



## **Minutes of the SDR Forum 60<sup>th</sup> General Meeting 17 September 2008**

The 60<sup>th</sup> General Meeting of the SDR Forum was held September 8<sup>th</sup> to 11<sup>th</sup> in Boston, Massachusetts. This document provides the minutes of the meeting.

Drop boxes for the Boston meeting can be found at:  
[http://www.sdrforum.org/pages/boston\\_08\\_dropbox/](http://www.sdrforum.org/pages/boston_08_dropbox/)  
[http://www.sdrforum.org/pages/boston\\_08\\_workshop/](http://www.sdrforum.org/pages/boston_08_workshop/)

The feedback form for this meeting can be found at:  
<http://www.sdrforum.org/BostonFeedback>

### **Opening Plenary: Monday 8 September 2008**

The meeting was called to order at 12:30 PM by the Chair of the SDR Forum, Dr. John Chapin.

Attendance was checked with the COO and it was determined that a quorum was present.

Dr. Chapin then ask for a motion waiving the reading and approving the minutes of the 59<sup>th</sup> meeting held in Portland. Pete Cook representing Hypres made the motion, John Fitton representing Harris Corporation seconded. Hearing no discussion, Dr. Chapin called for the vote and the motion was approved with no negative votes and no abstentions.

Dr. Chapin then initiated a review of the agenda for the 60th General Meeting and adjustments were made based on feedback received.

Dr. Chapin then asked if there was any new business and hearing none, called for a motion to accept the agenda and adjourn the meeting until the closing plenary to be held on Wednesday at 16:30. John Powell representing NPSTC so moved, Fred Frantz representing L3 Communications seconded, Dr. Chapin called the vote. The motion was approved with no negative votes and no abstentions.

The meeting was adjourned at 13:30.

### **Key Accomplishments in Portland**

The following defines the projects that will be worked on during the 60<sup>th</sup> General Meeting of the SDR Forum in Boston, Massachusetts, organized by committee.

### **Project Approval Committee**

The Project Approval Committee approved the project proposals for two new projects:

- **SDR Forum Report on Programmable Baseband Processing Technologies**, which will be developed by the newly formed Commercial Baseband Processing Work Group. This group will provide a technical description of currently available commercial technologies for SDR baseband processing and the tools used to generate waveforms executing on SDR platforms. These include both infrastructure and handset solutions. Some synthesis and projections of where technologies are headed is also included.
- **Increment 1 (V.1.0.0) of the Transceiver Facility Specification**, which will be developed by the Transceiver Subsystems Interfaces Task Group. The project is intended to define Increment 1 (V.1.0.0) of the SDR Forum specification “Transceiver Facility Specification”. Increment 1 shall provide solid basis for the development of the specification effort. It will therefore target:
  - A complete description of the specification basic approach and methodology, with elementary general level requirements specification,
  - A specific chapter reporting on Base Stations Manufacturing business case,
  - A limited scope for the analysis-level requirements specification,
  - A limited number of implementation-level requirements specification.

Discussion related to the approval of these projects by the SDR Forum Project Approval Committee is captured in separate minutes.

### **Markets Committee**

- Participation in the 2009 Mobile World Congress – the Markets committee had been exploring having the SDR Forum host a booth for SDR Forum members at the 2009 Mobile World Congress in Barcelona. The Forum did not receive sufficient commitment from Forum members in time to take advantage of this opportunity, so the idea was table to be tried again next year.
- Safety Critical Special Interest Group – the Markets Committee discussed the future of the Safety Critical SIG, given the lack of participation in this activity. The initial feedback was that no one knows what a Safety Critical SIG does, and that the former name of Avionics SIG was more intuitive. The committee discussed 3 options:
  - End the SIG

- Work with interested parties to reform the SIG and define specific problems
- Transfer the activity to the Technical Committee. It was felt that there should be some interest in a DO-178B certifiable implementation of the SCA, and defining the requirements for such and implementation may be an appropriate activity for the SCA Work Group.

The committee agreed to follow up with the SIG chair to discuss this and make a decision during the operations planning cycle

