WIRELESS INNOVATION FORUM™

SDR FORUM VERSION 2.0 WIRELESSINNOVATION.ORG

Annual Report

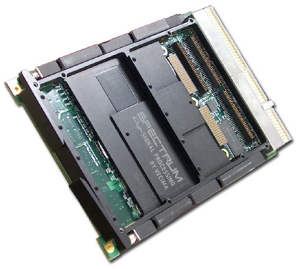
for

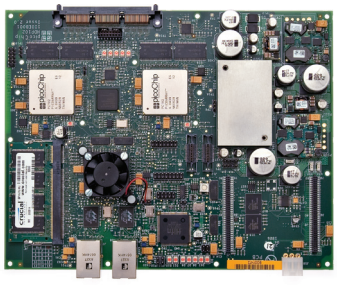
The Software Defined Radio Forum Inc.,

doing business as

The Wireless Innovation Forum

for the Year Ending
30 June 2011





About the Wireless Innovation Forum

Established in 1996, the Wireless Innovation Forum™ is an non-profit "mutual benefit corporation" dedicated driving technology innovation in commercial, civil, and defense communications around the world. Forum members bring a broad base of experience in Software Defined Radio (SDR), Cognitive Radio(CR) and Dynamic Spectrum Access (DSA) technologies in diverse markets and at all levels of the wireless value chain to address emerging wireless communications requirements through enhanced value, reduced total life cost of ownership, and accelerated deployment of standardized families of products, technologies, and services. The Forum acts as the premier venue for its members to collaborate to achieve these objectives, providing opportunities to network with customers, partners and competitors, educate decision makers, develop and expand markets and advance relevant technologies.

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Board of Directors

The Wireless Innovation Forum

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Forward by the Chair of the Forum

As I look back over the past year I am impressed at the accomplishments of the members and stakeholders of the Forum. 2011 has really been a productive year. In addition to our general meetings and conferences the Forum hosted three ad hoc events and four documents were balloted and approved by our members. In April, the Forum initiated a Webinar series presenting tutorial material in areas of broad member interest. All of these are evidence that the Forum is truly driving technology innovation in commercial, civil and defense communications worldwide.

Beyond the general meetings, the Forum organized and hosted several major and highly successful events. The SDR10 Technical Conference and Product Exposition in Washington DC, the European Conference on Communications Technologies and Software Defined Radio (SDR'11 WInnComm Europe) in Brussels, and the joint meeting between the Forum and US Joint Tactical Radio System Science and Technology Forum (JSTeF) provided valuable opportunities for our members and potential members to exchange information on the future of wireless communications. In addition, the Forum organized three ad-hoc events that supported the Forum's 2011 work plan: a SCA Next Roll Out meeting was held August 24-25 in Washington DC, a European Regional Meeting was held on Oct 11-14, 2010 in Antalya, Turkey (Hosted by Tubitak) with a workshop on "SCA Standards and Certification" and a TV White Space Communications Summit was held June 7, 2011 in Washington DC. Thank you to the Forum staff which has put in significant time and effort to make these ad-hoc events successful.

The members of the Forum also balloted and approved four documents in FY2011:

- Securing Software Reconfigurable Communications Devices (Document WINNF-08-P-0013-V1.0.0)
- Quantifying the Benefits of Cognitive Radio (Document WINNF-09-P-0012-V1.0.0)
- IPA - Information Process Architecture Volume I (Document WINNF-09-P-0020-V1.0.0)
- "Description of the Cognitive Radio Ontology" (Document WINNF-10-S-0007 -V1.0.0)

Continuing a productive FY2011 the Forum's membership are working on sixteen documents targeted to be balloted in FY2012. The Forum's Roadmap Committee has been working on the "Top 10 Most Wanted Wireless Innovations" that will also be published in FY2012.
This long list of Forum accomplishments were made possible by the significant contributions of time and resources from our member organizations, the technical and business expertise of the volunteer participants, and the dedicated work of the staff. On behalf of the Forum's leadership, I would like to express our deep appreciation for all of your efforts during the past year and thank you in advance for continuing this effort in Fiscal Year 2012 and beyond.
"Comments of the SDR Forum on the FCC's Innovation Notice of Inquiry" (Document SDRF-09-R-0019-V1.0.0)
"Commercial Baseband Technology Overview" (Document WINNF-09-P-0009-V1.0.0)
"Description of the Cognitive Radio Ontology" (Document WINNF-10-S-0007-V1.0.0)
Securing Software Reconfigurable Communications Devices (Document WINNF-08-P-0013-V1.0.0)
IPA Information Process Architecture Volume I (Document WINNF-09-P-0020-V1.0.0)

Continuing a productive 2010 the Forum's membership are working on fifteen documents targeted to be balloted in 2011 and has also established a Roadmap Committee that will work to develop the Forum's "Top 10 Most Wanted Wireless Innovations" in Fiscal Year 2011.

