S).

  - **Lon**: In Data Item Lon, enter the geographical longitude (degrees, minutes, seconds, and hemisphere E or W) of the Point or center of the Ellipse. If the seconds are not known, use 00, except in the case of navigation aid systems, geostationary satellites, and microwave facilities where seconds are required. Use leading zeros as appropriate for degrees, minutes, or seconds. Degrees longitude require three digits. Seconds may have a decimal point followed by up to two decimals. enter E or W immediately following the seconds. The format is: **`dddmmss.hhH`** (where ".hh" is optional and H = E or W).

    [XSD ERR REGEX] This data item MUST comply to the regular expression: "((((((0[0-9]{2})|(1[0-7][0-9]))([0-5][0-9]){2})(.[0-9]{1,2})?)|1800000)(E|W))|X"

  - **Lat**: In Data Item Lat, enter the geographical latitude (degrees, minutes, seconds and hemisphere N or S) of the Point or center of the Ellipse. Same remarks for seconds and leading zeros. enter N or S immediately following the seconds. The format is: **`ddmmss.hhH`** (where ".hh" is optional and H = N or S).

    [XSD ERR REGEX] This data item MUST comply to the regular expression: "((((((([0-8][0-9]))([0-5][0-9]){2})(.[0-9]{1,2})?)|900000)(N|S))|X"

PotentialVictims *(US)*

Potentia lVictims

Data Item Tag	Data Item Name	Occurrence	Format
Type	Victim Notation Type	Opt	Code List CEN
VictimName	Victim Name	Opt	S50
VictimNotation	Victim Notation	Opt	US20
Sub-Element Of:	Notation		

Description

Complex element PotentialVictims (US) contains the names of systems, or the Notations of signals, which may be affected by the subject Notation/Signal.

Input Requirement

* **Type**: In Data Item Type (US), enter the type of Notation.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CEN:**

Code	Meaning
CENOT	
DIA Equipment Number	
ELNOT	
Interim identifier	
SPOT	
Emitter ID	
Other	If selected, a clarifying remark SHOULD be entered

* **VictimName**: In Data Item VictimName (US), enter the name or nomenclature of a system that may be negatively impacted by the subject Notation/Signal.
* **VictimNotation**: In Data Item VictimNotation (US), enter the designator for a specific emitter that may be negatively impacted by the subject Notation/Signal.

Example

See Notation.

Power

Power

Data Item Tag	Data Item Name	Occurrence	Format
PowerMin	Minimum or Nominal Power	Opt	SN(10,7)*(dBW)*
PowerMax	Maximum Power	Opt	SN(10,7)*(dBW)*
PowerType	Power Type	Opt	Code List CPT
Calculated	Calculated Data Indicator	Opt	Code List CBO
Sub-Element Of:	TxMode		

Description

Complex element Power identifies the transmitter RF power at the transmitter antenna port.

Input Requirement

Enter (1) carrier power (pZ) for A3E sound broadcasting in the broadcasting service, (2) mean power (pY) for other amplitude modulated emissions using unkeyed full carrier, and for all frequency modulated emissions, and (3) peak envelope power (pX) for all emission designators other than those referred to in (1) and (2) above, including C3F television (video only).

* **PowerMin**: In Data Item PowerMin, enter the nominal transmitter power, or the minimum power in case of a range of values.
* **PowerMax**: In Data Item PowerMax, enter the maximum transmitter power.

  [XSL ERR MINMAX] If PowerMax is used, it MUST be greater than PowerMin.
* **PowerType**: In Data Item PowerType, enter the power type code for carrier, mean, or peak envelope power emitted. The power type code will depend on the type of emission of the transmitter equipment.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CPT:**

Code	Meaning
C8b	Use this entry for the submission of space data to the ITU if the maximum peak power and power density values are of type C8b.
Carrier	Carrier Power
Mean	Mean Power
PEP	Peak Envelope Power

* **Calculated**: In Data Item Calculated, enter "Yes" if the power value(s) have been calculated, or "No" if they have been measured.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

Example

```
<Power>
  <PowerMin cls="U">-3</PowerMin>
  <PowerMax cls="U">31.8</PowerMax>
  <PowerType cls="U">PEP</PowerType>
  <Calculated cls="U">No</Calculated>
</Power>
```

Notes

* The value must always be transmitted in dBW. Some software tools may translate the value in watts for display only; in this case it is recommended to precede the value with the unit designator as follows:
  W - If power is less than 1000 watts
  K - If power is at least 1 kW but less than 1000 kW
  M - If power is at least 1 MW but less than 1000 MW

G - If power is 1 GW or greater

* In order to be able to accommodate legacy data, a value of "-9999.99" MAY be used in attribute minPower as a gap filler, but only for legacy data which do not contain this information. The real value SHOULD always be used for new datasets and during the review of old datasets.

PreviousAuthorization *(US)*

Previous Authorization

Data Item Tag	Data Item Name	Occurrence	Format
DocketNum	Docket Number	Req	S8
Date	Date	Opt	D
AgencySerialNum	Agency Serial Number	Opt	S12
Sub-Element Of:	Assignment		

Description

Complex element PreviousAuthorization (US) refers to the frequency assignment's previous Government Master File (GMF) authorization agency serial number.

Input Requirement

* **DocketNum**: IIn Data Item DocketNum (US), enter the previous frequency assignment Government Master File (GMF) authorization docket number.
* **Date** : In Data Item Date (US), enter the previous frequency assignment Government Master File (GMF) authorization date.
* **AgencySerialNum**: In Data Item AgencySerialNum (US), enter the externally-assigned unique identifier of a frequency assignment.

Project

Project

Data Item Tag	Data Item Name	Occurrence	Format
Type	Project Type	Opt	Code List CPJ
Name	Project Name	Req	S30
Description	Description	Opt	MEMO
Sub-Element Of:	Allotment, Assignment, FEDeployment, JRFLEntry, SSRequest		

Description

Complex element Project provides the Project, OPLAN, COMPLAN or Exercise name, or any other project name associated to the dataset.

Input Requirement

* **Type**: In Data Item Type, enter the type of project.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CPJ:**

Code	Meaning
COMPLAN	
Exercise	
Mission	
Operation	
OPLAN	
Other	If selected, a clarifying remark SHOULD be entered

* **Name**: In Data Item Name, enter the name of the project.
* **Description**: Complex element Project provides the Project, OPLAN, COMPLAN or Exercise name, or any other project name associated to the dataset.

Example

```
<Project>
  <Type cls="U">Exercise</Type>
  <Name cls="U">JWID 2002</Name>
  <Description cls="U">This is a good project.</Description>
</Project>
```

Pulse

Pulse

Data Item Tag	Data Item Name	Occurrence	Format
PulseCycle		**Opt**	
PRRMin	Minimum or Nominal Pulse Repetition Rate	Opt	UN(9,3)*(pulse/s)*
PRRMax	Maximum Pulse Repetition Rate	Opt	UN(9,3)*(pulse/s)*
PDMin	Minimum or Nominal Pulse Duration	Opt	UN(12,6)*(us)*
PDMax	Maximum Pulse Duration	Opt	UN(12,6)*(us)*
PulseAvgCycle		**Opt**	
DutyCycleMin	Minimum/Nominal Duty Cycle Ratio	Opt	UN(4,2)[0..100]*(%)*
DutyCycleMax	Maximum Duty Cycle Ratio	Opt	UN(4,2)[0..100]*(%)*
AvgPowerMin	Minimum/Nominal Average Power	Opt	SN(10,7)*(dBW)*
AvgPowerMax	Maximum Average Power	Opt	SN(10,7)*(dBW)*
PulseComp		**Opt**	
CompRatio	Pulse Compression Ratio	Opt	UN(8,4)
CompMethod	Pulse Compression Method	Opt	S40
PulseForm		**Opt**	
RiseTime	Rise Time	Opt	UN(12,6)*(us)*
FallTime	Fall Time	Opt	UN(12,6)*(us)*
JustifyShortRiseTime	Justification for Short Rise Time	Opt	MEMO
RadarProcessingGainMax	Maximum Radar Processing Gain	Opt	SN(6,3)*(dB)*
NumSubpulses	Number of Subpulses	Opt	UN(10)
Sub-Element Of:	TxMode		

Description

Complex element Pulse contains the pulse characteristics for equipments using a pulsed emission. It includes the parameters of the pulse time cycle and the pulse shape.

Input Requirement

* **PulseCycle**: This group is OPTIONAL.

  This group contains the pulse characteristics for all equipment using a pulsed emission.

  - **PRRMin**: In Data Item PRRMin, enter the numeric value for the pulse repetition rate (PRR) of the equipment. For equipment having a capability for continuously variable PRR over a wide range(s), insert the minimum value in this attribute and the maximum value in maxPRR.
  - **PRRMax**: In Data Item PRRMax, enter for equipment having a capability for continuously variable PRR over a wide range.

    [XSL ERR MINMAX] If PRRMax is used, it MUST be greater than PRRMin.
  - **PDMin**: In Data Item PDMin, enter a numeric value indicating the characteristic pulse duration of the equipment at the half-power (-3 dB) points. For equipment having a capability for continuously variable PDs over a wide range, insert the minimum value in this attribute and the maximum value in maxPD.
  - **PDMax**: In Data Item PDMax, enter for equipment having a capability for continuously variable PD over a wide range.

    [XSL ERR MINMAX] If PDMax is used, it MUST be greater than PDMin.

* **Pulse Average Cycle**: This group is OPTIONAL.

  This group contains information about the pulse form factor.

  - **DutyCycleMin**: In Data Item DutyCycleMin, enter as a percentage, the minimum or nominal ratio of the pulse duration to the pulse period.

- **DutyCycleMax**: In Data Item DutyCycleMax, enter as a percentage, the maximum ratio of the pulse duration to the pulse period.

  [XSL ERR MINMAX] If DutyCycleMax is used, it MUST be greater than DutyCycleMin.

- **AvgPowerMin**: In Data Item AvgPowerMin, enter the minimum or nominal average power.
- **AvgPowerMax**: In Data Item AvgPowerMax, enter the maximum average power.

  [XSL ERR MINMAX] If AvgPowerMax is used, it MUST be greater than AvgPowerMin.

* **Pulse Compression**: This group is OPTIONAL.

  This group contains the ratio of the uncompressed pulse width to the compressed pulse width, where the compressed pulse width in (microseconds) is 1/frequency displacement (in MHz).

  - **CompRatio**: In Data Item CompRatio, enter the ratio of the uncompressed pulse width to the compressed pulse width measured at the 50% amplitude (-3 dB) points.
  - **CompMethod**: In Data Item CompMethod, enter the method employed to reduce the period of the pulse.

* **Pulse Form Factor**: This group is OPTIONAL.

  This group contains the rise time (period for the pulse leading edge to rise from 10% to 90% of the voltage envelope) and fall time (period for the pulse trailing edge to fall from 90% to 10% of the voltage envelope) of a pulse.

  - **RiseTime**: In Data Item RiseTime, enter the pulse rise time from 10 to 90 percent of the pulse.
  - **FallTime**: In Data Item FallTime, enter the pulse fall time from 90 to 10 percent of the pulse.
  - **JustifyShortRiseTime**: In Data Item JustifyShortRiseTime, enter an operational justification for short pulse rise time. This is required if the transmitter is a pulsed Group B, C, or radar, and either:
    1) it uses FM modulation and the Rise Time or Fall Time is less than 0.1 microseconds, or
    2) it uses Non-FM modulation and the Rise Time or Fall Time is less than 0.01 microseconds.

* **RadarProcessingGainMax**: In Data Item RadarProcessingGainMax, enter the maximum ratio of the post-processing signal-to-noise ratio to the received signal-to-noise ratio. This only applies when the Radar Type is "FM Pulse".

* **NumSubpulses**: In Data Item NumSubpulses, enter the total number of subpulses (chips) contained in a radar coded pulse. This only applies when the Radar Type is "FM Pulse" or "Coded Pulse"

Example

```
<Pulse>
  <PRRMin cls="U">300</PRRMin>
  <PDMin cls="U">12</PDMin>
  <DutyCycleMax cls="U">50</DutyCycleMax>
  <AvgPowerMin cls="U">20</AvgPowerMin>
</Pulse>
```

RFSystem

RF System

Data Item Tag	Data Item Name	Occurrence	Format
FieldedStatus	Fielded Status	Opt	Code List CSG
Emergency	Emergency Indicator	Opt	Code List CBO
InitialCost ***(US)***	Initial Cost	Opt	S70
Inherits from:	Common		
Sub-Element Of:	SchemaRoot		
Sub-Elements:	Configuration [0..n] Deployment [0..n] Nomenclature [0..n] POCInformation [0..n] RelatedSystem [0..n] StockNum [0..n] ***(US)*** UsingCountries [0..n] ***(US)***		

Description

This element inherits attributes and sub-elements from element Common.

Complex element RFSystem describes the association of one or several Transmitters, Receivers and Antennas as they are assembled to form a system on a platform; it can also include the specific modes which are allowed or technically possible in this assembly.
See RFSystem Diagram
See Configuration Diagram

Input Requirement

[XSL ERR DSTYPE] Part 3 of the Serial reference (dataset type) MUST be "**TR**".

* **FieldedStatus**: In Data Item FieldedStatus, enter the current stage of the RFSystem.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CSG:**

Code
Conceptual
Developmental
Experimental
Operational

* **Emergency**: In Data Item Emergency, enter "Yes" if the system may be used in a case of emergency.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **InitialCost** ***(US)***: In Data Item InitialCost (US) enter the estimated initial cost, in US dollars, of the system/ equipment.

Example

```
<RFSystem cls="U">
  <Serial cls="U">USA::TR:123</Serial>
  <EntryDateTime cls="U">2011-12-25T00:00:00Z</EntryDateTime>
  <Deployment>
    <Type cls="U">Land Mobile</Type>
  </Deployment>
  <Configuration>
    <ConfigID cls="U">CONFIG1</ConfigID>
    <TxRef>
      <Serial cls="U">USA::TX:1111</Serial>
```

```
      <TxAntModeRef>
        <Serial cls="U">USA::AN:2222</Serial>
      </TxAntModeRef>
    </TxRef>
    <RxRef>
      <Serial cls="U">USA::RX:3333</Serial>
    </RxRef>
  </Configuration>
</RFSystem>
```

RFSystemRef

RF System Reference

Data Item Tag	Data Item Name	Occurrence	Format
	Element Content	Req	pattern (S29)
Sub-Element Of:	Satellite		

Description

Complex element RFSystemRef contains a reference to a RF System used on the satellite.

Input Requirement

In Data Item RFSystemRef, enter the dataset identifier of a RFSystem.

[XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "**TR**".

[XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

RadiationPlan *(US)*

Radiation Plan

Data Item Tag	Data Item Name	Occurrence	Format
FreqMax	Maximum Frequency	Opt	UN(16,9) [0..1.0E9]*(MHz)*
FreqMin	Minimum Frequency	Req	UN(16,9) [0..1.0E9]*(MHz)*
JCALevel	Authorisation Level	Opt	UN(2)
LocationRef	Plan Location Serial	Opt	pattern (S29)
Name	Radiation Plan Name	Opt	S100
StartDateTime	Start Time	Opt	DT
StopDateTime	Stop Time	Opt	DT
Version	Radiation Plan Version	Opt	S10
Inherits from:	Common		
Sub-Element Of:	SchemaRoot		
Sub-Elements:	JammingAuthority [0..n] JammingPlan [0..n]		

Description

This element inherits attributes and sub-elements from element Common.

Complex element RadiationPlan (US) is used to describe the high level plans that can be directed at a specific target or the mission plan for a group of targets.
See RadiationPlan Diagram

Input Requirement

[XSL ERR DSTYPE] Part 3 of the Serial reference (dataset type) MUST be "**RP**".

* **FreqMax**: In Data Item FreqMax (US), enter the frequency range maximum value planned for denial of use.

  [XSL ERR MINMAX] If FreqMax is used, it MUST be greater than FreqMin.

* **FreqMin**: In Data Item FreqMin (US), enter the frequency range minimum value planned for denial of use.

* **JCALevel**: In Data Item JCALevel (US), enter the level of joint control authorization (JCA) required for the jamming plan.

* **LocationRef**: In Data Item LocationRef (US), enter the unique reference serial of an existing Location dataset.

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

* **Name**: In Data Item Name (US), enter a descriptive name for the Radiation Plan.

* **StartDateTime**: In Data Item StartDateTime (US), enter the timestamp when the denial of spectrum use is planned to begin.

* **StopDateTime**: In Data Item StopDateTime (US), enter the timestamp when the denial of spectrum use is planned to be halted.

* **Version**: In Data Item Version (US), enter the current version of the Radiation Plan.

Example

```
<RadiationPlan cls="U">
  <Serial cls="U">USA::RP:123</Serial>
  <EntryDateTime cls="U">2011-12-25T00:00:00Z</EntryDateTime>
  <FreqMax cls="U">3107.56</FreqMax>
  <FreqMin cls="U">2999.753</FreqMin>
  <JCALevel cls="U">3</JCALevel>
  <LocationRef cls="U">D:AR:LO:123</LocationRef>
```

```
  <Name cls="U">A37</Name>
  <StartDateTime cls="U">2011-12-25T01:23:001Z</StartDateTime>
  <StopDateTime cls="U">2011-12-25T01:29:013Z</StopDateTime>
  <Version cls="U">1673</Version>
  <JammingAuthority>
    <JCACallSign cls="U">Checkmate 32</JCACallSign>
    <JCAFreq cls="U">3002</JCAFreq>
    <JCALevel cls="U">3</JCALevel>
    <JCAState cls="U">Denied</JCAState>
  </JammingAuthority>
  <JammingPlan>
    <Name cls="U">A1370003</Name>
    <NumFreqs cls="U">204</NumFreqs>
    <Priority cls="U">High</Priority>
    <RequiredEffect cls="U">Deception </RequiredEffect>
    <RequiredPerformance cls="U">Partially Effective</RequiredPerformance>
    <StartDateTime cls="U">2011-12-25T01:23:001Z</StartDateTime>
    <StartLocationRef cls="U">D:AR:LO:123</StartLocationRef>
    <StartTrigger cls="U">Troops in Contact</StartTrigger>
    <StopDateTime cls="U">2011-12-25T01:29:013Z</StopDateTime>
    <StopLocationRef cls="U">D:AR:LO:123</StopLocationRef>
    <StopTrigger cls="U">Troops Not in Contact</StopTrigger>
    <Version cls="U">1673</Version>
    <Level3Auth cls="U">Yes</Level3Auth>
    <StandOffDist cls="U">120</StandOffDist>
    <JammingTarget>
      <AntStabilisation cls="U">At Bearing</AntStabilisation>
      <Bearing cls="U">271</Bearing>
      <FreqMax cls="U">3107.56</FreqMax>
      <FreqMin cls="U">2999.753</FreqMin>
      <Lat cls="U">394217.12N</Lat>
      <LoadsetRef cls="U">D:AR:LO:123</LoadsetRef>
      <LocationRef cls="U">D:AR:LO:123</LocationRef>
      <Lon cls="U">792823.5W</Lon>
      <PolarisationType cls="U">Oblique, angled, crossed</PolarisationType>
      <Power cls="U">100</Power>
      <TargetID cls="U">67981</TargetID>
      <JammingPerformance>
        <ActualEffect cls="U">Deception </ActualEffect>
        <ActualPerformance cls="U">Partially Effective</ActualPerformance>
        <ContinuousUpdate cls="U">Yes</ContinuousUpdate>
        <DesiredEffect cls="U">Deception </DesiredEffect>
        <DesiredPerformance cls="U">Partially Effective</DesiredPerformance>
      </JammingPerformance>
    </JammingTarget>
  </JammingPlan>
</RadiationPlan>
```

Receiver

Receiver

Data Item Tag	Data Item Name	Occurrence	Format
Generic	Generic indicator	Req	Code List CBO
Duplex		**Opt**	
DuplexSep	Duplex Separation	Req	UN(16,9) [0..1.0E9]*(MHz)*
DuplexSepType	Duplex Separation Type	Opt	Code List CDS
PreselectionType	Preselection Type	Opt	S60
ConductedEmissions ***(US)***	Conducted Emissions	Opt	SN(6,3) [-165..-30]*(dBm)*
FCCAcceptanceNum ***(US)***	FCC Acceptance Number	Opt	S50
TSPR ***(US)***	TSPR	Opt	S10
Inherits from:	Common		
Sub-Element Of:	SchemaRoot		
Sub-Elements:	Curve [0..n] Deployment [0..n] Nomenclature [0..n] POCInformation [0..n] RxMode [0..n] UsingCountries [0..n] ***(US)***		

Description

This element inherits attributes and sub-elements from element Common.

Complex element Receiver is the root element (dataset) containing the receiver characteristics.
See Receiver Diagram

Input Requirement

[XSL ERR DSTYPE] Part 3 of the Serial reference (dataset type) MUST be "**RX**".

* **Generic**: In Data Item Generic, enter "Yes" to indicate that the dataset describes typical parameters of a waveform or standard signal, or a generic antenna model, rather than a specific equipment model.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **Duplex Frequency Separation**: This group is OPTIONAL.

  This group identifies the required (exact or minimum) offset frequency separation between the transmit and the receive radio frequencies for an equipment capable of operating in the duplex mode.

  - **DuplexSep**: In Data Item DuplexSep, enter the minimum or exact duplex frequency separation
  - **DuplexSepType**: In Data Item DuplexSepType, enter if the frequency separation must be exactly, or at the minimum, the amount specified.

    [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CDS:**

Code	Meaning
Exactly	The separation must be exactly the value entered (for use when transmit and receive radio frequencies are assigned in fixed pairs).
Minimum	The separation must be at least the value entered.

* **PreselectionType**: In Data Item PreSelectionType, enter the type of preselection used in the receiver frontend.
* **ConductedEmissions *(US)***: In Data Item ConductedEmissions (US), enter the power level of undesired signals generated in the receiver and conducted by way of the connection to the receiver.

* **FCCAcceptanceNum** ***(US)***: In Data Item FCCAcceptanceNum (US), enter the Federal Communication Commission (FCC) ID of FCC authorised.
* **TSPR** ***(US)***: In Data Item TSPR (US), enter the telecommunications service priority applicable to a spectrum-dependent radiocommunications system intended to be used in direct support of a national emergency declared under Section 706 of the Communications Act of 1934, as amended.

Example

```
<Receiver cls="U">
  <Serial cls="U">NLD::RX:123</Serial>
  <EntryDateTime cls="U">2011-12-25T00:00:00Z</EntryDateTime>
  <Generic cls="U">No</Generic>
  <Nomenclature>
    <Name cls="U">AN/PRC-113</Name>
  </Nomenclature>
  <RxMode>
    <ModeID cls="U">HIGH POWER VOICE</ModeID>
  </RxMode>
</Receiver>
```

RecordNote *(US)*

Record Note

Data Item Tag	Data Item Name	Occurrence	Format
NoteRef	Note Reference	Req	pattern (S29)
Comments	Comments	Opt	MEMO
Sub-Element Of:	Assignment		

Description

Complex element RecordNote (US) contains a reference to a formal host nation "note" and specific comments.

Input Requirement

* **NoteRef**: In Data Item NoteRef (US), enter a reference to the Note dataset that describes the note identified in NoteCode.

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

* **Comments**: In Data Item Comments (US), enter the Amplifying conditional comments for the note as agreed to by the Interdepartment Radio Advisory Committee (IRAC) Frequency Assignment Subcommittee (FAS).

RelatedOrganisation

Related Organisation

Data Item Tag	Data Item Name	Occurrence	Format
Type	Type	Opt	Code List CFT
Relation	Relationship	Req	Code List CFR
Serial	Organisation Serial	Req	pattern (S29)
Sub-Element Of:	Organisation		

Description

Complex element RelatedOrganisation identifies an Organisation linked to the current Organisation, the type of relation (reporting, budget, etc) and the relation (parent, child, sibling).

Input Requirement

* **Type**: In Data Item Type, enter the type of relationship;

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CFT:**

Code
Budget
Plan ORBAT
Reference ORBAT
Related
Reporting

* **Relation**: In Data Item Relation, enter the relationship between the two organisations.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CFR:**

Code	Meaning
Child	The referenced Organisation / Force Element is child of the current Organisation / Force Element
Parent	The referenced Organisation / Force Element is parent of the current Organisation / Force Element
Sibling	The referenced Organisation / Force Element is a sibling of the current Organisation / Force Element

* **Serial**: In Data Item Serial, enter the unique reference of the Organisation associated with the current Organisation.

  [XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "**OR**".

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

Example

```
<RelatedOrganisation>
  <Type cls="U">Reporting</Type>
  <Relation cls="U">Child</Relation>
  <Serial cls="U">USA:AR:OR:05008827</Serial>
</RelatedOrganisation>
```

RelatedRef

Related Reference

Data Item Tag	Data Item Name	Occurrence	Format
	Element Content	Req	pattern (S29)
Sub-Element Of:	Assignment		

Description

Complex element RelatedRef contains the serial of a referenced such as SSReply.

Input Requirement

In Data Item RelatedRef, enter the serial of a related Dataset, such as a SSReply. This MAY be used to link several assignments which are related to each other, or to refer to the Supportability documentation on which the assignment is based. It MAY also be used to indicate that the assignment applies to a specific force element. It SHOULD be used when an assignment is produced from an Allotment.

[XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "**AS** or **AL** or **HD** or **FE** or **FD**".

[XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

RelatedSupportability

Related Supportability

Data Item Tag	Data Item Name	Occurrence	Format
Type	Type	Req	Code List CDD
SSRequestRef	SSRequest Serial	Opt	pattern (S29)
J12Number ***(US)***	J/F 12 Number	Opt	S15
Sub-Element Of:	SSRequest		

Description

Complex element RelatedSupportability refers to a SSRequest with which the current dataset has a dependency.

Input Requirement

* **Type**: In Data Item Type, enter the type of dependency between the current dataset and the referred application.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CDD:**

Code	Meaning
Dependant	Dependant Dataset (e.g. in AsgnAllot or SSRequest, one system cannot operate without the other)
Related	Related Dataset (e.g. in AsgnAllot or SSRequest, each system may still operate without the related system)
Superseded	Superseded Dataset

* **SSRequestRef**: In Data Item SSRequestRef, enter a Serial reference to a superseded or related SSRequest application.

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

* **J12Number *(US)***: In Data Item J12Number (US), enter the US Military Command, Control, Communications, and Computers Executive Board (MC4EB) identifier of a superseded or related application.

Example

```
<RelatedSupportability>
  <Type cls="U">Related</Type>
  <SSRequestRef cls="U">USA:NTIA:SR:123</SSRequestRef>
</RelatedSupportability>
```

RelatedSystem

Related System

Data Item Tag	Data Item Name	Occurrence	Format
Relation	Relation Type	Req	Code List CFR
Serial	Related System Serial	Req	pattern (S29)
Sub-Element Of:	RFSystem		

Description

Complex element RelatedSystem identifies a System linked to the current System, and the relation (parent, child, sibling).

Input Requirement

* **Relation**: In Data Item Relation, enter the relationship between the two systems.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CFR:**

Code	Meaning
Child	The referenced Organisation / Force Element is child of the current Organisation / Force Element
Parent	The referenced Organisation / Force Element is parent of the current Organisation / Force Element
Sibling	The referenced Organisation / Force Element is a sibling of the current Organisation / Force Element

* **Serial**: In Data Item Serial, enter the reference of the System associated with the current System.

  [XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "**TR**".

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

Example

```
<RelatedSystem>
  <Relation cls="U">HasChild</Relation>
  <Serial cls="U">USA:AR:TR:05008827</Serial>
</RelatedSystem>
```

Remarks

Remarks

Attribute Tag	Attribute Name	Occurrence	Format
idx	Index	Req	UN(6)
Data Item Tag	Data Item Name	Occurrence	Format
	Element Content	Req	MEMO
Sub-Element Of:	Common		

Description

Complex element Remarks is a free text field that provides a place to add additional. In certain situations, technical data must be included in free text in order to clearly explain a technical or operational consideration; in these instances, the data must also be entered in the data element(s) specifically established for it.

Input Requirement

In Data Item Remarks, enter additional information applicable to this data item. A remarked Data Item MUST be populated.

* **idx** *(Attribute)*: In attribute idx, enter a unique index for each Remark used by this Dataset. Once an idx is used it SHOULD NOT be modified during the lifetime of the Dataset; e.g., an element with idx=2 will keep idx=2 even if the first occurrence (idx=1) is deleted.

  [XSD ERR UNIQUE] Each value of this data item MUST be unique within the parent element.

Example

(see also a more complete example in the standard metadata attributes)

```
<Remarks cls="C" idx="1">This is a JTIDS Class 2H terminal</Remarks>
```

Role

Role (Job Account)

Data Item Tag	Data Item Name	Occurrence	Format
EffectiveDate	Effective Date	Opt	D
ExpireReview		**Opt**	
ExpirationDate	Expiration Date	Opt	D
ReviewDate	Review Date	Opt	D
Name	Role Name	Req	S50
Country	Country	Opt	Code List CCY
Inherits from:	Common		
Sub-Element Of:	SchemaRoot		
Sub-Elements:	Address [0..n] ContactRef [0..n] EMail [0..n] TelephoneFax [0..n]		

Description

This element inherits attributes and sub-elements from element Common.

Complex element Role is the XML root for all parameters of a Role (position or role representing an organisational user of the system; also known as Job Account in the USA).
See Role Diagram

Input Requirement

[XSL ERR DSTYPE] Part 3 of the Serial reference (dataset type) MUST be "**JA**".

* **EffectiveDate**: In Data Item EffectiveDate, enter the date by which the dataset is to be operational or effective.
* **ExpireReview**: This group is OPTIONAL.
  - **ExpirationDate**: In Data Item ExpirationDate, enter the date at which the dataset will expire. The Expiration date should be less than five years from current date.
  - **ReviewDate**: In Data Item ReviewDate, enter the date by which the dataset is to be reviewed. The Review date should be less than five years from the effective date. In Data Item Spectrum Supportability datasets, this date indicate when the organisation responsible for re-initiating host coordination plans to resubmit a Spectrum Supportability request to the host nation for continued use of the equipment.
* **Name**: In Data Item Name, enter the name or function of the Role. The name SHOULD be unique within the agency.
* **Country**: In Data Item Country, enter the country to which the Role belongs.
  IMPORTANT NOTE: The Country is Optional in order to accommodate legacy data; however it SHOULD be filled in. The release of datasets to Roles is based upon matching nationalities; therefore a Role without a Country will not be able to receive datasets having a releasability caveat.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CCY (extract only):**

Code	Meaning
AFG	Afghanistan
ALB	Albania
DZA	Algeria
AND	Andorra
AGO	Angola
ATG	Antigua and Barbuda
ARG	Argentine Republic
ARM	Armenia
AUS	Australia
AUT	Austria

...	...

Example

```
<Role cls="U">
  <Serial cls="U">USA::JA:123</Serial>
  <EntryDateTime cls="U">2011-12-12T00:00:00Z</EntryDateTime>
  <Name cls="U">EUCOM FMFO</Name>
  <Country cls="U">USA</Country>
  <ContactRef cls="U">USA:EU:CN:1</ContactRef>
</Role>
```

RoleRef

Role Reference

Data Item Tag	Data Item Name	Occurrence	Format
	Element Content	Req	pattern (S29)
Sub-Element Of:	Organisation		

Description

Complex element RoleRef contains the serial of a referenced Role.

Input Requirement

In Data Item Serial, enter the unique reference of a Role associated with this Organisation.

[XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "**JA**".

[XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

RxAntModeRef

Receiver Antenna

Data Item Tag	Data Item Name	Occurrence	Format
Serial	Antenna Identifier	Req	pattern (S29)
ModeID	Antenna Mode Identifier	Opt	S20
CouplingLoss	Coupling Loss	Opt	SN(6,3)*(dB)*
Inherited by:	TxAntModeRef		
Sub-Element Of:	RxRef		

Description

Complex element RxAntModeRef contains references to the Antenna and its AntMode, used to construct a Receiver Configuration.

Input Requirement

* **Serial**: In Data Item Serial, enter the reference to an Antenna in this configuration. This antenna is associated with the receiver specified in the Serial field of the parent RxRef element.

  [XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "**AN**".

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

* **ModeID**: In Data Item ModeID, enter the unique name of an AntMode of the Antenna specified in the corresponding Serial field. This antenna mode is grouped with the receiver modes specified in RxModeRef.

  [XSL WRN RELATED] This item, with item Serial SHOULD refer to an existing Antenna/AntMode in the data repository.

* **CouplingLoss**: In Data Item CouplingLoss, enter the loss that occurs when energy is transferred between the transmitter/receiver and the antenna.

Example

```
<RxAntModeRef>
  <Serial cls="U">USA:NTIA:AN:123</Serial>
  <ModeID cls="U">TRACKING</ModeID>
</RxAntModeRef>
```

RxMode

Receiver Mode

Attribute Tag	Attribute Name	Occurrence	Format
curves	Links to Curves	Opt	List of UN6
Data Item Tag	**Data Item Name**	**Occurrence**	**Format**
ModeInfo		**Req**	
ModeID	Mode Identifier	Req	S20
Description	Mode Description	Opt	S100
RxType	Receiver Type	Opt	Code List CRT
NecessaryBw	Necessary Bandwidth	Opt	UN(16,9) [0..1.0E9]*(MHz)*
Tunability		**Opt**	
Tunability	Tunability	Opt	Code List CTU
TuningMethod	Tuning Method	Opt	Code List CTN
Intermodulation		**Opt**	
IntermodPct	Intermodulation Value	Opt	UN(4,2)[0..100]*(%)*
IntermodEffect	Intermodulation Effect	Opt	MEMO
Sensitivity		**Opt**	
SensitivityLevel	Sensitivity Level	Opt	SN(6,3)*(dBm)*
NoiseFigure	Noise Figure	Opt	SN(6,3)*(dB)*
NoiseTemp	Noise Temperature	Opt	UN(7,1)*(Kelvins)*
SensitivityCriteriaType	Type of Sensitivity Criteria	Opt	Code List CSE
SensitivityCriteriaLevel	Sensitivity Criteria	Opt	UN(16,15)*(dBm)*
SensitivityCriteriaText	Sensitivity Criteria	Opt	S50
PostDetection		**Opt**	
PostDetectionFreqMin	Minimum Post Detection Frequency	Opt	UN(16,9) [0..1.0E9]*(MHz)*
PostDetectionFreqMax	Maximum Post Detection Frequency	Opt	UN(16,9) [0..1.0E9]*(MHz)*
ProcessingGainMin	Minimum Processing Gain	Opt	SN(6,3)*(dB)*
ProcessingGainMax	Maximum Processing Gain	Opt	SN(6,3)*(dB)*
SpuriousRejection	Rejection of Spurious Emissions	Opt	UN(5,2) [0..150]*(dB)*
ImageRejection	Rejection on Image Frequency	Opt	UN(5,2) [0..150]*(dB)*
IntermodRejection	Rejection of Intermodulation	Opt	UN(5,2) [0..200]*(dB)*
AdjacentChannelSelectivity	Adjacent Channel Selectivity	Opt	SN(6,3)*(dB)*
FreqTolerance		**Opt**	
FreqTolerance	Frequency Tolerance	Req	UN(18,6)
FreqToleranceUnit	Frequency Tolerance Unit	Req	Code List CFO
ModeName ***(US)***	Mode Name	Opt	S40
Sub-Element Of:	Receiver		
Sub-Elements:	Baseband [0..n] EmsClass [0..n] FreqConversion [0..n] RxModulation [0..n] RxSignalTuning [0..n] SpreadSpectrum [0..1]		

Description

Complex element RxMode and sub-elements define all the technical parameters for a mode of operation of the Receiver. A mode can be defined as a set of parameters or settings for a radio or radar, allowing the equipment to perform a given function (e.g. voice, data, seek, tracking, etc).
See RxMode Diagram

Input Requirement

* **curves** *(Attribute)*: In attribute curves, enter the list of indices referring to Curves applicable to the data item.
* **Mode Information**: This group is REQUIRED.
  - **ModeID**: In Data Item ModeID, enter a short name for the mode; this name should be a meaningful identification of the mode, but it can also be automatically generated in some systems. The Name MUST be unique within the dataset and SHOULD NOT be modified during the entire lifetime of the dataset.

    [XSD ERR UNIQUE] Each value of this data item MUST be unique within the parent element.
  - **Description**: In Data Item Description, enter a description of the operational mode; this description should be a meaningful explanation of the mode main characteristics.
* **RxType**: In Data Item RxType, enter the type of receiver. If there is no suitable entry in the code list, use `+Other` and indicate the type in a Remarks.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CRT (extract only):**

Code	Meaning
Coherent	
Crystal	
Direct View Optics	
Double Conversion Superheterodyne	
Homodyne	
Imaging Detector	
Non-Coherent	
Non-Imaging Detector	
Quad Conversion Superheterodyne	
Super Regenerative	
...	...

* **NecessaryBw**: In Data Item NecessaryBw, enter the necessary bandwidth which is defined as the minimum width of the frequency band sufficient to ensure the transmission of information at the required rate and quality. This is approximately at the -20 dB level on an emission curve..
* **Tunability**: This group is OPTIONAL.
  - **Tunability**: In Data Item Tunability, enter the tuning capability.

    [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CTU:**

Code	Meaning
Continuous	Systems capable of being tuned to any frequency within the requested band
Continuous+Stepped	Combination of continuous and stepped
Fixed	Systems capable of operating on a single discrete frequency
Fixed+Continuous	Combination of fixed and continuous
Fixed+Stepped	Combination of fixed and stepped
Stepped	Systems capable of being tuned across the authorised or requested band in discrete steps or increments. This includes crystal control
Fixed-Constrained	Systems capable of operating on a single discrete frequency, determined by the bandwidth constraints of the power generating or frequency determining device
Fixed or Random	Frequency-agile radars that operate on various frequencies within a band, either specified or random mode
Other	If selected, a clarifying remark SHOULD be entered

  - **TuningMethod**: In Data Item TuningMethod, enter the device or process used to tune the equipment through the RF spectrum.

    [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CTN (extract only):**

Code	Meaning
Cavity	
Cavity Mechanically Tuned	

Cavity Resonant	
Cavity Tunable	
Continuous	
Continuous VCO	
Crystal Controlled	
Crystal Fixed	
Crystal Interchangeable	
Crystal SAW	
...	...

* **Intermodulation**: This group is OPTIONAL.

  This group describes the distortion that is the result of two or more signals mixing together that are not harmonic frequencies. These signals mix to create additional non-harmonic frequencies that are undesirable.

  - **IntermodPct**: In Data Item IntermodulationPct, enter the percentage of the total signal either transmitted or received affected by the distortion products.
  - **IntermodEffect**: In Data Item IntermodulationEffect, enter the effect on circuit operation caused by the level of intermodulation distortion.

* **Sensitivity**: This group is OPTIONAL.

  This group describes the minimum RF signal power present at the input terminals that ensures acceptable detection and demodulation of the desired signal, and the criteria used to determine this minimum level. It may also contain a measure of the internal receiver noise present in the receiver output. It is the ratio of the input signal to noise ratio to the output-signal-to-noise ratio at the standard temperature of 290 Kelvin. It may also contain the minimum receiver noise temperature.

  - **SensitivityLevel**: In Data Item SensitivityLevel, enter the minimum RF signal power level as it relates to one of the four Sensitivity Criteria Types: PWOP, SINAD, S/N or S+N/N indicated in item SensitivityCriteriaType. Note, for MDS and MTR criteria, the RF signal power level is zero and this item may be left blank in those instances.
  - **NoiseFigure**: In Data Item NoiseFigure, enter the ratio of the output noise power to the portion of noise power attributable to thermal noise in the input termination at 290 Kelvins. Noise Figure is related to Noise Temperature by the following formula:
    NoiseFigure [dB] = 10 * log10((NoiseTemp [K] / 290) + 1)
  - **NoiseTemp**: In Data Item NoiseTemp, enter the absolute temperature of a passive system having an available noise power per unit bandwidth at a specified frequency equal to that of the actual terminals of a network. Noise Figure is related to Noise Temperature by the following formula:
    NoiseFigure [dB] = 10 * log10((NoiseTemp [K] / 290) + 1).
  - **SensitivityCriteriaType**: In Data Item SensitivityCriteriaType, enter the value of the criteria; the meaning and unit of this value depends on the Sensitivity Criteria Type selected.

    [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CSE:**

Code	Meaning
Pulse Width Opposition	Pulse Width Opposition; value is in dB
Bit Error Rate	Bit Error Rate; value is a number in scientific notation
Minimum Discernible Signal	Minimum Discernible Signal
Minimum Target Recognition	Minimum Target Recognition
SINAD	Signal-Plus-Noise-Plus-Distortion to Noise-Plus-Distortion; value is in dB
S/N	Signal-to-Noise ratio; value is in dB
(S+N)/N	(Signal plus-Noise)-to-Noise ratio; value is in dB

  - **SensitivityCriteriaLevel**: In Data Item SensitivityCriteriaLevel, enter the value of the criteria; the meaning and unit of this value depends on the Sensitivity Criteria Type selected.

- **SensitivityCriteriaText**: In Data Item SensitivityCriteriaText, enter the value of the criteria when it cannot be expressed as a number.

Example:

```
<Sensitivity>
  <SensitivityLevel>-92</SensitivityLevel>
  <NoiseFigure>9</NoiseFigure>
  <NoiseTemp>850</NoiseTemp>
  <SensitivityCriteriaType>SINAD</SensitivityCriteriaType>
  <SensitivityCriteriaText>10 dB at 30 kHz BW</SensitivityCriteriaText>
</Sensitivity>
```

* **Post-Detection Frequency Range**: This group is OPTIONAL.

  This group identifies the minimum and maximum Post Detection Frequencies

  - **PostDetectionFreqMin**: In Data Item PostDetectionFreqMin, enter the maximum post detection frequency at the baseband half-power point.
  - **PostDetectionFreqMax**: In Data Item PostDetectionFreqMax, enter the maximum post detection frequency at the baseband half-power point.

    [XSL ERR MINMAX] If PostDetectionFreqMax is used, it MUST be greater than PostDetectionFreqMin.

* **ProcessingGainMin** : In Data Item ProcessingGainMin, enter the minimum ratio of the post processing signal-to-noise ratio to the received signal-to-noise ratio.

* **ProcessingGainMax**: In Data Item ProcessingGainMax, enter the maximum ratio of the post processing signal-to-noise ratio to the received signal-to-noise ratio.

  [XSL ERR MINMAX] If ProcessingGainMax is used, it MUST be greater than ProcessingGainMin.

* **SpuriousRejection**: In Data Item SpuriousRejection enter the spurious receiver responses that arise when strong undesired signals and the receiver local oscillator (LO) combine in the mixer to produce a frequency on or near the intermediate frequency. The rejection is the ratio in dB of a particular out-of-band frequency (outside the fundamental IF bandwidth) signal level required to produce a specified output, to the signal level required to produce the same output.

* **ImageRejection**: In Data Item ImageRejection, enter the ratio of the image frequency signal level required to produce a specified output, to the desired signal level required to produce the same output. This applies to superheterodyne receivers. For example, if a receiver has a sensitivity of -100 dBm and could receive an image signal with a maximum power of -20 dBm without causing the standard response, then the receive image rejection would be 80 dB.

* **IntermodRejection**: In Data Item IntermodRejection, enter the rejection of spurious emissions involving the mixing of two or more signals. Spurious emissions are emissions on a frequency or frequencies that are outside the necessary bandwidth and the level of which may be reduced without affecting the related transmission of information.

* **AdjacentChannelSelectivity**: In Data Item AdjacentChannelSelectivity, enter the ratio in dB between the wanted signal and the maximum level of an unwanted signal in the adjacent channel which still allows correct reception of the wanted signal.

* **Frequency Tolerance**: This group is OPTIONAL.

  The maximum drift from an equipment's center frequency after normal warm-up time has been allowed.

  - **FreqTolerance**: In Data Item FreqTolerance, enter the drift in Hz or in ppm using the formula: Frequency tolerance (ppm) = Maximum drift (Hz) / Center frequency (MHz). enter the units (Hz or ppm) in FreqToleranceUnit.
  - **FreqToleranceUnit**: In Data Item FreqToleranceUnit, enter the units in which the Frequency Tolerance is expressed.

    [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CFO:**

Code	Meaning
Hz	Hertz
ppm	parts per million

* **ModeName *(US)***: In Data Item ModeName (US), enter a short name for the mode.

RxModeRef

Receiver Mode Identifier

Data Item Tag	Data Item Name	Occurrence	Format
	Element Content	Req	S20
Sub-Element Of:	RxRef		

Description

Complex element RxModeRef references a RxMode used in a specific configuration.

Input Requirement

In Data Item RxModeRef, enter the unique identifier of a RxMode.

[XSL WRN RELATED] This item, with item Serial in parent element SHOULD refer to an existing Receiver/RxMode in the data repository.

RxModulation

Receiver Modulation

Data Item Tag	Data Item Name	Occurrence	Format
DigitalModType	Digital Modulaton Type	Opt	Code List CMO
MaxBitRate	Maximum Bit Rate	Opt	UN(10,3)*(kbit/s)*
DigitalFormat		**Opt**	
NumStates	Number of Digital States	Opt	UN(5)
LineCoding	Line Coding	Opt	Code List CDF
CodeRate	Pseudorandom Code Rate	Opt	UN(10,3)*(kbit/s)*
CodePeriod	Pseudorandom Code Repetition Period	Opt	UN(12,6)*(us)*
Inherited by:	TxModulation		
Sub-Element Of:	RxMode		

Description

Complex element RxModulation contains the detailed characteristics of the modulation on the receiver side.

Input Requirement

* **DigitalModType**: In Data Item DigitalModType, enter the type of digital modulation.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CMO (extract only):**

Code	Meaning
8-Tone	
16-Tone	
32-Tone	
AM Clear Voice	
AM Secure Voice	
ASK/OOK	
Audio FSK	
Binary FSK	
Binary Phase Shift Key	
Code Division Multiplex	
...	...

* **MaxBitRate**: In Data Item MaxBitRate, enter the maximum bit rate in kilobits per second applicable to digital communications systems. For spread spectrum transmissions enter the bit rate after error-correction coding. Do not enter the spectrum-spreading clock or chip rate.

* **DigitalFormat**: This group is OPTIONAL.

  This group contains information about data coding.

  - **NumStates**: In Data Item NumStates, enter the total number of states, e.g., 4 for 4-ary Phase Shift-Keying, 64 for 64 level Quadrature AM.

  - **LineCoding**: In Data Item LineCoding, enter the format used to represent binary digit sequencing when digital modulation is used.

    [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CDF (extract only):**

Code	Meaning
Bi-Phase-Level	
Bi-Phase-Mark	
Bi-Phase-Space	
Differential Bi-Phase-Level	

Differential Bi-Phase-Mark	
Differential Bi-Phase-Space	
NRZ	
NRZ-Mark	
NRZ-Space	
Return to Zero	
...	...

- **CodeRate**: In Data Item CodeRate, enter the pseudorandom code rate.
- **CodePeriod**: In Data Item CodePeriod, enter the length of time of the pseudorandom code repetition period.

Example

```
<RxModulation>
  <DigitalModType cls="U">ASK/OOK</DigitalModType>
  <MaxBitRate cls="U">27000000</MaxBitRate>
</RxModulation>
```

RxRef

Receiver Reference

Data Item Tag	Data Item Name	Occurrence	Format
Serial	Receiver Serial	Req	pattern (S29)
Sub-Element Of:	Configuration		
Sub-Elements:	RxAntModeRef [0..n] RxModeRef [0..n]		

Description

Complex element RxRef contains the reference of a Receiver, and optionally some of its RxModes and the associated Antennas and AntMode.

Input Requirement

* **Serial**: In Data Item Serial, enter the identifier of the related Receiver used in this configuration. The same receiver can be referenced in different RxRef elements in order to properly group receiver modes with antenna modes.

  [XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "**RX**".

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

RxSignalTuning

Receiver Signal Tuning

Data Item Tag	Data Item Name	Occurrence	Format
FreqRangeGrp		**Req**	
FreqMin	Nominal or Minimum Frequency	Req	UN(16,9) [0..1.0E9]*(MHz)*
FreqMax	Maximum Frequency	Opt	UN(16,9) [0..1.0E9]*(MHz)*
TuningStep	Tuning Step	Opt	UN(16,9) [0..1.0E9]*(MHz)*
NumPresetChannels	Number of Preset Channels	Opt	UN(8)
Sub-Element Of:	RxMode		

Description

Complex element RxSignalTuning indicates the tuning capabilities, the specific frequency or range of frequencies within which the equipment may tune, and the tuning increments of the equipment

Input Requirement

* **Frequency Range**: This group is REQUIRED.

  This group indicates a range of frequencies or a tuning range.

  - **FreqMin**: In Data Item FreqMin, enter the nominal frequency or minimum value of the frequency range.
  - **FreqMax**: In Data Item FreqMax, enter the maximum value of the frequencies in the range.

    [XSL ERR MINMAX] If FreqMax is used, it MUST be greater than FreqMin.
* **TuningStep**: In Data Item TuningStep, enter the tuning increment.
* **NumPresetChannels**: In Data Item NumPresetChannels, enter the number of preset channels available.

Example

```
<RxSignalTuning>
  <FreqMax cls="U">3107.56</FreqMax>
  <FreqMin cls="U">2999.753</FreqMin>
  <NumPresetChannels cls="U">45</NumPresetChannels>
  <TuningStep cls="U">0.025</TuningStep>
</RxSignalTuning>
```

SSReply

Spectrum Supportability Reply

Data Item Tag	Data Item Name	Occurrence	Format
SSRequestRef	SSRequest Serial	Opt	pattern (S29)
ReplyingCountry	Replying Country	Req	Code List CAO
SupportabilityCode	Supportability Code	Req	Code List CCD
DateReceivedByCountry	Date Request Received By Country	Opt	D
EffectiveDate	Effective Date	Req	D
ExpireReview		**Opt**	
ExpirationDate	Expiration Date	Opt	D
ReviewDate	Review Date	Opt	D
ApprovalSPSNum *(US)*	Approval SPS Number	Opt	S11
ERPNumber *(US)*	ERP Number	Opt	S50
FASNumber *(US)*	FAS Number	Opt	S50
IRACNumber *(US)*	IRAC Number	Opt	S50
ReplyingAuthority *(US)*	Replying Authority	Opt	S100
DistributionGroups *(US)*	Distribution Groups	Opt	S20
CoordinationNum *(US)*	Coordination Number	Opt	S15
Inherits from:	Common		
Sub-Element Of:	SchemaRoot		
Sub-Elements:	CommentSource [0..n] Configuration [0..n] StageLocation [0..n]		

Description

This element inherits attributes and sub-elements from element Common.

Complex element SSReply is the XML root for all parameters of a Host Nation Declaration of Spectrum Supportability. It inherits attributes and sub-elements from element Common
See SSReply Diagram

Input Requirement

[XSL ERR DSTYPE] Part 3 of the Serial reference (dataset type) MUST be "**HD**".

* **SSRequestRef**: In Data Item SSRequestRef, enter the dataset identifier of the SSRequest being replied to.

  [XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "**SR**".

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

* **ReplyingCountry**: In Data Item ReplyingCountry, enter the code of the country providing the reply.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CAO (extract only):**

Code	Meaning
AFG	Afghanistan
FF	Africa
US-AL	Alabama
ALA	Åland Islands
US-AK	Alaska
ALB	Albania
DZA	Algeria
NT-ASC	Allied Submarine Command
ASM	American Samoa
AND	Andorra
...	...

* **SupportabilityCode**: In Data Item SupportabilityCode, enter the overall result of the national analysis.

- If replying "Supported with Restrictions", use Comments for general restrictions only. Specific restrictions on authorised/excluded location should be expressed using the LocationRef. Specific restrictions on tuning ranges and power limits should be expressed using the Configuration.
- If replying "Supported with Recommendations", use Comments to express these recommendations.

[XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CCD:**

Code	Meaning
Draft	
Pending	
Not Supported	
Supported	
Supported with Recommendations	
Supported with Restrictions	
Request Frequency Assignment	
Temporary Assignment Only	
Other	If selected, a clarifying remark SHOULD be entered

* **DateReceivedByCountry**: In Data Item DateReceivedByCountry, enter the date the request was received by the Host Nation Administration.
* **EffectiveDate**: In Data Item EffectiveDate, enter the date by which the dataset is to be operational or effective.
* **ExpireReview**: This group is OPTIONAL.
  - **ExpirationDate**: In Data Item ExpirationDate, enter the date at which the dataset will expire. The Expiration date should be less than five years from current date.
  - **ReviewDate**: In Data Item ReviewDate, enter the date by which the dataset is to be reviewed. The Review date should be less than five years from the effective date. In Data Item Spectrum Supportability datasets, this date indicate when the organisation responsible for re-initiating host coordination plans to resubmit a Spectrum Supportability request to the host nation for continued use of the equipment.
* **ApprovalSPSNum** ***(US)***: In Data Item ApprovalSPSNum (US), enter the Certification of Spectrum Support Spectrum Planning Subcommittee (SPS) document identifier assigned by NTIA. This is not the same as the application SPS number.
* **ERPNumber** ***(US)***: In Data Item ERPNumber (US), enter the Emergency Readiness Plan (ERP) Number. Certification applications are assigned an ERP Number by the Emergency Planning Subcommittee (EPS) of the Interdepartment Radio Advisory Committee (IRAC) if the system involves national security and emergency preparedness (NSEP).
* **FASNumber** ***(US)***: In Data Item FASNumber (US), enter the Interdepartment Radio Advisory Committee (IRAC) Frequency Assignment Subcommittee (FAS) identifier assigned by NTIA.
* **IRACNumber** ***(US)***: In Data Item IRACNumber (US), enter the Interdepartment Radio Advisory Committee (IRAC) document number of the NTIA Certification of Spectrum Support document. This number is assigned by NTIA.
* **ReplyingAuthority** ***(US)***: In Data Item ReplyingAuthority (US), enter the name of the organization providing the reply.
* **DistributionGroups** ***(US)***: In Data Item DistributionGroups (US), identify to whom the signed certification should be distributed (e.g., "J-12 Holders").
* **CoordinationNum** ***(US)***: In Data Item CoordinationNum (US), enter the US Military Command, Control, Communications, and Computers Executive Board (MC4EB) identifier assigned to the equipment or system. (e.g., "J/F 12/12345")

Example

```
<SSReply cls="U">
```

```
  <Serial cls="U">FRA::HD:123</Serial>
  <EntryDateTime cls="U">2012-02-25T00:00:00Z</EntryDateTime>
  <SSRequestRef cls="U">USA::SR:123</SSRequestRef>
  <ReplyingCountry cls="U">FRA</ReplyingCountry>
  <SupportabilityCode cls="U">Supported with Restrictions</SupportabilityCode>
  <EffectiveDate cls="U">2012-02-25</EffectiveDate>
  <CommentSource>
    <Source cls="U">CAA</Source>
    <Comment idx="1" cls="U">IAW frequency clearance agreement FR MoD/FR CAA.</
Comment>
  </CommentSource>
</SSReply>
```

SSRequest

Spectrum Supportability Request

Data Item Tag	Data Item Name	Occurrence	Format
Title	Application Title	Req	S100
CurrentStage	Current Stage	Opt	Code List CSG
Requirement	Requirement Description	Opt	MEMO
Emergency	Emergency Indicator	Opt	Code List CBO
NumUnits		**Opt**	
NumMobileUnits	Number of Mobile Units	Opt	UN(9)
NumAreaUnits	Number of Units in Area	Opt	UN(9)
NumCositedUnits	Number of Cosited Units	Opt	UN(9)
ApplicationDate	Application Date	Opt	D
DateResponseRequired	Date Response Required	Opt	D
ReplacementInfo	Replacement Info	Opt	MEMO
ApplicationSPSNumber *(US)*	Application SPS Number	Opt	S11
CoordinationNum *(US)*	Coordination Number	Opt	S15
InfoTransferRequirement *(US)*	Info Transfer Requirement	Opt	MEMO
InitialCost *(US)*	Initial Cost	Opt	S70
InitialCostDesc *(US)*	Initial Cost Description	Opt	MEMO
ITUWaiver *(US)*	ITU Waiver	Opt	Code List CBO
NTIACoordinationRequired *(US)*	NTIA Coordination Required	Opt	Code List CBO
NTIASpaceData *(US)*	NTIA Space Data	Opt	MEMO
OperInvIntent *(US)*	Operational Inventory Intent	Opt	Code List CBO
OriginatingAgency *(US)*	Originating Agency	Opt	S80
RequestType *(US)*	Request Type	Opt	S50
RelatedAnalysisAndTestData *(US)*	Related Analysis And Test Data	Opt	MEMO
SysRelationEssential *(US)*	System Relationship And Essentiality	Opt	MEMO
TSPR *(US)*	TSPR	Opt	S10
WartimeUse *(US)*	Wartime Use	Opt	Code List CBO
Inherits from:	Common		
Sub-Element Of:	SchemaRoot		
Sub-Elements:	Configuration [0..n] DiagramEndpoint [0..n] DiagramLine [0..n] HostNation [0..n] Nomenclature [0..n] POCInformation [0..n] Project [0..n] RelatedSupportability [0..n] Stage [0..4] StatusLog [0..n] *(US)* Time [0..n] Trunking [0..1] *(US)*		

Description

This element inherits attributes and sub-elements from element Common.

