



## **FY2013 Operations Plan**

Version 1.0.0

**26 June 2012**

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# 1 Introduction – The Wireless Innovation Forum FY2013 Objectives

The Wireless Innovation Forum (SDR Forum version 2.0) Board of Directors has established the following nine items as high level objectives for the Forum for the period from July 1, 2012 through June 30, 2013 in executing on the Forum's Strategic Plan:

1. **Deliver Relevant Work Products** – The Forum's members shall ballot and release at least four new Specifications supporting the Forum's commercialization strategy. In addition, each committee within the Forum shall ballot and release at least one Report and at least one Recommendation supporting the Forum's advocacy, business development and education strategies in the 12 month period starting July 1<sup>st</sup>, 2012. The Forum shall actively promote these work products as they are developed, to solicit contributions from members and partners towards their creation and to ensure that they accurately reflect the broader consensus views of the Forum.

To facilitate this goal, the Forum will move to a model where possible where work products supporting a project will be initiated at one meeting and completed at the next. This model serves three purposes:

- It makes it easier for volunteers to commit to participation
  - It shows continuing progress towards larger goal, which will facilitate broader participation
  - It simplifies agenda planning and promotion for working meetings
2. **Establish Cross Committee Projects** – At least two projects shall be identified or established in FY2013 that require participation from multiple committees (Technical, Regulatory, User Requirements) in supporting the broader needs of the membership as a whole. Validation of this shall occur in two ways:
    - Cross committee participation will be discussed at project initiation and will be considered by the PAC
    - A matrix will be maintained of all projects showing relationships as they evolve
  3. **Define a Test and Evaluation Model** – The Forum's members shall work with key government and industry stakeholders to identify business cases/models for the Forum to establish compliance test and evaluation capabilities that are mutually beneficial to both government and industry. The scope of this area includes:
    - Certification Processes – Define business processes and use case models for test and certification as applicable to specific certification bodies, e.g. SCA and TVBD/White Space. Identify applicable standards, limits and constraints associated with the certification process.
    - Testing Methodologies – Investigate SDR testing methodologies and processes that support the certification processes identified and facilitate the integration and testing process.

- Testing Architectures – Investigate and develop approaches and reference architectures for integrated SDR testing architectures that provide integrated systems test and measurement across hardware and software.
4. **Develop Committee Roadmaps** – Each committee will meet to define and prioritize new initiatives to support the needs of committee members and to support addressing “The Top 10 Most Wanted Wireless Innovations” list. Key input for this process will be a member survey and event activity survey to be held quarterly. Projects defined through this process will be initiated following the standard process and may be assigned to exist work group or to ad hoc task groups as required. Committee roadmaps will be consolidated and harmonized by the roadmap committee.
  5. **Publish a “Top 10 Most Wanted Wireless Innovations” List** – The Forum’s roadmap committee shall publish a revision of the Top 10 Most Wanted Wireless Innovations list in 2012 at the end of each general meeting.
  6. **Increase End User Participation** – The Forum’s members shall define and initiate projects and programs to measurably increase participation in Forum activities by End Users and their representatives as defined in the Forum's strategic plan. These new efforts will include, at a minimum, a workshop to be organized and hosted by each special interest group focused on exploring requirements for next generation wireless communications systems in their target market domain.
  7. **Strengthen the Forum’s Brand** – The Forum shall enhance the relevance of its brand where possible within the advanced wireless community through structured marketing that professionally promotes Forum events and activities, coupled with a market outreach program and a continuing focus on cultivating collaborative relationships with partner organizations. Included in this goal will be continuing the Forum’s webinar series to hold at least 8 webinars in the year.
  8. **Improve Regional Support** – The Forum will establish and execute a strategy for forming special interest groups and projects focused on regional needs. The Forum will leverage regional meetings and workshops in each region as necessary to gather requirements as inputs to this strategy and to support execution of individual defined initiatives.
    - Evaluate the needs and expectations of our members and care for potential regional differences
    - Expand cooperation with regional bodies such as ETSI, IEEE and PSCE
    - ITU region 1: Define plan to increase participation by European Members, Optimize regional support, and increase participation in SDR'13 WInnComm Europe Congress;
    - ITU Region 2: Extend support to central and south America as appropriate
    - ITU region 3: Define plan to increase participation by members in East and South Asia, establish new outreach activities in China and India.

9. **Grow Participation** - The Forum believes that executing on these high level objectives will inherently lead to increased participation in the Forum's meetings, increased attendance at the annual conferences, and ultimately grow the Forum's membership. As such, the Forum's Board of Directors has established an objective of growing participation in Forum meetings, webinars, conferences and workshops.

This document presents specific plans for achieving these high level objectives in separate sections dedicated to the FY2013 Meeting Plan, and the respective work plans of the User Requirements Committee, The Regulatory Committee, the Technical Committee on Software Defined Radio, the Technical Committee on Cognitive Radio and Dynamic Spectrum Access, the Coordinating Committee on International SCA Standards, the Roadmap Committee, the Board of Directors, and the Forum's Corporate Administration. The budget necessary to support these objectives is also addressed in the last section of this document.

## 2 Wireless Innovation Forum Organizational Overview

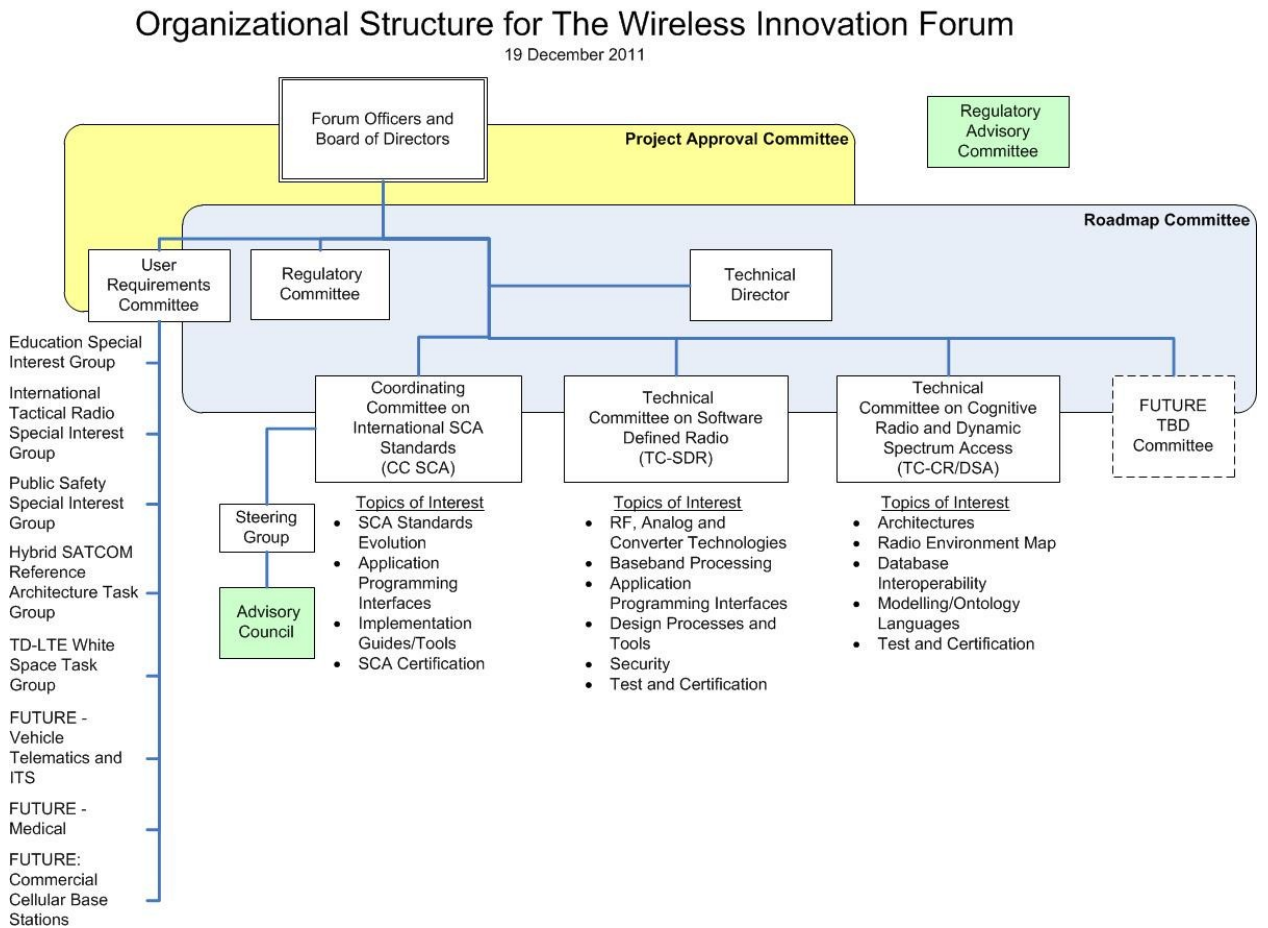
### 2.1 Forum Structure

The FY2012 Organizational Structure of The Wireless Innovation Forum is presented in Figure 1. The Forum is organized around six standing committees, whose responsibilities are summarized as follows:

- *The User Requirements Committee:* The User Requirements Committee acts as the primary interface for requirements with the wireless end-users and the representatives of wireless end-users in their segment, including, as appropriate, network operators, government acquisition authorities and research sponsors. Through Special Interest Groups (SIGs), the Committee works with these key stakeholders to validate concepts and requirements against technology readiness and standardization and to document domain specific requirements, use cases and business models that will drive the activities of the Regulatory and Technical committees. The User Requirements Committee also supports member organizations in identifying new opportunities for next generation products and services in each defined market domain.
- *The Regulatory Committee:* The Regulatory Committee works with the regulatory and public policy community to establish a global regulatory framework promoting the adoption of emerging technologies for advanced wireless systems. The work of the Regulatory Committee is facilitated by a Regulatory Advisory Committee made up of regulatory and public policy officials and experts from around the world working on relevant issues.
- *The Technical Committees:*
  - Committee on Software Defined Radio: provides a venue for the exchange of information on emerging radio technologies and produces reports, specifications and recommendations supporting the use of next generation technologies in radio devices.
  - Committee on Cognitive Radio and Dynamic Spectrum Access: provides a venue for the exchange of information on emerging technologies important in wireless networking and produces reports, specifications and recommendations supporting the development and deployment of advanced wireless systems.
  - Coordinating Committee on International SCA Standards: supports the harmonization of SCA based standards at the international level for the mutual benefits of all stakeholders to include:
    - Defining an industry driven SCA evolution roadmap for the international community
    - Profiling the SCA specification and related APIs to define internationally accepted variants that are hosted by the Forum
    - Developing extensions to the SCA standards that address any gaps between the defined SCA evolution roadmap and Forum accepted SCA specification variants

- Providing implementation and certification guides, tools etc. easing implementation and supporting proliferation
  - Establishing and managing industry led certification programs where appropriate
- *The Roadmap Committee:* Defines and publishes the Forum’s “Top 10 Most Wanted Wireless Innovations”

These committees are managed by the Forum’s elected officers, which include the Chair and Vice Chair of the Forum, the Technical Director, the chairs of the User Requirements and Regulatory Committees, the Secretary, and the Treasurer.



**Figure 1: Wireless Innovation Forum FY2012 Organizational Structure**

Management and oversight of the Forum as a whole, including the Forum’s corporate affairs, is performed by the Forum’s Board of Directors. These directors are elected on an annual basis, as defined in the [Bylaws](#). The elected slate of Directors for Calendar Year 2012 is provided in Table 1.

