

SOFTWARE DEFINED RADIO FORUM
STRUCTURE
And
2002 UNIFIED WORKPLAN
28 February 2002

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SECTION 2.1

SDR Forum Vision and Scope

SDR Vision

The SDR Forum vision is to advance the development of software defined radios to enable high quality, ubiquitous, competitively-priced wireless networking systems, equipment, and services with advanced capabilities. This vision includes a view of seamlessness across diverse networks and integration of capabilities in an environment of multiple standards and solutions.

Ease of use, mobility, enhanced productivity, and support for lifestyle choices are all desired by communications systems users. Convergence among wireless and wired services such as e-commerce, educational, entertainment, and information services requires improved interworking and interoperability.

Consequently, consumers of communications services, communications service providers, equipment suppliers and maintainers can benefit from deploying systems using the software-definable radio systems. This community of interest not only includes the needs of the general public, but also governments, and their requirements for defence, law enforcement, and emergency services, including National Security and Emergency Preparedness.

SDR Definition

Software Defined Radios are elements of a wireless network whose operational modes can be changed or augmented, post-manufacturing, via software. Software-definable radios use adaptable software and flexible hardware platforms to address the problems that arise from the constant evolution and technical innovation in the wireless industry particularly as waveforms, modulation techniques, protocols, services, and standards change. It can also address the implementation of radios that facilitate satisfying the increasing need for users to communicate as they move between different operating environments.

A software-definable radio in the SDR context goes beyond the bounds of traditional radio and extends from the radio terminal of the subscriber, through and beyond the network infrastructures and supporting sub-systems and systems, to access not only other users, but suppliers of value-added applications. SDR as a concept spans numerous radio network technologies and services, including cellular, PCS, mobile data, emergency services, messaging, paging, and military and government communications.

SDR Forum Mission

The mission of the SDR Forum is to accelerate development, deployment, and use of software-definable radio systems consistent with the objectives of the above wireless vision.

The SDR Forum will work toward the adoption of software defined radio implementations and developments within wireless systems that include the requisite functionality in terminals, networks, and systems to provide "multiple capability and multiple mission" flexibility for voice, data, messaging, image, multimedia and future needs.

The SDR Forum shall establish requirements related to the definition of internal and external system interfaces, modules, software, and functionality that the industry can use as guidelines in building modules, products, and systems.

Further, the SDR Forum will promote the development of standards for the SDR concepts, including those focused on SDR equipment and those in supporting service application areas, in areas of interoperability and performance, and in underpinning core technologies. These standards will be supported either directly or through appropriate liaison to other industry associations and standards bodies. The SDR Forum will pursue industry wide acceptance of these standards.

To assist the wireless and supporting industries in understanding the value and benefit of a software definable radio, and in particular the SDR vision, the SDR Forum will also address market requirements, quantify the market, and develop timelines relative to the use of multi-mode, multi-band, and multi-application wireless communications systems.

The SDR Forum membership includes telecommunications users, equipment suppliers, and developers of technology, products, systems, hardware, and software, as well as service providers and system operators or any other organization, or entity who has interest in furthering the vision of the SDR concepts.

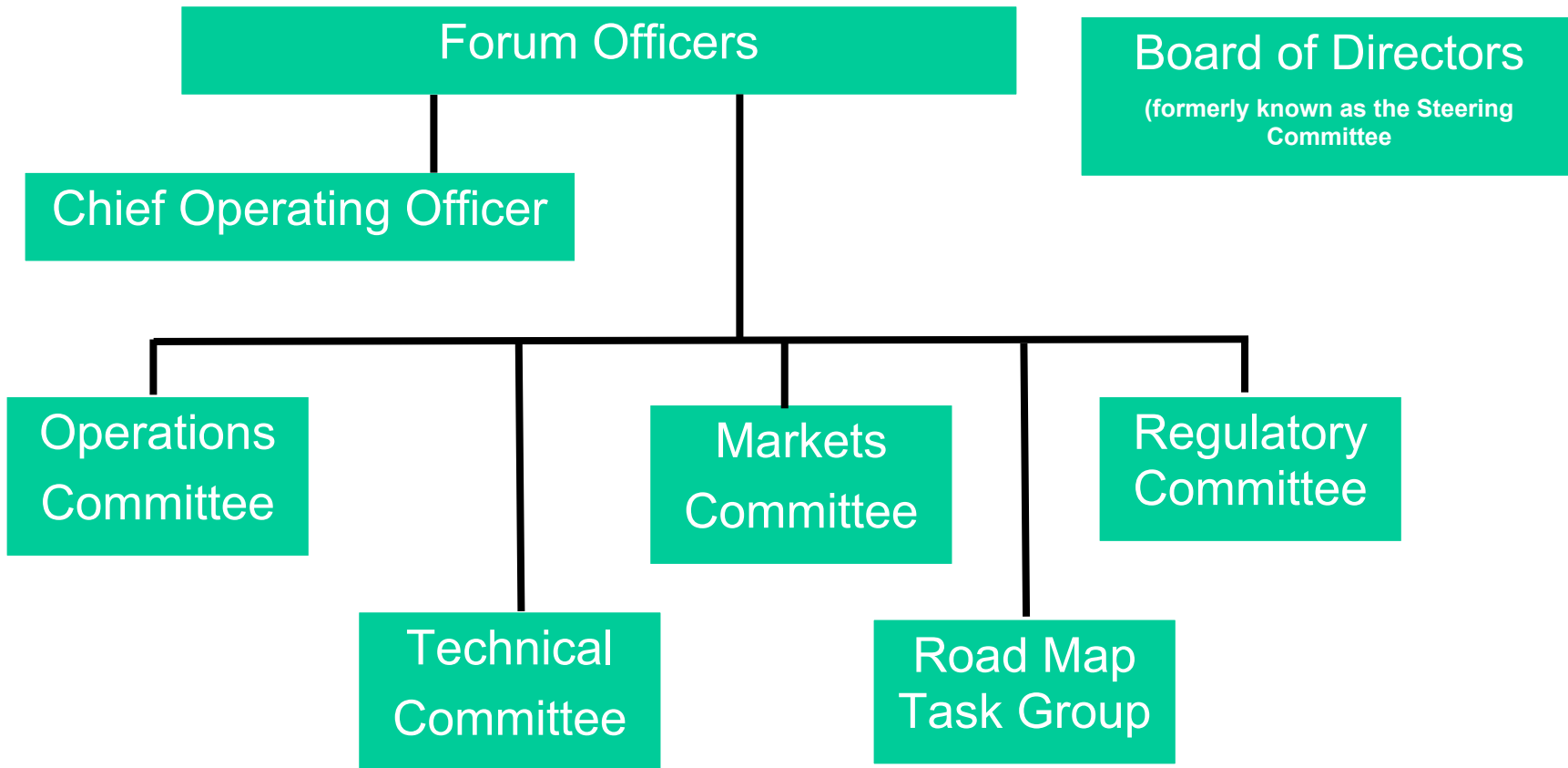
The Forum membership exceeds 100 entities from around the world developing SDR throughout the wireless system value chain.