Complex element SSRequest contains all parameters describing the system and its usage, for which Spectrum Supportability is being requested.
See SSRequest Diagram
See DiagramEndpoint Diagram
See StatusLog Diagram
See Trunking Diagram

Input Requirement

[XSL ERR DSTYPE] Part 3 of the Serial reference (dataset type) MUST be "**SR**".

* **Title**: In Data Item Title, enter the title of the Spectrum Supportability application. Each application title should be unique.

* **CurrentStage**: In Data Item CurrentStage, enter the current stage of the system.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CSG:**

Code
Conceptual
Developmental
Experimental
Operational

* **Requirement**: In Data Item Requirement, enter a description of the types and forms of information to be transmitted or received. The r+equirement should describe:

  - The general purpose of the system (e.g. in the PATRIOT system: this is an anti-missile, anti-aircraft system to protect fixed facilities);
  - Each significant capability of the system (e.g. in the PATRIOT system: search, acquisition and tracking radar, TT&C, C2 links, etc);
  - Any related supportability documents should be listed in the ExtReferenceRef element.

* **Emergency**: In Data Item Emergency, enter "Yes" if the system may be used in a case of emergency.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **NumUnits**: This group is OPTIONAL.

  - **NumMobileUnits**: In Data Item NumMobileUnits, enter the number of mobile units. These units do not necessarily operate simultaneously in the same electromagnetic environment.
  - **NumAreaUnits**: In Data Item NumAreaUnits, enter the maximum number of units (equipment) that will be operating simultaneously in the same area of operation. An area is generally defined as a country. Enter the number of land mobile stations, ship stations, and transportable stations associated with the current Assignment or SSRequest dataset.
    Within an Assignment (but not under SSRequest), the number entered shall represent either the exact number of stations or a range of numbers as follows:

Number of Stations	Enter
1-10	10
11-30	30
31-100	100
101-300	300
301-1000	1000
1001-3000	3000
3001-10000	10000
Above 10000	Nearest 10000

    If the exact number is to be recorded, and it is 10, 30, 100, 300, 1000, 3000, or a multiple of 10000, add one to the number to distinguish it from a figure that represents a range of numbers.
  - **NumCositedUnits**: In Data Item NumCositedUnits, enter the maximum number of units (equipment) that will be operating simultaneously in the same cosite environment. A cosite situation occurs when several antennas are within the near field of each other.

* **ApplicationDate**: In Data Item ApplicationDate, enter the date on which the application will be submitted to the appropriate spectrum management office.

* **DateResponseRequired**: In Data Item DateResponseRequired, enter the date by which the frequency assignment or Spectrum Supportability Reply is required by the user in order to complete necessary advanced operation coordination.

* **ReplacementInfo**: In Data Item ReplacementInfo, enter the name of the systems that are likely to be replaced by this system. This item SHOULD NOT be used if there is no replaced system or if the replaced systems are not known: do not enter text such as "NONE" or "N/A".
* **ApplicationSPSNumber *(US)***: In Data Item ApplicationSPSNumber (US), enter the application Spectrum Planning Subcommittee (SPS) document identifier assigned by NTIA. This is not the same as the Certification of Spectrum Support SPS number.
* **CoordinationNum *(US)***: In Data Item CoordinationNum (US), enter the US Military Command, Control, Communications, and Computers Executive Board (MC4EB) identifier assigned to the equipment or system. (e.g., "J/F 12/12345")
* **InfoTransferRequirement *(US)***: In Data Item InfoTransferRequirement (US), enter the required character rates, data rates, and circuit quality/reliability of the system.
* **InitialCost *(US)***: In Data Item InitialCost (US) enter the estimated initial cost, in US dollars, of the system/equipment.
* **InitialCostDesc *(US)***: In Data Item InitialCostDesc (US), enter the explanation of how the estimated initial cost for the system was calculated.
* **ITUWaiver *(US)***: In Data Item ITUWaiver (US), enter if this is a satellite system that is exempt from submitting notification to the Radiocommunication Bureau.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **NTIACoordinationRequired *(US)***: In Data Item NTIACoordinationRequired (US), enter if this application requires coordination with the National Authority for approval. For US records, the National Authority is NTIA and this should be Yes, unless the record does not require coordination with NTIA for approval.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **NTIASpaceData *(US)***: In Data Item NTIASpaceData (US), enter the Space and terrestrial information as defined by section 10.8 of the NTIA Manual and not captured in other more specific data fields.
* **OperInvIntent *(US)***: In Data Item OperInvIntent (US), enter if the system is intended for the DoD operational inventory.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **OriginatingAgency *(US)***: In Data Item OriginatingAgency (US), enter the agency that originated the application.
* **RequestType *(US)***: In Data Item RequestType (US), enter the request type. Possible values may include, but are not limited to, DoD Certification, NTIA Certification, and Foreign Coordination.
* **RelatedAnalysisAndTestData *(US)***: In Data Item RelatedAnalysisAndTestData (US), describe electromagnetic compatibility studies, testing or analyses relevant to this system, including documents currently in progress. Use the ExtReference attribute of this element as appropriate.
* **SysRelationEssential *(US)***: In Data Item SystemRelationshipAndEssentiality (US), enter a statement of the relationship between the proposed system and the function or operation it is intended to support.
* **TSPR *(US)***: In Data Item TSPR (US), enter the telecommunications service priority applicable to a spectrum-dependent radiocommunications system intended to be used in direct support of a national emergency declared under Section 706 of the Communications Act of 1934, as amended.
* **WartimeUse *(US)***: In Data Item WartimeUse (US), enter if the system is used in a wartime environment.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

Example

```
<SSRequest cls="U">
  <Serial cls="U">USA::SR:123</Serial>
  <EntryDateTime cls="U">2011-12-25T00:00:00Z</EntryDateTime>
  <Title cls="U">MIDS LVT</Title>
  <Configuration>
    <ConfigID cls="U">LOW VOLUME</ConfigID>
    <TxRef>
      <Serial cls="U">USA::TX:555</Serial>
    </TxRef>
  </Configuration>
</SSRequest>
```

Satellite

Satellite

Data Item Tag	Data Item Name	Occurrence	Format
ReviewDate	Review Date	Opt	D
CallSign	Call Sign	Opt	S20
OrbitType	Orbit Type	Opt	Code List CSP
LaunchStatus	Launch Status	Opt	Code List CLS
LaunchLocRef	Launch Location	Opt	pattern (S29)
LaunchDate	Launch Date	Opt	D
GeoNominalLon	Geostationary Nominal Longitude	Opt	pattern (S11)
GeoAltitude	Geostationary Altitude	Opt	UN(9,4)*(km)*
NonGeoPeriod	Non-Geostationary Period	Opt	UN(10,4)*(min)*
NonGeoNumSatellites	Number of Non-Geostationary Satellites	Opt	UN(4)
NonGeoApogee	Non-Geostationary Apogee	Opt	UN(9,4)*(km)*
NonGeoPerigee	Non-Geostationary Perigee	Opt	UN(9,4)*(km)*
NonGeoInclination	Non-Geostationary Inclination	Opt	SN(4,2) [-90..90]*(deg)*
InternationalDesignator	International Designator	Opt	S20
ObjectNum	Object Number	Opt	S20
Administration	Notifying Administration	Opt	S100
NetworkName	Network Name	Opt	S50
Inherits from:	Common		
Sub-Element Of:	SchemaRoot		
Sub-Elements:	EarthStation [0..n] Nomenclature [0..n] RFSystemRef [0..n] ServiceArea [0..n]		

Description

This element inherits attributes and sub-elements from element Common.

Complex element Satellite contains station information related to the space service.
See Satellite Diagram

Input Requirement

[XSL ERR DSTYPE] Part 3 of the Serial reference (dataset type) MUST be "**SA**".

* **ReviewDate**: In Data Item ReviewDate, enter the date by which the dataset is to be reviewed. The Review date should be less than five years from the effective date. In Data Item Spectrum Supportability datasets, this date indicate when the organisation responsible for re-initiating host coordination plans to resubmit a Spectrum Supportability request to the host nation for continued use of the equipment.

* **CallSign**: In Data Item CallSign, enter the call sign assigned to the transmitting station. It can be an internationally allocated call sign or the tactical call sign assigned by the operational authority when the Station is used within a Net. For navigational aids, enter the NAVAIDS identifier.

* **OrbitType**: In Data Item OrbitType, enter the type of orbit.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CSP (extract only):**

Code	Meaning
Deep Eccentric	
Deep Space	
GEO Drift	
GEO Inclined	
GEO Inclined Drift	
GEO Near-Synchronous	
GEO Stationary	

GEO Synchronous	
GEO Transfer	
Heliocentric	
...	...

* **LaunchStatus**: In Data Item LaunchStatus, enter the status of the satellite.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CLS (extract only):**

Code	Meaning
Cancelled	
Decayed	
Firm Future	
Ground Spare	
Inoperative	
Launched	
Operational	
Orbital Spare	
Orbital Test	
Partially Operational	
...	...

* **LaunchLocRef**: In Data Item LaunchLocRef, enter a reference to a Location that identifies the satellite launch location.

  [XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "**L0**".

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

* **LaunchDate**: In Data Item LaunchDate, enter the date of the satellite launch.

* **GeoNominalLon**: In Data Item GeoNominalLon, enter the longitude of the geostationary satellite in the following format: dddmmss[.hh]H, where H represents "E" for East or "W" for West.

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "((((((0[0-9]{2})|(1[0-7][0-9]))([0-5][0-9]){2})(.[0-9]{1,2})?)|1800000)(E|W))|X"

* **GeoAltitude**: In Data Item GeoAltitude, enter the altitude of the geostationary satellite, relative to Mean Sea Level (MSL).

* **NonGeoPeriod**: In Data Item NonGeoPeriod, enter the time required for the non-geostationary satellite to make one complete orbit around the earth.

* **NonGeoNumSatellites**: In Data Item NonGeoNumSatellites, enter the number of non-geostationary satellites in a system having similar orbital characteristics.

* **NonGeoApogee**: In Data Item NonGeoApogee, enter the maximum altitude of the non-geostationary satellite relative to Mean Sea Level (MSL).

* **NonGeoPerigee**: In Data Item NonGeoPerigee, enter the minimum altitude of the non-geostationary satellite relative to Mean Sea Level (MSL).

* **NonGeoInclination**: In Data Item NonGeoInclination, enter the angle determined by the plane containing the orbit of the non-geostationary satellite and the equatorial plane of the earth.

* **InternationalDesignator**: In Data Item InternationalDesignator, enter the externally-assigned International Designator for the satellite.

* **ObjectNum**: In Data Item ObjectNum, enter the USSPACECOM-assigned space object identification number.

* **Administration**: In Data Item Administration, enter the country and/or administration which registered the satellite.

* **NetworkName**: In Data Item NetworkName, enter the name of the network to which the satellite belongs.

Example

```
<Satellite cls="U">
```

```
  <Serial cls="U">GBR::SA:123</Serial>
  <EntryDateTime cls="U">2011-12-25T00:00:00Z</EntryDateTime>
  <OrbitType cls="U">GEO Stationary</OrbitType>
  <LaunchStatus cls="U">Operational</LaunchStatus>
  <GeoNominalLon cls="U">0053000E</GeoNominalLon>
  <NetworkName cls="U">SKYNET 4</NetworkName>
</Satellite>
```

SchemaRoot

SchemaRoot

Sub-Elements:	Administrative [0..n] Allotment [0..n] Antenna [0..n] Assignment [0..n] ChannelPlan [0..n] Contact [0..n] ExternalReference [0..n] FEDeployment [0..n] ForceElement [0..n] IntfReport [0..n] JRFL [0..n] Loadset [0..n] ***(US)*** Location [0..n] Message [0..n] Note [0..n] ***(US)*** Organisation [0..n] RFSystem [0..n] RadiationPlan [0..n] ***(US)*** Receiver [0..n] Role [0..n] SSReply [0..n] SSRequest [0..n] Satellite [0..n] TOA [0..n] Transmitter [0..n]

Description

Complex element SchemaRoot is the root element for any SSRF-XML message. It contains attributes defining the namespace used. Any SSRF-XML message may contain any number of datasets.

Input Requirement

Example

```
<SSRF>
  <Datasets_here/>
</SSRF>
```

SecurityClass *(US)*

Dataset Security Classification

Data Item Tag	Data Item Name	Occurrence	Format
ClsAuthority	Original Classification Authority	Opt	S30
SourceClsDate	Source Classification Date	Opt	D
ClsOrg	Original Classification Authority Organization	Opt	S30
ClsReason	Reason for Classification	Opt	S15
DeclsType	Declassification Instructions	Opt	S10
DeclsDate	Declassification Date	Opt	D
DeclsEvent	Declassification Event	Opt	S200
Sub-Element Of:	Common		
Sub-Elements:	ClsDerived [0..n] Downgrade [0..3]		

Description

Complex element SecurityClass (US) contains the security classification from one or more data information sources.

Input Requirement

This element ...

* **ClsAuthority**: In Data Item ClsAuthority (US), enter the identity, by name and position, or by personal identifier, of the original classification authority.
* **SourceClsDate**: TIn Data Item SourceClsDate (US), enter the date this classified dataset was prepared, i.e., the Original Classification Date.
* **ClsOrg**: In Data Item ClsOrg (US), enter the organization of the original classification authority.
* **ClsReason**: In Data Item ClsReason (US), enter the reason(s) for the classification. This field contains one or more letters, separated by spaces, from the following list.
  (a) military plans, weapons systems, or operations;
  (b) foreign government information;
  (c) intelligence activities (including covert action), intelligence sources or methods, or cryptology;
  (d) foreign relations or foreign activities of the United States, including confidential sources;
  (e) scientific, technological, or economic matters relating to the national security;
  (f) United States Government programs for safeguarding nuclear materials or facilities;
  (g) vulnerabilities or capabilities of systems, installations, infrastructures, projects, plans, or protection services relating to the national security; or
  (h) the development, production, or use of weapons of mass destruction.
* **DeclsType**: In Data Item DeclsType (US), enter the declassification instructions of the dataset. Refer to the appropriate classification authority(s) for more information about this field.
* **DeclsDate**: In Data Item DeclsDate (US), enter the declassification date for DEDATE and DE25Xn-based declassification instructions.
* **DeclsEvent**: In Data Item DeclsEvent (US), enter the declassification event, when necessary based on the declassification instructions.

Example

```
<SecurityClass>
  <ClsAuthority cls="U">DOD Spectrum Data Admin</ClsAuthority>
  <ClsOrg cls="U">DSO</ClsOrg>
  <ClsReason cls="U">A G</ClsReason>
  <DeclsDate cls="U">2014-12-31</DeclsDate>
  <DeclsEvent cls="U">DECLASSIFY AFTER MISSILE LAUNCH</DeclsEvent>
  <DeclsType cls="U">DE25X2</DeclsType>
```

```
  <SourceClsDate cls="U">2011-10-19</SourceClsDate>
</SecurityClass>
```

ServiceArea

Service Area

Data Item Tag	Data Item Name	Occurrence	Format
	Element Content	Req	Code List CAO
Sub-Element Of:	Satellite		

Description

Complex element ServiceArea contains the geographic area serviced by the satellite.

Input Requirement

In Data Item ServiceArea, enter a geographic area code.

[XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CAO (extract only):**

Code	Meaning
AFG	Afghanistan
FF	Africa
US-AL	Alabama
ALA	Åland Islands
US-AK	Alaska
ALB	Albania
DZA	Algeria
NT-ASC	Allied Submarine Command
ASM	American Samoa
AND	Andorra
...	...

SpreadSpectrum

Spread Spectrum

Data Item Tag	Data Item Name	Occurrence	Format
Type	Spread Spectrum Type	Opt	Code List CSS
FreqRangeGrp		**Opt**	
FreqMin	Nominal or Minimum Frequency	Req	UN(16,9) [0..1.0E9]*(MHz)*
FreqMax	Maximum Frequency	Opt	UN(16,9) [0..1.0E9]*(MHz)*
MaxGain	Spread Spectrum Processing Gain	Opt	SN(6,3)*(dB)*
PulseFreqDev	Pulse Frequency Deviation	Opt	UN(16,9) [0..1.0E9]*(MHz)*
InfoDataRate	Information Data Rate	Opt	UN(10,3)*(bit/s)*
ChipRate	Direct Sequence Chip Rate	Opt	UN(16,9) [0..1.0E9]*(MChip/s)*
CodeRate	Code Rate	Opt	UN(10,3)*(symbols/bit)*
PulseChirpRate	Chirp Rate	Opt	UN(16,9)*(MHz/s)*
PulseChirpFreqShift	Chirp Frequency Shift	Opt	UN(16,9) [0..1.0E9]*(MHz)*
PulseChirpDurationMin	Minimum Chirp Duration	Opt	UN(12,6)*(us)*
PulseChirpDurationMax	Maximum Chirp Duration	Opt	UN(12,6)*(us)*
TimeHop		**Opt**	
TimeHopNumSlots	Number of Time Hop Slots	Opt	UN(5)
TimeHopPulsesPerDwell	Number of Pulses Per Dwell	Opt	UN(12)
Hopset		**Opt**	
HopRate	Hopping Rate	Opt	UN(9,3)*(hop/s)*
HopDwell	Hop Dwell Time	Opt	UN(12,6)*(us)*
NumFreqsPerHopset	Number of Frequencies in the Hopset	Opt	UN(4)
NumHopsets	Number of Hopsets	Opt	UN(4)
FreqBlocking	Hopset Frequency Blocking Indicator	Opt	Code List CBO
Sub-Element Of:	RxMode, TxMode		

Description

Complex element SpreadSpectrum contains characteristics of systems using spread spectrum techniques.

Input Requirement

* **Type**: In Data Item Type, enter the type of spread spectrum system being used.

[XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CSS (extract only):**

Code	Meaning
Automatic Channel Selection	
Chirp	
Direct sequence	
Direct sequence + Frequency hopped	
Direct sequence + Time hopped	
Diversity	
Free Channel Search	
Frequency + Time hopped	

Frequency hopped	
Time hopped	
...	...

* **Frequency Range**: This group is OPTIONAL.

  This group indicates a range of frequencies or a tuning range.

  - **FreqMin**: In Data Item FreqMin, enter the nominal frequency or minimum value of the frequency range.
  - **FreqMax**: In Data Item FreqMax, enter the maximum value of the frequencies in the range.

    [XSL ERR MINMAX] If FreqMax is used, it MUST be greater than FreqMin.

* **MaxGain**: In Data Item MaxGain, enter the processing gain.
* **PulseFreqDev**: In Data Item PulseFreqDev, Enter, for FM pulse radars, the total frequency shift during the pulse width.
* **InfoDataRate**: In Data Item InfoDataRate, enter the information data rate.
* **ChipRate**: In Data Item ChipRate, enter the maximum generator rate used to encode/decode a Direct Sequence spread spectrum signal.
* **CodeRate**: In Data Item CodeRate, enter the post encryption number of symbols per bit for a digital data stream. This does not refer to modulation symbols in a format such as quadrature amplitude modulation (QAM).
* **PulseChirpRate**: In Data Item PulseChirpRate, enter for linear frequency modulation, the constant rate at which the radio frequency of a pulse is increased throughout the width of the pulse.
* **PulseChirpFreqShift**: In Data Item PulseChirpFreqShift, enter the difference between the starting and stopping frequency of a chirped pulse signal.
* **PulseChirpDurationMin**: In Data Item PulseChirpDurationMin, enter the duration (pulsewidth) of the chirp signal.
* **PulseChirpDurationMax**: In Data Item PulseChirpDurationMax, enter the maximum duration (pulsewidth) of the chirp signal.

  [XSL ERR MINMAX] If PulseChirpDurationMax is used, it MUST be greater than PulseChirpDurationMin..

* **TimeHop**: This group is OPTIONAL.

  This group is used for time hopped systems. It contains the number of slots, the number of pulses transmitted during the dwell time, and the time slot allocated for the hopping interval in a spread spectrum (time) signal.

  - **TimeHopNumSlots**: In Data Item TimeHopNumSlots, enter the number of time slots.
  - **TimeHopPulsesPerDwell**: In Data Item TimeHopPulsesPerDwell, enter the number of pulses transmitted during each dwell.

* **Hopset**: This group is OPTIONAL.

  This group contains information about a frequency hopping mode of an equipment.

  - **HopRate**: In Data Item HopRate, enter the rate at which the frequency hopping system hops from one frequency to another frequency.
  - **HopDwell**: In Data Item HopDwell, enter the length of time the frequency hopping system dwells on a frequency.
  - **NumFreqsPerHopset**: In Data Item NumFreqsPerHopset, enter the number of frequencies contained in a hop set.
  - **NumHopsets**: In Data Item NumHopsets, enter the number of frequency hopsets employed when a system uses frequency hopping spread spectrum modulation techniques, including hybrid direct sequence and frequency hopping.
  - **FreqBlocking**: In Data Item FreqBlocking, enter if the frequency hopping system is capable of blocking certain frequencies.

    [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code

Yes
No

Example


```
<SpreadSpectrum>
  <ChipRate cls="U">4000</ChipRate>
  <CodeRate cls="U">1987</CodeRate>
  <FreqBlocking cls="U">Yes</FreqBlocking>
  <FreqMax cls="U">3107.56</FreqMax>
  <FreqMin cls="U">2999.753</FreqMin>
  <HopDwell cls="U">82.46</HopDwell>
  <HopRate cls="U">64</HopRate>
  <InfoDataRate cls="U">6400</InfoDataRate>
  <MaxGain cls="U">87.89</MaxGain>
  <NumFreqsPerHopset cls="U">7843</NumFreqsPerHopset>
  <NumHopsets cls="U">12</NumHopsets>
  <PulseChirpDurationMin cls="U">300</PulseChirpDurationMin>
  <PulseChirpDurationMax cls="U">400</PulseChirpDurationMax>
  <PulseChirpFreqShift cls="U">47.98</PulseChirpFreqShift>
  <PulseChirpRate cls="U">800</PulseChirpRate>
  <PulseFreqDev cls="U">25.1</PulseFreqDev>
  <TimeHopNumSlots cls="U">346</TimeHopNumSlots>
  <TimeHopPulsesPerDwell cls="U">679</TimeHopPulsesPerDwell>
  <Type cls="U">Direct sequence + Frequency hopped</Type>
  <ChipRate cls="U">8954</ChipRate>
  <CodeRate cls="U">236</CodeRate>
  <FreqBlocking cls="U">Yes</FreqBlocking>
  <FreqMax cls="U">3107.56</FreqMax>
  <FreqMin cls="U">2999.753</FreqMin>
  <HopDwell cls="U">79.235</HopDwell>
  <HopRate cls="U">5000</HopRate>
  <InfoDataRate cls="U">800</InfoDataRate>
  <MaxGain cls="U">34</MaxGain>
  <NumFreqsPerHopset cls="U">35</NumFreqsPerHopset>
  <NumHopsets cls="U">23</NumHopsets>
  <PulseChirpDurationMin cls="U">100</PulseChirpDurationMin>
  <PulseChirpFreqShift cls="U">47.98</PulseChirpFreqShift>
  <PulseChirpRate cls="U">500</PulseChirpRate>
  <PulseFreqDev cls="U">347</PulseFreqDev>
  <TimeHopNumSlots cls="U">890</TimeHopNumSlots>
  <TimeHopPulsesPerDwell cls="U">679</TimeHopPulsesPerDwell>
  <Type cls="U">Direct sequence + Frequency hopped</Type>
</SpreadSpectrum>
```

Stage

Stage

Data Item Tag	Data Item Name	Occurrence	Format
Type	Stage	Req	Code List CSG
StartDate	Start Date	Opt	D
TargetDate	Target Date	Opt	D
DateApprovalRequired	Desired Approval Date	Opt	D
TerminationDate	Termination Date	Opt	D
NumEquip	Number of Equipment	Opt	UN(9)
GeoDescription ***(US)***	Geographic Description	Opt	MEMO
Sub-Element Of:	SSRequest		
Sub-Elements:	StageLocation [0..n]		

Description

Complex element Stage contains information about the life-cycle management of the system.

Input Requirement

* **Type**: In Data Item Type, enter the stage.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CSG:**

Code
Conceptual
Developmental
Experimental
Operational

* **StartDate**: In Data Item StartDate, enter the date upon which work will commence on this stage.
* **TargetDate**: In Data Item TargetDate, enter the date by which a usable version of the system is expected to be available for testing or deployment.
* **DateApprovalRequired**: In Data Item DateApprovalRequired, enter the date by which the approval of the application is desired.
* **TerminationDate**: In Data Item TerminationDate, enter the date this stage is expected to terminate. For a stage 2 application the date entered is the date when the system is expected to enter stage 3. The date may be an estimate.
* **NumEquip**: In Data Item NumEquip, enter the total number of units to be built, procured or used during this stage.
* **GeoDescription *(US)***: In Data Item GeoDescription (US), enter a textual description of the geographic locations where this equipment will be used during this stage.

Example

```
<Stage>
  <Type cls="U">Experimental</Type>
  <StartDate cls="U">2004-01-01</StartDate>
  <TargetDate cls="U">2005-01-01</TargetDate>
  <DateApprovalRequired cls="U">2003-01-01</DateApprovalRequired>
  <TerminationDate cls="U">2009-01-01</TerminationDate>
  <NumEquip cls="U">2000</NumEquip>
</Stage>
```

StageLocation

Stage Location Restriction

Data Item Tag	Data Item Name	Occurrence	Format
LocSatRef	Location or Satellite Reference	Req	pattern (S29)
Excluded	Shape is Excluded	Opt	Code List CBO
Sub-Element Of:	SSReply, Stage		

Input Requirement

Complex element StageLocation defines locations where the equipment or system is allowed or forbidden from use.

* **LocSatRef**: In Data Item LocSatRef, enter the serial of a Location or satellite.

  [XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "**LO** or **SA**".

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

* **Excluded**: In Data Item Excluded, enter "Yes" to indicate that the shape is to be excluded from the set. If omitted, a "No" SHOULD be assumed by processing applications, meaning that the shape is included by default.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

Station

Station

Data Item Tag	Data Item Name	Occurrence	Format
StationID	Station Identifier	Req	S100
CallSign	Call Sign	Opt	S20
CositeSep	Cosite Separation	Opt	UN(16,9) [0..1.0E9]*(MHz)*
CositeSepDescription	Cosite Separation Description	Opt	MEMO
NumUnits		**Opt**	
NumMobileUnits	Number of Mobile Units	Opt	UN(9)
NumAreaUnits	Number of Units in Area	Opt	UN(9)
NumCositedUnits	Number of Cosited Units	Opt	UN(9)
TSDF	Time Slot Duty Factor	Opt	pattern (S6)
UserCode	User Code	Opt	S6
AntStructureHeight ***(US)***	Antenna Structure Height	Opt	UN(3)*(m)*
StationName ***(US)***	Station Name	Opt	S100
StationControl ***(US)***	Station Control	Opt	S18
PrimaryStation ***(US)***	Primary Station	Opt	Code List CBO
Sub-Element Of:	Assignment		
Sub-Elements:	POCInformation [0..n] StationLoc [1..n] ***(US)***		

Description

Complex element Station defines the station, or one of the stations, within the current Assignment dataset.

Input Requirement

* **StationID**: In Data Item StationID, enter a unique identifier for the station. This identifier should be a meaningful identification of the station, but may also be automatically generated. The identifier MUST be unique within the Assignment dataset and SHOULD NOT be modified during the lifetime of the dataset.

  [XSD ERR UNIQUE] Each value of this data item MUST be unique within the parent element.

* **CallSign**: In Data Item CallSign, enter the call sign assigned to the transmitting station. It can be an internationally allocated call sign or the tactical call sign assigned by the operational authority when the Station is used within a Net. For navigational aids, enter the NAVAIDS identifier.

* **CositeSep**: In Data Item CositeSep enter the minimum required frequency separation between the equipment for which the assignment is being made and any other equipment operating at the same location. Enter:

  - For a fixed frequency assignment, the required frequency separation in MHz (without unit), between this equipment and other equipment operated at one location. If the frequency separation is unknown use the NATO recommended frequency separation requirements are listed below.
    0.5 (MHz) for a transmitter power below 24.8 dBW (300 watts);
    2 (MHz) for a transmitter power above 24.8 dBW (300 watts);
    2.0 through 9.9 (MHz) for exceptionally high transmitter powers or difficult cosite constraints.

  - For a HAVE QUICK II or SATURN frequency hopping assignments, one of the following values:
    0 - Instantaneous separation may be as small as 25 kHz;
    4 - Minimum separation is 4 MHz;
    8 - Minimum separation is 8 MHz;
    12 - Minimum separation is 12 MHz

* **CositeSepDescription**: In Data Item CositeSepDescription, enter a free text description of the minimum required frequency separation between a number of transmitters, or between a transmitter and a related receiver in radio relay frequency requests.

* **NumUnits**: This group is OPTIONAL.

- **NumMobileUnits**: In Data Item NumMobileUnits, enter the number of mobile units. These units do not necessarily operate simultaneously in the same electromagnetic environment.
- **NumAreaUnits**: In Data Item NumAreaUnits, enter the maximum number of units (equipment) that will be operating simultaneously in the same area of operation. An area is generally defined as a country. Enter the number of land mobile stations, ship stations, and transportable stations associated with the current Assignment or SSRequest dataset.
  Within an Assignment (but not under SSRequest), the number entered shall represent either the exact number of stations or a range of numbers as follows:

Number of Stations	Enter
1-10	10
11-30	30
31-100	100
101-300	300
301-1000	1000
1001-3000	3000
3001-10000	10000
Above 10000	Nearest 10000

  If the exact number is to be recorded, and it is 10, 30, 100, 300, 1000, 3000, or a multiple of 10000, add one to the number to distinguish it from a figure that represents a range of numbers.
- **NumCositedUnits**: In Data Item NumCositedUnits, enter the maximum number of units (equipment) that will be operating simultaneously in the same cosite environment. A cosite situation occurs when several antennas are within the near field of each other.

* **TSDF**: In Data Item TSDF, enter the time slot duty factor assigned to stations of a time division multiple access (TDMA) system. It is applicable in particular to the MIDS/JTIDS systems as explained in the notes below. For NATO MIDS/JTIDS assignments, enter in value the time slot duty factor expressed as NNN/nn where NNN is the maximum percentage of time that may be used by MIDS/JTIDS users in an operational area (a circle with a 100 nautical mile (183.2 km) radius) and nn is the maximum percentage of time that any individual user may be using MIDS/JTIDS. Optionally, use a Remark to add any amplifying information.
  Notes:
  1. A JTIDS time slot is a 0.0078125 microsecond time interval during which MIDS/JTIDS messages may be transmitted or received.
  2. The 40/20 notation specifies that the total MIDS/JTIDS community will not be assigned more than 40% TSDF, with no more than 20% TSDF assigned to a single user. Note that 100% TSDF corresponds to a maximum pulse transmission rate of 396,288 pulses per 12 second period (an average of 33,024 pulses per second). The total number of pulses allowed per 12 second period is 158,515 for 40% TSDF and 79,257 for 20% TSDF. Using all 1536 time slots in each 12 second period, with 258 pulses per time slot with no contention or multinet overlap conditions results in a TSDF of 100%.

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "([0-9]{1,2}|100)/[0-9]{1,2}"
* **UserCode**: In Data Item UserCode, enter a code identifying the user of the station.
* **AntStructureHeight *(US)***: In Data Item AntStructureHeight (US), enter the overall height, of the antenna support structure above ground level.
* **StationName *(US)***: In Data Item StationName (US), enter a short descriptive name for the station. This must be unique within the dataset.
* **StationControl *(US)***: In Data Item StationControl (US), enter the operating unit that controls the station when different than the assignment users.
* **PrimaryStation *(US)***: In Data Item PrimaryStation (US), enter whether this station is the station of primary regulatory interest.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

Example

```
<Station>
  <Name cls="U">Base Station</Name>
  <CallSign cls="U">WUH55</CallSign>
  <sub-elements/>
</Station>
```

StationConfig

Station Configuration

Data Item Tag	Data Item Name	Occurrence	Format
Type	Station Type	Req	Code List CAU
ConfigID	Configuration Reference	Req	S100
StationID	Station Reference	Req	S100
EIRP		**Opt**	
EIRPMin	Minimum or Nominal EIRP	Opt	SN(10,7)*(dBW)*
EIRPMax	Maximum EIRP	Opt	SN(10,7)*(dBW)*
AntFeedpointHeight	Antenna Feedpoint Height	Opt	UN(5)*(m)*
FeedlineLength	Feedline length	Opt	SN(7,2)*(m)*
FeedlineLoss	Feedline total loss	Opt	SN(6,3)*(dB)*
EarthCoverage	Satellite Earth Coverage	Opt	Code List CCO
PointingAzMin	Pointing Minimum/Nominal Azimuth	Opt	UN(5,2) [0..360]*(deg)*
PointingAzMax	Pointing Maximum Azimuth	Opt	UN(5,2) [0..360]*(deg)*
PointingElevMin	Pointing Minimum/Nominal Elevation	Opt	SN(4,2) [-90..90]*(deg)*
PointingElevMax	Pointing Maximum Elevation	Opt	SN(4,2) [-90..90]*(deg)*
CoordinationNum ***(US)***	Coordination Number	Opt	S15
Sub-Element Of:	Link		
Sub-Elements:	Blanking [0..n]		

Description

Complex element StationConfig describes one couple (station, configuration) used for transmitting and/or receiving in the current Link. It may also contain additional antenna pointing/blanking parameters.

Input Requirement

* **Type**: In Data Item Type, enter whether the StationConfig is acting as a transmitter, receiver or transceiver.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CAU:**

Code
Transmit Only
Receive Only
Transmit-Receive

* **ConfigID**: In Data Item ConfigID, enter the unique identifier of one the configurations used by this Assignment at this specific Station.

  [XSD ERR RELATED] This item MUST refer to an existing Configuration within the dataset.

* **StationID**: In Data Item StationID, enter the unique identifier of one of the stations used by this Assignment at this specific Station. A Station dataset may have more than one discrete station.

  [XSD ERR RELATED] This item MUST refer to an existing Station within the dataset.

* **EIRP**: This group is OPTIONAL.

  Group EIRP contains the Effective Isotropic Radiated Power (EIRP) radiated from the transmitter antenna. The EIRP is the sum of the power supplied to the antenna and the gain of the antenna, less the line loss, expressed in dBW.

  - **EIRPMin**: In Data Item EIRPMin, enter the minimum or nominal effective isotropic radiated power (EIRP) radiated from the transmitter antenna. It is the sum of the power supplied to the antenna and the gain of the antenna, less the line loss.
  - **EIRPMax**: In Data Item EIRPMax, enter the maximum effective isotropic radiated power (EIRP) radiated from the transmitter antenna. It is the sum of the power supplied to the antenna and the gain of the antenna, less the line loss.

    [XSL ERR MINMAX] If EIRPMax is used, it MUST be greater than EIRPMin.

* **AntFeedpointHeight**: In Data Item AntFeedpointHeight, enter the antenna feed point height above the terrain, in metres. In Data Item the case where the antenna is mounted pointing vertically to a reflector on the same structure, enter the height of the reflector above ground. If the Station is a flying object, this data represents the maximum altitude of the object above ground.
* **FeedlineLength**: In Data Item FeedlineLength, enter the length of the antenna feed line.
* **FeedlineLoss**: In Data Item FeedlineLoss, enter the total loss of the antenna feed line.
* **EarthCoverage**: In Data Item EarthCoverage, enter the area of earth coverage.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CCO (extract only):**

Code	Meaning
Global	
Eastern Hemisphere	
Western Hemisphere	
Northern Hemisphere	
Southern Hemisphere	
North-eastern Earth Quarter	
North-western Earth Quarter	
South-eastern Earth Quarter	
South-western Earth Quarter	
Narrow Beam	
...	...

* **PointingAzMin**: In Data Item PointingAzMin, enter the starting azimuth if an azimuth range is reported; otherwise, enter a single azimuth. This is considered the left limit of an azimuth range when an azimuth range is entered.
* **PointingAzMax**: In Data Item PointingAzMax, enter the maximum antenna azimuth angle. A range can be used to identify a scan or automated or manual adjustment range. Use "0" or "360" for true north.

  [XSL ERR MINMAX] If PointingAzMax is used, it MUST be greater than PointingAzMin.
* **PointingElevMin**: In Data Item PointingElevMin, enter the minimum antenna elevation angle. Use "-90" for straight down and "90" for directly overhead. A range can be used to identify a scan or automated or manual adjustment range.
* **PointingElevMax**: In Data Item PointingElevMax, enter the maximum antenna elevation angle. Use "-90" for straight down and "90" for directly overhead. A range can be used to identify a scan or automated or manual adjustment range.

  [XSL ERR MINMAX] If PointingElevMax is used, it MUST be greater than PointingElevMin.
* **CoordinationNum *(US)***: In Data Item CoordinationNum (US), enter the US Military Command, Control, Communications, and Computers Executive Board (MC4EB) identifier assigned to the equipment or system. (e.g., "J/F 12/12345")

Example

```
<StationConfig>
  <Type cls="U">Transmit-Receive</Type>
  <ConfigID cls="U">CONFIG 1</ConfigID>
  <StationID cls="U">STATION 1</StationID>
</StationConfig>
```

StationLoc *(US)*

Station Location

Data Item Tag	Data Item Name	Occurrence	Format
LocationExcluded	Excluded Location Indicator	Opt	Code List CBO
LocSatRef	Location or Satellite Reference	Opt	pattern (S29)
LocationRadius	Location Radius	Opt	UN(9,4)*(km)*
SV		**Opt**	
ServiceVolumeLocRef	Service Volume Identifier	Req	pattern (S29)
ServiceVolumeRadius	Service Volume Radius	Opt	UN(9,4)[0..10000]*(km)*
ServiceVolumeHeight	Service Volume Height	Opt	SN(7,2)*(m)*
Sub-Element Of:	Station		

Description

Complex element StationLoc (US) provides detailed location information associated with one or more Satellites or Location datasets associated with a specific Station.

Input Requirement

* **LocationExcluded**: In Data Item LocationExcluded (US), enter "Yes" to indicate that the LocSatRef is to be excluded from the location set for the current station. If omitted, "No" is assumed, meaning that the location is included.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **LocSatRef**: In Data Item LocSatRef (US), enter the serial of a Location or Satellite dataset. If this location is a complex dataset (more than a single point), the assignment is mobile, inside the Station location.

  [XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "**LO** or **SA**".

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

* **LocationRadius**: In Data Item LocationRadius (US), enter the radius associated with the Location to produce a circle.
  Radius information only applies to points, and should be ignored in the case of polygons and ellipses.

* **Service Volume**: This group is OPTIONAL.

  - **ServiceVolumeLocRef**: Enter the unique reference of an existing Location dataset.

    [XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "**LO**".

    [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

  - **ServiceVolumeRadius**: Enter the radius (in km) associated with the ServiceVolumeLocRef (referencing a Location) to produce a circle.
    Note that the Radius information only applies to points, and should be ignored in the case of polygons and ellipses.

  - **ServiceVolumeHeight**: Enter the flight altitude in metres of all aeronautical navigational aids and air traffic control assignments for radio frequencies above 30 MHz and for low-frequency beacons. The altitude is always referenced to the mean sea level (MSL).

Example

```
<StationLoc>
  <LocationExcluded cls="U">Yes</LocationExcluded>
  <LocationRadius cls="U">458</LocationRadius>
```

```
  <LocSatRef cls="U">GBR::SA:123</LocSatRef>
  <ServiceVolumeHeight cls="U">5000</ServiceVolumeHeight>
  <ServiceVolumeLocRef cls="U">GBR::SA:123</ServiceVolumeLocRef>
  <ServiceVolumeRadius cls="U">252.65</ServiceVolumeRadius>
</StationLoc>
```

StatusLog *(US)*

Status Log

Data Item Tag	Data Item Name	Occurrence	Format
DateTime	DateTime	Req	DT
State	State	Req	Code List UST
AgencyCode	Agency Code	Opt	S80
Comment	Comment	Opt	S255
POCRef	Point Of Contact Reference	Opt	pattern (S29)
Sub-Element Of:	Assignment, SSRequest		

Description

Complex element StatusLog (US) contains the transactional processing information related to frequency assignments or spectrum supportability requests.

Input Requirement

* **DateTime**: In Data Item DateTime (US), enter the date and UTC time of this status log entry.
* **State**: In Data Item State (US), enter the state of the record or action performed at the time of this status log entry.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List UST (extract only):**

Code	Meaning
ACCEPTED BY	
ACTIVATED BY	
ADMIN MOD BY	
APPROVED BY	
ASSIGNED BY	
AUTHORISED BY	
COMMENT BY	
COMPLIANCE	
COORDINATION (from, to list)	
DELETED BY	
...	...

* **AgencyCode**: In Data Item AgencyCode (US), enter the agency responsible for this status log entry.
* **Comment**: In Data Item Comment (US), enter amplifying information about this status log entry.
* **POCRef**: In Data Item POCRef (US), enter the reference to a Contact, Organisation, or Role responsible for this status log entry or the recipient of the action.

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

Example

```
<StatusLog>
  <AgencyCode cls="U">DISA</AgencyCode>
  <Comment cls="U">Validated by independent review</Comment>
  <DateTime cls="U">2011-12-25T01:23:001Z</DateTime>
  <POCRef cls="U">GBR::SA:123</POCRef>
  <State cls="U">UST</State>
</StatusLog>
```

StnClass

Class of Station

Data Item Tag	Data Item Name	Occurrence	Format
	Element Content	Req	Code List USC
Sub-Element Of:	Allocation		

Description

Complex element StnClass contains the station class associated with the TOA frequency usage.

Input Requirement

In Data Item StnClass, enter the station class, as defined by the appropriate Administration. When exchanging with NATO, only include ITU entries.

[XSD ERR CODELIST] This data item MUST use one of the codes from **Code List USC (extract only):**

Code	Meaning
AL	Aeronautical Radionavigation Land Station: A land station in the aeronautical radionavigation service not intended for use while in motion. (ITU)
ALA	Aeronautical Marker Beacon Station: A radionavigation land station in the aeronautical radionavigation service which employs a marker beacon. (INTL)
ALB	Aeronautical Radiobeacon Station: A radiobeacon station in the aeronautical radionavigation service intended for the benefit of aircraft. (INTL)
ALC	Aeronautical Radar Beacon (racon) Station: A land station in the aeronautical radionavigation service which employs a radar beacon (racon). (INTL)
ALG	Glide Path (Slope) Station: A radionavigation land station which provides vertical guidance to aircraft during approach to landing. (INTL)
ALL	Localizer Station: A radionavigation land station in the aeronautical radionavigation service which employs an Instrument Landing System Localizer. (INTL)
ALO	Omnidirectional Range Station: A radionavigation land station in the aeronautical radionavigation service providing direct indication of the bearing (omni-bearing) of that station from an aircraft. (INTL)
ALR	Radio Range Station: A radionavigation land station in the aeronautical radionavigation service providing radial equisignal zones. (In certain instances a radio range station may be placed on board a ship.) (INTL)
ALS	Surveillance Radar Station: A radionavigation land station in the aeronautical radionavigation service employing radar to display the presence of aircraft within its range. (In certain instances, a surveillance radar station may be placed on board a ship.) (INTL)
ALTM	Radionavigation Land Test Station (Maintenance Test Facility): A radionavigation land station in the aeronautical radionavigation service which is used as a radionavigation calibration station for the transmission of essential information in connection with the testing and calibration of aircraft navigational aids, receiving equipment and interrogators at predetermined surface locations. The primary purpose of this facility is to permit maintenance testing by aircraft radio service personnel. (INTL)
...	...

StockNum *(US)*

Stock Number

Data Item Tag	Data Item Name	Occurrence	Format
StockNum	Stock Number	Req	S50
Type	Stock Number Type	Opt	Code List UNS
Sub-Element Of:	ForceElement, RFSystem		

Description

Complex element StockNum (US) provides the equipment stock number and indicates the type of stock number.

Input Requirement

* **StockNum**: In Data Item StockNum (US) enter the stock number of the system/equipment.
* **Type**: In Data Item Type (US), enter the type of stock number.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List UNS:**

Code	Meaning
Agency Tracking ID	
Commercial P/N	
Drawing Number	
Line Item Number	
National Stock Number	
NATO Stock Number	
Other	If selected, a clarifying remark SHOULD be entered

Example

```
<StockNum>
  <Number>0967-01-234-6799</Number>
  <Type>N</Type>
</StockNum>
```

SubcarrierFreq

SubcarrierFreq

Data Item Tag	Data Item Name	Occurrence	Format
Freq	Subcarrier Frequency	Req	UN(16,9) [0..1.0E9]*(MHz)*
FreqOffset	Subcarrier Frequency Offset	Opt	UN(16,9) [0..1.0E9]*(MHz)*
FreqRest	Rest Frequency	Opt	UN(16,9) [0..1.0E9]*(MHz)*
Sub-Element Of:	TxMode		
Sub-Elements:	SubcarrierTone [0..n]		

Description

Complex element SubcarrierFreq describes the secondary channel thatresides within the main channel (a carrier within a carrier). A type of multiplexing, the subcarrier is a modulated signal at a lower frequency that is combined with the main carrier signal operating at a higher frequency.

Input Requirement

* **Freq** : In Data Item Freq, enter the subcarrier frequency.
* **FreqOffset**: In Data Item FreqOffset, enter the frequency differential from the subcarrier frequency.
* **FreqRest**: In Data Item FreqRest, enter the dwell or pause frequency utilised while processing the subcarrier. Typically provided for improvement of the baseband S/N noise ratio.

SubcarrierTone

SubcarrierTone

Data Item Tag	Data Item Name	Occurrence	Format
FreqRangeGrp		**Opt**	
FreqMin	Nominal or Minimum Frequency	Req	UN(16,9) [0..1.0E9]*(MHz)*
FreqMax	Maximum Frequency	Opt	UN(16,9) [0..1.0E9]*(MHz)*
Duration	Subcarrier Tone Dwell	Opt	UN(12,6)*(us)*
Name	Tone Name	Opt	S10
Sub-Element Of:	SubcarrierFreq		

Description

Complex element SubcarrierTone describes the sidetone frequency used to modulate the subcarrier.

Input Requirement

* **Frequency Range**: This group is OPTIONAL.

  This group indicates a range of frequencies or a tuning range.

  - **FreqMin**: In Data Item FreqMin, enter the nominal frequency or minimum value of the frequency range.
  - **FreqMax**: In Data Item FreqMax, enter the maximum value of the frequencies in the range.

    [XSL ERR MINMAX] If FreqMax is used, it MUST be greater than FreqMin.

* **Duration**: In Data Item Duration, enter the period of dwell for the baseband audio frequency, before it is disabled or switched.

* **Name**: In Data Item Name, enter the name of the tone. Tone names MUST match entries in Baseband/US:SignalSequenceDesc.

SysOfStation

System Of Stations

Data Item Tag	Data Item Name	Occurrence	Format
SysName	System Name	Opt	S30
NumStations	Number of Stations	Opt	UN(9)
Sub-Element Of:	Assignment		

Description

Complex element SysOfStation defines the name of the system that this assignment belongs and whether or not the assignment provides assets to or uses another assignment resources. It also describes linkages to or from other datasets.

Input Requirement

* **SysName**: In Data Item SysName, enter the name of the system to which the frequency assignment belongs. A system is considered two or more equipment having a common property, usually geographic, administrative, functional, or operational in nature.
* **NumStations**: In Data Item NumOfStations, enter the total number of stations associated with the Assignment.

Example

```
<SysOfStation>
  <SysName cls="U">BALTIMORE LMR SYSTEM</SysName>
</SysOfStation>
```

TOA

Table Of Allocations

Data Item Tag	Data Item Name	Occurrence	Format
Administration	Administration	Req	S50
EffectiveDate	Effective Date	Opt	D
ExpirationDate	Expiration Date	Opt	D
Title	Title	Opt	S100
Inherits from:	Common		
Sub-Element Of:	SchemaRoot		
Sub-Elements:	ChannelPlanRef [0..n] Country [0..n] Footnote [0..n] FreqBand [1..n]		

Description

This element inherits attributes and sub-elements from element Common.

Complex element TOA is the XML root for all parameters of a Table of Allocations. It inherits attributes and sub-elements from element Common.
See TOA Diagram
See Allocation Diagram

Input Requirement

[XSL ERR DSTYPE] Part 3 of the Serial reference (dataset type) MUST be "**TA**".

* **Administration**: In Data Item Administration, enter the nation or regulatory body that administers this Table of Allocations.
* **EffectiveDate**: In Data Item EffectiveDate, enter the date by which the dataset is to be operational or effective.
* **ExpirationDate**: In Data Item ExpirationDate, enter the date at which the dataset will expire. The Expiration date should be less than five years from current date.
* **Title**: In Data Item Title, enter an identifying name for this Table of Allocations.

Example

```
<TOA cls="U">
  <Serial cls="U">USA:NTIA:TA:1</Serial>
  <EntryDateTime cls="U">2011-12-25T00:00:00Z</EntryDateTime>
  <Administration cls="U">NTIA</Administration>
  <FreqBand>
    <FreqMin cls="U">230</FreqMin>
    <FreqMax cls="U">400</FreqMax>
    <Allocation>
      <AllocatedService cls="U">Mobile Service</AllocatedService>
      <Priority cls="U">Primary</Priority>
    </Allocation>
  </FreqBand>
</TOA>
```

TelephoneFax

Telephone or Telefax Number

Data Item Tag	Data Item Name	Occurrence	Format
Preferred	Preferred Number	Opt	Code List CBO
Type	System or Network	Opt	S20
Fax	Telefax Indicator	Opt	Code List CBO
MaxCls	System Maximum Classification	Opt	Code List CCL
Number	Tel or Fax Number	Req	S50
Sub-Element Of:	Contact, Organisation, Role		

Description

Complex element TelephoneFax reflects the telephone and/or telefax number(s) of the Contact, Organisation or Role.

Input Requirement

* **Preferred**: In Data Item Preferred, enter a code **"Yes"** for the preferred number(s) and a code **"No"** for the others.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **Type**: In Data Item Type, enter the name of the network on which this number can be dialed (e.g., DSN, IVSN, CORMORANT). Use "PUBLIC" for normal public telephone or GSM.

* **Fax**: In Data Item Fax, enter **"Yes"** if the number is for a telefax. If this item is empty, it SHOULD be considered as **"No"**.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **MaxCls**: In Data Item MaxCls, enter the highest classification that can be used on the network.
  Note for the USA: The letter "R" MUST NOT be used in USA created datasets.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CCL:**

Code	Meaning
U	Unclassified
R	Restricted (This classification SHALL NOT be used in USA-created datasets)
C	Confidential
S	Secret
T	Top Secret

* **Number**: In Data Item Number, enter the area code, telephone/telefax number (including the extension if necessary) of individual or contact organisation.

Example

```
<TelephoneFax>
  <Type cls="U">TEL-Civil</Type>
  <Number cls="U">(202)281-3824x1234</Number>
</TelephoneFax>
```

Time

Usage / Time Information

Data Item Tag	Data Item Name	Occurrence	Format
Period	Period	Opt	Code List CTI
UsageDescription	Usage Description	Opt	MEMO
Sub-Element Of:	SSRequest		

Description

Complex element Time indicates when the equipment or system will be used.

Input Requirement

* **Period**: In Data Item Period, enter the period of usage.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CTI:**

Code	Meaning
Continuous	Continuously 24 hours per day
Day	Day time
Night	Night time
Transition	Transition period
Intermittent	Intermittently throughout 24 hours
Once	Once
Other	If selected, a clarifying remark SHOULD be entered

* **UsageDescription** : In Data Item UsageDescription, enter a description of the total amount of time a system/ equipment is expected to be in operation.

TimingDeconflictionProtocol *(US)*

Timing Deconfliction Protocol

Data Item Tag	Data Item Name	Occurrence	Format
Description	Protocol Description	Opt	MEMO
Name	Protocol Name	Opt	S50
Period	Period	Opt	UN(12,6)*(us)*
Ranking	Ranking Level	Opt	Code List UTM
Required	Deconfliction Required	Req	Code List CBO
SyncMethod	Synchronisation Method	Opt	MEMO
TriggerOff	Off Trigger	Opt	UN(12,6)*(us)*
TriggerOn	On Trigger	Opt	UN(12,6)*(us)*
Sub-Element Of:	JammingChannelProfile		

Description

Complex element TimingDeconflictionProtocol (US) defines algorithm(s) used for synchronising Electronic Warfare jamming information.

Input Requirement

* **Description**: In Data Item Description (US), enter a description of the timing deconfliction protocol.
* **Name**: In Data Item Name (US), enter the identifying term for the timing deconfliction protocol
* **Period**: In Data Item Period (US), enter the enter the elapsed time between On and Off Triggers (i.e., Operations).
* **Ranking**: In Data Item Ranking (US), enter the ranking level of the timing deconfliction protocol.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List UTM:**

Code	Meaning
Primary	
Secondary	
Test	
Other	If selected, a clarifying remark SHOULD be entered

* **Required**: In Data Item Required (US), enter if a common timing deconfliction protocol is required for processing the subject signal. Enter "#No"# if only entering Jamming Frequencies without timing deconfliction.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **SyncMethod**: In Data Item SyncMethod (US), enter a description of the timing synchronisation method used by the timing deconfliction protocol.
* **TriggerOff**: In Data Item TriggerOff (US), enter the time that the jammer is off (listening).
* **TriggerOn**: In Data Item TriggerOn (US), enter the time that the jammer is on (jamming).

Example

```
See Loadset.
```

Transmitter

Transmitter

Data Item Tag	Data Item Name	Occurrence	Format
Generic	Generic indicator	Req	Code List CBO
Duplex		**Opt**	
DuplexSep	Duplex Separation	Req	UN(16,9) [0..1.0E9]*(MHz)*
DuplexSepType	Duplex Separation Type	Opt	Code List CDS
Output		**Opt**	
OutputDeviceType	Output Device Type	Opt	Code List COT
OutputDevice	Output Device Name	Opt	S40
Filter	Filter Type Description	Opt	MEMO
FCCAcceptanceNum ***(US)***	FCC Acceptance Number	Opt	S50
TSPR ***(US)***	TSPR	Opt	S10
Inherits from:	Common		
Sub-Element Of:	SchemaRoot		
Sub-Elements:	Curve [0..n] Deployment [0..n] Nomenclature [0..n] POCInformation [0..n] TxMode [0..n] UsingCountries [0..n] ***(US)***		

Description

This element inherits attributes and sub-elements from element Common.

Complex element Transmitter is the root element (dataset) containing the transmitter characteristics.
See Transmitter Diagram

Input Requirement

[XSL ERR DSTYPE] Part 3 of the Serial reference (dataset type) MUST be "**TX**".

* **Generic**: In Data Item Generic, enter "Yes" to indicate that the dataset describes typical parameters of a waveform or standard signal, or a generic antenna model, rather than a specific equipment model.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **Duplex Frequency Separation**: This group is OPTIONAL.

  This group identifies the required (exact or minimum) offset frequency separation between the transmit and the receive radio frequencies for an equipment capable of operating in the duplex mode.

  - **DuplexSep**: In Data Item DuplexSep, enter the minimum or exact duplex frequency separation
  - **DuplexSepType**: In Data Item DuplexSepType, enter if the frequency separation must be exactly, or at the minimum, the amount specified.

    [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CDS:**

Code	Meaning
Exactly	The separation must be exactly the value entered (for use when transmit and receive radio frequencies are assigned in fixed pairs).
Minimum	The separation must be at least the value entered.

* **Output Device**: This group is OPTIONAL.

  This group contains the final RF power output device type and name.

- **OutputDeviceType**: In Data Item OutputDeviceType, enter the type of the device. Select an entry from the list.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List COT (extract only):**

Code	Meaning
Amplitron	
Backward Wave Oscillator	
Carcinatron	
Cross Field Amplifier	
Diode	
FET	
FET Push-Pull	
Fixed Magnetron	
Gallium Arsinide FET	
Gunn Diode	
...	...