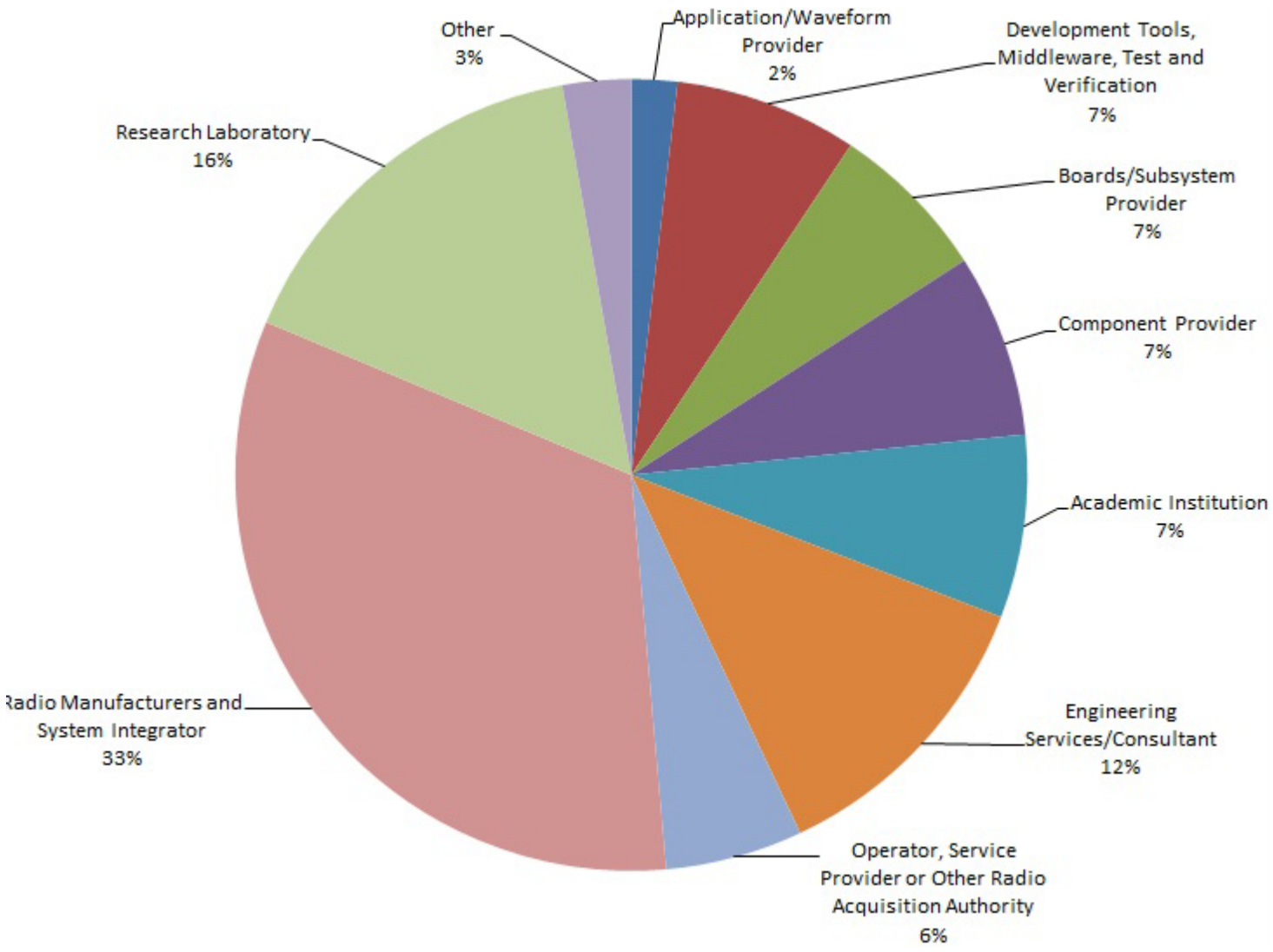
This long list of Forum accomplishments were made possible by the significant contributions of time and resources from our member organizations, the technical and business expertise of the volunteer participants, and the dedicated work of the staff. On behalf of the Forum's leadership, I would like to express our deep appreciation for all of your efforts during the past year and thank you in advance for continuing this effort in 2011 and beyond.

Bruce Oberlies
Chair of the Wireless Innovation Forum

2011 Membership

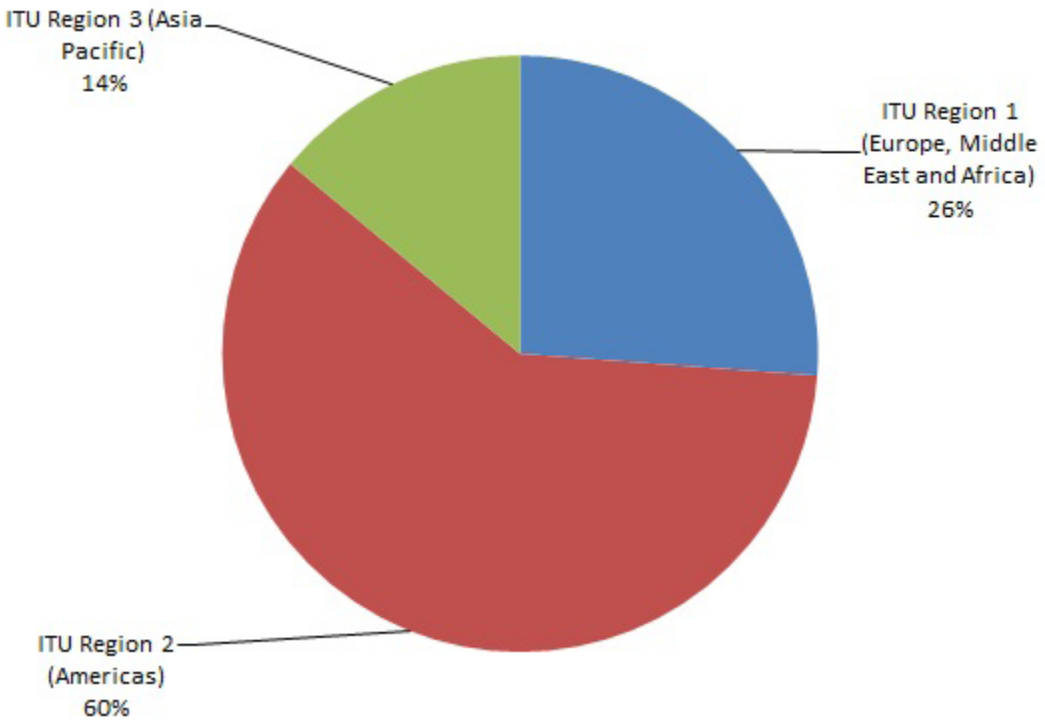
The membership of the Wireless Innovation Forum (SDR Forum Version 2.0) consists of commercial, defense, and civil government organizations including wireless service providers, network operators, component and equipment manufacturers, hardware and software developers, regulatory agencies, and academia. Individual representatives from these organizations include decision makers, planners, policy makers, technologists, educators, and program/product managers. Presently numbering more than 107 organizations, the Forum's membership spans Asia-Pacific, Europe, and North America.