SECTION 2.2

SDR Forum Structure

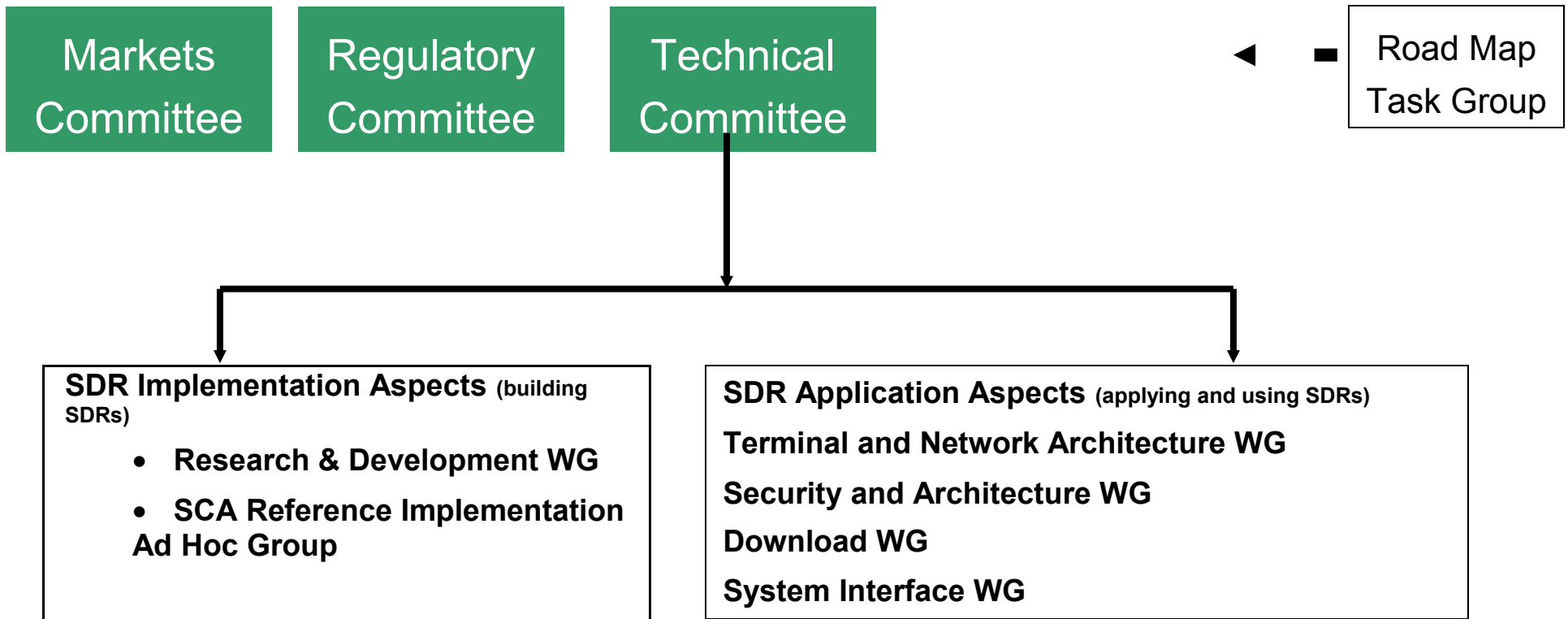
To provide a visual perspective, the following diagram details the SDR Forum operating structure and the relationships among the entities within the Forum. Each major subdivision has an included charter and scope.

SDR Forum



Non-profit, international, open membership corporation established in 1996.

Technical Committee Detailed View



COMMITTEE AND WORKING GROUP CHARTERS

FORUM STRUCTURE

The Forum is structured to address several major aspects associated with SDR and its development, implementation and application. These are:

Understanding the Market	(Markets Committee)
Implementation Aspects	(Technical Committee)
Application Aspects	(Technical Committee)
Authorizing of SDRs	(Regulatory Committee)

Understanding the market includes addressing and quantifying the who, what, why, where and when of SDRs. Implementation aspects includes the key developments of technologies and similar items as relates to the enablers for the building of products that incorporate SDR and its concepts. Application aspects delves into those areas that are necessary enablers for using, applying and taking best advantage of products built around SDR. Authorizing of SDRs addresses those enablers that promote a positive global regulatory climate so that SDR can be designed into products and allowed to be sold and deployed.

MARKETS COMMITTEE

The primary goal of the Markets Committee is to understand the SDR market and provide overall (who, what, when, where, why and how) requirements to the Forum. . The Markets Committee also manages major events, public relations and membership drives. To do this, they perform market surveys, organize and hold product expositions, organize and hold SDR technical conferences, and manage all press releases and trade journal submissions.

REGULATORY COMMITTEE

The Regulatory Committee charter is to remove regulatory barriers and promote the development of a global regulatory framework supporting SDR-enabled equipment and services via submissions in formal proceedings and public discussions. Under the Bylaws of the Forum, the primary goal of the Committee is to address regulatory and public policy issues on behalf of the Corporation

TECHNICAL COMMITTEE

The principal goal of the Technical Committee is to produce documents related to the development and implementation of software radio functions for the purpose of providing technical guidance and standard solutions to problems.

To manage the work, the committee has defined several workgroups organized as follows within the context of **SDR Implementation Aspects** and **SDR Application Aspects**:

SDR IMPLEMENTATION ASPECTS (Building SDRs)

R & D Working Group

Conduct research into technical activities and publications throughout the world as related to Software Defined Radio. This is to identify technologies which can either fulfill the needs of the marketplace, or enable new products, services, and applications. Develop briefings, working papers, bibliographies and expert lists for use by the Forum membership on the conducted research. Exchange guest speakers, as necessary, with other organizations as a means of re-enforcing and proliferating SDR concepts. Facilitate Forum members collaborating on technology demonstrations at select venues including the annual SDRF Technical Conference and Exposition. Support development of a web-accessible testbed for use in applied research in software defined radio.

