



Document Approval Process

SDR Forum Policy 001

Revised
27 January, 2009



Scope

This policy describes procedures for submission of documents to the SDR Forum for consideration, deliberation, and adoption as technical specifications, technical reports, recommendations, and information.

Rationale

This document proposes how the SDR Forum should henceforth assess submitted contributions and how they should be analyzed and published. It addresses the need for rigorous process adherence and unquestionable fair-handedness expected by industry at large. Such a process is also essential to support our interaction with other industry bodies and standards organizations.

Among the attributes desired for an SDR Forum process are:

- a) Rigorous specification of form and content for document submission
- b) A defined review and progression process mediated by checks and balances of “working groups”, committees, and steering committee, and chairs
- c) A well defined process for elevating differences of opinion for resolution
- d) Sufficient industrial review, participation, validation
- e) Opportunity for alternative standards, and performance contrasts
- f) Traceability of each version, and annotated responses accommodating all recommendations; rigorous record keeping
- g) Alignment with the processes of other key standards bodies within the wireless telecommunications community, such as ETSI

In the many years since its inception, a substantial body of work has been accomplished and published in the SDR Forum. A significant benefit provided to Forum members by the organization has been a venue for discussion of technical, market and regulatory issues. Competing companies have been able to discuss the SDR technology, and arrive at consensus agreements that avoid product differences introduced solely because they have been developed by engineering organizations without a means to communicate and compromise.

This policy describes procedures that provide the formality and accountability necessary in these deliberations. It also describes the infrastructure to support the mechanical details of implementation in a more structured way. The policy represents an update to the original Technical Committee Process that was developed and approved in 2001 (SDRF-01-I-0013-V3.2). That process was revised in the form of SDR Forum Policy 001, which was approved by the Board of Directors on 4 September 2006. The revision provided for a better defined and more rigorous process for the introduction, maturation, and promulgation of SDR Forum documentation and other work products and applied to the work products of all committees, including the Marketing and Regulatory



committees. The modifications made in this iteration of the document are largely editorial, and are made to:

- 1) Align this process with the project approval process approved by the Board of Directors on 1 February 2008
- 2) Clarify sections that have been flagged as ambiguous by various SDR Forum members
- 3) Grant the Chair of the Forum the authority to reduce the ballot cycle for committee ballots under special circumstances



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Procedures

1 Introduction

Work products of the Software Defined Radio Forum (SDRF) are generally distributed in the form of documents. This process describes the procedures to be followed as the SDRF generates and approves those documents.

The goal of this document is to provide a process that can apply to all groups creating work products within the SDR Forum. This includes Technical Committee Work Groups, Markets Committee Special Interest Groups, Task Groups, Ad-Hoc Groups, etc. as they are formed. Three terms are used throughout this document as a generic term representing any SDR Forum group that is developing a work product. The terms are: 1) Working Group, 2) “work groups” or 3) “working groups” in quotes. Committee is used as a generic term to define one of the SDR Forum Committees (Technical, Markets, Regulatory, etc.) as appropriate.

2 SDR Forum Document Types

The SDRF generates a number of different document types. The document types managed by this policy are:

- Specifications
- Reports
- Recommendations
- Information
- Historical

High level definitions for the use of the above terms in this document are as follows:

- Specifications are the documents designed to provide an SDRF-supported definition of a specific architectural element or interface within a software defined radio system. Specifications represent voluntary standards with respect to an SDR application or operation.
- Reports are used by the Forum to formally present the current state of some relevant topic with the Software Defined Radio community (regulations, markets, business, etc.)
- Recommendations are documents provided by the Forum to other organizations, such as the FCC or the JPEO, to provide guidelines or opinions.



- Information documents act as inputs to the Forum from member companies or other organizations, and may include reports, articles, specifications, etc. that are considered important to the SDR Forum and its members.
- Historical documents are documents that are no longer applicable to the SDR Forum. They are documents that were previously determined to be Specification, Reports, or Information documents.

The documents are explored in additional detail in the sections below.

2.1 SDR Forum Specification Documents (S)

Specifications provide, in a complete, precise, and verifiable manner, the requirements, design, behavior or other characteristics of some architectural element of a software defined or cognitive radio system or network. After approval of an SDR Forum Specification it can be positioned in the industry as a “voluntary standard.” A voluntary standard is a standard announced to the public by a not for profit industry group which allows open company/agency membership for its development. It is voluntary in that there are no legal or otherwise binding requirements in the adoption of a voluntary standard. Industry compliance is based on cooperation followed by competition. It is better to cooperate in developing a voluntary standard to quickly form the foundation for rapid industry growth; and then, once the standard is in place, compete with industry players for a share of the market.

Specification documents are identified with Document Category Identifier S.

2.2 SDR Forum Reports (P)

Reports are used by the Forum to formally present the current state of some relevant topic with the Software Defined Radio community (regulations, markets, business, etc.) The purpose of these reports is not to make recommendations or to specify a technology, but rather to explain the “how and why” of some technology or process, and to identify and define any associated issues. Reports may include market needs, RF environments, requirements, designs, test results, architectures, operational concepts, technology advancements or other similar types of information regarding SDR technology, markets or regulations. The output of a report can often act to define the requirements for the creation of a Specification. All material to be published as a Report must have progressed along the Document Process timeline at least to the level of SDR Proposal (see Figure 1 and Control Point 5). These reports may be sponsored by the Technical Committee, Marketing Committee, Regulatory committee or an Ad Hoc Committee formed for a specific purpose.

Report documents are identified with Document Category Identifier P.