Name	Member Organization	Position	Email
Eric Christensen	General Dynamics	Chair of the Board of Directors	<a href="mailto:eric.christensen@gdc4s.com">eric.christensen@gdc4s.com</a>
David Renaudeau	Thales Communications	Director, ITU Region 1 Representative	<a href="mailto:david.renaudeau@fr.thalesgroup.com">david.renaudeau@fr.thalesgroup.com</a>
Terry Anderson	ITT Exelis	Director, ITU Region 2 Representative	<a href="mailto:terry.anderson@exelisinc.com">terry.anderson@exelisinc.com</a>
Boya Lu	Huawei Technologies	Director, ITU Region 3 Representative	<a href="mailto:lvboya@huawei.com">lvboya@huawei.com</a>
James Neel	Cognitive Radio Technologies	Director, Small Company Representative	<a href="mailto:james.neel@ertwireless.com">james.neel@ertwireless.com</a>
R. Muralidharan	Tata Power SED	Director, Medium Company Representative	<a href="mailto:r.muralidharan@TataPowerSED.com">r.muralidharan@TataPowerSED.com</a>
Claudio Armani	Selex Communications	Director, Large Company Representative	<a href="mailto:claudio.armani@selex-comms.com">claudio.armani@selex-comms.com</a>
John Powell	NPSTC	Director, Government and Non-Profit Representative	<a href="mailto:jpowell@berkeley.edu">jpowell@berkeley.edu</a>
Paul Sutton	Centre for Telecomm Research	Director, Academic Institutions Representative	<a href="mailto:suttonpd@tcd.ie">suttonpd@tcd.ie</a>
Kuan Collins	SAIC	Director, At-Large Director	<a href="mailto:kuan.h.collins@saic.com">kuan.h.collins@saic.com</a>
Hiroshi Harada	NICT	Director, At-Large Director	<a href="mailto:harada@nict.go.jp">harada@nict.go.jp</a>
Pekka Heikkinen	Elektrobit	Director, At-Large Director	<a href="mailto:Pekka.Heikkinen@elektrobit.com">Pekka.Heikkinen@elektrobit.com</a>
Paul Kolodzy	Kolodzy Consulting	Director, At-Large Director	<a href="mailto:pkolodzy@kolodzy.com">pkolodzy@kolodzy.com</a>
Vince Kovarik	PrismTech	Director, At-Large Director	<a href="mailto:vince.kovarik@prismtech.com">vince.kovarik@prismtech.com</a>
Bruce Oberlies	Motorola Solutions	Officer and Director, President and Chair of the Forum	<a href="mailto:bruce.oberlies@motorolasolutions.com">bruce.oberlies@motorolasolutions.com</a>
Ruediger Leschhorn	Rohde and Schwarz	Officer and Director, Vice President and Vice Chair of the Forum	<a href="mailto:ruediger.leschhorn@rohde-schwarz.com">ruediger.leschhorn@rohde-schwarz.com</a>
Manuel Uhm	Coherent Logix	Officer and Director, Chair of the User Requirements Committee	<a href="mailto:manuel@coherentlogix.com">manuel@coherentlogix.com</a>
		Officer and Director, Chair of the Regulatory Committee	
John Glossner	Optimum Semiconductor Technologies	Officer and Director, Technical Director	<a href="mailto:jglossner@optimumsemi.com">jglossner@optimumsemi.com</a>
Mark Turner	Harris Corporation	Officer and Director, Forum Treasurer and Chief Financial Officer	<a href="mailto:mturner@harris.com">mturner@harris.com</a>
Bob Schutz	Datron World Communications	Officer and Director, Secretary	<a href="mailto:bschutz@dtwc.com">bschutz@dtwc.com</a>

**Table 1: CY2012 Board of Directors of The Software Defined Radio Forum Inc.**

## **2.2 Forum Corporate Administration**

Corporate administration and member services are provided to the Forum through a combination of employees, consultants, and third party contractors. The Forum's key personnel for FY2013 are as follows:

- Chief Executive Officer ([Lee Pucker](#)) – Reporting to the Board of Directors, the Chief Executive Officer’s primary responsibility is to maximize the value the Forum brings to its members. Accordingly, the CEO drives the development of the Forum’s Strategic Plan and supports the Forum’s other officers in executing on that plan. The CEO proactively identifies opportunities, solves the Forum’s critical problems, and makes an effort to anticipate future needs of the membership. The CEO assures that the organization and its mission, programs, products and services are consistently presented in a strong, positive image to relevant stakeholders, in particular to the Forum’s membership. The CEO, with the Treasurer, oversees the organization’s finances, ensuring the Forum’s member’s needs are met to the maximum extent possible while maintaining financial stability as a not-for-profit organization.
- Director of Marketing and Communications ([Stephanie Hamill](#)). The Director of Marketing and Communications (MarCom) has primary responsibility for managing communications for the Forum, including internet presence and member communications, and supporting the CEO in establishing and maintaining the Forum’s leadership in advanced wireless markets, evangelizing the Forum’s programs and services, and supporting the organizational objectives of the Forum’s membership. Reporting to the Forum’s CEO, the Director of MarCom helps assure that the Forum and its mission, programs, products and services are consistently presented in a strong, positive image to relevant stakeholders, in particular to the Forum’s membership.

The slate of key consultants and contractors retained by the Forum to support its members in FY2013 are as follows:

- 1) [Drohan Management Group](#) – Manager of the Forum’s Headquarters Operations
- 2) [InfoEx World Services](#) – Representative for the Forum in China
- 3) [Joel Gluck](#) – Web Master
- 4) [Bowling, Franklin & Company](#) – Audits and Finance
- 5) [Gesmer Updegrove LLP](#) – General Legal Counsel
- 6) [Hogan Lovells](#) – Communications Regulatory Counsel

In addition, the Forum retains a document editor on an as needed basis to support the creation of reports, specifications and recommendations by its members. Additional details on the Corporate Administration Work Plan for FY2013 can be found in Sections 9 through 12 of this plan.

### 3 User Requirements Committee (URC) FY2013 Work Plan (Chair: Manuel Uhm (Coherent Logix), Vice Chair: David Renaudeau (Thales))

#### 3.1 Objectives

The URC has established the following committee objectives for FY2013 to support the Forum's High Level Objectives:

##### 3.1.1 Deliver Relevant Work Products

The members of the URC will deliver at least 5 reports in FY2013 through the projects defined in section 3.3 of this plan. In addition, the committee will explore initiating the following projects for the development of relevant work products in FY2013 and FY2014.

- The **Education Special Interest Group** will explore a number of new projects to initiate, including:
  - SDR Design Challenge for 2012-2013 academic year
  - RFI To Industry on Education Needs
  - SDR Curriculum Recommendations
  - SDR Distinguished Speaker Series. This could end up being part of a broader Forum effort entitled "SDR Experts".
  - GNU Radio Lab update: Updated versions of the GNU Radio/GRC labs developed by Sharon Katz at California State University, Northridge are available at: [http://ossie.wireless.vt.edu/download/labs/GNURadio\\_Labs/GRC\\_Tutorials\\_CSUN/](http://ossie.wireless.vt.edu/download/labs/GNURadio_Labs/GRC_Tutorials_CSUN/). These include minor updates for use with GNU Radio 3.3 as well as some extensions, but have not yet been tested with GNU Radio 3.5. The original labs are available at: [http://www.csun.edu/~skatz/katzpage/sdr\\_project/sdrproject.html](http://www.csun.edu/~skatz/katzpage/sdr_project/sdrproject.html)
- The **International Tactical Radio Special Interest Group** will work to strengthen relationship with other groups, especially the Test and Evaluation Work Group and the Security Work Group.
- The **Public Safety Special Interest Group** will initiate at least one new project as the current project moves to ballot. Although the final decision on the project will be made at the beginning of FY2013, candidate projects include:
  - Requirements and technologies for public safety operations in a GPS-denied environment.
  - User interface requirements in an SDR/CR network—what type of new information can be/should be made available to end users and communications managers based on new capabilities of SDR and cognitive radios?
  - Concepts for small cells (e.g., femtocells, picocells) in public safety broadband networks.
  - Applicability of SDR/CR technology in addressing the challenges of public safety adoption of LTE as the standard for broadband wireless for 700 MHz systems.
- **Market Sizing Report Update** – Depending on demand and budget, the URC may partner with an accredited industry analyst to release a market sizing report focusing on

mature SDR industries: commercial wireless infrastructure, MILCOM, public safety, and SATCOM

### 3.1.2 Develop Committee Roadmap

The URC will extract roadmap requirements from use case, business model and market study reports developed by its members for consideration by the Roadmap Committee for inclusion in the Forum's "Top 10 Most Wanted Wireless Innovations" report defined in Section 6 of this operations plan.

### 3.1.3 Increase End User Participation

As per the Forum's Strategy, the Special Interest Groups of the User Requirements Committee will assist in organizing workshops focused on the specific needs of their market domain:

- **SDR-WinnComm Requirements and Opportunities Track** – The URC, in conjunction with the Regulatory Committee, will develop a multi-day, multi-SIG requirements and opportunities track during the Forum's annual US Conference focused on outreach and education. This will bring industry and analysts together to explore the potential markets for SDR and CR technologies, the current state of applicable technology, regulations and business models, and technical regulatory and business issues hampering adoption.
- **Tactical Radio Workshop** – In conjunction with SDR'13-WinnComm-Europe

### 3.1.4 Grow Participation

The URC will undertake the following activities in FY2013 in support of this objective:

- **Outreach** – The URC will actively engage in outreach activities to bring new members to the Forum who are keenly interested in identifying new business opportunities and developing new opportunities for their products and services. This will be a primary activity for the URC in FY2013, with at least 3 new member organizations brought into the Forum by June of 2013 specifically to participate in URC activities.
- **Special Interest Groups Workshops** – Ad hoc workshops will be held as required to address each SIGs need for outreach to the community for feedback and participation.

## 3.2 Organization

The organization of the User Requirements Committee (URC) for FY2013 is presented in Figure 2. Included within the structure of this Committee are multiple Special Interest Groups, or SIGs, which are cross-disciplinary work groups comprising end users, operators, service providers, radio manufacturers, and regulators focused on the needs of a single market or market segment. The URC currently supports four special interest groups:

- **Education Special Interest Group** – The Educational Special Interest Group (Chair: Carl Dietrich (Virginia Tech), Vice-Chair: Tim Newman (LTS)) is the interface of the Forum to the Educational Community, and is tasked with:

- raising awareness of resources for education in SDR, Cognitive Radio, and related advanced wireless technologies,
- publicizing the activities of the Forum as they pertain to issues of interest and concern within this community, and
- increasing participation of this community in the Wireless Innovation Forum.

The Educational SIG also interacts with other committees and work groups within the Forum to provide the Educational Community inputs into the publications and initiatives undertaken by the Forum and to solicit inputs on topics related to wireless communications education.