- **OutputDevice**: In Data Item OutputDevice, enter the name of the output device. The specific device designation should be provided, for example, `VARIAN VTS5751A1`.

* **Filter**: In Data Item Filter, enter a brief description of the type of the output filter.
* **FCCAcceptanceNum** ***(US)***: In Data Item FCCAcceptanceNum (US), enter the Federal Communication Commission (FCC) ID of FCC authorised.
* **TSPR** ***(US)***: In Data Item TSPR (US), enter the telecommunications service priority applicable to a spectrum-dependent radiocommunications system intended to be used in direct support of a national emergency declared under Section 706 of the Communications Act of 1934, as amended.

Example

```
<Transmitter cls="U">
  <Serial cls="U">NLD::TX:123</Serial>
  <EntryDateTime cls="U">2011-12-25T00:00:00Z</EntryDateTime>
  <Generic cls="U">No</Generic>
  <Nomenclature>
    <Name cls="U">AN/PRC-113</Name>
  </Nomenclature>
  <TxMode>
    <ModeID cls="U">HIGH POWER VOICE</ModeID>
    <OccBw cls="U">0.025</OccBw>
    <EmsClass cls="U">F3E</EmsClass>
    <Power>
      <PowerMax cls="U">10</PowerMax>
    </Power>
  </TxMode>
</Transmitter>
```

Trunking *(US)*

Trunking

Data Item Tag	Data Item Name	Occurrence	Format
AdditionalChannelsRationale	AdditionalChannelsRationale	Opt	MEMO
Dispatcher	Dispatcher	Opt	S1
DispatcherExplanation	Dispatcher Explanation	Opt	MEMO
EstimatedExpansionCost	Estimated Expansion Cost	Opt	S70
ExpansionTargetDate	Expansion Target Date	Opt	D
FreqMax	Frequency Maximum	Opt	UN(16,9) [0..1.0E9]*(MHz)*
NSEPUse	NSEP Use	Opt	MEMO
NumFreqsRequired	Number of Frequencies Required	Opt	UN(10)
NumRepeaters	Number of Repeaters	Opt	UN(7)
NumUsers	Number of Users	Opt	UN(10)
PreviousSPSDocketNum	Previous SPS Docket Number	Opt	S12
RequestForExpansion	Request For Expansion	Opt	Code List CBO
SeparateSystemJustification	Separate System Justification	Opt	MEMO
FreqMin	Frequency Minimum	Opt	UN(16,9) [0..1.0E9]*(MHz)*
Sub-Element Of:	SSRequest		
Sub-Elements:	TrunkingAssignment [0..n]		

Description

Complex element Trunking (US) defines Radiotelephony using standard land mobile principles where multiple baseband signals are bounded within one physical channel.

Input Requirement

* **AdditionalChannelsRationale**: In Data Item AdditionalChannelsRationale (US), enter a rationale for the additional channels (e.g., channel loading, queuing times, or new users).
* **Dispatcher**: In Data Item Dispatcher (US), enter if a Dispatcher accesses base stations or repeaters in the trunked land mobile system.
* **DispatcherExplanation**: In Data Item DispatcherExplanation (US), enter how the dispatcher accesses the base station or repeater.
* **EstimatedExpansionCost**: In Data Item EstimatedExpansionCost (US), enter the estimated cost of the expansion.
* **ExpansionTargetDate**: In Data Item ExpansionTargetDate (US), enter the date this expansion will be activated (i.e., the date the system will require the additional radio frequencies).
* **FreqMax**: In Data Item FreqMax (US), enter the upper frequency of band.

  [XSL ERR MINMAX] If FreqMax is used, it MUST be greater than FreqMin.
* **NSEPUse**: In Data Item NSEPUse (US), enter the U.S. National Security and Emergency Preparedness (NSEP) function. A statement as to whether the proposed system, if it becomes operational, will support a NSEP function and require review under the Telecommunications Service Priority for Radiocommunications (TSP-R) System.
* **NumFreqsRequired**: In Data Item NumFreqsRequired (US), enter the total number of frequencies required.
* **NumRepeaters**: In Data Item NumRepeaters (US), enter the total number of repeaters in the trunked land mobile system.
* **NumUsers**: In Data Item NumUsers (US), enter the total number of users of the trunked land mobile system.
* **PreviousSPSDocketNum**: In Data Item PreviousSPSDocketNum (US), enter the IRAC Spectrum Planning Subcommittee (SPS) docket number of the NTIA Certification of Spectrum Support for the existing trunked system.

* **RequestForExpansion**: In Data Item RequestForExpansion (US), enter if this application is a request for expansion.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **SeparateSystemJustification**: In Data Item SeparateSystemJustification (US), enter the For trunked land mobile systems that are within 30 km of an existing or planned trunked land mobile system authorised by NTIA, provides the information required under subparagraph 8.2.48a of the NTIA Manual ("Procedures and Principles for the Assignment and Coordination of Frequencies, Land Mobile Radio Communications").
* **FreqMin**: In Data Item USFreqMin(US), enter the lower end of the frequency band.

Example

```
<Trunking>
  <AdditionalChannelsRationale cls="U">Redundant network because of importance of
target</AdditionalChannelsRationale>
  <Dispatcher cls="U">Yes</Dispatcher>
  <DispatcherExplanation cls="U">Period of use expired</DispatcherExplanation>
  <EstimatedExpansionCost cls="U">458903</EstimatedExpansionCost>
  <ExpansionTargetDate cls="U">2014-06-23</ExpansionTargetDate>
  <FreqMax cls="U">3380</FreqMax>
  <NSEPUse cls="U">Period of use expired</NSEPUse>
  <NumFreqsRequired cls="U">4</NumFreqsRequired>
  <NumRepeaters cls="U">15</NumRepeaters>
  <NumUsers cls="U">490</NumUsers>
  <PreviousSPSDocketNum cls="U">47890</PreviousSPSDocketNum>
  <RequestForExpansion cls="U">Yes</RequestForExpansion>
  <SeparateSystemJustification cls="U">Redundant network because of importance of
target</SeparateSystemJustification>
  <USFreqMin cls="U">3250</USFreqMin>
</Trunking>
```

TrunkingAssignment *(US)*

Trunking Assignment

Data Item Tag	Data Item Name	Occurrence	Format
IsRelinquished	Is Relinquished	Req	Code List CBO
AgencySerialNum	Agency Serial Number	Opt	S12
FreqMax	Frequency Maximum	Opt	UN(16,9) [0..1.0E9]*(MHz)*
FreqMin	Frequency Minimum	Opt	UN(16,9) [0..1.0E9]*(MHz)*
RelinquishmentDate	Relinquishment Date	Opt	D
Sub-Element Of:	Trunking		

Description

Complex element TrunkingAssignment (US) refers to the Agency Serial Number of the existing assignment to be relinquished or used in the trunked land mobile system.

Input Requirement

* **IsRelinquished**: In Data Item IsRelinquished (US), enter the Yes if this is an existing assignment to be relinquished by the trunked land mobile system. If No, the existing assignment will be used by (incorporated into) the system.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **AgencySerialNum**: In Data Item AgencySerialNum (US), enter the externally-assigned unique identifier of a frequency assignment.
* **FreqMax**: In Data Item FreqMax (US), enter the upper frequency of band.
* **FreqMin**: In Data Item FreqMin (US), enter the lower frequency of band or discrete frequency.
* **RelinquishmentDate**: In Data Item RelinquishmentDate (US), enter the expected date the existing assignment will be relinquished by the trunked land mobile system.

Example

```
<TrunkingAssignment>
  <AgencySerialNum cls="U">USA::AL:123</AgencySerialNum>
  <FreqMax cls="U">3350</FreqMax>
  <FreqMin cls="U">3150</FreqMin>
  <IsRelinquished cls="U">Yes</IsRelinquished>
  <RelinquishmentDate cls="U">2014-01-23</RelinquishmentDate>
</TrunkingAssignment>
```

Tuning

Tuning

Data Item Tag	Data Item Name	Occurrence	Format
TuningStep	Tuning Step	Req	UN(16,9) [0..1.0E9]*(MHz)*
NumFreq	Number of Frequencies	Req	UN(4)
Priority	Priority	Opt	UN(1)
Exclusive	Exclusive Assignment	Opt	Code List CBO
FreqSep		**Opt**	
FreqSep	Frequency Separation	Req	UN(16,9) [0..1.0E9]*(MHz)*
FreqSepType	Frequency Separation Type	Req	Code List CDS
Sub-Element Of:	Link		
Sub-Elements:	RequestedFreq [0..n]		

Description

Complex element Tuning indicates the specific frequency or range of frequencies, tuning increment, and number of frequencies, required for an assignment.

Input Requirement

* **TuningStep**: In Data Item TuningStep, enter the tuning increment expressed of the requested frequency range. This should be compatible with the tuning capability of the transmitters and/or receivers in the link.
* **NumFreq**: In Data Item NumFreq, enter the number of frequencies required.
* **Priority**: In Data Item Priority, enter a number from 0 to 9 that is used to influence the positioning of the Assignment in the ordering of the assignment process, where 9 represents the highest priority and 0 is the lowest priority.
* **Exclusive**: In Data Item Exclusive, enter Yes if the assigned frequency should not be reused within the area of exercise/operation.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **FreqSep**: This group is OPTIONAL.

  This group identifies the required (exact or minimum) frequency separation between the requested frequencies.

  - **FreqSep**: In Data Item FreqSep, enter the required minimum or exact frequency separation
  - **FreqSepType**: In Data Item FreqSepType, enter if the stated frequency separation is an exact or minimum value.

    [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CDS:**

Code	Meaning
Exactly	The separation must be exactly the value entered (for use when transmit and receive radio frequencies are assigned in fixed pairs).
Minimum	The separation must be at least the value entered.

Example

```
<Tuning>
  <TuningStep cls="U">0.025</TuningStep>
  <NumFreq cls="U">1</NumFreq>
</Tuning>
```

TxAntModeRef

Transmitter Antenna

Data Item Tag	Data Item Name	Occurrence	Format
Serial	Antenna Identifier	Req	pattern (S29)
ModeID	Antenna Mode Identifier	Opt	S20
CouplingLoss	Coupling Loss	Opt	SN(6,3)*(dB)*
SpectralPowerDensity	Spectral Power Density	Opt	SN(6,3)*(dBW/Hz)*
Inherits from:	RxAntModeRef		
Sub-Element Of:	TxRef		

Description

This element inherits attributes and sub-elements from element RxAntModeRef.

Complex element TxAntModeRef contains references to the Antenna and its AntMode, used to construct a Transmitter Configuration.

Input Requirement

* **Serial**: In Data Item Serial, enter the reference to an Antenna in this configuration. This antenna is associated with the receiver specified in the Serial field of the parent RxRef element.

  [XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "**AN**".

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

* **ModeID**: In Data Item ModeID, enter the unique name of an AntMode of the Antenna specified in the corresponding Serial field. This antenna mode is grouped with the receiver modes specified in RxModeRef.

  [XSL WRN RELATED] This item, with item Serial SHOULD refer to an existing Antenna/AntMode in the data repository.

* **CouplingLoss**: In Data Item CouplingLoss, enter the loss that occurs when energy is transferred between the transmitter/receiver and the antenna.

* **SpectralPowerDensity**: In Data Item SpectralPowerDensity, enter the maximum spectral power density supplied to the input of the antenna.

Example

```
<TxAntModeRef>
  <Serial cls="U">USA:NTIA:AN:123</Serial>
  <ModeID cls="U">TRACKING</ModeID>
  <SpectralPowerDensity cls="U">15</SpectralPowerDensity>
</TxAntModeRef>
```

Notes

AntModeRef specifies an antenna mode that is grouped with all the transmitter modes in sibling TxModeRef elements. It also specifies the spectral power density and coupling loss for the antenna mode when grouped with the sibling transmitter modes in this Configuration.

TxMode

Transmitter Mode

Attribute Tag	Attribute Name	Occurrence	Format
curves	Links to Curves	Opt	List of UN6
Data Item Tag	**Data Item Name**	**Occurrence**	**Format**
ModeInfo		**Req**	
ModeID	Mode Identifier	Req	S20
Description	Mode Description	Opt	S100
NecessaryBw	Necessary Bandwidth	Opt	UN(16,9) [0..1.0E9]*(MHz)*
Tunability		**Opt**	
Tunability	Tunability	Opt	Code List CTU
TuningMethod	Tuning Method	Opt	Code List CTN
Intermodulation		**Opt**	
IntermodPct	Intermodulation Value	Opt	UN(4,2)[0..100]*(%)*
IntermodEffect	Intermodulation Effect	Opt	MEMO
Burst		**Opt**	
BurstRate	Burst Rate	Opt	UN(12,3)*(bursts/s)*
BurstDuration	Burst Duration	Opt	UN(12,6)*(us)*
BurstNumPulses	Number of Pulses in Burst	Opt	UN(8)
BurstOffTime	Burst Off-Time	Opt	UN(12,6)*(us)*
OccupiedBw		**Opt**	
OccBw	Occupied Bandwidth	Req	UN(16,9) [0..1.0E9]*(MHz)*
OccBwCalculated	Calculated Occupied Bandwidth Indicator	Opt	Code List CBO
Spurious		**Opt**	
SecondHarmonicLevel	Second Harmonic Level	Opt	SN(6,3)*(dB)*
ThirdHarmonicLevel	Third Harmonic Level	Opt	SN(6,3)*(dB)*
OtherHarmonicLevel	Other Harmonic Level	Opt	SN(6,3)*(dB)*
SpuriousLevel	Spurious Emissions Level	Opt	SN(6,3)*(dB)*
FreqTolerance		**Opt**	
FreqTolerance	Frequency Tolerance	Req	UN(18,6)
FreqToleranceUnit	Frequency Tolerance Unit	Req	Code List CFO
RadarType	Radar Modulation Type	Opt	Code List CRA
ChannelDwell	Channel Duration	Opt	UN(12,6)*(us)*
NumSubCarriers	Number of Subcarriers	Opt	UN(5)
NumSideTones	Number of Side Tones	Opt	UN(5)
GpsNBL1Level ***(US)***	GPS NBL1 Level	Opt	SN(5,3)*(dBW)*
GpsNBL2Level ***(US)***	GPS NBL2 Level	Opt	SN(5,3)*(dBW)*
GpsWBL1Level ***(US)***	GpsWBL1Level	Opt	SN(9,6)*(dBW/Hz)*
GpsWBL2Level ***(US)***	GPS WBL2 Level	Opt	SN(9,6)*(dBW/Hz)*
ModulationType ***(US)***	Modulation Type	Opt	Code List UMD
ModeName ***(US)***	Mode Name	Opt	S40
JitterCapable ***(US)***	Jitter Capable	Opt	Code List CBO
Sub-Element Of:	Transmitter		
Sub-Elements:	Baseband [0..n] EmsClass [0..n] ObservedMOPAnalysis [0..n] ***(US)*** ObservedPulseAnalysis [0..n] ***(US)*** ObservedRFAnalysis [0..n] ***(US)*** Power [0..n] Pulse [0..n] SpreadSpectrum [0..1] SubcarrierFreq [0..n] TxModulation [0..n]		

	TxSignalTuning [0..n]

Description

Complex element TxMode and its sub-elements define all the technical parameters for a mode of operation of the Transmitter. A mode can be defined as a set of parameters or settings for a radio or radar, allowing the equipment to perform a given function (e.g. voice, data, seek, tracking, etc).
See TxMode Diagram
See TxModulation Diagram
See Pulse Diagram
See SpreadSpectrum Diagram
See ObservedMOPAnalysis Diagram
See ObservedRFAnalysis Diagram
See ObservedPulseAnalysis Diagram

Input Requirement

* **curves** *(Attribute)*: In attribute curves, enter the list of indices referring to Curves applicable to the data item.
* **Mode Information**: This group is REQUIRED.
  - **ModeID**: In Data Item ModeID, enter a short name for the mode; this name should be a meaningful identification of the mode, but it can also be automatically generated in some systems. The Name MUST be unique within the dataset and SHOULD NOT be modified during the entire lifetime of the dataset.

    [XSD ERR UNIQUE] Each value of this data item MUST be unique within the parent element.
  - **Description**: In Data Item Description, enter a description of the operational mode; this description should be a meaningful explanation of the mode main characteristics.
* **NecessaryBw**: In Data Item NecessaryBw, enter the necessary bandwidth which is defined as the minimum width of the frequency band sufficient to ensure the transmission of information at the required rate and quality. This is approximately at the -20 dB level on an emission curve..
* **Tunability**: This group is OPTIONAL.
  - **Tunability**: In Data Item Tunability, enter the tuning capability.

    [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CTU:**

Code	Meaning
Continuous	Systems capable of being tuned to any frequency within the requested band
Continuous+Stepped	Combination of continuous and stepped
Fixed	Systems capable of operating on a single discrete frequency
Fixed+Continuous	Combination of fixed and continuous
Fixed+Stepped	Combination of fixed and stepped
Stepped	Systems capable of being tuned across the authorised or requested band in discrete steps or increments. This includes crystal control
Fixed-Constrained	Systems capable of operating on a single discrete frequency, determined by the bandwidth constraints of the power generating or frequency determining device
Fixed or Random	Frequency-agile radars that operate on various frequencies within a band, either specified or random mode
Other	If selected, a clarifying remark SHOULD be entered

  - **TuningMethod**: In Data Item TuningMethod, enter the device or process used to tune the equipment through the RF spectrum.

    [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CTN (extract only):**

Code	Meaning
Cavity	
Cavity Mechanically Tuned	
Cavity Resonant	
Cavity Tunable	

Continuous	
Continuous VCO	
Crystal Controlled	
Crystal Fixed	
Crystal Interchangeable	
Crystal SAW	
...	...

* **Intermodulation**: This group is OPTIONAL.

  This group describes the distortion that is the result of two or more signals mixing together that are not harmonic frequencies. These signals mix to create additional non-harmonic frequencies that are undesirable.

  - **IntermodPct**: In Data Item IntermodulationPct, enter the percentage of the total signal either transmitted or received affected by the distortion products.
  - **IntermodEffect**: In Data Item IntermodulationEffect, enter the effect on circuit operation caused by the level of intermodulation distortion.

* **Burst**: This group is OPTIONAL.

  This group contains the time characteristics of a pulse burst.

  - **BurstRate**: In Data Item BurstRate, enter the number of pulse bursts per second.
  - **BurstDuration**: In Data Item BurstDuration, enter the pulse burst duration.
  - **BurstNumPulses**: In Data Item BurstNumPulses, enter the number of pulses in a single pulse burst.
  - **BurstOffTime**: In Data Item BurstOffTime, enter the pulse burst off time in microseconds (duration of time between the end of one pulse burst to the start of the next pulse burst).

* **OccupiedBw**: This group is OPTIONAL.

  This group contains the Occupied Bandwidth which is defined as the bandwidth that contains 99% of the spectral power under the emission curve.

  - **OccBw**: In Data Item OccBw, enter the minimum bandwidth utilized to process 99.5% of the emission spectra.
  - **OccBwCalculated**: In Data Item OccBwCalculated, enter Yes to indicate that the data was calculated, or "No" if the data is issued from measurement.

    [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **Spurious Emissions**: This group is OPTIONAL.

  This group contains levels of emissions on a frequency or frequencies that are outside the necessary bandwidth and the level of which may be reduced without affecting the corresponding transmission of information. Spurious emissions include harmonic emissions, parasitic emissions, intermodulation products and frequency conversion products, but exclude out-of-band emissions.

  - **SecondHarmonicLevel**: In Data Item SecondHarmonicLevel, enter the out-of-band emission level at the frequency that is two times the fundamental frequency. The value is expressed as the power level in decibels relative to the peak output power of the carrier signal.
  - **ThirdHarmonicLevel**: In Data Item ThirdHarmonicLevel, enter the out-of-band emission level at the frequency that is three times the fundamental frequency. The value is the ratio of the power level to peak output power of the carrier signal.
  - **OtherHarmonicLevel**: In Data Item OtherHarmonicLevel, enter the greatest out-of-band emission level at harmonic frequencies greater than three times the fundamental frequency. The value is expressed as the power level in decibels relative to the peak output power of the carrier signal.

- **SpuriousLevel**: In Data Item SpuriousLevel, enter the maximum of all emission levels which occur outside the bandwidth of the fundamental emission and not at a harmonic frequency. The value is expressed as the power level in decibels relative to the peak output power of the carrier signal

* **Frequency Tolerance**: This group is OPTIONAL.

  The maximum drift from an equipment's center frequency after normal warm-up time has been allowed.

  - **FreqTolerance**: In Data Item FreqTolerance, enter the drift in Hz or in ppm using the formula: Frequency tolerance (ppm) = Maximum drift (Hz) / Center frequency (MHz). enter the units (Hz or ppm) in FreqToleranceUnit.
  - **FreqToleranceUnit**: In Data Item FreqToleranceUnit, enter the units in which the Frequency Tolerance is expressed.

    [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CFO:**

Code	Meaning
Hz	Hertz
ppm	parts per million

* **RadarType**: In Data Item RadarType, enter the type of radar.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CRA:**

Code	Meaning
Coded Pulse	
CW	
FM CW	
FM Pulse	
Non-FM Pulse	
Other	If selected, a clarifying remark SHOULD be entered

* **ChannelDwell**: In Data Item ChannelDwell, enter the time the transmitter is on.
* **NumSubCarriers**: In Data Item NumSubCarriers, enter the number of subcarrier frequencies for the subcarriers modulating the carrier individually.
* **NumSideTones**: In Data Item NumSideTones, enter the number of side tone frequencies for the sidetones modulating the carrier individually.
* **GpsNBL1Level** ***(US)***: In Data Item GpsNBL1Level (US), enter the narrowband levels emitted by this system in the Navstar Global Positioning System (GPS) 1164-1240 MHz band.
* **GpsNBL2Level** ***(US)***: In Data Item GpsNBL2Level (US), enter the narrowband levels emitted by this system in the Navstar Global Positioning System (GPS) 1559-1610 MHz band.
* **GpsWBL1Level** ***(US)***: In Data Item GpsWBL1Level (US), enter the wideband levels emitted by this system in the Navstar Global Positioning System (GPS) 1164-1240 MHz band.
* **GpsWBL2Level** ***(US)***: In Data Item GpsWBL2Level (US), enter the wideband levels emitted by this system in the Navstar Global Positioning System (GPS) 1559-1610 MHz band.
* **ModulationType** ***(US)***: In Data Item ModulationType (US), enter the type of modulation.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List UMD:**

Code	Meaning
Pulse	
Digital	
Analog	
Other	If selected, a clarifying remark SHOULD be entered

* **ModeName** ***(US)***: In Data Item ModeName (US), enter a short name for the mode.
* **JitterCapable** ***(US)***: In Data Item JitterCapable (US), indicate whether the mode of the pulse stream is jitter capable.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes

No

Example


```
<TxMode>
  <BurstDuration cls="U">.001</BurstDuration>
  <BurstNumPulses cls="U">458</BurstNumPulses>
  <BurstOffTime cls="U">.13</BurstOffTime>
  <BurstRate cls="U">5984</BurstRate>
  <ChannelDwell cls="U">.2387</ChannelDwell>
  <curves cls="U">34</curves>
  <Description cls="U">Targets 893 and 569</Description>
  <FreqTolerance cls="U">.0001</FreqTolerance>
  <FreqToleranceUnit cls="U">ppm</FreqToleranceUnit>
  <IntermodulationEffect cls="U">Friendly receivers performance degraded by 12
percent</IntermodulationEffect>
  <IntermodulationPct cls="U">17</IntermodulationPct>
  <ModeID cls="U">Narrowband Pulse</ModeID>
  <NecessaryBw cls="U">3123.67</NecessaryBw>
  <NumSideTones cls="U">16</NumSideTones>
  <NumSubCarriers cls="U">16</NumSubCarriers>
  <OccBw cls="U">3363.67</OccBw>
  <OccBwCalculated cls="U">Yes</OccBwCalculated>
  <OtherHarmonicLevel cls="U">106</OtherHarmonicLevel>
  <RadarType cls="U">FM Pulse</RadarType>
  <SecondHarmonicLevel cls="U">89</SecondHarmonicLevel>
  <SpuriousLevel cls="U">90</SpuriousLevel>
  <ThirdHarmonicLevel cls="U">93</ThirdHarmonicLevel>
  <Tunability cls="U">Fixed+Stepped</Tunability>
  <TuningMethod cls="U">Synthesizer Microprocessor Controlled</TuningMethod>
  <GpsNBL1Level cls="U">46.95</GpsNBL1Level>
  <GpsNBL2Level cls="U">66.98</GpsNBL2Level>
  <GpsWBL1Level cls="U">12.89</GpsWBL1Level>
  <GpsWBL2Level cls="U">16.975</GpsWBL2Level>
  <JitterCapable cls="U">Yes</JitterCapable>
  <ModeName cls="U">Broadband Sweep Jamming</ModeName>
  <ModulationType cls="U">Pulse</ModulationType>
</TxMode>
```

TxModeRef

Transmitter Reference (incl. mode)

Data Item Tag	Data Item Name	Occurrence	Format
ModeID	Mode Identifier	Req	S20
PowerLimit	Power Limit	Opt	SN(10,7)*(dBW)*
Sub-Element Of:	TxRef		

Description

Complex element TxModeRef contains references to the Transmitter and its modes, used to construct a Configuration.

Input Requirement

* **ModeID**: In Data Item ModeID, enter the unique identifier of a TxMode of the transmitter in this configuration. This mode is from the transmitter specified in the Serial field of the parent TxRef element.

  [XSL WRN RELATED] This item, with item Serial in parent element SHOULD refer to an existing Transmitter/ TxMode in the data repository.

* **PowerLimit**: In Data Item PowerLimit, enter the power limit of this transmitter mode when in this configuration.

Example

```
<TxModeRef>
  <Serial cls="U">USA:NTIA:TX:123</Serial>
  <ModeID cls="U">CLEAR VOICE H. POWER</ModeID>
</TxModeRef>
```

Notes

TxModeRef specifies a transmitter mode that is grouped with all the antenna modes specified in sibling AntModeRef elements. It also specifies power limits for the transmitter mode in this Configuration. The absence of any TxModeRef elements under TxRef implies that all modes from the transmitter are used with no power limits.

TxModulation

Transmitter Modulation

Data Item Tag	Data Item Name	Occurrence	Format
DigitalModType	Digital Modulaton Type	Opt	Code List CMO
MaxBitRate	Maximum Bit Rate	Opt	UN(10,3)*(kbit/s)*
DigitalFormat		**Opt**	
NumStates	Number of Digital States	Opt	UN(5)
LineCoding	Line Coding	Opt	Code List CDF
CodeRate	Pseudorandom Code Rate	Opt	UN(10,3)*(kbit/s)*
CodePeriod	Pseudorandom Code Repetition Period	Opt	UN(12,6)*(us)*
MaxDevRatio	Maximum Deviation Ratio	Opt	UN(5,3)
AM		**Opt**	
AMIdx	Amplitude Modulation Index	Opt	UN(5,3)
AMRMSIdx	RMS Amplitude Modulation Index	Opt	UN(5,3)
FM		**Opt**	
FMPeakFreqDev	Peak Frequency Deviation	Opt	UN(16,9) [0..1.0E9]*(MHz)*
FMRMSFreqDev	RMS Frequency Deviation	Opt	UN(16,9) [0..1.0E9]*(MHz)*
FMDeviationCode	RMS Frequency Deviation Code	Opt	Code List CFM
FMPeakModulationIdx	FM Peak Modulation Index	Opt	UN(5,3)
Suppression		**Opt**	
CarrierSuppression	Level of Carrier Suppression	Opt	SN(6,3)*(dB)*
SidebandSuppression	Level of Sideband Suppression	Opt	SN(6,3)*(dB)*
SidebandSuppressed	Sideband Suppressed	Opt	Code List CSI
KeysAngle ***(US)***	Keying Angle	Opt	UN(5,2) [0..180]*(deg)*
KeysDesc ***(US)***	Keying Format	Opt	S500
MUXLevel ***(US)***	Multiplexing Level	Opt	SN(5,2)*(dB)*
MUXScheme ***(US)***	Multiplexing Scheme	Opt	S100
SymbolSize ***(US)***	Symbol Size	Opt	UN(3)*(bits)*
Inherits from:	RxModulation		
Sub-Element Of:	TxMode		

Description

This element inherits attributes and sub-elements from element RxModulation.

Complex element TxModulation contains the detailed characteristics of the modulation on the transmitter side.

Input Requirement

* **DigitalModType**: In Data Item DigitalModType, enter the type of digital modulation.

[XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CMO (extract only):**

Code	Meaning
8-Tone	
16-Tone	
32-Tone	
AM Clear Voice	
AM Secure Voice	
ASK/OOK	
Audio FSK	
Binary FSK	
Binary Phase Shift Key	

Code Division Multiplex	
...	...

* **MaxBitRate**: In Data Item MaxBitRate, enter the maximum bit rate in kilobits per second applicable to digital communications systems. For spread spectrum transmissions enter the bit rate after error-correction coding. Do not enter the spectrum-spreading clock or chip rate.

* **DigitalFormat**: This group is OPTIONAL.

  This group contains information about data coding.

  - **NumStates**: In Data Item NumStates, enter the total number of states, e.g., 4 for 4-ary Phase Shift-Keying, 64 for 64 level Quadrature AM.

  - **LineCoding**: In Data Item LineCoding, enter the format used to represent binary digit sequencing when digital modulation is used.

    [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CDF (extract only):**

Code	Meaning
Bi-Phase-Level	
Bi-Phase-Mark	
Bi-Phase-Space	
Differential Bi-Phase-Level	
Differential Bi-Phase-Mark	
Differential Bi-Phase-Space	
NRZ	
NRZ-Mark	
NRZ-Space	
Return to Zero	
...	...

  - **CodeRate**: In Data Item CodeRate, enter the pseudorandom code rate.

  - **CodePeriod**: In Data Item CodePeriod, enter the length of time of the pseudorandom code repetition period.

* **MaxDevRatio**: In Data Item MaxDevRatio, enter the deviation ratio data applicable to frequency- or phase-modulation equipment. For FM systems the deviation ratio is directly proportional to the frequency deviation of the variance of the modulator. In Data Item PM systems the deviation ratio is tied to both the amplitude of the modulating signal and phase deviation constant of the modulator. For example, for an FM system a deviation ratio of 1 indicates that a 3 kHz input frequency will cause a peak instantaneous frequency deviation of 3 kHz. a deviation ratio of 3 is the result of a 9 kHz deviation of the emission when modulated with a 3 kHz signal. Do not use this item for amplitude or pulse modulated systems.

* **Amplitude Modulation**: This group is OPTIONAL.

  This group contains the modulation index (percentage) when double-sideband amplitude modulation (DSB/AM) is employed.

  - **AMIdx**: In Data Item AMIdx, enter the amplitude modulation index, which is a unitless value for an amplitude modulation signal derived by dividing the peak modulating voltage by the peak carrier voltage. The modulation index should always be > 0 and < 1. If = 0, the resultant modulated waveform is a constant keyed carrier without a modulating signal. If > 1, the envelope is over modulated and distorted. A typical value is 0.6

  - **AMRMSIdx**: In Data Item AMRMSIdx, enter the RMS modulation index when analog or phase modulation is used and the baseband consists of FDM channels or multiple subcarrier signals. The RMS Amplitude Modulation Index is a unitless value for an amplitude modulation signal derived by dividing the RMS peak modulating voltage by the RMS peak carrier voltage.

* **Frequency Modulation**: This group is OPTIONAL.

  This group contains information about a frequency modulated transmission.

- **FMPeakFreqDev**: In Data Item FMPeakFreqDev, enter the peak frequency deviation when analog modulation is employed.
- **FMRMSFreqDev**: In Data Item FMRmsFreqDev, enter the Root Means Square (RMS) frequency deviation when frequency modulation (FM) is employed and the base band consists of frequency-division multiplexed (FDM) channels or multiple subcarrier signals.
- **FMDeviationCode**: In Data Item FMDeviationCode, enter the code that indicates the type of Root Mean Square (RMS) deviation (multichannel or per-channel).

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CFM:**

Code
Multichannel
Per Channel

- **FMPeakModulationIdx**: In Data Item FMPeakModulationIdx, enter the peak modulation index (deviation ratio) when using analog frequency or phase modulation.

* **Suppression**: This group is OPTIONAL.

  This group describes the radio frequency carrier suppression and the amount of sideband suppression, typically referenced to single sideband communications equipment.

  - **CarrierSuppression**: In Data Item CarrierSuppression, enter the amount of reduction of the signals carrier, as compared to a non attenuated signal carrier.
  - **SidebandSuppression**: In Data Item SidebandSuppression, enter the amount that one or both of the sidebands of a signal are reduced prior to transmission. “One or both" is determined by evaluation of the emission designator.
  - **SidebandSuppressed**: In Data Item SidebandSuppressed, enter the sideband that is suppressed in a single sideband signal.

    [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CSI:**

Code
Lower sideband
Upper sideband

* **KeysAngle** ***(US)***: In Data Item KeysAngle (US), enter the keying angle for the digital/analog/hybrid data stream.
* **KeysDesc** ***(US)***: In Data Item KeysDesc (US), enter a text description of the keying format for the digital/analog/hybrid data stream.
* **MUXLevel** ***(US)***: In Data Item US:MUXLevel (US), enter the signal power in dB referenced to the baseband carrier for the companding of the multiplexed signal.
* **MUXScheme** ***(US)***: In Data Item US:MUXScheme (US), enter a freetext description of the multiplexing algorithm.
* **SymbolSize** ***(US)***: In Data Item SymbolSize (US), enter the number of bits in the symbols being generated. For example, if this is a binary stream made up of bytes then the symbolSize would be 8. For Link-16 the symbolSize would be 70 since that link uses 70-bit words.

Example

```
<TxModulation>
  <DigitalModType>ASK/OOK</DigitalModType>
  <MaxBitRate>27000000</MaxBitRate>
  <MaxDevRatio>3</MaxDevRatio>
</TxModulation>
```

TxRef

Transmitter Reference

Data Item Tag	Data Item Name	Occurrence	Format
Serial	Transmitter Serial	Req	pattern (S29)
Sub-Element Of:	Configuration		
Sub-Elements:	TxAntModeRef [0..n] TxModeRef [0..n]		

Description

Complex element TxRef contains the reference of a Transmitter, and optionally some of its TxModes and the associated Antennas and AntMode.

Input Requirement

* **Serial**: In Data Item TxRef, enter the serial of a Transmitter in this configuration. The same transmitter can be referenced in different TxRef elements in order to properly group transmitter modes with antenna modes.

  [XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "**TX**".

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

TxSignalTuning

Transmitter Signal Tuning

Data Item Tag	Data Item Name	Occurrence	Format
FreqRangeGrp		**Req**	
FreqMin	Nominal or Minimum Frequency	Req	UN(16,9) [0..1.0E9]*(MHz)*
FreqMax	Maximum Frequency	Opt	UN(16,9) [0..1.0E9]*(MHz)*
TuningStep	Tuning Step	Opt	UN(16,9) [0..1.0E9]*(MHz)*
NumPresetChannels	Number of Preset Channels	Opt	UN(8)
LowestUsableChannel ***(US)***	Lowest Usable Channel	Opt	UN(16,9) [0..1.0E9]*(MHz)*
MinSeparation ***(US)***	Minimum Separation	Opt	UN(16,9) [0..1.0E9]*(MHz)*
Sub-Element Of:	TxMode		

Description

Complex element TxSignalTuning indicates the tuning capabilities, the specific frequency or range of frequencies within which the equipment may tune, and the tuning increments of the equipment.

Input Requirement

* **Frequency Range**: This group is REQUIRED.

  This group indicates a range of frequencies or a tuning range.

  - **FreqMin**: In Data Item FreqMin, enter the nominal frequency or minimum value of the frequency range.
  - **FreqMax**: In Data Item FreqMax, enter the maximum value of the frequencies in the range.

    [XSL ERR MINMAX] If FreqMax is used, it MUST be greater than FreqMin.
* **TuningStep**: In Data Item TuningStep, enter the tuning increment.
* **NumPresetChannels**: In Data Item NumPresetChannels, enter the number of preset channels available.
* **LowestUsableChannel *(US)***: In Data Item LowestUsableChannel (US), enter the center frequency of the lowest channel usable within this transmitter frequency range.
* **MinSeparation *(US)***: In Data Item MinSeparation (US), enter the minimum frequency separation required at one transmitter or receiver location.

Example

```
<TxSignalTuning>
  <FreqMax cls="U">3107.56</FreqMax>
  <FreqMin cls="U">2999.753</FreqMin>
  <NumPresetChannels cls="U">500</NumPresetChannels>
  <TuningStep cls="U">0.001</TuningStep>
  <LowestUsableChannel cls="U">176.345</LowestUsableChannel>
  <MinSeparation cls="U">500</MinSeparation>
</TxSignalTuning>
```

Usage

Usage

Data Item Tag	Data Item Name	Occurrence	Format
EqpFnct	Equipment Function	Opt	Code List CEF
StnClass	Class of Station	Opt	Code List USC
RadioService	Radiocommunication Service	Opt	Code List CSN
Sub-Element Of:	Configuration		

Description

Complex element Usage identifies how an operational configuration can be used or will be used.

Input Requirement

* **EqpFnct**: In Data Item EqpFnct, enter the equipment function.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CEF (extract only):**

Code	Meaning	Extended
Communications		Basic
Communications-Air Traffic Control		Basic
Communications-Data		Basic
Communications-Emergency		Basic
Communications-Monitor		Basic
Communications-P/P Or Net		Basic
Communications-Pager		Basic
Communications-Radio Relay		Basic
Communications-Satellite		Basic
Communications-Secure Voice		Basic
...	...	...

* **StnClass**: In Data Item StnClass, enter the station class, as defined by the appropriate Administration. When exchanging with NATO, only include ITU entries.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List USC (extract only):**

Code	Meaning
AL	Aeronautical Radionavigation Land Station: A land station in the aeronautical radionavigation service not intended for use while in motion. (ITU)
ALA	Aeronautical Marker Beacon Station: A radionavigation land station in the aeronautical radionavigation service which employs a marker beacon. (INTL)
ALB	Aeronautical Radiobeacon Station: A radiobeacon station in the aeronautical radionavigation service intended for the benefit of aircraft. (INTL)
ALC	Aeronautical Radar Beacon (racon) Station: A land station in the aeronautical radionavigation service which employs a radar beacon (racon). (INTL)
ALG	Glide Path (Slope) Station: A radionavigation land station which provides vertical guidance to aircraft during approach to landing. (INTL)
ALL	Localizer Station: A radionavigation land station in the aeronautical radionavigation service which employs an Instrument Landing System Localizer. (INTL)
ALO	Omnidirectional Range Station: A radionavigation land station in the aeronautical radionavigation service providing direct indication of the bearing (omni-bearing) of that station from an aircraft. (INTL)

ALR	Radio Range Station: A radionavigation land station in the aeronautical radionavigation service providing radial equisignal zones. (In certain instances a radio range station may be placed on board a ship.) (INTL)
ALS	Surveillance Radar Station: A radionavigation land station in the aeronautical radionavigation service employing radar to display the presence of aircraft within its range. (In certain instances, a surveillance radar station may be placed on board a ship.) (INTL)
ALTM	Radionavigation Land Test Station (Maintenance Test Facility): A radionavigation land station in the aeronautical radionavigation service which is used as a radionavigation calibration station for the transmission of essential information in connection with the testing and calibration of aircraft navigational aids, receiving equipment and interrogators at predetermined surface locations. The primary purpose of this facility is to permit maintenance testing by aircraft radio service personnel. (INTL)
...	...

* **RadioService**: In Data Item RadioService, enter the Radiocommunication Service associated with the frequency usage in this configuration. Allowable values are defined by the appropriate Administration.

[XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CSN (extract only):**

Code	Meaning
Aeronautical Fixed Service	A radiocommunication service between specified fixed points provided primarily for the safety of air navigation and for the regular, efficient and economical operation of air transport.
Aeronautical Mobile (Off Route) Service	An aeronautical mobile service intended for communications, including those relating to flight coordination, primarily outside national or international civil air routes.
Aeronautical Mobile (Route) Service	An aeronautical mobile service reserved for communications relating to safety and regularity of flight, primarily along national or international civil air routes.
Aeronautical Mobile Service	A mobile service between aeronautical stations and aircraft stations, or between aircraft stations, in which survival craft stations may participate; emergency position-indicating radiobeacon stations may also participate in this service on designated distress and emergency frequencies.
Aeronautical Mobile-Satellite (OR) Service	An aeronautical mobile-satellite service intended for communications, including those relating to flight coordination, primarily outside national and international civil air routes.
Aeronautical Mobile-Satellite (R) Service	An aeronautical mobile-satellite service reserved for communications relating to safety and regularity of flight, primarily along national or international civil air routes.
Aeronautical Mobile-Satellite Service	A mobile-satellite service in which mobile earth stations are located on board aircraft; survival craft stations and emergency position-indicating radiobeacon stations may also participate in this service.
Aeronautical Radionavigation Service	A radionavigation service intended for the benefit and for the safe operation of aircraft.
Aeronautical Radionavigation-Satellite Service	A radionavigation-satellite service in which earth stations are located on board aircraft.
Amateur Service	A radiocommunication service for the purpose of self-training, inter-communication and technical investigation carried out by amateurs, that is, by duly authorised persons interested in radio technique solely with a personal aim and without pecuniary interest.
...	...

Example

```
<Usage>
  <EqpFnct cls="U">EW-Jamming-Sweep</EqpFnct>
  <RadioService cls="U">Special Service</RadioService>
  <StnClass cls="U">MAP</StnClass>
</Usage>
```

UsingCountries *(US)*

UsingCountries

Data Item Tag	Data Item Name	Occurrence	Format
CountryName	Country Name	Req	Code List CAO
Role	Country Role	Opt	Code List US2
Sub-Element Of:	Antenna, Notation, RFSystem, Receiver, Transmitter		

Description

Complex element UsingCountries (US) describes the countries that manufacture (Producing), supply (Source), and use (Using) the Equipment.

Input Requirement

* **CountryName**: In Data Item CountryName (US), enter the designator for a specific country associated with the emitter that transmits the subject Notation/Signal. Emitters commonly have more than one user country associated with them.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CAO (extract only):**

Code	Meaning
AFG	Afghanistan
FF	Africa
US-AL	Alabama
ALA	Åland Islands
US-AK	Alaska
ALB	Albania
DZA	Algeria
NT-ASC	Allied Submarine Command
ASM	American Samoa
AND	Andorra
...	...

* **Role**: In Data Item Role (US), enter the role of the country associated with the emitter that transmits the subject Notation/Signal.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List US2:**

Code	Meaning
Producing	
Source	
Using	
Other	If selected, a clarifying remark SHOULD be entered

Example

```
<UsingCountries>
  <CountryName cls="U">UZB</CountryName>
  <Role cls="U">Source</Role>
</UsingCountries>
```

VSWR

Voltage Standing Wave Ratio

Data Item Tag	Data Item Name	Occurrence	Format
Freq	Frequency	Opt	UN(16,9) [0..1.0E9]*(MHz)*
Ratio	Ratio	Req	UN(2,1)
Sub-Element Of:	AntMode		

Description

Complex Element VSWR stores the Voltage Standing Wave Ratio information for an Antenna Mode; it may be used to describe the VSWR curve as a function of frequency.

Input Requirement

* **Freq**: In Data Item Freq, enter the specific frequency at which the VSWR measurement was taken. If multiple points are described, Freq MUST be filled in.
* **Ratio**: In Data Item Ratio, enter the standing wave ratio referenced to the specific frequency, as a number without unit (e.g., enter "2" to represent a ratio of 2:1)

Example

```
<VSWR>
  <Freq cls="U">225</Freq>
  <Ratio cls="U">1.2</Ratio>
</VSWR>
```

Variance

Variance

Data Item Tag	Data Item Name	Occurrence	Format
Type	Type	Req	Code List CAV
AllocatedService	Allocated Service	Req	Code List CSN
Priority	Priority	Req	Code List CPS
Sub-Element Of:	Allocation		
Sub-Elements:	Administration [0..n]		

Description

Complex element Variance indicates if the local allocation deviates from an upper level allocation (e.g. a national allocation not aligned with the ITU RR).

Input Requirement

* **Type**: In Data Item Type, enter the type of variance.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CAV:**

Code
Additional
Different

* **AllocatedService**: In Data Item AllocatedService, enter a radiocommunication service recognized by an administration that is allocated to this frequency band (e.g., "Fixed Service").

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CSN (extract only):**

Code	Meaning
Aeronautical Fixed Service	A radiocommunication service between specified fixed points provided primarily for the safety of air navigation and for the regular, efficient and economical operation of air transport.
Aeronautical Mobile (Off Route) Service	An aeronautical mobile service intended for communications, including those relating to flight coordination, primarily outside national or international civil air routes.
Aeronautical Mobile (Route) Service	An aeronautical mobile service reserved for communications relating to safety and regularity of flight, primarily along national or international civil air routes.
Aeronautical Mobile Service	A mobile service between aeronautical stations and aircraft stations, or between aircraft stations, in which survival craft stations may participate; emergency position-indicating radiobeacon stations may also participate in this service on designated distress and emergency frequencies.
Aeronautical Mobile-Satellite (OR) Service	An aeronautical mobile-satellite service intended for communications, including those relating to flight coordination, primarily outside national and international civil air routes.
Aeronautical Mobile-Satellite (R) Service	An aeronautical mobile-satellite service reserved for communications relating to safety and regularity of flight, primarily along national or international civil air routes.
Aeronautical Mobile-Satellite Service	A mobile-satellite service in which mobile earth stations are located on board aircraft; survival craft stations and emergency position-indicating radiobeacon stations may also participate in this service.
Aeronautical Radionavigation Service	A radionavigation service intended for the benefit and for the safe operation of aircraft.
Aeronautical Radionavigation-Satellite Service	A radionavigation-satellite service in which earth stations are located on board aircraft.
Amateur Service	A radiocommunication service for the purpose of self-training, inter-communication and technical investigation carried out by amateurs, that is, by duly authorised persons interested in radio technique solely with a personal aim and without pecuniary interest.
...	...

* **Priority**: In Data Item Priority, enter if this service is a primary or secondary use of this band. ("Permitted" SHOULD only be used if the priority is unknown.)

[XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CPS:**

Code	Meaning
Primary	
Secondary	
Permitted	
Other	If selected, a clarifying remark SHOULD be entered

Example

```
<Variance>
  <Type cls="U">Additional</Type>
  <AllocatedService cls="U">Aeronautical Mobile (Off Route) Service</
AllocatedService>
  <Priority cls="U">Permitted</Priority>
</Variance>
```

Code Lists

Code List CAC

Used in element CodeList

Code
Add Code
Add List
Delete Code
Delete List

Code List CAD

Used in element AntMode

Code	Meaning
Directional	The antenna radiates towards a fixed direction
Non-Dir Or Omni	Non-Directional Or Omnidirectional (the direction cannot be determined or the radiation is non directional)
Rotating	The antenna rotates at a fixed rate
Sector Scan H	Scanning horizontally through a limited sector
Sector Scan V	Scanning vertically through a limited sector
Steerable	Fixed direction but steerable in the reference plane
Tracking	Tracking that can observe a moving object
Other	If selected, a clarifying remark SHOULD be entered

Code List CAF

Used in element AntHardware

Code	Meaning
Balun	
Cassegrain	
Eight Feed Horn Cluster	
Feed Horn Cluster	
Four Horn Cluster	
Conical	
Cutler	
Dipole	
Dipole Array	
Rotating Dipole	
Faired Set Horns	
Float Strip Type Power Divider	
Half Wave Radiator	
Horn	
Horn-Rotating Spinner	
Lens	
Lewis Scanner	
Multiple Array Of Folded Dipoles	
Multiple Feed Horn Array	
Pill Box	
Probe	
Rod	
Slot	
Slotted Linear Array	
Waveguide	

Yagi Element	
Other	If selected, a clarifying remark SHOULD be entered

Code List CAL

Used in element AntHardware

Code	Meaning
Cable Air Dielectric	
Cable Coaxial	
Cable Flexible Coaxial	
Cable Rigid Coaxial	
Line Coplaner Strip	
Line Ladder	
Line Microstrip	
Line Surface-Wave	
Open Wire	
Twin Lead	
Waveguide	
Waveguide Beam	
Waveguide Circular	
Waveguide Dielectric	
Waveguide Elliptic	
Waveguide Fin-Line	
Waveguide Flexible	
Waveguide Optic-Fiber	
Waveguide Rectangular	
Waveguide Ridge	
Waveguide Semirigid	
Other	If selected, a clarifying remark SHOULD be entered

Code List CAP

Used in element AntPattern

Code	Meaning	Extended
Azimuth	Pattern in the horizontal plane	Basic
Elevation	Pattern in the vertical plane	Basic
ELHH	Horizontal polarised port response to a horizontally polarised signal in the vertical direction	Extended
ELHV	Horizontal polarised port response to a vertically polarised signal in the vertical direction	Extended
ELVH	Vertically polarised port response to a horizontally polarised signal in the vertical direction	Extended
ELVV	Vertically polarised port response to a vertically polarised signal in the vertical direction	Extended
HH	Horizontal polarised port response to a horizontally polarised signal in the horizontal direction	Extended
HV	Horizontal polarised port response to a vertically polarised signal in the horizontal direction	Extended

VH	Vertically polarised port response to a horizontally polarised signal in the horizontal direction	Extended
VV	Vertically polarised port response to a vertically polarised signal in the horizontal direction	Extended
Other	If selected, a clarifying remark SHOULD be entered	Basic

Code List CAS

Used in element AntMode

Code	Meaning
360 Degrees Rotating	
Bi-Directional Sector	
Conical	
Electronic Scan (360 Degrees)	
Electronic Scan (Sector)	
Fixed	
Fixed-3 Axis Stabilised	
Helical	
Horizontal	
Lobing	
Manual	
Mechanically Steerable	
Palmer Raster	
Raster	
Sector Scan	
Spiral	
Tracker	
Unidirectional Sector	
Vertical	
Other	If selected, a clarifying remark SHOULD be entered

Code List CAT

Used in element Antenna

Code	Meaning	Extended
Adcock Array		Extended
Annular Slot		Extended
Aperture		Extended
Axial Mode Helix		Extended
Backfill Radiator		Extended
Backfire		Extended
Backfire Array		Extended
Balanced T		Extended
Batwing		Extended
Batwing Array		Extended
Biconical		Extended
Biconical Dipole		Extended
Biconical Horn		Extended
Billboard		Extended
Blade		Basic
Bow Tie		Extended
Bow Tie Array		Extended

Broadside Array	Extended
Cassegrain	Basic
Cavity Backed Dipole	Extended
Cavity Backed Monopole	Extended
Cavity Backed Slot	Extended
Cavity Backed Spiral	Extended
Clover Leaf	Extended
Coaxial Dipole	Extended
Collinear Array	Basic
Conformal Array	Extended
Conical Horn	Extended
Conical Monopole	Extended
Conical Spiral	Extended
Coplanar Array	Extended
Corner Reflector	Extended
Corrugated Horn	Extended
Corrugated Rod	Extended
Crossed Dipoles	Extended
Crossed Log Periodic Array	Extended
Crossed Loops	Extended
CSC2 Reflector	Extended
Cubical Quad	Extended
Cubical Quad Array	Extended
Cup-Dipole	Extended
Cup-Dipole-Array	Extended
Cylindrical Array	Extended
Cylindrical Slot	Extended
Dichroic	Extended
Dielectric Horn	Extended
Dielectric Lens	Extended
Dielectric Rod	Extended
Dipole	Basic
Dipole Array	Basic
Dipole Stacked	Basic
Dipole W/Reflector	Extended
Discage	Extended
Discone	Basic
Doublet	Extended
Endfire Array	Extended
Equi-Angular Spiral	Extended
E-Sectoral Horn	Extended
Fan Monopole	Extended
Feed	Extended
Ferrite Loop	Extended
Ferrite Loop Stick	Extended
Fin Cap	Extended
Flat Plate	Extended
Flat Screen Reflector	Extended
Flat Top	Extended
Flexible Tape	Extended
Folded Dipole	Extended
Folded Dipole/W Ground Plane	Extended
Folded Helix	Extended

Folded Monopole	Extended
Folded Trapezoidal Log-Periodic Array	Extended
Franklin	Extended
Gregorian	Extended
Ground Plane	Extended
Ground-Plane Whip	Extended
Half Loop	Extended
Half Rhombic	Extended
Halfwave Dipole	Extended
Halfwave Whip	Extended
Halo	Extended
Helical	Basic
Helical Whip	Extended
Helix Array	Extended
Hog Horn	Extended
Horizontal Dipole	Extended
Horizontal Vee	Extended
Horn	Basic
H-Sectoral Horn	Extended
Inverted L	Extended
Inverted Cone	Extended
Inverted Discone	Extended
Inverted Vee	Extended
Leaky Coax	Extended
Lens	Extended
Linear	Extended
Log Conical Spiral	Extended
Log Periodic	Basic
Log Periodic Array	Extended
Long Wire	Basic
Loop	Basic
Loop Array	Extended
Luneburg Lens	Extended
Mattress	Extended
Metal Plate Lens	Extended
Microstrip	Extended
Micro-Strip Array	Extended
Monopole	Basic
Monopole Array	Extended
Monopole With Reflector	Extended
Multi-Curtain Rhombic	Extended
Multi-Horn Array	Extended
Multiple Slot	Extended
Nested Rhombics	Extended
Normal Mode Helix	Extended
Open Wire	Extended
Open-Ended Waveguide	Extended
Orange Peel Reflector	Extended
Organ Pipe	Extended
Parabolic Cylinder	Extended
Parabolic High	Extended
Parabolic Mesh	Extended
Parabolic Reflector	Basic

Parabolic Segment	Extended
Parabolic Segment Mesh	Extended
Passive Reflector	Extended
Patch	Extended
Periscope	Extended
Phased Array	Basic
Phased Array Dipole	Extended
Phased Array Horn	Extended
Phased Array Ridged Waveguide	Extended
Phased Array Waveguide	Extended
Phased Array Yagi	Extended
Phased-Array Slotted Waveguide	Extended
Pill Box	Extended
Pine Cone	Extended
Planar Array	Extended
Planar Slot	Extended
Ported Coaxial Cable	Extended
Probe	Extended
Pyramidal Horn	Extended
Quad Log Periodic	Extended
Quadrafilar Helix	Extended
Radial Line	Extended
Rhombic	Extended
Ridged Waveguide	Extended
Rod	Extended
Scimitar	Extended
Single Curtain Rhombic	Extended
Single Slot	Extended
Single-Turn Loop	Extended
Skeleton Slot	Extended
Skeleton Slot W/ Reflector	Extended
Sleeve Dipole	Extended
Slot	Extended
Slot Array	Extended
Slotted Waveguide	Extended
Slotted Waveguide Planar Array	Extended
Spiral	Extended
Stacked Yagi	Extended
Standing-Wave Waveguide Planar Array	Extended
Stripline	Extended
Stripline Dipole	Extended
Stub	Extended
Swastika	Extended
Symmetrical Tee	Extended
Synthetic Aperture	Basic
Top Hat	Extended
Tower	Extended

Trailing Wire		Extended
Traveling Wave		Extended
Traveling-Wave Waveguide Planar Array		Extended
Trilinear Array		Extended
Turnstile		Extended
Vee		Extended
Vertical Array		Extended
Vertical Dipole		Extended
Vertical Half Rhombic		Extended
Vertical Radiator		Extended
Vertical Top Hat		Extended
Whip		Basic
Whip Half Wave		Basic
Whip Quarter Wave		Basic
Wullenweber Array		Extended
Yagi Array		Extended
Yagi-Unidirectional Array		Basic
Other	If selected, a clarifying remark SHOULD be entered	Basic

Code List CAU

Used in elements AntFreqs, AntMode, AsgnFreqBase, JRFLEntry, StationConfig

Code
Transmit Only
Receive Only
Transmit-Receive

Code List CAV

Used in element Variance

Code
Additional
Different

Code List CBD

Used in elements AntMode, ObservedLobeAnalysis

Code	Meaning
Cardioid	
Cosecant Squared	
Elliptical	
Fan	
Hyperbolic	
Omni	
Pencil	
Shaped Beam	
Single Symmetrical Lobe	
Other	If selected, a clarifying remark SHOULD be entered

Code List CBO

Used in elements Allocation, AntGain, AntMode, AntPattern, Antenna, Assignment, Common, ConfigFreq, Configuration, Curve, DiagramEndpoint, EMail, Ellipse, EndpointLocation, ExternalReference, IntfReport, JammingChannelProfile, JammingPerformance, JammingPlan, Message, ObservedERPAnalysis,

ObservedLobeAnalysis, ObservedMOPAnalysis, ObservedPolarisationAnalysis, ObservedPulseAnalysis, ObservedRFAnalysis, ObservedScanAnalysis, Point, Polygon, Power, RFSystem, Receiver, SSRequest, SpreadSpectrum, StageLocation, Station, StationLoc, TelephoneFax, TimingDeconflictionProtocol, Transmitter, Trunking, TrunkingAssignment, Tuning, TxMode

Code
Yes
No

Code List CCD

Used in element SSReply

Code	Meaning
Draft	
Pending	
Not Supported	
Supported	
Supported with Recommendations	
Supported with Restrictions	
Request Frequency Assignment	
Temporary Assignment Only	
Other	If selected, a clarifying remark SHOULD be entered

Code List CCI

Used in element POCInformation

Code	Meaning
Submitter	
Reviewer	
Program Manager	
Project Engineer	
Point of Contact	
User	
Supplier	
Spectrum Manager	
Change Author	
Subject Matter Expert	
Other	If selected, a clarifying remark SHOULD be entered

Code List CCL

Used in elements Common, Downgrade, EMail, ExternalReference, TelephoneFax

Code	Meaning
U	Unclassified
R	Restricted (This classification SHALL NOT be used in USA-created datasets)
C	Confidential
S	Secret
T	Top Secret

Code List CCN

Used in element AntHardware

Code	Meaning
MC	
Micro-coaxial	

Micro-miniature coaxial	
MMX	
Neill-Concelman Bayonet	
Neill-Concelman Threaded	
Sub-Miniature version A	
Sub-Miniature version B	
Sub-Miniature version C	
Type N	
Other	If selected, a clarifying remark SHOULD be entered

Code List CCO

Used in elements IntfReport, StationConfig

Code	Meaning
Global	
Eastern Hemisphere	
Western Hemisphere	
Northern Hemisphere	
Southern Hemisphere	
North-eastern Earth Quarter	
North-western Earth Quarter	
South-eastern Earth Quarter	
South-western Earth Quarter	
Narrow Beam	
Other	If selected, a clarifying remark SHOULD be entered

Code List CCT

Used in element Curve

Code	Meaning
Filter	External filter between TxRx and Antenna
Selectivity-IF1	Receiver 1st intermediate frequency selectivity
Selectivity-IF2	Receiver 2nd intermediate frequency selectivity
Selectivity-IF3	Receiver 3rd intermediate frequency selectivity
Selectivity-IF4	Receiver 4th intermediate frequency selectivity
Selectivity-IF5	Receiver 5th intermediate frequency selectivity
Selectivity-Overall	Overall Selectivity
Selectivity-RF	Receiver radio-frequency selectivity
Tx RF Spectrum	Transmitter RF spectrum

Code List CDD

Used in element RelatedSupportability

Code	Meaning
Dependant	Dependant Dataset (e.g. in AsgnAllot or SSRequest, one system cannot operate without the other)
Related	Related Dataset (e.g. in AsgnAllot or SSRequest, each system may still operate without the related system)
Superseded	Superseded Dataset

Code List CDF

Used in element RxModulation

Code	Meaning
Bi-Phase-Level	
Bi-Phase-Mark	
Bi-Phase-Space	
Differential Bi-Phase-Level	
Differential Bi-Phase-Mark	
Differential Bi-Phase-Space	
NRZ	
NRZ-Mark	
NRZ-Space	
Return to Zero	
Split Phase (Manchester)	
Other	If selected, a clarifying remark SHOULD be entered

Code List CDR

Used in element Administrative

Code	Meaning
Code List Change	The dataset adds, deletes, or modifies Codes or Code Lists
Data Invalid	An invalid dataset was received (other than Missing refs).
Data Not Supported	The referenced dataset is not supported by the system.
Data Recall	The referenced dataset is being recalled.
Data Rejected	The received dataset does not fulfill the requirement.
Data Deleted	The referenced datasets should be removed from the recipient local repository
Missing Refs	The referenced dataset has been rejected because of missing cross-references.
Data Retired	The dataset is no longer Active, but may be reactivated at a future date

Code List CDS

Used in elements Receiver, Transmitter, Tuning

Code	Meaning
Exactly	The separation must be exactly the value entered (for use when transmit and receive radio frequencies are assigned in fixed pairs).
Minimum	The separation must be at least the value entered.