2.3 SDR Forum Recommendations (R)

Recommendations are documents provided by the Forum to other organizations, such as the US Federal Communications Commission, the European Telecommunications



Standards Institute, the International Telecommunications Union, or the Joint Tactical Radio System Program Executive Office, to provide guidelines or opinions. These can include, for example, a suggestion to adopt, or not adopt, some policy or practice, or can provide advice on the applicability of certain technologies in addressing another organization's needs. Recommendations are primarily intended to influence the decisions of these other organizations on behalf of the Forum's member companies. Like Specifications and Reports, Recommendations must generally go through the complete document release process. However, given the often time sensitive nature of these types of documents, specific Recommendations may be selected by the SDR Forum Board of Directors to be "Fast Track" documents. Fast track documents may, at the discretion of and with approval by the committee chair, bypass procedures prior to CP6 (Forum Balloting) to meet with a specific suspense date, and should time require, may be voted on directly by the Board of Directors in lieu of a full plenary vote.

Recommendation documents are given the designation R.

2.4 Information Documents (I)

Information documents are items that are intended solely for informational purposes. They are published for the general information of SDRF members, and are not considered SDRF work products. The Information designation is intended to provide SDRF members access to a broad range of documents from many sources, subject only to editorial considerations and to verification that there has been adequate coordination with the document approval process.

Information Documents can be originated by persons outside the SDR Forum, but must be sponsored by at least one member company to be accepted by the Forum for publication. These documents can also be recommended studies to be developed by SDR Forum Committees. After initiation of the document, it could be later decided to advance as a Report, Specification or Recommendation.

Information Documents may be original work. Or they have been published elsewhere. If they have been published elsewhere, they do not become copyright by the SDRF, but respect all of the copyrights of the original publisher. This material is normally made available at SDRF meetings to all participants; however Information Documents may be designated as Member's Only documents and will be treated accordingly. Information documents that contain material protected by patents are subject to the SDR Forum Intellectual Rights Policy ([SDR Forum Policy 007](#)).

Specifications that have been prepared outside of the SDR Forum and are not incorporated into the SDRF Recommendations or Reports Documents may be published as Information documents, with the permission of the owner and the concurrence of the Chair of the SDR Forum.



The SDRF serves only as a distributor of this material, and will retain a file copy so that additional copies can be provided to members. Because this material is not subject to any of the provisions of the SDRF Document Approval Process, they may not be endorsed by the Forum. Information documents will be assigned an SDRF document number for filing purposes, but will not be subject to tracking or status reporting. The Publications Manager will be responsible for custody of Information documents and will assure respect of the IP rights of others.

Information documents are identified with Document Category Identifier I.

2.5 Historical Documents (H)

There are a number of reasons that a publication may lose its status of being a current document, including replacement by a current version, rejection by a vote, or inactivity by the sponsoring “work group” for the designated expiration time period.

When such events occur, the item under consideration will be evaluated by the Sponsoring “Work Group” (or committee) and will be considered for depreciation to become a Historical document by the Sponsoring “Work Group” and committee. Depreciation of a document requires balloting at the plenary level, although the Chair of the SDR Forum may choose to promote a document for balloting for depreciation, at the recommendation of the committee chairs, without requiring further process. The original document number will be retained, but with the Document Category Indicator changed to H.

Historical documents are identified with Document Category Identifier H.

3 SDRF Document Approval Process Overview

The SDRF Documents Approval Process applies both to Documents that are intended for release to the public by the SDR Forum and also those documents that are not intended for release to the public. At each stage in the maturation process, referred to as a control point, the document proceeds through an evolutionary cycle.

There are six major goals for the process:

- Formalize the mechanism by which any member can propose an item for endorsement by the SDR Forum and release to the SDR marketplace at large.
- Provide an opportunity for any member having a stake in the content of an item to influence the positions taken before it is formally adopted by the SDR Forum.
- Provide a way to identify the current status of a work item and the work plan for further maturation.
- Identify the originator of an item, define the role of any other parties with a degree of sponsorship, and indicate the SDRF “Work Group” that has sponsorship of the item (document). And as such, the Chair of the Sponsoring “Work Group” has management responsibility for maturation of the item (document).
- Provide an archival record of the process through which an item matures. This will include all versions of the item, the comments on each, responses to the comments, and the dates on which all actions on the item took place.
- Provide a framework so that different sizes of task groups may develop documents (single person to large groups). And provide a framework so that work groups can develop different documents based on the objectives of the particular committee they represent; thus market reports, regulatory comments/reviews, concepts of operation, technical architectures, etc. could be developed under this documents approval process. This freedom of development of documents can be applied to ad hoc committees and to existing or new SDR Forum committees; and the document approval process is applicable to all SDR Forum documents.

The process is summarized in Figure 1. There are a series of maturity levels, defined at the present from SDRF Draft Submission through SDRF Release. At each level there are defined phases, from admission to balloting, which must be accomplished. They will

normally be done sequentially, but may be taken out of sequence if circumstances indicate.