- ***International Tactical Radio Special Interest Group*** – The charter of the International Tactical Radio SIG (Chair: David Renaudeau (Thales), Vice-Chair: Jimmie Marks (Raytheon)) is to forge strong relationships between the military tactical radio communities of the Americas, EMEA and Asia, to facilitate interoperable allied communications, to identify common industry requirements and drive to a common solution via the Wireless Innovation Forum Technical Committees outputs, and to endorse activities and outputs from industry, government, and unions (e.g., NATO).
- ***Public Safety Special Interest Group*** – The Public Safety Special Interest Group (Chair: Fred Frantz (L-3 Communications), Vice-Chair: Rick Taylor (Harris)) is the interface of the Forum to the Public Safety Community (including both users and vendors), and is tasked with raising awareness of advanced wireless technology applicable to public safety, publicizing the activities of the Forum as they pertain to issues of interest and concern within this community and increasing participation of this community in the Wireless Innovation Forum. The Public Safety SIG also interacts with other committees and work groups within the Forum to provide the Public Safety Community’s inputs into the publications and initiatives undertaken by the Forum.
- ***Satellite Communications Special Interest Group*** – The Satellite Communications SIG (SATCOM-SIG) is the interface of the Forum to the Satellite Communications Community (including both users and vendors), and is tasked with raising awareness of Software Defined Radio (SDR) and Cognitive Radio (CR) architectures within the community. The SATCOM-SIG also interacts with other committees and work groups within the Forum to provide user needs input from the satellite industry community for advanced, adaptive communications architectures. A key focus of the SATCOM-SIG is on development of hybrid (SATCOM and Terrestrial) communications architecture (Task Chair: Daniel Devasirvatham (SAIC)) for ubiquitous information processing across communication domains.
- ***White Space Special Interest Group*** – The charter of the White Space Special Interest Group is to identify and capture requirements, application scenarios and use cases for usage of SDR and cognitive radio devices in white space, as well as assess the potential impact of interference emissions. This charter will be refined in FY2013.

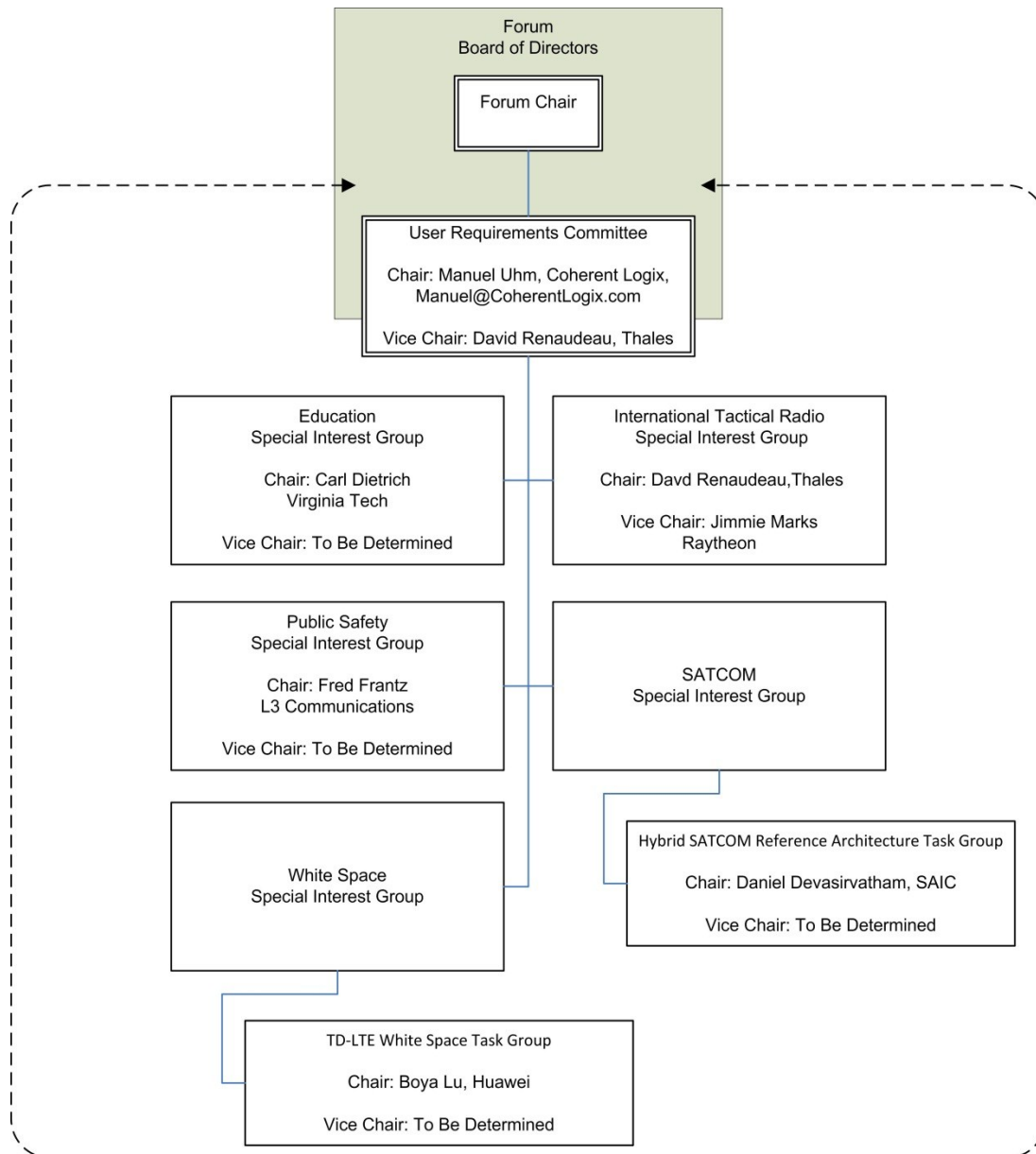


Figure 2: User Requirements Committee Organizational Structure

### 3.3 Projects

The URC plans to deliver the following work products in FY2013 in support of this objective:

- **“Cognitive Radio Technology Survey for Public Safety”**
  - **Objective:** This study is being done by the Public Safety SIG for public safety community leadership, researchers, product developers, regulatory, and standards developers who are planning the evolution of communication capabilities and/or

can benefit from awareness of future technology developments. It is based on the technology requirements identified in the Cognitive Use Case documents published by the Public Safety SIG and the Quantification Document under development by the Cognitive Radio WG to identify both current and projected maturity and also availability of technology to fulfill those requirements. The Final Report will include a description of emerging technologies that can be applied to the public safety domain and provide a coarse estimate of the current and projected Technology Readiness Levels (TRLs).

- **Special Interest Group:** Public Safety
  - **Project Lead:** Fred Frantz, L3 Communications
  - **Milestones:**
    - This document is expected to go to ballot in the Q1 FY2013.
- ***“Hybrid SATCOM Reference Architecture for Public Safety Applications”***
    - **Objective:** The SATCOM-SIG, together with the Public Safety SIG, will develop a concepts document and a reference architecture to enable phased and concurrent operation of satellite, airborne and terrestrial, narrowband and broadband systems for public safety emergency, and non-emergency communications. The document will study the technologies, integration of the elements, concepts of operation, and their deployment using National Incident Management/Incident Command System (NIMS/ICS) principles. The document will examine possible current solutions and also identify the gaps in standards and technology which could be addressed in the reference architecture using SDR and Cognitive Radio (CR) principles. This reference architecture will be based on the Forum’s Information Processing Architecture (IPA) development and will serve as a basis for hardware, software, and applications development of hybrid communication platforms that provide convergence of Line-of-Sight (LOS) and Beyond-Line-of-Sight (BLOS) networks.
    - **Special Interest Group:** SATCOM
    - **Project Lead:** Daniel Devisirvatham, SAIC
    - **Milestones:**
      - The first part of this report is expected to go to ballot in Q2 FY2013.
  - ***“Business Models for New Entrants in the SDR Tactical Radio Market”***
    - **Objective:** The ITR-SIG will complete work on this report which identifies the business models for participants in the SDR tactical radio value chain. In addition, comparisons will be made to business models in the commercial wireless infrastructure industry. The report is being prepared for tactical radio customers, primes, contractors and suppliers worldwide to the tactical radio market.
    - **Special Interest Group:** International Tactical Radio
    - **Project Lead:** David Renaudeau, Thales
    - **Milestones:**
      - This document is expected to go to ballot in the Q3 FY2013.

- **“TD-LTE in White Space”**
  - **Objective:** The TD-LTE White Space Task Group will complete work on this report which is being developed for Operators, Network Infrastructure Vendors, Mobile Service Providers, Baseband Providers, and Wireless Terminal Manufacturers who want to exploit the TD-LTE system in White Space. The report will address application scenarios for TD-LTE in white space, build use cases from those application scenarios, and define performance parameters, associated deployment scenarios and the impact of interference emissions.
  - **Special Interest Group:** White Space
  - **Project Lead:** Boya Lu, Huawei
  - **Milestones:**
    - Work on this report will be completed in Q1 FY2013.
  
- **“Software Defined Radio Design Challenge”**
  - **Objective:** The Educational SIG is hosting a contest for undergraduate and graduate level students who seek and opportunity to compete and demonstrate project work in SDR. The project will allow competition among a wide range of institutions and teams performing SDR related projects projects on either specified/constrained (with predefined metrics) or self-selected/open-ended topics and encourages undergraduate participation by allowing teams that consist entirely of undergraduate students to compete separately from teams that include graduate students. The contest is being piloted during the 2011-2012 academic year, with competition to be hosted at Virginia Tech 31 May 2012.
  - **Special Interest Group:** Education
  - **Project Lead:** Carl Dietrich, Virginia Tech
  - **Milestones:**
    - Project proposal for the 2013/2014 contest will be completed in Q1 FY2013
  
- **Wireless Innovation Forum Recommendations**
  - **Objective:** The URC will evaluate opportunities for Recommendations throughout the year and will create ad-hoc project groups to deliver these Recommendations when appropriate.

## **4 Regulatory Committee FY2013 Work Plan (Acting Chair: Bruce Oberlies (Motorola Solutions), Vice Chair: Paul Kolodzy, (Kolodzy Consulting))**

The organization of the Regulatory Committee will continue to evolve in FY2013 to increase member participation and value, to facilitate collaboration with other Forum groups, to ensure excellent expert resources, and to further shape and promote the Forum's regulatory agenda. The Regulatory Committee will improve collaboration with the regulatory and public policy community through the Forum's Regulatory Advisory Committee (RAC) and Forum-sponsored events. The Regulatory Committee will also utilize the services of the Forum's outside regulatory counsel, as necessary and subject to budgetary constraints, for regulatory and legal matters in promotion of the Forum's regulatory agenda.

Regulatory Committee will pursue the following initiatives in FY2013 in support of the Forum's High Level Objectives.

### **4.1 Deliver Relevant Work Products**

The Regulatory Committee will proactively track and participate in relevant regulatory proceedings and events. The Regulatory Committee plans to ballot and release at least one Report and at least one Recommendation in support of the Forum's advocacy strategy. Recommendations in the form of comments, reply comments, position papers or other filings or submissions to regulatory bodies that would be submitted in response to specific requests, inquiries, consultations or other events. Working closely with the other Committees and the Board of Directors, the Regulatory Committee will, where and when appropriate, spawn ad-hoc projects or joint task groups to develop and provide such recommendations in connection with the following organizations:

- The International Telecommunications Union Radiocommunications Sector (ITU-R);
- Inter-governmental and regional organizations such as the Inter-American Telecommunication Commission (CITEL), the Asia Pacific Telecommunity (APT) and the European Commission's Information Society and Media Directorate General through the Radio Spectrum Policy Group (RSPG); and
- National regulators such as the U.S. Federal Communications Commission (FCC) and National Telecommunications Information Administration (NTIA), the U.K. Office of Communications (Ofcom), Industry Canada, Japan's Ministry of Internal Affairs and Communications (MIC), Germany's Federal Network Agency (BNetzA), the Korea Communications Commission (KCC) and other agencies seeking to promote adoption of emerging technologies for advanced wireless systems.