- Market Study – the committee discussed commissioning a new market study on behalf of the members, but no consensus was reached on what market to explore. This will be followed up on during the operations planning cycle.
- Public Safety Special Interest Group – During the Boston meeting the Public Safety SIG finalized the chemical plant scenario to be explored in the document entitled *Use Cases for Cognitive Radio Technology in Public Safety Systems, Part 2* and began preparing the document for ballot. In addition, the Public Safety SIG continued to mature the cost model tools they had been developing to support tradeoff analysis associated with SDR. The SIG plans to complete a report on these tools, and provide this report along with the associated spreadsheets and databases as reference implementation to be offered on the SDR Forum website. They also discussed offering the artifacts of this project to the National Public Safety Telecommunications Council for “open source model” maintenance. Finally, the PS-SIG also met jointly with the Security WG to discuss providing support to the Security WG in defining a security profile for Public Safety radio devices. A collaborative plan was defined allowing the Public Safety SIG to provide inputs to and reviewed and approve the results of this activity.
- International Radio Special Interest Group – The ITR-SIG also continued to mature their report entitled “*Issues in the International Tactical Radio Market Domain*”. As a part of this activity, the ITR-SIG produced a white paper on certification issues in response to a request from the SCA Test and Evaluation Task Group. This white paper was jointly reviewed with the SCA T&E Task group, and will be added as an addendum to the ITR report and all elements will be integrated into the report. The ITR-SIG also met jointly with the Security Work Group to discuss requirements for an international Crypto API.
- Secondary Spectrum Access Task Group – This new group met to discuss their plans in defining the use cases and requirements for independent test of devices that have “non-primary” access to the spectrum. Next steps for this group are to 1) Change their name to be more intuitive, 2) refine their project plans and proposal to seek project approval

### **Regulatory Committee**

- SDR Forum Regulatory Agenda and Regulatory Recommendations – The Regulatory completed work on the “*Draft Regulatory Recommendation on Technology and Service Neutrality*”. This document was voted out of the project group and will now be balloted at the committee level.

### **Technical Committee**

- Cognitive Radio Work Group – The CRWG reviewed the response material for the “*ITU response document to questions on Cognitive Radio*” and discussed next steps following the ballot process. In addition, the group discussed initiating a new project quantifying the benefits of cognitive radio from literature. The idea for this project is to review available cognitive radio literature to identify and compile quantifiable benefits to cognitive radio:
  - Specify who accrues the benefit (stakeholder)
  - What’s the problem being solved?
  - What’s the solution (algorithm)?
  - How much do they benefits / tradeoffs from the CR application?

Next steps identified for this project are identify and solicit key contributors, define an agreed upon work plan, and draft a project proposal for submission to the Project Approval Committee.

- Commercial Baseband Processing Work Group – This group met briefly to make plans for the official kick off to this group to be held in conjunction with the SDR08 Technical Conference and Product Exposition that will be held October 27<sup>th</sup> to 29<sup>th</sup>, 2008 in Washington DC
- Crypto API Project – A pre-formation meeting of the Crypto API project was held, defining actions necessary to move this project forward for approval. The next steps identified to move this project forward were to define the value of this activity to international organizations and ally nations, and to identify a co-chair from a non-US member organization.
- Meta-language for Mobility Work Group - The MLM WG completed voting of the document entitled “Use Cases for MLM Language in Modern Wireless Networks” and promoted the document to the Technical Committee for balloting. They also began planning for the next phase of their larger project, which is the development of a comprehensive ontology for the domain.
- SCA Work Group
  - The SCA Interpretation Guide task group defined a work plan to obtain a common understanding and interoperable implementations of the SCA through an online discussion forum in the SCA Group portal. This guide will serve as input to the SCA CF developers and Test Developers during the Test and Certification process
  - The SCA API Task Group continued work on the “*SCA WG API Implementers Guide*”, including discussing the Vocoder Loopback

Control extensions and discussing the roadmap API specifications to examine next. They also began developing an SCA implementation model of the XCVR API under development by the Transceiver Subsystem Interface Task Group.

- The Test and Evaluation Task Group continued work on the “*Test and Certification Guide for SDRs based on SCA Part 1: SCA*”. As a part of this project, they defined two separate processes associated with test and certification:
  - SCA Certification Installation Process: The non-recurrent actions required to define all that is needed to perform a certification
  - SCA Certification Process – The recurring actions associated with doing the certification.

The SCA Test and Evaluation Group intends to complete work on this document by the January meeting

- RF Technology Project – A meeting was held to discuss the proposed RF technologies project, the scope of the project was discussed and additional participants were identified. The consensus was that this was an important project for the SDR Forum, but that the group would need to secure additional committed contributors before moving forward.
- Security Work Group – The Security Work group reviewed and approved changes to the specification entitled “*Securing Software Reconfigurable Communications Technology*” and promoted this document to the Technical Committee for balloting. They also completed work on a project proposal for defining a security profile for public safety SDRs based on the specification. This proposal was submitted to the project approval committee for review. In anticipation of approval of this project, the group held joint meetings with the Public Safety Special Interest Group to begin developing the concepts of operation and case studies necessary to define this profile.
- Smart Antenna Work Group: The Smart Antenna WG continued to mature the “*Smart Antenna Specification: PIM and PSM for Smart Antenna*” undergoing standardization through the Object Management Group. A key activity of the Boston meeting was to define and get approval for a coordinated schedule for moving the document through both processes in a timely manner.
- Test and Measurement Task Group – The T&M Task Group continued to analyze the responses received to their RFI and develop a report on this analysis entitled “*Test and Measurement of unique features for Software-Defined/Cognitive Radios*”. They also set a work plan for maturing their document over the next 3 months, including defining possible solutions to some of the unmet testing needs as perceived by the responders in the report

- Transceiver System Interface Task Group – The TSI Task Group continued to mature the document entitled “*Transceiver Facility Specification*”. The intention of this group is to begin balloting of the draft specification in November.