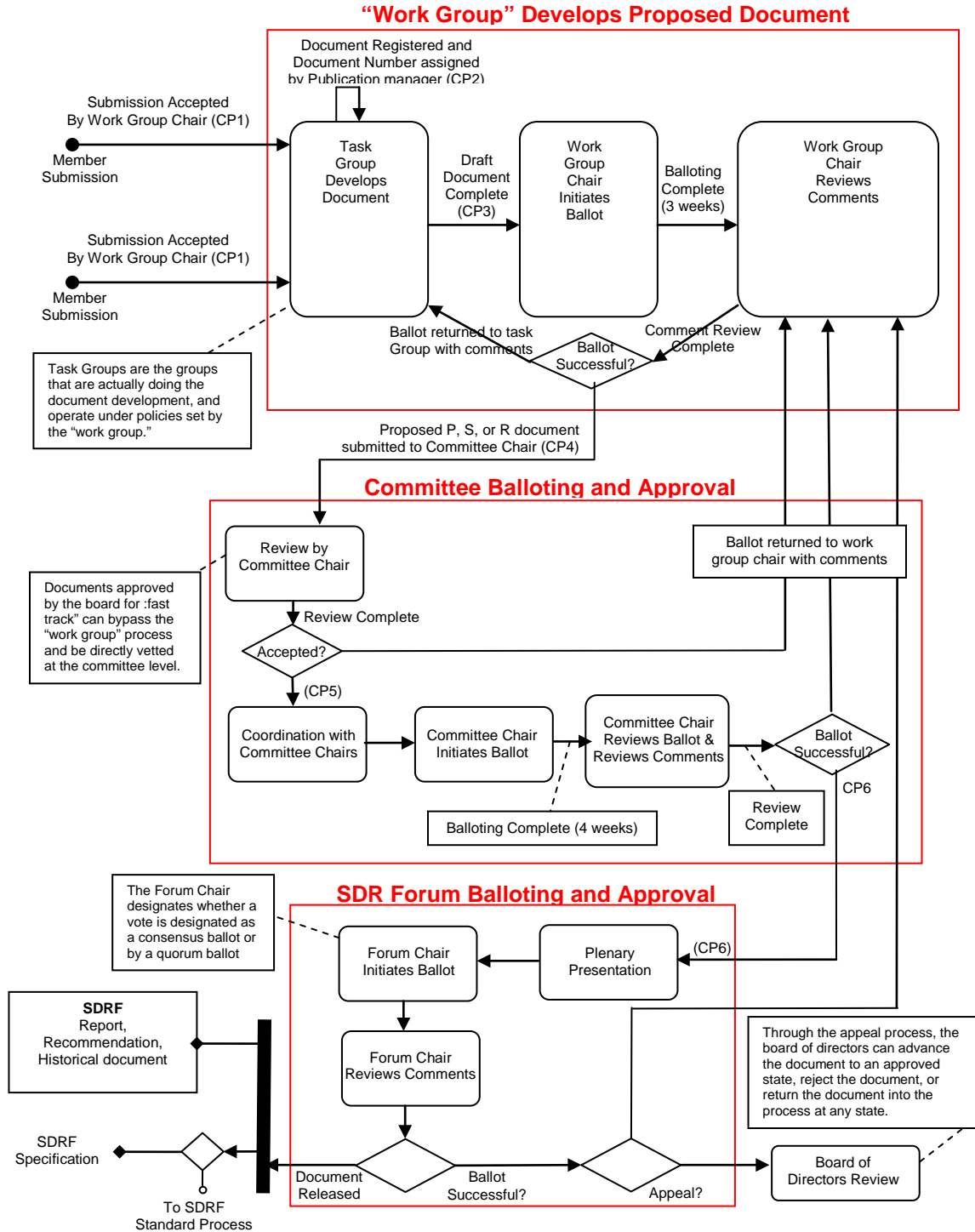


Figure 1: Activity Diagram of the SDR Forum Document Release Process



3.1 SDRF Document Levels of Maturity

Documents are generally developed within the SDR Forum as a part of a work project that has been approved by the SDR Forum Project Approval Committee, as defined in the SDR Forum Project Approval Process ([SDR Forum Policy 002](#)).

The Stages along the Document Approval Track are:

3.1.1 SDRF Submission

The document is developed by an SDR Forum member organization and submitted to the SDRF for consideration and promotion. Documents developed within the “working group” may skip this phase, and documents submitted for information purposes only (“I” documents) are never promoted beyond this phase.

3.1.2 SDRF Draft

Document Submissions have been accepted, the project to mature the document has been approved, the format of the document (Report, Specification, Recommendation) has been defined, the document has been developed by a Sponsoring “Work Group”.

3.1.3 SDRF Proposal

The document developed by the Sponsoring “Work Group” has been balloted at the Sponsoring “Work Group” level, and has obtained the Sponsoring “Work Group” Approval. The document is submitted to the appropriate Committee.

3.1.4 SDRF Release

Documents has been accepted by the Committee chair, balloted and approved at the Committee level, and accepted for publication by vote of the eligible SDR Forum membership. After this approval, the document is promoted to an SDR Forum Released Document, with the appropriate designation.

3.1.5 SDR Standard

The document is designated as a voluntary standard that is ready for the SDRF Standardization Process. It may be submitted to a recognized Standards body or published by SDRF (see Section 4.5).

3.2 Comments

During the process of deliberation on a document under consideration there are normally a number of changes of language. Prior to balloting at the Committee level, these changes may be entered as markup in the primary document using a “track changes” function of the document editing tool or they may be submitted separately. The document champion may convert to a new version number as appropriate. The comments/proposed



changes are gradually worked off to arrive at a document that has consensus from the “work group.” In order to retrieve earlier comments, they are stored by the document champion because he has stored earlier versions of the document.

When comments are developed for a document that has not been approved for public release, the comments may be limited to SDRF “working group” members and SDRF members (see Section 5.2).

During balloting to promote a document from SDRF Proposal to SDRF Release, a separate set of comments will be collected by the Publications Manager. These comments will clearly define what portion of the base document is to be changed and should suggested substitute language. The convenience of the document editor should be considered by making insertion of the new material into the existing document as simple as possible.

3.3 SDRF Document Approval Phases:

The following Phases are used at each Level of Maturity within the process.

3.3.1 Admission

Admission is the step where a document is accepted for work effort to mature it to a higher maturity level. As part of this phase the Sponsoring “Working Group” chair with reporting responsibility is identified.

3.3.2 Development/Coordination

In this phase detailed consideration of the document is made. Changes may be made by the originator, or submitted as comments by others. This phase may take an extended period of time if a large number of revisions are proposed, or it can be executed very quickly if there is consensus that the criteria for promotion have been met.