Membership by Value Chain – 30 June 2011



2011 Membership (continued)

Membership by Region – 30 June 2011



FY2011 Program Review (1 July 2010 - 30 June 2011)

Organizational Structure

The Organizational Structure of The Wireless Innovation Forum as of 30 June 2010 is presented in the diagram below. The Forum is organized around five primary committees and a Roadmap Committee, 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 Next Generation Radio Technologies: 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 Advanced Wireless Networking and Infrastructure: 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" list

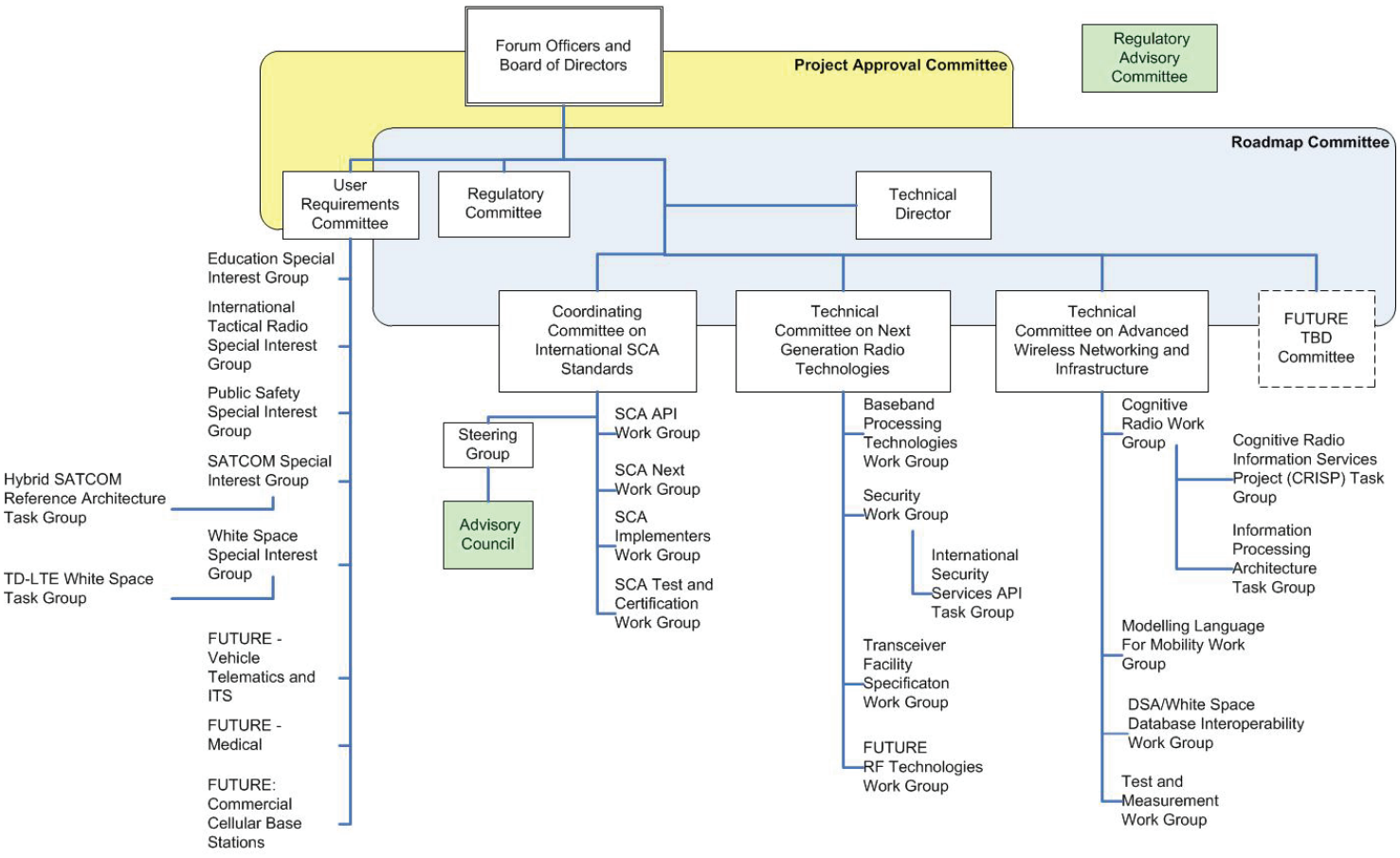


Figure 1: Wireless Innovation Forum FY2011 Organizational Structure

Key deliverables for 2011 from each element of the organization are provided in sections that follow.