Code List CEA

Used in element EarthStation

Code
Specific
Typical

Code List CEF

Used in element Usage

Code	Meaning	Extended
Broadcast Radio/ Television		Extended
Broadcast-Satellite		Extended
Collision Avoidance		Extended
Communications		Basic
Communications-Air Traffic Control		Basic

Communications-Data	Basic
Communications-Emergency	Basic
Communications-Monitor	Basic
Communications-P/P Or Net	Basic
Communications-Pager	Basic
Communications-Radio Relay	Basic
Communications-Satellite	Basic
Communications-Secure Voice	Basic
Communications-Special	Basic
Communications-Spread Spectrum	Basic
Communications-Troposcatter	Basic
Communications-Trunking	Basic
Communications-Video	Basic
Communications-Video/Data	Basic
Control	Basic
Control-Guidance	Extended
Control-Satellite (Uplink)	Extended
Deep Space Mission	Extended
Electronic Warfare	Basic
Electroptical Equipment	Basic
Elint Reconnaissance	Extended
EO-Forward Looking Infrared	Extended
EO-Forward Looking Radar	Extended
EO-Infrared Countermeasures	Extended
EO-Infrared Search And Track	Extended
EO-Infrared Seeker	Extended
EO-Infrared Surveillance	Extended
EO-Infrared Warning Receiver	Extended
EO-Laser Communications	Extended
EO-Laser Designator	Extended
EO-Laser Radar	Extended
EO-Laser Range Finder	Extended
EO-Laser Seeker	Extended
EO-Laser Tracker	Extended

EO-Laser Warning Receiver	Extended
EO-Laser Weapon	Extended
EO-Night Vision/Image Intensifier	Extended
EO-Night Vision/ Thermal Image	Extended
EO-Surveillance	Extended
EO-Telescope	Extended
EO-TV Seeker	Extended
EO-Ultraviolet Warning Receiver	Extended
EW-Active jamming	Extended
EW-Anti-Satellite	Extended
EW-Anti-Satellite Target	Extended
EW-Deception	Extended
EW-ECCM/EPM	Extended
EW-Frequency Hopping	Extended
EW-Intercept	Extended
EW-Jamming	Extended
EW-Jamming-Barrage	Extended
EW-Jamming-Spot	Extended
EW-Jamming-Sweep	Extended
EW-Radar Warning Receiver	Extended
EW-Reactive jamming	Extended
Instrumentation	Basic
Instrumentation-Calibration	Extended
Instrumentation-Equipment Monitor	Extended
Instrumentation-Frequency Standard	Extended
Instrumentation-Test Equipment	Extended
Instrumentation-Test Range	Extended
Interrogator	Extended
Ionospheric Sounder	Extended
Location	Basic
Location-Homing	Extended
Location-Intrusion Detector	Extended
Location-Laser Reflector	Extended
Location-Low-Light Level Television	Extended
Location-Miss Distance Indicator (MDI)	Extended
Location-Satellite Beacon	Extended
Location-Satellite Tracking	Extended
Location-Sonobuoy	Extended

Location-Tracking/ Ranging	Extended
Manned Platform	Extended
Meteor Burst	Basic
Meteorological Aid	Basic
Meteorological Satellite	Extended
Missile Guidance	Basic
Missile Homing	Basic
Missile Tracking	Extended
Nav-Altimeter	Extended
Nav-Beacon	Extended
Nav-Direction Finder	Extended
Nav-DME	Extended
Nav-Drift Angle Measurement	Extended
Nav-GPS/Navstar	Extended
Nav-IFF/SIF	Extended
Navigation Aids	Basic
Nav-ILS	Extended
Nav-Localizer	Extended
Nav-LORAC	Extended
Nav-LORAN	Extended
Nav-MLS	Extended
Nav-Navigation Transponder	Extended
Nav-SHORAN	Extended
Nav-Space Based Navigation Aid	Extended
Nav-TACAN	Extended
Nav-VOR	Extended
Nav-VORTAC	Extended
Nuclear Detonation Detection	Extended
Optical Astronomy	Extended
Photo Reconnaissance	Extended
Radar	Basic
Radar Calibration Aid	Extended
Radar Intercept	Extended
Radar Navigation	Extended
Radar Transponder	Extended
Radar, Spread Spectrum	Extended
Radar-Acquisition	Extended
Radar-Bombing	Extended
Radar-CW	Extended
Radar-Doppler	Extended
Radar-Duplex Repeater	Extended
Radar-Fire Control	Extended
Radar-Ground Control Approach	Extended
Radar-Height Finder	Extended
Radar-Illuminator	Extended
Radar-Mapping	Extended

Radar-Meteorological		Extended
Radar-Monopulse		Extended
Radar-Over The Horizon		Extended
Radar-Precision Approach		Extended
Radar-Pulse Compression		Extended
Radar-Ranging		Extended
Radar-Reconnaissance		Extended
Radar-Search		Extended
Radar-Side Looking		Extended
Radar-Space-Based		Extended
Radar-Special		Extended
Radar-Synthetic Aperture		Extended
Radar-Tail Warning		Extended
Radar-Target Acquisition		Extended
Radar-Terrain Avoidance		Extended
Radar-Terrain Following		Extended
Radar-Tracking		Extended
Radar-Track-While Scan		Extended
Radar-Transponder		Extended
Radar-Velocity Measurement		Extended
Radar-Warfare Simulator		Extended
Radar-Weather Avoidance		Extended
Radio Astronomy		Extended
Radiosonde		Extended
Remote Sensing		Extended
Research		Extended
Retransmission		Extended
Scientific Investigation		Extended
Search And Rescue		Extended
Seeker		Extended
Signal Collection		Extended
Simulator		Extended
Space-Based Surveillance		Basic
Submarine Buoy		Extended
Telemetry		Extended
Telemetry-Satellite		Extended
Trainer		Extended
Other	If selected, a clarifying remark SHOULD be entered	Extended

Code List CEN

Used in elements Notation, NotationTimeline, PotentialVictims

Code	Meaning

CENOT	
DIA Equipment Number	
ELNOT	
Interim identifier	
SPOT	
Emitter ID	
Other	If selected, a clarifying remark SHOULD be entered

Code List CET

Used in element ForceElement

Code	Meaning
Aircraft	
Air Drop	
Helicopter	
V/STOL	
Air Launched Missile	
Armored Land Vehicle	
Non-Tactical Land Vehicle	
Tactical Land Vehicle	
Surface Launched Missile	
Water Launched Missile	
Unmanned Air Vehicles	
Lighter/Boat	
Amphibious Vessel	
Tug Boat	
Command Ship	
Landing Craft, Air Cushion	
Amphibious Command Ship	
Amphibious Assault Ship	
Amphibious Transport Dock	
Amphibious Cargo Ship	
Landing Craft Utility	
Amphibious Assault Vehicle	
Expeditionary Fighting Vehicle	
Rigid Raiding Craft	
Riverine Assault Craft	
High Speed Vessel	
Joint High Speed Vessel	
Aid to Navigation Boat	
High Endurance Cutter	
Motor Life Boat	
Medium Endurance Cutter	

Patrol Boat	
Utility Boat	
Transportable Port Security Boat	
Mine Countermeasure Ship	
Coastal Mine Hunter	
Cruiser	
Aircraft Carrier	
Destroyer	
Guided Missile Destroyer	
Frigates	
Coastal Patrol Craft	
Littoral combat Ship	
Crane Ship	
Ammunition Ship	
Combat Stores Ship	
Research Ship	
Surveillance Ship	
Survey Ship	
Hospital Ship	
Container Ship	
Dry Cargo/Ammunition Ship	
Fast Sealift Ship	
Underway Replenishment Oiler	
Fast Combat Support Ship	
Transport Tanker	
Cable Repair Ship	
Rescue & Salvage	
Ocean-Going Tug	
Aviation Support Ship	
Research Vessel	
Ballistic Missile Submarine	
Attack Submarine	
Salvage Ship	
Submarine Tender	
Yard Patrol Craft	
Special Operations Craft	
Other	If selected, a clarifying remark SHOULD be entered

Code List CFD

Used in element FEDeployment

Code	Meaning
Location-Home	Home location of the force element
Location-Current	Physical location of the force element
Location-Planned	Planned location of the force element
Operating Area-Current	Operating area of the force element (typically a polygon / AOR)
Operating Area-Planned	Planned operating area

Route-Current	Current route
Route-Planned	Planned route
Other	If selected, a clarifying remark SHOULD be entered

Code List CFE

Used in element ForceElement

Code
Specific Platform
Platform Class
Specific Weapon
Weapon Class
Unit

Code List CFM

Used in element TxModulation

Code
Multichannel
Per Channel

Code List CFN

Used in element Link

Code	Meaning	Extended
UNKNOWN		Basic
AIR OPS		Basic
AIR OPS - AIR/AIR COMMS		Basic
AIR OPS - AIR/AIR COMMS - A-EPLRS		Extended
AIR OPS - AIR/ AIR COMMS - AIR DEFENSE/ INTERCEPT		Extended
AIR OPS - AIR/AIR COMMS - BLUE ANGELS		Extended
AIR OPS - AIR/AIR COMMS - HAVE QUICK		Extended
AIR OPS - AIR/AIR COMMS - SATURN		Extended
AIR OPS - AIR/ AIR COMMS - INSTRUCTOR/ STUDENT TRAINING		Extended
AIR OPS - AIR/ AIR COMMS - INTERPLANE		Extended
AIR OPS - AIR/AIR COMMS - PILOT-TO-PILOT		Extended
AIR OPS - AIR/ AIR COMMS - REFUELING		Extended
AIR OPS - AIR/ AIR COMMS - THUNDERBIRDS		Extended

AIR OPS - AIR/ GROUND/AIR COMMS		Basic
AIR OPS - AIR/ GROUND/AIR COMMS - AIR DEFENSE/ INTERCEPT		Extended
AIR OPS - AIR/ GROUND/ AIR COMMS - BROADCAST		Extended
AIR OPS - AIR/ GROUND/AIR COMMS - COMMAND POST		Extended
AIR OPS - AIR/ GROUND/AIR COMMS - FLIGHT FOLLOWING	(Non-ATC)	Extended
AIR OPS - AIR/ GROUND/AIR COMMS - GOLDEN KNIGHTS		Extended
AIR OPS - AIR/ GROUND/AIR COMMS - HAVE QUICK		Extended
AIR OPS - AIR/ GROUND/AIR COMMS - SATURN		Extended
AIR OPS - AIR/ GROUND/AIR COMMS - PILOT-TO-DISPATCHER		Extended
AIR OPS - AIR/ GROUND/AIR COMMS - PILOT-TO-METRO		Extended
AIR OPS - AIR/ GROUND/ AIR COMMS - SQUADRON/WING COMMON		Extended
AIR OPS - AIR/ GROUND/AIR COMMS - SOF	SOF = SUPERVISOR OF FLYING	Extended
AIR OPS - AIR/ GROUND/AIR COMMS - TRAINING		Extended
AIR OPS - AIR TRAFFIC CONTROL		Basic
AIR OPS - AIR TRAFFIC CONTROL - APPROACH CONTROL		Extended
AIR OPS - AIR TRAFFIC CONTROL - ATIS	ATIS = Auto Terminal Information Service	Extended

AIR OPS - AIR TRAFFIC CONTROL - CLEARANCE DELIVERY		Extended
AIR OPS - AIR TRAFFIC CONTROL - DBRITE		Extended
AIR OPS - AIR TRAFFIC CONTROL - DEPARTURE CONTROL		Extended
AIR OPS - AIR TRAFFIC CONTROL - FEEDER CONTROL		Extended
AIR OPS - AIR TRAFFIC CONTROL - FLIGHT INSPECTION		Extended
AIR OPS - AIR TRAFFIC CONTROL - GCA		Extended
AIR OPS - AIR TRAFFIC CONTROL - GROUND CONTROL		Extended
AIR OPS - AIR TRAFFIC CONTROL - LOCAL CONTROL		Extended
AIR OPS - AIR TRAFFIC CONTROL - TOWER		Extended
AIR OPS - EXECUTIVE		Basic
AIR OPS - EXECUTIVE - AIR FORCE ONE		Extended
AIR OPS - EXECUTIVE - AIRBORNE COMMAND CENTER		Extended
AIR OPS - EXECUTIVE - GENERAL OFFICER SUPPORT		Extended
AIR OPS - EXECUTIVE - ERCS	ERCS = Emergency Rocket Comms System	Extended
AIR OPS - EXECUTIVE - MYSTIC STAR		Extended
AIR OPS - EXECUTIVE - NAOC (National Airborne OPS Center)	AIR OPS - EXECUTIVE - NAOC (National Airborne OPS Center)	Extended
AIR OPS - EXECUTIVE - NORAD		Extended
AIR OPS - EXECUTIVE - WHCA (White House COMMS Agency)	AIR OPS - EXECUTIVE - WHCA (White House COMMS Agency)	Extended
AIR OPS - FLIGHT TEST		Basic

AIR OPS - NAVAIDS		Basic
AIR OPS - NAVAIDS - AIR ROUTE SURVEILLANCE RADAR		Extended
AIR OPS - NAVAIDS - AIRPORT SURVEILLANCE RADAR		Extended
AIR OPS - NAVAIDS - BEACON		Extended
AIR OPS - NAVAIDS - ETCAS	ETCAS = Enhanced Traffic Collision Avoid System	Extended
AIR OPS - NAVAIDS - IFF/SIF		Extended
AIR OPS - NAVAIDS - ILS	ILS = instrument landing system	Extended
AIR OPS - NAVAIDS - MLS	MLS = Microwave Landing System	Extended
AIR OPS - NAVAIDS - PAR		Extended
AIR OPS - NAVAIDS - RF TAGS	(Radio Frequency Tags and Interrogators)	Extended
AIR OPS - NAVAIDS - TACAN		Extended
AIR OPS - NAVAIDS - TCAS	TCAS = Traffic Collision Avoidance System	Extended
AIR OPS - NAVAIDS - VOR		Extended
AIR OPS - NAVAIDS - VORTAC		Extended
AIR OPS - NAVAIDS - WEATHER RADAR		Extended
AIR OPS - TELECOMMAND		Basic
AIR OPS - TELECOMMAND - COMMAND DESTRUCT/ TERMINATION		Extended
AIR OPS - TELECOMMAND - DRONE CONTROL		Extended
AIR OPS - TELECOMMAND - MICROWAVE DATA LINK		Extended
AIR OPS - TELECOMMAND - TMGS	TMGS = Transportable Mobile Ground Subsystem	Extended
AIR OPS - TELECOMMAND - TOSS	TOSS = TV Ordinance Scoring System	Extended
AIR OPS - UAV	UAV = Unmanned Aerial Vehicle	Basic
AIR OPS - TRAINING		Basic
AIR OPS - TARGET ACQUISITION		Basic

AIR OPS - TARGET ACQUISITION - LONGBOW		Extended
AIR OPS - TARGET ACQUISITION - MISSILE		Extended
AIR OPS - APPROACH/ DEPARTURE CONTROL		Basic
GROUND OPS		Basic
GROUND OPS - AIR DEFENSE		Basic
GROUND OPS - AIR DEFENSE - ARTILLERY		Extended
GROUND OPS - AIR DEFENSE - AVENGER-STC		Extended
GROUND OPS - AIR DEFENSE - FAADC2	FAADC2 = Forward Area Air Defense, Command and Control	Extended
GROUND OPS - AIR DEFENSE - LINEBACKER		Extended
GROUND OPS - AIR DEFENSE - PATRIOT		Extended
GROUND OPS - AIR DEFENSE - SENTINEL	(AN/MPQ-64 Surveillance Radar)	Extended
GROUND OPS - ENGINEERS		Basic
GROUND OPS - ENGINEERS - GRIZZLY	(M1 Breacher MineSweeper)	Extended
GROUND OPS - ENGINEERS - M93A1 FOX		Extended
GROUND OPS - ENGINEERS - WOLVERINE	(Assault Bridge)	Extended
GROUND OPS - ARTILLERY		Basic
GROUND OPS - ARTILLERY - AQF	AQF = Advanced Quick Fix	Extended
GROUND OPS - ARTILLERY - LLDR	LLDR = Lightweight Laser Designator Rangefinder)	Extended
GROUND OPS - ARTILLERY - MLRS	MLRS = Multiple Launch Rocket System	Extended
GROUND OPS - BATTLE COMMAND		Basic
GROUND OPS - BATTLE COMMAND - A2C2S	A2C2S = Army Airborne Command & Control System	Extended
GROUND OPS - BATTLE COMMAND - A-EPLRS (SADL)		Extended

GROUND OPS - BATTLE COMMAND - CTT	CTT = Commander's Tactical Terminal	Extended
GROUND OPS - BATTLE COMMAND - EPLRS	EPLRS = Enhanced Position Location Reporting System	Extended
GROUND OPS - BATTLE COMMAND - LAND WARRIOR		Extended
GROUND OPS - BATTLE COMMAND - NTDR	NTDR = Near Term Digital Radio	Extended
GROUND OPS - BATTLE COMMAND - SCAMP	SCAMP = Single Channel Anti-Jam Manportable Terminal	Extended
GROUND OPS - BATTLE COMMAND - SINCGARS	SINCGARS = Single Channel Ground and Airborne Radio System	Extended
GROUND OPS - BATTLE COMMAND - SINCGARS-ASIP	SINCGARS-ASIP = Single Channel Ground and Airborne Radio System-Advanced System Improvement Plan	Extended
GROUND OPS - BATTLE COMMAND - WIN-T	WIN-T = Warfighter Information Network-Tactical	Extended
GROUND OPS - CAVALRY		Basic
GROUND OPS - CAVALRY - STRIKER II	(Advanced Fire Support/Scout/Surveillance System)	Extended
GROUND OPS - CLOSE AIR SUPPORT (CAS)		Basic
GROUND OPS - COMBAT CONTROL TEAM		Basic
GROUND OPS - COMMAND POST		Basic
GROUND OPS - ELECTRONIC WARFARE		Basic
GROUND OPS - ELECTRONIC WARFARE - ACS	ACS = Aerial Common Sensor	Extended
GROUND OPS - ELECTRONIC WARFARE - AHFEWS	AHFEWS = Army HF EW System	Extended
GROUND OPS - ELECTRONIC WARFARE - ARL	ARL = Aerial Reconnaissance-Low	Extended
GROUND OPS - ELECTRONIC WARFARE - IEWCS	IEWCS = Intelligence Electronic Warfare Common Sensor	Extended
GROUND OPS - ELECTRONIC WARFARE - LMRDFS	LMRDFS = Light Man-portable Radio Direction Finding System	Extended
GROUND OPS - ELECTRONIC WARFARE - TACJAM	TACJAM = Tactical COMMS Jamming System	Extended

GROUND OPS - ELECTRONIC WARFARE - TEAMMATE		Extended
GROUND OPS - ELECTRONIC WARFARE - TRACKWOLF		Extended
GROUND OPS - FIRE SUPPORT		Basic
GROUND OPS - FIRE SUPPORT - AFATDS		Extended
GROUND OPS - FIRE SUPPORT - ARTILLERY		Extended
GROUND OPS - FIRE SUPPORT - CLOSE AIR SUPPORT (CAS)		Extended
GROUND OPS - FIRE SUPPORT - MFCS	MFCS = Mortar Fire control System	Extended
GROUND OPS - FORWARD AIR CONTROL POST		Basic
GROUND OPS - GROUND INTERDICTION		Basic
GROUND OPS - GROUND INTERDICTION - CIWS	CIWS = Close-In Weapons System	Extended
GROUND OPS - GROUND INTERDICTION - GBCS-L	GBCS-L = Ground Based Common Sensor-Light	Extended
GROUND OPS - GROUND INTERDICTION - GSR	GSR = Ground Surveillance Radar	Extended
GROUND OPS - GROUND INTERDICTION - I-REMBASS	I-REMBASS = Improved-Remotely Monitored Battlefield Sensor System	Extended
GROUND OPS - GROUND INTERDICTION - TRAILBLAZER	(Ground Based COMMS Intelligence System)	Extended
GROUND OPS - INFANTRY		Basic
GROUND OPS - INTELLIGENCE		Basic
GROUND OPS - INTELLIGENCE - ASAS	ASAS = All Source Analysis System	Extended
GROUND OPS - TACCS		Basic
GROUND OPS - TRAINING		Basic
SEA OPS		Basic
SEA OPS - ASW	ASW = ANTI-SUBMARINE WARFARE	Basic

SEA OPS - ASW - SONOBOUY	ASW = ANTI-SUBMARINE WARFARE	Extended
SEA OPS - ELECTRONIC WARFARE		Basic
SEA OPS - FLEET SUPPORT		Basic
SEA OPS - FORACS	FORACS = Fleet Operational Readiness Accuracy Check Site	Basic
SEA OPS - INTELLIGENCE		Basic
SEA OPS - INTELLIGENCE - TARGET		Extended
SEA OPS - NAVAIDS		Basic
SEA OPS - NAVAIDS - NAVIGATION RADAR		Extended
SEA OPS - RESUPPLY		Basic
SEA OPS - SHIP/AIR OPS		Basic
SEA OPS - SHIP/ SHIP		Basic
SEA OPS - SHIP/ SHIP - AEGIS		Extended
SEA OPS - SHIP/ SHORE OPS		Basic
SEA OPS - SHIP/ SHORE OPS - HARBOR-PORT OPS		Extended
SEA OPS - SHIP/ SHORE OPS - NAVAL GUNFIRE SUPPORT		Extended
SEA OPS - TRAINING		Basic
SPACE OPS		Basic
SPACE OPS - EXPERIMENTAL		Basic
SPACE OPS - SATCOM	SATCOM = SATELLITE COMMS	Basic
SPACE OPS - SATCOM - AEHF	AEHF = Advanced EHF	Extended
SPACE OPS - SATCOM - AFSATCOM	AFSATCOM = Air Force Satellite Comms	Extended
SPACE OPS - SATCOM - DSCS	DSCS = Defense Satellite COMMS System	Extended
SPACE OPS - SATCOM - FLTSATCOM	FLTSATCOM = Fleet Satellite COMMS	Extended
SPACE OPS - SATCOM - GBS	GBS = Global Broadcast System	Extended
SPACE OPS - SATCOM - LEASAT	LEASAT =Leased Satellite	Extended
SPACE OPS - SATCOM - Milstar		Extended
SPACE OPS - SATCOM - SPITFIRE	(Manpack UHF SATCOM DAMA Terminal)	Extended

SPACE OPS - SATCOM - Trojan SPIRIT		Extended
SPACE OPS - SATCOM - WGS	WGS = Wideband Global SATCOM	Extended
SPACE OPS - SATCOM - UFO	UFO = UHF Follow-On	Extended
SPACE OPS - GPS	GPS = GLOBAL POSITIONING SYSTEM	Basic
SPACE OPS - METEOROLOGICAL		Basic
SPACE OPS - METEOROLOGICAL - DMSP	DMSP = Defense Meteorological Satellite Program	Extended
SPACE OPS - METEOROLOGICAL - SAWDS	SAWDS = SATELLITE AUTOMATED WX DIST SYS	Extended
SPACE OPS - NASA		Basic
SPACE OPS - NASA - SHUTTLE		Extended
RANGE OPS		Basic
RANGE OPS - EXPERIMENTAL		Basic
RANGE OPS - FLIGHT TEST		Basic
RANGE OPS - RANGE CONTROL		Basic
RANGE OPS - RANGE CONTROL - OCCS SUPPORT		Extended
RANGE OPS - RANGE CONTROL - RDMS	RDMS = Range Data Management Subsystem	Extended
RANGE OPS - RANGE CONTROL - TELEMETRY		Extended
RANGE OPS - RANGE CONTROL - TRUNKING		Extended
RANGE OPS - SAFETY		Basic
RANGE OPS - SIMULATOR		Basic
RANGE OPS - TEST RANGE		Basic
RANGE OPS - TEST RANGE - TARGET		Extended
RANGE OPS - TEST RANGE - TARGET SCORING		Extended
RANGE OPS - TEST RANGE - TEST RANGE TIMING		Extended
RANGE OPS - TEST RANGE - TCRS	TCRS = Target Control System	Extended
RANGE OPS - TEST RANGE - TOSS	TOSS = TV Ordinance Scoring System	Extended
RANGE OPS - TRAINING		Basic

RANGE OPS - TRAINING - MITT/ DTES	MITT/DTES = Mobile Integrated Tactical Terminal/Distributed Common Ground System Test and Evaluation Strategy	Extended
SURVEILLANCE/ RECONNAISSANCE		Basic
SURVEILLANCE/ RECONNAISSANCE - AIR DEFENSE WARNING		Basic
SURVEILLANCE/ RECONNAISSANCE - AIR DEFENSE WARNING - AWACS	AWACS = Airborne Warning & Control System	Extended
SURVEILLANCE/ RECONNAISSANCE - AIR DEFENSE WARNING - BMEWS	BMEWS = Ballistic Missile Early Warning System	Extended
SURVEILLANCE/ RECONNAISSANCE - AIR DEFENSE WARNING - CARS	CARS = Contingency Airborne Reconnaissance System	Extended
SURVEILLANCE/ RECONNAISSANCE - AIR DEFENSE WARNING - GRCS	GRCS = Guardrail Common Sensor	Extended
SURVEILLANCE/ RECONNAISSANCE - AIR DEFENSE WARNING - JSS	JSS = JOINT SURVEILLANCE SYSTEM	Extended
SURVEILLANCE/ RECONNAISSANCE - AIR DEFENSE WARNING - OTHR/ ROTHR	OTHR/ROTHR = Over-the-Horizon Radar	Extended
SURVEILLANCE/ RECONNAISSANCE - AIR DEFENSE WARNING - PAVE PAWS		Extended
SURVEILLANCE/ RECONNAISSANCE - TRAINING		Basic
SPECIAL OPS		Basic
SPECIAL OPS - AIR FORCE SPECIAL OPS		Basic
SPECIAL OPS - ARMY SPECIAL OPS		Basic
SPECIAL OPS - ARMY SPECIAL OPS - CIVIL AFFAIRS		Extended
SPECIAL OPS - ARMY SPECIAL OPS - PSYCHOLOGICAL OPS		Extended
SPECIAL OPS - ARMY SPECIAL OPS - RANGER UNITS		Extended

SPECIAL OPS - ARMY SPECIAL OPS - SPECIAL FORCES		Extended
SPECIAL OPS - NAVY SPECIAL OPS		Basic
C3		Basic
C3 - COMMAND NET		Basic
C3 - COMMAND NET - GLOBAL		Extended
C3 - COMMAND NET - GLOBAL ALE	ALE = Automatic Link Establishment	Extended
C3 - COMMAND NET - GLOBAL BLACK		Extended
C3 - COMMAND NET - GLOBAL DISCRETE		Extended
C3 - COMMAND NET - GLOBAL RED		Extended
C3 - COMMAND NET - HICOM (High Command)		Extended
C3 - DATA LINK		Basic
C3 - DATA LINK - ARTS (Telemetry)	ARTS = Automated Remote Tracking System	Extended
C3 - DATA LINK - JTIDS/MIDS		Extended
C3 - DATA LINK - SGLS	SGLS = Space Ground Link Subsystem	Extended
C3 - DATA LINK - TADIL-A		Extended
C3 - DATA LINK - TADIL-C		Extended
C3 - COMMS		Basic
C3 - COMMS - IONOSPHERIC SOUNDER		Extended
C3 - COMMS - ISYSCON	ISYSCON = Integrated System Control	Extended
C3 - COMMS - MARS	MARS = Military Affiliated Radio System	Extended
C3 - COMMS - MICROWAVE		Extended
C3 - COMMS - MSE	MSE = Mobile Subscriber Equipment	Extended
C3 - COMMS - RADIO RELAY		Extended
C3 - COMMS - TACTS	TACTS = Tactical Trunk Signaling	Extended
C3 - GCCS	GCCS = Global Command & Control System	Basic
C3 - SATELLITE COMMS		Basic
C3 - SATELLITE COMMS - AEHF	AEHF = Advanced EHF	Extended
C3 - SATELLITE COMMS - AFSATCOM		Extended
C3 - SATELLITE COMMS - DSCS		Extended
C3 - SATELLITE COMMS - FLTSATCOM		Extended

C3 - SATELLITE COMMS - GBS	GBS = Global Broadcast System	Extended
C3 - SATELLITE COMMS - LEASAT		Extended
C3 - SATELLITE COMMS - MILSTAR		Extended
C3 - SATELLITE COMMS - SPITFIRE	(Manpack UHF SATCOM DAMA Terminal)	Extended
C3 - SATELLITE COMMS - TROJAN SPIRIT		Extended
C3 - SATELLITE COMMS - WGS	WGS = Wideband Global SATCOM	Extended
C3 - SATELLITE COMMS - UFO	UFO = UHF Follow-On	Extended
C3 - TELEMETERY		Basic
C3 - TELEMETERY - ARTS		Extended
C3 - TELEMETERY - SGLS		Extended
SUSTAINING OPS		Basic
SUSTAINING OPS - ADMINISTRATIVE		Basic
SUSTAINING OPS - ADMINISTRATIVE - INSTALLATION PA SYSTEM (Giant Voice)		Extended
SUSTAINING OPS - ADMINISTRATIVE - PAGING		Extended
SUSTAINING OPS - ADMINISTRATIVE - TRAVELERS INFORMATION SYSTEM		Extended
SUSTAINING OPS - ADMINISTRATIVE - UNLICENSED DEVICE		Extended
SUSTAINING OPS - ADMINISTRATIVE - WIRELESS LOCAL AREA NETWORK		Extended
SUSTAINING OPS - ADMINISTRATIVE - WIRELESS MIKE		Extended
SUSTAINING OPS - CIVIL ENGINEERING		Basic
SUSTAINING OPS - CIVIL ENGINEERING - CIVIL WORKS		Extended
SUSTAINING OPS - CIVIL ENGINEERING - CONSTRUCTION		Extended
SUSTAINING OPS - CIVIL ENGINEERING		Extended

- INDUSTRIAL CONTROLS	
SUSTAINING OPS - CIVIL ENGINEERING - PRIME BEEF	Extended
SUSTAINING OPS - CIVIL ENGINEERING - PUBLIC WORKS	Extended
SUSTAINING OPS - CIVIL ENGINEERING - RED HORSE	Extended
SUSTAINING OPS - CIVIL ENGINEERING - SAFETY	Extended
SUSTAINING OPS - CIVIL ENGINEERING - SEABEES	Extended
SUSTAINING OPS - CIVIL ENGINEERING - UTILITIES	Extended
SUSTAINING OPS - COMMAND AND CONTROL	Basic
SUSTAINING OPS - COMMAND AND CONTROL - BASE OPS	Extended
SUSTAINING OPS - COMMAND AND CONTROL - COMMAND NET	Extended
SUSTAINING OPS - COMMAND AND CONTROL - MOMS	Extended
SUSTAINING OPS - COMMAND AND CONTROL - TRUNKING	Extended
SUSTAINING OPS - EMERGENCY SERVICES	Basic
SUSTAINING OPS - EMERGENCY SERVICES - ALARM SYSTEMS	Extended
SUSTAINING OPS - EMERGENCY SERVICES - DISASTER PLANNING	Extended
SUSTAINING OPS - EMERGENCY SERVICES - EOD	Extended
SUSTAINING OPS - EMERGENCY SERVICES - FIRE	Extended
SUSTAINING OPS - EMERGENCY SERVICES - HAZMAT	Extended

SUSTAINING OPS - EMERGENCY SERVICES - MEDICAL		Extended
SUSTAINING OPS - EMERGENCY SERVICES - WARNING SYSTEM		Extended
SUSTAINING OPS - ENVIRONMENTAL		Basic
SUSTAINING OPS - ENVIRONMENTAL - RESOURCES CONSERVATION		Extended
SUSTAINING OPS - LAW ENFORCEMENT		Basic
SUSTAINING OPS - LAW ENFORCEMENT - CID	CID = Criminal Investigation Command	Extended
SUSTAINING OPS - LAW ENFORCEMENT - DIS	DIS = DEFENSE INVESTIGATIVE SERVICE	Extended
SUSTAINING OPS - LAW ENFORCEMENT - MILITARY POLICE		Extended
SUSTAINING OPS - LAW ENFORCEMENT - NCIS	NCIS = NAVAL CRIMINAL INVESTIGATIVE SERVICE	Extended
SUSTAINING OPS - LAW ENFORCEMENT - OSI	OSI = OFFICE OF SPECIAL INVESTIGATIONS	Extended
SUSTAINING OPS - LAW ENFORCEMENT - SCOPE SHIELD		Extended
SUSTAINING OPS - LAW ENFORCEMENT - SECURITY FORCE		Extended
SUSTAINING OPS - LAW ENFORCEMENT - SHORE PATROL		Extended
SUSTAINING OPS - LAW ENFORCEMENT - SPEED MEASUREMENT SYSTEMS		Extended
SUSTAINING OPS - LAW ENFORCEMENT - SURVEILLANCE SYSTEMS		Extended
SUSTAINING OPS - LAW ENFORCEMENT - TETHERED AEROSTAT RADAR		Extended
SUSTAINING OPS - LAW ENFORCEMENT - WEAPONS STORAGE PROTECTION		Extended

SUSTAINING OPS - MAINTENANCE		Basic
SUSTAINING OPS - MAINTENANCE - AIRCRAFT		Extended
SUSTAINING OPS - MAINTENANCE - COMMS		Extended
SUSTAINING OPS - MAINTENANCE - EQUIPMENT CHECKS		Extended
SUSTAINING OPS - MAINTENANCE - MISSILE		Extended
SUSTAINING OPS - MAINTENANCE - MUNITIONS		Extended
SUSTAINING OPS - MAINTENANCE - RAMP CONTROL		Extended
SUSTAINING OPS - MAINTENANCE - REMOTE CONTROL CRANE		Extended
SUSTAINING OPS - MAINTENANCE - RUNWAY ICE DETECTION SYSTEMS		Extended
SUSTAINING OPS - MAINTENANCE - SNOW REMOVAL		Extended
SUSTAINING OPS - METEOROLOGICAL		Basic
SUSTAINING OPS - METEOROLOGICAL - AMSS	AMSS = Automatic Meteorological Sensor System	Extended
SUSTAINING OPS - METEOROLOGICAL - ASOS	ASOS = Auto Surface Observation System	Extended
SUSTAINING OPS - METEOROLOGICAL - AWOS		Extended
SUSTAINING OPS - METEOROLOGICAL - GOES	GOES = Geostationary Operational Environmental Satellites	Extended
SUSTAINING OPS - METEOROLOGICAL - IMETS	IMETS = Integrated Meteorological System	Extended
SUSTAINING OPS - METEOROLOGICAL - NEXRAD		Extended
SUSTAINING OPS - METEOROLOGICAL - WEATHER		Extended
SUSTAINING OPS - METEOROLOGICAL - WIND PROFILER		Extended

SUSTAINING OPS - NATURAL RESOURCES		Basic
SUSTAINING OPS - NATURAL RESOURCES - CONSERVATION		Extended
SUSTAINING OPS - NATURAL RESOURCES - WILDLIFE PRESERVATION		Extended
SUSTAINING OPS - NAVAIDS CONTROLS		Basic
SUSTAINING OPS - NAVAIDS CONTROLS - REMOTE BARRIER CONTROL SYSTEMS		Extended
SUSTAINING OPS - NAVAIDS CONTROLS - RUNWAY LIGHTING CONTROL		Extended
SUSTAINING OPS - SUPPLY AND LOGISTICS		Basic
SUSTAINING OPS - SUPPLY AND LOGISTICS - AMPS	AMPS = Air Movement Planning System	Extended
SUSTAINING OPS - SUPPLY AND LOGISTICS - CSSCS	CSSCS = Combat Service Support Control System	Extended
SUSTAINING OPS - SUPPLY AND LOGISTICS - INVENTORY/ INVENTORY CONTROLS		Extended
SUSTAINING OPS - SUPPLY AND LOGISTICS - MTS	MTS = Movement Tracking System	Extended
SUSTAINING OPS - SUPPLY AND LOGISTICS - NISTARS	NISTARS = Navy Integrated Storage Tracking & Retrieval System	Extended
SUSTAINING OPS - SUPPLY AND LOGISTICS - POL		Extended
SUSTAINING OPS - SUPPLY AND LOGISTICS - RESUPPLY		Extended
SUSTAINING OPS - SUPPLY AND LOGISTICS - RF TAGS		Extended

SUSTAINING OPS - SUPPLY AND LOGISTICS - SHIPYARD	Extended
SUSTAINING OPS - TRAINING	Basic
SUSTAINING OPS - TRANSPORTATION	Basic
SUSTAINING OPS - TRANSPORTATION - MOTOR POOL	Extended
SUSTAINING OPS - TRANSPORTATION - TAXI	Extended
DOMESTIC SUPPORT OPS	Basic
DOMESTIC SUPPORT OPS - COMMUNITY ASSISTANCE	Basic
DOMESTIC SUPPORT OPS - COMMUNITY ASSISTANCE - AERO CLUB	Extended
DOMESTIC SUPPORT OPS - COMMUNITY ASSISTANCE - COLOR/HONOR GUARD	Extended
DOMESTIC SUPPORT OPS - COMMUNITY ASSISTANCE - EDUCATION	Extended
DOMESTIC SUPPORT OPS - COMMUNITY ASSISTANCE - MUTUAL AID	Extended
DOMESTIC SUPPORT OPS - COMMUNITY ASSISTANCE - PUBLIC WORKS	Extended
DOMESTIC SUPPORT OPS - COMMUNITY ASSISTANCE - TRAINING	Extended
DOMESTIC SUPPORT OPS - CONTINGENCY	Basic
DOMESTIC SUPPORT OPS - CONSEQUENCE MANAGEMENT	Basic

DOMESTIC SUPPORT OPS - CONSEQUENCE MANAGEMENT - CBR	Extended
DOMESTIC SUPPORT OPS - CONSEQUENCE MANAGEMENT - CIVIL SUPPORT TEAM	Extended
DOMESTIC SUPPORT OPS - CONSEQUENCE MANAGEMENT - ENVIRONMENTAL CLEANUP	Extended
DOMESTIC SUPPORT OPS - CONSEQUENCE MANAGEMENT - FEMA	Extended
DOMESTIC SUPPORT OPS - CONSEQUENCE MANAGEMENT - HAZARDOUS MATERIAL RELEASE	Extended
DOMESTIC SUPPORT OPS - CONSEQUENCE MANAGEMENT - TECHNICAL ESCORT UNIT	Extended
DOMESTIC SUPPORT OPS - CONSEQUENCE MANAGEMENT - TRAINING	Extended
DOMESTIC SUPPORT OPS - LAW ENFORCEMENT	Basic
DOMESTIC SUPPORT OPS - LAW ENFORCEMENT - ANTI-TERRORISM	Extended
DOMESTIC SUPPORT OPS - LAW ENFORCEMENT - CIVIL DISTURBANCES	Extended
DOMESTIC SUPPORT OPS - LAW ENFORCEMENT - COUNTER DRUG	Extended
DOMESTIC SUPPORT OPS - LAW ENFORCEMENT - PROJECT COTHEN	Extended

DOMESTIC SUPPORT OPS - LAW ENFORCEMENT - SPECIAL SECURITY OPS		Extended
OTHER OPS - LAW ENFORCEMENT		Basic
OTHER OPS - LAW ENFORCEMENT - DTSS	DTSS = Digital Topographic Support System	Extended
OTHER OPS - LAW ENFORCEMENT - ETRAC	ETRAC = Enhanced Tactical Radar Correlator	Extended
OTHER OPS - LAW ENFORCEMENT - RDTE SUPPORT		Extended
OTHER OPS - EXERCISE		Basic
OTHER OPS - EXPERIMENTAL		Basic
OTHER OPS - HYDROLOGIC		Basic
OTHER OPS - HYDROLOGIC - LOCKS AND DAMS		Extended
OTHER OPS - SEARCH AND RESCUE		Basic
OTHER OPS - SEARCH AND RESCUE - CAP	CAP = Civil Air Patrol	Extended
OTHER OPS - SEISMIC		Basic
OTHER OPS - SPECIAL COURIER		Basic
OTHER OPS - SPECIAL PROJECTS		Basic
OTHER OPS - SPECIAL PROJECTS - HAARP	HAARP = High Frequency Active Auroral Research Program	Extended
OTHER OPS - SURVEY		Basic
OTHER OPS - TEST AND MEASUREMENT		Basic

Code List CFO

Used in elements ObservedRFAnalysis, RxMode, TxMode

Code	Meaning
Hz	Hertz
ppm	parts per million

Code List CFR

Used in elements RelatedOrganisation, RelatedSystem

Code	Meaning
Child	The referenced Organisation / Force Element is child of the current Organisation / Force Element

Parent	The referenced Organisation / Force Element is parent of the current Organisation / Force Element
Sibling	The referenced Organisation / Force Element is a sibling of the current Organisation / Force Element

Code List CFT

Used in element RelatedOrganisation

Code
Budget
Plan ORBAT
Reference ORBAT
Related
Reporting

Code List CHN

Used in element Assignment

Code	Meaning
Host nominations acceptable	Host Nation Nominations are acceptable.
NATO HQ-assigned	The frequency is preassigned by NATO headquarters (NHQC3S/SC3IB).
NUFAS-assigned	The frequency was assigned by the NATO UHF Frequency Assignment Software (NUFAS) at NHQC3S/SC3IB.
User-assigned	The frequency was preassigned by the user.

Code List CIC

Used in element DiagramEndpoint

Code	Meaning
Airborne	
Earth	
Fixed	
Land	
Land Mobile	
METAIDS Ground	
METAIDS Radar	
METAIDS Radiosonde	
Mobile Earth-Air	

Mobile Earth-Land	
Mobile Earth-Sea	
Radar-Air	
Radar-Land	
Radar-Sea	
Satellite	
Sea	
Secondary Radar-Air	
Secondary Radar-Land	
Secondary Radar-Sea	
Target	
Transport	
Other	If selected, a clarifying remark SHOULD be entered

Code List CIN

Used in element Deployment

Code	Meaning
Air	
Amphibious	
Deep Space	
Handheld	
Land	
Land Fixed	
Land Mobile	
Manpack	
Missile	
Non Synchronous Orbit	
Unmanned Aerial Vehicle (UAV)	
Unmanned Aircraft System (UAS)	

Unmanned Ground Vehicle (UGV)	
Unmanned Surface Vehicle (USV)	
Unmanned Underwater Vehicle (UUV)	
Satellite	
Shipboard	
Space	
Submarine	
Synchronous Orbit	
Transport	
Water	
Other	If selected, a clarifying remark SHOULD be entered

Code List CIR

Used in element Assigned

Code	Meaning
Not requested-Security	Registration with ITU-R not requested for security reasons
Not required	Registration with ITU-R not required
Outside Rules	Not notified to ITU-R due to the rules laid down in the ITU regulations
Pending	Pending notification to ITU-R
Registered	Registered with ITU-R
Registered on Insistence	Registration with ITU-R on an insistence basis
Registered-Needs modification	Registered with ITU-R but needs to be modified
Required	Registration with ITU-R is required
Unfavourable	Notified to ITU-R but received unfavourable findings and therefore not registered in the International Frequency List (IFL)

Code List CJ1

Used in element IntfReport

Code
Environmental
Interference
Intrusion
Jamming
Meaconing

Code List CLC

Used in element ForceElement

Code	Meaning
Academy	
Accounts Control Section	
Activity	
Admission	
Agency	
Air Facility	
Air Patrol	
Air Station	
Annex	

Area
Area Regional Office
Army Group
Arsenal
Augmentation
Band
Barge
Barracks
Base
Basin
Battalion
Battalion Landing Team
Battery
Board
Boat
Branch
Brigade
Business Unit
Camp
Centre
Clinic
College
Command
Commission
Communications-Electronics Complex
Communications-Electronics Package
Company
Consolidated Distribution Centre
Corps
Corps Artillery
Crew
Defense Attache Office
Depot
Detachment
Detachment For MEB
Detachment For MEF
Detachment For MEU
Detachment Residual
Detail
Director/Directorate
Dispensary
District
Division
Division Artillery
Element
Facility
Field Artillery
Field Operating Activity
Flight
Flotilla

Force
Force Troops
Garrison
Group
Home
Hospital
HQ
HQ And HQ Battery
HQ And HQ Company
HQ And HQ Detachment
HQ And HQ Troop
HQ And Maintenance Company
HQ And Service Battery
HQ And Service Company
HQ And Support Company
HQ Company
HQ Company And Band
HQ Detachment
II MEB And MEU DET Residual
II MEB Detachment Residual
Inspector
Installation
Institute
Laboratory
Library
Magazine
Maintenance Float
Manager
Marine Air Group
Marine Air Wing
Marine Expeditionary Brigade
Marine Expeditionary Force
Marine Expeditionary Unit
Marine Forces
MEB DET Residual
Merchant Ship
MEU DET Residual
Military Assistance Advisory Group
Mission
MSC One-Time Charter
MSC Ship
Museum
Navy Support Craft
No Significant Level

Numbered Air Force
Numbered Army
Numbered Fleet
Observatory
Office
Office Of Defense Cooperation
Office Of Military Cooperation
Officer
Officer-In-Charge
Operating Location
Package
Packet
Party
Plant
Platoon
Port
Port Captain
Post Office
Proving Ground
Range
Regiment
Regimental Combat Team
Regimental Landing Team
Region
Region(al)
Representative
Reserves
School
Section
Sector
Service
Service Company
Ship, Foreign/ Merchant
Shipyard
Shop
Shop Stores
Special Troops
Squad
Squadron
Staff
Station
Store
Substation
Subunit
Supervisor
Support Command
System
Task Element
Task Force
Task Group
Task Unit

Team	
Terminal	
Train	
Troop	
Unit	
US Ship	
USCG Cutter	
Wing	
Works	
Other	If selected, a clarifying remark SHOULD be entered

Code List CLO

Used in element FreqConversion

Code
LO above or below RF
LO above RF
LO below RF

Code List CLS

Used in element Satellite

Code	Meaning
Cancelled	
Decayed	
Firm Future	
Ground Spare	
Inoperative	
Launched	
Operational	
Orbital Spare	
Orbital Test	
Partially Operational	
Possible Future	
Retired	
Total Launch Failure	
Other	If selected, a clarifying remark SHOULD be entered

Code List CMC

Used in element ForceElement

Code	Meaning
Admin and Special Services	
Armor/Antitank	
Artillery /Air and Space Defense	
Aviation Support	
Aviation/Anti-Aircraft	
Chemical/Ordnance	
Civil Affairs	
Civil Air Patrol	
Combat Support	
Communications	
Composite Forces	
Engineering	
Finance	
Infantry	

Intelligence / Psychological Ops	
Law enforcement / Security	
Maintenance	
Major Command	
Medical/Dental	
Miscellaneous	
Multifunction Post	
Naval Support	
Recruiting	
Research and Development	
Special Ops	
Supply	
Tactical Control	
Task Organisation	
Training	
Transportation / Fleet Auxiliaries	
Warships	
Other	If selected, a clarifying remark SHOULD be entered

Code List CMO

Used in elements Baseband, ObservedMOPAnalysis, RxModulation

Code	Meaning
8-Tone	
16-Tone	
32-Tone	
AM Clear Voice	
AM Secure Voice	
ASK/OOK	
Audio FSK	
Binary FSK	
Binary Phase Shift Key	
Code Division Multiplex	
COFDM	
Coherent FSK	
Coherent MSK	
Coherent Quadrature PSK	
Continuous Wave	
CPFSK	
Data	
Differential Binary PSK	
Differential Gaussian MSK	
Differential PSK	
Differential Quadrature PSK	
Differential Raised Cosine MSK	
Direct Sequence Binary FSK	

Direct Sequence Binary PSK
Direct Sequence Complementary Code Keying
Direct Sequence FSK
Direct Sequence MSK
Direct Sequence Offset Quadrature PSK
Direct Sequence PSK
Direct Sequence Quadrature PSK
Doppler Frequency-Shift
DTMF
Electronic Attack
Feher QPSK-B
Feher QPSK-JR
FM Clear Voice
FM Secure Voice
Frequency Division Multiplex
FSK
Gaussian FSK
Gaussian MSK
Minimum Shift Keying
Multichannel
Multichannel Data
Multichannel PCM Voice
Multi-channel PCM Voice
Multichannel Voice
Multichannel Voice/ Data
Multi-index Continuous Phase Modulation
NOISE
OFDM
Offset Quadrature PSK
PSK
Pulsed
QAM
Quad Tone
Quadrature FSK
Quadrature Partial Response Signaling
Quadrature PSK
Secure Data
Shaped Binary PSK
Shaped FSK
Shaped MSK
Shaped Offset Quadrature PSK
Single Channel

Single Secure Voice Channel	
Single Voice Channel	
Time Division Multiplex	
Tuned Frequency Modulation	
Video	
Other	If selected, a clarifying remark SHOULD be entered

Code List CNU

Used in element Nomenclature

Code
Primary
Alternate
Nickname
Pennant Number

Code List COT

Used in element Transmitter

Code	Meaning
Amplitron	
Backward Wave Oscillator	
Carcinatron	
Cross Field Amplifier	
Diode	
FET	
FET Push-Pull	
Fixed Magnetron	
Gallium Arsinide FET	
Gunn Diode	
Gyrotron	
Impatt Diode	
Integrated Circuit	
Klystron	
Lighthouse	
Magnetron	
Pentode	
Reactance Tube	
Solid State	
Stabilotron	
Step Recovery Diode	
Tetrode	
Transformer	
Transistor	
Traveling-Wave Tube	
Triode	
Tunable Magnetron	
Twystron	
Voltage Controlled Oscillator	
Yttrium Iron Garnet	
Other	If selected, a clarifying remark SHOULD be entered

Code List CPC

Used in element JRFLEntry

Code	Meaning
Guarded	Frequencies with interest to the Intelligence sections.
Protected	Frequencies that have importance to the operation, but may be jammed because of geographic or time separation.
Taboo	Safety of life, stop buzzer, etc. If priorities are used, Taboo should always be A1.