3.3.3 Proposal for Promotion

For each level of maturity, a sponsored “working group” level is specified. When that “working group” is satisfied with the work effort, they prepare to submit it to the next higher stage (stages shown in section 3.2) with a Proposal for Promotion. The submitting working group chair collaborates with the receiving level Chair (Technical, Marketing, Regulatory, etc.) to bring the document up for consideration. It is incumbent on those involved to “socialize” the proposal with Forum members at appropriate levels to identify any unresolved issues prior to submittal.

3.3.4 Last Call

Prior to promotion there is a time period when the document is made available for consideration. The Sponsoring Chair controls the Last Call process, and Last Call may be concurrent with Balloting.



Comments received during Last Call must be evaluated by the Sponsoring Chair, and two options are possible:

- 1) If only minor changes and typographical edits are received, these may be made on the fly. The document can then be promoted without requiring recirculation
- 2) If substantive comments are submitted, and the Sponsoring Chair determines that these comments must be resolved before the Proposal for Promotion is accepted, then the document must be returned to the “working group” for resolution of the comments. Once the comments are resolved, the process repeats until the Proposal for Promotion is accepted.

3.3.5 Balloting

Balloting requirements are specified for each Stage. **Balloting at all stages is limited to SDR Forum Members only.** Eligibility for balloting at the work group level or below will be set by the approved work group policy, and may be limited to only active work group members. For balloting at the Committee or Plenary level, each eligible SDR Forum member organization casts a single vote following the procedures defined herein. If several representatives from a member organization are present, they may caucus to determine their organization’s vote.

3.4 Protests and Appeals

This entire process is intended to strengthen and expedite the work of the SDR Forum. It is subject to review by the SDRF Board of Directors. They may revisit any decision made under the process, or revise the process.

Disapproval of a document can be appealed to the SDR Forum Board of Directors. Protests relating either to approval or disapproval of a document are adjudicated by the SDR Forum Board of Directors, and their decision will be final. If they so choose, they may reinstate any document into the standards process at the level they choose, and with whatever comments they choose, for reconsideration.

3.5 Joint Development with Other Organizations

Through our liaison activity, the Forum may be involved with the document development process of other organizations. In this case, three scenarios are envisioned:

- 1) The Forum develops a formal input to the other organization as a member of that organization. This input would need to follow the process for creating an approved document outlined in this process
- 2) The partner organization provides input to the Forum as a member. In this case, the document will be assigned an information document number and will be treated under the rules of membership. This will likely mean the document will be protected as “SDR Forum Members Only”



- 3) The Forum may jointly develop a document at the working level with the other organization that will be jointly released, in whole or in part, by the 2 organizations.

In the latter case, the memorandum of understanding between the two working groups should clearly align the processes to be followed by the two organizations. At a minimum, the process should allow for multiple drafts of the document to be jointly developed between the two working groups without formal balloting by either group. Once the joint document is stable, the document should be balloted through both organization following their respective processes. Should comments occur during the balloting at any stage by either organization that could materially affect the balloting of the other organization, a mechanism must be provided to allow for this feedback.

The SDR Forum's full policy on sharing documents between organizations can be found at http://www.sdrforum.org/pages/aboutTheForum/Document_Sharing_Policy.pdf

4 SDRF Process Details

Each document that is to be published as an item endorsed by the SDR Forum goes through defined Levels of Maturity. These Levels can be traversed with varying degrees of formality. Documents that are small in size, limited in scope, or on which there is a wide consensus can be moved quickly through the various stages. For documents where extensive negotiation is required to resolve divergent positions held by members or where coordination is needed with a broad range of interested parties, the process can be executed with a significant degree of formality.

An item on the Document Approval path acquires increasing maturity and status as it progresses. After acceptance as an SDRF Release the document is available to the market. Prior to that level of maturity it is for use by a limited audience. Once the desired degree of maturity has been reached, it is allowed but not required to move it further through the process.

At any time in the process an item may be withdrawn, or converted to another document type, such as Historical or Information.

4.1 SDRF Submission

It is the intent of this process to be as open to new submissions as is consistent with good practice. The process is simple for this level so that a Draft Submission can be easily accepted as an SDRF Draft. A Draft Submission could only be the definition of a document to be generated (either an existing document or original work to be developed). The application of the Process Phases for the SDRF Draft Submission is recommended as follows, however, the actual process is managed by the sponsoring “Work Group” receiving the draft submission through their internal policies and procedures, unless otherwise specified.

4.1.1 SDRF Submission: Admission

4.1.1.1 Unsolicited Submissions

Any member or group of members can make a submission at any time by complying with the Admission phase items below. Note that the policy of the SDR Forum is that non-members cannot directly make an unsolicited submission; instead these submissions **MUST** be sponsored by one or more member organizations. Admission of a submission normally takes place prior to the meeting at which the submission is to be introduced to provide adequate time for participants to review it. Then the remainder of the process can take place at the meeting, and elevation from submission to draft and consideration of the draft can take place in a single session.

- An Originator, or Champion, must be identified from a member organization. With this role comes responsibility to submit the item, provide the effort needed to promote its admission, respond to comments,

and meet the requirements of this process, including indication of planned disposition of the intended work product when accepted.

- The submission must have an approved cover page with an “I” document number assigned by the Publication Manager.
- The submission must be in an acceptable format, including a soft copy version useable with some widely available software product (e.g. Microsoft Word, Adobe Acrobat with restrictions removed, etc.). A document template is provided by the SDR Forum to facilitate this requirement.
- The submission must be accepted by the Chair of a “Working Group” within the associated Committee. Normally an existing Work Group, Task Group, or Sub Group will be used, and a Co-Chair of that group will have authority to commit the group to place it on their agenda. If no appropriate group exists, one may be created by a “Work Group” Chair or the appropriate Committee Chair, with the requirement that the resulting Task Group must gain approval for the resulting project through the Project Approval Committee. The Chair accepting responsibility is then designated the Sponsoring Work Group Chair for the work item, and is responsible for reporting its status and scheduling ballots.
- The submission must support an approved project or be used as a basis for gaining project approval.

