



PERSPECTIVES ON SDR STANDARDS

Name : Philippe CAMBRAYE

philippe.cambraye@eda.europa.eu

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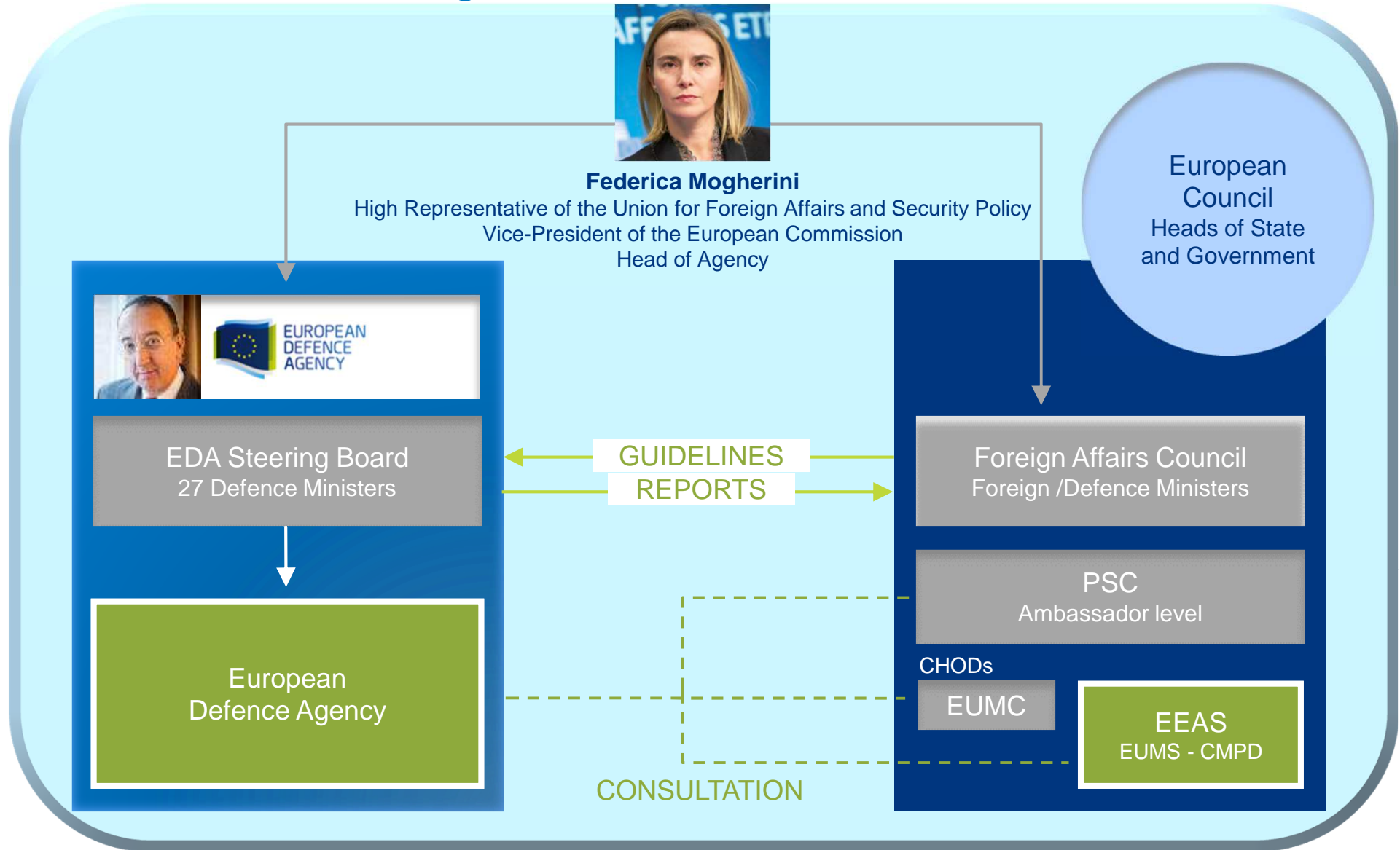
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About EDA

Together for a stronger Europe

Institutional setting



Facts & Figures

Only Agency whose Steering Board meets at ministerial level



120 staff
connected with
2,500 experts in
Member States



**Jorge
DOMECQ**

EDA Chief
Executive



27 Member States

(all EU members except Denmark)
& Administrative Arrangements
with Norway, Serbia, Switzerland
and Ukraine)

Operational budget 2015
30,5 Mio

Number and value of ad-hoc
projects 2015:

22 projects / 70 Mio

Value R&T projects 2004-2016 run
within EDA: **€1 billion**

Mission

... to support the Council and the Member States in their effort to improve the European Union's defence capabilities for the Common Security and Defence Policy.*

* Treaty of Lisbon, signed in 2007, entered into force in 2009

EDA: a capability multiplier



FLEXIBILITY

- EDA works à la carte
- Member States decide on the extent to which they participate in the Agency's core

EXPERTISE

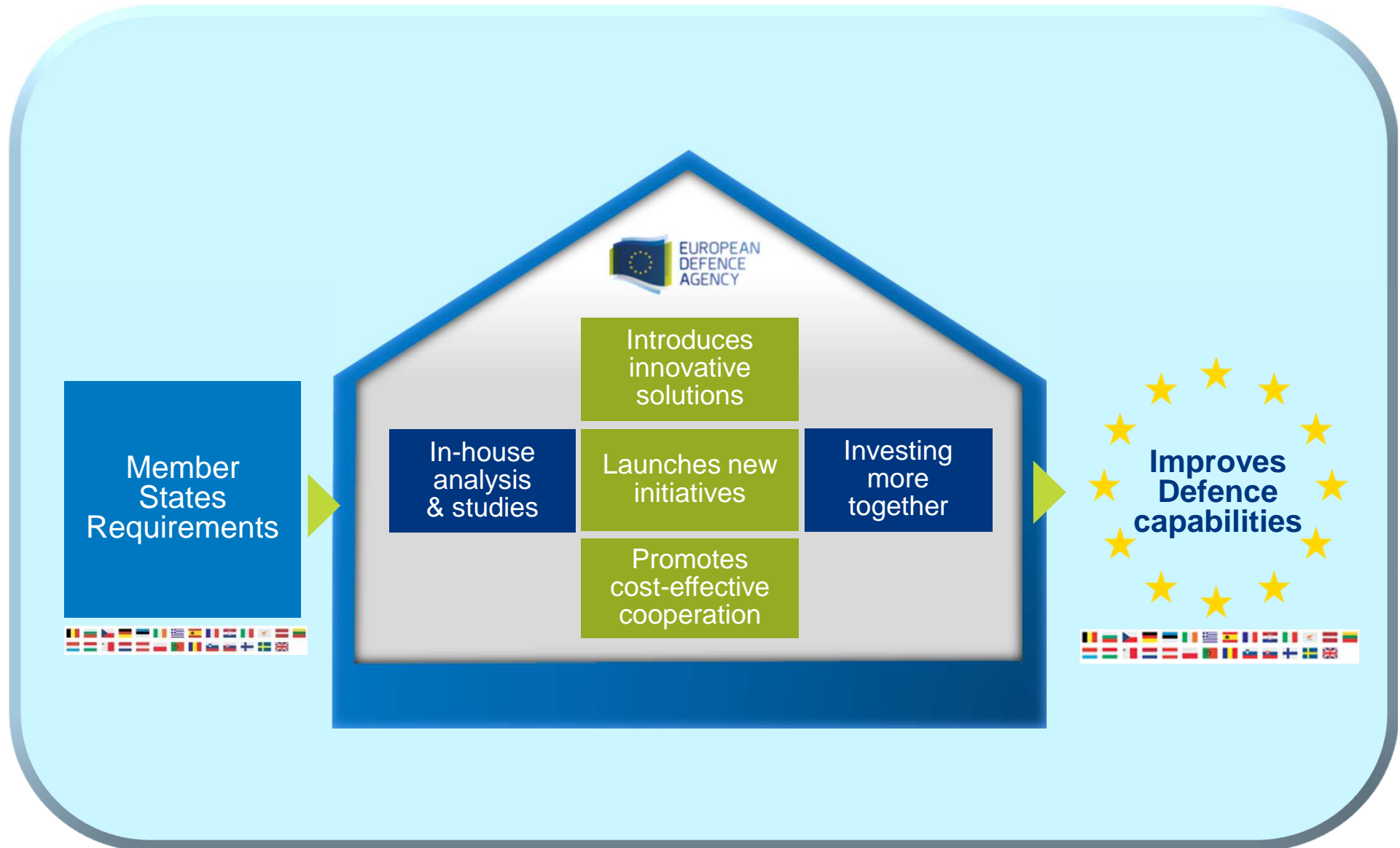
- EDA supports projects for their entire lifecycle
- Expertise is widely acknowledged
- Close links to Member States and other EU and multinational structures



COST-EFFICIENCY

- Budget ~ €30 million euros
- Projects and programmes launched and managed by the Agency generated 70 million euros in ad-hoc budgets within EDA in 2015