Collaboration on Reports, Recommendations and Specifications

A primary purpose of the organization is to facilitate collaboration between members and the broader community to promote the advancement of software defined radio, cognitive radio and dynamic spectrum access technologies. To support this objective, the Forum held three General Meetings in fiscal year 2011. These meetings are the face-to-face working meetings of the Forum membership, providing them a venue to explore the reconfigurable radio market and to advance the Forum's work plan in support of the commercial, public safety, and international tactical radio communities. Each General Meeting also includes a one day workshop exploring a specific topic relevant in the members in supporting the organizations objectives. The general meetings held in FY2011 and the associated workshops are as follows:

- 67th General Meeting, 13to17 September 2010 in Schaumburg, IL
  - Workshop: "Going to Market with TV Band Devices: Long Term Promises, Near Term Actions"
- 68th General Meeting, 14 to 17 March 2011 in San Diego
  - Collocated with the JTRS Science and Technology Forum
- 69th General Meeting, 20 to 24 June in Brussels
  - Collocated with the Wireless Innovation Forum European Conference on Communications Technologies and Software Defined Radio (SDR'11 WInnComm Europe)

Three ad-hoc events were also held in FY2011 supporting the Forum's 2011 work plan:

- SCA Next Roll Out, 24 to 25 August in Washington DC
- European Regional Meeting, 11-14 October 2010 in Antalya, Turkey (Hosted by Tubitak)
  - Workshop: "SCA Standards and Certification"
- White Space Communications Summit, June 7, 2011 in Washington DC

In addition to these meetings, the Forum also provides teleconferencing and web conferencing services to facilitate collaboration between meetings, and maintains a group portal supporting file libraries, document management and discussion forums.

Through these services, the members of the Forum balloted and approved the following work products in FY2011, which have been made publically available through the Forum's document library (http://www.wirelessinnovation.org/page/Document_Library):

- Securing Software Reconfigurable Communications Devices (Document WINNF-08-P-0013-V1.0.0) – This report was developed by the Security Work Group to provide guidance, key considerations and recommendations for SDR developers and manufacturers regarding the design and manufacturing processes essential to producing appropriate security solutions for software reconfigurable radio platforms. It spans a comprehensive range of security topics such as considerations for stakeholders and other roles and their security needs as well as potential vulnerabilities, threats, attacks/exploits, and associated risk analyses.
- Quantifying the Benefits of Cognitive Radio (Document WINNF-09-P-0012-V1.0.0) – This report was developed by the Cognitive Radio Work Group for the world-wide telecommunications and spectrum community who need to understand the benefits of using cognitive radio technologies in next generation wireless systems. The report acts as a contribution to the ITU-R and lays the groundwork for regulatory organizations to understand the benefits and system design choices associated with cognitive radio technologies.

- IPA - Information Process Architecture Volume I (Document WINNF-09-P-0020-V1.0.0) – This report was produced by the Cognitive Radio Work Group for stakeholders in 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 interact with other systems with similar characteristics, but developed independently. The Information Process Architecture provides a general top-down model and a series of tools for depicting Operational, Systems, and Technical Standards Views of the structure of complex systems. The report will aid in defining, designing and selecting Cognitive Radio processes relevant and useful to Communication System stakeholders and, via a top-down approach, facilitate an improved understanding of the structure and relationships between Information Systems that span user domains, and allow users to assess the role of their systems with these architectural products.
- "Description of the Cognitive Radio Ontology" (Document WINNF-10-S-0007 -V1.0.0) – This specification was developed by the Modeling Language for Mobility Work Group for developers of next generation communication systems who want to create flexible and efficient communication protocols between advanced radio systems to support next generation features of vertical and horizontal mobility, spectrum awareness and dynamic spectrum adaption, waveform optimization, capabilities, feature exchanges, and advanced applications. The final report will include use cases, corresponding signalling plan, requirements and technical analysis of the information exchanges that enable these next generation features and is intended to lead to specifications/standards for languages and data exchange structures to support these capabilities.

In addition, members of the Regulatory Committee made two filings with the US Federal Communications Commission related to the use of Dynamic Spectrum Access Technologies:

- Ex Parte Letter to FCC for Rule Clarification on TVBD (Document WINNF-10-R-0014-V1.0.1)
- "Comments of the Wireless Innovation Forum to the FCC In the Matter of Promoting More Efficient Use of Spectrum Through Dynamic Spectrum Use Technologies" (Document WINNF-11-R-0001-V1.0.0)

Members of the Coordinating Committee on International SCA Standards also balloted and releases one requests for comment related to the JTRS Program's SCA Next Initiative:

- Request for Comment on Generalization of the Resource Factory Concept (Document WINNF-10-RFI-0005-V2.0.0)

Members also collaborated on the development of a number of other work products that are expected to be balloted in FY2012:

- "Business Models for Open Source Air Interfaces" – This report is being developed by the Commercial Baseband Processing Technologies Work Group 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 report 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.

- "Cognitive Radio Information Services Project : Anticipating Future CR Needs with the Development

of a Radio Environment Map (REM)" – This specification is being produced by the Cognitive Radio Work Group for third party database providers and white space radio manufacturers to provide database structures and standardized formats and functionalities that support 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.