4.1.1.2 Solicited Submissions

At the “work group” chairs discretion, the “work group” may solicit input from outside of the “work group.” These types of solicitations will come in one of the following three forms. Other forms of solicitations can be proposed to the committee chair for review and utility. A variety of types of documents can be pursued by this document approval process.

- Request for Market Information (RMI) - A request for market information is used to solicit information from industry. It will generally take the form of a market survey and may be used to, for example, survey available COTS technologies available in the market or to explore best practices in the development of SDR technology. RMI’s may have broad industry distribution, including soliciting information from outside of the Forum. In releasing an RMI, the “work group” itself will act as the originator, and the results of the RMI will generally be encapsulated by the “work group” in an SDR Forum Report following the Forum’s standard process.
- Request for Information (RFI) – a request for information can be a collection of information for general use by the Forum or is sent as a predecessor to a request

for proposal and is used to solicit information from industry that will be used in preparing a request for proposal. Like RMI's, RFI's may have broad industry distribution, with the "work group" itself acting as the originator.

- Request for Proposal (RFP) – RFPs are issued to solicit submissions that will act as proposed draft standards. RFP's are generally distributed to member companies only, but may at the discretion of the associated Committee chair be distributed to other organizations through which the SDR Forum has a formal relationship. RFP's may, at the discretion of the "work group" chair, require a letter of intent be submitted by companies that plan to respond to the RFP at an appropriate date preceding the submittal of the proposal. A representative from the company submitting the proposal response will act as the originator/champion in the context of the SDRF process moving forward.

The release of an RMI, RFI, or RFP does not require full SDR Forum approval, but instead will occur following the standard SDR Forum process through control point 6. Information received from RMI's, RFI's, and RFP's will be available only to "work group" members, following the "work group's" and committees working policy, and will be protected accordingly. This allows the "working group" and committee to establish through their policies whether they will solicit inputs from "members only" or be more open. For example, the SCA Work Group, as a body producing standards track documents may decide that received information will be treated as "members only". The Design Process and Tools Work Group, as a body producing technical reports, may decide to be more open.

4.1.2 SDRF Submission: Development

The Originator gives to the designated group the rationale behind the item and presents a brief introduction to it. Because "working group" energy is a scarce resource, it is appropriate to discuss the relevance and importance of the proposal. Changes may be made to the document at this point, but they should be limited to non-technical considerations such as title, intended disposition, format, and typographical changes.

4.1.3 SDRF Submission: Proposal for Promotion

After discussion, the item is proposed for promotion from SDR Draft Submission to SDR Draft. This step is equivalent to calling for the question in parliamentary procedure.

4.1.4 SDRF Submission: Last Call

This is a call by the Work Group Chair for agreement to ballot. No time delay is required, but consideration of the item may be deferred at this point rather than proceeding with a formal ballot.

4.1.5 SDRF Submission: Balloting

Balloting to accept the submission into the work group is performed according to the Sponsoring Work Group internal policies and procedures.

Control Point 1

*Submission is made by the Document Champion
Sponsoring “Work Group” evaluates the Submission
Submission is accepted as input in support of an approved
project
Committee Chair is notified in writing*

4.2 SDRF Draft

The next process level contains the work required to mature the SDR Draft to an SDRF Proposal. This is the level at which documents undergoing development spend the most time. While a draft reflects the position of one or a few members, the result is a negotiated position that represents a formal position of the entire Sponsoring Work Group membership.

4.2.1 SDRF Draft: Admission

Admission in the Draft stage represents the beginning of the development of a Recommendation, Report, or Specification in support of an approved project. Admission may be based on one or more SDRF Submissions, or may start from scratch as a “work group” development. A document template is available from The SDR Forum should the “work group” choose this latter path.

During this phase of the Draft Level, the policies and procedures for maturing the document by the “work group” must be established, to include voting eligibility. Draft policies and procedures are provided by The SDR Forum for consideration.

Once the project is initiated, the Sponsoring Work Group Chair must register the document with the Publication Manager following the procedures defined in Section 6. At this time a document number will be assigned to the document under development. In addition, online facilities may be established in the SDR Forum’s group portal to facilitate development, including setting up private file sharing facilities, discussion forum’s, and email reflectors supporting the group.

Control Point 2

*Project is initiated by the Sponsor Chair
Policies and Procedures are Established
Document is “Registered” with Publications Manager
Document number “V0.2.0” assigned (used for new document)*

4.2.2 SDRF Draft: Development

This is the phase where detailed consideration of the proposed work item takes place under direction of the Sponsoring Work Group Chair. The structure and the policies of

the Sponsoring Work Group manage the Document development task through control point 3. Interested parties carefully review the document on a paragraph by paragraph basis. The process to be used is not specified, but the object is to negotiate and rework the item until consensus is obtained.

The conclusion of the development phase requires that the document to be in its final “Draft” form, including pre-pending required cover pages and material as defined in Section 5. The document should be a stand-alone document, with the document style, numbering scheme, etc. approved by the Publications Manager, and the “work group” may choose to utilize SDR Forum Document Editor to reach this mature state.

4.2.3 SDRF Draft: Proposal for Promotion

This step is in preparation for moving it out of the “working group,” and is reported to the Committee Chair in writing. To be proposed for promotion, the “working group” must agree to end development, and the document must be stable, with changes and corrections complete. The Proposal for Promotion then is accepted by a majority vote of the members present with one vote per eligible “work group” member.