These deliverables will be dependent on activities and initiatives of these organizations and will be subject to available Forum resources and the members' interest in following particular proceedings and advocating certain positions. The Committee also plans to promote relevant work products from other Forum groups with regulators.

## **4.2 Define a Test and Evaluation Model**

The Regulatory Committee will provide relevant input and guidance to assist in the evaluation of compliance test and evaluation capabilities for key technologies to ensure such capability would be consistent with and helpful to applicable regulatory schemes.

## **4.3 Increase End User Participation**

The Regulatory Committee will actively engage in outreach activities to increase participation in Forum activities by End Users and their representatives who are keenly interested in regulatory issues affecting next generation wireless communications systems.

- Outreach: The Regulatory Committee, with the assistance of Forum staff, will continue to solicit active participation from regulatory/governmental affairs departments and other relevant groups within member organizations from each ITU region and will develop opportunities to interact with key regulatory officials in conjunction with Forum meetings and workshops, SDR-WInnComm, agency visits, receptions or other events.
- Workshops: The Regulatory Committee will work with the User Requirements Committee to host the SDR-WInnComm Requirements and Opportunities Track program committee and Forum staff to organize a Regulatory Workshop and complimentary plenary sessions at the conference.

## **4.4 Develop Committee Roadmap**

Representatives of the Regulatory Committee will participate on the Forum's Roadmap Committee and will contribute at least one regulatory innovation for the list.

## **4.5 Improve Regional Support**

The Regulatory will actively seek a vice chair from each region. The role of this vice chair will be to inform the committee members of regulatory filings and other regulatory activities around the world that may impact Members' ability to achieve their organizational objectives. Such activities may include issuing member alerts (through the Regulatory Committee's portal page and e-mail) and supporting the ITU Region Representative to the Board of Directors in preparing their quarterly update for the membership.

## 5 Technical Committees FY2012 Work Plans

### 5.1 *Technical Committee on Cognitive Radio and Dynamic Spectrum Access (TC-CR/DSA) FY2013 Work Plan (Chair: James Neel (Cognitive Radio Technologies))*

#### 5.1.1 Objectives

The TC-CR/DSA has established the following committee objectives for FY2013 to support the Forum's High Level Objectives:

##### 5.1.1.1 Deliver Relevant Work Products

The TC-CR/DSA plans to deliver three work products as a result of ongoing projects in the fiscal year. The specific work products and milestones are presented in the section 5.1.2 below. In addition, two new projects and the formation of a new work group are planned for this fiscal year:

- The **Modeling Language for Mobility Work Group** will formally initiate a new project in FY2013 to consider additional use cases applications of MLM.
- The **Cognitive Radio Work Group** plans to initiate a new project starting in Q1 2013.
- Other new initiatives will be defined by other groups as needed

##### 5.1.1.2 Establish Cross Committee Projects

The TC-CR/DSA will start at least one cross-committee project in 2013. Candidates include Algorithms for TD-LTE in TVWS (with URC and TC-SDR) and Receiver Specifications for Cognitive Radio (with Regulatory Committee).

##### 5.1.1.3 Develop Committee Roadmaps

The TC-CR/DSA will actively support the Roadmap committee in publishing this list, with a focus on cognitive radio and DSA related technologies. The DSA State of the Art survey would directly support this objective.

##### 5.1.1.4 Define a Test and Evaluation Model

The TC-CR/DSA will publish a recommendation for test guidelines for DSA devices in TV White Space.

##### 5.1.1.5 Grow Participation

The TC-CR/DSA will help organize a workshop in 2013 relevant to ongoing TC-CRDSA projects and provide other member services such as regular notifications of significant CR and DSA activities around the world.

#### 5.1.2 Projects

The table below provides a summary of projects in the TC\_CR/DSA and projects considered over the coming year and highlights relationships with other projects within the forum. Additional information regarding the projects is provided below.

Short Title	Objective	End	Related Projects
DSA Test Guidelines	Test Guidelines and Requirements for TVWS	2013	Database Interoperability Specifications” and Database Synchronization Guidelines
Algorithms for TD-LTE in TVWS	Survey / report that Identifies algorithms that enable TD-LTE in TVWS	2013	TD-LTE in TVWS (URC), Open Source Air Interfaces (TC-SDR)
Receiver Specifications for Cognitive Radio	API specification of radio security services	2013	Regulatory Committee
DSA State of the Art Survey	Report on current technical, regulatory, and market developments for DSA devices	2013	CR Quantification Document, Roadmap
Modeling Languages for Mobility	Use cases applying MLM to identified use cases	2013	IPA, SATCOM Disaster Response (SATCOM URC), Public Safety CR Applications (PSSIG URC)

- ***Cognitive Radio Information Services Project : Anticipating Future CR Needs with the Development of a Radio Environment Map (REM)”***
  - ***Objective:*** This Specification is being produced for third party database providers and TV White Space (TVWS) device manufacturers to provide guidance about database structures and standardized formats and functionalities that supports the flexibility necessary to accommodate current and future cognitive radio spectrum applications, such as mobility, spectrum economic transactions, dropouts, handovers, available networks, and services, etc. In this first volume, two use cases for extending database functionality will be presented, developed from a survey existing TVWS database proposals, and further applications enabled by more extensive information sharing and in other bands will be described.
  - ***Work Group:*** Cognitive Radio Work Group
  - ***Project Lead:*** Ihsan Akbar, Harris Corporation
  - ***Milestones***
    - Volume 1 Work Group Ballot: Sep 2012
    - Volume 1 Plenary Ballot: Dec 2012
- ***“Information Process Architecture”***
  - ***Objective*** - This Report is being produced in two parts for stakeholders of Complex Information Systems and their associated Communications Subsystems who need to represent the current state of their systems, consider how to expand and enhance them from a process perspective, and analyze opportunities to be interoperable with other systems with similar characteristics, but developed independently. The First volume was released in December 2010 and presented a general top-down model and a series of tools or views - Operational, System, and Technical Standards – for depicting the complex system’s structure. The second volume is more focused on studying and developing techniques to better facilitate inter-cognitive radio communications and collaboration. An initial survey of wireless domain machine-to-machine communications is nearing completion and reviews how Cursor on Target, IEEE 1900.6, Standard Spectrum Resource Format and other standards distribute and maintain data and context for use in automated and human-supervised processes. This will then be refined into general

design principles for facilitating inter-CR communications in information processes.

- **Work Group:** Cognitive Radio Work Group
  - **Project Lead:** Pete Cook, CRT
  - **Milestones**
    - Part 2 Work Group Ballot: May 2012
    - Part 2 Plenary Ballot: June 2012
- **“Test Guidelines and Requirements for Secondary Spectrum Access of Unused TV Spectrum, also referred to as TV White Space”**
    - **Objective:** This Report is for equipment designers and manufacturers, test & measurement vendors, test & evaluation departments, certification authorities, spectrum stakeholders, wireless service providers and end-users who are impacted by software defined radio and cognitive radio (SDR/CR) system technology developments such as dynamic waveform activation, opportunistic scheduling, dynamic spectrum access, secondary and unlicensed spectrum access (e.g. by TVBDs) and policy based operation which are features not implemented in traditional radio systems. The report will define the usage models and test requirements for personal portable devices in unused TV spectrum, with the overlaying spectrum availability, and will provide a basis for test and certification for radio manufacturers and regulators who need to understand the usage scenarios and test requirements for devices that can dynamically access unused spectrum in the TV bands through the use of cognitive techniques.
    - **Work Group:** Test and Measurement
    - **Project Lead:** To Be Assigned
    - **Milestones**
      - Work Group Ballot: Q2 FY2013
      - Plenary Ballot: Q3 FY2013

## **5.2 Technical Committee on Software Defined Radio (TC-SDR) FY2013 Work Plan (Chair: Vince Kovarik (PrismTech))**

### **5.2.1 Objectives**

The TC-SDR has established the following committee objectives for FY2013 to support the Forum's High Level Objectives:

#### **5.2.1.1 Deliver Relevant Work Products**

The TC-SDR plans to deliver four work products as output of ongoing projects in the fiscal year. The specific work products and milestones are presented in the section 5.2.2 below. In addition, three new projects and the formation of a new work group are planned for this fiscal year:

- The Transceiver Facility Specification Work Group will initiate a new project to develop an open source implementation of the Transceiver specification previously completed by the work group.
- A Systems and Software Modeling Work Group will be formed to focus on the use and application of a wide range of modeling tools and their application and usage within the SDR space.
  - This group will initiate a new project entitled "Integrated Model of SDR Systems and Software" that focuses on developing a common modeling approach for SDR systems that leverages the integration of SysML and UML to yield a comprehensive system design. The project will leverage and be based, in part, on prior integrated modeling work called the Government Reference Architecture.
  - A second project is planned to be initiated developing a modular, component-based architecture for SDR management frameworks. This will leverage some of the capabilities

#### **5.2.1.2 Establish Cross Committee Projects**

The Integrated Communications Systems Model project will be the flagship cross-committee project for the TC-SDR in 2013. This project will touch on aspects of user Candidates include Algorithms for TD-LTE in TVWS (with URC and TC-SDR) and Receiver Specifications for Cognitive Radio (with Regulatory Committee).

#### **5.2.1.3 Develop Committee Roadmaps**

The TC-SDR will actively support the Roadmap committee in developing more collaboration between technical, user and market committees and projects.

#### **5.2.1.4 Define a Test and Evaluation Model**

The TC-SDR will investigate initiating a project proposal to assess the technical foundations of test and evaluation. IT is anticipated that this effort would be coordinated with the Integrated Communications System Model project. A systems perspective will be applied to seek participation and integration between software and hardware engineering disciplines and

coordination across SDR developers, end-customers and test and evaluations equipment manufacturers.

### 5.2.1.5 Grow Participation

The TC-SDR will help organize a workshop in 2013 relevant to ongoing TC-SDR projects and seek to initiate a modeling workshop.

## 5.2.2 Projects

The table below provides a summary of the projects in the TC\_SDR and the highlights relationships with other projects within the forum. Additional information regarding the projects is provided in the following subsections.

Short Title	Objective	End	Related Projects
Open Source Air Interfaces	Implementation of LTE	2013	TC-SDR Transceiver Implementation
Security Profiles	Specification document of radio security profiles	2013	TC-SDR Radio Security Services
Radio Security Services	API specification of radio security services	2013	TC-SDR Security Profile TC-SCA
Integrated SDR Modeling (New)	Reference model of SDR hardware and software modules.	2013	TC-SDR IRSS API, Transceiver API and Implementation. URC SATCOM SIG.
Component-Based SDR Framework (New)	Reference model of a modular and extensible SDR framework	2013	TC-SCA C++ SCA Framework (New)
Transceiver Implementation (New)	Open source implementation of transceiver specification.	2013	TC-SDR Transceiver specification (completed)

### 5.2.2.1 Completed Projects

- **Transceiver Facility Specification**
  - **Objective:** Develop a transceiver specification to capture the information needed for interoperability between waveform applications and transceiver subsystems, expressed as generic and abstract requirements for properties and programming interfaces, including the associated real-time issues.
  - **Work Group:** **Transceiver System Interface Work Group (TSI-WG)** – This work group became the custodian for the Forum’s *“PIM and PSM for Smart Antenna Specification”* and intends to leverage the specification in extending multichannel support to the *“Transceiver Facility Specification”*.
  - **Working Group/Chair:** Eric Nicollet, Thales Communications
  - **Results:** Transceiver Specification v1.0 delivered.

