



The SDR Forum Starts Up Two New Potential Projects at Rome Meeting, Hosts All-Day SCA Test and Evaluation Workshop and More

SDR Forum actively seeking participants for 2 potential new projects

RF Technologies Project within the R&D Work Group – the SDR Forum is exploring the formation of a new project focused on presenting a baseline summary of the state of the art for RF technologies for use by the Forum’s members and their customers. This report will cover technology areas that include antennas/arrays, RF and IF chipsets, broadband amplifiers, frequency agile filters and co-site interference cancellers that can be used in software defined and cognitive radio equipments, and will forecast the roadmap for the advancement of these technologies over the next several years. Unlike the use of trade magazines, which require constant monitoring by SDR Forum members in a consistent fashion to keep up with the current state-of-the-art, or the use of text books, which may not be updated frequently enough to keep up with this rapidly changing technology area, leveraging leading experts in this field to provide a set of useful documents and presentations for the use of the SDR Forum’s members. The SDR Forum RF Technologies report will support organizations within the SDR Forum and their customers who need to keep abreast of RF and related technologies that may be used in SDR and CR devices and the roadmap for these technologies over the next several years by capturing this information in a single Moore’s law cycle, leveraging leading experts in this field to provide a set of useful documents and presentations for the use of the SDR Forum’s members.

Commercial Baseband Processor Work Group – the SDR Forum is exploring the formation of a group focused on supporting the needs of the baseband processor community and promoting the use of programmable processing technologies in next generation radio platforms. Initial activities of such a group could include:

Producing a report that can be used to help regulators and original equipment manufacturers understand the state of the art and medium term roadmap for baseband processing technologies,

Defining standard “radio specific” API’s for abstracting the hardware interfaces and IP interfaces in wireless SoC devices, working in cooperation with the SDR Forum’s Transceiver API Task Group and other organizations such as the MIPI Alliance

Coordinating with the SDR Forum Metalanguage for Mobility Work Group to define a standard protocol for “querying” radio devices to determine processing capabilities

People interested in participating in either of these two potential activities should contact SDR Forum CEO Lee Pucker, lee.pucker@sdrforum.org.

Other highlights of the meeting included:

Workshop on SCA Test and Evaluation - The Software Defined Radio (SDR) Forum hosted an all-day workshop on Software Communications Architecture (SCA) test, evaluation and certification on Thursday, April 17. The goal of the workshop was to capture requirements from

the international SCA stakeholders to lay the foundations of future test, evaluation and certification of SCA-based radios and other products. The workshop featured presentations and discussion with representatives from the European Commission, the European Defence Agency, NATO, and ministries of defense world wide including Canada, Finland, France, India, Italy and the Netherlands. In addition, the workshop hosted exhibition and demonstrations on relevant technologies from four SDR Forum member organizations: CRC, EtherStack, prismTech and Zeligsoft. Outcomes of the workshop are as follows:

- The defense community generally agrees on the need to promote standardization and follow on certification, to improve waveform interoperability and provide a common architecture to increase waveform portability and reduce development costs. There are multiple views on how this can be achieved, including using the existing SCA as is, creating a European evolution of the SCA, promoting cross-fertilization of the civilian- and military markets and allowing the civilian mass market to define the standard
- There was consensus that the evolution needs to take a networked approach, within Europe and in collaboration with the US, India, and others.
- There was consensus that testing needs to be independent of the manufacturers, and allow for different levels of national independence.
- There was also general agreement that the SDR Forum should act as the standardization authority for advancing the SCA, and should define test procedures guidelines and help in the development/implementation of test centers

The SDR Forum SCA Work Group will use these outcomes to define projects within the SDR Forum that support the needs of the Forum members and the tactical radio community as a whole.

Presentation by Dan Lanz from Mitre to a joint session of the SDR Forum R&D Work Group, Security Work Group, and the International Tactical Radio Special Interest Group on the Common Interface Cryptologic Module (CICM) - The outcome of this session and follow on sessions in Rome was a proposed work plan to promote the creation of a “Crypto API” in three stages: Stage 1 would be the formation of use cases and system requirements by the ITR-SIG, stage 2 would be the development of a platform independent application programming interface (API) for use in any tactical radio system, and stage three would be to transform this platform independent API into an SCA API for use in radio systems supporting the Software Communications Architecture.

Presentation and introduction to Intelligent Transportation Systems by (ITS) Phil Pettit, CEO of innovITS to the SDR Forum’s members and guests, followed by a round table discussion on the use of SDR in Intelligent Transportation Systems - The value proposition for SDR in ITS is fairly compelling – ITS requires a mixed economy of communications supporting multiple, sometimes disparate, national regulatory requirements. In addition, radios supporting ITS that need to be deployed in vehicles and infrastructure that can operate over life cycles that often span 10 or more years. SDR allows a single radio technology to support these multiple communications standards and allows future standards to be added while the radio is in deployment. The session include discussion on the safety critical requirements inherent in ITS, and discussed the special session on SDR organised by innovITS, ITS(UK) and the SDR Forum to be held at the ITS World Congress November 16 to 20 in NewYork City.

Presentation by PSCE - The SCA Work Group also hosted a number of presentations relevant to the advancement of the SDR Forum's SCA API strategy:

- “Discussion of JTRS APIs using MHAL as an example” – presented by Rohde & Schwarz
- Presentation & Discussion “Common Services Comparisons-OMG” – presented by PrismTech
- “CORBA everywhere” as middleware solution in SDR environments – presented by SELEX

Other accomplishments in Rome:

Test and Measurement Task Group advanced their RFI to Technical Committee ballot

- The SCA test and Evaluation Task Group - advanced the SCA Test and Evaluation RFI Response report to Technical Committee ballot
- Avionics SIG - changed its name to Safety Critical SIG, reflecting the need to support and developed a work plan for next SDR in Mission Critical Environments -
- Cognitive Radio Work Group
 - Worked on ITU document Integration, putting SDRF contribution text into the ITU formatted response document. This document must be completed and balloted by no later than Oct 1 2008.
 - Worked on finalizing the Nomenclature document. Final polish completed through the first 50% of the document. The intent is to complete the nomenclature document and vote out of the WG by NLT May 1.
- ITR SIG – continued to advance report on “Issues in International Tactical Radio Market Domain”
- Metalanguage for Mobility Work Group – advanced the “MLM for Cognitive Radio Interactions”
- PS-SIG – continued to advance Cognitive Use Cases, 700 MHz and Cost Model reports
- Security WG - held a review of the current status of the document “Securing Software Reconfigurable Communications Technology”. The document is approximately 90% complete, with the remaining material primarily about implementation mechanisms, and case studies. Expected completion is no later than June 1
- Smart Antenna Work Group - addressd the submitted issues in the OMG standardization effort, including making assignments, establishing due dates, discussing disposition options including specific resolutions for each issue, etc.
- XCVR API Task group – presented and discussed draft reference specification from THALES, with work on defining a method for future contributions

The dropbox for the meeting is here: http://www.sdrforum.org/pages/rome_08/

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