At this point the document begins to move from a group of participants who have detailed understanding of the proposal to the rest of the Forum membership. Consideration should be given to developing presentations and other tutorial materials that help the more general audience understand the work product.

Control Point 3

*Development work complete, document is stable
Voted for promotion by the “work group” sponsoring development
Document number “0.3.0” assigned (may not have 0’s if not a new
document)*

4.2.4 SDRF Draft: Last Call

The finished work is posted on the group portal, and the “Sponsoring Work Group Chair” issues a “Last Call” via email to the eligible “work group” membership. This Last Call will announce the intention of the “work group” to accept the document, and solicit final comments within a period of three weeks. That time period is intended for detailed technical evaluation by member organizations, and to give them an opportunity to adjust business plans to take the impact of the new material into account. Any comments from typographical corrections to a major objection may be submitted. Based on the results of the Last Call, the Sponsoring Work Group Chair may refer the document back to the “work group” or may proceed with balloting. Last Call may occur be concurrent with Balloting at the discretion of the Sponsoring Work Group Chair.

4.2.5 SDRF Draft: Balloting

Balloting is done within the Sponsoring Work Group according to their policies and structure. Upon completion of a successful ballot, the document is promoted to an SDR Proposal.

Balloting may occur at meetings of the Forum or by email. The Sponsoring “Work Group” Chair or the Committee Chair is responsible for conduct of the vote. Eligibility for balloting at the work group level or below will be set by the approved work group policy, and may be limited to only active work group members.

Balloting may be done at an SDR Forum General Meeting if last call has already occurred. If a ballot is done at a meeting, absent members may designate a proxy to submit their vote. If a vote is not acceptable to any member, a challenge may be submitted for resolution by the SDRF Board of Directors.

If balloting is done via email, Last Call may be concurrent with the email ballot to streamline the overall process. The email ballot should include the document under consideration, the date in which balloting concludes, and the options for balloting. These options are set following the “work group” policies and procedures, however the preferred options are:

- Approve
- Approve with comment
- Disapprove with comment
- Abstain

The Sponsoring Work Group Chair may choose to engage the Publication Manager to facilitate an email ballot at the “work group” level.

Control Point 4

Three weeks elapsed since Last Call

“Work Group” Chair initiates ballot

Successful ballot at “work group” level

Document number “0.4.0” assigned (may not have 0’s if not a new document)

Document Configuration Management transferred to the Publications Manager

4.3 SDRF Proposal

An SDRF Proposal is a viable document in final or near-final form that has been approved by a Sponsoring Work Group. The process at this level involves coordination with other “Working Groups” across the appropriate Committees and exposure to the entire SDRF membership for promotion along its designated path.

4.3.1 SDRF Proposal: Acceptance

Acceptance consists of agreement by the Chair of the appropriate Committee to proceed with the exposure and socialization necessary to garner support for the work from the entire SDR Forum. A key element of this activity is sign-off on the architectural coherence of the proposal with other SDRF Documents, either released or in development, and adherence to the SDRF Strategic Plan and Roadmap.

Control Point 5

Accepted by Committee Chair

Document number "0.5.0" assigned

4.3.2 SDRF Proposal: Coordination

The Development Phase of the Proposal Level requires coordination of the Proposal with all of the Committees, "Work Groups" and relevant Task/Sub Groups to ensure that it is compatible with material that they have published and have under consideration. This assent is accomplished by a survey of those individuals conducted by the associated committee chair. It may be desirable to schedule joint working sessions between "Working Groups" or discussion of the material in a plenary session.

4.3.3 SDRF Proposal: Proposal for Promotion

To proceed with promotion, the chair of the appropriate Committee must declare that the document is stable, with all changes and corrections complete, and direct the Publication Manager to initiate the Committee Ballot.

4.3.4 SDRF Proposal: Committee Last Call and Committee Ballot

Balloting at the Committee Level is always done via email concurrent with Last Call. All SDR Forum Member organizations that are eligible to vote, as defined in the SDR Forum's Bylaws, may participate in a committee ballot, with each eligible SDR Forum member organization casting a single vote. The email ballot will be issued by the Publication Manager and will include the document under consideration, the date in which balloting concludes, the options for balloting, and a sheet for capturing and returning comments. Four weeks are generally allocated for the Committee Ballot to be completed, although the Committee Chair may request the Chair of the SDR Forum to reduce the Last Call to a period of not less than 2 weeks for a specific Committee Ballot where special circumstances may apply. Options for balloting will be:

- Approve
- Approve with comment
- Disapprove with comment
- Abstain



The Committee Chair determines whether a consensual or quorum vote is to be used at the Committee Level. A consensual ballot is appropriate when it appears that a consensus exists. For a consensual ballot, the email ballot sent by the Publications Manager will clearly state that *no response is considered a vote for acceptance*. If the decision to use a consensual ballot is contested, then a quorum ballot will be used. A quorum ballot requires a quorum of the eligible membership, as defined in the Bylaws, to participate for the ballot to be valid. If more members vote for acceptance than for rejection, the item is approved. Abstentions are not counted. If a quorum is not achieved, then the document may be re-voted at a later time, or it may be returned to the work group to gain additional support.

Documents that cross multiple committees must be balloted separately in each committee, with comments resolved collectively by the committee chairs. Upon completion of a successful ballot, the Committee Chair notifies the SDR Forum Chair that the Document is ready for final ballot.

Control Point 6

Committee Balloting complete

Document number "0.6.0" assigned (may not have 0's if not a new document)

Forum Chair notified that the document is ready for Plenary Ballot

4.3.5 SDRF Proposal: Plenary Presentation

The final step is to present the Document to a Plenary session of the entire SDR Forum as a way to explain the essence of the document and promote an understanding of the impact it may have when issued. The Plenary presentation may be made by the Committee Chair, the Sponsoring WG chair, or a champion of the work done. The key is to make sure the entire organization understands and supports publication.