### 5.2.2.2 Continuing Projects

- **Business Models for Open Source Air Interfaces**
  - **Objective:** A presentation for baseband providers, computer manufactures (MIDS), automotive electronics suppliers, handset manufacturers, infrastructure manufacturers, software services companies, and operators who need access to air interfaces for new platforms being developed or who may want a competitive baseband environment

- and access. The presentation will provide a description of open source licenses, potential business models, languages and development environments (C, python, Matlab), potential customers and markets for open source air interfaces, potential developers, and currently available open source projects.
- **Work Group/Chair: Commercial Baseband Processing Technologies Work Group**, John Glossner, [Optimum](#) Semiconductor
  - **Project Lead:** Daniel Iancu, [Optimum](#) Semiconductor
  - **Progress:** The project scope is headed to the PAC for approval. The presentation is complete and was given at SDR'10.
  - **Milestones and Work Products:**
    - PAC Approval to accept SDR'11 presentation as final work product: 6/2012
- **Open Source Cognitive LTE PHY implementation**
    - **Objective:** This project contains a number of objectives:
      - An open source implementation of a cognitive physical layer.
      - A Steering Group will be set up to identify a preferred system implementation. A part of the responsibility will be to identify IP issues and document known art that may require licensing.
      - A cognitive baseband system reference design for one or several 3G+ protocols, written using a high level mathematical analysis tool, and an implementation of those on top of the C/C++ framework targeted initially for handsets. The exact set of protocols considered for implementation as a reference design and in C/C++ will be defined by the group, based on proposed contributions and the group member commitments. Initially this will consist of a base cognitive PHY layer and be expanded to add control channels. The plan is to produce a base platform and then add APIs to develop in a phased manner.
      - An open-source C/C++ based framework initially for the PHY layer and with extention to Upper layers later. This should be powerful and flexible enough to serve as a base for reconfigurable commercial 3G+ wireless communication systems. Initial target is modems and handsets, with base stations considered as a possible later target.
      - An Open C-based language or format, together with an open methodology which may include open source tooling, to promote high performance, portable SDR programming.
    - **Work Group/Chair: Commercial Baseband Processing Technologies Work Group**, John Glossner, [Optimum](#) Semiconductor
    - **Project Lead:** Daniel Iancu, [Optimum](#) Semiconductor
    - **Progress:** The initial work product was approved by the PAC. A call for contributions has been issued. Initial LTE PHY coding in Mathematica has been started. A github repository has been created to host the code.
    - **Milestones and Work Products:**
      - An initial code deposit will be made by September



- **Milestones and Work Products:**
  - Submit project proposal for approval      May, 2012
  - Review of Prior Models:                      September 2012
  - Modeling plan:                                      October 2012
  - Preliminary Model:                              March 2013
  
- **Component-Based Radio Management Framework**
  - **Objective:** The use of the SCA has grown beyond its origins and use within the JTRS program. However, it has not gained a wider commercial acceptance. The recent release of the SCA 4.0 specification has provided a way forward for more flexibility of the implementation allowing for application to other domains and markets. This project will take the Platform Independent Model (PIM) and Platform Specific Model (PSM) approach of SCA 4.0 and develop a component-based approach to radio management frameworks that can be extended in a modular fashion and be applied across a wide range of commercial systems.
  - **Work Group/Chair: Systems and Software Modeling Work Group,** Vince Kovarik, PrismTech
  - **Project Lead:** Vince Kovarik, PrismTech
  - **Progress:** Project proposal is being drafted.
  - **Milestones and Work Products:**
    - Submit project proposal for approval      July, 2012
    - Initial Work Group Meeting                  October, 2012
    - Architecture Concept Document              March, 2013
  
- **Open Source Transceiver Facility Implementation**
  - **Objective:** This project will take the Transceiver Application Programming Interface (API) specification completed above and develop an open source implementation for the USRP radio system. This implementation will be available to forum members for use and as a reference implementation to apply to other radio systems.
  - **Work Group/Chair: Transceiver Work Group,** Eric Nicollet, Thales
  - **Project Lead:** Alejandro Sanchez, Thales
  - **Progress:** Preliminary project proposal is in review.
  - **Milestones and Work Products:**
    - Project proposal submission                  April, 2012
    - Design and Draft Delivery                      July, 2012
    - Final Delivery                                      September, 2012
    - Report    October, 2012
    - Ballot and Approval                              January, 2013

### **5.3 Coordinating Committee on International SCA Standards (CC SCA) FY2013 Work Plan (Chair: Eric Nicollet (Thales) and Mark Turner (Harris))**

#### **5.3.1 Objectives**

The CC SCA has established the following committee objectives for FY2013 to support the Forum's High Level Objectives.

##### **5.3.1.1 Deliver Relevant Work Projects**

The CC SCA plans to deliver 3 work products as a result of ongoing projects entering the fiscal year. The specific work products and milestones are presented in the section 5.3.3 below.

In addition, the CC SCA plans to undertake the following new activities in FY2013 in support of this objective:

- Waveform Portability Guidelines: The SCA Implementer's Work Group will develop and publish a set of SCA waveform application portability guidelines.
- API Specification Requirements: The SCA API WG will generate and release a specification that establishes a set of requirements of what normative material a complete API must contain.
- API Specification Enhancements: The SCA API WG will This project will apply the API requirements established in the above item to the existing JTRS Audio Device API, identify missing information, produce this information and publish the missing material as a recommendation or specification.
- CORBA Zero Copy Enhancement: The SCA Next WG will develop and RFC for the OMG for a zero copy feature that is intended to move data efficiently with increased throughput and reduced latency.

##### **5.3.1.2 Cross-Committee Initiatives**

The CC SCA will support WINNF Cross-Committee initiatives in particular with regards to the Tactical Radio Special Interest Group of the User Requirements Committee in generation and validation of relevant user requirements. The CC SCA will consider other Cross-Committee initiatives where appropriate.

##### **5.3.1.3 Define a Test and Evaluation Model**

The CC SCA will initiate a new project, "*SCA Test, Evaluation & Certification: Part 3*" as a follow-on project from the realization of the generic role based model towards the next phase of candidate implementation plans.

##### **5.3.1.4 Develop Committee Roadmap**

The CC SCA Steering Group will work with the Advisory Council to develop and publish an SCA Standards Roadmap with updates on a six month cadence. Elements of this roadmap may

be submitted to the Forum’s main Roadmap Committee for inclusion in the Forum’s “Top 10 Most Wanted Wireless Innovations” report as defined in Section 6 of this operations plan.

### 5.3.1.5 Increase End User Participation

In FY2013, The CC SCA will grow Advisory Council participation as appropriate, update the charter, and facilitate at least 3 Advisory Council meetings in FY2013.

## 5.3.2 Organization

The organizational structure for the CC SCA entering FY2013 is depicted in Figure 3.

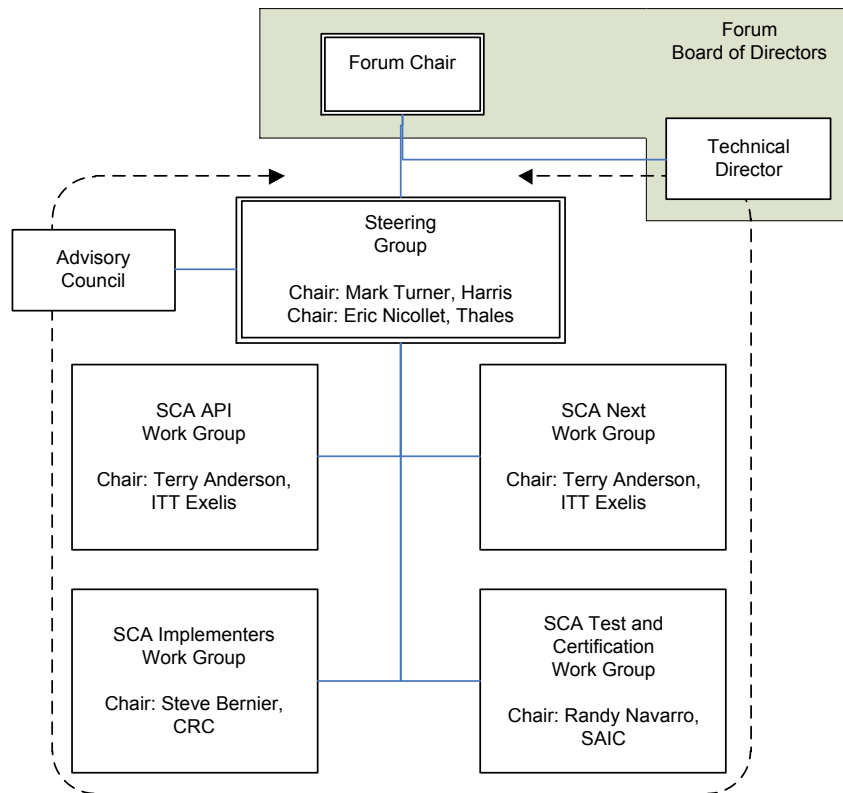


Figure 3: Coordinating Committee on International SCA Standards FY2013 Organizational Structure

## 5.3.3 Projects

The CC SCA commits to delivering the following work products in support of this objective (see above project descriptions for respective details associated with the identified work products):

- **“Realization Model for the Coordination of International SCA Standards”**
  - **Objective:** This recommendation is being developing by the CC SCA Steering Group in collaboration with the CC SCA Advisory Council for stakeholders (i.e., manufacturers, vendors, Governments) of the international SCA-based ecosystem who seek increased harmonization among SCA-based international standards. The

model is expected to continue to evolve over time with updates to be published at least on an annual basis.

- **Work Group:** CC SCA Steering Group
  - **Project Lead:** Mark Turner, Harris and Eric Nicollet, Thales
  - **Milestones:**
    - Release 1 Steering Group Ballot: December 2012
    - Release 1 Plenary Ballot: March 2013
    - Release 2 Steering Group Ballot: June 2013
    - Release 2 Plenary Ballot: September 2013 (FY2014)
- **“SCA Standards Roadmap”**
    - **Objective:** The CC SCA Steering Group will work with the Advisory Council to develop and publish an SCA Standards Roadmap with updates on a six month cadence.
    - **Work Group:** CC SCA Steering Group
    - **Project Lead:** Mark Turner, Harris and Eric Nicollet, Thales
    - **Milestones:**
      - Release 1 Steering Group Ballot: September 2012
      - Release 1 Plenary Ballot: December 2012
      - Release 2 Steering Group Ballot: March 2013
      - Release 2 Plenary Ballot: June 2013
- **“SCA Next Recommendations”**
    - **Objective:** The **SCA Next Work Group** (Chair:) will support the continued evolution of SCA Standards through the technical analysis, evaluation and recommendation of corrections, extensions and improvements, delivering formal recommendations to JTRS JPEO for consideration of incorporation into future versions of the specifications. This will include evaluation and recommendation of SCA Standards extensions that could come from other *Programs* (i.e., ESSOR Program, SvuFA Program). The anticipated cadence for providing recommendations is every 6 months.
    - **Work Group:** SCA Next
    - **Project Lead:** Terry Anderson, ITT Exelis
    - **Milestones:**
      - Release 1 Work Group Ballot (i.e., CORBA Zero Copy): September 2012
      - Release 1 Plenary Ballot; December 2012
      - Release 2 Work Group Ballot: March 2013
      - Release 2 Plenary Ballot: June 2013
- **“SCA Waveform Applications Portability Guidelines”**
    - **Objective:** The SCA Implementer’s Work Group will develop and publish a set of SCA waveform application portability guidelines for the waveform developers and radio platform manufacturers who require reducing the cost, effort and time needed to perform the development and porting of waveforms among different processing architectures (i.e: DSP, FPGA). The report will provide a compilation

of portability recommendations, guidelines and best practices for waveform development with portability as the main target.