Software Communications Architecture (SCA) Reference Implementation Ad Hoc Group

To review and evaluate SCA-RI contractor deliverables for fulfilling acceptance criteria in accordance with contract. To report acceptance test results to SDFR Forum Chief Operating Officer.

SDR APPLICATION ASPECTS (Applying and Using SDRs)

Terminal and Network Architecture Working Group

Define architectural concepts and submit API's for standardization in the area of commercial SDR enabled terminals. The process is considering product-relevant enabling technologies and end-to-end architecture issues for commercial SDR devices. Commercial wireless is the focus area of current deliverables within this topic area.

Security and Architecture Working Group

Identify the network and security architectures and functions supporting the reconfigurable radios that are fundamental to a successful SDR deployment and for building a business case. Examine and document architectural topics and influence appropriate external organizations.

Download Working Group

The Download Working Group is responsible to study principally the technical aspects of software download to SDR devices, whether over-the-air or via other means, and includes questions related to RF reconfiguration of the equipment. In this area however, there will be a need for this group to be involved in and possibly oversee the development of documents that may have a regulatory focus. Thus this working group, while situated as a working group under the Technical Committee, may also directly work on issues for the Regulatory committee. The Group will develop and publish information regarding definitions, requirements, concepts, timelines and other features of SDR downloads for the wireless industry to stimulate and drive the development of appropriate standards that address the ability of software based radio devices to be reconfigured in a proper manner subsequent to manufacture and/or deployment. The information developed will also benefit regulators around the world, and provide a major input to the Forum's reports to the FCC on security and certification aspects of SDR equipment. This work has strong support and co-ordination across all SDR Forum Committees and planned activities."

System Interface Working Group

The System Interface Working Group is responsible for identifying radio, management, network, and physical services and their interfaces. It will also maintain and promote system interface standards and develop and promulgate new standards when necessary. The product of the working group will be a yearly report on the defined interfaces.

OPERATIONS COMMITTEE

The Operations Committee is responsible for the administrative functions of the Forum, including the scheduling and carrying out of member meetings, all member fulfilment activities, website maintenance, document distribution, and all office operations. Oversight of the committee is the responsibility of the Corporate Secretary and day-to-day operations are conducted by the office staff under the direction of the Chief Operating Officer.

ROADMAP TASK GROUP

The Roadmap Task Group generates a document that describes near, mid, and far-term steps in the evolution of SDR and its unifying principles as envisioned by the SDR Forum. Given a working consensus on the roadmap, SDR Forum members work those projects of interest to the members, within the common ground tasks. Some common ground tasks are market-centric, focusing member activities towards common issues shaped by a specific market. Other common ground tasks transcend individual markets. The roadmap addresses Forum functions, constituencies, markets, and common ground tasks.

SECTION 2.3

SDR Forum Electronic Methods

The following E-mail reflectors have been set up to facilitate work by correspondence between meetings. To register for a reflector, send a request to info@sdrforum.org.

Table 2.3

Group	E-mail Reflector
Markets Committee	markets@sdrforum.org
Regulatory Committee	regulatory@sdrforum.org
Mid-year FCC report list	sdrmidyear@sdrforum.org
Technical Committee	
Terminal and Network Architecture WG	terminalnetwork@sdrforum.org
Security and Architecture WG	secarch@sdrforum.org
Download WG	download@sdrforum.org
System Interface WG	systemif@sdrforum.org
R & D WG	researchdevelopment@sdrforum.org
SCA Reference Implementation Ad Hoc	scari@sdrforum.org

To send a message to all the participants in a reflector group, send an E-mail to the E-mail address shown above, e.g. sdrmidyear@sdrforum.org.

Do not send your request to subscribe to an email reflector to these addresses - your request would be sent to everyone on the email reflector list.

To subscribe to an E-mail Reflector, send an E-mail to info@sdrforum.org with the single line in the body of the E-mail message: subscribe [E-mail Reflector name] e.g. subscribe sdrmidyear

To unsubscribe to an E-mail Reflector, send an E-mail to info@sdrforum.org with the single line in the body of the E-mail message: unsubscribe [E-mail Reflector name] e.g. unsubscribe sdrmidyear

Some Committees and Working Groups have dedicated web pages on the SDR Forum website. Please follow links on the website to access these pages if provided.

General SDR Forum contact information:

The SDR Forum
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New Hartford, NY 13413 USA

The Forum website is located at: <http://www.sdrforum.org>

SECTION 2.4

SDR Forum Key Leadership Contact Details

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SECTION 2.5

SDR Forum Meeting Schedule

Five Major Meetings Per Year

Winter Meeting (~February), generally held in USA

Spring Meeting (~April), generally held in Asia-Pacific region

Summer Meeting (~June), generally held in USA

Fall Meeting (~September), generally held in Europe

Annual Business Meeting (~November), generally held in USA

2002 Schedule (as adopted)

5 - 7	February –	Mtg #27	Dallas, TX USA	
16-18	April –	Mtg #28	Tokyo, Japan	
11-13	June –	Mtg #29	Boston MA USA	
18-20	September –	Mtg #30	Edinburgh, Scotland	
11-12	November –		San Diego, CA USA	Conference and Product Expo (co-located venue)
13-15	November –	Mtg # 31	San Diego, CA USA	plus Annual Business Meeting on evening of 14 th
TBD	December –		TDB	Board of Directors Planning Meeting

2003 Schedule (planned)

28-30	January			
16-18	April			
11-13	June			
17-19	September			
11-13	November			
TBD	December –			Board of Directors Planning Meeting

2004 Schedule (planned)

3 - 5	February			
13-15	April			
8-10	June			
14-18	September			
9-11	November			
TBD	December –			Board of Directors Planning Meeting

SECTION 2.6

Proposed Long-Range SDR Forum Work Program Plan**1 Update of Existing Documents**

A set of documents will be maintained as the current representation of SDR Forum views positions. Other documents will be retained but clearly identified as historical in nature.

2 Development of New Deliverables

A series of documents or work activities are to be completed as discussed in this section and further delineated in Sections 2.7 and 2.8. This work is organized within the Committees of the Forum as shown below.