4.3.6 SDRF Proposal: Plenary Last Call

The Last Call will normally be made at an SDRF Plenary session, with announcement that a ballot will be conducted at a later Plenary, with at least 24 hours elapsed between sessions. This delay is to allow any member to refer the work back to their internal organization for a final review, and to lobby for or against the proposal with other members.

Alternatively, last call may be issued via email, with one weeks notice given prior to the Plenary Session where the ballot will occur.

4.3.7 SDRF Proposal: Plenary Balloting

The Plenary Ballot is a vote of the entire membership, one vote per member. After a successful ballot, the document is promoted to an SDRF Release. The Forum chair will determine the type of ballot (consensus or quorum) and the Forum chair will determine

the percentage approval required for a successful consensus ballot. Promotion of an SDR Proposal to an SDRF Release is an important step and as such it is incumbent on the Forum not to publish as a Report, Recommendation or Specification work that is not ready to be implemented.

As all comments should have been resolved at the Committee level, Plenary Ballots are generally up/down votes with no additional comments allowed. Should the Forum Chair wish to accept comments, or should schedule prohibit a live vote, the Forum Chair may choose to initiate a Plenary Ballot via email. Should this occur, the Publication Manager will initiate the Ballot following the same procedures as defined for the Committee Ballot with a minimum period of 1 week for responses to be received.

Control Point 7

Plenary Presentation made

24 hours since Last Call

Successful Plenary ballot

Document number "1" assigned (for a new document) (status and version in work numbers eliminated at this control point)

4.4 SDRF Release

A SDRF Release is a document ready for public distribution. Documents may be released as Specifications, Reports, or Recommendations, and will be provided by the SDRF to the SDR community in general. SDRF Specifications designated to be converted to a qualified standard will follow additional processes as documented in "Conversion of SDRF Voluntary Standards to International Standards."

Detailed procedures beyond this level are not currently defined.

4.5 SDRF Standard

The process must provide for the updating and issue of new versions of a standard. The process for maturation from a SDRF Specification to an SDRF Standard is not currently defined. For certain specifications, a possible next step may be the solicitation of a reference implementation, either as information submission or through a separate RFP process. Implementation can take on many forms. A separate document will be developed to manage the "Standards" development process beyond the Specification level.



5 Document Format

This section describes the mechanical details of managing SDRF Documents. The Publication Manager will be responsible for developing and maintaining this information. All document numbers, data disclosure sections, and formats will be controlled by the Publication Manager.

5.1 Document Numbers

Document numbers will be in the following format as prescribed in SDRF Policy PG02:

SDRF-YY-C-NNNN-V.J.K.L

SDRF - The letters **SDRF**, a designator that this is an SDRF document number.

YY - Last two digits of the year of submission.

C - Document Category Identifier

- I** Input/Information documents
- R** Recommendations
- H** Historical documents
- P** Reports
- S** Specifications

NNNN – Document serial number, a unique number for each year assigned by the Publications Manager

VJ.K.L - The Version number.

V = the letter **V**

J = 0 until the document is first released (passes control point 7); after that, it is incremented each time it has been revised and that revision has been approved for release.

K = the control point the document has passed

L = incremented for each new draft at the current control point

J, **K**, and **L** are separated by a decimal point (aka period). Each **J**, **K**, and **L** may be single or double digits.

When revision work is begun on an approved document, the current value of **J** is kept and **K** and **L** are added again to indicate it's processing toward a new release. When the new version is approved for release, the **J** is incremented and the **K** and **L** are removed.

5.2 Data Disclosure

The following information will be provided for SDRF documents tracked under this process on a coversheet that will be removed once the document is released:

- 1) Title, author, date of submission, sponsoring organization, expiration date
- 2) Document type: information, historical, recommendation, technical specification or technical report
- 3) Document description
- 4) Copyright transfer to publishing body – The Software Defined Radio Forum Inc.
- 5) Distribution - Several options are available for distribution of a document prior to release. Distribution may be:
 - SDRF Sponsoring Work Group members
 - SDRF members only
 - Public release

If a document has allowed special release to “work group” members that are not SDRF members, those “work group” members are to be listed and maintained by the Sponsoring Work Group (it need not be in the work product document). They may have release of the document for their use, but they may not share the document outside of their control. This is called Work Group Release. Non-forum members should be warned they are not able to share the document outside of their control. Request for sharing is managed by the Chair of the Sponsoring Work Group.

If the “Work Group” has limited the work effort to SDRF members only, the document shall be Limited to SDRF members only.

When comments are developed for a document in work, the comments are “Limited to sponsoring Work Group members and SDRF members.

In addition, the document shall contain Front Material that will be incorporated in the released version that includes the following:

- 1) Acknowledgements of not only all contributing authors but traceability to important predecessors and authors
- 2) Copyright and IPR notices, as defined in the SDR Forum IPR Policy ([SDRF Policy 007](#))

6 Document Tracking Procedure

The purpose of this tracking procedure is to describe the actions necessary for documents to progress through the SDR Forum’s accepted approval. It provides guidance to assist SDR Forum members in creating documents and tracking the status of work items. Separate procedures are provided for Information documents submitted to the Forum, and

work products developed by the Forum's work groups, special interest groups and task groups for endorsement by the Forum's members.