Code List CPI

Used in element Assignment

Code	Meaning
International Approval	The dataset is outside national boundaries; however, it must be processed to national or international level authority for approval
Local Approval	The dataset is within national boundaries; however, it need not be processed to national level authority for approval
National Approval	The dataset is to be processed to national level authority for approval
Outside National Boundaries	The dataset is outside national boundaries and need not be processed to national level authority for approval
Other	If selected, a clarifying remark SHOULD be entered

Code List CPJ

Used in element Project

Code	Meaning
COMPLAN	
Exercise	
Mission	
Operation	
OPLAN	
Other	If selected, a clarifying remark SHOULD be entered

Code List CPO

Used in elements AntMode, IntfReport, JammingTarget, ObservedPolarisationAnalysis

Code	Meaning
45-degrees	
Left-hand circular	
Right-hand circular	
Dual	
Elliptical	
Elliptic left	
Elliptic right	
Horizontal linear	
Horizontal and vertical	
Linear	
Mixed	
Oblique, angled, crossed	
Rotating	
Right-hand slant	
Left-hand slant	
Right and left-hand circular	
Vertical linear	
Other	If selected, a clarifying remark SHOULD be entered

Code List CPS

Used in elements Allocation, ConfigFreq, Variance

Code	Meaning
Primary	
Secondary	
Permitted	
Other	If selected, a clarifying remark SHOULD be entered

Code List CPT

Used in elements Configuration, Power

Code	Meaning
C8b	Use this entry for the submission of space data to the ITU if the maximum peak power and power density values are of type C8b.
Carrier	Carrier Power
Mean	Mean Power
PEP	Peak Envelope Power

Code List CRA

Used in element TxMode

Code	Meaning
Coded Pulse	
CW	
FM CW	
FM Pulse	
Non-FM Pulse	
Other	If selected, a clarifying remark SHOULD be entered

Code List CRD

Used in elements AntMode, ObservedPolarisationAnalysis

Code
Clockwise
Counter-Clockwise

Code List CRE

Used in element ExternalReference

Code	Meaning
CF299	C/F 299 Number
Contact Report	Contact Report: A brief report of a telephone call or a site visit
Contract	Contract Reference
Data Retrofit	Database Retrofit
Document	Document in any format not otherwise covered
ECSA	Equipment Characteristics / Space Archive
Email	Electronic Mail: any email not covered in one of the other specific categories, or any electronic media/transfer.
Eng Report	Engineering Report
EWIR	Electronic Warfare Integrated Reprogramming
FCC	Federal Communications Commission Filing: A document registered with the FCC.
Industry Publication	Industry Publication: any document published by a company. Frequently, they are brochures or Specifications Sheets describing the capabilities of an equipment or system.
Interference	Interference Report (to be used only when the interference report is not in SMADEF-XML format)
ITU Notification	ITU Notification
ITU Sat	ITU SSG (Satellite) Filing
Janes	Janes Publications
JF12	J/F 12 Document
License	General License Reference

Memo	Memorandum
MIPI	Multilateral Interoperability Programme Identifier
National Number	National control/request number (may be entered by any organisational level)
Nomenclature Card	Nomenclature Card (DD FORM 61)
NTIA	Spectrum Planning Subcommittee Number (USA code used by NTIA)
Prev Certification	Previous Certification
SIN	Systems ID Number (USA code used by NTIA)
Standard	STANAG or other Standard documentation
Technical Manual	Technical Manual
Spectrum Support Certification	Certification of Spectrum Support
Other	If selected, a clarifying remark SHOULD be entered

Code List CRS

Used in element Antenna

Code	Meaning
Boxed Slot	
Cavity	
Clamshell	
Cone	
Corner	
Curved Convergent	
Cylindrical	
Double Corner	
Elliptical	
Horn	
Hyperbolic	
Lens	
Mattress	
Orange Peel	
Parabolic	
Parabolic Segment	
Parasitic	
Plane	
Plate	
Polarized	
Rectangular	
Rod	
Screen	
Trough	
Other	If selected, a clarifying remark SHOULD be entered

Code List CRT

Used in element RxMode

Code	Meaning
Coherent	
Crystal	
Direct View Optics	
Double Conversion Superheterodyne	
Homodyne	
Imaging Detector	
Non-Coherent	
Non-Imaging Detector	

Quad Conversion Superheterodyne	
Super Regenerative	
Superheterodyne	
Triple Conversion Superheterodyne	
Tuned Radio Frequency	
Other	If selected, a clarifying remark SHOULD be entered

Code List CSE

Used in element RxMode

Code	Meaning
Pulse Width Opposition	Pulse Width Opposition; value is in dB
Bit Error Rate	Bit Error Rate; value is a number in scientific notation
Minimum Discernible Signal	Minimum Discernible Signal
Minimum Target Recognition	Minimum Target Recognition
SINAD	Signal-Plus-Noise-Plus-Distortion to Noise-Plus-Distortion; value is in dB
S/N	Signal-to-Noise ratio; value is in dB
(S+N)/N	(Signal plus-Noise)-to-Noise ratio; value is in dB

Code List CSG

Used in elements ExternalReference, RFSystem, SSRequest, Stage

Code
Conceptual
Developmental
Experimental
Operational

Code List CSI

Used in element TxModulation

Code
Lower sideband
Upper sideband

Code List CSN

Used in elements Allocation, Usage, Variance

Code	Meaning
Aeronautical Fixed Service	A radiocommunication service between specified fixed points provided primarily for the safety of air navigation and for the regular, efficient and economical operation of air transport.
Aeronautical Mobile (Off Route) Service	An aeronautical mobile service intended for communications, including those relating to flight coordination, primarily outside national or international civil air routes.
Aeronautical Mobile (Route) Service	An aeronautical mobile service reserved for communications relating to safety and regularity of flight, primarily along national or international civil air routes.
Aeronautical Mobile Service	A mobile service between aeronautical stations and aircraft stations, or between aircraft stations, in which survival craft stations may participate; emergency position-indicating radiobeacon stations may also participate in this service on designated distress and emergency frequencies.
Aeronautical Mobile-Satellite (OR) Service	An aeronautical mobile-satellite service intended for communications, including those relating to flight coordination, primarily outside national and international civil air routes.

Aeronautical Mobile-Satellite (R) Service	An aeronautical mobile-satellite service reserved for communications relating to safety and regularity of flight, primarily along national or international civil air routes.
Aeronautical Mobile-Satellite Service	A mobile-satellite service in which mobile earth stations are located on board aircraft; survival craft stations and emergency position-indicating radiobeacon stations may also participate in this service.
Aeronautical Radionavigation Service	A radionavigation service intended for the benefit and for the safe operation of aircraft.
Aeronautical Radionavigation-Satellite Service	A radionavigation-satellite service in which earth stations are located on board aircraft.
Amateur Service	A radiocommunication service for the purpose of self-training, inter-communication and technical investigation carried out by amateurs, that is, by duly authorised persons interested in radio technique solely with a personal aim and without pecuniary interest.
Amateur-Satellite Service	A radiocommunication service using space stations on earth satellites for the same purposes as those of the amateur service.
Broadcasting Service	A radiocommunication service in which the transmissions are intended for direct reception by the general public. This service may include sound transmissions, television trans-missions or other types of transmissions.
Broadcasting-Satellite Service	A radiocommunication service in which signals transmitted or retransmitted by space stations are intended for direct reception by the general public. In the broadcasting-satellite service, the term "direct reception" shall encompass both individual reception and community reception.
Earth Exploration-Satellite (active)	A radiocommunication service between earth stations and one or more active space stations, which may include links between space stations, in which:; -information relating to the characteristics of the Earth and its natural phenomena including data relating to the state of the environment is obtained from active sensors or passive sensors on earth satellites -similar information is collected from airborne or earth-based platforms; -such information may be distributed to earth stations within the system con- cerned; -platform interrogation may be included.;This service may also include feeder links necessary for its operation.
Earth Exploration-Satellite (passive)	A radiocommunication service between earth stations and one or more passive space stations, which may include links between space stations, in which:; -information relating to the characteristics of the Earth and its natural phenomena including data relating to the state of the environment is obtained from active sensors or passive sensors on earth satellites -similar information is collected from airborne or earth-based platforms; -such information may be distributed to earth stations within the system con- cerned; -platform interrogation may be included.;This service may also include feeder links necessary for its operation.
Earth Exploration-Satellite Service	A radiocommunication service between earth stations and one or more space stations, which may include links between space stations, in which: - information relating to the characteristics of the Earth and its natural phenomena, including data relating to the state of the environment, is obtained from active sensors or passive sensors on earth satellites; - similar information is collected from airborne or Earth-based platforms; - such information may be distributed to earth stations within the system concerned; - platform interrogation may be included.
Fixed Service	A radiocommunication service between specified fixed points.
Fixed-Satellite Service	A radiocommunication service between earth stations at given positions when one or more satellites are used; the given position may be a specified fixed point or any fixed point within specified areas; in some cases this service includes satellite-to-satellite links, which may also be operated in the inter-satellite service, the fixed-satellite service may also include feeder links for other space radiocommunication services.
Inter-Satellite Service	A radiocommunication service providing links between artificial earth satellites.
Land Mobile Service	A mobile service between base stations and land mobile stations, or between land mobile stations.
Land Mobile-Satellite Service	A mobile-satellite service in which mobile earth stations are located on land.

Maritime Mobile Service	A mobile service between coast stations and ship stations, or between ship stations, or between associated on-board communication stations; survival craft stations and emergency position-indicating radiobeacon stations may also participate in this service.
Maritime Mobile-Satellite Service	A mobile-satellite service in which mobile earth stations are located on board ships; survival craft stations and emergency position-indicating radiobeacon stations may also participate in this service.
Maritime Radionavigation Service	A radionavigation service intended for the benefit and for the safe operation of ships.
Maritime Radionavigation-Satellite Service	A radionavigation-satellite service in which earth stations are located on board ships.
Meteorological Aids Service	A radiocommunication service used for meteorological, including hydrological, observations and exploration.
Meteorological-Satellite Service	An Earth exploration-satellite service for meteorological purposes.
Mobile Service	A radiocommunication service between mobile and land stations, or between mobile stations.
Mobile-Satellite Service	A radiocommunication service: - between mobile earth stations and one or more space stations, or between space stations used by this service; or - between mobile Earth stations by means of one or more space stations. This service may also include feeder links necessary for its operation.
Radio Astronomy Service	A service involving the use of radio astronomy.
Radiodetermination Service	A radiocommunication service for the purpose of radiodetermination.
Radiodetermination-Satellite Service	A radiocommunication service for the purpose of radio-determination involving the use of one or more space stations. This service may also include feeder links necessary for its own operation.
Radiolocation Service	A radiodetermination service for the purpose of radiolocation.
Radiolocation-Satellite Service	A radiodetermination-satellite service used for the purpose of radiolocation. This service may also include the feeder links necessary for its operation.
Radionavigation Service	A radiodetermination service for the purpose of radionavigation.
Radionavigation-Satellite Service	A radiodetermination-satellite service used for the purpose of radionavigation. This service may also include feeder links necessary for its operation.
Space Operation Service	A radiocommunication service concerned exclusively with the operation of spacecraft, in particular space tracking, space telemetry and space telecommand. These functions will normally be provided within the service in which the space station is operating.
Space Research (active)	A radiocommunication service in which spacecraft or other active objects in space are used for scientific or technological research purposes.
Space Research (passive)	A radiocommunication service in which spacecraft or other passive objects in space are used for scientific or technological research purposes.
Space Research Service	A radiocommunication service in which spacecraft or other objects in space are used for scientific or technological research purposes.
Space Telecommand	The use of radiocommunication for the transmission of signals to a space station to initiate, modify or teminate functions of equipment on an associated space object, including the space station.
Space Telecommand (TT&C)	The use of radiocommunication for the transmission of signals to a space station to initiate, modify or teminate functions of equipment on an associated space object, including the space station.
Space Telemetering	The use of telemetry for the transmission from a space station of results of measurements made in a spacecraft, including those relating to the functioning of the spacecraft.
Space Telemetering (TT&C)	The use of telemetry for the transmission from a space station of results of measurements made in a spacecraft, including those relating to the functioning of the spacecraft. (RR)
Space Tracking	Determination of the orbit, velocity or instantaneous position of an object in space by means of radiodetermination, excluding primary radar, for the purpose of following the movement of the object.

Space Tracking (TT&C)	Determination of the orbit, velocity or instantaneous position of an object in space by means of radiodetermination, excluding primary radar, for the purpose of following the movement of the object.
Special Service	A radiocommunication service, not otherwise defined in this Section, carried on exclusively for specific needs of general utility, and not open to public correspondence.
Specialised Mobile Radio Service	A radio service in which licensees provide land mobile communications services in the 800 MHz and 900 MHz bands on a commercial basis to entities eligible to be licensed under this part, federal government entities, and individuals.
Standard Frequency and Time Signal Service	A radiocommunication service for scientific, technical and other purposes, providing the transmission of specified frequencies, time signals, or both, of stated high precision, intended for general reception.
Standard Frequency and Time Signal-Satellite Service	A radiocommunication service using space stations on earth satellites for the same purpose as those of the standard frequency and time signal service. This service may also include feeder links necessary for its operation.
Other	If selected, a clarifying remark SHOULD be entered

Code List CSP

Used in element Satellite

Code	Meaning
Deep Eccentric	
Deep Space	
GEO Drift	
GEO Inclined	
GEO Inclined Drift	
GEO Near-Synchronous	
GEO Stationary	
GEO Synchronous	
GEO Transfer	
Heliocentric	
Highly Elliptic (HEO)	
LEO	
LEO Equatorial	
LEO Intermediate	
LEO Polar	
LEO Retrograde	
LEO Sun-Synchronous	
Lunar	
MEO	
Molniya	
Non-Earth	
Non-GEO	
Other	If selected, a clarifying remark SHOULD be entered

Code List CSR

Used in element ForceElement

Code	Meaning
AG/Band	
Air Defense	
Airborne Division	
Airmobile	
Armor	
Army	
Army Material Command	

Aviation	
Brigade Combat Team/IDIV	
Censorship	
Chaplain	
Chemical	
Civil Affairs	
Combat Service Support	
Corps	
Engineering	
Field artillery	
Finance	
General	
Heavy Division/ Brigade	
Infantry	
Judge Advocate	
Maintenance	
Medical	
Military Intelligence (corps and below)	
Military intelligence (EAC)	
Military intelligence (SIGINT EAC)	
Military police	
Ordnance	
Psychological Operations	
Quartermaster	
Separate Light Infantry	
Signal	
Space/Missile Defense	
Special Forces	
Supply	
Transportation	
Other	If selected, a clarifying remark SHOULD be entered
Unknown	

Code List CSS

Used in element SpreadSpectrum

Code	Meaning
Automatic Channel Selection	
Chirp	
Direct sequence	
Direct sequence + Frequency hopped	
Direct sequence + Time hopped	
Diversity	
Free Channel Search	
Frequency + Time hopped	
Frequency hopped	

Time hopped	
Other	If selected, a clarifying remark SHOULD be entered

Code List CSU

Used in elements Common, Deployment

Code	Meaning
Active	
Inactive	
Other	If selected, a clarifying remark SHOULD be entered

Code List CTA

Used in element Footnote

Code	Meaning
Band Application	
Band User	
FCC Part	
Footnote-ITU	
Footnote-National	
Other	If selected, a clarifying remark SHOULD be entered

Code List CTI

Used in elements Assignment, IntfReport, Time

Code	Meaning
Continuous	Continuously 24 hours per day
Day	Day time
Night	Night time
Transition	Transition period
Intermittent	Intermittently throughout 24 hours
Once	Once
Other	If selected, a clarifying remark SHOULD be entered

Code List CTN

Used in elements RxMode, TxMode

Code	Meaning
Cavity	
Cavity Mechanically Tuned	
Cavity Resonant	
Cavity Tunable	
Continuous	
Continuous VCO	
Crystal Controlled	
Crystal Fixed	
Crystal Interchangeable	
Crystal SAW	
Crystal Varactor/ Phase lock	
Crystals Manually Switch	
Dielectric Resonant Oscillator	
Electro Mechanical	
Factory Fixed Phase Locked Gunn	

Factory Fixed PLL	
Factory Tuned	
Fixed	
Gunn VCO	
Klystron Mechanically Tuned	
Magnetron Fixed	
Magnetron Tunable	
Manual	
Oscillator Manually Adjustable Gunn	
Oscillator Non-Adjustable Gunn Diode	
Oscillator Tunable Cavity	
Oscillator Voltage Controlled	
Oscillator Yig	
Phase-Locked Loop	
SAW Resonator	
Synthesizer	
Synthesizer Crystal Controlled	
Synthesizer Crystal Controlled PLL	
Synthesizer Digital	
Synthesizer Direct Digital	
Synthesizer Manually Adjustable	
Synthesizer Microprocessor Controlled	
Synthesizer Non-Adjustable Crystal	
Synthesizer PLL	
Synthesizer Programmable Frequency	
Synthesizer VCO	
Tunable PLL	
Varactor Tuned	
Voltage Tuned Yig	
Other	If selected, a clarifying remark SHOULD be entered

Code List CTO

Used in elements Nomenclature, Organisation

Code	Meaning
Civilian/Commercial	
Generic	
Government	
Military	
Other	If selected, a clarifying remark SHOULD be entered

Code List CTP

Used in element AntPattern

Code	Meaning
PHI	Rotation angle about the boresight
THETA	Angle off the boresight

Code List CTS

Used in element JRFLEntry

Code
Approved
For Review
Pending

Code List CTU

Used in elements RxMode, TxMode

Code	Meaning
Continuous	Systems capable of being tuned to any frequency within the requested band
Continuous+Stepped	Combination of continuous and stepped
Fixed	Systems capable of operating on a single discrete frequency
Fixed+Continuous	Combination of fixed and continuous
Fixed+Stepped	Combination of fixed and stepped
Stepped	Systems capable of being tuned across the authorised or requested band in discrete steps or increments. This includes crystal control
Fixed-Constrained	Systems capable of operating on a single discrete frequency, determined by the bandwidth constraints of the power generating or frequency determining device
Fixed or Random	Frequency-agile radars that operate on various frequencies within a band, either specified or random mode
Other	If selected, a clarifying remark SHOULD be entered

Code List CUT

Used in elements Allotment, Assignment

Code	Meaning
Request Temporary	
Request Permanent	
Approved Temporary	
Approved Permanent	
Cancelled/Rejected	
Other	If selected, a clarifying remark SHOULD be entered

Code List CCY

Used in elements Common, Role

Code	Meaning
AFG	Afghanistan
ALB	Albania
DZA	Algeria
AND	Andorra
AGO	Angola
ATG	Antigua and Barbuda
ARG	Argentine Republic
ARM	Armenia
AUS	Australia
AUT	Austria
AZE	Azerbaijan
BHS	Bahamas
BHR	Bahrain
BGD	Bangladesh

BRB	Barbados
BLR	Belarus
BEL	Belgium
BLZ	Belize
BEN	Benin
BTN	Bhutan
BOL	Bolivia
BIH	Bosnia and Herzegovina
BWA	Botswana
BRA	Brazil
BRN	Brunei Darussalam
BGR	Bulgaria
BFA	Burkina Faso
BDI	Burundi
KHM	Cambodia
CMR	Cameroon
CAN	Canada
CPV	Cape Verde
CCEB	CCEB Nations (AUS, CAN, GBR, NZL, USA)
CAF	Central African Republic
TCD	Chad
CWCS	Chemical Weapons Convention States
CHL	Chile
CHN	China
COL	Colombia
COM	Comoros
COG	Congo
COD	Congo (Democratic Republic of the)
CRI	Costa Rica
HRV	Croatia
CUB	Cuba
CYP	Cyprus (See footnote 1)
CZE	Czech Republic
DNK	Denmark
DJI	Djibouti
DMA	Dominica
DOM	Dominican Republic
TLS	East Timor
ECU	Ecuador
EGY	Egypt
SLV	El Salvador
GNQ	Equatorial Guinea
ERI	Eritrea
EST	Estonia
ETH	Ethiopia
FJI	Fiji
FIN	Finland
FVEY	FIVE EYES (USA, CAN, GBR, AUS, NZL)
ACGU	FOUR EYES (USA, CAN, GBR, AUS)
FRA	France
GAB	Gabon
GMB	Gambia
GEO	Georgia
DEU	Germany
GHA	Ghana
GRC	Greece

GRD	Grenada
GTM	Guatemala
GIN	Guinea
GNB	Guinea-Bissau
GUY	Guyana
HTI	Haiti
HND	Honduras
HUN	Hungary
ISL	Iceland
IND	India
IDN	Indonesia
IRN	Iran
IRQ	Iraq
IRL	Ireland
ISR	Israel
ITA	Italy
CIV	Ivory Coast
JAM	Jamaica
JPN	Japan
JOR	Jordan
KAZ	Kazakhstan
KEN	Kenya
KIR	Kiribati
PRK	Korea, North
KOR	Korea, South
YU-KM	Kosovo
KWT	Kuwait
KGZ	Kyrgyzstan
LAO	Laos
LVA	Latvia
LBN	Lebanon
LSO	Lesotho
LBR	Liberia
LBY	Libya
LIE	Liechtenstein
LTU	Lithuania
LUX	Luxembourg
MDG	Madagascar
MWI	Malawi
MYS	Malaysia
MDV	Maldives
MLI	Mali
MLT	Malta
MHL	Marshall Islands
MRT	Mauritania
MUS	Mauritius
MEX	Mexico
FSM	Micronesia
MDA	Moldova
MCO	Monaco
MNG	Mongolia
MNE	Montenegro
MAR	Morocco
MOZ	Mozambique
MMR	Myanmar
NAM	Namibia

NATO	NATO Nations (28 Nations: ALB, BEL, BGR, CAN, CZE, DEU, DNK, ESP, EST, FRA, GBR, GRC, HUN, HRV, ITA, ISL, LUX, LTU, LVA, NLD, NOR, POL, PRT, ROU, SVK, SVN, TUR, USA)
NRU	Nauru
NPL	Nepal
NLD	Netherlands
NZL	New Zealand
NIC	Nicaragua
NER	Niger
NGA	Nigeria
NOR	Norway
OMN	Oman
PAK	Pakistan
PLW	Palau
PSE	Palestine
PAN	Panama
PNG	Papua New Guinea
PRY	Paraguay
PER	Peru
PHL	Philippines
POL	Poland
PRT	Portugal
QAT	Qatar
ROU	Romania
RUS	Russian Federation
RWA	Rwanda
KNA	Saint Kitts and Nevis
LCA	Saint Lucia
VCT	Saint Vincent and the Grenadines
WSM	Samoa
SMR	San Marino
STP	Sao Tome and Principe
SAU	Saudi Arabia
SEN	Senegal
SRB	Serbia
SYC	Seychelles
SLE	Sierra Leone
SGP	Singapore
SVK	Slovakia
SVN	Slovenia
SLB	Solomon Islands
SOM	Somalia
ZAF	South Africa
ESP	Spain
LKA	Sri Lanka
SDN	Sudan
SUR	Suriname
SWZ	Swaziland
SWE	Sweden
CHE	Switzerland
SYR	Syria
TWN	Taiwan
TJK	Tajikistan
TZA	Tanzania
THA	Thailand
FYR	The former Yugoslav Republic of Macedonia (See footnote 2)

TEYE	THREE EYES (USA, CAN, GBR)
TGO	Togo
TON	Tonga
TTO	Trinidad and Tobago
TUN	Tunisia
TUR	Turkey
TKM	Turkmenistan
TUV	Tuvalu
UGA	Uganda
UKR	Ukraine
ARE	United Arab Emirates
GBR	United Kingdom
UN	United Nations
USC	United States (CONUS)
USP	United States and Possessions
USA	United States of America
UNKN	Unknown
URY	Uruguay
UZB	Uzbekistan
VUT	Vanuatu
VAT	Vatican City State
VEN	Venezuela
VNM	Vietnam
YEM	Yemen
YO05	Yugoslavia (YUG) - Deprecated
ZMB	Zambia
ZWE	Zimbabwe

Notes:

1. Turkey states that the "Republic of Cyprus" / "Cyprus" referred to in this document is not the original partnership state established in 1960. Therefore, Turkey declares that signature, ratification and implementation of this document neither amount to any form of recognition of the Greek Cypriot Administration, as referred to in this document as "Republic of Cyprus" / "Cyprus", nor prejudice Turkey's rights and obligations emanating from the Treaty of Guarantee, the Treaty of Alliance, and Treaty of Establishment of 1960.
2. Turkey recognises the Republic of Macedonia with its constitutional name.

Code List CAO

Used in elements Address, Administration, CaseNum, CodeList, Country, ForceElement, HostNation, IntfReport, Location, Manufacturer, Note, SSReply, ServiceArea, UsingCountries

Code	Meaning
AFG	Afghanistan
FF	Africa
US-AL	Alabama
ALA	Åland Islands
US-AK	Alaska
ALB	Albania
DZA	Algeria
NT-ASC	Allied Submarine Command
ASM	American Samoa
AND	Andorra
AGO	Angola
AIA	Anguilla
ANTR	Antarctic
4Z	Antarctic Ocean
ATA	Antarctica Continent

ATG	Antigua and Barbuda
5A	Arctic Ocean
ARG	Argentine Republic
US-AZ	Arizona
US-AR	Arkansas
ARM	Armenia
ABW	Aruba
SH-AC	Ascension
AB	Asia Continent
9A	Atlantic Ocean
AUS	Australia
AUSC	Australia Continent
AUT	Austria
AZE	Azerbaijan
PT-20	Azores
BHS	Bahamas
BHR	Bahrain
UM-8	Baker Island
BGD	Bangladesh
BRB	Barbados
BLR	Belarus
BEL	Belgium
BLZ	Belize
BEN	Benin
BMU	Bermuda
BTN	Bhutan
BWCS	Biological Weapons Convention States
BOL	Bolivia
BES	Bonaire, Saint Eustatius and Saba
BIH	Bosnia and Herzegovina
BWA	Botswana
BVT	Bouvet Island
BRA	Brazil
IOT	British Indian Ocean Territory
BRN	Brunei Darussalam
BGR	Bulgaria
BFA	Burkina Faso
BDI	Burundi
US-CA	California
KHM	Cambodia
CMR	Cameroon
CAN	Canada
ES-CN	Canary Islands
CPV	Cape Verde
CARB	Caribbean
CAI	Caroline Islands
CYM	Cayman Islands
CCEB	CCEB Nations (AUS, CAN, GBR, NZL, USA)
CAF	Central African Republic
CAM	Central America
TCD	Chad
CWCS	Chemical Weapons Convention States
CHL	Chile
CHN	China
CXR	Christmas Island
CPMT	Civilian Protection Monitoring Team for Sudan

CP	Clipperton Island
CCK	Cocos (Keeling) Islands
COL	Colombia
US-CO	Colorado
CMFC	Combined Maritime Forces
COM	Comoros
COG	Congo
COD	Congo (Democratic Republic of the)
US-CT	Connecticut
COK	Cook Islands
CMFP	Cooperative Maritime Forces Pacific
CRI	Costa Rica
HRV	Croatia
FR-TF	Crozet Archipelago
CUB	Cuba
CUW	Curaçao
CYP	Cyprus (See footnote 1)
CZE	Czech Republic
US-DE	Delaware
DNK	Denmark
DG	Diego Garcia
US-DC	District of Columbia
DJI	Djibouti
DMA	Dominica
DOM	Dominican Republic
TLS	East Timor
EAS	Easter Island
ECU	Ecuador
EGY	Egypt
SLV	El Salvador
GNQ	Equatorial Guinea
ERI	Eritrea
EST	Estonia
ETH	Ethiopia
EE	Europe Continent
EUDA	European Union DARFUR
EFOR	European Union Stabilization Forces in Bosnia
FLK	Falkland Islands (Malvinas)
FRO	Faroe Islands
FJI	Fiji
FIN	Finland
FVEY	FIVE EYES (USA, CAN, GBR, AUS, NZL)
US-FL	Florida
ACGU	FOUR EYES (USA, CAN, GBR, AUS)
FRA	France
GUF	French Guiana
PYF	French Polynesia
ATF	French Southern Territories
GAB	Gabon
GMB	Gambia
GEO	Georgia
US-GA	Georgia
GEOS	Geostationary Satellite
DEU	Germany
GHA	Ghana
GIB	Gibraltar

GCTF	Global Counter-Terrorism Forces
GMIF	Global Maritime Interception Forces
9Z	Great Lakes
GRC	Greece
GRL	Greenland
GRD	Grenada
GLP	Guadeloupe
GUM	Guam
GTM	Guatemala
GGY	Guernsey
GIN	Guinea
GNB	Guinea-Bissau
1M	Gulf of Mexico
GUY	Guyana
HTI	Haiti
US-HI	Hawaii
HMD	Heard and McDonald Islands
HEME	Hemisphere East
HEMN	Hemisphere North
HEMS	Hemisphere South
HEMW	Hemisphere West
HND	Honduras
HKG	Hong Kong
UM-84	Howland Island
HUN	Hungary
ISL	Iceland
US-ID	Idaho
US-IL	Illinois
IND	India
6A	Indian Ocean
US-IN	Indiana
IDN	Indonesia
INTL	International
ICAO	International Civil Aviation Organization
IESC	International Events Security Coalition
ITU	International Telecommunications Union
US-IA	Iowa
IRN	Iran
IRQ	Iraq
IRL	Ireland
ISAF-AFG	ISAF for Afghanistan
IMN	Isle of Man
ISR	Israel
ITA	Italy
ITU1	ITU Region 1
ITU2	ITU Region 2
ITU3	ITU Region 3
CIV	Ivory Coast
JAM	Jamaica
JPN	Japan
UM-86	Jarvis Island
JEY	Jersey
UM-67	Johnston Atoll
JOR	Jordan
US-KS	Kansas
KAZ	Kazakhstan

US-KY	Kentucky
KEN	Kenya
KER	Kerguelen Islands
UM-89	Kingman Reef
KIR	Kiribati
PRK	Korea, North
KOR	Korea, South
YU-KM	Kosovo
KWT	Kuwait
KGZ	Kyrgyzstan
9E	Lake Erie
9H	Lake Huron
9M	Lake Michigan
9N	Lake Ontario
9S	Lake Superior
LAO	Laos
LVA	Latvia
LBN	Lebanon
LSO	Lesotho
LBR	Liberia
LBY	Libya
LIE	Liechtenstein
LTU	Lithuania
US-LA	Louisiana
LUX	Luxembourg
MAC	Macao
MDG	Madagascar
PT-30	Madeira
US-ME	Maine
MWI	Malawi
MYS	Malaysia
MDV	Maldives
MLI	Mali
MLT	Malta
US-MP	Mariana Islands (excluding Guam)
MAI	Marion Island
MHL	Marshall Islands
MTQ	Martinique
US-MD	Maryland
US-MA	Massachusetts
MRT	Mauritania
MUS	Mauritius
MYT	Mayotte
89	Mediterranean Sea
MEX	Mexico
US-MI	Michigan
FSM	Micronesia
UM-71	Midway Islands
US-MN	Minnesota
US-MS	Mississippi
US-MO	Missouri
MDA	Moldova
MCO	Monaco
MNG	Mongolia
US-MT	Montana
MNE	Montenegro

MSR	Montserrat
MAR	Morocco
MOZ	Mozambique
MLEC	Multi-Lateral Enduring Contingency
MCFI	Multinational Coalition Forces - Iraq
MIFH	Multinational Interim Force Haiti
MULT	Multiple Areas
MMR	Myanmar
NAM	Namibia
NT-AEW	NATO AEW&C Force Command
NT-AGS	NATO Air Ground Surveillance (Italy)
NT-AC	NATO AIRCOM Ramstein
NT-ACO	NATO Allied Command Operations (ACO)
NT-ACT	NATO Allied Command Transformation (ACT)
NT-SC	NATO Allied Submarine Command
NT-A-DEU	NATO CAOC Germany
NT-A-ESP	NATO CAOC Spain
NT-CISG	NATO CIS Group (Belgium)
NT-CIA	NATO Communications & Information Agency
NT-A-ITA	NATO DACC Italy
NT-D-DEU	NATO D-AOC Germany
NT-D-ESP	NATO D-AOC Spain
NT-EUR	NATO European Nations (NATO, excluding USA, CAN, ISL)
NT-HQ	NATO Headquarters
NT-HQ-SM	NATO HQ Spectrum Management
NT-J-ITA	NATO Joint Force HQ Italy
NT-J-NLD	NATO Joint Force HQ Netherlands
NT-LC	NATO LANDCOM Izmir
NT-MC	NATO MARCOM Northwood
NATO	NATO Nations (28 Nations: ALB, BEL, BGR, CAN, CZE, DEU, DNK, ESP, EST, FRA, GBR, GRC, HUN, HRV, ITA, ISL, LUX, LTU, LVA, NLD, NOR, POL, PRT, ROU, SVK, SVN, TUR, USA)
NT-S-DEU	NATO Signals Battalion Germany
NT-S-ITA	NATO Signals Battalion Italy
NT-S-POL	NATO Signals Battalion Poland
NT-STF	NATO Strike Force (STRIKFORNATO)
NRU	Nauru
UM-76	Navassa Island
US-NE	Nebraska
NPL	Nepal
NLD	Netherlands
ANT	Netherlands Antilles
US-NV	Nevada
NCL	New Caledonia
US-NH	New Hampshire
US-NJ	New Jersey
US-NM	New Mexico
US-NY	New York
NZL	New Zealand
NIC	Nicaragua
NER	Niger
NGA	Nigeria
NIU	Niue
NGEO	Non-Geostationary Satellite
NFK	Norfolk Island
NACT	North African Counter-Terrorism Forces

NN	North America Continent
US-NC	North Carolina
US-ND	North Dakota
MNP	Northern Mariana Islands
NOR	Norway
UU	Oceania
US-OH	Ohio
US-OK	Oklahoma
OMN	Oman
US-OR	Oregon
OTH	Other - See Remarks
4O	Pacific Ocean
PAK	Pakistan
PLW	Palau
PSE	Palestine
UM-95	Palmyra Atoll
PAN	Panama
PNG	Papua New Guinea
PRY	Paraguay
US-PA	Pennsylvania
PER	Peru
PHL	Philippines
KI-P	Phoenix Islands
PCN	Pitcairn Island
POL	Poland
PRT	Portugal
PRI	Puerto Rico
QAT	Qatar
RCVR	Radio Astronomy
REU	Réunion
US-RI	Rhode Island
MU-RO	Rodrigues
CFCK	ROK/US Combined Forces Command, Korea
ROU	Romania
RUS	Russian Federation
RWA	Rwanda
BLM	Saint Barthélemy
SHN	Saint Helena
KNA	Saint Kitts and Nevis
LCA	Saint Lucia
MAF	Saint Martin (French part)
AMS	Saint Paul and Amsterdam Islands
SPM	Saint Pierre and Miquelon
VCT	Saint Vincent and the Grenadines
WSM	Samoa
SMR	San Marino
DO-26	Santiago-Rodriguez
STP	Sao Tome and Principe
SAU	Saudi Arabia
SEN	Senegal
SRB	Serbia
SYC	Seychelles
SLE	Sierra Leone
SGP	Singapore
SXM	Sint Maarten (Dutch part)
SVK	Slovakia

SVN	Slovenia
SLB	Solomon Islands
SOM	Somalia
ZAF	South Africa
SR	South America Continent
US-SC	South Carolina
US-SD	South Dakota
SGS	South Georgia and the South Sandwich Islands
SPCE	Space
ESP	Spain
LKA	Sri Lanka
KFOR	Stabilization Forces in Kosovo
SDN	Sudan
SUR	Suriname
SJM	Svalbard and Jan Mayen Islands
SWA	Swan Islands
SWZ	Swaziland
SWE	Sweden
CHE	Switzerland
SYR	Syria
TWN	Taiwan
TJK	Tajikistan
TZA	Tanzania
US-TN	Tennessee
US-TX	Texas
THA	Thailand
FYR	The former Yugoslav Republic of Macedonia (See footnote 2)
TEYE	THREE EYES (USA, CAN, GBR)
TGO	Togo
TKL	Tokelau
TON	Tonga
TTO	Trinidad and Tobago
SH-TA	Tristan da Cunha
TUN	Tunisia
TUR	Turkey
TKM	Turkmenistan
TCA	Turks and Caicos Islands
TUV	Tuvalu
UGA	Uganda
UKT1	UK Territories in Region 1
UKT3	UK Territories in Region 3
UKR	Ukraine
ARE	United Arab Emirates
GBR	United Kingdom
UN	United Nations
UNCK	United Nations Command, Korea
USC	United States (CONUS)
USP	United States and Possessions
UMI	United States Minor Outlying Islands
USA	United States of America
UNKN	Unknown
URY	Uruguay
USCE	US - Central
SCML	US - Mid Atlantic
USMW	US - Midwest
USNC	US - North Central

USNE	US - North East
USNW	US - North West
USSC	US - South Central
USSE	US - South East
USSW	US - South West
USWE	US - West
US-UT	Utah
UZB	Uzbekistan
VUT	Vanuatu
VAT	Vatican City State
VEN	Venezuela
US-VT	Vermont
VNM	Vietnam
VGB	Virgin Islands (British)
VIR	Virgin Islands (U.S.)
US-VA	Virginia
XVE	Visible Earth
UM-79	Wake Island
WLF	Wallis and Futuna Islands
US-WA	Washington
US-WV	West Virginia
ESH	Western Sahara
US-WI	Wisconsin
US-WY	Wyoming
YEM	Yemen
YO05	Yugoslavia (YUG) - Deprecated
ZMB	Zambia
ZWE	Zimbabwe
Other	If selected, a clarifying remark SHOULD be entered

Notes:

1. Turkey states that the "Republic of Cyprus" / "Cyprus" referred to in this document is not the original partnership state established in 1960. Therefore, Turkey declares that signature, ratification and implementation of this document neither amount to any form of recognition of the Greek Cypriot Administration, as referred to in this document as "Republic of Cyprus" / "Cyprus", nor prejudice Turkey's rights and obligations emanating from the Treaty of Guarantee, the Treaty of Alliance, and Treaty of Establishment of 1960.
2. Turkey recognises the Republic of Macedonia with its constitutional name.

Code List UAG

Used in element IntfReport

Code	Meaning
AFRICOM	
CENTCOM	
EUCOM	
JFCOM	
NORTHCOM	
PACOM	
SOCOM	
SOUTHCOM	
STRATCOM	
TRANSCOM	
OTHER	If selected, a clarifying remark SHOULD be entered

Code List UCH

Used in element IntfReport

Code	Meaning
NOISE	
PULSED	
VOICE ENGLISH	
VOICE FOREIGN	
OTHERS NEARBY AFFECTED	
OTHERS FAR AWAY AFFECTED	
INTERFERENCE FOLLOWS WHEN I CHANGE	
GARBLED	
FRAME LOSS	
STEADY RECEIVE INDICATION (SRI)	
REDUCED RANGE	
FALSE TARGETS	
REDUCED INTELLIGIBILITY (VOICE)	
DATA ERRORS	
Other	If selected, a clarifying remark SHOULD be entered

Code List UCJ

Used in element CoordinationData

Code	Meaning
Canada	
Mexico	
NATO	
Host Nation	
NTIA Fas Members	
FAA	
DoD Joint Chiefs of Staff	
Other	If selected, a clarifying remark SHOULD be entered

Code List UDA

Used in element Assignment

Code	Meaning
FMSC/MRFL data from NATO	
Industry Canada	
Federal Communications Commission	
Frequency Resource Record System	
Government Master File	
International Telecommunication Union	
Radio Astronomy data from the National Research Council	

Other	If selected, a clarifying remark SHOULD be entered

Code List UFN

Used in elements DetailedFunction, Link

Code	Meaning
UNKNOWN	
A2C2S (Army Airborne Command & Control System)	
ACS (Aerial Common Sensor)	
ADMINISTRATIVE	
AEGIS	
A-EPLRS	
AERO CLUB	
AFATDS	
AFAUX/CAP (Air Force Auxiliary/Civil Air Patrol)	
AFSATCOM	
AHFEWS (Army HF EW System)	
AIR DEFENSE	
AIR DEFENSE WARNING	
AIR DEFENSE/ INTERCEPT	
AIR FORCE ONE	
AIR FORCE SPECIAL OPERATIONS	
AIR OPERATIONS	
AIR ROUTE SURVEILLANCE RADAR	
AIR TRAFFIC CONTROL	
AIR/AIR COMMUNICATIONS	
AIR/GROUND/AIR COMMUNICATIONS	
AIRBORNE COMMAND CENTER	
AIRCRAFT	
AIRPORT SURVEILLANCE RADAR	
ALARM SYSTEMS	
AMPS (Air Movement Planning System)	
AMSS (Automatic Meteorological Sensor System)	
ANTI-TERRORISM	
APPROACH CONTROL	
AQF (Advanced Quick Fix)	

ARL (Aerial Reconnaissance-Low)

ARMY AVIATION

ARMY SPECIAL OPERATIONS

ARTILLERY

ARTS (Automated Remote Tracking System) (Telemetry)

ASAS (All Source Analysis System)

ASOS (Automated Surface Observation System)

ASW (Anti-Submarine Warfare)

ATFP

ATIS (Auto Terminal Information Service)

AVENGER-STC

AWACS

AWOS (Automatic Weather Observing System)

BACKBONE

BASE OPERATIONS

BATTLE COMMAND

BEACON

BLUE ANGELS

BMDS (Ballistic Missile Defense System)

BMEWS (Ballistic Missile Early Warning System)

BROADCAST

C3 (Command, Control, & Communications)

CARS (Contingency Airborne Reconnaissance System)

CAVALRY

CBR (Chemical, Biological, Radiological)

CID

CIVIL AFFAIRS

CIVIL DISTURBANCES

CIVIL ENGINEERING

CIVIL SUPPORT TEAM

CIVIL WORKS

CIWS (Close-In Weapons System)

CLEARANCE DELIVERY

CLOSE AIR SUPPORT (CAS)

COG/COOP

COLOR/HONOR GUARD

COMBAT CONTROL TEAM

COMBATANT COMMAND/ GENERAL OFFICER SUPPORT

COMMAND AND CONTROL

COMMAND DESTRUCT/ TERMINATION

COMMAND NET

COMMAND POST

COMMAND POST/ CENTER

COMMANDER

COMMUNICATIONS

COMMUNITY ASSISTANCE

CONSEQUENCE MANAGEMENT

CONSERVATION

CONSTRUCTION

CONTINGENCY

COUNTER DRUG

CSSCS (Combat Service Support Control System)

CTT (Commander’s Tactical Terminal)

DATA COLLECTION PLATFORM

DATA LINK

DBRITE (Digital Bright Radar Indicator Tower Equipment)

DEPARTURE CONTROL

DIS (Defense Investigative Service)

DISASTER PLANNING

DMSP (Defense Meteorological Satellite Program)

DOMESTIC SUPPORT OPERATIONS

DRONE CONTROL

DSCS (Defense Satellite

Communication System)
DTSS (Digital Topographic Support System)
EDUCATION
ELECTRONIC WARFARE
EMERGENCY SERVICES
EMWIN
ENGINEERS
ENVIRONMENTAL
ENVIRONMENTAL CLEANUP
EOD (Emergency Ordinance Disposal)
EPLRS (Enhanced Position Location Reporting System)
EQUIPMENT CHECKS
ERCS (Emergency Rocket Communications Systems)
ETCAS (Enhanced Traffic Collision Avoidance System)
ETRAC (Enhanced Tactical Radar Correlator)
EXECUTIVE
EXERCISE
EXPERIMENTAL
FAADC2 (Forward Area Air Defense, Command and Control)
FEEDER CONTROL
FEMA (Federal Emergency Mgt Agency)
FIRE
FIRE ALARM
FIRE SUPPORT
FLEET SUPPORT
FLIGHT FOLLOWING
FLIGHT INSPECTION
FLIGHT TEST
FLOOD WARNING SYSTEM
FLTSATCOM (Fleet Satellite Communications)
FORACS (Fleet Operational Readiness Accuracy Check Site)

FORWARD AIR CONTROL POST	
GBCS-L (Ground Based Common Sensor-Light)	
GBS (Global Broadcast System)	
GCA (Ground Control Approach)	
GCCS (Global Command and Control System-Army)	
GLOBAL	
GLOBAL ALE (Automatic Link Establishment)	
GLOBAL BLACK	
GLOBAL DISCRETE	
GLOBAL RED	
GMD (Ground Missile Defense)	
GOES (Geostationary Operational Environmental Satellites)	
GOLDEN KNIGHTS	
GPS (Global Positioning System)	
GRCS (Guardrail Common Sensor)	
GRIZZLY (M1 Bleacher MineSweeper)	
GROUND CONTROL	
GROUND INTERDICTION	
GROUND OPERATIONS	
GSR (Ground Surveillance Radar)	
HAARP (High Frequency Active Auroral Research Program)	
HARBOR-PORT OPERATIONS	
HAVE QUICK	
HAZARDOUS MATERIAL RELEASE	
HAZMAT (Hazardous Materials)	
HELO CONTROL	
HICOM (High Command)	
HYDRA (Hierarchical Yet Dynamically Reprogrammable Architecture)	

HYDROLOGIC
IEWCS (Intelligence Electronic Warfare Common Sensor)
IFF/SIF
ILS (Instrument Landing System)
IMETS (Integrated Meteorological System)
INDUSTRIAL CONTROLS
INFANTRY
INSPECTION
INSTALLATION PA SYSTEM (Giant Voice)
INSTRUCTOR/ STUDENT TRAINING
INTELLIGENCE
INTERPLANE
INVENTORY/ INVENTORY CONTROLS (e.g., Optical Scanners)
IONOSPHERIC SOUNDER
I-REMBASS (Improved-Remotely Monitored Battlefield Sensor System)
ISYSCON (Integrated System Control)
JSS (Joint Surveillance System)
JTIDS/MIDS (Joint Tactical Information Distribution System)
LAND WARRIOR
LAW ENFORCEMENT
LEASAT (Leased Satellite)
LINEBACKER
LLDR (Lightweight Laser Designator Rangefinder)
LMRDFS (Light Man-portable Radio Direction Finding System)
LOCAL CONTROL
LOCKS AND DAMS
LONGBOW (Apache Helicopter)
LOOTING PREVENTION
M93A1 FOX
MAINTENANCE

MARS (Military Affiliated Radio System)
MEDICAL
METEOROLOGICAL
MFCS (Mortar Fire control System)
MICROWAVE
MICROWAVE DATA LINK
MILITARY POLICE
MILSTAR (Military Strategic and Tactical Relay System)
MISC (Miscellaneous)
MISSILE
MITT/DTES (Mobile Integrated Tactical Terminal/Distributed Common Ground System Test and Evaluation Strategy)
MLRS (Multiple Launch Rocket System)
MLS (Microwave Landing System)
MOBILE TELEPHONE
MOMS (Man on the Move System)
MOTOR POOL
MSE (Mobile Subscriber Equipment)
MTS (Movement Tracking System)
MUNITIONS
MUTUAL AID
MYSTIC STAR
NAOC (National Airborne Operations Center)
NASA
NATURAL RESOURCES
NAVAIDS
NAVAIDS CONTROLS
NAVAL GUNFIRE SUPPORT
NAVIGATION RADAR
NAVY SPECIAL OPERATIONS
NCIS (Naval Criminal Investigative Service)
NDB
NERON (NOAA Environmental Real-

Time Observation Network)	
NEXRAD	
NOAA WEATHER RADIO	
NOAA WEATHER RADIO LINK	
NORAD (North American Air defense Command)	
NTDR (Near Term Digital Radio)	
OCCS SUPPORT	
OPERATION ALLIANCE	
OSI (Office of Special Investigation)	
OTHER OPERATIONS	If selected, a clarifying remark SHOULD be entered
OTHR/ROTHR (Over-the-Horizon Radars)	
PAGING	
PAR (Precision Approach Radar)	
PATRIOT	
PAVE PAWS (Precision Acquisition Vehicle Entry Phased Array Warning System)	
PILOT-TO-DISPATCHER	
PILOT-TO-METRO	
PILOT-TO-PILOT	
POL (Petroleum, Oil, and Lubricants)	
POSTAL OPERATIONS	
PRIME BEEF	
PRISON BUS	
PROJECT COTHEN	
PSYCHOLOGICAL OPERATIONS	
PUBLIC WORKS	
RADAR (Radio Detection and Ranging)	
RADIO RELAY	
RADIOLOCATION	
RADIOSONDE	
RAMP CONTROL	
RANGE CONTROL	
RANGE OPERATIONS	
RANGER UNITS	

RDMS (Range Data Management Subsystem)
RDTE SUPPORT
RED HORSE
REFUELING
REMOTE BARRIER CONTROL SYSTEMS
REMOTE CONTROL CRANE
RESOURCES CONSERVATION
RESUPPLY
RF TAGS
RUNWAY ICE DETECTION SYSTEMS
RUNWAY LIGHTING CONTROL
SAFETY
SATELLITE COMMUNICATIONS
SAWDS (Satellite Automated WX Dist Sys)
SCAMP (Single Channel Anti-Jam Manportable Terminal)
SCOPE SHIELD
SEA OPERATIONS
SEABEES
SEARCH AND RESCUE
SECURITY FORCE
SEISMIC
SENTINEL (AN/MPQ-64 Surveillance Radar)
SGLS (Space Ground Link Subsystem) (Telemetry)
SHIP/AIR OPERATIONS
SHIP/SHIP
SHIP/SHORE OPERATIONS
SHIPYARD
SHORE PATROL
SHORT TERM INCIDENT RESPONSE
SHUTTLE
SIMULATOR
SINCGARS (Single Channel Ground and Airborne Radio System)

SINCGARS-ASIP (Single Channel Ground and Airborne Radio System-Advanced System Improvement Plan)	
SNOW REMOVAL	
SOF (Supervisor of Flying)	
SONOBUOY	
SORT (Special Operations Response Team)	
SPACE OPERATIONS	
SPECIAL COURIER	
SPECIAL FORCES	
SPECIAL OPERATIONS	
SPECIAL PROJECTS	
SPECIAL SECURITY OPERATIONS	
SPEED MEASUREMENT SYSTEMS	
SPITFIRE (SPITFIRE Manpack UHF SATCOM DAMA Terminal)	
SQUADRON/WING COMMON	
STRIKER II (Advanced Fire Support/Scout/ Surveillance System)	
SUPPLY AND LOGISTICS	
SURFACE NAVAIDS	
SURVEILLANCE SYSTEMS	
SURVEILLANCE/ RECONNAISSANCE	
SURVEY	
SUSTAINING OPERATIONS	
TACAN (Tactical Air Navigation)	
TACCS (Tactical Army Combat Service Support Computer System)	
TACJAM (Tactical Communications Jamming System)	
TACTS (Tactical Trunk Signaling)	
TADIL-A	
TADIL-C	

TARGET
TARGET ACQUISITION
TARGET SCORING
TAXI
TCAS (Traffic Collision Avoidance System)
TCRS (Target Control System)
TEAMMATE
TECHNICAL ESCORT UNIT
TELECOMMAND
TELEMETRY
TEST AND MEASUREMENT
TEST RANGE
TEST RANGE TIMING
TETHERED AREOSTAT RADAR
THUNDERBIRDS
TIS or TRAVELERS INFORMATION SYSTEM
TMGS (Transportable mobile ground subsystems)
TOSS (TV Ordnance Scoring System)
TOWER
TRACKWOLF
TRAILBLAZER (Ground Based Communications Intelligence System)
TRAINING
TRANSPORTATION
TROJAN SPIRIT
TRUNKING
TSU
UAV (Unmanned Aerial Vehicle)
UNLICENSED DEVICE
UTILITIES
VOR (Very High Frequency Omnidirectional Range)
VORTAC (VHF Omni-range TACAN)
WARNING SYSTEM
WEAPON SYSTEMS
WEAPONS STORAGE PROTECTION
WEATHER

WEATHER RADAR	
WHCA (White House Communications Agency)	
WIDEBAND GLOBAL SATCOM	
WILDLIFE PRESERVATION	
WIND PROFILER	
WIN-T (Warfighter Information Network-Tactical)	
WIRELESS LOCAL AREA NETWORK	
WIRELESS MIKE	
WOLVERINE (Assault Bridge)	

Code List UMD

Used in element TxMode

Code	Meaning
Pulse	
Digital	
Analog	
Other	If selected, a clarifying remark SHOULD be entered

Code List UNS

Used in element StockNum

Code	Meaning
Agency Tracking ID	
Commercial P/N	
Drawing Number	
Line Item Number	
National Stock Number	
NATO Stock Number	
Other	If selected, a clarifying remark SHOULD be entered

Code List UOW

Used in element AsgnAllotOwner

Code	Meaning
Agency	
Unified Command	
Unified Command Service	
Bureau	
Major Command	
Subcommand	
Installation Frequency Manager	
Operating Unit	
Area AFC/DoD AFC/ Other Organizations	
Requestor	
Other	If selected, a clarifying remark SHOULD be entered

Code List UPF

Used in element Assignment

Code	Meaning
Air/ground/air	
Air to air	
Air/ground/air pool	
Other	If selected, a clarifying remark SHOULD be entered

Code List UPR

Used in element IntfReport

Code	Meaning
Priority 1 Strategic Order	
Priority 2 Tasked Plan Execution	
Priority 3 Essential Operational Support	
Priority 4 Training	
Priority 5 VIP Support	
Priority 6 RDT&E and General	
Priority 7 Miscellaneous	
Other	If selected, a clarifying remark SHOULD be entered

Code List UPU

Used in element PairedFreq

Code	Meaning
Repeater Out	
Repeater In	
Duplex Pairing	
Frequency Diversity	
Space Diversity	
Other	If selected, a clarifying remark SHOULD be entered

Code List URI

Used in element Assignment

Code	Meaning
Routine Application	
Regular Application	
Aeronautical Assignment Group (AAG) Application	
Marine Assignment Group (MAG) Application	
Other	If selected, a clarifying remark SHOULD be entered

Code List USC

Used in elements StnClass, Usage

Code	Meaning
AL	Aeronautical Radionavigation Land Station: A land station in the aeronautical radionavigation service not intended for use while in motion. (ITU)
ALA	Aeronautical Marker Beacon Station: A radionavigation land station in the aeronautical radionavigation service which employs a marker beacon. (INTL)

ALB	Aeronautical Radiobeacon Station: A radiobeacon station in the aeronautical radionavigation service intended for the benefit of aircraft. (INTL)
ALC	Aeronautical Radar Beacon (racon) Station: A land station in the aeronautical radionavigation service which employs a radar beacon (racon). (INTL)
ALG	Glide Path (Slope) Station: A radionavigation land station which provides vertical guidance to aircraft during approach to landing. (INTL)
ALL	Localizer Station: A radionavigation land station in the aeronautical radionavigation service which employs an Instrument Landing System Localizer. (INTL)
ALO	Omnidirectional Range Station: A radionavigation land station in the aeronautical radionavigation service providing direct indication of the bearing (omni-bearing) of that station from an aircraft. (INTL)
ALR	Radio Range Station: A radionavigation land station in the aeronautical radionavigation service providing radial equisignal zones. (In certain instances a radio range station may be placed on board a ship.) (INTL)
ALS	Surveillance Radar Station: A radionavigation land station in the aeronautical radionavigation service employing radar to display the presence of aircraft within its range. (In certain instances, a surveillance radar station may be placed on board a ship.) (INTL)
ALTM	Radionavigation Land Test Station (Maintenance Test Facility): A radionavigation land station in the aeronautical radionavigation service which is used as a radionavigation calibration station for the transmission of essential information in connection with the testing and calibration of aircraft navigational aids, receiving equipment and interrogators at predetermined surface locations. The primary purpose of this facility is to permit maintenance testing by aircraft radio service personnel. (INTL)
ALTO	Radionavigation Land Test Station (Operational Test Facility): A radionavigation land station in the aeronautical radionavigation service which is used as a radionavigation calibration station for the transmission of essential information in connection with the testing and calibration of aircraft navigational aids, receiving equipment and interrogators at predetermined surface locations. The primary purpose of this facility is to permit the pilot to check a radionavigation system aboard the aircraft prior to takeoff. (INTL)
AM	Aeronautical Radionavigation Mobile Station: A mobile station in the aeronautical radionavigation service intended to be used while in motion or during halts at unspecified points. (ITU)
AMA	Altimeter Station: A radionavigation mobile station in the aeronautical radionavigation service which employs a radio altimeter. (INTL)
APX	ALASKA PRIVATE (FCC)
APX2	ALASKA PRIVATE (TEMPORARY) (FCC)
AT	Amateur station (ITU)
AX	Fixed station in the Aeronautical Fixed Service (ITU)
AX2	AERONAUTICAL FIXED (TEMPORARY) (FCC)
BC	Broadcasting Station (sound): A station (sound) in the broadcasting service. (ITU)
BT	Broadcasting Station (television): A station (television) in the broadcasting service. (ITU)
DAMS	DOMESTIC AERONAUTICAL MOBILE-SATELLITE SERVICE (FCC)
DARS	SATELLITE DIGITAL AUDIO RADIO SERVICE (FCC)
DBS	DIRECT BROADCAST SATELLITE SERVICE (FCC)
DFSS	DOMESTIC FIXED SATELLITE SERVICE (FCC)
DGP	Differential-Global-Positioning-System (DGPS) Station: a terrestrial station used for the transmission of differential correction information to DGPS receivers aboard aircraft for navigation. (INTL)
DHFS	DIRECT TO HOME FIXED SATELLITE (FCC)
DLMS	DOMESTIC LAND MOBILE SATELLITE SERVICE (FCC)
DMMS	DOMESTIC MARITIME MOBILE SATELLITE SERVICE (FCC)
DMSS	DOMESTIC MOBILE SATELLITE SERVICE (FCC)
DTH	DIRECT TO HOME SATELLITE (FCC)
E1	Space research (active sensor) space station (ITU)
E2	Space research (passive sensor) space station (ITU)
E3	Space station in the Earth exploration-satellite service(active sensor) (ITU)
E4	Space station in the Earth exploration-satellite (passive sensor) (ITU)