- "Cognitive Radio Technology Survey for Public Safety Applications" – This survey is being developed by the Public Safety Special Interest Group for the 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. The survey 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 to:
  - Help public safety agencies plan communications system life cycle
  - Inform public safety standards and regulatory bodies regarding evolving systems capabilities
  - "De-mystify" cognitive radio for public safety leaders and users
  - Identify for researchers technology gaps and dependencies, and
  - Support roadmap development efforts of the Wireless Innovation Forum.

- "Database Interoperability Specifications" and "Database Synchronization Guidelines" – The DSA/White Space Database Interoperability Work Group will support white space database administrators and all entities that must communicate with them by defining the application layer communications of spectrum administration databases. Two separate documents will be developed by this group: "Database Synchronization Guidelines" which will establish methods, policies and best practice implementations including system operation, data ownership and confidentiality, information assurance and ecosystem integrity, integration with service provider operations, interference avoidance, mediation and incident response. "Device Interoperability Specifications" will define a pre-standard, FCC Rules compliant reference implementation that industry may develop against and that a formal standards effort may build upon. The work of this group will build on years of previous activity in this area, and has participation from a broad base of industry stakeholders including multiple candidate database administrators, TV band device manufacturers, and incumbent representatives.

- "Hybrid SATCOM Reference Architecture for Public Safety Applications" – This report is being prepared by the Satellite Communications (SATCOM) Special Interest Group for use by organizations such as the US Department of Homeland Security (DHS), Federal Emergency Management Agency (FEMA) and first responder providers who require the use of SATCOM systems to support emergency services during natural and/or man-made disasters . The report will document use cases where disruption of traditional terrestrial emergency services is expected, and explore the market need for integration of commercial and military satellite systems with terrestrial communications, highlighting areas where satellite communications provides both primary and back-up communications. The report will also propose a notional architecture for a hybrid LOS/BLOS platform compliant with the Forum's Information Processing Architecture. .

- "Information Process Architecture – Volume II" – This report is being produced by the Cognitive Radio Work Group for stakeholders in 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 interact with other systems with similar characteristics, but developed independently. The Information Process Architecture

provides a general top-down model and a series of tools for depicting Operational, Systems, and Technical Standards Views of the structure of complex systems. The report will aid in defining, designing and selecting Cognitive Radio processes relevant and useful to Communication System stakeholders and, via a top-down approach, facilitate an improved understanding of the structure and relationships between Information Systems that span user domains, and allow users to assess the role of their systems with these architectural products.

- "International Security Services API" – This specification is being developed by the International Security Services API Task Group for nations, international organizations and companies who need software interoperability and portability between international and independently developed software radios. The international radio security services API will specify how to interface and operate with a common set of radio security services improving interoperability and portability of software through the use of a common open software architecture.

- "Issues in the International Tactical Radio Market Domain" – This study is being performed by the International Tactical Radio Special Interest Group and identifies the trends and issues associated with the introduction and usage of SDR technologies in the international tactical radio market. The report is being prepared for tactical radio customers, primes, contractors and suppliers worldwide who need to understand the industry trends and barriers to achieving success using SDR concepts and technologies.

- "Realization Model for the Coordination of International SCA Standards" – This recommendation is being developing by the CC SCA Steering Group in collaboration with the CC SCA Advisory Council for stakeholders (manufacturers, vendors, governments) of the international SCA-based ecosystem who seek increased harmonization among SCA-based international standards. The recommendation, once complete, will provide a baseline for Coordination of International SCA Standards around the WInnF CC SCA and Advisory Council and that organizes the first meetings that comply with the defined model.

- "Security Profiles for Public Safety Radios" – This report is being prepared by the Security Work Group to provide a security concept of operations (CONOPS) for public safety SDR and produce a security profile for public safety SDR based on the document "Securing Software Reconfigurable Communications Devices" which was completed in 2008. This specification is being created for designers, developers and manufacturers of Public Safety SDR Devices who need guidance on the process that should be followed to determine which of the security services would be appropriate and give range of sample analyses.

- "SCA Certification Guide #2 - SCA Test, Evaluation and Certification Model Realization". This Recommendation is being developed by the SCA Test and Certification Work Group for procurement authorities, producers of radios, radio components and tools who are active in markets where the standardised SCA is relevant and compliance is required to provide guidance on establishing test and certification capabilities for "category 1" standards to ensure that compliance is met in an efficient way including time to market and cost. The recommendation will aim to define the realization aspects (including business models) of the role based, generic certification process of SCA based SDRs, as defined in the Report "Test and Certification Guide for SDRs based on SCA Part 1: SCA" and will define and analyze candidate approaches and give recommendations to satisfy the responsibilities of the roles identified in that document.

- "SCA WG API Implementers Aids" – This report is also being developed by the SCA API Work Group to give SCA radio and software developers an "Implementers Guide" providing a common

interpretation of published SCA APIs along with hints and examples on their implementation, and filling in additional API specifications as necessary.

- "Software Communications Architecture Interpretation Guide" – This report is being prepared by the SCA Implementers Work Group for the participants in the international software defined radio community where the SCA and SCA derivatives are of 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.

- "TD-LTE in White Space" – The TD-LTE White Space Task Group will complete work on this report which is being developed for Operators, Network Infrastructure Venders, 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.