## **Other Highlights of the Meeting**

### ***Keynote address by Dr. William Lehr of the Communications Futures Program (CFP) of the Massachusetts Institute of Technology***

A keynote presentation during the plenary session on September 10<sup>th</sup> by William Lehr entitled “Building the Ecosystem for Commercial Cognitive Radio”. This talk will provide an economist's perspective on the public policy and business challenges of building a healthy ecosystem for cognitive radio and associated innovative radio technologies. William Lehr is an economist and researcher in the Computer Science and Artificial Intelligence Laboratory (CSAIL) at the Massachusetts Institute of Technology (MIT), where he helps direct the Communications Futures Program (CFP). Dr. Lehr's research focuses on the economic and policy implications of broadband Internet access, next generation Internet architecture, and radio spectrum management reform. In addition to his academic work, Dr. Lehr provides business strategy and litigation consulting services to public and private sector clients in the US and abroad. Dr. Lehr holds a PhD in Economics from Stanford and an MBA in Finance from the Wharton School, and MSE, BA, and BS degrees from the University of Pennsylvania.

***Regional reports were also presented from representatives from ITU regions 1, 2, and 3 as well as liaison reports on relevant activities from representatives of IEEE SCC41, the OMG, the E3 Program, and the JTRS Science and Technology Forum.***

## **Closing Plenary – Wednesday, 18 June 2008**

The meeting was recalled to order at 16:30 hours by Dr. John Chapin.

***Presentation by John Fitton on the SDR Forum Awards Program*** – John Fitton representing Harris Corporation and chair of the SDR Forum Awards Committee gave an introduction to the SDR Forum awards program. Each year the SDR Forum makes awards in 2 categories

- The SDR Forum Industry Achievement Award - This award is presented to an individual, or group of individuals, who have made an especially significant contribution to the development, furtherance and/or acceptance of Software Radio Technology. Only one such award is made each year.

- The SDR Forum Contributor Award - This Award is presented to individuals in recognition of their sustained outstanding contributions in support of the SDR Forum and its activities. Only one such award is made each year.

The winners of these awards will be announced on October 30<sup>th</sup> 2008 at the awards luncheon to be held at the SDR 08 Technical Conference and Product Exposition being held in Washington DC ([www.sdrforum.org/sdr08](http://www.sdrforum.org/sdr08)). Mr. Fitton invited SDR Forum members to submit nominations for the award program using the nomination form that is available online at:

<http://www.sdrforum.org/pages/aboutTheForum/halloffame.asp>

and indicated that the deadline for submissions was October 15<sup>th</sup> 2008.

***Presentation by Pete Cook on proposed changes to the SDR Forum Bylaws***

– Pete Cook representing Hypres and Chair of the SDR Forum Governance Committee presented a proposed set of changes to the SDR Forum's bylaws. These changes are largely to bring the Bylaws up to date with how we are actually doing business, given the changes in the operations that have occurred over the past 6 years through resolutions of the Board of Directors. In addition, some "tweaks" were required in the Bylaws to support our approved strategy and current US and California law. Mr. Cook indicated that the SDR Forum Board of Directors does not believe that any of these changes will be an issue for the Membership, and that the Board unanimously approved sending the revisions to the membership for approval at the upcoming Annual meeting on to be held on October 29<sup>th</sup> in conjunction with the SDR08 Technical Conference and Product Exposition in Washington DC.

***Out Briefs*** – Out briefs were then given on the outcomes of the Boston meeting by the chairs of the Technical Committee, the Markets Committee, and the Regulatory Committee.

***Ballots*** – Following the presentation of the out briefs, Dr. Chapin initiated balloting activity on two documents:

- Document SDRF-06-P-0009-V0.6.0 entitled "Cognitive Radio Definitions and Nomenclature". Dr. Chapin asked for a motion to approve the document, and the motion was made by James Neel representing Cognitive Radio Technology LLC, and was seconded by John Fitton representing Harris Corporation. Dr. Chapin asked for discussion and hearing none, called the question. The ballot passed and the document was approved by unanimous consent.



- Document SDRF-08-R-0006-V0.6.0 entitled “Endorsement of JTRS SCA 2.2.2”. Dr. Chapin asked for a motion to approve the document, and the motion was made by Ruediger Leschhorn representing Rohde & Schwarz, and was seconded by Eric Nicollet, representing Thales. Dr Chapin asked for discussion and hearing none, called the question. The ballot passed and the document was approved by unanimous consent.

#### Close of the 60<sup>th</sup> General Meeting

Following the completion of the balloting process, the meeting was adjourned at by Dr. Chapin at 17:30 hours.