2.1 Markets Committee**2.1.1 Market Analysis**

A series of documents are to be generated defining the Markets needs and requirements for SDR. The first document is a SDR market survey performed by Gartner. The next document shall be an analysis of the Market survey and other current market information. The purpose of these documents is to provide the Forum with general market requirements (who, what, where, when, why, and how)

2.1.2 Press Releases & Trade Journal Publications:

A series of documents are to be generated to promote the use and acceptance of SDRF technology. These document topics shall vary from general promotion of the SDRF to publicizing significant SDRF events. The committee performing the subject work shall author the document.

2.1.3 Major Events

A series of deliverables are to be generated for the SDR Forum's major events. Deliverables include email announcements, flyers, programs, publication of documents, list of exhibitors, and other various deliverables required to hold an event. Major events shall include a Security Workshop, a technical conference, and a product exposition.

2.1.4 Membership

A series of documents shall be generated to retain and attract new members. These documents shall include, membership feedback, new member package, perspective member package, and a membership drive plan.

2.2 Regulatory Committee

2.2.1 Prepare/Submit Interim Report to FCC on SDR Security (target: June 2002) – based heavily on anticipated responses to the Request for Information (RFI) regarding security activities and on internal efforts of the Forum (notably the Download WG), a mid-year report will be developed. It is expected to include an overview of the security challenge, a survey of relevant activities, and a detailed description of security threats to wireless in general and SDR in particular, and a matrix of industry activities addressing the identified threats.

2.2.2 Prepare/Submit Final Report to FCC on SDR Security (target: December 2002) – following on to the Interim Report, this product will update earlier material and will document the scope, goals and timeline of ongoing work, discuss the range and type of solutions being considered, relevant dependencies, and provide appropriate conclusions and recommendations relative to SDR security.

- 2.2.3 Support European regulatory activities (continuing) – includes ongoing liaison with European regulators through the EC/TCAM working group on SDR, security standards work in MExE, and broad distribution of regulatory and security material.
- 2.2.4 Support Asian regulatory activities (April 2002, continuing) – includes ongoing liaison with Japan's MPHPT and IEICE, as well as other officials in the region. Participate in MPHPT and IEICE workshop, It is planned to increase the distribution of SDR regulatory and security material.

2.3 Technical Committee

2.3.1 Terminal and Network Architecture WG

The long term activity will include the following steps:

Draft SDR terminal High Level API to enable Network Operators, Manufacturers, 3rd Party Application Providers and Users to control terminal reconfiguration.

Synchronize and consolidate the High Level API with the emerging Radio Engine related API's with the emerging SDR Systems Interface Definitions document (SI-SSID)

The workgroup is preparing a Java Specification Request (JSR) document that will be submitted to the Java Community Process (JCP).

2.3.2 Security and Architecture WG

Produce a series of documents that provide a high-level view of wireless systems security, architecture, and business characteristics. At a very high level these topics interact to describe the structure of wireless systems, control how they deliver information, and identify the transactions and revenue streams among participants

2.3.3 Download WG

A series of documents are to be generated to address from a coordinated global perspective the aspects of download of radio software for RF reconfiguration into SDR based radios whether over the air or via other means. A series of seven documents are proposed. Five are to come from the Technical Committee, and two from the Regulatory Committee. This document series has strong support and co-ordination across all the SDR Forum Committees. In addition, this work will result in the development and publication of requirements, concepts and other information to the wireless industry to stimulate and drive the development of appropriate standards to address the ability of software based radio devices to be reconfigured in a proper manner either at time of manufacture or after subsequent deployment. The information developed will also be of benefit to regulators around the world. In particular, these deliverables support the creation of interim and final report to the FCC for the purpose of "taking adequate steps to prevent unauthorized software modifications to radios". Similarly support for initiatives under way in other regulatory regimes is envisioned. Principal focus of current deliverables is the Commercial Wireless Domain.

2.3.4 System Interface WG

The System Interface Working Group plans for a series of interface definition documents collected into a yearly report, SDR System Interface Definitions. A Technical Compliance white paper will also be accomplished. This group will provide a year ending SCA Reference Implementation Report as well.

Long term work products include maintenance of the Reference Implementation. We will also maintain our current liaison relationships with the JTRS JPO, SDRF Liaison to the JPO and JTRS Liaison to the SDRF.

2.3.5 R & D WG -

The R&D Working Group plans to conduct the following work during 2002. Much of this work will be performed by correspondence using email

circulation via the Group reflector, and through bi-weekly teleconferences.

- 1) The R&D WG will solicit additional members by issuing a Call for Participation in one or more venues to include the IEEE Spectrum.
- 2) The R&D WG will survey the state-of-the-art in:

- Hardware technology (RF enablers, digital enablers)
- Software technology (SDR definition tools, Radio virtual machines)
- System technology (smart antennas and adaptive processing, scalable systems, advanced terminal management and security technology, and testbed architecture).

The information for the survey will be collected by issuing a Request for Information (RFI) in each of the study areas, which should receive broad dissemination, such as publication within the IEEE Spectrum. Draft RFI's will be developed and reviewed by correspondence, prepared as input submissions, reviewed/commented by the Technical Committee at the April plenary meeting in Tokyo, and posted as input documents for review by the SDRF membership. The finalized RFI's for each study area will be broadly issued after the June plenary meeting after coordination and integration of review comments.

3) Responses to the RFI received by the September and November meetings will be reported on by the respective study groups to the Technical Committee at those meetings. Companies responding to the RFI's may be invited by the R&D WG to present their responses to the Technical Committee at SDR Forum meetings. Working by correspondence, each study group will issue a preliminary report by the end of November 2002. The report will be an input submission to the SDR Forum for the 2003 work period. The SDR Forum will seek to publish highlights of results of the RFIs within the IEEE Communications Magazine or a similar publication.

4) During the 2003 work period, the R&D Working Group plans to analyze the potential impacts of the new technologies to SDR hardware, software, and systems, and draft one or more SDRF Recommendations on radio virtual machines, SDR definition languages, adaptive systems, and other areas as appropriate.

5) The R&D WG members will support the planning and review of the November SDRF Technical Conference by coordinating with conference planners, encouraging our peers in the submission of papers, assisting in the peer review of submitted papers, and assisting in chairing of sessions as needed.

6) The R&D WG will develop and maintain an internal website which include informal discussion boards and posting area for working papers, for the purposes of informal peer review and comment.

2.3.6 SCA Reference Implementation Ad Hoc Group -

To review and evaluate SCA-RI contractor deliverables for fulfilling acceptance criteria in accordance with contract. To report acceptance test results to SDRF Forum Chief Operating Officer.