EA	Space station in the amateur-satellite service (ITU)
EB	Broadcasting-Satellite Space Station (sound broadcasting): A space station in the broadcasting-satellite service (sound broadcasting). (ITU)
EC	Fixed-Satellite Space Station: A space station in the fixed-satellite service. (ITU)
ED	Space Telecommand Space Station: A space station which receives emissions used for space telecommand. (ITU)
EE	Standard Frequency Satellite Space Station: A space station in the standard frequency satellite service. (ITU)
EESS	EARTH EXPLORATION SATELLITE SERVICE (FCC)
EF	Radiodetermination-Satellite Space Station: A space station in the radiodetermination-satellite service. (ITU)
EG	Maritime Mobile-Satellite Space Station: A space station in the maritime mobile-satellite service. (ITU)
EH	Space Research Space Station: A space station in the space research service. (ITU)
EI	Mobile-Satellite Space Station: A space station in the mobile-satellite service. (ITU)
EJ	Aeronautical Mobile-Satellite Space Station: A space station in the aeronautical mobile-satellite service. (ITU)
EK	Space Tracking Space Station: A space station which transmits or receives and retransmits emissions used for space tracking. (ITU)
ELT	ELT TEST (FCC)
ELT1	ELT TEST (MOBILE) (FCC)
EM	Meteorological-Satellite Space Station: A space station in the meteorological-satellite service. (ITU)
EMER	Meteorological-Satellite Telemetry Space Station (INTL)
EMSS	Meteorological-Satellite Tracking Space Station (INTL)
EN	Radionavigation-Satellite Space Station: A space station in the radionavigation-satellite service. (ITU)
EO	Aeronautical Radionavigation-Satellite Space Station: A space station in the aeronautical radionavigation-satellite service. (ITU)
EQ	Maritime Radionavigation-Satellite Space Station: A space station in the maritime radionavigation-satellite service. (ITU)
ER	Space Telemetering Space Station: A space station the emissions of which are used for space telemetering. (ITU)
ES	Inter-Satellite Space Station: A space station in the inter-satellite service. (ITU)
ESV	EARTH STATION ON BOARD VESSEL (FCC)
ET	Space Operation Space Station: A space station in the space operation service. (ITU)
EU	Land Mobile-Satellite Space Station: A space station in the land mobile-satellite service. (ITU)
EV	Broadcasting-Satellite Space Station (television): A space station in the broadcasting-satellite service (television). (ITU)
EW	Earth Exploration-Satellite Space Station: A space station in the Earth exploration-satellite service. (ITU)
EX	Experimental Station: A station utilising radio waves in experiments with a view to development of science or technique. (EX is not used on applications.) (INTL)
EY	Space station in the time signal-satellite service (ITU)
FA	Aeronautical Station: A land station in the aeronautical mobile service. In certain instances, an aeronautical station may be located, for example on board ship or on a platform at sea. (ITU)
FA1	AERONAUTICAL ENROUTE (MOBILE) (FCC)
FA2	AERONAUTICAL ENROUTE (TEMPORARY) (FCC)
FAA	AERONAUTICAL ADVISORY (UNICOM) (FCC)
FAA1	AERONAUTICAL ADVISORY (UNICOM) (MOBILE) (FCC)
FAA2	AERONAUTICAL ADVISORY (UNICOM) (TEMPORARY) (FCC)
FAB	Aeronautical Broadcast Station: An aeronautical station which makes scheduled broadcasts of meteorological information and notices to airmen. (In certain instances, an aeronautical broadcast station may be placed on board a ship.) (INTL)

FAC	Airdrome Control Station: An aeronautical station providing communication between an airdrome control tower and aircraft. (INTL)
FAD	Telecommand Aeronautical Station: A land station in the aeronautical mobile service the emissions of which are used for terrestrial telecommand. (INTL)
FAS	AVIATION SUPPORT INSTRUCTIONAL (FCC)
FAS1	AVIATION SUPPORT INSTRUCTIONAL (MOBILE) (FCC)
FAT	Flight Test Station: An aeronautical station used for the transmission of essential communications in connection with the testing of aircraft or major components of aircraft. (INTL)
FAT1	FLIGHT TEST (MOBILE) (FCC)
FAT3	FLIGHT TEST (ITINERANT) (FCC)
FB	Base Station: A land station in the land mobile service. (ITU)
FB2	MOBILE RELAY (FCC)
FB2A	MOBILE RELAY - AIRPORT TERMINAL USE (FCC)
FB2C	MOBILE RELAY - INTERCONNECT (FCC)
FB2I	MOBILE RELAY - ITINERANT (FCC)
FB2J	MOBILE RELAY - TEMPORARY INTERCONNECT (FCC)
FB2K	MOBILE RELAY - STAND-BY INTERCONNECT (FCC)
FB2L	MOBILE RELAY - ITINERANT INTERCONNECT (FCC)
FB2S	MOBILE RELAY - STAND-BY (FCC)
FB2T	MOBILE RELAY - TEMPORARY (FCC)
FB4	COMMUNITY REPEATER (FCC)
FB4C	COMMUNITY REPEATER - INTERCONNECT (FCC)
FB4I	COMMUNITY REPEATER - ITINERANT (FCC)
FB4J	COMMUNITY REPEATER - TEMPORARY INTERCONNECT (FCC)
FB4K	COMMUNITY REPEATER - STAND-BY INTERCONNECT (FCC)
FB4S	COMMUNITY REPEATER - STAND-BY (FCC)
FB4T	COMMUNITY REPEATER - TEMPORARY (FCC)
FB6	PRIVATE CARRIER (PROFIT) (FCC)
FB6C	PRIVATE CARRIER (PROFIT) - INTERCONNECT (FCC)
FB6I	PRIVATE CARRIER (PROFIT) - ITINERANT (FCC)
FB6J	PRIVATE CARRIER (PROFIT) - TEMPORARY INTERCONNECT (FCC)
FB6K	PRIVATE CARRIER (PROFIT) - STAND -BY INTERCONNECT (FCC)
FB6L	PRIVATE CARRIER (PROFIT) - ITINERANT INTERCONNECT (FCC)
FB6S	PRIVATE CARRIER (PROFIT) - STAND-BY (FCC)
FB6T	PRIVATE CARRIER (PROFIT) - TEMPORARY (FCC)
FB7	PRIVATE CARRIER (NON-PROFIT) (FCC)
FB7C	PRIVATE CARRIER (NON-PROFIT) - INTERCONNECT (FCC)
FB7J	PRIVATE CARRIER (NON-PROFIT) - ITINERANT (FCC)
FB7T	PRIVATE CARRIER (NON-PROFIT) - TEMPORARY INTERCONNECT (FCC)
FB8	CENTRALIZED TRUNK RELAY (FCC)
FB8A	CENTRALIZED TRUNK RELAY - AIRPORT TERMINAL USE (FCC)
FB8C	CENTRALIZED TRUNK RELAY - INTERCONNECT (FCC)
FB8I	CENTRALIZED TRUNK RELAY - ITINERANT (FCC)
FB8J	CENTRALIZED TRUNK RELAY - TEMPORARY INTERCONNECT (FCC)
FB8L	CENTRALIZED TRUNK RELAY - ITINERANT INTERCONNECT (FCC)
FB8S	CENTRALIZED TRUNK RELAY - STANDBY (FCC)
FB8T	CENTRALIZED TRUNK RELAY- TEMPORARY (FCC)
FBA	SMALL BASE (FCC)
FBAT	SMALL BASE - TEMPORARY (FCC)
FBBS	BASE (FCC)
FBC	BASE - INTERCONNECT (FCC)
FBCT	BASE - INTERCONNECT (FCC)
FBD	Telecommand Base Station: A land station in the land mobile service the emissions of which are used for terrestrial telecommand. (INTL)
FBGS	GROUND (FCC)

FBI	BASE - ITINERANT (FCC)
FBJ	BASE- TEMPORARY INTERCONNECT (FCC)
FBK	BASE - STAND-BY INTERCONNECT (FCC)
FBL	BASE - ITINERANT INTERCONNECT (FCC)
FBS	BASE - STAND-BY (FCC)
FBSI	AIR-GROUND SIGNALING (FCC)
FBST	STAND-BY (FCC)
FBT	BASE - TEMPORARY (FCC)
FC	Coast Station: A land station in the maritime mobile service. (ITU)
FCA	MARINE SUPPORT - TESTING & TRAINING (FCC)
FCA2	MARINE SUPPORT - TESTING & TRAINING (TEMPORARY) (FCC)
FCB	Marine Broadcast Station: A coast station which makes scheduled broadcast of time, meteorological, and hydrographical information. (INTL)
FCD	Telecommand Coast Station: A land station in the maritime mobile service the emissions of which are used for terrestrial telecommand. (INTL)
FCL	PRIVATE COAST (FCC)
FCL2	PRIVATE COAST (TEMPORARY) (FCC)
FCU	MARINE UTILITY (FCC)
FCU1	MARINE UTILITY (MOBILE) (FCC)
FD	Aeronautical Station (R): An aeronautical station in the aeronautical mobile (R) service. (ITU)
FDBS	FEEDER LIINK FOR DBS IN FIXED SATELLITE SERVICE (FCC)
FG	Aeronautical Station (OR): An aeronautical station in the aeronautical mobile (OR) service. (ITU)
FIS	FLIGHT INFORMATION SERVICES (FCC)
FL	Land Station: A station in the mobile service not intended to be used while in motion. (ITU)
FLD	Telecommand Land Station: A land station in the mobile service the emissions of which are used for terrestrial telecommand. (INTL)
FLE	Telemetering Land Station: A land station the emissions of which are used for telemetering. (INTL)
FLEA	Aeronautical Telemetering Land Station: A telemetering land station used in the flight testing of manned or unmanned aircraft, missiles, or major components thereof. (INTL)
FLEB	Flight Telemetering Land Station: A telemetering land station the emissions of which are used for telemetering to a balloon; to a booster or rocket, excluding a booster or rocket in orbit about the Earth or in deep space; or to an aircraft, excluding a station used in the flight testing of an aircraft. (INTL)
FLEC	Surface Telemetering Land Station: A telemetering land station the emissions of which are intended to be received on the surface of the Earth. (INTL)
FLFS	FEEDER LINK IN FIXED SATELLITE SERVICE (FCC)
FLH	Hydrologic and Meteorological Land Station: A land station the emissions of which are used for the automatic transmission of either hydrologic or meteorological data, or both. (INTL)
FLU	Aeronautical Utility Land Station: A land station located at airdrome control towers and used for control of ground vehicles and aircraft on the ground at airdromes. (INTL)
FLU1	AVIATION SUPPORT SERVICE (MOBILE) (FCC)
FLW	FEEDER LINK FOR WIDE AREA AUGMENTATION SYSTEM (FCC)
FMA1	AIRCRAFT FLIGHT TEST STATION (FCC)
FP	Port Station: A coast station in the port operations service. (ITU)
FR	Receiving station only, connected with the general network of telecommunication channels (INTL)
FSS	FIXED SATELLITE SERVICE (FCC)
FSSF	FIXED SATELLITE SERVICE (FCC)
FX	Fixed Station: A station in the fixed service. (ITU)
FX1	CONTROL (FCC)
FX1A	CONTROL - AIRPORT TERMINAL USE (FCC)
FX1C	CONTROL - INTERCONNECT (FCC)
FX1I	CONTROL - ITINERANT (FCC)
FX1J	CONTROL - TEMPOARY INTERCONNECT (FCC)

FX1K	CONTROL - STAND-BY INTERCONNECT (FCC)
FX1L	CONTROL - ITINERT INTERCONNECT (FCC)
FX1S	CONTROL- STAND-BY (FCC)
FX1T	CONTROL - TEMPORARY (FCC)
FX2	FIXED RELAY (FCC)
FX2C	FIXED RELAY - INTERCONNECT (FCC)
FX2I	FIXED RELAY - ITINERANT (FCC)
FX2J	FIXED RELAY - TEMPORARY INTERCONNECT (FCC)
FX2K	FIXED RELAY - STAND-BY INTERCONNECT (FCC)
FX2L	FIXED REALY - ITINERANT INTERCONNECT (FCC)
FX2S	FIXED RELAY - STAND-BY (FCC)
FX2T	FIXED RELAY - TEMPORARY (FCC)
FX3	SECONDARY FIXED (TONE SIGNALLING) (FCC)
FX3C	SECONDARY FIXED - INTERCONNECT (FCC)
FX3J	SECONDARY FIXED - TEMPORARY INTERCONNECT (FCC)
FX3S	SECONDARY FIXED - STAND-BY (FCC)
FX3T	SECONDARY FIXED - TEMPORARY (FCC)
FX5	TEMPORARY FIXED (FCC)
FXC	FIXED - INTERCONNECT (FCC)
FXCO	CENTRAL OFFICE (FCC)
FXCT	CONTROL (FCC)
FXD	Telecommand Fixed Station: A fixed station in the fixed service the emissions of which are used for terrestrial telecommand. (INTL)
FXDI	DISPATCH (FCC)
FXE	Telemetering Fixed Station: A fixed station the emissions of which are used for telemetering. (INTL)
FXH	Hydrologic and Meteorological Fixed Station: A fixed station the emissions of which are used for the automatic transmission of either hydrologic or meteorological data, or both. (INTL)
FXI	FIXED - ITINERANT (FCC)
FXIO	INTER-OFFICE (FCC)
FXK	FIXED - STAND-BY INTERCONNECT (FCC)
FXO	OPERATIONAL FIXED (FCC)
FXOC	OPERATIONAL FIXED - INTERCONNECT (FCC)
FXOI	OPERATIONA FIXED - ITINERANT (FCC)
FXOJ	OPERATIONAL FIXED - TEMPORARY INTERCONNECT (FCC)
FXOS	OPERATIONAL FIXED - STAND-BY (FCC)
FXOT	OPERATIONAL FIXED - TEMPORARY (FCC)
FXRP	REPEATER (FCC)
FXRX	FIXED RELAY (FCC)
FXS	FIXED - STAND-BY (FCC)
FXSB	FIXED SUBSCRIBER (FCC)
FXT	FIXED - TEMPORARY (FCC)
FXTS	AUXILIARY TEST (FCC)
GCO	GROUND COMMUNICATIONS OUTLET (FCC)
GS	Station on board a warship or a military or naval aircraft (INTL)
IAMS	INTERNATIONAL AERONAUTICAL MOBILE SATELLITE SERVICE (FCC)
IFLM	FEEDER LINK FOR MOBILE SATELLITE SERVICE (FCC)
IFSS	INTERNATIONAL FIXED SATELLITE SERVICE (FCC)
IMMS	INTERNATIONAL MARITIME MOBILE SATELLITE SERVICE (FCC)
IMSS	INTERNATIONAL MOBILE SATELLITE SERVICE (FCC)
LR	Radiolocation Land Station: A station in the radiolocation service not intended to be used while in motion. (ITU)
LRT	RADIOLOCATION LAND - TEMPORARY (FCC)
MA	Aircraft Station: A mobile station in the aeronautical mobile service other than a survival craft station, located on board an aircraft. (ITU)

MAD	Telecommand Aircraft Station: A mobile station in the aeronautical mobile service the emissions of which are used for terrestrial telecommand. (INTL)
MAP	Portable Aircraft Station: A portable station operating in the aeronautical mobile service. (INTL)
ME	Space Station: A station located on an object which is beyond, is intended to go beyond, or has been beyond, the major portion of the Earth's atmosphere. (ME is not used on applications.) (INTL)
MFL	AERONAUTICAL MULTICOM (FCC)
MFL1	AERONAUTICAL MULTICOM (MOBILE) (FCC)
MFL2	AERONAUTICAL MULTICOM (TEMPORARY) (FCC)
MFX	MARINE OPS FIXED (FCC)
ML	Land Mobile Station: A mobile station in the land mobile service capable of surface movement within the geographical limits of a country or continent. (ITU)
MLD	Telecommand Land Mobile Station: A mobile station in the land mobile service the emissions of which are used for terrestrial telecommand. (INTL)
MLP	Portable Land Mobile Station: A portable station operating in the land mobile service. (INTL)
MMS	MARITIME MOBILE SATELLITE SERVICE (FCC)
MO	Mobile Station: A station in the mobile service intended to be used while in motion or during halts at unspecified points. (ITU)
MO3	MOBILE/VEHICULAR REPEATER (FCC)
MO3C	MOBILE/VEHICULAR REPEATER WITH INTERCONNECT (FCC)
MO3I	MOBILE/VEHICULAR REPEATER - ITINERANT (FCC)
MO5	MOBILE & TEMPORARY FIXED (FCC)
MO6	PRIVATE CARRIER MOBILE OP (PROFIT) (FCC)
MO6C	PRIVATE CARRIER MOBILE OP (PROFIT) - INTERCONNECT (FCC)
MO6I	PRIVATE CARRIER MOBILE OP (PROFIT) - ITINERANT (FCC)
MO6L	PRIVATE CARRIER MOBILE OPERATION (PROFIT) WITH TEMPORARY INTERCONNECT (FCC)
MO6S	PRIVATE CARRIER MOBILE OP (PROFIT) - STAND-BY (FCC)
MO7	PRIVATE CARRIER MOBILE OP (NON-PROFIT) (FCC)
MO7C	PRIVATE CARRIER MOBILE OP (NON-PROFIT) - INTERCONNECT (FCC)
MO7I	PRIVATE CARRIER MOBILE OP (NON-PROFIT) - ITINERANT (FCC)
MO7L	PRIVATE CARRIER MOBILE OP (NON-PROFIT) - WITH ITINERANT INTERCONNECT (FCC)
MO8	CENTRALIZED TRUNK MOBILE (FCC)
MO8A	CENTRALIZED TRUNK MOBILE - AIRPORT TERMINAL USE (FCC)
MO8C	CENTRALIZED TRUNK MOBILE - INTERCONNECT (FCC)
MOA	MOBILE - AIRPORT TERMINAL USE (FCC)
MOB	Radio Beacon Mobile Station: A mobile station the emissions of which are used to determine its location. (INTL)
MOC	MOBILE - INTERCONNECT (FCC)
MOD	Telecommand Mobile Station: A mobile station in the mobile service the emissions of which are used for terrestrial telecommand. (INTL)
MOE	Telemetering Mobile Station: A mobile station the emissions of which are used for telemetering. (INTL)
MOEA	Aeronautical Telemetering Mobile Station: A telemetering mobile station used for transmitting data directly related to the airborne testing of the vehicle, (or major components), on which the station is installed. (INTL)
MOEB	Flight Telemetering Mobile Station: A telemetering mobile station used for transmitting data from an airborne vehicle, excluding data related to airborne testing of the vehicle itself, (or major components thereof). (INTL)
MOEC	Surface Telemetering Mobile Station: A telemetering mobile station located on the surface of the Earth and the emissions of which are intended to be received on the surface of the Earth. (INTL)
MOH	Hydrologic and Meteorological Mobile Station: A mobile station the emissions of which are used for the automatic transmission of either hydrologic or meteorological data, or both. (INTL)

MOI	MOBILE - ITINERANT (FCC)
MOL	MOBILE WITH ITINERANT INTERCONNECT (FCC)
MOP	Portable Mobile Station: A portable station operating in the mobile service. (INTL)
MOS	MOBILE - STAND-BY (FCC)
MOT	TEMPORATY MOBILE (FCC)
MOU	Aeronautical Utility Mobile Station: A mobile station used for communication at airdromes with the aeronautical utility land station, the airdrome control station, the US FAA flight service station, ground vehicles, and aircraft on the ground. (All transmissions shall be subject to the control of the airdrome control station and shall be discontinued immediately when so requested by the airdrome control operators.) (INTL)
MOU1	AERONAUTICAL UTILITY MOBILE (FCC)
MR	Radiolocation Mobile Station: A station in the radiolocation service intended to be used while in motion or during halts at unspecified points. (ITU)
MRP	Portable Radiolocation Station: A portable station operating in the radiolocation service. (INTL)
MRT	MARINE RECEIVER TEST (FCC)
MRT2	MARINE RECEIVER TEST (TEMPORARY) (FCC)
MS	Ship Station: A mobile station in the maritime mobile service located on board a vessel which is not permanently moored, other than a survival craft station. (ITU)
MSC	SHORE RADAR TEST (FCC)
MSD	Telecommand Ship Station: A mobile station in the maritime mobile service the emissions of which are used for terrestrial telecommand. (INTL)
MSP	Portable Ship Station: A portable station operating in the maritime mobile service. (INTL)
MSR	SHORE RADIONAVIGATION (FCC)
MSS	MOBILE SATELLITE SERVICE (FCC)
NL	Maritime Radionavigation Land Station: A land station in the Maritime Radionavigation Service not intended for use while in motion (ITU)
NLC	Maritime Radar Beacon (racon) Station: A land station in the maritime radionavigation service which employs a radar beacon (racon). (INTL)
NLM	Marine Radiobeacon Station: A radiobeacon station in the maritime radionavigation service intended for the benefit of ships. (INTL)
NR	Radionavigation Mobile Station: A station in the radionavigation service intended to be used while in motion or during halts at unspecified points. (ITU)
OD	Oceanographic Data Station: A station in the maritime mobile service located on a ship, buoy or other sensor platform the emissions of which are used for the transmission of oceanographic data. (ITU)
OE	Oceanographic Data Interrogating Station: A station in the maritime mobile service the emissions of which are used to initiate, modify, or terminate functions of equipment directly associated with an oceanographic data station, including the station itself. (ITU)
OTH	OTHER - If selected a clarifying Remark SHOULD be entered.
PA	Passenger Ship (INTL)
PL	Combination of 2 or more classes of station (ITU)
PLAN	FIXED SATELLITE SERVICE ORB-88 ALLOTMENT PLAN (FCC)
RA	Radio Astronomy Station: A station in the radio astronomy service. (This is always a receiving station.) (ITU)
RCO	REMOTE COMMUNICATIONS OUTLET (FCC)
RDS	RADIO DETERMINATION SATELLITE SERVICE (FCC)
RG	Radiodetermination station using radio direction finding (ITU)
RLA	AERONAUTICAL MARKER BEACON (FCC)
RLB	AERONAUTICAL RADIO BEACON (FCC)
RLB1	AERONAUTICAL RADIO BEACON (MOBILE) (FCC)
RLB2	AERONAUTICAL RADIO BEACON (TEMPORARY) (FCC)
RLC	SHORE RADIOLOCATION TEST (FCC)
RLC2	SHORE RADIOLOCATION TEST (TEMPORARY) (FCC)
RLD	RADAR/RADAR TEST (FCC)
RLG	GLIDE PATH (SLOPE) (FCC)
RLL	LOCALIZER (FCC)

RLO	OMNIDIRECTIONAL RADIO RANGE (FCC)
RLR	SHORE RADIOLOCATION/RACON (FCC)
RLT	RADIONAVIGATION LAND TEST (FCC)
RLT1	RADIONAVIGATION LAND TEST (MOBILE) (FCC)
RM	Maritime radionavigation mobile station (ITU)
RN	Radionavigation Land Station: A station in the radionavigation service not intended to be used in motion. (ITU)
RNL	Loran Station: A long distance radionavigation land station transmitting synchronised pulses. Hyperbolic lines of position are determined by the measurement of the difference in the time of arrival of these pulses. (INTL)
RNV	RADIONAVIGATION LAND (FCC)
RPC	RAMP CONTROL (FCC)
SA	Meteorological Aids Mobile Station: A mobile station in the meteorological aids service intended to be used while in motion or during halts at unspecified points. (ITU)
SAR	Radiosonde Station: A station in the meteorological aids service employing a radiosonde. (INTL)
SAR1	SEARCH AND RESCUE (MOBILE) (FCC)
SM	Meteorological Aids Base Station: A land station in the meteorological aids service not intended for use while in motion. (ITU)
SMB	Radar Beacon Precipitation Gage Station: A transponder station in the meteorological aids service, the emissions of which are used for telemetering. (INTL)
SMD	Meteorological Radar Station: A station in the meteorological aids service employing radar. (INTL)
SMRG	Radiosonde Ground Station: A station in the meteorological aids service employing a ground station associated with a radiosonde. (INTL)
SN	Sounder Network Station: A station equipped with an ionosphere sounder used for the real-time selection of frequencies for operational communication circuits. (INTL)
SP	Sounder Prediction Station: A station equipped with an ionosphere sounder for real-time monitoring of upper atmosphere phenomena or to obtain data for the prediction of propagation conditions. (INTL)
SS	Standard Frequency and Time Signal Station: A station in the standard frequency and time signal service. (ITU)
TA	Space operation earth station in the amateur-satellite service (ITU)
TB	Aeronautical Earth Station: An earth station in the fixed-satellite service or in some cases in the aeronautical mobile-satellite service located at a specified fixed point on land to provide a feeder link for the aeronautical mobile-satellite service. (ITU)
TC	Fixed-Satellite Earth Station: An earth station in the fixed-satellite service. (ITU)
TD	Space Telecommand Earth Station: An earth station the emissions of which are used for space telecommand. (ITU)
TE	Satellite EPIRB Station: A satellite Emergency Position-Indicating Radio Beacon (EPIRB) in the mobile-satellite service (ITU)
TF	Radiodetermination-Satellite Earth Station: A fixed earth station in the radiodetermination-satellite service. (ITU)
TG	Ship Earth Station: A mobile earth station in the maritime mobile-satellite service located on board ship. (ITU)
TH	Space Research Earth Station: An earth station in the space research service. (ITU)
TI	Coast Earth Station: An earth station in the fixed-satellite service or in some cases in the maritime mobile-satellite service located at a specified fixed point on land to provide a feeder link for the maritime mobile-satellite. (ITU)
TJ	Aircraft Earth Station: A mobile earth station in the aeronautical mobile-satellite service located on board an aircraft. (ITU)
TK	Space Tracking Earth Station: An earth station which transmits or receives emissions used for space tracking. (ITU)
TL	Radiodetermination-Satellite Mobile Earth Station: A mobile earth station in the radiodetermination-satellite service. (ITU)
TM	Meteorological-Satellite Earth Station: An earth station in the meteorological-satellite service. (ITU)

TN	Radionavigation-Satellite Fixed Earth Station: A fixed earth station in the radionavigation-satellite service. (ITU)
TO	Aeronautical Radionavigation-Satellite Mobile Earth Station: A mobile earth station in the aeronautical radionavigation-satellite service. (ITU)
TP	Earth Station (receiving): An earth station used for receiving. (TP is not used on applications.) (INTL)
TQ	Maritime Radionavigation-Satellite Mobile Earth Station: A mobile earth station in the maritime radionavigation-satellite service. (ITU)
TR	Space Telemetering Earth Station: An earth station which receives emissions used for space telemetering. (ITU)
TS	Television Sound Channel (INTL)
TT	Space Operation Earth Station: An earth station in the space operation service. (ITU)
TU	Land Mobile Earth Station: A mobile earth station in the land mobile-satellite service capable of surface movement within the geographical limits of a country or continent. (ITU)
TV	Television Vision Channel (INTL)
TW	Earth Exploration-Satellite Earth Station: An earth station in the Earth exploration-satellite service. (ITU)
TX	Maritime Radionavigation-Satellite Earth Station: A fixed earth station in the maritime radionavigation-satellite service. (ITU)
TY	Base Earth Station: An earth station in the fixed-satellite service or in some cases in the land mobile-satellite service located at a specified point or within a specified area on land to provide a feeder link for the land mobile-satellite service. (ITU)
TZ	Aeronautical Radionavigation-Satellite Earth Station: A fixed earth station in the aeronautical radionavigation-satellite service. (ITU)
UA	Mobile Earth Station: An earth station in the mobile-satellite service intended to be used while in motion or during halts at unspecified points. (ITU)
UB	Earth station in the broadcasting-satellite service (sound broadcasting) (ITU)
UD	Space telecommand mobile earth station (ITU)
UE	Earth station in the standard frequency-satellite service (ITU)
UH	Mobile earth station in the space research service (ITU)
UK	Space tracking mobile earth station (ITU)
UM	Radionavigation-Satellite Mobile Earth Station: A mobile earth station in the radionavigation-satellite service. (ITU)
UN	Mobile earth station in the meteorological-satellite service (ITU)
UR	* Space telemetering mobile earth station (ITU)
UT	Mobile earth station in the space operation service (ITU)
UV	Earth station in the broadcasting-satellite service (television) (ITU)
UW	Mobile earth station in the earth exploration-satellite service (ITU)
UY	Earth station in the time signal-satellite service (ITU)
VA	Land Earth Station: An earth station in the fixed-satellite service or in some cases in the mobile-satellite service located at a specified point or within a specified area on land to provide a feeder link for the mobile-satellite service. (ITU)
WDX	RADIOLOCATION WEATHER RADAR (FCC)
WDXT	RADIOLOCATION WEATHER RADAR - TEMPORARY (FCC)
X	The station class is not known (legacy data only) (INTL)
XC	Experimental Contract Developmental Station: An experimental station used for the evaluation or testing under Government contract of electronics equipment or systems in a design or development stage. (INTL)
XD	Experimental Developmental Station: An experimental station used for evaluation or testing of electronics equipment or systems in a design or development stage. (INTL)
XE	Experimental Export Station: An experimental station intended for export and used for the evaluation or testing of electronics equipment or systems in the design or development stage. (INTL)
XM	Experimental Composite Station: An experimental station used in experimental operations of a complex nature not readily specified or used in an operation which is a composite of two or more of the established experimental categories. (INTL)

XR	Experimental Research Station: An experimental station used in basic studies concerning scientific investigation looking toward the improvement of the art of radiocommunications. (INTL)
XT	Experimental Testing Station: An experimental station used for the evaluation or testing of electronics equipment or systems, including site selection and transmission path surveys, which have been developed for operational use. (INTL)

Code List UST

Used in element StatusLog

Code	Meaning
ACCEPTED BY	
ACTIVATED BY	
ADMIN MOD BY	
APPROVED BY	
ASSIGNED BY	
AUTHORISED BY	
COMMENT BY	
COMPLIANCE	
COORDINATION (from, to list)	
DELETED BY	
EXPIRED BY	
FORWARDED (from, to)	
IMPORTED BY	
IN-PROCESS AT	
INFO (from, to list)	
LATERAL COORDINATION	
MODIFIED BY	
NOTIFIED BY	
ORIGINATED BY	
RECALLED (from, to)	
RECEIVED BY	
REGISTERED WITH	
REJECTED (from, to)	
RESOLVED (from, to)	
REVIEW REQUIRED (from, to)	
SUBMITTED TO	
TABLED BY	
EXPORT BY	
IMPORT BY	
UNAPPROVED BY	
Other	If selected, a clarifying remark SHOULD be entered

Code List UTY

Used in element Assignment

Code	Meaning
Simplex	
Duplex	
Semiduplex	
Simplex Net	
One Directional Transmission	
Broadcast	

Simultaneous Broadcast	
Radionavigation	
Radiolocation	
Reception Only	
Radio Determination	
Other	If selected, a clarifying remark SHOULD be entered

Code List UUC

Used in element Assignment

Code	Meaning
Wartime circuits required to be operated or to be ready for operation in Peacetime	
Wartime circuits that have a limited capability in peacetime for exchanging traffic between the planned terminals	
Required for wartime only	
Required for occasional and temporary usage for training exercises or maneuver purposes	
Required for the deployment phase of contingency operations	
Required for the employment phase of contingency operations	
Required for peacetime only	
Other	If selected, a clarifying remark SHOULD be entered

Code List UUF

Used in element Assignment

Code	Meaning
Regular, not limited to workweek	
Regular, workweek	
Occasional, not limited to workweek	
Occasional, workweek	
Other	If selected, a clarifying remark SHOULD be entered

Code List UFU

Used in element ConfigFreq

Code	Meaning
BEACON	

BEACON, DOWNLINK	
BEACON, UPLINK	
CROSSLINK	
CROSSLINK RECEIVE	
CROSSLINK TRANSMIT	
CROSSLINK TRANSMIT/RECEIVE	
DOWNLINK	
Other	If selected, a clarifying remark SHOULD be entered
RECEIVE	
SENSOR	
SENSOR, ACTIVE	
SENSOR, PASSIVE	
TRANSMIT	
TRANSMIT/RECEIVE	
UPLINK	
Other	If selected, a clarifying remark SHOULD be entered

Code List ULD

Used in element JammingChannelProfile

Code
Negative
Positive

Code List UNT

Used in elements Notation, NotationTimeline

Code	Meaning
Active	
Associated	
Cancelled	
Future	
Incorporated	
Renotated	
Retired	
Other	If selected, a clarifying remark SHOULD be entered

Code List USX

Used in element ObservedMOPAnalysis

Code
Amplitude Modulation (AM)
Continuous Wave (CW)
Frequency Modulation (FM)
Phase Modulation (PM)

Code List USY

Used in element ObservedRFAnalysis

Code	Meaning
Coherent	The standard deviation of the first phase difference is less than 10 degrees
Non-Coherent	The standard deviation of the first phase difference is more than 57 degrees
Other	If selected, a clarifying remark SHOULD be entered

Code List US2

Used in element UsingCountries

Code	Meaning
Producing	
Source	
Using	
Other	If selected, a clarifying remark SHOULD be entered

Code List US5

Used in element Nomenclature

Code	Meaning
Associated Equipment	
Associated Platform	
Associated Unit	
Associated Weapon	
Other	If selected, a clarifying remark SHOULD be entered

Code List US7

Used in elements ObservedERPAnalysis, ObservedMOPAnalysis, ObservedPolarisationAnalysis, ObservedPulseAnalysis, ObservedRFAnalysis, ObservedScanAnalysis

Code	Meaning
Adaptive	variations are driven by an environmental condition (e.g., target range, target velocity, etc.)
Non-Patterned	variations do not repeat significantly to create a recognizable pattern.
Patterned	variations repeat significantly to create a recognizable pattern.
Unmodulated	indicated by a constant ERP.
Other	If selected, a clarifying remark SHOULD be entered

Code List US8

Used in element ObservedScanAnalysis

Code	Meaning
Primary	
Secondary	
Other	If selected, a clarifying remark SHOULD be entered

Code List USS

Used in element Baseband

Code	Meaning
Gaussian	
Ramp	
Sawtooth	
Sinusoidal	
Square	
Other	If selected, a clarifying remark SHOULD be entered

Code List UTM

Used in element TimingDeconflictionProtocol

Code	Meaning
Primary	
Secondary	
Test	
Other	If selected, a clarifying remark SHOULD be entered

Code List UWA

Used in elements JammingPerformance, JammingPlan

Code	Meaning

Deception	deception the deliberate radiation, reradiation, alteration, suppression, absorption, denial, enhancement, or reflection of electromagnetic energy in a manner intended to convey misleading information to an enemy or to enemy electromagnetic-dependent weapons, thereby confusing, misleading, degrading or neutralizing the enemy's combat capability. EW deception manipulates the
Degradation	degradation refers to making an enemy incapable of performing the designated mission. It resembles disruption but is not as comprehensive in execution or impact. Degradation may confuse or delay the actions of an untrained enemy, but a trained operator can work around the effects. Like disruption, forces achieve degradation with electromagnetic jamming, electromagnetic deception, and electromagnetic intrusion. Degradation may be the best choice to stimulate the enemy to determine their response or for electronic attack conditioning.
Denial	denial is controlling the information an enemy receives via the electromagnetic spectrum and preventing the acquisition of accurate information about friendly forces. Denial uses traditional jamming techniques, expendable countermeasures, destructive measures, or network applications. These range from limited effects up to complete denial of usage.
Destruction	destruction is the elimination of targeted enemy systems. Various weapons and techniques -- ranging from conventional munitions and directed-energy weapons to network attacks -- can destroy jamming.
Disruption	disruption aims to confuse or delay enemy action. Disruption techniques interfere with the enemy's use of the electromagnetic spectrum to limit enemy combat capabilities. Disruption resembles denial but is not as comprehensive in execution or impact. A trained enemy operator can thwart disruption through electronic protection measures, such as procedures to counter communications jamming.
Intrusion	the intentional insertion of electromagnetic energy into transmission paths in any manner, with the objective of deceiving operators or causing confusion.
Masking	the controlled radiation of electromagnetic energy on friendly frequencies in a manner to protect the emissions of friendly communications and electronic systems against enemy electronic warfare support measures/signals intelligence without significantly degrading the operation of friendly systems.
Other	If selected, a clarifying remark SHOULD be entered

Code List UWB

Used in elements JammingPerformance, JammingPlan

Code	Meaning
Fully Effective	100% of targets MUST be impacted
Not Effective	this choice SHOULD NOT be used for Required or Desired Performance)
Partially Effective	if selected, a minimum percentage SHOULD be entered in a Remark.
Other	If selected, a clarifying remark SHOULD be entered

Code List UWC

Used in element JammingAuthority

Code	Meaning
Allowed	
Continue	
Denied	
Other	If selected, a clarifying remark SHOULD be entered

Code List UWE

Used in element JammingPlan

Code	Meaning
High	
Low	
Medium	
Other	If selected, a clarifying remark SHOULD be entered

Code List UWF

Used in element JammingPlan

Code	Meaning
Date/Time	
Never	
Signal Detected	
Signal Not Detected	
Troops in Contact	
Troops in Region	
Troops Not in Contact	
Troops Not in Region	
Other	If selected, a clarifying remark SHOULD be entered

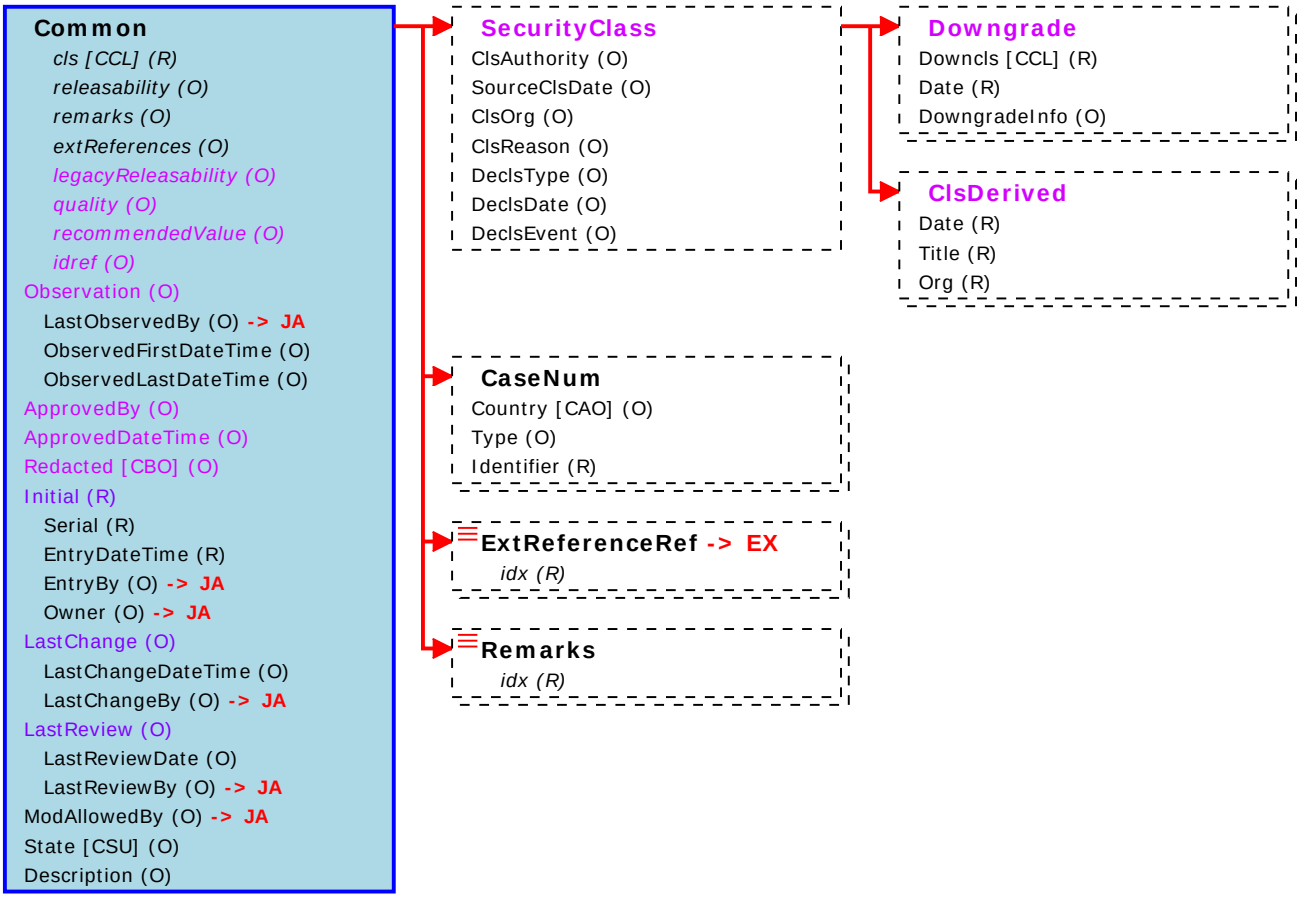
Code List UWG

Used in element JammingTarget

Code	Meaning
At Bearing	
At Point	
None	
Other	If selected, a clarifying remark SHOULD be entered

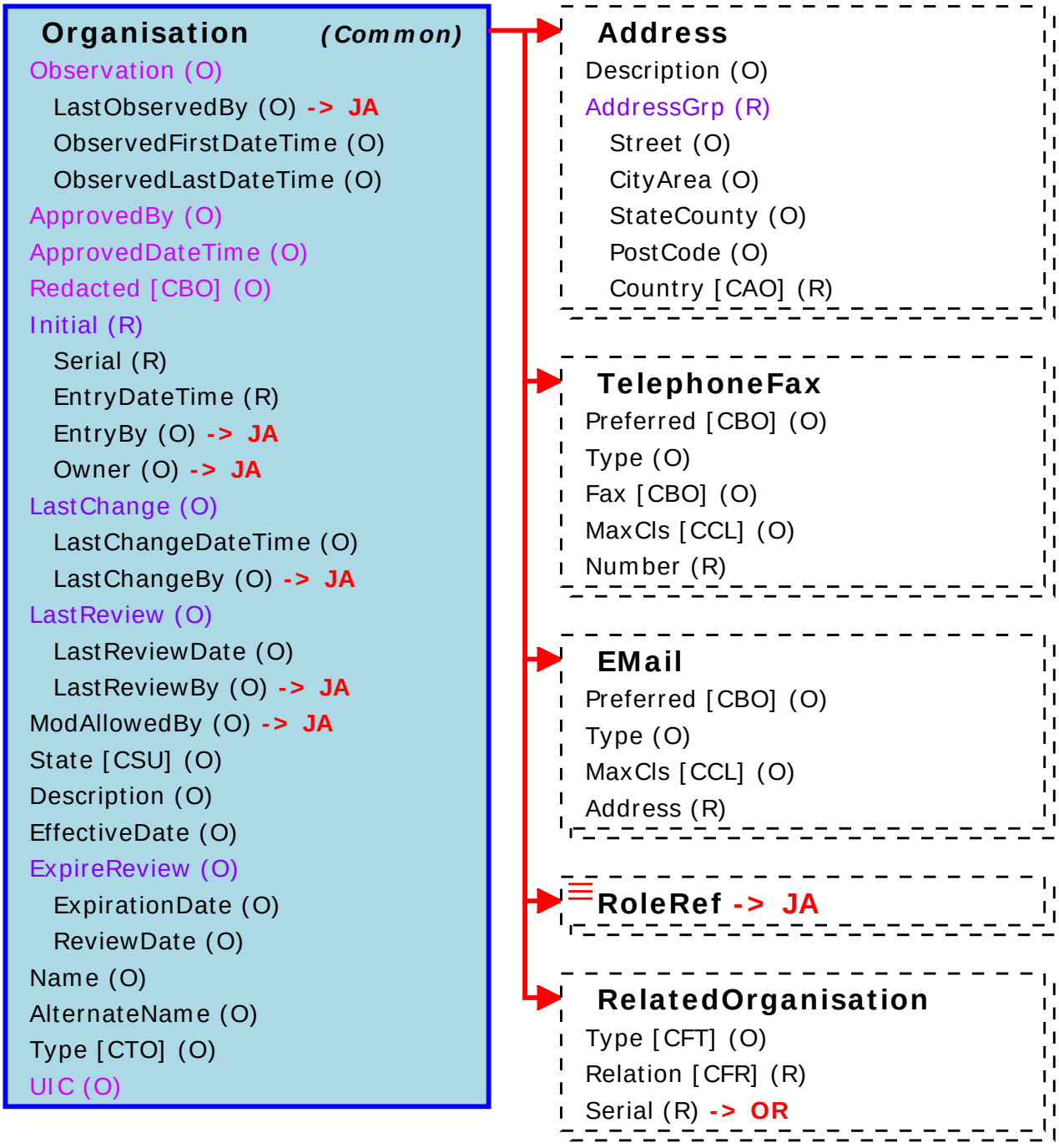
Common

References:, CaseNum, ClsDerived, Common, Downgrade, ExtReferenceRef, Remarks, SecurityClass



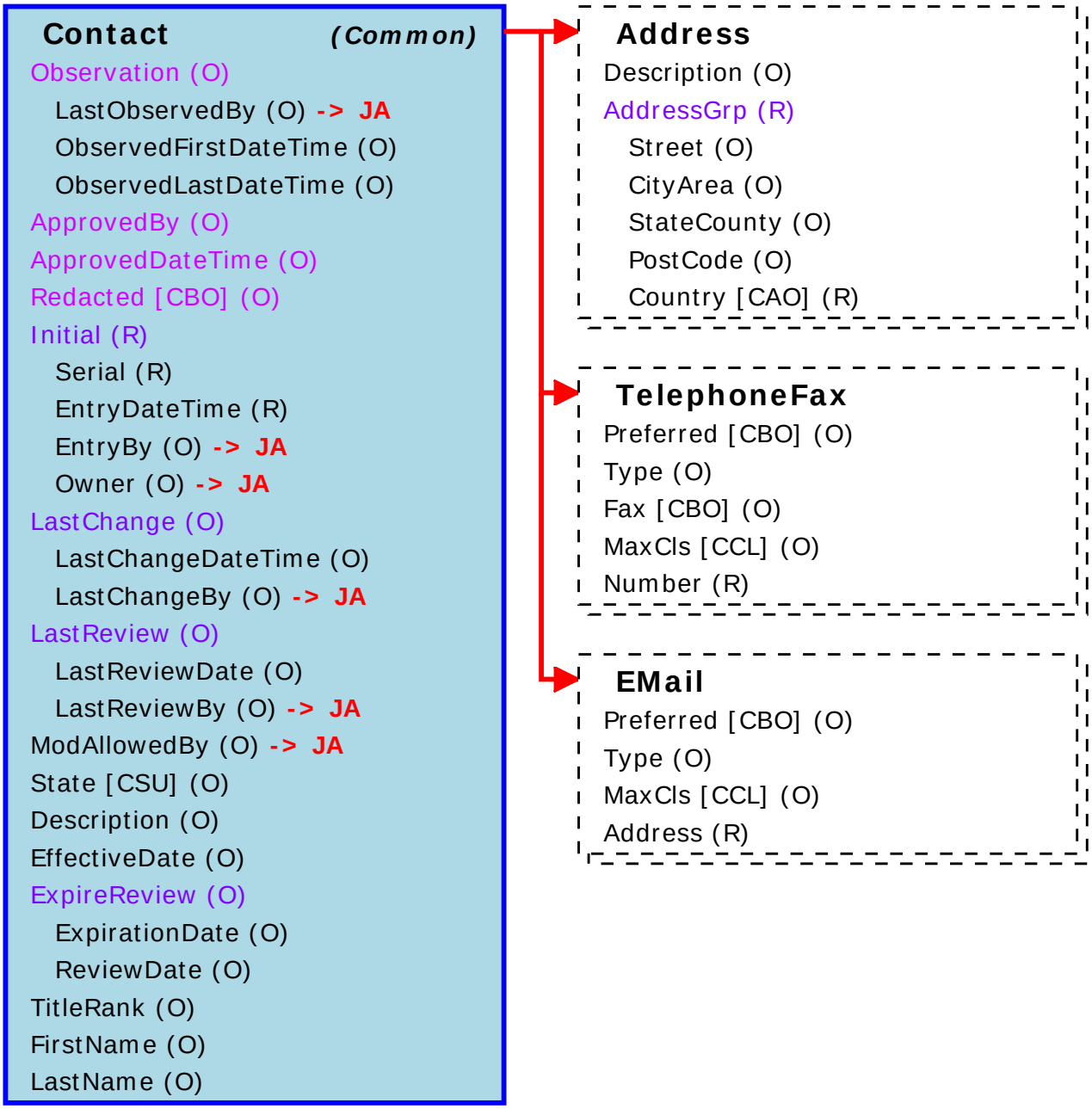
Organisation

References:, Address, Common, EMail, Organisation, RelatedOrganisation, RoleRef, TelephoneFax