A catalyst: from Member States to Member States



A proactive hub for the European defence community

EDA stakeholders

EDA capability development
(e.g. NATO)

Key partners in civil-military coordination
(e.g. European Commission, ESA, SESAR)

Partner organisations in improving European military capabilities
(e.g. OCCAR)

Industry,
through ASD & NDIAs





EDA SDR Standardisation Activities

EDA SDR Activities since 2006 : Genese

1. EU-WINTSEC - (Wireless INTeroperability for SECurity) to examine the security aspects of deploying SDR 2006 .
2. EDA – SCORED (Software and Cognitive Radio for European Defense) 2007 - 2009;
 - a. Complement the WINTSEC project, focuses on the military-specific technical capabilities of future SDR networks .
 - b. concentrates on the future evolution of SDR and the application of Cognitive Radio-based Spectrum Management (CRSM) to meet the requirements of future Flexible Spectrum Management regulatory environments.
 - c. The study involved 20 organizations from 11 nations

EDA SDR Activities since 2006 : Main Outputs

1. Study to Support the Definition of SDR Military Requirements - 2007.
2. CAT B project ESSOR (ESP- FIN - FRA– ITA- POL- SWE) – 2008
3. ESSAC - SDR Standardization and Certification Feasibility Study 2009 – 2010.(DEU- ESP- FIN - FRA– ITA- POL - SWE) -
4. UWGT (Universal Waveform Generation Tool) study 2011 (DEU– FIN– FRA– ESP- SWE) – To analyse the possibilities of developing an universal WF generation and porting tools to cover.
5. Creation of SDR SSG – 2012 (DEU- ESP- FIN - FRA– ITA- PO– SWE)
6. AMIS : Application of Multiple and Independent Levels of Security (MILS) to SDR- 2013.



EDA SDR Standardisation Strategic Guidance Ad Hoc Group

Why creating the EDA Ad Hoc WG on SDR SSG

1. To define and promote a common European Defence position on SDR SW Architecture standardization ;
2. To promote excellent working relation with the most important SDR stakeholders, in order to ensure portability and interoperability of the various SDR products;
3. To allow the best possible coordination among the “Participants” in the various forums dealing with SDR SW Architecture standardization.