Software Defined Radio Forum Working Relationships and Liaisons

The SDR Forum has identified the opportunity to improve its level of coordination with other relevant industry organizations. With the proliferation of telecommunication industry fora, special interest groups, collaborative research projects, and Standards Development Organizations (SDOs), it is more important than ever for information to have widespread distribution to ensure that relevant entities are informed. It is essential to the SDR Forum, and its current and potential membership, that the Forum improve its coordination with groups which have appreciable levels of common interest and activities. This improved coordination will allow the SDR Forum to better focus its resources on those areas that are not well covered elsewhere in the industry, and to avoid inefficient duplication of other efforts.

To address this opportunity, the SDR Forum has begun to define and implement a process whereby the correct external organizations are identified, and the appropriate level of liaison activity is established. The Forum's liaison activities are managed at the Forum Plenary level.

The foundation of the new process is a Liaison Candidate List. The list, which will be continually updated, will contain the names of those external organizations which have similar and relevant interests and activities. A draft version of the Liaison Candidate List will be posted on the SDR Forum web site and inputs to the list will be accepted, following the 27th general meeting in Dallas. A first official version of the list will be issued during the 28th general meeting in Tokyo Japan during the week of April 16. Example organizations to be included on the Candidate List include:

Table 2.6

<u>Commercial Wireless</u>	<u>Military and Civil Government</u>	<u>Regulatory</u>	<u>Other</u>
WAP Forum 3GPP - T2 - MExE 3GPP - SA5 3GPP2 ITU: WP8A; WP8F European Commission: TRUST; SCOUT SyncML Initiative Japan IEICE TMF Mobile Wireless Internet Forum (MWIF) Object Management Group (OMG)	USA- Joint Tactical Radio System Joint Program Office(JTRS- JPO) USA- National Public Safety Technology Council (NPSTC)	USA- National Telecommunications and Information Administration (NTIA) USA- Federal Communications Commission (FCC) Japan -MPHPT Japan- TELEC Europe- TCAM	

Based on member contribution and volunteerism, organizations will be selected from the candidate list, and will be activated for either formal or informal liaison attention. A formal liaison activity will be based on a formal, bilateral, agreement between the SDR Forum and the external organization. Informal activities will range from basic monitoring of the organizations meetings, to contributions made outside the context of a liaison agreement.

In all cases, an active liaison activity will have a designated rapporteur who will be responsible for serving as the recognized point of contact for the liaison relationship. This responsibility will include the issuance of a written liaison report (in the form of an SDR Forum contribution document), as well as a verbal liaison report delivered during the opening plenary of each general meeting.

The complete process, and associated documentation templates, is described in the SDRF Liaison Policy document. Interested organizations are invited to contact the Forum regarding liaison interfaces.

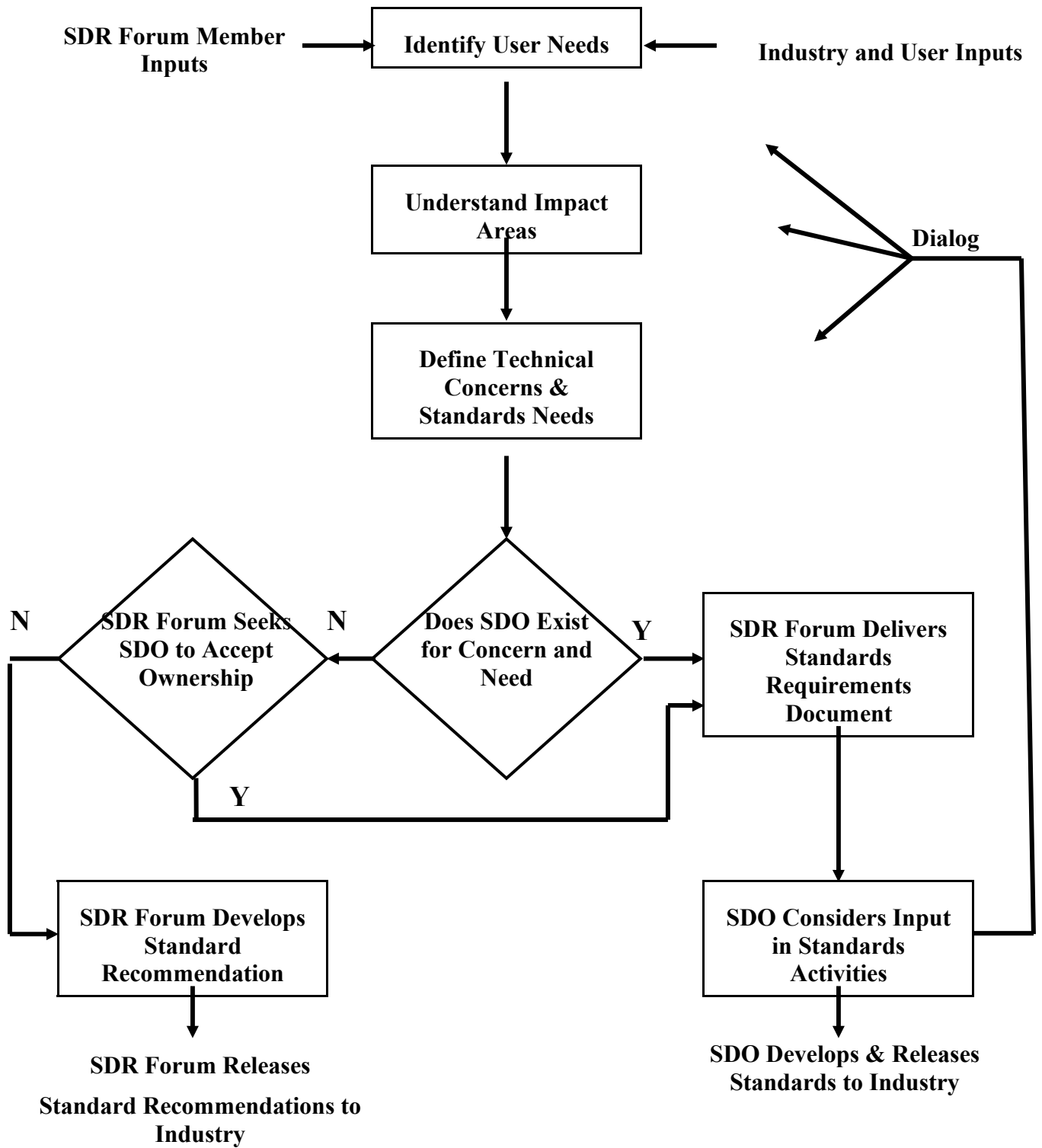


Figure 2.6

SECTION 2.7

Overall deliverables/workplan of SDR Forum for 2002

This table provides the schedule of when approval of the deliverables will be achieved following the procedures of the Forum. Additional detail and sub-components of these deliverables is provided in SECTION 2.8. The entries in this table are considered to be the “end product” deliverables.