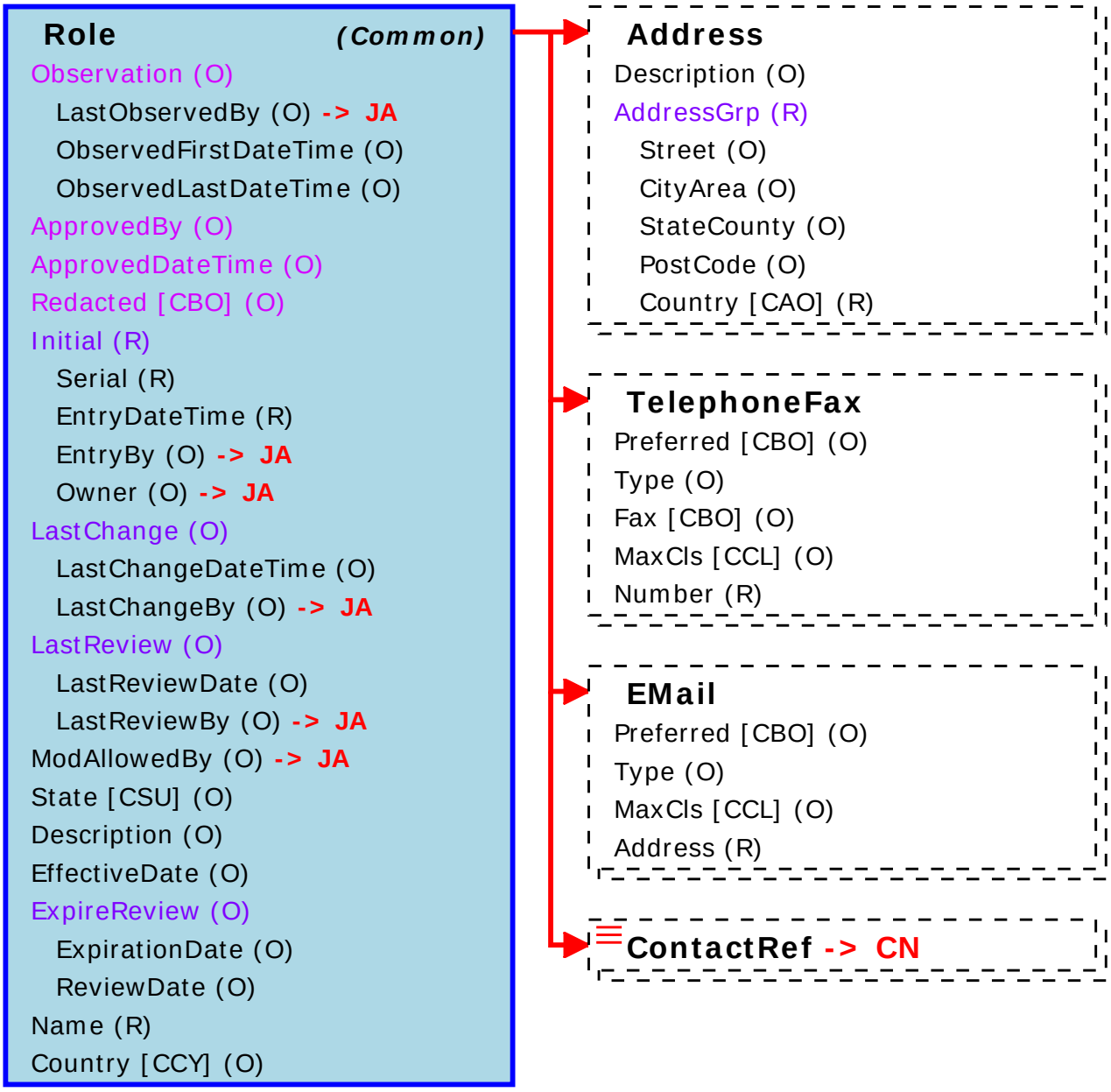
Contact

References:, Address, Common, Contact, EMail, TelephoneFax



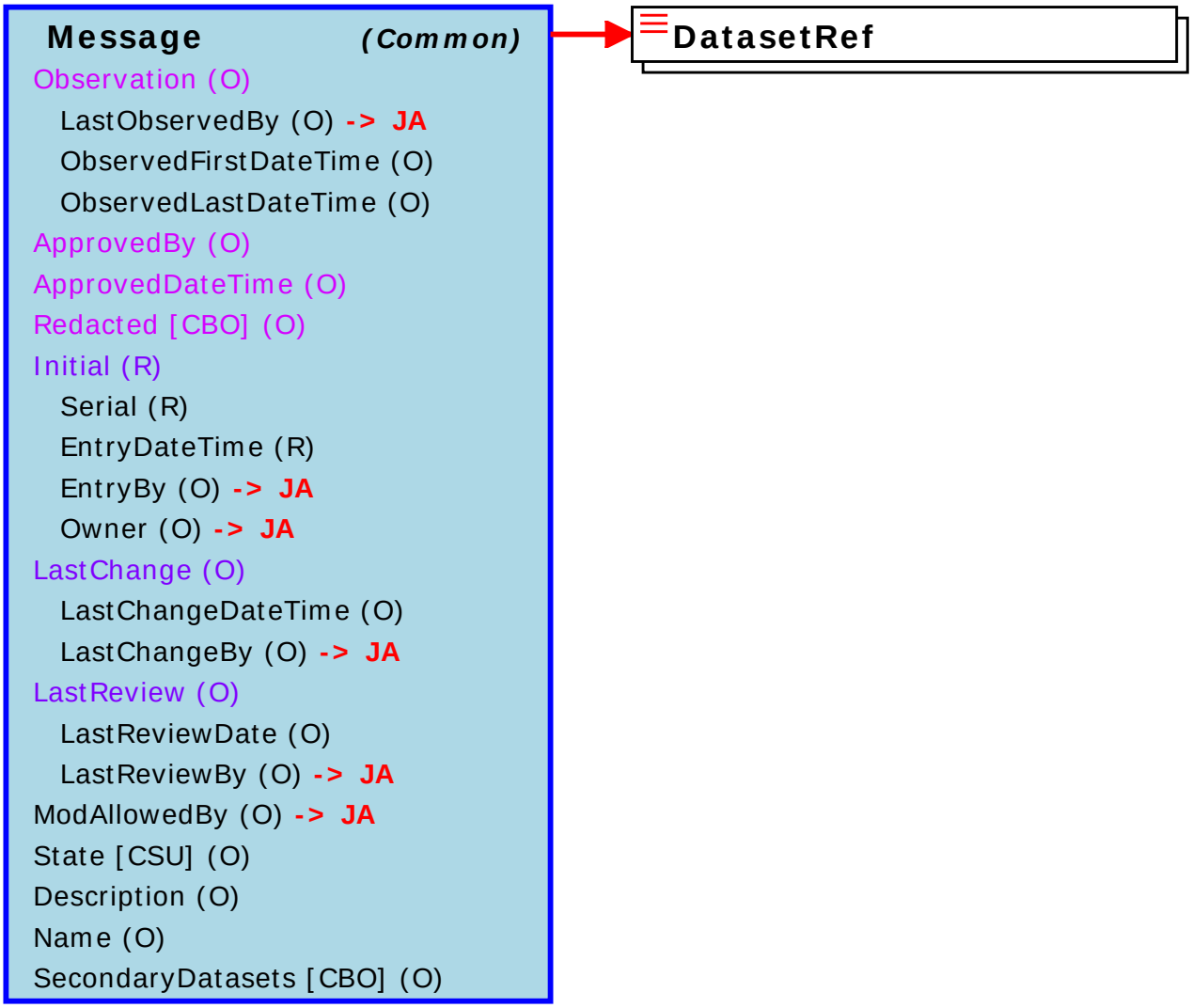
Role

References:, Address, Common, ContactRef, EMail, Role, TelephoneFax



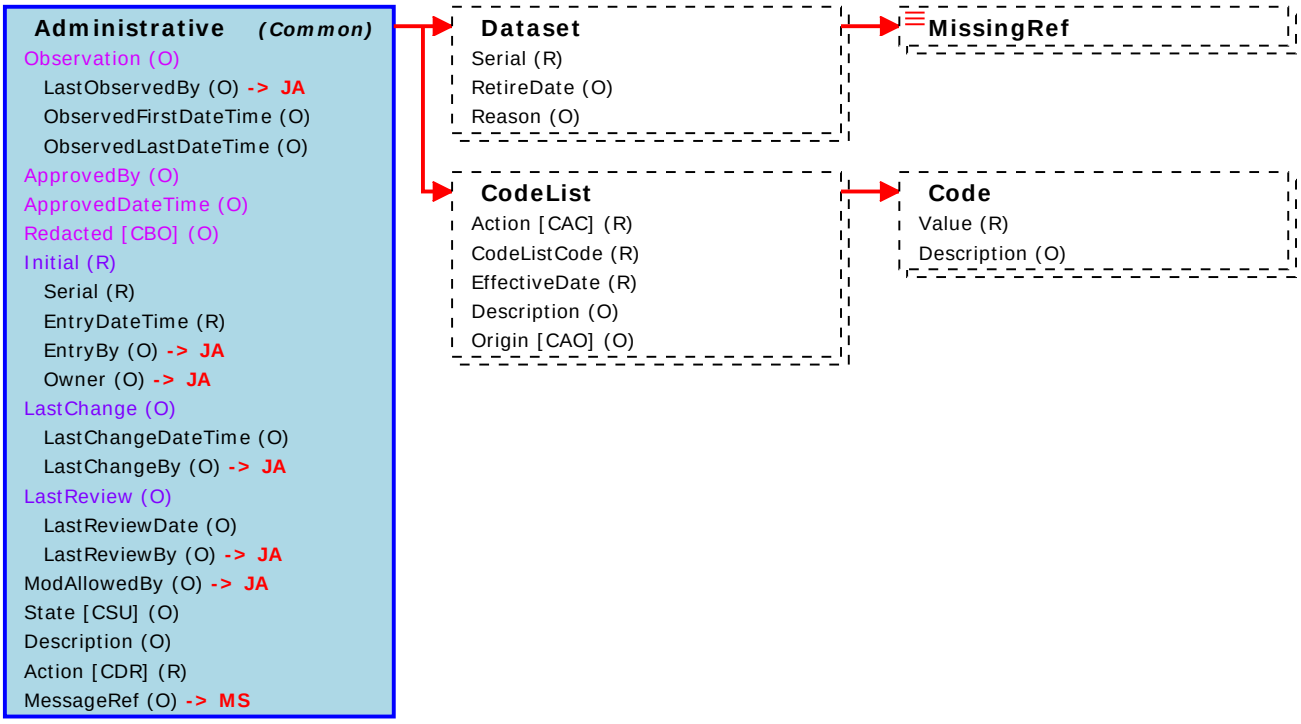
Message

*References:*Common, DatasetRef, Message



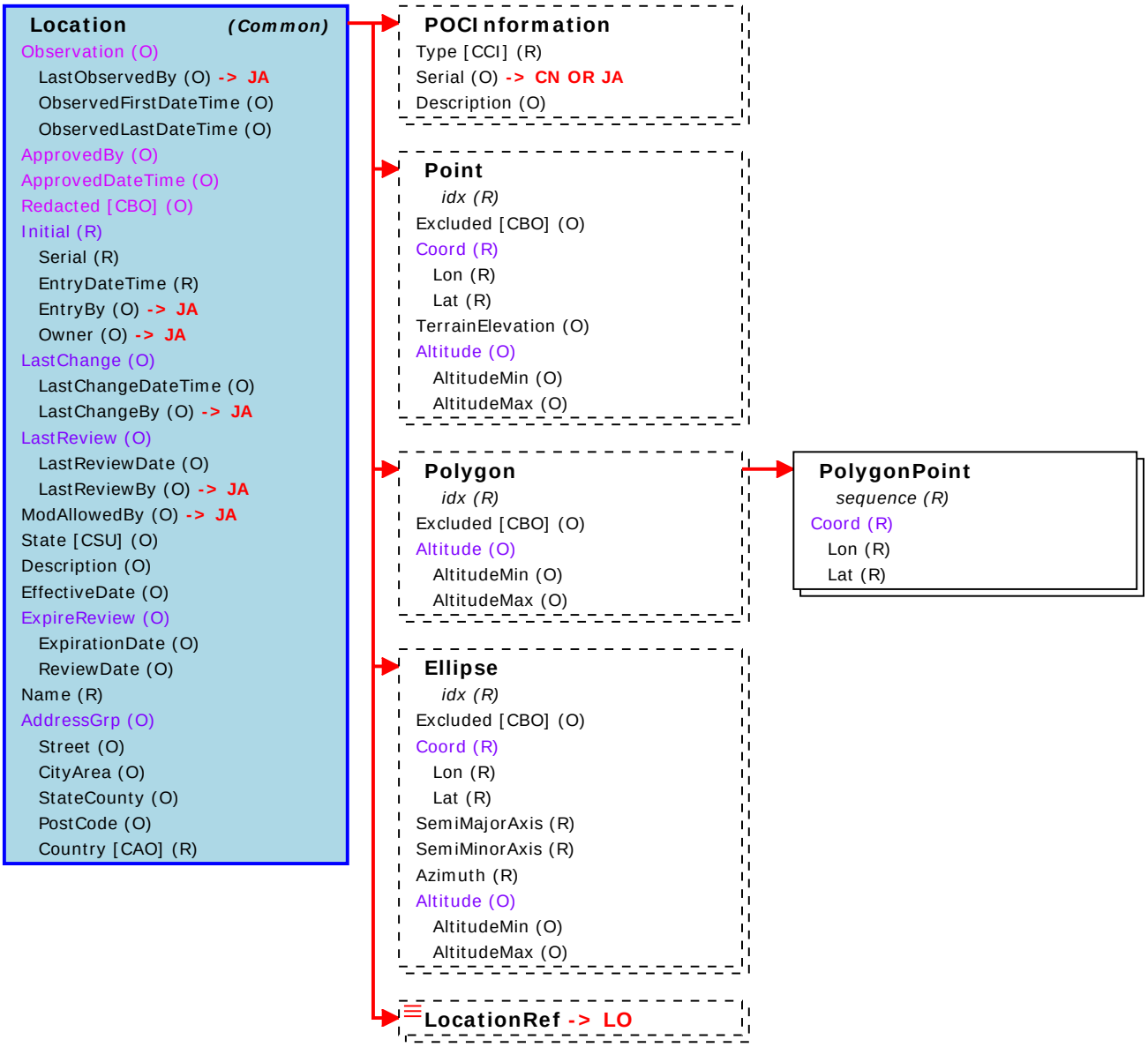
Administrative

References:, Administrative, Code, CodeList, Common, Dataset, MissingRef



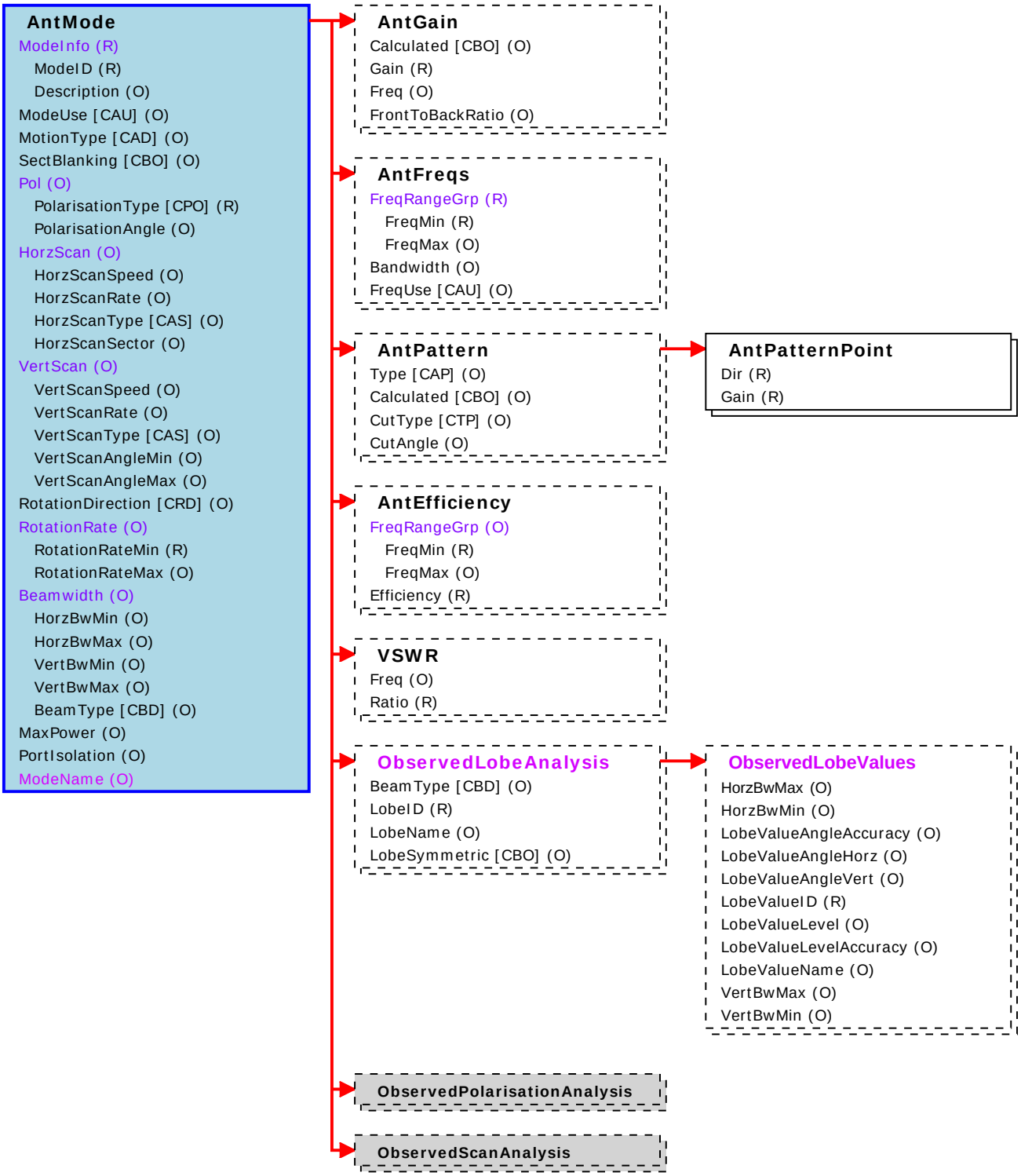
Location

References:, Common, Ellipse, Location, LocationRef, POCInformation, Point, Polygon, PolygonPoint



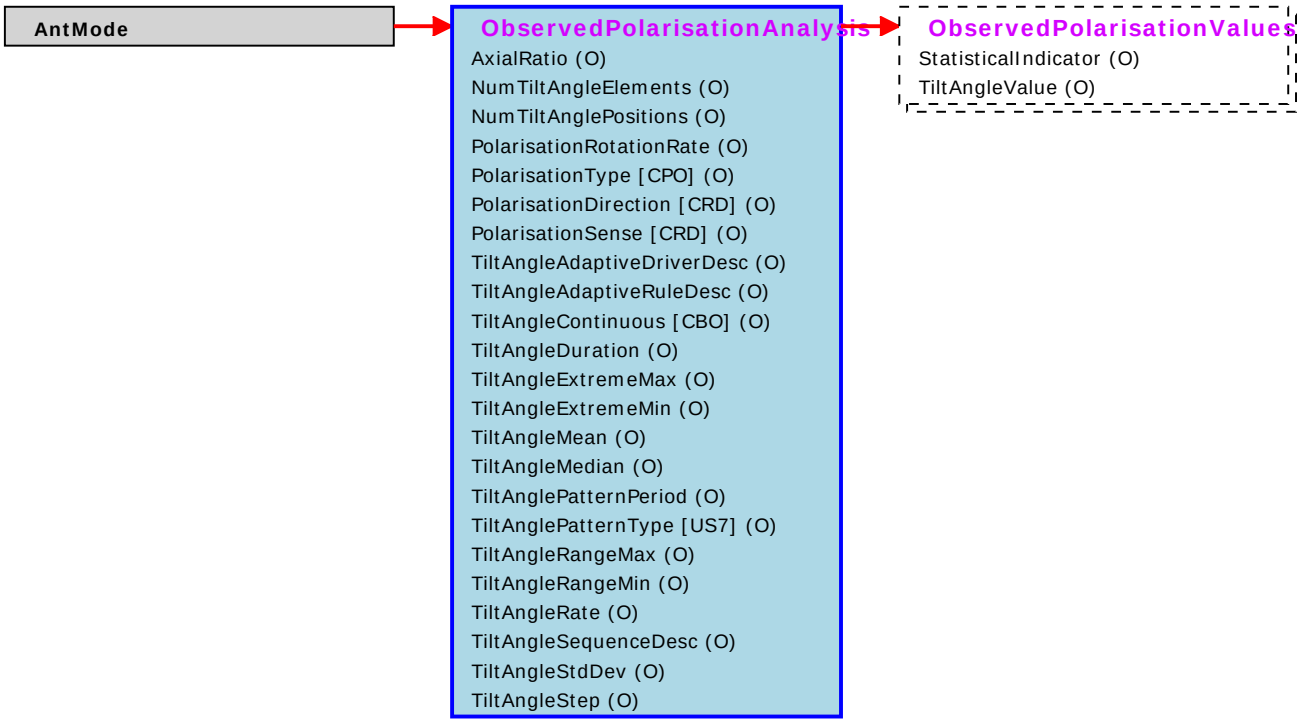
AntMode

References:, AntEfficiency, AntFreqs, AntGain, AntMode, AntPattern, AntPatternPoint, ObservedLobeAnalysis, ObservedLobeValues, ObservedPolarisationAnalysis, ObservedScanAnalysis, VSWR



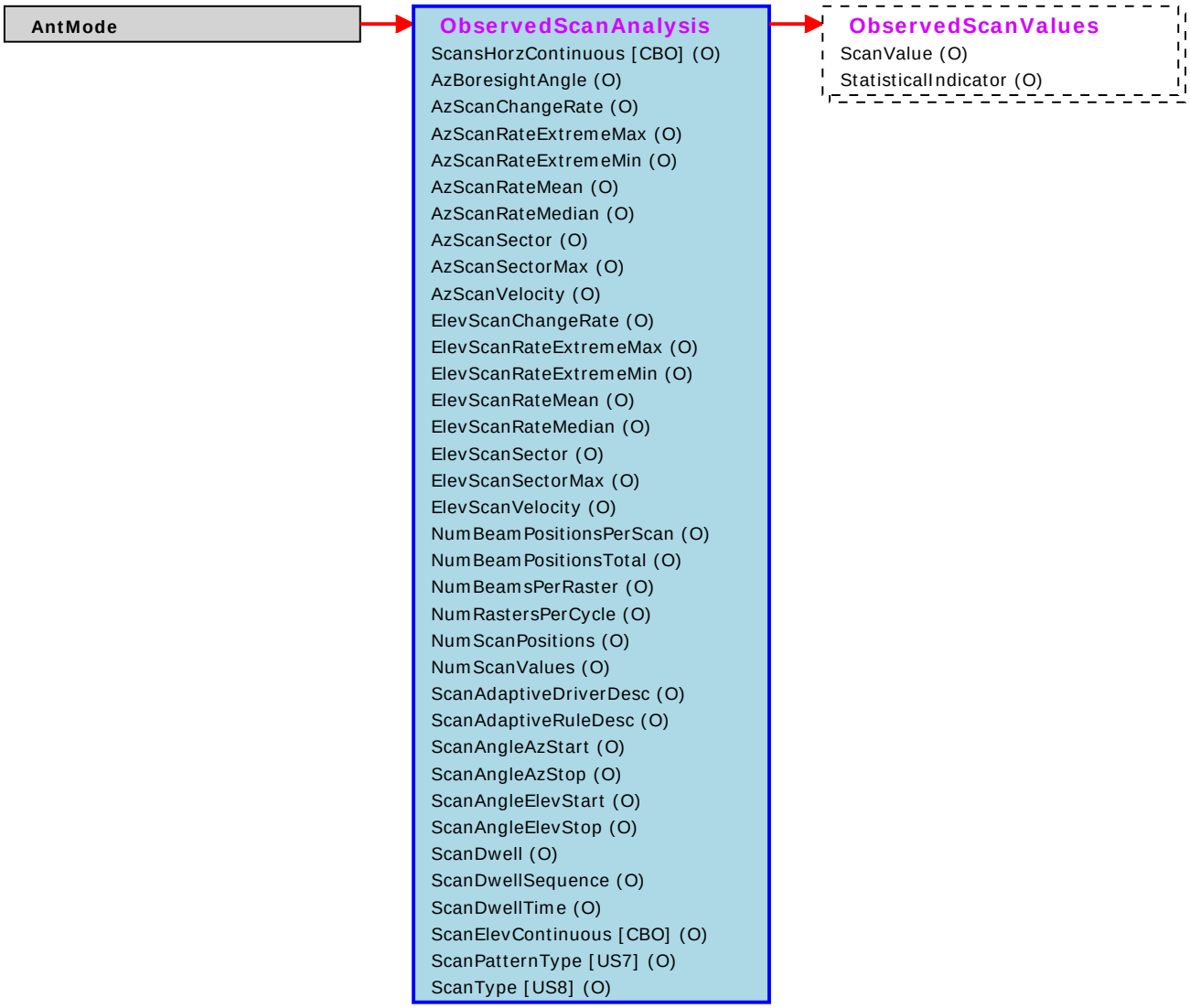
ObservedPolarisationAnalysis

References:, AntMode, ObservedPolarisationAnalysis, ObservedPolarisationValues



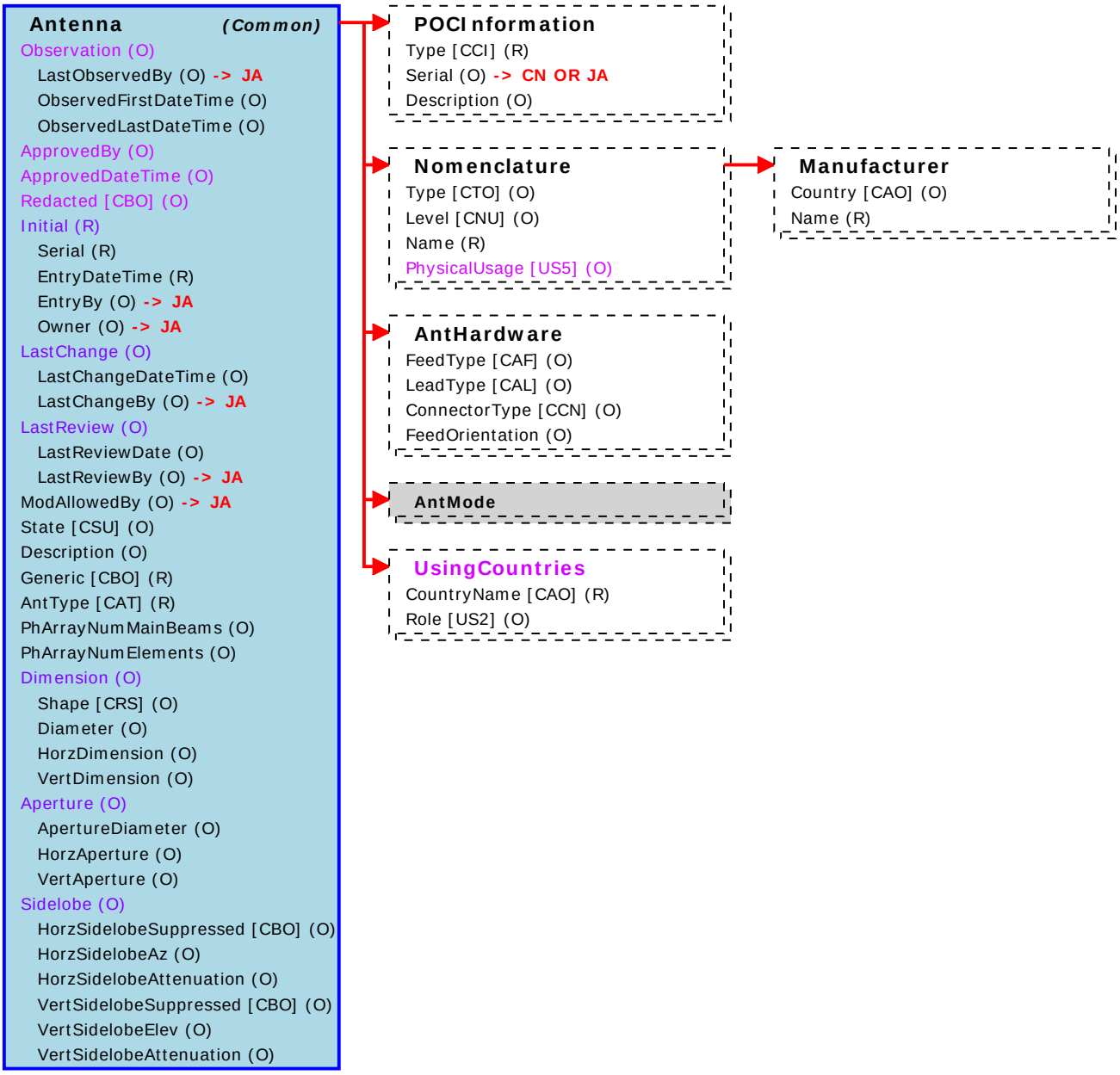
ObservedScanAnalysis

References:, AntMode, ObservedScanAnalysis, ObservedScanValues



Antenna

References:, AntHardware, AntMode, Antenna, Common, Manufacturer, Nomenclature, POCInformation, UsingCountries

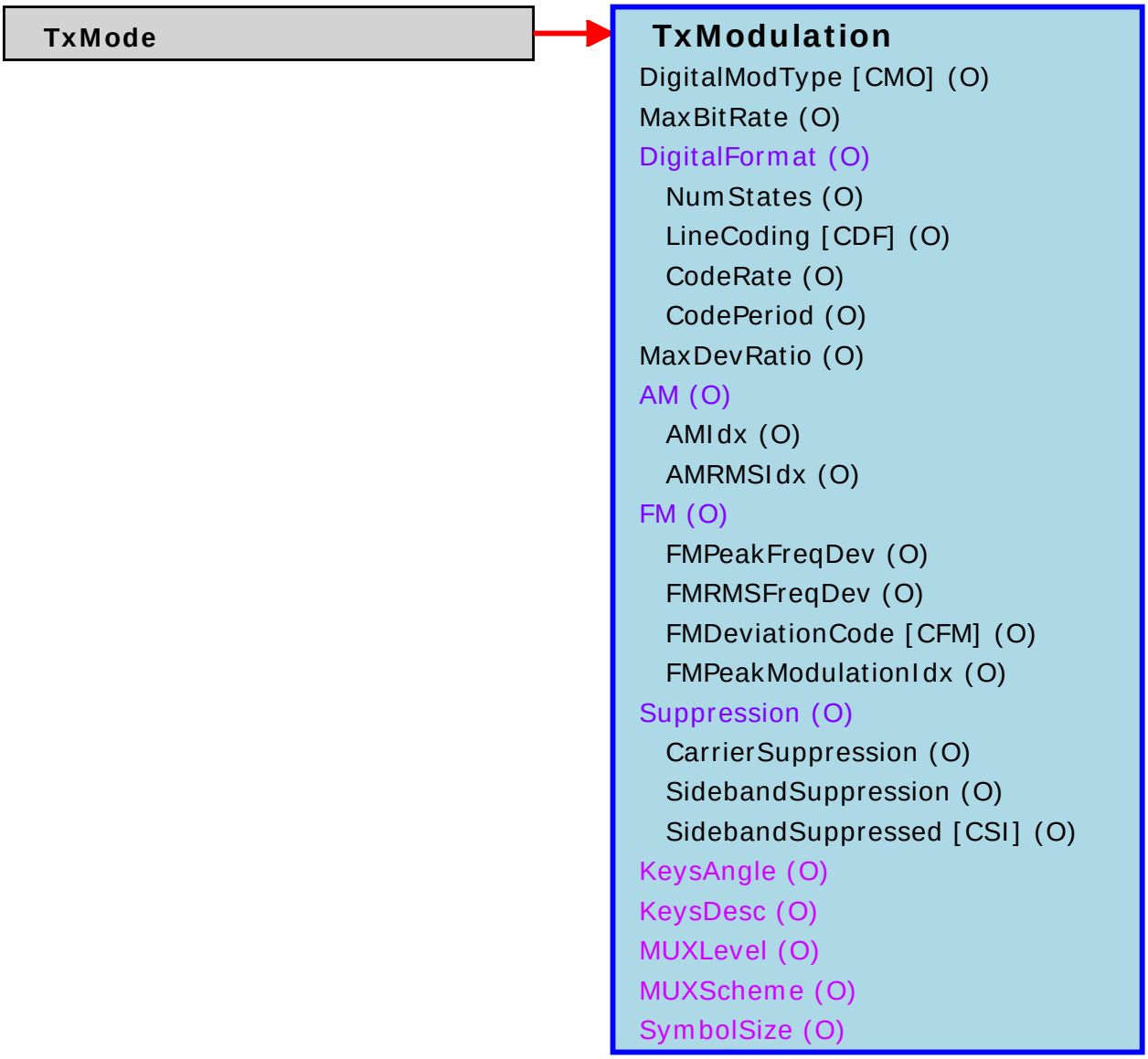


TxMode

References:, Baseband, EmsClass, ObservedMOPAnalysis, ObservedPulseAnalysis, ObservedRFAnalysis, Power, Pulse, SpreadSpectrum, SubcarrierFreq, SubcarrierTone, Transmitter, TxMode, TxModulation, TxSignalTuning

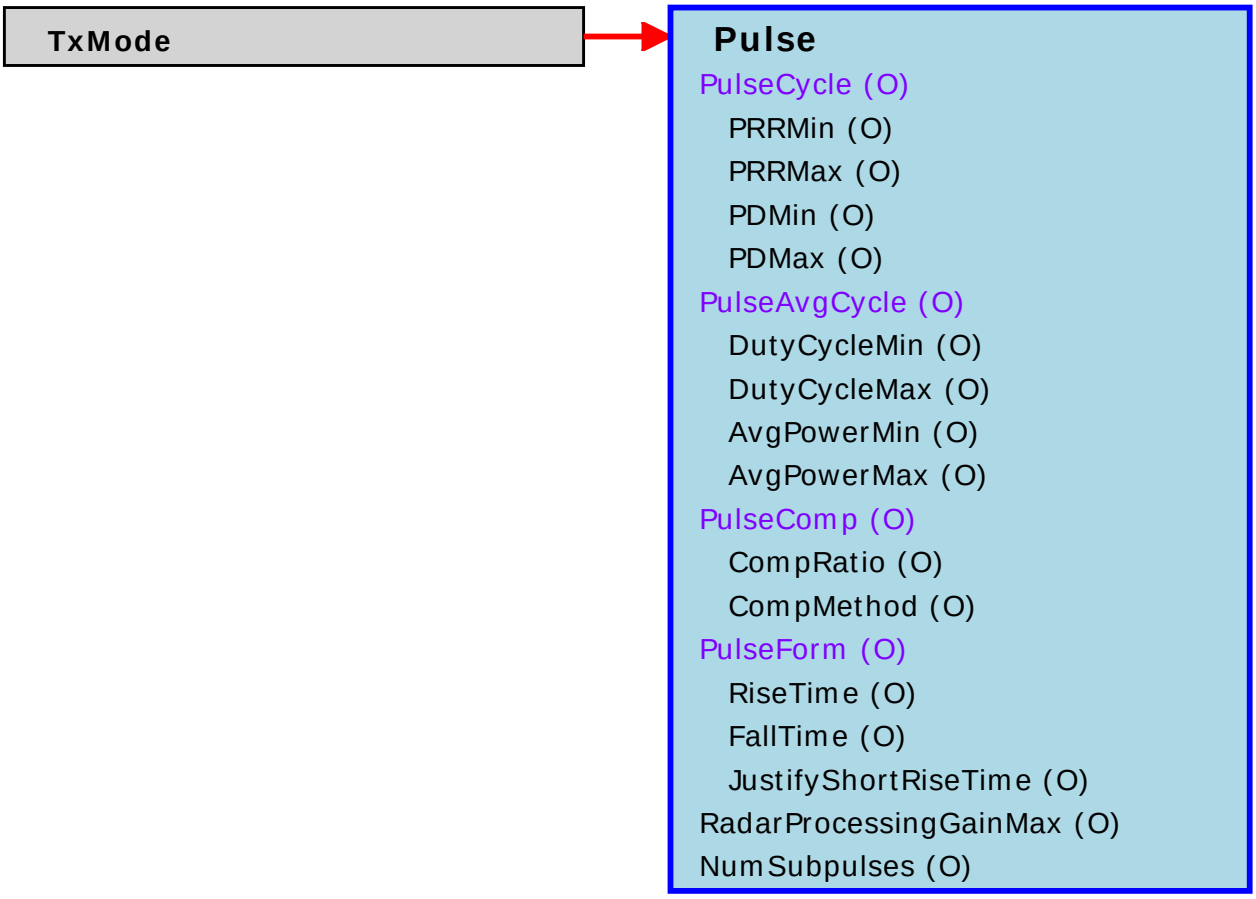
TxModulation

*References:*RxModulation, TxMode, TxModulation



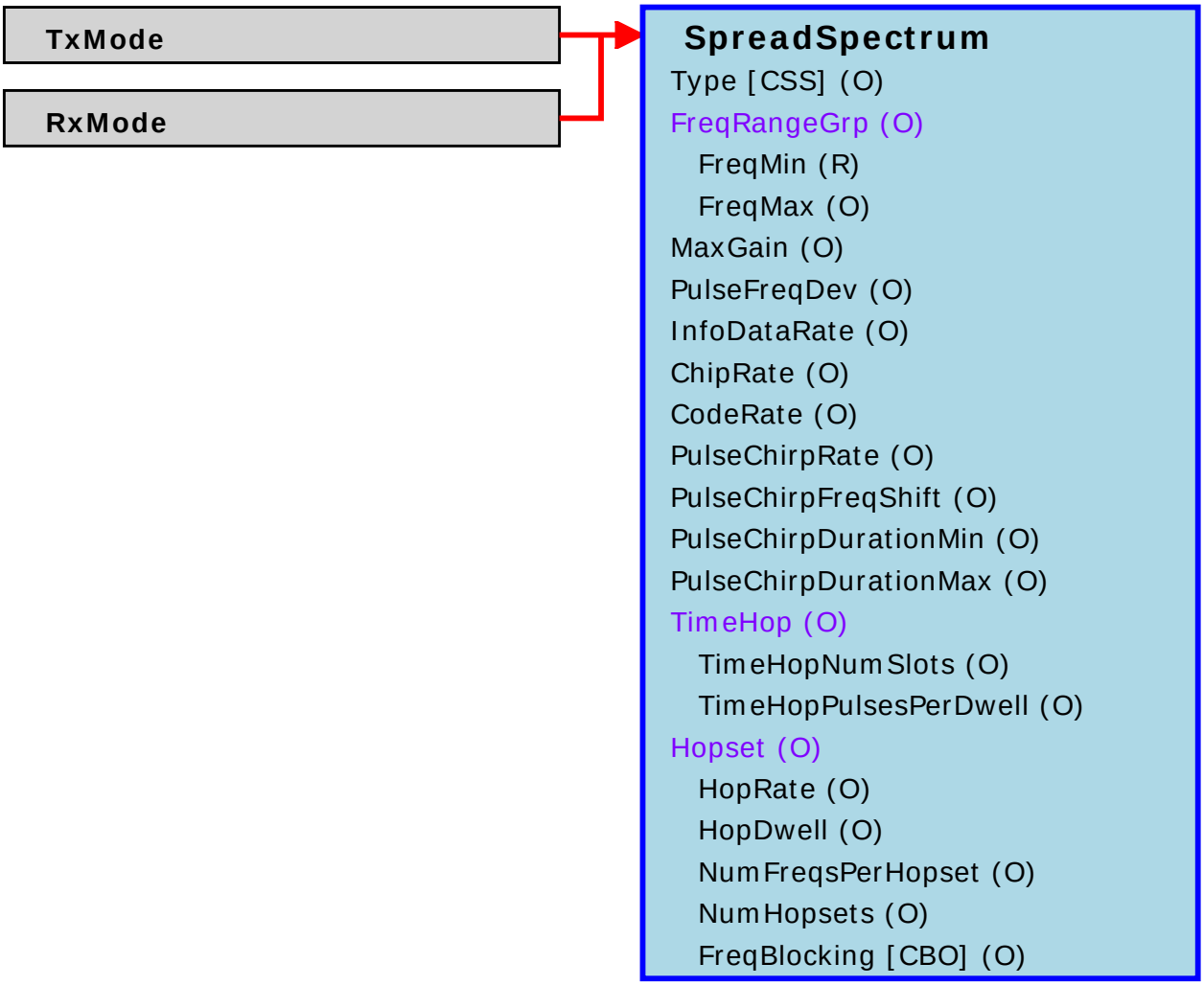
Pulse

References:, Pulse, TxMode



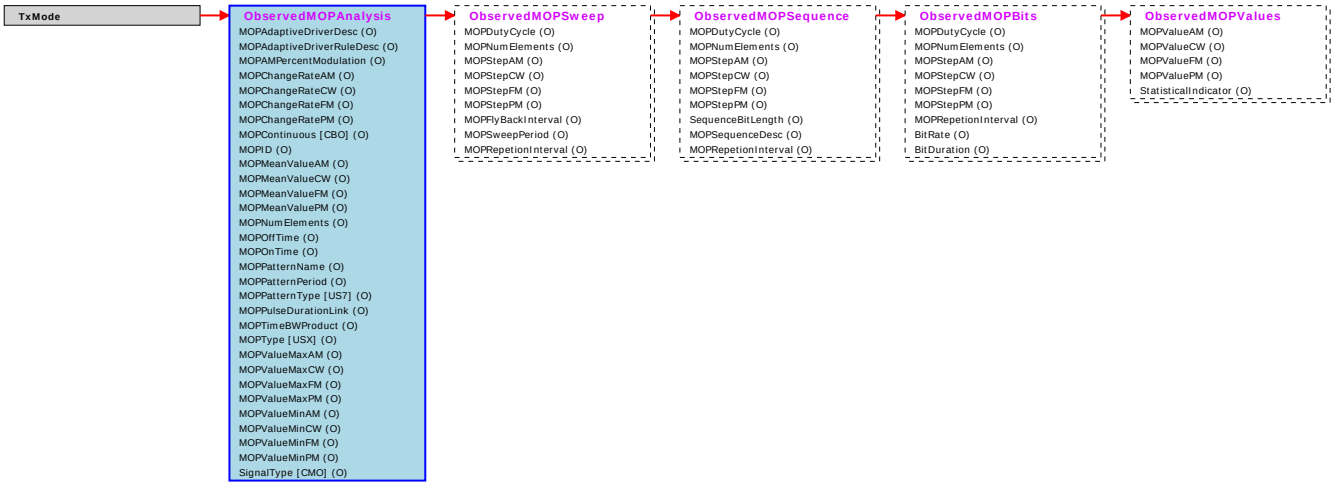
SpreadSpectrum

References:, RxMode, SpreadSpectrum, TxMode



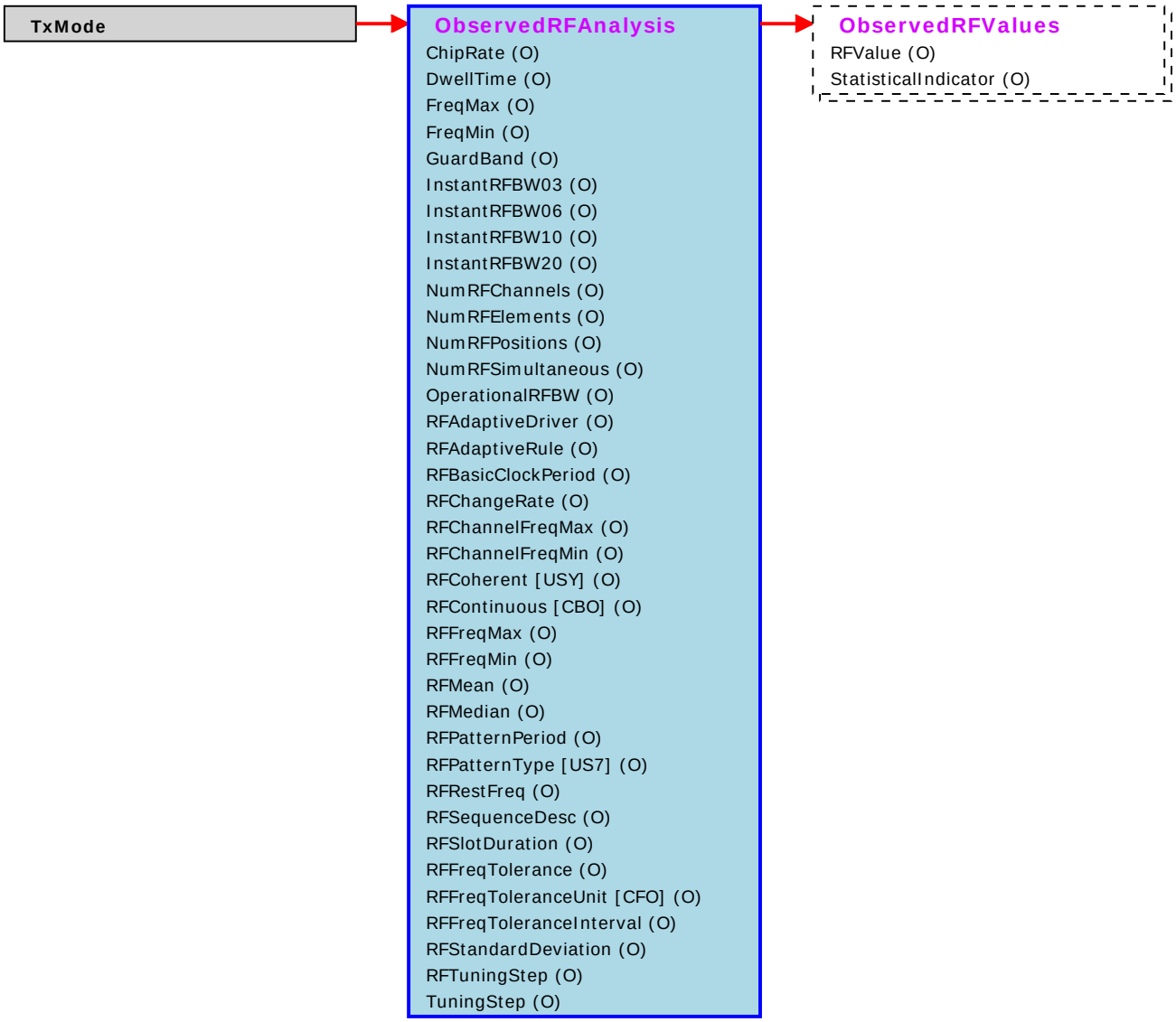
ObservedMOPAnalysis

References:, ObservedMOPAnalysis, ObservedMOPBits, ObservedMOPSequence, ObservedMOPSweep, ObservedMOPValues, TxMode



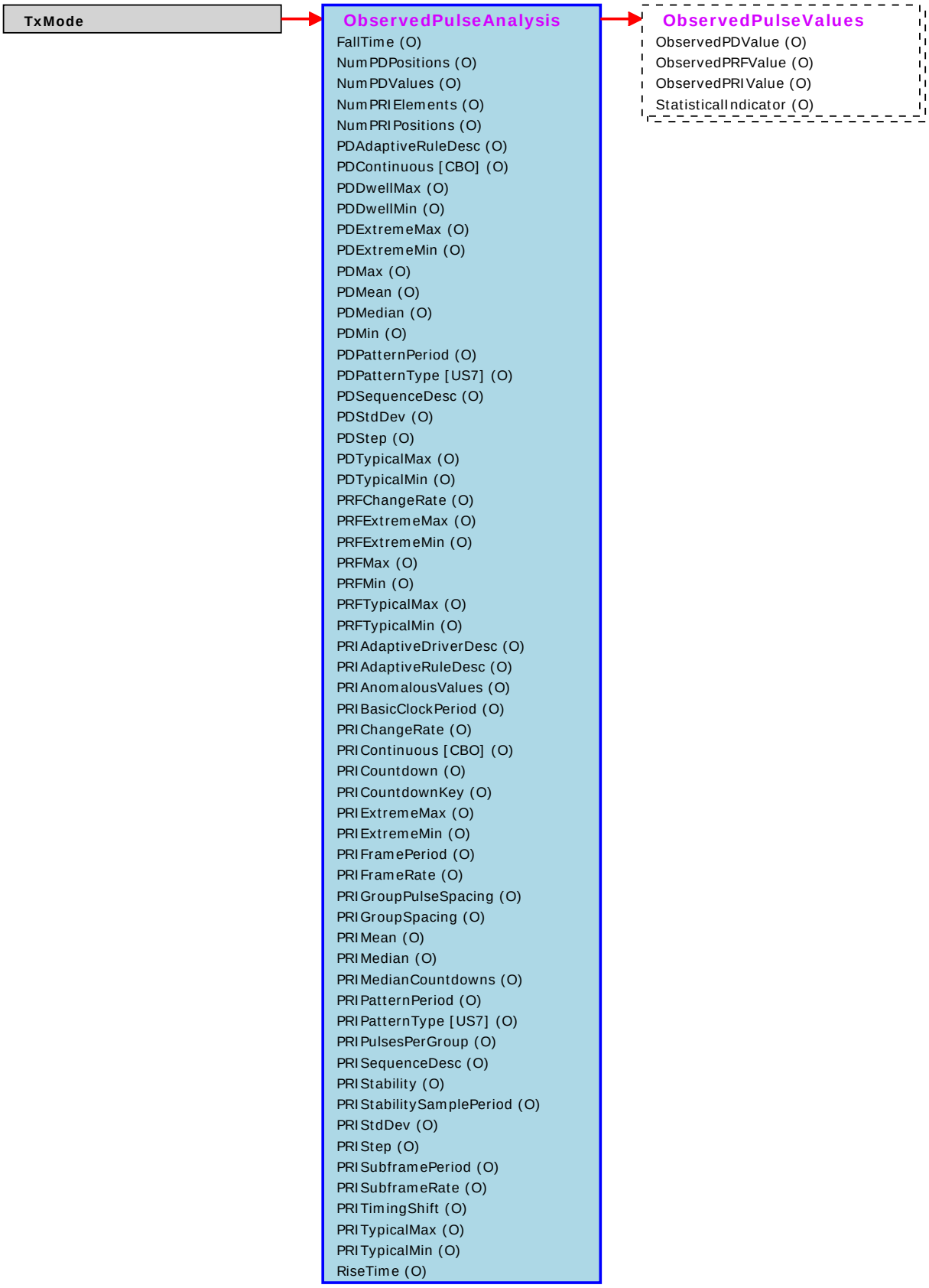
ObservedRFAnalysis

References:, ObservedRFAnalysis, ObservedRFValues, TxMode



ObservedPulseAnalysis

References:, ObservedPulseAnalysis, ObservedPulseValues, TxMode

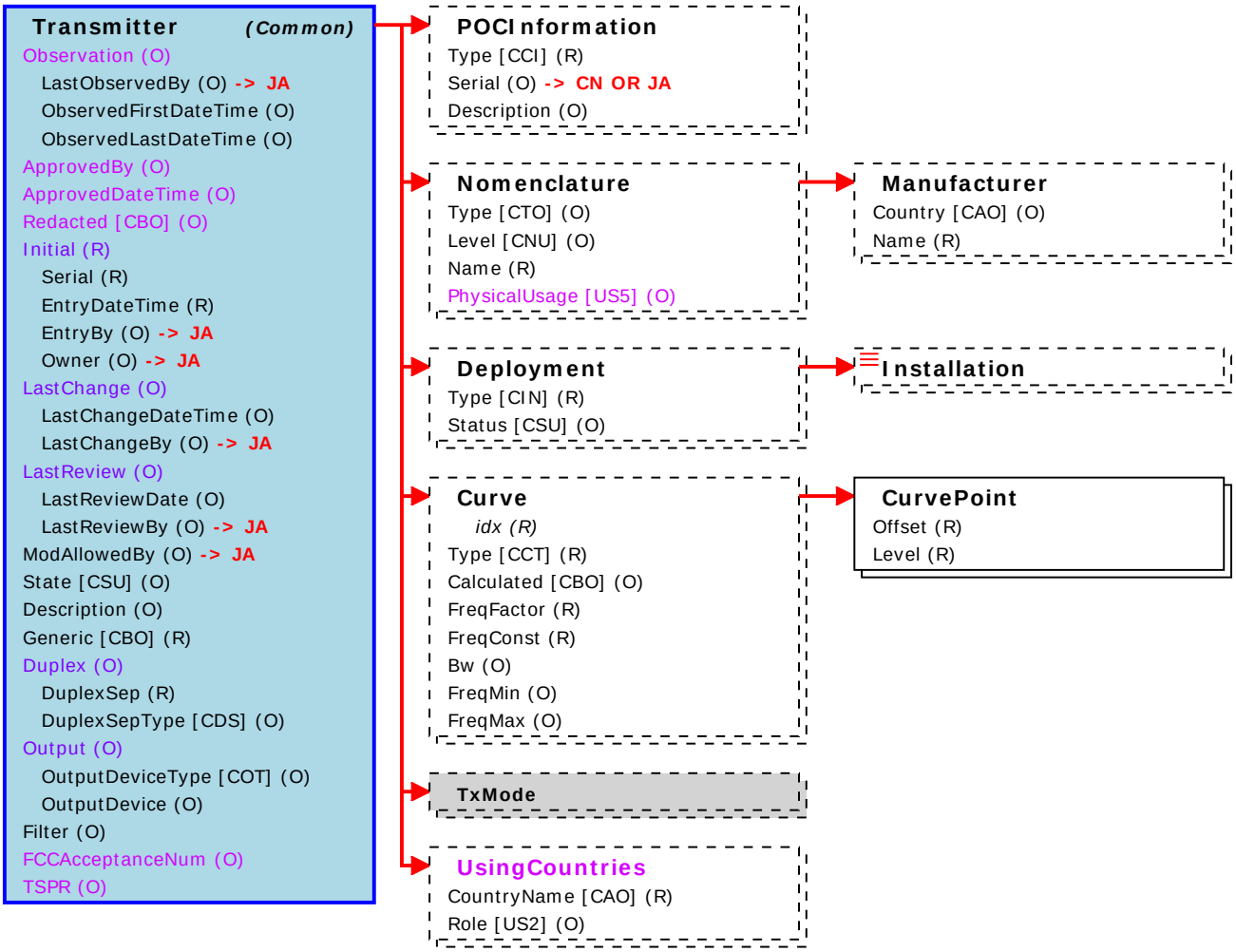


RxMode

References:, Baseband, EmsClass, FreqConversion, Receiver, RxMode, RxModulation, RxSignalTuning, SpreadSpectrum

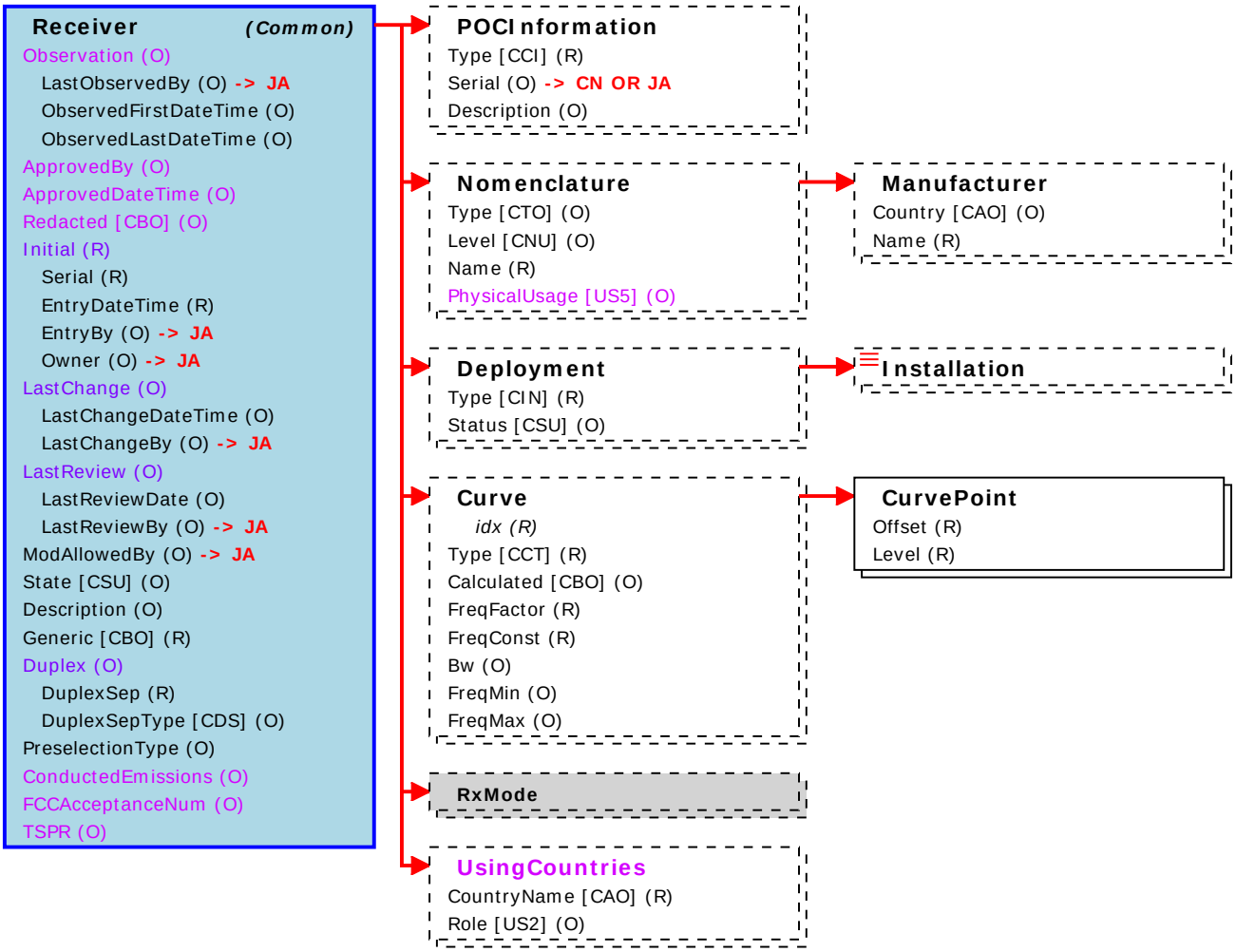
Transmitter

References:, Common, Curve, CurvePoint, Deployment, Installation, Manufacturer, Nomenclature, POCInformation, Transmitter, TxMode, UsingCountries



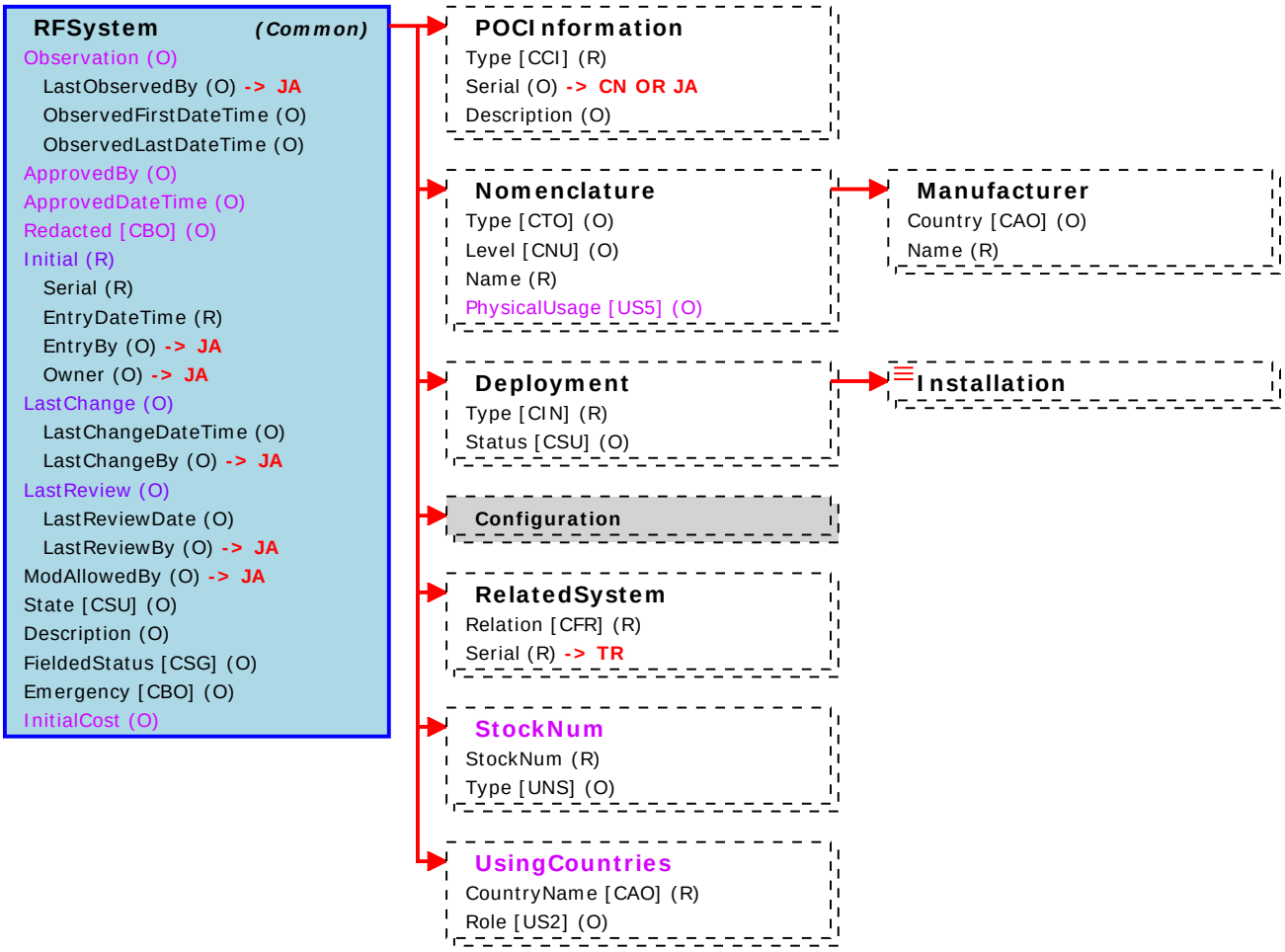
Receiver

References:, Common, Curve, CurvePoint, Deployment, Installation, Manufacturer, Nomenclature, POCInformation, Receiver, RxMode, UsingCountries



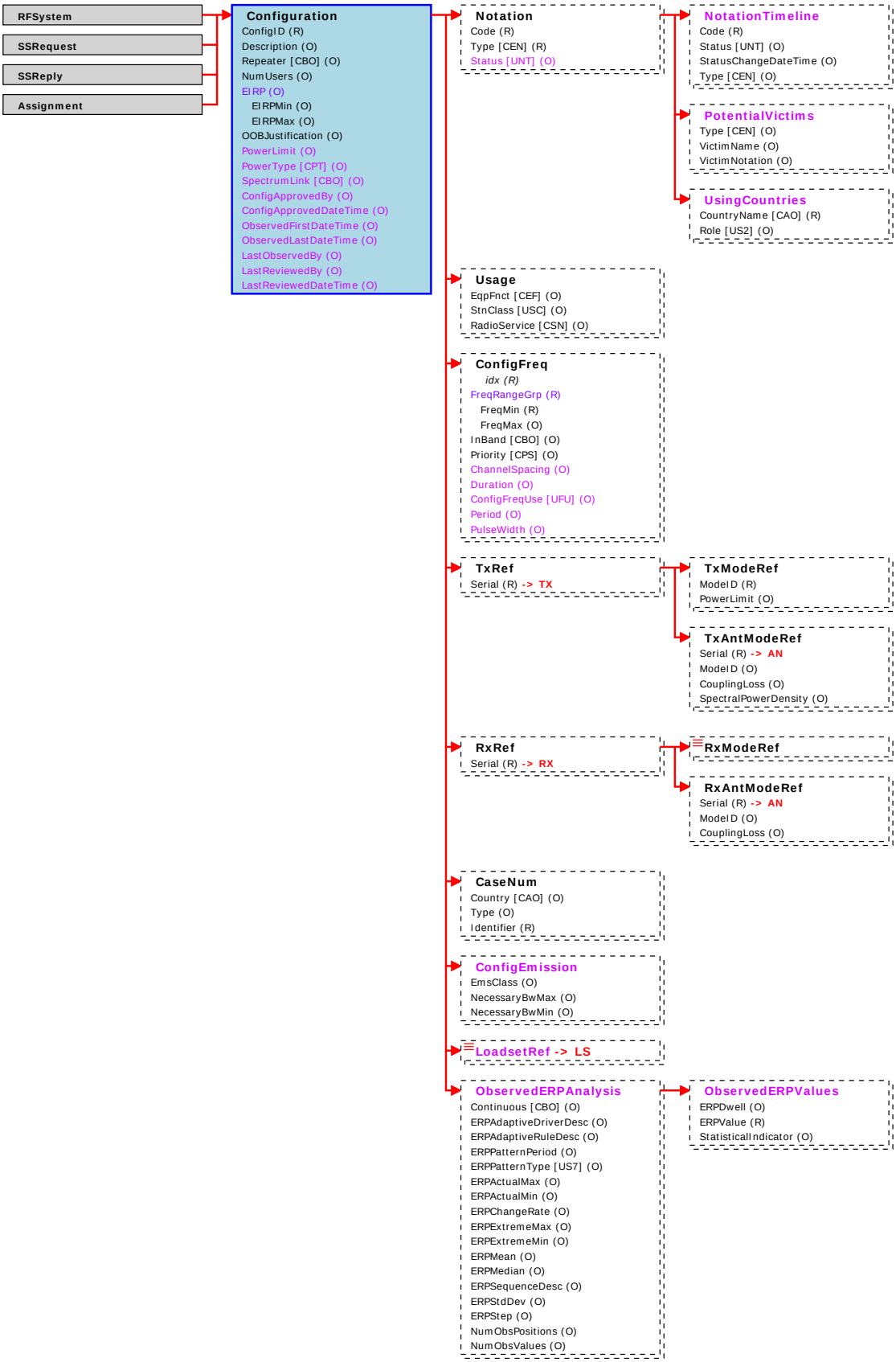
RFSystem

References:, Common, Configuration, Deployment, Installation, Manufacturer, Nomenclature, POCInformation, RFSystem, RelatedSystem, StockNum, UsingCountries