- **Work Group:** SCA Implementers
  - **Project Lead:** Alberto Quintana, Indra
  - **Milestones:**
    - Release 1 Work Group Ballot: March 2013
    - Release 1 Plenary Ballot: June 2013
- **“Software Communications Architecture Interpretation Guide”**
    - **Objective:** This report is being prepared by the **SCA Implementers Work Group** (Chair: Steve Bernier (CRC)) for the participants in the international software defined radio community where the SCA and SCA derivatives are relevant who need clarity on the SCA to harmonize the development of embedded system software in order to lower development and maintenance cost as well as time to market. The output of this activity will be submitted to the JTRS as comments and for inclusion in their next release of the specification, and will also be shared with the ESSOR program and on the Forum site for the international community to standardize on a single interpretation.
    - **Work Group:** SCA Implementers
    - **Project Lead:** Steve Bernier, CRC
    - **Milestones:**
      - Release 1 Work Group Ballot: March 2013
      - Release 1 Plenary Ballot: June 2013
  - **“SCA API Requirements Specification”**
    - **Objective:** The SCA API WG will generate and release a specification that establishes a set of requirements of what normative material a complete API must contain.
    - **Work Group:** SCA API
    - **Project Lead:** Terry Anderson
    - **Milestones:**
      - Release 1 Work Group Ballot: September 2013
      - Release 1 Plenary Ballot: December 2013

## 6 Roadmap Committee FY2013 Work Plan (Chair: John Glossner (Optimum Semiconductor))

The Roadmap Committee has established the following committee objectives for FY2013 to support the Forum's High Level Objectives:

- **Publish a "Top 10 Most Wanted Wireless Innovations" List** The primary deliverable of the Roadmap Committee will be to develop and submit for plenary ballot a quarterly update to the Forum's "**Top 10 Most Wanted Wireless Innovations**" list. The process that will be adopted by the Committee in FY2013 in supporting this goal is as follows:
  - Committee Chairs (Technical, Regulatory, URC) will keep their own roadmaps
  - Committees will meet as a Committee Plenary at all face-to-face meetings and update their roadmaps
  - A Roadmap Committee meeting will be held the morning of the last day of all face-to-face meetings to:
    - Discuss what Top 10 innovations will be added and which will drop off
    - Keep a watch list of new developments
    - Update progress to the current Top 10 list
    - Note any reasons for moving a Top 10 item off the list

The document will be balloted at the plenary of each face to face meeting, with balloting lagging defined changes by one quarter.

- **Strengthen the Forum's Brand** – The Roadmap Committee will create and maintain a roadmap page on the website containing:
  - Achievements to date against items on the Top 10 List,
  - Current Work relevant to the Top 10 List,
  - Third party projects related to the Top 10 list

The roadmap page will allow public comments, moderated by the Roadmap Committee, allowing the broader advanced wireless community to suggest additional Top 10 items and propose available solutions addressing the current Top 10 needs.

## **7 FY2013 Cross Committee Work Plans (Forum Chair: Bruce Oberlies (Motorola Solutions), Forum Vice Chair: Ruediger Leschhorn (Rohde & Schwarz))**

Section 2 described the responsibilities of the Forum committees. The User Requirements committee acts to identify requirements of wireless end-users with Special Interest Groups (SIGs) validating concepts and requirements against readiness. The Regulatory committee promotes the adoption of advanced wireless systems with global regulatory and policy communities. The Technical committees produce reports, specifications and recommendations within the committees on Software Defined Radio, Cognitive Radio and Dynamic Spectrum Access, and Coordinating Committee on International SCA Standards. All these committees create important work product which is described in the previous sections that may be utilized in the other committees. But, sometimes this work becomes silo'd missing opportunities to maximize the leverage of workflow between the committees reducing potential value for the Forum members.

In order to improve the leverage of work products through the committees we have established a Cross Committee Projects goal. The Forum will identify or establish two projects in FY2013 that require participation from and collaboration between multiple committees (User Requirements, Regulatory, and Technical) in supporting the broader needs of the membership as a whole. To facilitate this goal we will discuss cross committee participation during the initiation of new projects and reviewed at the PAC meeting. We will monitor progress to the goal by maintaining a matrix of all projects showing the committee relationships.

## 8 Board of Directors FY2013 Work Plan (Chair: Eric Christensen (GD-C4S))

A primary responsibility of the Board of Directors in FY2013 is monitoring the operations of the Forum ensuring compliance with the 2010 to 2014 Strategy and this Operations Plan. Meetings of the Board of Directors are planned for the following dates (2<sup>nd</sup> Tuesday of the Month):

- July 10, 2012
- August 14, 2012
- September 11, 2012
- October 9, 2012
- November 1, 2012 (Held in conjunction with the General Meeting)
- December 11, 2012
- January 10, 2013 (Held in conjunction with WinnForum Technical Conference)
- February 12, 2013
- March 12, 2013 (in conjunction with the General Meeting)
- April 9, 2013
- May 14, 2013
- June 11, 2013 (in conjunction with the General Meeting)

An additional Board Meeting may be held in May 2013 to facilitate operations planning.

An additional key role of the Board of Directors is monitoring the financial performance of the Forum. The financial performance is reviewed following the schedule below:

- November 2012 Board Meeting – Review the audited financial results for FY2012 to be presented to the members at the Annual Meeting in January 2013, and the Q1 FY2013 forecast with projections for the remainder of the year.
- Annual Meeting of the Members – Present FY2013 audited financial results to the members, present updated FY2013 projections
- February Board Meeting – Review Q1 and Q2 FY2013 unaudited financial results and projections for the remainder of the year.
- March 2013 General Meeting – Review the Q3 FY2013 forecast with projections for the remainder of the year.
- June 2013 General Meeting – Review the FY2013 forecast and approve the FY2014 Operation Plan and Budget and submit to the membership for approval.

Additional work by the Board to monitor performance and explore strategy is undertaken by the following Board committees:

- **Audits Committee** – Provides board oversight of the organization's annual financial audit, including reviewing the adequacy and reliability of the Forum's internal controls and financial reporting, review the independence of and performance of the Forum's

external auditor, review alleged violations of the Forum's stated policies, and reports to the board on recommendations. Chair: Assigned by the Chair of the Board

- **Finance Committee** – Provides board oversight of the Forum finances including recommending financial policies and internal controls, reviewing the annual budget prepared by staff and recommending it to the full board for approval, and monitoring financial reports prepared by the staff, including monitoring of investments, against the approved budget. Chair: Treasurer
- **Employee Compensation and Contractor Performance Committee (ECCP)** – as defined in the Forum's [Bylaws](#)
- **Governance and Policy Committee** – provides oversight and assessment of the Board, identifies requirements for Board orientation and education. Reviews current best practices and governance trends and makes recommendations to the full board on bylaws and policies. Chair: Secretary
- **Planning Committee** – Provides board oversight of strategic planning process, including participating in an annual strategic review. Reviews and matures recommendations from the CEO on updates/modifications to the strategic plan, directs the CEO in specific areas to explore, and makes recommendations to the full board. Chair: Chair of the Forum.

A key deliverable of the Planning Committee for FY2013 in support of the Forum's High Level Goals is the development and implementation of a strategy to Improve Regional Support and increase participation at forum hosted events. The Forum's Planning Committee will work with the URC and Technical Committee to identify Regional topics of interest to support formulation of a project or formation of a SIG. A significant aspect of this deliverable is to establish new outreach activities which will contribute to Increasing End User Participation.

- **Nominating Committee** – As defined in the Forum's [Bylaws](#). The 2013 Nominating Committee is formed by the Chair of the Board of Directors on or before the start of the June General Meeting, and presents the proposed slate of Directors to the Board at the 1 November 2012 Board meeting.

Finally, in FY2013 the Board will continue to work with staff to refocus on member retention and recruitment, dedicating the October face to face board meeting to evaluating strategy related to this topic.

## 9 Project Support

The Forum's staff will work with Forum leadership to provide the facilities and infrastructure necessary for the members of the Forum's standing Committees to collaborate as required to achieve the objectives stated in this operations plan. Specific services defined for FY2013 include facilitating face to face and online meetings, facilitating project initiation and execution, and providing outreach for work groups, task groups and special interest groups to individuals and communities who can provide relevant contributions to their projects. A summary of these services are provided in this section.

### 9.1 Face to Face Meetings

#### 9.1.1 General Meetings

The Wireless Innovation Forum will host three general meetings in FY2013. These meetings will act as the primary venue for advancing the work items defined in this Operations Plan, and will provide a venue for outreach to potential new communities, regulatory officials and members of strategic interest. The Forum will facilitate this latter objective through a significant increase in invited speakers and through the use of workshops as defined in the Strategic Plan. The current meeting and workshop schedule for FY2013 is as follows:

- Fall Meeting – 73rd General meeting 31 October to 02 November at the Harris Corporation offices in Melbourne, Florida, (Hosted by Harris Corporation)
  - Located near MILCOM 2012 (<http://www.milcom.org/>)
- Spring Meeting- 74th General Meeting 11 to 13 March 2013 in Las Vegas, Nevada (tentative)
  - Collocated with IWCE 2013 (<http://www.iwceexpo.com/iwce2013>)
- Summer Meeting – 75<sup>th</sup> General Meeting will be held as a part of the SDR'13-WInnComm Event in June. Dates and location are to be determined.

The draft agenda for each of these meetings will be posted within one week of the completion of the previous meeting, in accordance with the Forum's meeting policies and procedures. Meeting locations for the following year will be announced at least 9 months in advance of the meeting.

Satisfaction surveys taken at Forum meetings will be used to determine attendee satisfaction, perceived problems, and potential improvements. The survey results will be used to guide plans for future meetings.

**Goal: Increase average result in satisfaction surveys by one half point to 8.2;**

#### 9.1.2 Adhoc Meetings and Workshops

The Forum will support adhoc meetings and workshops throughout the year as required by the Forum's Committee in achieving their objectives. Where possible, meetings will be hosted at the Forum's offices in Reston, Virginia or at member facilities. Working sessions of the Forum's Work Groups, Task Groups and Special Interest Groups will also be scheduled as required at the Forum's US and European Conferences (see Section 10).

### 9.1.3 Meeting Promotion

The Forum will promote member meetings through event emails, direct communications, social media posts, flyer distribution and advertising as warranted in order to ensure relevant stakeholders are aware of these events and able to plan participation. Success in these efforts will be evaluated by analyzing relative website traffic year following each communication and comparing to the previous year's results.

Note that an evaluation of the effectiveness of Google Adwords determined that it had a negative ROI for Forum meetings, and so this channel will be discontinued pending additional research and evaluation.

## 9.2 Online Meetings and Tools

Much of the work of the Forum's members is done using electronic utilizing the following tools provided by the Forum:

- Webconferencing: A Go To Meeting account has been established for each committee
- Online Communities: An collaboration area has been established for each work group, task group and special interest group on the Forum's "Groups Portal" (<http://groups.winnforum.org>). Each collaboration area can host multiple project specific file libraries, list servers and wikis

In FY2013, the Forum's staff will continue to maintain these tools with a commitment **to acknowledge, and where possible resolve, services requests issued by the Forum's volunteer leaders of less than 24 hours**. In addition, members of the Forum staff will periodically contact the Committee chairs and work group leaders to review the utilization of these tools and investigate new options as required to make collaboration between members using these tools more efficient.