- "Test Guidelines and Requirements for Television Band Devices (TVBDs) Designed to Operate on Available Channels in the Broadcast Television Frequency Bands" – This report is being developed by the Test and Measurement Work Group 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 identify unique test challenges created by SDR/CR radio system technology used for TVBDs and will provide a basis for test and certification.

- "Transceiver Facility Specification – Version 2.0" – This revised specification is being developed by the Transceiver System Interface Work Group and captures 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. The specification is being prepared for radio system integrators, waveform providers, SDR platform providers and radio head manufacturers, who seek increased efficiency when integrating waveform applications with target platforms (incl. radio heads), and who seek increased portability for their waveform applications.

In addition, the Forum's membership has established a Roadmap Committee that will work to publish the Forum's first "Top 10 Most Wanted Wireless Innovations" in Fiscal Year 2012.

Technical Conference

The Forum held its annual US technical conference and product exposition November 30th to December 3rd, 2010 at the Hyatt regency in Crystal City, Virginia. This event acts as the primary vehicle for the organization to fulfill its education mandate, and featured more than 100 papers focusing on software defined and cognitive radio technologies, standards, regulatory issues and business activities - presented by an international array of researchers and organizations in the commercial, civil

and defense communications markets to attendees from over 22 countries. The event provides an international perspective on the current state of the art for advanced wireless communications and included keynotes, workshops, panels, tutorials and product demonstrations from over 35 exhibitors.
In support of this event, in 2010 the Forum arranged a travel grant with the US National Science Foundation to provide support to students at US Universities active in software defined radio and cognitive radio in attending the conference. The goal of this grant was to provide students with exposure to industry and the real problems they will face when entering the workforce in the design, development, manufacture and deployment of advanced wireless systems. Such exposure will help them to better understand how their course work at university applies in a real world setting, and will accelerate the pace at which they become productive upon graduation. At the conference they will meet and interact the leading researchers and practitioners in this field. 33 travel grant awards were made by the conference's program committee, with grants of up to $375 made to students living within 300 miles of the event, and grants of up to $650 made for students living more than 300 miles away. Grants were made against actual expenses, and receipts were required before payment was made. The Forum also provided lodging at the conference hotel for a fixed number of nights as a matching contribution.

The Forum is scheduled to hold its next annual US technical conference and product exposition November 29th to December 2, 2011 at the Hyatt regency in Crystal City, Virginia. In FY2011, the Forum formed a Technical Program Committee, issued the call for papers, tutorials, demonstrations and workshops for this event, and began soliciting for sponsors and exhibitors.

In addition, in 2011 hosted its first European Conference on Communications Technologies and Software Defined Radio. This conference was held June 22 to 24, 2011 in Brussels, Belgium and featured over 60 papers and presentations focusing on research and development related to software defined radio, cognitive radio and dynamic spectrum access in European Programs. The conference attracted over 120 delegates from 25 countries representing organizations at all level of the wireless value chain. The conference also included a small exhibition with 10 exhibitors. The Forum is scheduled to hold its second European Conference on Communications Technologies and Software Defined Radio in June of 2012. In FY2011, the Forum began forming the program committee for this event to define the technical program.

Webinars

In April of 2011, the Forum began hosting a Webinar Series presenting tutorial material on specific technologies or other areas of broad member interest. Two webinars were held in FY2011, with total combined registration of 130:

- "Introduction to Spectrum Policy for Technologists", conducted on 28 April 2011
- "The Software Communications Architecture", conducted on 26 May 2011

The Forum plans to continue these webinars in FY2012. Participation in these webinars will always be free for members, but non-members may from time to time be invited to participate for a fee.

Achievement Awards

Each year, the Forum presents awards in three categories:

- Wireless Innovation Forum International Achievement Award – This award is presented to an individual, group of individuals, or organization that made especially significant contributions to international furtherance or acceptance of Software Defined or Cognitive Radio
- Wireless Innovation Forum President's Award – This award is presented to individuals in recognition

of their sustained outstanding contributions in support of the Wireless Innovation Forum and its activities.
- Wireless Innovation Forum Technology of the Year – This award is presented to an individual or organization for a breakthrough product or technology in the field of software defined or cognitive radio as selected by the members.

In FY2010, The Communications Research Center Canada was awarded the International Achievement Award, Mr. Terry Anderson of ITT was awarded the President's Award, and the Ettus Research Universal Software Radio Peripheral product family was awarded the Technology of the Year.

Other Member Services

The Forum manages a number of other smaller programs for its members that are collectively referred to as "other member services". These include the following:
- Linked-In Group – The Forum manages a members-only Linked-In group to facilitate networking among representatives of its member organizations.
- Member Newsletter – The Forum provides up to date information on opportunities and news within the advanced wireless community through the Forum's bi-weekly "SDR News and Opportunities" reports
- Member Discounts – The Forum negotiates discounts for its members for relevant market studies, events and other items. In FY2011, the Forum secured discounts as follows:

Products/Services
- 10% Discount on membership in The Object Management Group.
- 50% discount for members interested in purchasing Frost and Sullivan's report "U.S. Military Software Defined Radio Markets"
- 10% discount for members interested in purchasing Forward Concepts Markets Study market research study number 8030 entitled – "Cellular Handset and Chip Markets '08, An In-Depth, Global Analysis of Cellphones, Chips & Subscribers" and their market research study number 7020 entitled - Cellular Handset and Chip Markets 07, An In-Depth, Global Analysis of Cellphones, Chips and Subscribers.
- 10% discount for Wireless Innovation Forum members on the applicable "North American Price" for all Elsevier Communications Engineering print books that are in-stock.
- One hard copy version at a discount of 25% off the then applicable "North American Price" or "International Price" or one electronic version of the Report (in .pdf format) and an "Enterprise License" to distribute copies thereof to the eligible Forum Member's employees on a worldwide basis, at a discount of 25% off the then applicable "Enterprise License" price discount for Wireless Innovation Forum members interested in purchasing ARCchart Market Research Report entitled "Software-Defined Radios in Mobile Phones, an Analysis of the Maturing Wireless Technology Set to Disrupt the Mobile Ecosystem.
- 25% discount on the "Single User" or "Multi-User" price as shown on their report website for Pioneer Consulting to provide a discount for members interested in purchasing their market research study entitled "Commercial Software Defined Radio - The Emergence of Multiprotocol Multiband Support in Base Stations".
- Avis is offering a year-round link for rental discounts for Wireless Innovation Forum members.

Events
- 20% off China 4G World/LTE Summit, September 9 - 10, 2010, The Regent Beijing Hotel
- 15% off The IET seminar on Cognitive Radio Communications, Oct 4, 2010London: Savoy Place
- 20% off 4G Wireless Evolution Conference, Oct. 4-6, 2010, Los Angeles, California
- 15% off Next Generation Mobile Devices, 7-8 October 2010, London, UK

- 20% off Mobile Broadband Forum 2010, 12-15 October 2010, Lisbon, Portugal
- 20 % off Software Defined Radio 2010, 26 – 28 October 2010, Sheraton Roma Hotel, Rome, Italy
- 50% off The Broadband Expo, 1-3 Nov 2010, Dallas, Texas
- 20% off 4GWE, 2-4 February 2011, Miami, Florida
- 20% off registration and exhibiting at 2011 Software Radio Communications Summit, 7-9 February 2011, Tysons Corner, Virginia
- 15% off SCA Introduction Course and Development Demonstration, 15-17 February 2011, San Diego, CA
- £100 registration discount for Mobile Deployable Communications, 28 February - 1 March 2011, Prague
- 25% off IWCE, 7-11 March 2011, Las Vegas, Nevada
- £100 registration discount for MilSpace 2011, 4 & 5 April 2011
- 20% discount for Tactical Communications 2011, 12-13 April 2011
- 20% off LTE Forum 2011, 12-13 April, Stockholm
- 100 registration discount for International Software Radio, 6 & 7 June 2011, London
- 20% off registration and exhibiting for Network Centric Warfare, 7-9 June 2011, Brussels

Product and Services Directory – This directory provides insight into products and services offered by Forum member organizations to help individuals operating at all levels of the wireless value chain to quickly find partners that can help address their specific requirements. There is no cost for members to participate in this directory.

Current Members

Adaptrum, Inc.
Aerospace Corporation Division: Communications Systems Subdivision
Agilent Technologies
Air Force Research Lab - IFGC
Airity
Alliance for ESSOR (a4ESSOR)
Alpha Design Technologies Pvt. Limited
Aselsan A.S.
Astrium, Ltd.
Bharat Electronics Limited (Central Research Lab)
Boeing
CDAC
Center of Excellence
CEVA
Cinterion Wireless Modules GmbH (was Siemens AG)
Cognitive Radio Technologies, LLC
Cognovo Ltd.
Coherent Logix, Inc.
Communications Research Centre (CRC)
CTVR
DataSoft Corporation
Datron World Communications Inc.
DEAL-DRDO
DSO National Laboratories
EID, SA
Elektrobit Wireless Communications Ltd
Etherstack
ETRI
Ettus Research LLC
Fairwaves
FMV
Fraunhofer-Institut
General Dynamics C4 Systems
GIRD Systems, Inc.
Harris Corporation
Hitachi Kokusai Electric Inc.
Huawei Technologies Co., Ltd
Hypres Inc
IDA (Institute for Defense Analyses)
Indra Sistemas
Innovative Integration
Institute for Infocomm Research
Institute for Telecommunications Research
ISR Technologies
ITT Exelis
Key Bridge Global LLC
Kolodzy Consulting, LLC
L-3 Communications Government Services Inc.
Mathworks
MIPS Technologies
MIT Lincoln Laboratory
MITRE Corp (Washington C3 Operations)
Motorola
NASA Glenn Research Center
NAVSYS Corporation
NCOIC
NEC Corporation
NICT
NPSTC
Oak Ridge National Laboratory
Objective Interface Systems, Inc.
OMG
Optimum Semiconductor Technologies, Inc.
Pentek Inc.
PrismTech
QinetiQ
Radmor SA
Rafael Advance Defense Systems Ltd.
Raytheon
Redline Communications
Research in Motion Limited
Reservoir Labs
Rockwell Collins
Rohde & Schwarz
Royal Institute of Technology (KTH)
RWTH Aachen University
SAIC
SecureComm, Inc.
Selex Communications
Shared Spectrum Company
Sigmatix, Inc.
Southwest Research Institute
Space Coast Communication Systems, Inc.
SPAWAR JPEO JTRS
Spectrum Bridge, Inc.
Spectrum Signal Processing by Vecima
ST Microelectronics
Stevens Institute of Technology
Sunair Electronics
Tata Power SED
TDK Corporation
Tecnalia Research and Innovation
Telefunken RACOMS
Thales Communications
Tubitak Uekae
UC San Diego
Ultra Electronics Inc
University of Oulu
Uurmi Systems Pvt Ltd
Vanteon Corporation
ViaSat, Inc.
Viettel Technologies, JSC
VIStology, Inc.
Wireless @Virginia Tech
xG Technology Inc.
Xilinx
ZTE Corporation

Message from the Treasurer

I am pleased to present the audited financial report for the Wireless Innovation Forum, indicating that the overall financial health of the organization continues to be strong. The Forum's Statement of Financial Position showed total assets of $ 472,814 as of June 30, 2011.