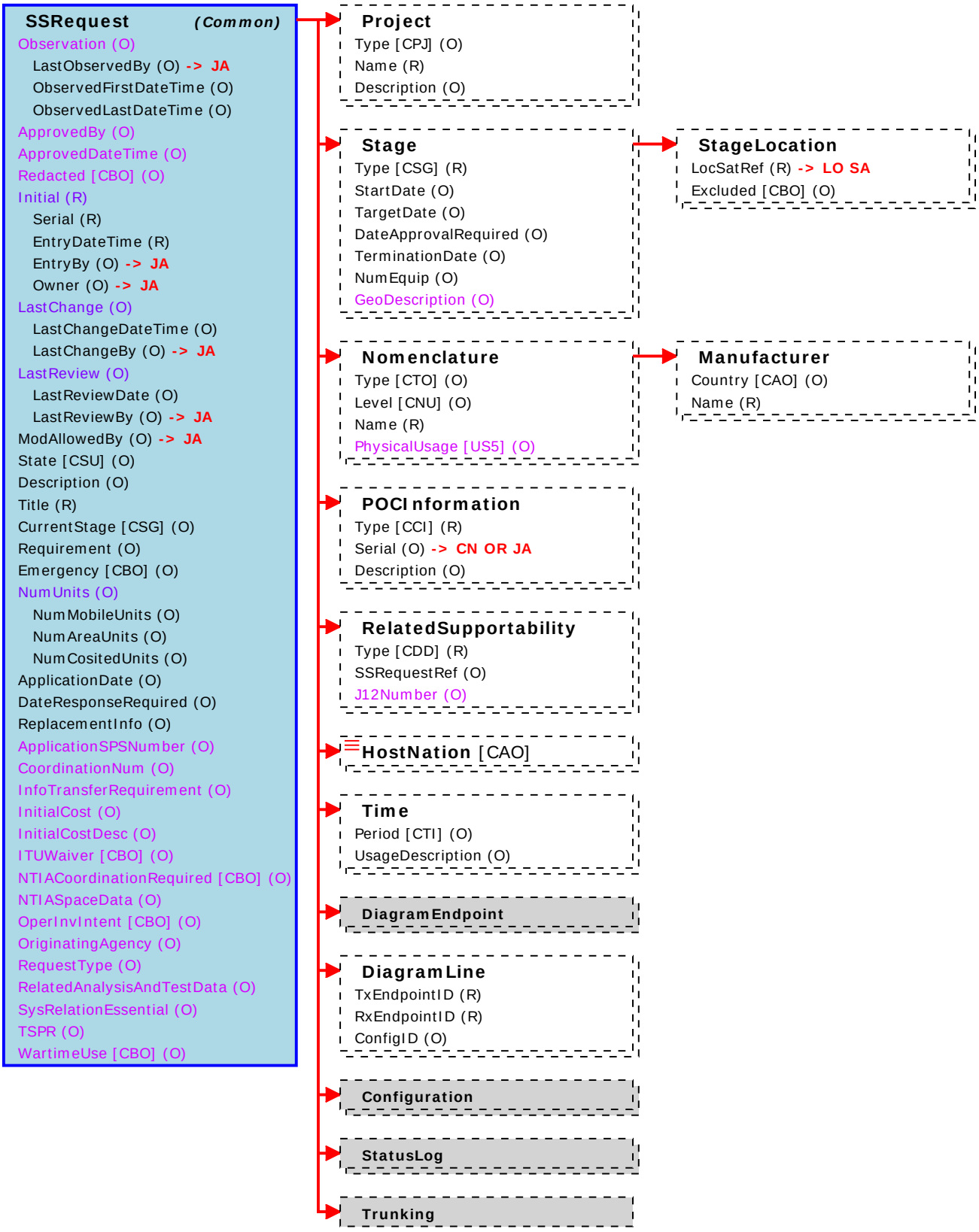
Configuration

References:, Assignment, CaseNum, ConfigEmission, ConfigFreq, Configuration, LoadsetRef, Notation, NotationTimeline, ObservedERPAnalysis, ObservedERPValues, PotentialVictims, RFSystem, RxAntModeRef, RxModeRef, RxRef, SSReply, SSRequest, TxAntModeRef, TxModeRef, TxRef, Usage, UsingCountries



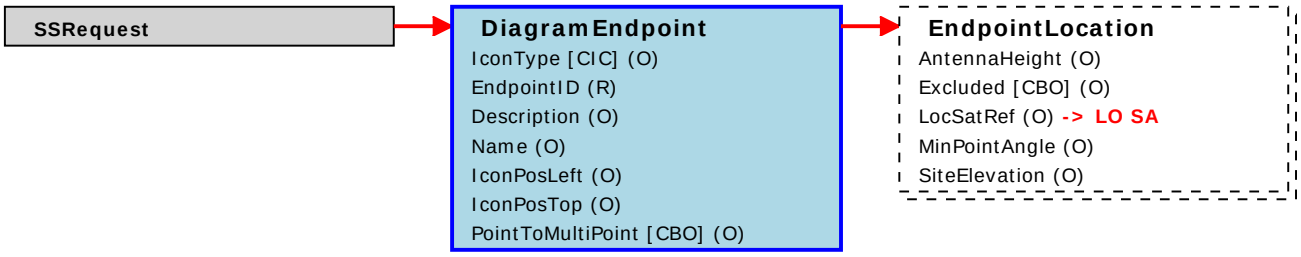
SSRequest

References:, Common, Configuration, DiagramEndpoint, DiagramLine, HostNation, Manufacturer, Nomenclature, POCInformation, Project, RelatedSupportability, SSRequest, Stage, StageLocation, StatusLog, Time, Trunking



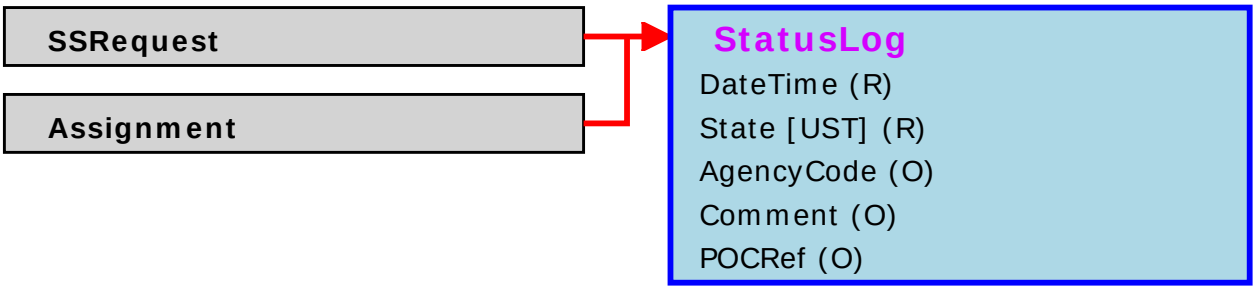
DiagramEndpoint

References:, DiagramEndpoint, EndpointLocation, SSRequest



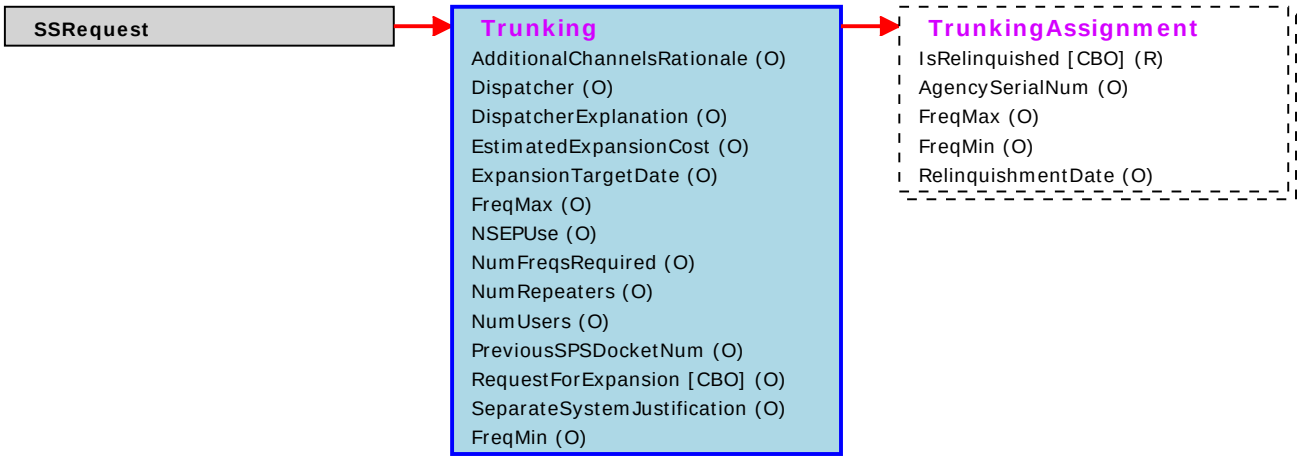
StatusLog

References:, Assignment, SSRequest, StatusLog



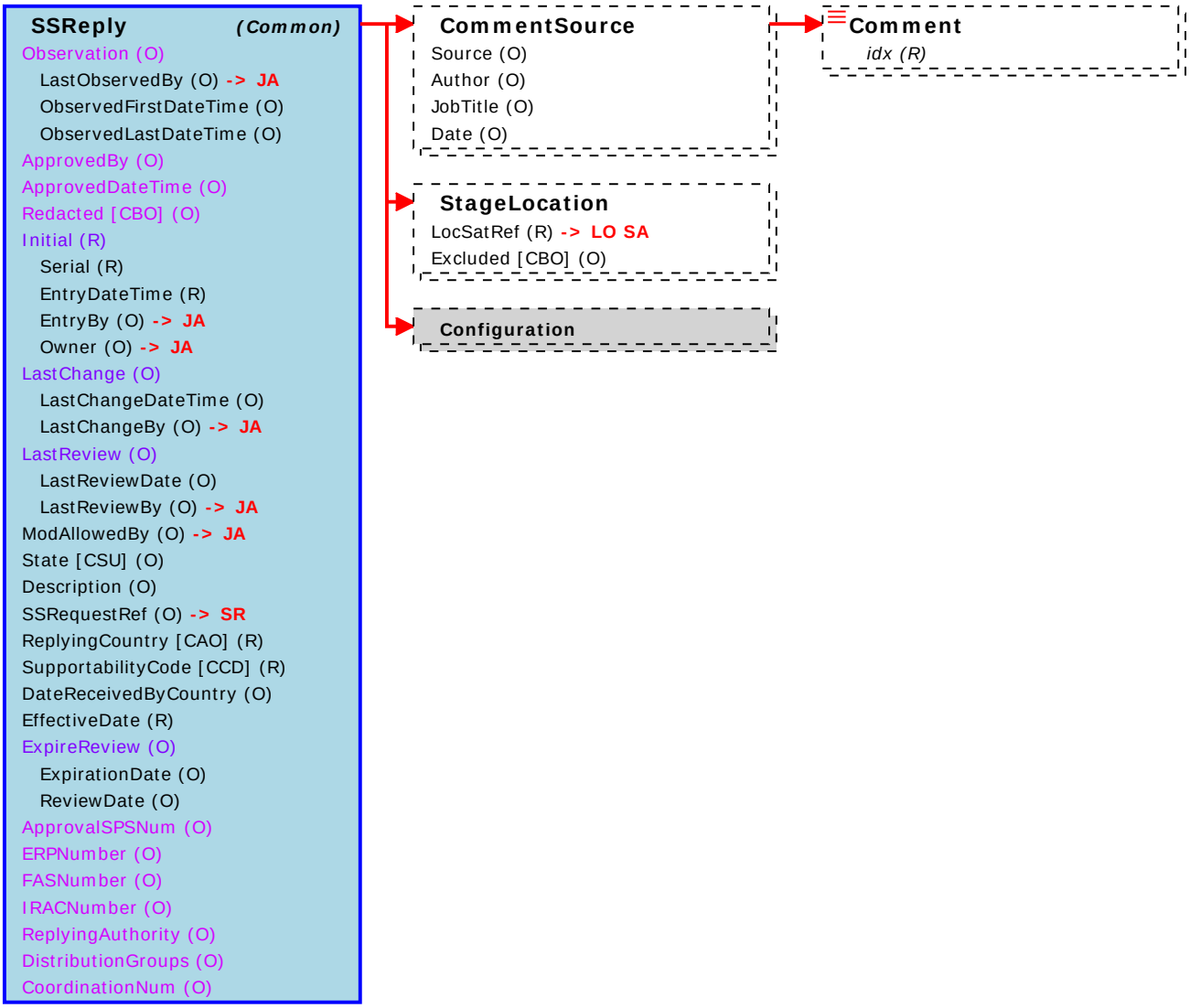
Trunking

References:, SSRequest, Trunking, TrunkingAssignment



SSReply

References:, Comment, CommentSource, Common, Configuration, SSReply, StageLocation

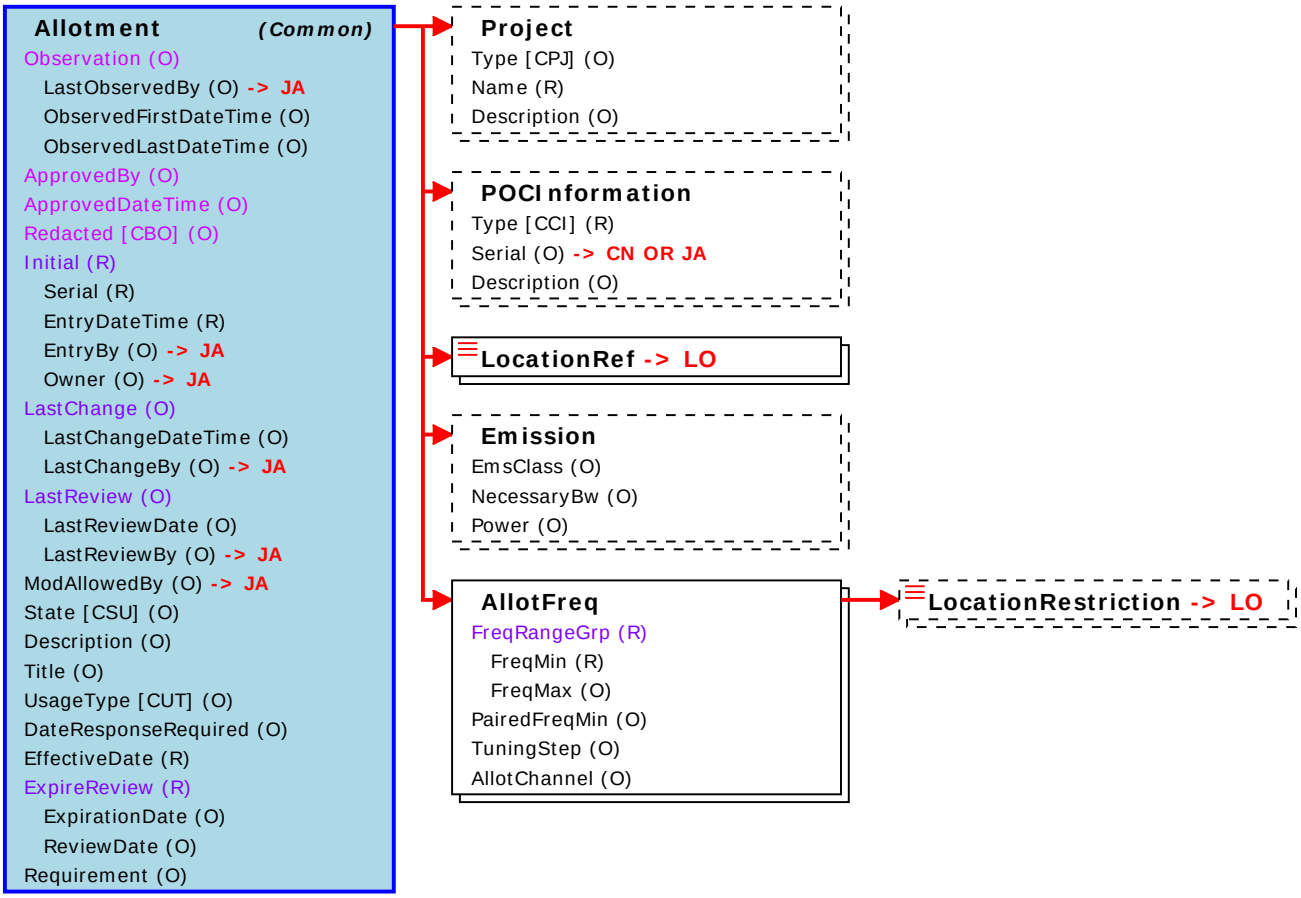


Link

References:, AsgnFreqBase, Assigned, Blanking, DCSTrunk, DetailedFunction, Freq, FreqOld, Link, NarrowBandPlanning, PairedFreq, RequestedFreq, StationConfig, Tuning

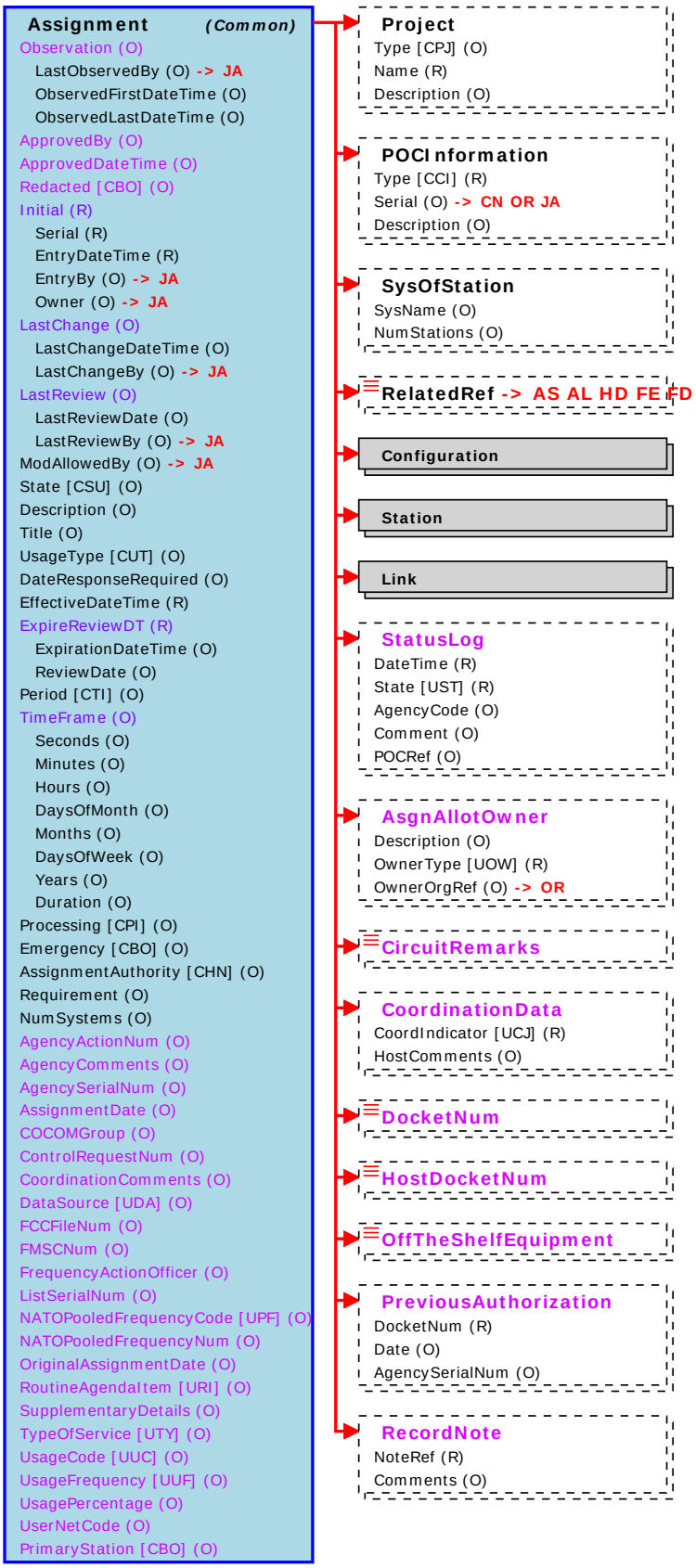
Allotment

References:, AllotFreq, Allotment, Common, Emission, LocationRef, LocationRestriction, POCInformation, Project



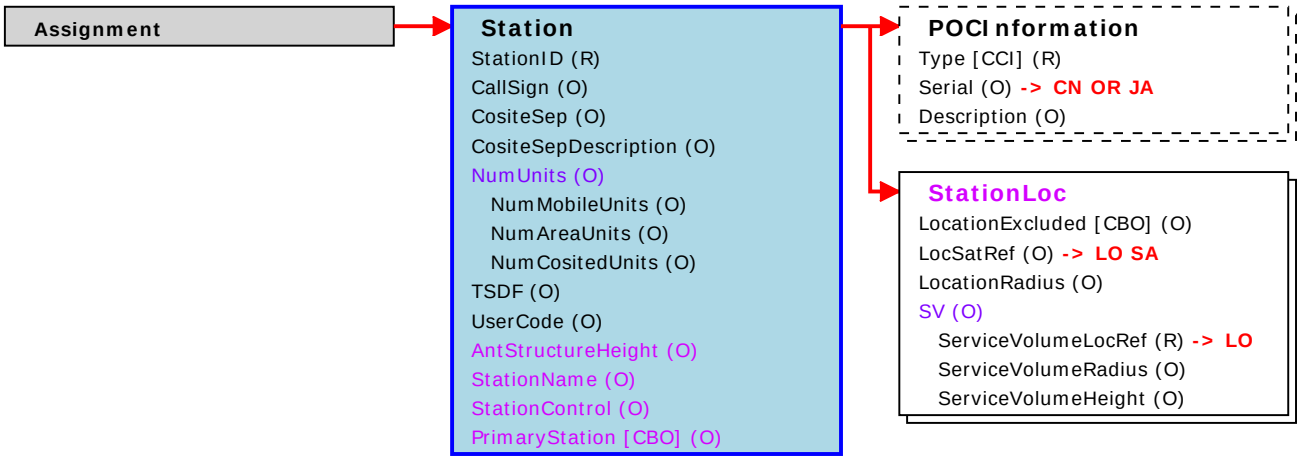
Assignment

References:, AsgnAllotOwner, Assignment, CircuitRemarks, Common, Configuration, CoordinationData, DocketNum, HostDocketNum, Link, OffTheShelfEquipment, POCInformation, PreviousAuthorization, Project, RecordNote, RelatedRef, Station, StatusLog, SysOfStation



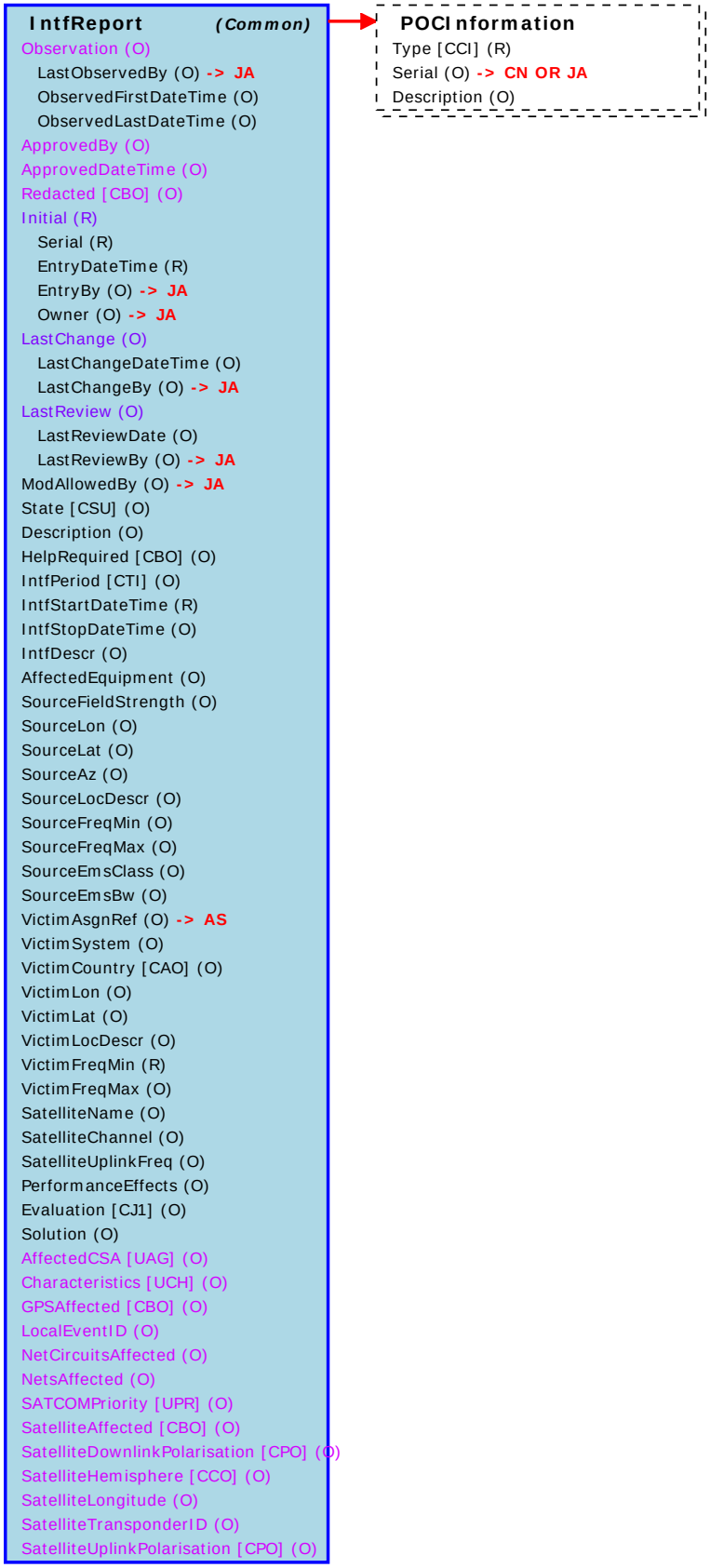
Station

References:, Assignment, POCInformation, Station, StationLoc



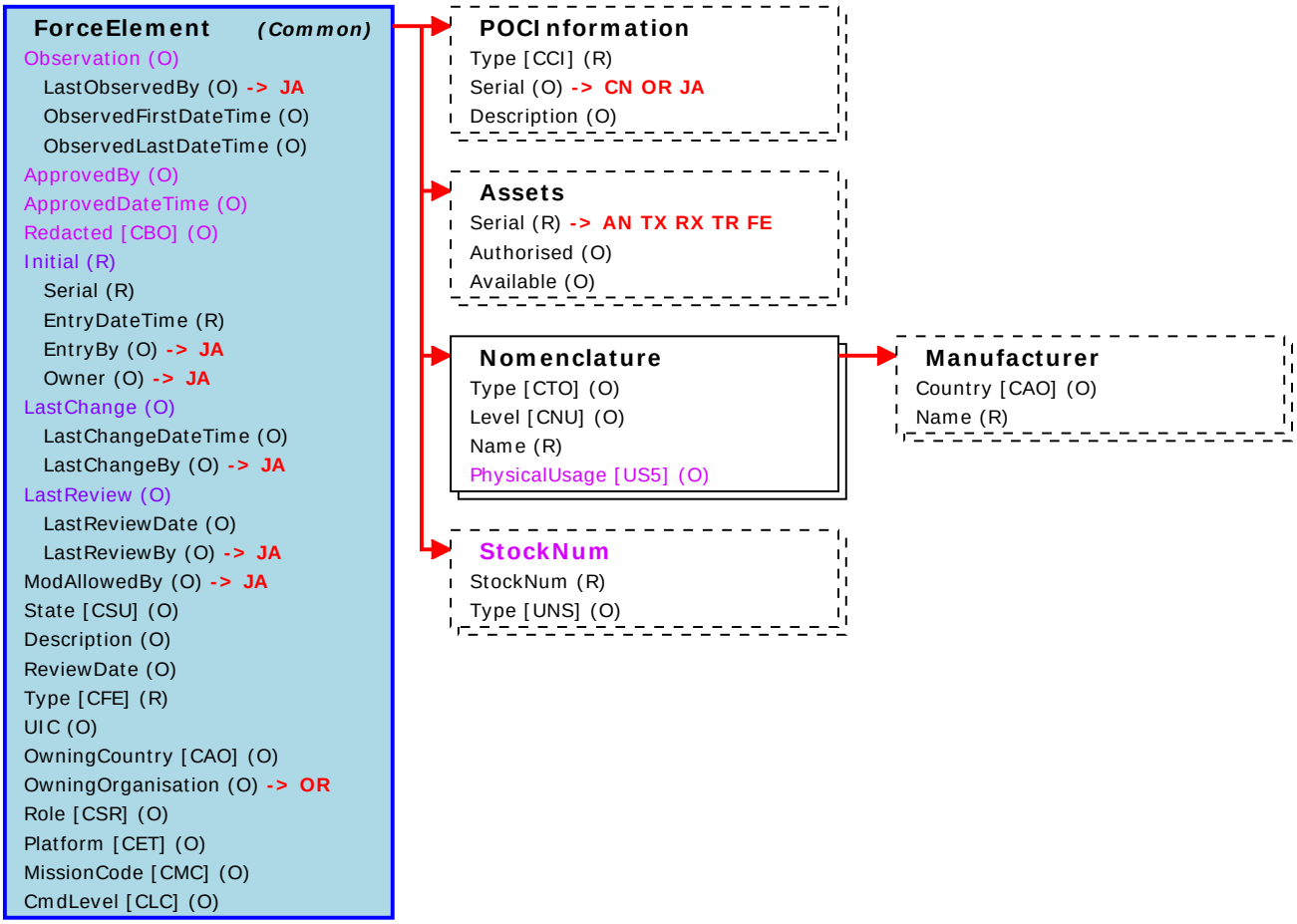
IntfReport

References:, Common, IntfReport, POCInformation



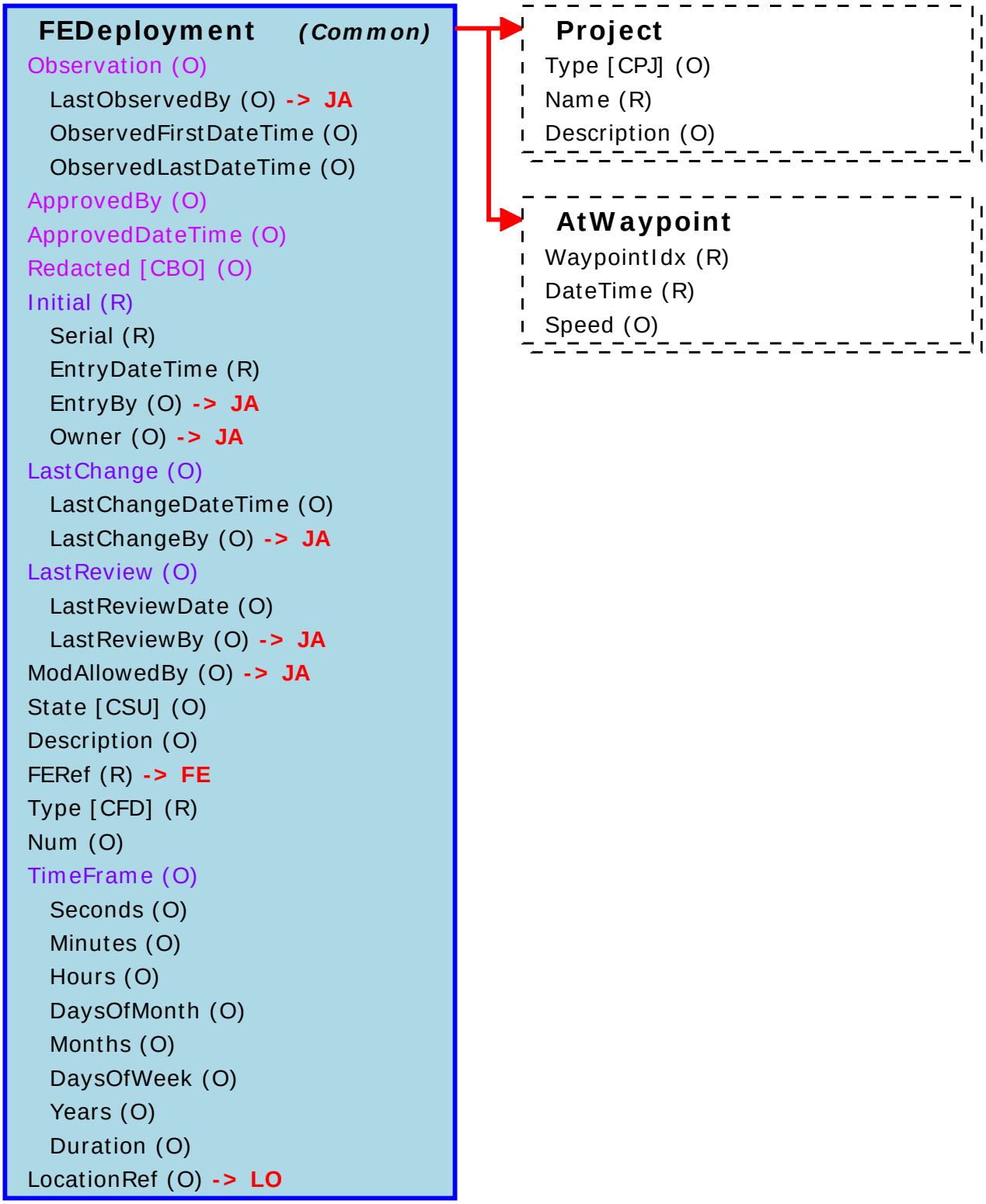
ForceElement

References:, Assets, Common, ForceElement, Manufacturer, Nomenclature, POCInformation, StockNum



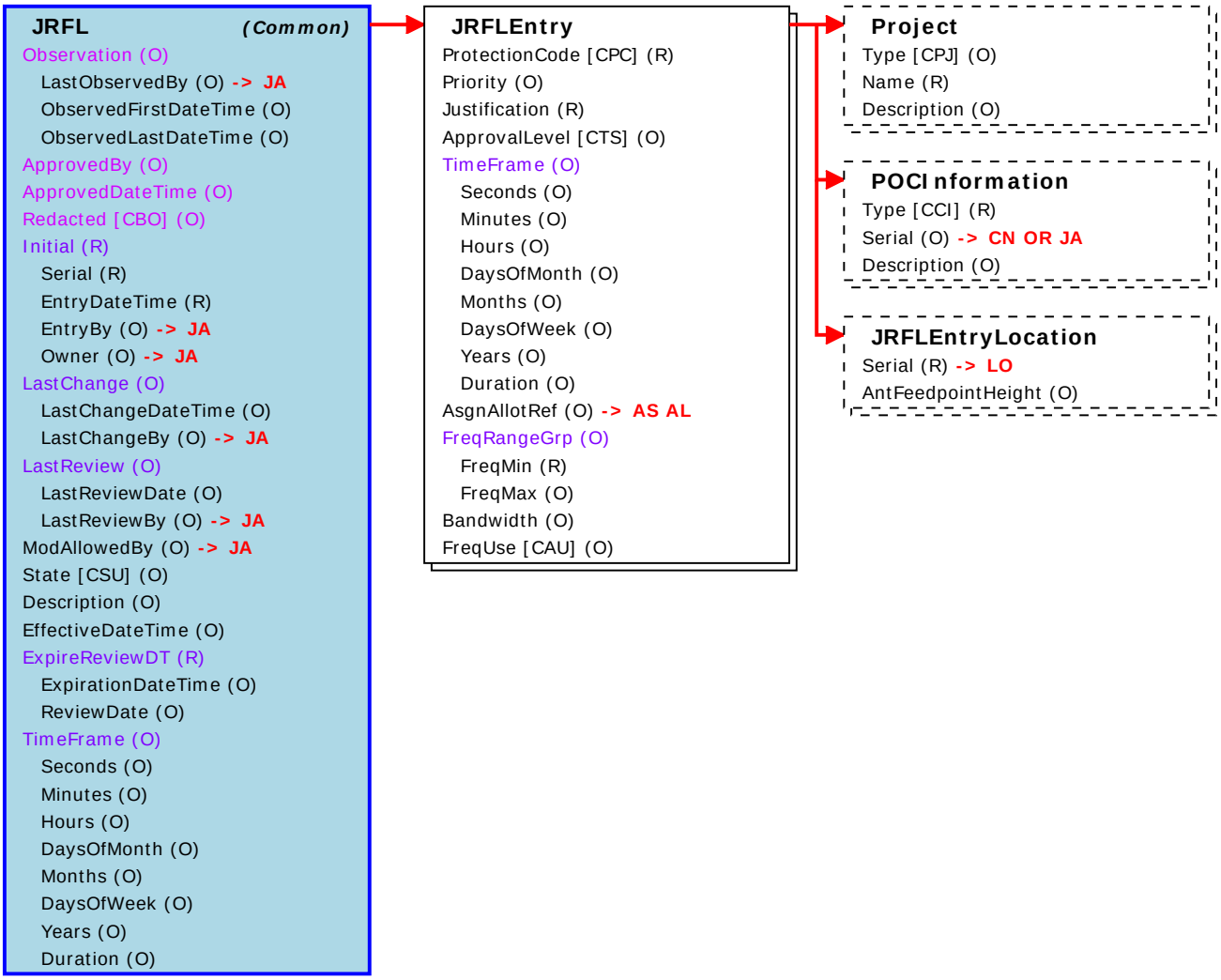
FEDeployment

References:, AtWaypoint, Common, FEDeployment, Project



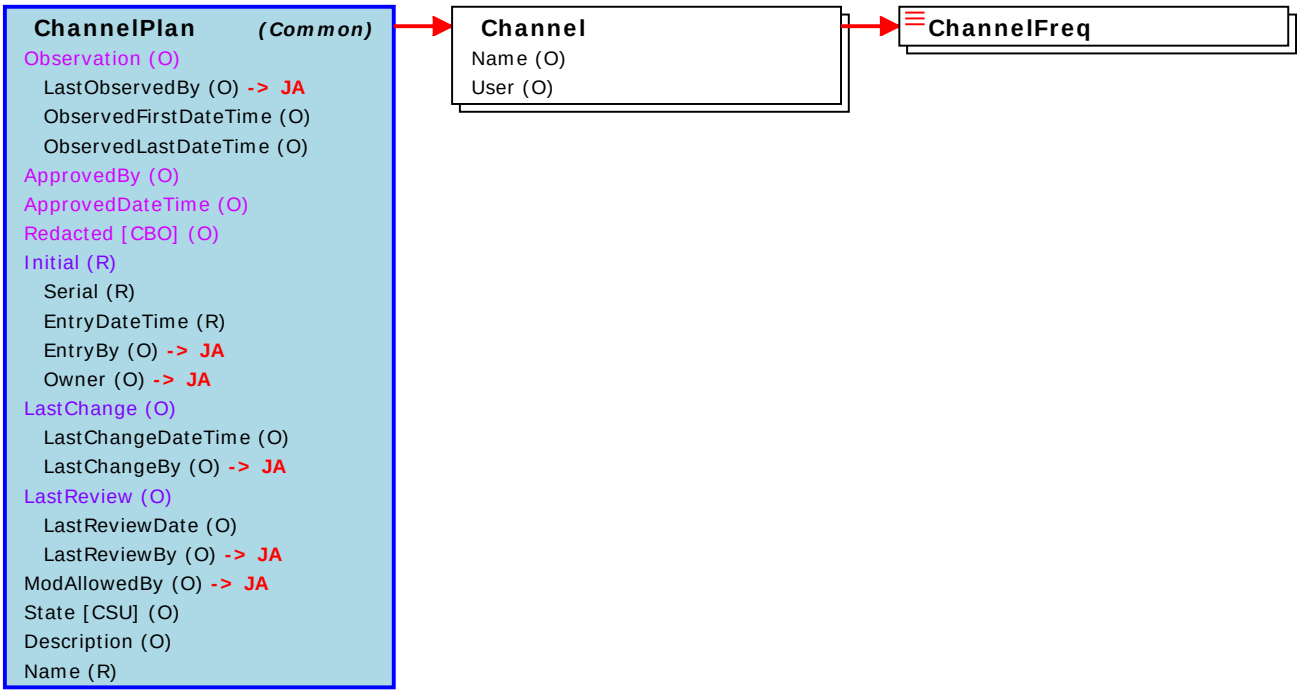
JRFL

References:, Common, JRFL, JRFLEntry, JRFLEntryLocation, POCInformation, Project



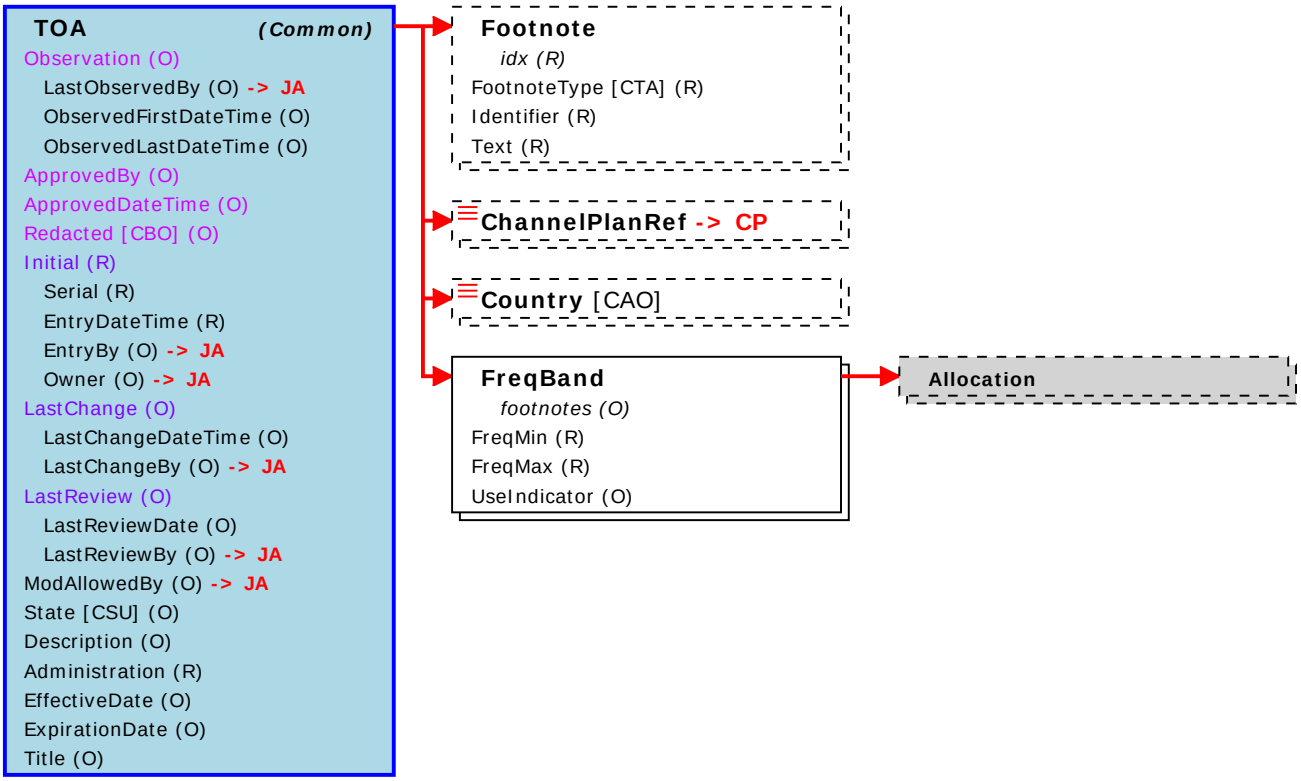
ChannelPlan

References:, Channel, ChannelFreq, ChannelPlan, Common



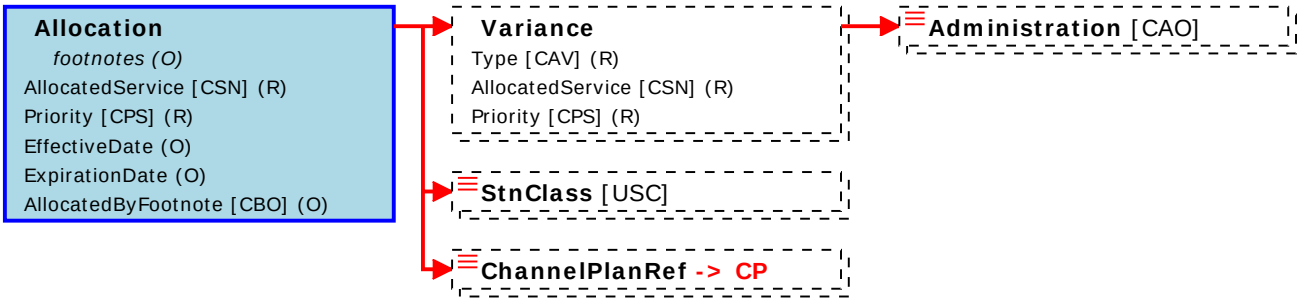
TOA

References:, Allocation, ChannelPlanRef, Common, Country, Footnote, FreqBand, TOA



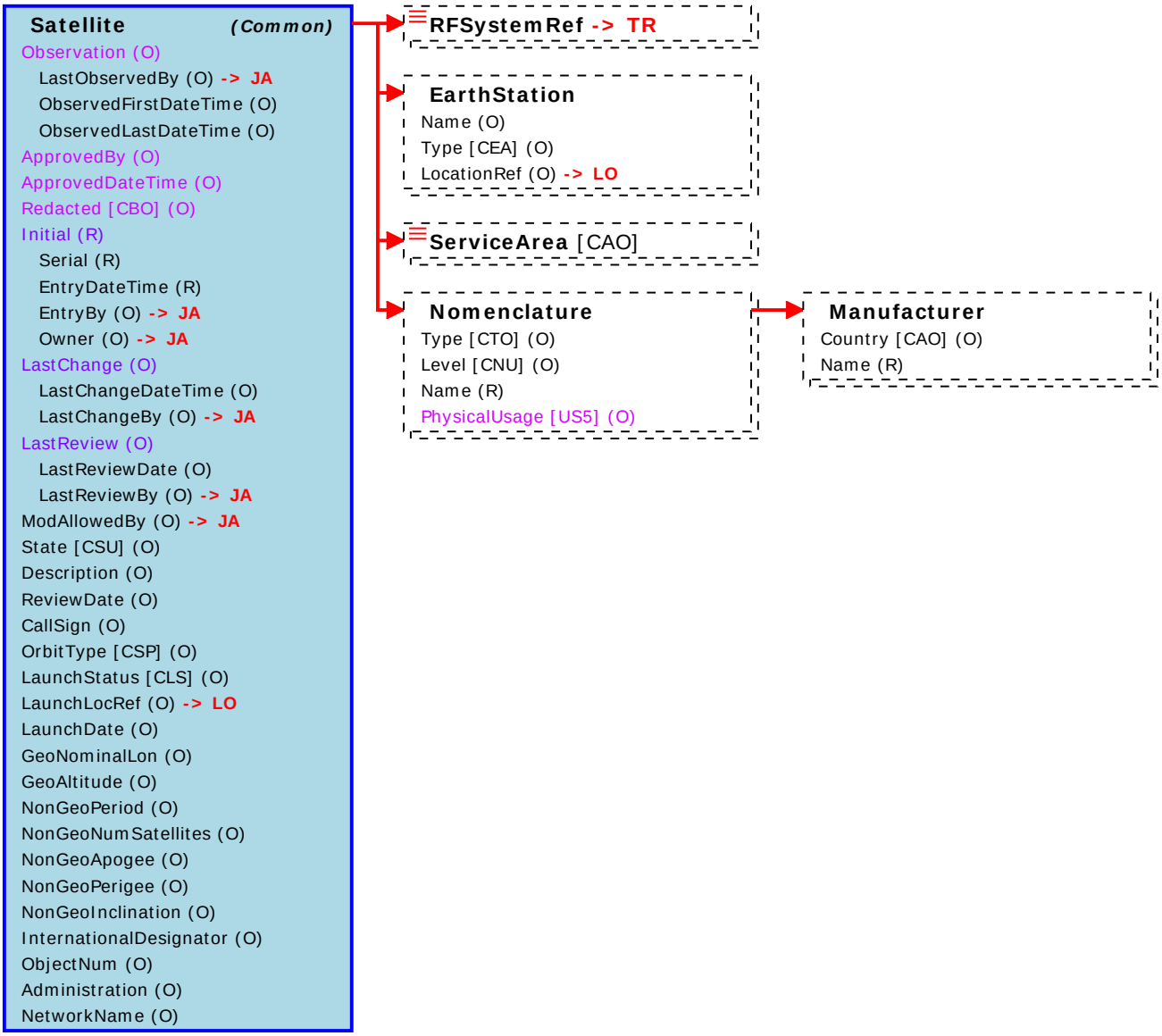
Allocation

References:, Administration, Allocation, ChannelPlanRef, StnClass, Variance



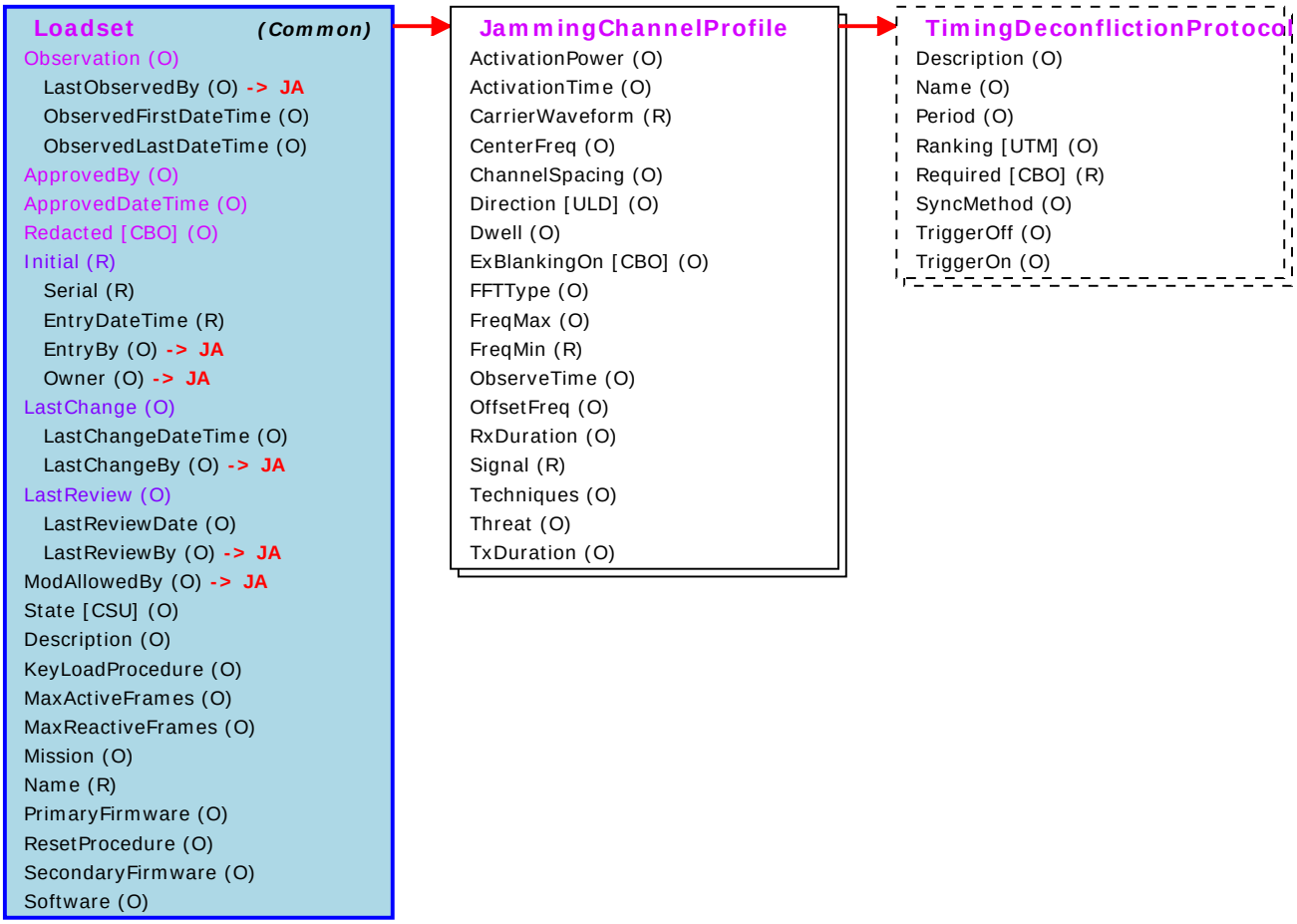
Satellite

References:, Common, EarthStation, Manufacturer, Nomenclature, RFSystemRef, Satellite, ServiceArea



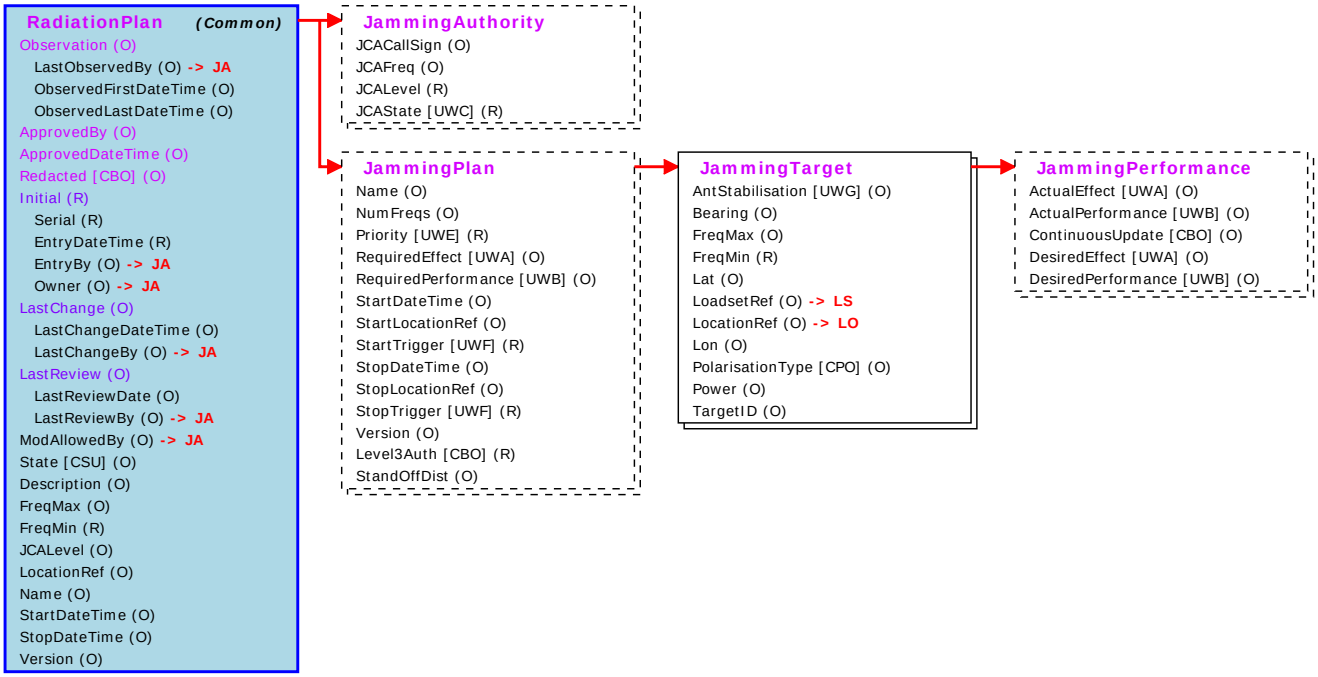
Loadset

References:, Common, JammingChannelProfile, Loadset, TimingDeconflictionProtocol



RadiationPlan

References:, Common, JammingAuthority, JammingPerformance, JammingPlan, JammingTarget, RadiationPlan



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