Table 2.7

Meeting / Timing	Responsible Group	Deliverable
5 -7 Feb 2002 General Meeting Dallas, Tx USA	Markets Regulatory Technical	Gartner Report on Selected Aspects of SDR Marketplace Industry RFI Letter for Data Gathering - FCC Mid-year Report SCA-Reference Implementation T-1 Stage
16-18 April 2002 General Meeting Tokyo, Japan	Markets Regulatory Technical Technical Technical Technical Technical Plenary	Revised Members Package Download Timelines (DL-TIM-1) Download Definition (DL-DFN) Handset API Requirements (TNA-HREQ) Handset Reconfiguration Use Cases (TNA-USE) Handset Reconfiguration Architecture (TNA-HARC) TC-Security Liaison Policy document
11-13 June 2002 General Meeting Boston, Ma USA	Markets Regulatory Technical Technical Technical Regulatory	Markets Report Update Download Regulatory (DL-REG-1) Download Requirements (DL-REQ) Download Global (DL-GLO-1) Business Case (S&A-BC) Technical Compliance Document (SI-TCOM) FCC Report Mid Year (FCC-RPT-1) complete by e-mail before meeting
18-20 Sep 2002 General Meeting Edinburgh, Scotland	Regulatory Regulatory Technical Technical Technical Technical	Download Timelines (DL-TIM-2) Regulatory Report (REG-RPT) Download Solutions (DL-SOL) Download Security & Integrity (DL-SIN) Download Global (DL-GLO-2) Network Architectures for Security (S&A-NET) SCA Ref Implementation & Compatibility Report (SI-SCARI)
13-15 Nov 2002 General Meeting San Diego, Ca	Markets Regulatory Technical Technical Regulatory	SDR Conference & Product Exposition Download Regulatory (DL-REG-2) R&D industry Bibliography (RD-SUM) SDR Java Specification Request (TNA-JSR) SDR System Interface Definition (SI-SSID) FCC Report End Year (FCC-RPT-1) complete by e-mail after meeting

Meeting / Timing	Responsible Group	Deliverable
28-30 Jan 2003 General Meeting	Technical Roadmap Task Group	Security Aspects (S&A-SEC) SDR Roadmap 2002

SECTION 2.8

Definition and Discussion of Deliverables/Projects

This table is an expansion of the deliverables and activities presented in SECTION 2.7. It is structured to present additional detail and information, including the requisite timings of the final products and the needed subcomponents. **While not a full scope project management presentation, this table is intended as an aid to sequence the work and to provide a basis for soliciting appropriate input contributions in a timely manner to progress the work to successful conclusion.**

Table 2.8

Deliverable	Identifier	Lead Working Group	Target Date	Comments
2002 Update to Road Map Document	RoadMap-2002	RoadMap Task Group	Nov 2002	The 2002 update will provide a revised perspective on 2003 and beyond. The 2002 edition of the document will be restructured to provide a publicly available perspective and Forum members only section.
	Subcomponents:			
	Call for inputs/improvements/changes.		April 02 Meeting	
	Divide Existing Report into Public and Forum Only Sections		June 02 meeting	
	Draft Issue of Rev 2002 Dialog among WGs		Sept 02 meeting	
	Draft Preliminary Approval		Nov 02 meeting	
	Final 2002 Edition Approved		Jan 03 meeting	

Deliverable	Identifier	Lead Working Group	Target Date	Comments
Business Case	S&A-BC	Technical committee (Security and Architecture WG)	Draft 4/02, Final 6/02	Exploration of the participants in the Wireless System market, and the transactions that flow between them in the context of system security and structure.
<p>Download Definitions:</p> <p>Defining Download of Radio Software for RF Reconfiguration in a Technical and Regulatory Context</p> <p>Notes:</p> <p>Use in Ch 2 Mid Year Rpt & Submit to April TCAM Mtg</p>	<p>DL-DFN</p> <p>Subcomponents:</p> <p>Reg-Con</p> <p>Reg-Def</p>	<p>Technical Committee</p> <p>(Download WG)</p>	<p>April 02 meeting</p>	<p>This document provides a complete perspective on the scope of software download in the context of SDR handheld and mobile devices with reference to application, requirements, methods and implementations, and presents a list of issues to be resolved, concerning regulation, certification and standardization. In particular it will concentrate on the download of "software" that has the potential to alter the radio parameters that are considered to be of import to the radio regulatory community, network operators, service providers and manufacturers. Commercial wireless is the focus area of current deliverables within this topic area.</p> <p>The high level concerns of regulators with regard to security and authentication from the perspective of diverse regions and jurisdictions will be described in this document. One chapter of the document will discuss the definition of SDRs from the regulatory perspective of multiple stakeholders (e.g., operators, service providers, manufacturers, and users).</p> <p>The roles and responsibilities in the software download process will be defined for users, network providers, service providers, application providers and terminal manufacturers. For example, this includes the responsibility of manufacturers to inform the network operators when changes are made that may impact network operations. A chapter discussing the definition of SDRs from the regulatory perspective of multiple stakeholders is included.</p>