Fiscal year 2011 financial performance missed plans with a net loss of $ 159,714 against a planned net loss of $ 73,204 primarily due to lower revenue for both membership dues and sponsorship fees collected during the period. Expenses were managed carefully by the Forum's leadership team to ensure continued fiscal stability, even during these turbulent global economic times. Note that the original net loss plan for the year was largely attributed to the payment for two individual European events within a single fiscal year due to the cash basis operating model employed by the Forum. Other key Fiscal Year 2011 financial performance parameters include:

- Total Revenue $ 954,432
- Total Expenses $ 1,114,146

The Wireless Innovation Forum is a tax exempt organization under Section 501(c)(6) of the Internal Revenue Code and operates on a modified cash accounting basis in accordance with Statement of Financial Accounting Standard (SFAS) No 117, Financial Statements of Not-for-Profit Organizations.

I submit this report with the certainty that the Wireless Innovation Forum continues to be a financially sound organization.

Mark Turner
Wireless Innovation Forum Treasurer

Summary Statement of Forum Assets, Liabilities, and Net Assets (Modified Cash Basis) for Years Ending 20 June 2010, 30 June 2009 and 31 December 2008[1]

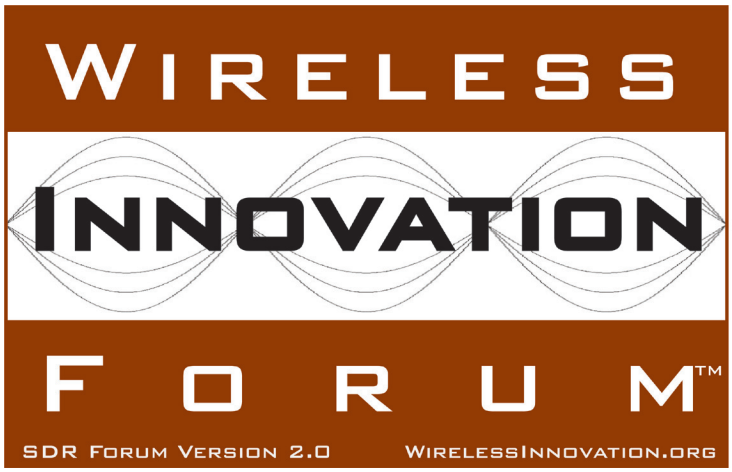
	30 June 2011	30 June 2010
Assets		
Current Assets		
Cash and Cash Equivalents	311,705	$631,898
Short Term Investments	160,479	
Total Current Assets	*472,184*	*631,898*
Long Term Investments	-	-
Total Other Assets	-	-
Total Assets	**$472,184**	**$631,898**
Liabilities and Net Assets		
Net Assets		
Unrestricted Net Assets	472,184	631,898
Total Net Assets	*472,184*	*631,898*
Total Liabilities and Net Assets	$472,184	$631,898

1Summary statement is based on the report from the independent auditor, and should not be considered complete. Full audited financial statements, including notes, are available for review upon request. The Software Defined Radio Forum Inc.'s Form 990 filings with the US Internal Revenue Service are publically available at http://www2.guidestar.org.

Summary Statement of Forum Revenues, Expenses, and Change in Net Assets (Modified Cash Basis) for Years Ending 30 June 2011, 30 June 2010.

	30 June 2011	30 June 2010
Unrestricted Net Assets		
Revenue		
Membership Fees	455,000	$450,320
Facility Fees	376,500	421,598
Program Fees	105,683	112,850
Government Grant	14,013	11,261
Interest and Other Revenue	3,236	8,030
Total Revenue	*954,432*	*1,004,059*
Program Expenses		
Advertising	17,859	24,599
Facilities and Event Food	339,781	243,165
Professional Fees	25,571	15,254
Legal	47,428	2,947
Other Program Expenses	29,745	20,161
Total Program Expenses	*460,384*	*306,126*
General and Administrative Expenses		
Payroll Expenses	406,086	461,764
Bank Charges	24,532	18,715
Consulting	44,929	-
Dues and Subscriptions	13,212	13,774
Insurance	6,420	6,484
Miscellaneous and Other Expenses	41,947	45,893
Office Management	36,626	28,910
Promotional Items	5,553	-
Public Relations	-	695
Telephone	11,062	11,863
Travel and Transportation	45,109	39,412
Website	18,286	24,642
Total General and Admin. Expenses	*$653,762*	*$652,152*
Change in Net Assets	**(159,714)**	**45,781**
Net Assets Beginning of the Period	*631,898*	*586,117*
Net Assets End of the Period	$472,184	$631,898

[2]Summary statement is based on the report from the independent auditor, and should not be considered complete. Full audited financial statements, including notes, are available for review upon request. The Software Defined Radio Forum Inc.'s Form 990 filings with the US Internal Revenue Service are publicly available at http://www2.guidestar.org



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