The ultimate goal is a worldwide harmonization

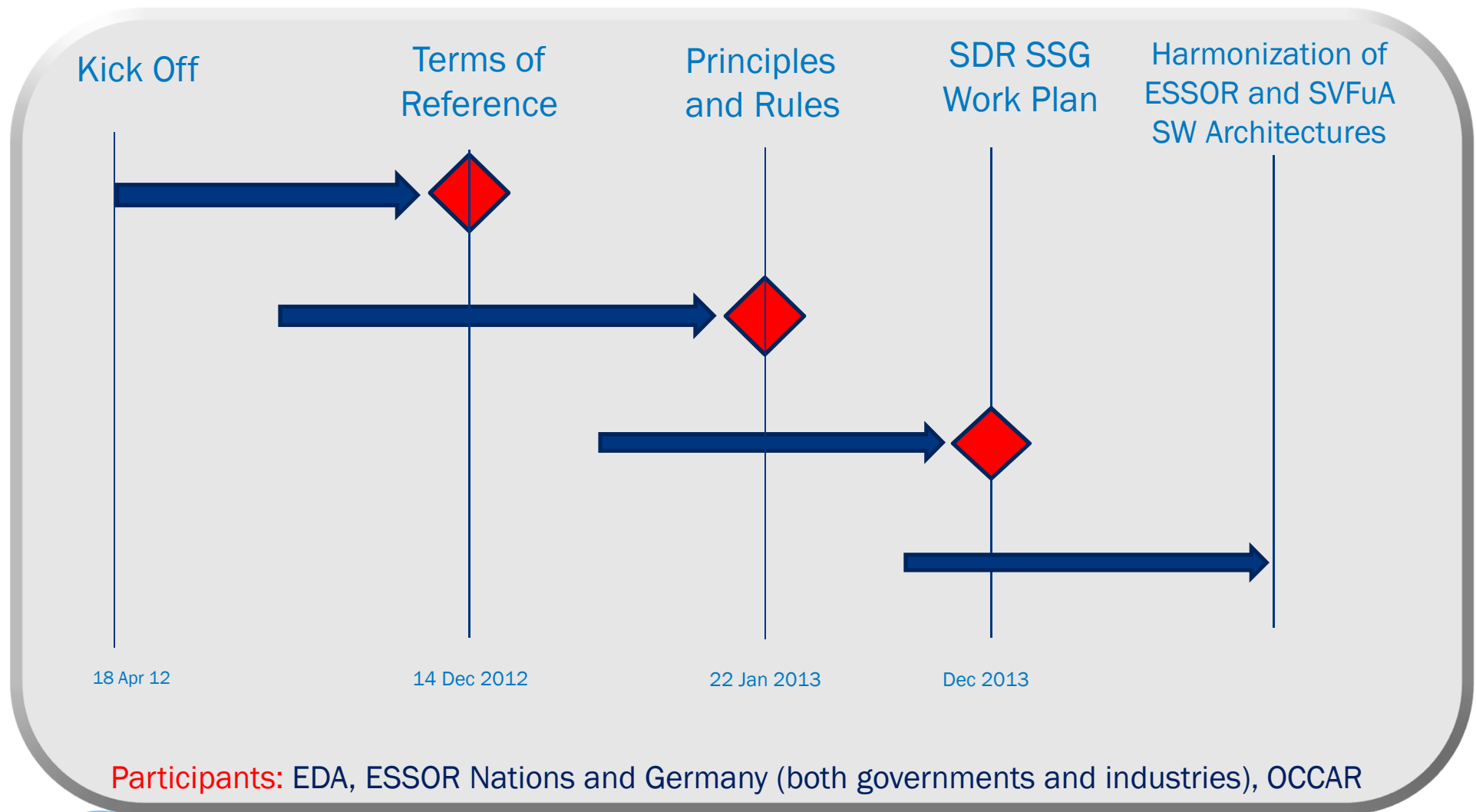
EDA SDR SSG Composition

1. As Participating Members (PM) of the SSG WG:
 - a. Representative of EDA involved in EU SDR domain
 - b. Representatives of nations:
 - i. Finland, France, Italy, Poland, Spain and Sweden (ESSOR nations);
 - ii. Germany (SVFuA)
 - c. Representatives of OCCAR managing the ESSOR program;
 - d. Representatives of industries involved in above programs.
2. As Invited participant is a representative who can be invited by PM (e.g.: NATO, EC, WINNF, US JTNC), but it is not a member of the group.

Scope and Objectives

1. Identify/define items to standardize;
2. Identify/define the global framework of the standardization including interfaces (e.g. NATO, WINNF, US JTNC) and policies;
3. Identify/define harmonized Rules and Procedures to achieve the SDR SW Architecture Military Standard taking into account the MODs' requirement to maintain control on the process.
4. address any financial resources associated with tasks' accomplishment.

EDA SDR Standardisation Strategic Guidance WG (Roadmap)



SDR SSG Workplan

Two kinds of activities are considered in this plan:

1. The technical activities, aiming at building the common technical specs for the European SDR Architecture, using the ESSOR and the SVFuA SW Architecture as a starting point;
2. The activities related to the custodianship model, investigating what kind of standardization (e.g. civil, military, etc) the different stakeholders want to achieve, its scope and also the most convenient body to conduct it.

EDA SDR SSG Objectives and priorities

1. The main objective is to improve WF Portability from the WF and platform perspective.
2. ESSOR Nations and Germany have exchanged information about their respective architectures;
3. Some key elements for an initial collaboration have been identified in the following architecture area of:
 - a. Operating Environment (OE) , Core Framework : SCA 2.2.2 / SCA 4.1
 - b. Radio Devices (RD) : e.g Transceiver
 - c. Radio Services (RS) : e.g. Timing Service

SDR SSG Perspectives on SDO

1. SDR SSG WG analysed different fora and SDOs to identify the optimal context where harmonization of worldwide SDR standards can be pursued :
 - a. Considering the balance of representation in the SDO :
 - i. From geographical point of view : North America and Europe
 - ii. From stakeholders point of view : Governmental and Industrial
 - b. considering the number and relevance of its contributors, including European Government and Industries representatives are adequately represented in SDO;
 - c. considering the significant efforts spent in enhancing and harmonizing SDR standards;
 - d. considering that every member is welcomed in contributing to WinnF projects on a volunteer basis
 - e. Considering the valuable achievements reached so far with the WinnF projects and their publicly result;
2. The SDR SSG WG identified the WinnF as the preferred place for harmonisation of SDR standards.

Conclusion

SDR is a pillar of future interoperable communications.

A worldwide harmonization of existing standards is a force multiplier for different programmes and initiatives.

European SDR programmes have proven to be an important source of contributions for global SDR standards (i.e. Complements to SCA architecture for increased flexibility) ;

European Nations are ready and willing to cooperate with stakeholders of global SDR market for the enhancement of existing standards towards better interoperability.

EDA SDR SSG WG looks at the WinnF as the preferred place for technical harmonization of existing SDR standards.



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Thank you for your attention