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<p>Download Global:</p> <p>Report on Global Radio Technology Development Organization Perspectives on Radio Software Download for RF Reconfiguration</p> <p>Notes:</p> <p>Use in Ch 5 Mid Year Rpt</p> <p>Use in End Yr Rpt to FCC</p> <p>Use in End Yr Rpt to FCC</p>	<p>DL-GLO</p> <p>Subcomponents:</p> <p>Reg-Rel</p> <p>Ind-Del</p> <p>Industry-Tim</p>	<p>Technical Committee</p>	<p>Jun 02 meeting & Nov 02 meeting</p> <p>June 02</p>	<p>This document provides an understanding of what work in the area of software download and related security issues is being performed by recognized Standards Development Organizations (SDOs), Partnership Projects (3GPP and 3GPP2), Technology Proponents, and other organizations (such as those that represent public safety and other civil Government applications of SDR and those that represent military applications of SDR). Commercial wireless is the focus area of current deliverables within this topic area.</p> <p>The relevancy of various groups including history, memberships etc.</p> <p>The specific deliverables with of the groups</p> <p>The Timelines for the specification</p>
<p>Download Regulatory:</p> <p>Regulatory Report on Global Regulatory Views on SDR and Radio Software Download for RF Reconfiguration</p> <p>Notes:</p>	<p>DL-REG</p> <p>Subcomponents:</p> <p>Reg Region I</p> <p>Reg Int</p> <p>Reg Spec</p> <p>Reg Equip</p> <p>Reg- Region 2 & 3, etc</p>	<p>Regulatory Committee</p>	<p>Jun 02 meeting & Nov 02 meeting</p>	<p>This document provides an understanding of how regulatory activities around the world are poised to support SDR and in particular how these agencies are anticipating what may be required to facilitate the usage of radio software download. It is a document that in conjunction with the requirements is critical in the definition and specification of acceptable solutions. Commercial wireless is the focus area of current deliverables within this topic area.</p> <p>High level Policy Support</p> <p>Regulatory activity associated with Equipment Certification & Other Regulatory activity</p> <p>Ditto the above for each Regional perspective</p>

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<p>Download Requirements:</p> <p>Requirements for Radio Software Download for RF Reconfiguration</p> <p>Notes:</p> <p>Used in Ch 4 Mid Year Rpt</p> <p>Extract fm Reg Perspective Doc V1</p> <p>Extract fm Reg Perspective Doc V1</p> <p>Extract fm Reg Perspective Doc V1</p> <p>Extract fm Reg Perspective Doc V1</p>	<p>DL-REQ</p> <p>Subcomponents:</p> <p>Reg- Comp</p> <p>Reg- Threat</p> <p>Reg-.High-level Security</p> <p>Reg-. Accountability</p> <p>Reg-Traceability</p>	<p>Technical Committee</p> <p>(Download WG)</p>	<p>June 02 meeting</p> <p>June 2002</p>	<p>Consistent with the definition of radio software download outlined in the previous document, this document covers the relevant factors associated with the download and establishes substantive requirements of a technical or other nature that form the basis for the development of common globally standardized solutions. Commercial wireless is the focus area of current deliverables within this topic area.</p> <p>Requirements related to issues such as third party radio software</p> <p>An identification of multiple threat scenarios from the perspective of intentional or un-intentional damage to spectrum or network integrity.</p> <p>Baseline results that security efforts should achieve from a regulatory perspective in the context of answering the specific threats</p> <p>The requirements associated with maintaining accountability for compliance to conformity requirements.</p> <p>The requirements associated with tracing a devices operational behavior through successive generations of software and/or hardware changes.</p>
<p>Download Security and Integrity:</p> <p>Radio Software Download for RF Reconfiguration Security and Integrity</p> <p>Notes:</p> <p>Use in End Yr Rpt to FCC</p> <p>Use in End Yr Rpt to FCC</p>	<p>DL-SIN</p> <p>Subcomponents:</p> <p>Reg- Threat</p> <p>Reg-Man</p>	<p>Technical Committee</p> <p>(Download WG)</p>	<p>Sept 02 meeting</p>	<p>This document is intended to include aspects related to ensuring security, integrity, and related items associated with software, firmware, or equivalent that is resident in the radio device after insertion via download or other means, either from original manufacturer or through subsequent actions. Commercial wireless is the focus area of current deliverables within this topic area.</p> <p>An in-depth analysis and risk assessment of multiple threats to spectrum or network integrity.</p> <p>Specific Regulatory mandates and/or specification with regard security and authentication methods and technologies</p>

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<p>Download Solutions:</p> <p>Specifications of Common Solutions for Radio Software Download for RF Reconfiguration</p> <p>Notes:</p> <p>Use in End Yr 2002 Rpt to FCC</p> <p>Use in End Yr 2002 Rpt to FCC</p> <p>Use in End Yr 2002 Rpt to FCC</p> <p>Use in End Yr 2002 Rpt to FCC</p> <p>Use in End Yr 2002 Rpt to FCC</p>	<p>DL-SOL</p> <p>Subcomponents:</p> <p>Reg Comp</p> <p>Reg Aut</p> <p>Reg User</p> <p>Reg.Traceability</p>	<p>Technical Committee</p> <p>(Download WG)</p>	<p>Sept 02 meeting</p> <p>Dec 02</p> <p>Dec 02</p> <p>Dec 02</p> <p>Dec 02</p>	<p>Consistent with the definition of radio software download outlined in the previous document, this document covers the relevant factors associated with the download and establishes substantive requirements of a technical or other nature that form the basis for the development of common globally standardized solutions. Commercial wireless is the focus area of current deliverables within this topic area.</p> <p>The desired regulatory framework to maximize benefits from multiple radio software developers</p> <p>The requirements from a regulatory perspective for authenticating the origin of specific software download</p> <p>The requirement for preventing intentional or unintentional user manipulation of radio software</p> <p>The shared requirements amongst multiple jurisdictions and regions with regard to the trace ability of conformity specifications for equipment</p>

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<p>Download Timelines</p> <p>Timelines for Radio Software Download for RF Reconfiguration</p> <p>Notes:</p>	<p>DL-TIM</p> <p>Subcomponents:</p> <p>Reg- Region I:</p> <p>Reg-Spec</p> <p>Re-Equip</p> <p>Reg-Region 2 & 3, etc</p>	<p>Regulatory Committee</p>	<p>April 02 meeting & Nov 02 meeting</p> <p>Dec 02 meeting</p>	<p>This document is to be a presentation of the radio developmental activities around the world where radio software download is required or influenced. Included is a perspective on timeframes of related regulatory activities. An action plan of what specific deliverables are required of the Forum and of the identified external organizations is presented. Also provided is the timing of the critical “entry” points into the developmental activities for each of these organizations are radio download in order for radio software download to be standardized and available in the marketplace. Commercial wireless is the focus area of current deliverables within this topic area.</p> <p>Regulatory activity associated with Spectrum efficiency and sharing</p> <p>Regulatory activity associated with Equipment Certification</p> <p>Ditto the above for each Regional perspective</p>

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FCC Report	FCC-RPT-1	Regulatory Committee	June 02	This will need to be finalized between meetings by correspondence with e-mail ballot.
	FCC-RPT-2		Sept 02	This will need to be finalized between meetings by correspondence with e-mail ballot.
Handset API	TNA-HREQ	Technical Committee (Terminal and Network Architecture WG)	Apr 02 meeting	Handset API Requirements Document Title: Handset Requirement Description: This document will describe the requirements, that define the layers within a software defined commercial wireless termin
Handset Reconfiguration Architecture	TNA-HARC	Technical Committee (Terminal and Network Architecture WG)	June 02 meeting - Draft Sept 02 meeting - Final	Handset Reconfiguration Architecture Description: This document will describe the software architecture, that is used in a software defined commercial wireless terminal.
Handset Use Cases	TNA-USE	Technical Committee (Terminal and Network Architecture WG)	April 02 meeting	Handset Reconfiguration Use Cases Description: This document will describe the Use Cases, that are relevant to software defined commercial wireless terminal. These Use Cases are strickly bound to reconfiguration aspects.