**Goal: Acknowledge, and where possible resolve, services requests issued by the Forum's volunteer leaders in less than 24 hours**

**Goal: Query volunteer leaders on a quarterly basis to determine macro changes required in online tools**

## 9.3 Project Facilitation and Management Services

Forum staff will work to enhance service offerings throughout the document development cycle as follows:

### 9.3.1 Project Initiation

Forum staff will continue to work with the Forum's volunteer leaders to speed the project initiation process. This includes refining and updating the materials provided in the group leaders' resource directory (<http://groups.winnforum.org/p/do/si/topic=150>), creating a Group Leader's Handbook, and putting the project proposal form online.

**Goal: Complete Group Leaders Handbook by the end of Q1 FY2013**

**Goal: Online Project Proposal Form by end of Q1 FY2013**

### 9.3.2 Project Support

Forum staff will provide project management services, upon request, to each work group, task group and special interest group to help group leaders in growing active participation and in achieving objectives. Supplied services will include, but are not limited to:

- Group Portal Support
- Meeting Planning Support, including scheduling and attending teleconferences, web conferences and face to face meetings, taking roll and keeping the ballot list, and taking and distributing minutes
- Project Management Support, including schedule management, following up on action items with volunteers and reporting

**Goal: Ensure execution of committee operations plans**

### 9.3.3 Document Advancement and Electronic Balloting

Forum staff will continue to improve document development and advancement to make the process more efficient and user-friendly for its members. These efforts will include periodically contacting Committee chairs and work group leaders to discuss the adequacy of existing procedures and whether or not they need to be modified in order to make the document approval process more efficient.

**Goal: Review of Document Process by the end of Q2 FY2013 with a report provided to the Board**

## 9.4 Project Promotion

### 9.4.1 Marketing

To grow participation, in FY2012, Forum staff launched a new monthly Project eNewsletter for reporting project status to the broader community, as well as a "Project of the Month" that was featured throughout marketing communication vehicles (emails, web site, social media). In FY2013, staff will further work to grow participation by refining the content and timing of the Project eNewsletter, promoting and encouraging involvement in active projects (rather than providing a comprehensive project listing and summary). In order to respect our members' in-boxes, project correspondence will only be sent when project milestones are hit or specific requests for involvement are needed. A project of the month will continue to be highlighted in our member e-Newsletter News & Opportunities.

Forum staff will continue to promote projects as needed via flyer distribution at events, promotion in SDR, CR and DSA News & Opportunities and press releases/announcements. In FY2012, Forum staff became more active in reviewing editorial calendars and online white paper placement opportunities and matching these opportunities to current projects. In FY2013, staff will continue to pursue paper placements and editorial opportunities (see also Experts Program), aimed at both growing participation in our groups, growing Forum membership and strengthening the Forum's brand

The Forum will also explore further segmenting our communications in order to more effectively communicate as well as reduce unnecessary email and increase open rates.

Forum staff will also write a bi-yearly feature story on projects that have been voted on and completed, as well as new members, and a look at the coming six months. This will not only help strengthen the Forum's brand, but also encourage new membership. New members will also be announced via social media and rss and have their company bio included in any member communications within the month of joining.

**Goal: Strengthen Forum's Brand and Increase Participation, as gauged by an increase in Document Library downloads and traffic on the Forum's Group Portal.**

## 9.4.2 Outreach and Business Development

The Forum will leverage its partner relationships and third party events around the world to promote member projects, to solicit relevant contributions for these projects from the broader community, and to otherwise serve member needs as defined in the following sections.

**Overall Goal: Support Members in "Delivering Relevant Work Products", "Increasing End User Participation", "Improving Regional Support", and "Strengthen Forum Brand"**

### 9.4.2.1 Industry Conferences and Tradeshow

The Forum will explore participation in other tradeshows to promote the Forum and its members. Participation may include exhibiting and/or establishing a Winn Forum "Show within a Show" promoting the activities of the Forum and supporting Forum members in identifying new opportunities. Where possible, speaking opportunities will be secured for Forum volunteer leaders to promote their projects and solicit relevant contributions. Conferences and tradeshows that will be evaluated will include:

- ISART (July 2012)
- IEICE Technical Conference (July 2012)
- Wireless China Summit (September 2012)
- IEEE DySPAN (October 2012)
- MILCOM 2011 (October 2012)
- IQPC SDR Europe Conference (October 2012)
- European Microwave Week (October 2012)
- IDGA Cognitive Radio Summit (February 2013)

- Mobile World Congress (February 2013)
- IWCE (March 2013)
- CTIA Wireless 2012 (March 2013)
- SMi Software Radio Conference (June 2013)

Forum staff will also work to identify a partner organization in India to host a workshop on SDR technologies.

#### **9.4.2.2 Partner Relationships**

The Forum will continue to foster and expand collaborative relationships with partner organizations and programs to promote its member's objectives. This list of organizations will include COST-TERRA, EDA, ETSI, IEEK, IEICE, IEEE, the JTRS Program, NATO, NCOIC, OMG, QoS MOS and VITA. In FY2013, the Forum will also explore new relationships with organizations such as the IETF, PSCE, WiFi Alliance, the Wireless Communications Association International (WCAI), the Service Availability Forum, and the Mobile Industry Processor Interface Alliance.

Where appropriate, the Forum will establish and maintain voting privileges in these organizations to maximize the ability of the Forum's members to collaborate on work products of mutual interest.

## 10 Conference Services

The Forum's annual conferences have historically served two primary purposes:

- For Researchers and Developers working on software defined radio and cognitive radio technologies who are seeking industry recognition for their current work and feedback/funding on next steps, the SDR-WinnComm conferences are annual events that provides access to Radio Manufacturers, System Integrators, Procurement Authorities and End User Representatives in commercial, civil and defense markets seeking SDR and CR technology solutions to emerging wireless communications requirements
- For Radio Manufacturers, System Integrators, Procurement Authorities and End User Representatives who are seeking SDR and CR technology solutions to emerging wireless communications requirements, the SDR-WinnComm conferences are annual events that provides access to information on the latest in SDR and CR technologies from leading researchers and developers

FY2013, the Forum will strive to extend the value of these conferences to providing additional focus on "markets, opportunities, business development, products, trends" while maintaining a strong technical program. In addition, the Forum's members will actively utilize the conferences as a primary venue for promoting the activities of the work groups, task groups and special interest groups to the broader community (Goal 1), for developing committee roadmaps (Goal 3) and for expanding "end-user participation" (Goal 5). Execution on these objectives will be supported as follows.

### 10.1 US Conference

The Forum's annual US Conference and Product Exposition will be held 08-13 January 2013 in Washington, DC. This is a change from the previous meeting dates of late November and early December. The change was made after considerable discussion and will enable more membership participation and allow collocation of the IEEE DySPAN Standards Committee. Key personnel supporting the operation of the SDR-WinnComm Conference are as follows:

- General Conference Management: Lee Pucker
- General Program Chair: John Glossner
- Conference Logistics and Operations: Don Kaiser and Suzy Buckshaw
- Sponsorships and Exhibitions: Don Kaiser
- Marketing and Media Relations: Stephanie Hamill

#### 10.1.1 Program

The technical program will include papers, presentations, tutorials, and demonstrations. The schedule for the conference program development for FY2013 is as follows:

Papers Accepted Notification	10 Sept 2012
Camera Ready Papers Due	15 Oct 2012
Presentations Due	19 Nov 2012

Execution on the conference objectives will be facilitated by track chairs for the Research and Development (R&D) and the Design, Manufacture and Deploy (DMD) tracks and a Steering Committee whose purpose is to set the direction of the conference and provide guidance and support on track chairs, conference location, suitable tracks, targeted topics, branding, sponsorships, and keynotes invite. The conference will continue publication of Journals from the Best of R&D Track and will work to grow participation in two areas:

1. Grow member participation in the DMD Track: Make work group chairs responsible for a session related to their ongoing work
2. Grow member participation in non-technical areas of the conference through the development and promotion of Business/URC/Regulatory Workshops

### 10.1.2 Operations

All operations of conference events from pre-conference services such as registration and exhibits management to onsite services will be conducted in to the highest degree of professionalism and membership service. Staff will look to maximize the meeting experience for all attendees while focusing on efficiency and economies. Staff will work at all times to promote the operational goals of the event to achieve the broader goals of the organization to include:

- Eliminate of any potential attrition issues
- Increase attendance by 10%
- Increase exhibitor and sponsorship revenue by 10%
- Increase net revenue by 5%

The Product Exhibition at SDR-WinnComm will be on Tuesday and Wednesday, and the traditional welcome reception for SDR-WinnComm will be on Tuesday night in the Exhibition Hall. The annual Technology Showcase, featuring advanced technology demonstrations from the R&D and DMD tracks will be held on Wednesday Evening.

During the first quarter of FY2013, we will investigate webinar options for selected presentations at SDR-WinnComm. If webinars are possible, we will consider pricing options and alternative programming for the conference.

As with the general meetings, satisfaction surveys by attendees will be used to determine attendee satisfaction, perceived problems, and potential improvements. The survey results will be used to guide plans for future conferences. Some examples of these changes that are projected based on the surveys are:

- Improve online proceedings to make them a more valuable “just in time” tool for the participants
- Solicit more “operational” papers to provide more practical experience information
- Increasing participation by representatives of the end-user communities through workshops focused on emerging requirements
- Increase the value and experience of the Exposition for attendees and exhibitors

- Improve the meeting room set-ups and floor plans to maximize the attendee experience

### 10.1.3 Marketing and Communications

To address the slip of this year's conference to January of 2013, the event will be rebranded as SDR-WInnComm, with the year left out to avoid confusion and the risk that the public would assume the Forum was eliminating this year's conference.

In promoting the conference, Forum staff will continue to utilize multiple channels including emails, news releases/ announcements, website promotion, co-sponsors advertisement, and free calendar placements. Website traffic analysis indicates that the Forum's direct email campaigns have the most impact on conference promotion, and so in FY2013 Forum staff will explore sending more targeted, segmented emails to promote specific topics of interest to relevant stakeholders.

In addition, the Forum will evaluate extending the marketing mix to include using more social media channels, including creating event pages on LinkedIn and Google+. After an evaluation of the effectiveness of Google Adwords it was determined to have a negative ROI, thus will be discontinued pending additional research and evaluation.

In FY2012, the Forum reduced printing costs substantially by creating an online only interactive agenda and producing only a printed pocketguide, rather than a full showguide. Response to this was quite favorable, and Forum staff will continue to refine the mix of electronic and printed product to best meet the needs of attendees.

### 10.1.4 FY2014 Conference on Communications Technologies and Software Defined Radio (SDR-WInnComm)

Planning for the FY2014 US conference will continue in Q1 and Q2 of FY2013 with the signing of a hotel contract, initiation of an EDAS capability (<http://www.edas.info/>), and establishment of schedule milestones.

The Forum will announce the location and schedule for the FY2014 conference during SDR-WInnComm, and the call for papers and important dates will be released shortly after that conference.