6.1 Information Documents

Information documents are generally developed outside of the SDR Forum and are submitted by member organizations as formal inputs to the Forum. The document tracking procedure for Information documents is:

- **Phase: Initiation**

Member action: SDR Forum Member representatives initiate the document process by sending an email request for a document number to the Publication Manager (PM). The subject line for this email should be "SDRF Document Number Request" and the body of the email must contain the

- Name of the submitter,
- Title, author, and source of the document,
- Type of document (information)
- Short description of document
- The preferred distribution, as follows:
 - Group Only (please list the appropriate group)
 - SDR Forum members only
 - Public release

PM action: Publication manager returns the email with a document number to the requesting member representative (V1.0.0), and information about the document is entered into the Document Tracking Sheet that maintained by the Publication Manager on the Forum's Group Leader portal

- **Phase: Submission**

Member action: The member representative will fill out the SDR Forum approved cover sheet for Information documents with the appropriate data and prepend this cover sheet to the document being submitted. This coversheet can be found on the Forum's Document Library page. The final document is then be returned to the Publication Manager for distribution

PM action: Once the Information document is received, the Publication Manager will review the coversheet for accuracy and the document for inappropriate material. If any problems are found the Publication Manager will work with the member representative to resolve them. The Document Tracking Sheet will then be updated to reflect that the document has been received and will be distributed as follows:

- Documents marked as Group Only will be placed on the group portal and be restricted to members of the working group until ready for Committee ballot
- Documents marked as SDR Forum members only will be placed on the group portal and will be restricted to members of the Forum

- Documents marked for public release will be placed on the portal until they are approved, at which time they will be released for public access
- **Phase: Distribution**
PM action: The Publications Manager will post the document on the SDR Forum's website in the appropriate area as specified in the distribution request
- **Revision/Update**
Should the member representative wish to revise the Information document, the version number should be incremented and document should be resubmitted to the Publication Manager with updated instructions.

6.2 Recommendations, Reports, and Specifications

Recommendations, Reports, and Specifications are documents which are developed within the SDR Forum's work groups, special interest groups, and task groups under the supervision of the group leader (GL). The document tracking procedure for these types of documents is as follows:

- **Phase: Initiation/Admission**
GL action: SDR Forum group leader initiates the document process by sending an email request for a document number to the Publication Manager. The subject line for this email should be "SDRF Document Number Request" and the body of the email must contain the
 - Name of the principal author,
 - Title of the document,
 - The state of the document (Control Point)
 - Type of document (report, specification, or recommendation)
 - Short description of document
 - The group (working group or special interest group or task group) for whom the document is intended.

PM action: The Publication manager will return a document number to the requesting group leader, and information about the document will be entered into the Document Tracking Sheet maintained by the Publication Manager on the Forum's Group Leader portal

- **Phase: Development**
GL action: The document will follow the approved document template found on the Forum's Document Library page. While in development, the document will be placed on the responsible Group's portal and will be controlled by the group leader until it has been approved by the Group.. After the document has been approved by the Group, the GL notifies the Committee chair and the Publications Manager by email that the document has passed the Group level ballot and is ready for Committee ballot. The GL notifies the Publications Manager if a shorter

than normal response time is required

PM action: The Publication Manager will update the Document Tracking Sheet to reflect that document has reached this stage of the process; the PM will also modify the document number.

- **Phase: Coordination**

Committee Chair action: The Committee Chair initiates and conducts the coordination phase of the process in the responsible committee.

PM action: The Publication Manager will review the document to ensure it is in an appropriate format and has the required cover materials. If any problems are found the Publication Manager will work with the Committee Chair and Group Leader to resolve them, including utilizing the SDR Forum’s document editor as required.

- **Phase: Committee ballot**

Committee Chair action: The Committee Chair notifies the Publication Manager that the Document is ready for ballot, and transfers the document to the Publication Manager via Email.

PM action: The Publication Manager will

- acknowledge receipt of the document, and update the Document Tracking Sheet to reflect the updated status,
- prepare the document for a Committee vote. At this point, the Publication Manager takes over configuration control of the document. Prior to initiating the ballot, the Publications Manager will convert the document to PDF and submit the converted document to the Committee chair for final approval.
- conduct an email ballot at the Committee level, or announce to the membership that the document is scheduled to be voted on at a working meeting. Under normal circumstances, the membership will have 4 weeks to consider the document at the Committee level: the email ballot will remain open for 4 weeks, or the document will be circulated for review 4 weeks in advance of a working meeting (“Last Call”).
- notify the Committee Chair of ballot results and comments received during the last call or email ballot

Committee Chair action: review the comments and determine the next steps:

- If the document requires minor rework that is editorial in nature, the Committee Chair will notify the Publication Manager of the required changes, and these changes will be made by the Publication Manager and returned to the Committee Chair for approval. Once the Committee Chair

approves the changes, the Committee chair will notify the Publication Manager that the document is ready for plenary vote.

- If the document requires substantial changes, the Committee Chair will notify the Publication Manager to return the document to the Group Leader for rework. The Publication Manager then transfer control of the document back to the group and update the Document Tracking Sheet to reflect this change in state.
- If the Committee Chair feels that the document is ready as is, the Committee chair will notify the Publication Manager that the document is ready for plenary vote

- **Phase: Plenary Ballot**

Committee Chair action: Notify the Publication Manager and the Chair of the Forum that the document is ready for Plenary Ballot,

Publication Manager action: update the version number on the document, update the Document Tracking Sheet to reflect the change in status, and notify the Chair of the Forum that the Document is ready for Plenary Ballot.

Forum Chair action: review the document and if he or she agrees that the document is ready for Plenary Ballot, direct the Publication Manger to initiate the Plenary Ballot. The Chair of the Forum determines the length of the ballot period and the ballot method (email vote or live vote). Under normal circumstances, the membership will have a minimum of 30 days to consider the document at the Plenary level

PM action: if approved by the membership on a plenary ballot, the document is appropriately re-numbered and posted on the SDR Forum's website as an approved document. The Document Tracking Sheet is updated to reflect this final change of state