Deliverable	Identifier	Lead Working Group	Target Date	Comments
<p>Major Events</p> <p>Notes:</p>	<p>SDR Forum Industry Conference and Product Exposition</p> <p>Subcomponents:</p> <p>Conf-Announcement</p> <p>Prod Expo Annc</p> <p>Conference Advertisement</p> <p>Conference Flyer</p>	<p>Markets Committee</p>	<p>15 Jan 02</p> <p>30 Jan 02</p> <p>May 02</p> <p>31 Mar 02</p>	<p>This document provides details of the current plans for a technical conference and product exhibition to be held in San Diego November 11 & 12 prior to the SDR Forum meetings.</p> <p>Announcement shall be distributed to SDR Forum contact list via email. Responsibility: Dr. Bruce Fette</p> <p>This document provides details for potential exhibitors and sponsors. Announcement shall be distributed to SDR Forum contact list via email. Responsibility: Colin Phan</p> <p>Conference and Product expo advertisement for selected Trade Journals Responsibility: Colin Phan</p> <p>Mailer that provides the same details as previous announcements. Shall be distributed to SDR Forum contact list via regular mail. Responsibility: Colin Phan</p>
<p>Major Events (continued)</p>	<p>Abstracts Due</p> <p>Notification of Acceptance</p> <p>Camera Copy Due</p> <p>Attendee Flyer</p>	<p>Markets Committee</p>	<p>1 May 02</p> <p>15 Jun 02</p> <p>1 Sept 02</p> <p>1 Sept 02</p>	<p>These documents are abstracts from potential speakers</p> <p>This set of documents shall notify potential speakers of their paper's acceptance. Responsibility: Dr. Jeff Reed</p> <p>These documents shall be the final copy of papers submitted by the selected speakers.</p> <p>Color flyer mailer publicizing the conference and product exposition. Document shall include chair bios, selected speakers, and exhibitors.</p>

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<p>Market Survey</p>	<p>Gartner Report</p>	<p>Markets Committee</p>	<p>Feb 02 meeting</p>	<p>Market Survey provided by Gartner under SDRF contract.</p>
	<p>Markets Report</p>	<p>Markets Committee</p>	<p>June 02 meeting</p>	<p>SDR Market report: Summary of current and future market needs for SDR. This document shall provide overarching (commercial, civil, and military) requirements to the SDR's technical and regulatory committees.</p>
<p>Membership</p>	<p>Perspective Members Package</p>	<p>Markets Committee</p>	<p>Apr 02 meeting</p>	<p>Perspective Members Package Responsibility: Colin Phan</p>
	<p>New Membership Package</p>	<p>Markets Committee</p>	<p>Apr 02 meeting</p>	<p>New Members Package: Responsibility: Colin Phan</p>

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SCA Reference Implementation	SCA-RI	Technical Committee (SCARI Ad Hoc)	Various: Per Contract Document	This is a JAVA based reference implementation of the SCA
SCA RI Report	SI-SCARI	Technical Committee (System Interface WG)	Sept 2002	Report on outcome and ensure Reference Implementation compatibility with system interfaces
SDR JSR	TNA-JSR	Technical Committee (Terminal and Network Architecture WG)	Nov 02 meeting	Software Defined Radio Java Specification Request Prepared This document is the detailed Java Specification Request for SDR Forum defined commercial wireless terminal architecture (TNA-HARC). (JSR is descibed in http://www.jcp.org/jsr/overview/index.en.jsp)
SDR System Interface Definitions	SI-SSID	Technical Committee (System Interface WG)	June 02 meeting- Draft Nov 02 meeting - Final	Yearly Report Outline - Wayne Bonser (AFRL) Radio Control service - Vince Kovarik (Harris) Modem service - Don Stephens (CommLargo) Antenna, Amp, RF, etc - Dawn Szelc (MITRE)

Deliverable	Identifier	Lead Working Group	Target Date	Comments
Security	S&A-SEC	Technical committee (Security and Architecture WG)	Apr 02 meeting - Outline Nov 02 meeting- Draft Feb 03 meeting- Final	Security is the system attribute that maintains the privacy and integrity of the system and the information distributed across it. It includes accurate delivery, denial of interception, and non-repudiation. Threat analysis, the study of likely sources of intentional interference, is inherent in each topic.
Technical Compliance	SI-TCOM	Technical Committee (System Interface WG)	April 02 meeting- Draft June 02 meeting- Final	Compliance issues draft- Dawn Szalc (MITRE) Spectrum, Functional performance, Standards compliance, etc.

Plans to develop and update existing documents and other texts

Existing Documents	Lead Group	Priority to be updated (Low / Medium / High)	Type of update (Major, TBD, None)	Target Date	Comments
Technical Report - November 1999	Technical	Low	None	N/A	Elements from this should be considered for inclusion in the Vision deliverables
Market Forecast Report—November 1998	Markets	Low	None	N/A	Elements from this should be considered for inclusion in the Vision deliverables
Market Forecast Report—January 2002	Markets	Medium	None	N/A	Consider timings of similar reports in year 2003
SDR Forum Roadmap Document – November 2001	Roadmap Task Group	High	Medium	Nov 2002	Develop 2003 and beyond perspective
SDR Forum Regulatory Perspective V1	Regulatory	Low	None	N/A	Provides a historical perspective of the regulatory implications, alternatives and conclusions as developed to support the Forum's involvement in the USA FCC SDR proceeding and various other international regulatory activities
Base Station System Structure	Technical	Low	None	N/A	Contains Wireless System description, Download Use Cases and Ladder Diagrams, and a taxonomy of radio RF components - can be referenced in development of new deliverables.