## 10.2 European "Congress"

In 2013, the Forum will combine its 75<sup>th</sup> General Meeting and European Conference into a single event. Key personnel supporting the operation of this European "Congress" are as tentatively set as follows:

- Forum Chair: Bruce Oberlies
- General Conference Management: Lee Pucker
- General Program Chair: Kuan Collins
- Conference Logistics and Operations: Arabelle Fourgo (Interel Association Management)
- Sponsorships and Exhibitions: Giuseppe Marlette (Interel Association Management)
- Marketing and Media Relations: Stephanie Hamill

The final decision on the location and dates will be made based on an assessment of economic factors, including sponsorship opportunities and ease of attendance by members.

### 10.2.1 Program

The technical program will include papers, presentations, tutorials, and demonstrations. The schedule for the conference program development for FY2013 is as follows:

- Call for Papers, Presentations and Tutorials announced 14 Sep 2012
- Abstracts Due (all tracks) 25 Jan 2013
- Abstracts Accepted Notification 22 Feb 2013
- Final Papers Due 12 Apr 2013
- Papers Accepted Notification 03 May 2013
- Camera Ready Papers Due 17 May 2013
- Presentations Due 18 May 2013

Execution on the conference objectives will be facilitated by track chairs for the Software Defined Radio (SDR), Cognitive Radio (CR) and Program tracks and the conference Technical Program Committee whose purpose is to set the direction of the conference and provide guidance and support for track chairs, targeted topics, branding and keynote. The conference will continue publication of Journals from the best conference papers as selected by the peer review process.

### 10.2.2 Operations

In 2012, Forum staff worked again in conjunction with Interel staff on the operations and logistics of the European Conference. Interel handled European operational activities including, but not limited to, hotel selection, European vendor relations, and onsite meeting arrangements, logistics, and staffing support. In addition, Interel staff provided exhibit and sponsor solicitation, management, and onsite support. Forum staff handled all pre-conference staffing support not previously noted as handled by Interel to include: meeting registration, call for papers and speaker management, invoicing, accounts payable and receivable, and coordinating with the VAT consultant for event payments and recovery. In 2013, Forum staff will work with Interel to streamline the meetings management processes to maximize efficiencies and to enhance the meeting experience for attendees, exhibitors, and sponsors.

### 10.2.3 Marketing

In preparation for the fourth annual European conference, Forum staff worked with Interel in establishing a comprehensive spreadsheet of European media, stakeholders and calendar opportunities in order to increase our event exposure in Europe. As a result, the event was included in several more calendars this year and appropriate contacts were made with potential partners in Europe to further promote the event. For FY2013, Forum staff will again work with Interel on expanding the list further and potentially forming alliances with important stakeholders in Europe.

In order to reduce printing costs for the 2012 event, the conference will also feature electronic proceedings and a pocket guide and comprehensive paper listing, rather than a showguide.

## 11 Other Member Services

### 11.1 Webinars

In FY2011, the Forum began a new Webinar Series as a member service, utilizing Go To Webinar in support of the Education pillar of the Forum's Strategic Plan. In FY2013, the Forum will continue to support this series with at least 8 webinars planned in support of the goal the "Strengthen the Forum's Brand".

### 11.2 Supporting Member Engagement

#### 11.2.1 Support for Strategic Planning

Forum Staff will conduct formal interviews with members, potential members and past members, to identify what new programs and activities should be undertaken by the Forum, and what additional improvements need to be made in the Forum in order to maximize the value of membership. Forum Staff shall also make use of Linked In and other Social Media as a vehicle for identifying projects.

In addition, Forum staff will support the Forum's committees in proactively reviewing relevant sources of information to identify emerging strategic issues that may positively or negatively impact the work of these committees.

These assessments will be provided to the Forum's Planning Committee for prioritization and as an aid in scenario planning.

**Goal: Perform a market scan and interview up to 40 members in Q1 FY2013 to support the Planning Committee in reviewing the Strategic Plan beginning in October. Ongoing updates and reviews to be performed quarterly thereafter.**

#### 11.2.2 Support for New Members

Forum staff will undertake a program to provide extra support to new members to ensure they are able to effectively participate in the Forum's projects and activities. Items that will be evaluated in this activity are as follows:

- Enhancing the new member package to include more details on how to get involved
- Introducing new members in a more timely way to existing members by employing social media (Facebook, LinkedIn, Twitter, Google+) announcements when a new member joins, including the new member company bio in any member communications within one month of joining, and inclusion in a bi-yearly feature story recapping Forum activities for the previous six months.
- Establishing a new member mentoring program
- Extending the newcomer orientation held at each meeting to a session on "making the most of your Forum membership" and extending a personal invitation to recent new members
- Follow up with new members at 3 and 6 month time periods to identify and correct any problems

**Goal: Support for new member procedure documented by the end of Q1**

### **11.3 Experts Program**

To further strengthen the Forum's brand and encourage Forum membership and project involvement, the Forum will work toward establishing an "Experts" program, soliciting member representatives who will volunteer to act as "Subject Matter Experts" in a specific technical, business, or policy area of their choice. Experts will be "go to" people for press interviews, and will be promoted in expert source placement services such as "ProfNet," leveraging their expertise to help legitimize Forum activities and positions. As a part of this program, the Forum may establish a Distinguished Speakers program, "Ask the Expert" discussion forums, and Experts blogs for education and support of Forum members and the broader reconfigurable radio community. The Forum will pursue appropriate experts for various areas within reconfigurable radio technologies. This will be done by request in our communication vehicles as well as personal contact (1<sup>st</sup> quarter). We will produce a roster of our experts with biographical information (2<sup>nd</sup> quarter), and a promotion plan for getting our experts placed in articles, etc. (3<sup>rd</sup> quarter).

**Goal: Establish interest in participation and make go/no go decision on program by Q2 FY2013**

### **11.4 Awards**

The Forum will launch the 2012 Awards program in October, with nominations pursued in eNewsletters, on the web site, as well as via announcements at the September General Meeting. Finalists for the 2012 awards will be announced in December 2012, and the winners will be announced at SDR-WinnComm. Award winners will be promoted in a press release following the awards ceremony and posted on the web site.

### **11.5 Newsletter**

Our e-newsletters are currently our main vehicle of communication with our members as well as non-member target audience. In order to further strengthen the Forum's brand, while respecting our members' in-boxes, the frequency of emails will be reviewed and further refined. We are exploring further segmenting of our newsletters to better target the appropriate readership. Due to member feedback, we are considering splitting our member e-newsletter SDR, CR, DSA News & Opportunities to two different emails (one with news and one with opportunities) and sending each monthly (one every other week, equaling two emails per month total), rather than bi-weekly, and/or being made available for subscription via rss. We are also considering making a daily or twice per week feed of the member newsletter available for a fee, similar to Comms Daily. Event newsletters, which are distributed to our entire database continue to get high open and click-through rates, and have been indicated consistently in surveys as the main vehicle for event attendees to find out about our events. Project news will go out as needed per project updates.

**Goal: Establish metrics for revised communications model by the end of Q1**

### **11.6 Member Discounts**

The Forum offered 15 event discounts in FY2012 and Forum staff will continue to expand upon our discount offerings by pursuing partnerships with events of interest to our members. The

partnerships in turn strengthen the Forum's brand by providing a vehicle for cross-promotion and exposure to our target audience.

**Goal: Strengthen Forum's brand by increasing number of discounts/opportunities for cross-promotion by 30% to 20**

### ***11.7 Social Media***

Social media engagement increased substantially in FY2012, from 28 followers on Twitter and fans on Facebook to 173 fans on Facebook and 172 followers on Twitter. Forum staff will continue to use these vehicles weekly to strengthen the Forum's brand and promote participation in events and projects.

In order to further promote participation in FY2013, Forum staff will expand event promotion to include group pages in LinkedIn for our conferences. This will encourage engagement among attendees prior to the event as well as allow a vehicle for promotion of workshops, tutorials, etc., as the presenters can post information on their sessions, exhibitors can promote their booths, etc.

**Goal: Grow participation through establishment of event presence on LinkedIn and establishment of Google+ presence**

### ***11.8 Web Site***

In FY2012, the Forum conducted focus groups to evaluate the quality of the Forum web site and look for avenues of improvement. As a result, the home page underwent a slight redesign to improve efficiency and usefulness, thus strengthening the Forum's brand and encouraging participation. It was also determined that a larger shift may be in order, which will be researched and explored in FY2013 and possibly implemented in FY2014 depending on the availability of budget. The shift may involve the site to a different service provider (the provider we use for our groups portal) in order to increase efficiency and flexibility.

**Goal: To continue to keep Forum's web site dynamic, accurate and efficient.**

### ***11.9 Product and Services Directory***

In 2008 the Forum launched an online Products and Services Directory centered around the reconfigurable radio Value Chain. The goal of the directory is to promote our members as well as make the Forum a resource to the SDR, CR and DSA communities as a whole by providing a searchable directory whose results yield company names, an advertisement (supplied by member) and web site for each company in each category, thus driving traffic to our members' sites. Currently, 13 members have opted to include an ad for their organization.

In FY2012, the Forum updated the directory to include paid advertising space and a more pleasing interface. In FY2013, Forum staff will pursue ads by contacting each member's marketing department directly and then will further promote the directory when participation has increased. Promotion of the directory then effectively turns the Forum into a marketing arm for our membership. Note: non-member organization's will also be allowed to participate in the directory upon request, as required by law.

**Goal: Strengthen the Forum's brand by increasing member participation to 50% (51 ads).**

## **12 Other Corporate Administration**

### **12.1 Annual Meeting of the Members**

The Annual Meeting of the Members, as described in the Forum [Bylaws](#) will be held on Thursday, 10 January 2013 in Washington, DC in conjunction with the SDR-WinnComm Conference.

### **12.2 Corporate Filings**

The Forum will continue to evaluate and improve internal office functions related to financial controls and reporting, archival storage of documents, and membership initiation and renewal. Finance and Accounting Procedures will be updated in Q1 FY2013 to reflect modifications of the membership renewal process as well as the process for managing Value Added Tax in our European Events.

In addition, the Forum shall ensure filings as follows:

- 990 filing with the IRS – 15 November 2012
- Arizona and California Tax Exempt Returns – 15 November 2012
- Canadian Information Return – 15 November 2012
- Canadian Extra-Provincial Annual Report – 2 January 2013
- Arizona Corporate Commission Report – 15 January 2013
  - <http://starpas.azcc.gov/ar0046f.pdf>
- 1099s to recipients – 31 January 2013
- 1099 and 990s to IRS – 28 February 2013
- California Statement of Information Filing – Feb 2013
  - Odd years only in February
  - [http://www.sos.ca.gov/business/corp/pdf/so/corp\\_so100.pdf](http://www.sos.ca.gov/business/corp/pdf/so/corp_so100.pdf)
- Foreign Bank Account Form – 30 June 2013
- Fairfax County, VA Business, Professional, Occupational License-01 March 2013
- Fairfax County, VA Personal Property Tax-01 May 2013
- Virginia Corporate Commission Report-30 April 2013

### **12.3 Insurance**

In addition, the Forum shall perform an insurance review (D&O, E&O, Liability, etc.) to be completed to be completed in advance of the renewal date.

### **12.4 FY2014 Planning Cycle**

The FY2014 Operation Plan will be developed on the following schedule:

- Board Approval of High Level Goals for FY2014 – 12 March 2013

- High Level Goals and Ops Plan Process Presented to Group Leaders – 13 March 2013
- Draft Budget Presented to the Finance Committee – 26 April 2013
- Draft Plan Submitted to Officers – 10 May 2013
- Final Draft Approved by Forum Chair and CEO – 20 May 2013

The final plan will be presented to the Board of Directors for their approval during the June 2013 Board Meeting, and will be submitted to the membership for final approval immediately thereafter.

