OMG's Third
Software-Based Communications (SBC) Workshop:
Realizing the Vision
Fairfax, VA USA – March 5-8, 2007

Workshop Program Summary

MONDAY – March 5, 2007 - Tutorials

0900 - 1230  *An Introduction to the OMG Systems Modeling Language (OMG SysML™)*
Sanford Friedenthal, Principal Systems Engineer, Lockheed Martin

1030 - 1045  Morning Refreshments

1230 - 1315  Lunch

1330 – 1700  *OMG Software Radio Specifications*
Gerald Lee Bickle, Chief Scientist-SDR Products, PrismTech

1500 - 1515  Afternoon Refreshments

TUESDAY – March 6, 2007

0900 - 0905  *Welcome & Opening Remarks* – Program Committee Chair
Fred Waskiewicz, Director of Standards, Object Management Group

0905 – 1000  *Keynote - NASA's Vision for Space Exploration and the Role of SBC and Navigation Systems*
Robert Spearing, Deputy Administrator for Space Communications and Navigation, NASA Headquarters

1000 – 1015  Morning Refreshments

1015 – 1130  *Session 1: Analysis and Design of Space Systems*
Chair: Roy Bell, Staff Software Engineer, Raytheon

1015-1045  *PIM/PSM For Space SDR RFP*
Mark Scoville, Software Architect, L-3 Communications

1045-1115  *Applying MDA to SDR for Space to Model Real-time Issues*
Tammy M. Blaser, Sr. Computer Engineer, NASA John H. Glenn Research Center

1115-1130  Session 1 Q&A and Discussion
1130 – 1200  **Sponsor Presentation**
Deborah Wilson, Program Manager, Boeing

1200 - 1300  Lunch

1300 – 1415  **Session 2: Security-Aware SBC**
Chair: Kevin Richardson, Software Systems Engineer, The MITRE Corporation

1300-1337  **A Threat Model for Software Reconfigurable Communications Systems**
Bernard C. Eydt, Associate, Booz Allen Hamilton

1338-1415  **Modeling and Implementation of Inter-Component Security for Effective Security Policy Enforcement and Channel/Process Separation**
Sebastian Staumann, Director for Security Products and Solutions, PrismTech

1400 – 1900  **Demonstration Area Open**

1415 – 1445  Afternoon Refreshments in Demonstration Area

1445 – 1645  **Session 3: Tool Support for SBC Software Development**
Chair: Piya Bhaskar, Systems Engineer, Lockheed Martin

1445-1525  **The Future of Software Radio MDD Tools**
Dominick Paniscotti, VP & GM- Fred Humcke, Director of Hardware, SDR Products, PrismTech

1525-1605  **Integrating SBC Tools**
John Hogg, CTO, Zeligsoft

1605-1645  **Efficient Hardware in the Loop Functional Verification Methodology for SDR’s**
Pascal Giard, J.F. Boland, Assistant Professor, J. Belzile, Professor, École de Technologie Supérieure

1645 – 1800  **Panel: Convergence of Military & Commercial SDR Requirements & Standards**
Moderator: Fred Waskiewicz, Director of Standards, Object Management Group

Panelists:  Gunter Brunhart, Chief Engineer, DoD PM NED
John Chapin, CTO, Vanu, Inc.
John Hogg, CTO, Zeligsoft
Dominick Paniscotti, VP Engineering SDR, PrismTech
Deborah Wilson, Program Manager, Boeing

1800 – 1900  **Demonstration Area Reception**  *hosted by*
WEDNESDAY, March 7, 2007

0900 – 0945  **Keynote - Future Mobile Devices Based on Software Based Platform**  
Soon Joon Park, Chief Research Engineer, LG Electronics

0945 – 1000  AM Refreshments in Demonstration Area

0945 – 1600  **Demonstration Area Open**

1000 – 1200  **Session 4: Evolving Standards Realizing the Extended, Higher Performance, Lower Cost SDR Vision**  
Chair: Fred Waskiewicz, Director of Standards, Object Management Group

1000-1030  **CORBA/e - New CORBA Profiles for SDR**  
Victor Giddings, Senior Scientist, Objective Interface Systems

1030-1100  **Evolution And Standardization Of the SCA**  
Gerald Lee Bickle, Chief Scientist-SDR Products, PrismTech

1100-1130  **A Framework For SDR Commercial Equipment: THE Reconfigurable Equipment PIM (REP)**  
Eric Nicollet, Embedded Software Architect, THALES Communications

1130-1200  Session 4 Q&A and Discussion

1200 - 1300  Lunch

1300 – 1330  **Sponsor Presentation**  
**PRISMTECH**  
**Transitioning to COTS-Based SDR Solutions**  
Gary Putlock, Director, Sales, SDR Products, PrismTech Corp.

1330 – 1600  **Session 5: New Directions for SBC**  
Chair: Victor Giddings, Senior Scientist, Objective Interface Systems

1330-1410  **Next Generation SCA Operating Environments**  
Gerald Lee Bickle, Chief Scientist-SDR Products, PrismTech

1410 – 1440  Afternoon Refreshments in Demonstration Area

1440-1520  **Making FPGAs "First Class" SCA Citizens**  
Fred Humcke, Hardware Director-SDR Products, PrismTech Corp.

1520-1600  **A PIM for Autonomously Reconfigurable User Equipment and Network Elements**  
Zachos Boufidis, Nancy Alonistioti, Eleni Patouni, Makis Stamateftatos, University of Athens  
Markus Muck and Didier Bourse, Motorola Labs

1600 – 1615  Afternoon Refreshments

1615 – 1745  **Panel: Alternative Architectures for SBC**  
Moderator: Roy Bell, Staff Software Engineer, Raytheon

Panelists:  
Cory Casanave, CEO/President, Model Driven Solutions  
Victor Giddings, Senior Scientist, Objective Interface Systems  
Dominick Paniscotti, VP Engineering SDR, PrismTech  
Gerardo Pardo-Castellote, CTO, Real-Time Innovations, Inc.

1800 - 2000  **Workshop Reception**  
*hosted by*  
**PRISMTECH** &  **BOEING**
THURSDAY, March 8, 2007

0830 – 1000 **Session 6: Integration**
Chair: John Hogg, CTO, Zeligsoft

0830-0915 **The Software-Defined Radio & Cognitive Radio Inter-Consortia Affiliation**
Mark Scoville, Software Architect, L-3 Communications

0915-1000 **Digital IF Revised Submission: A Concrete Example of Collaboration between an Industrial Forum and a Standardization Body**
Eric Nicollet, Embedded Software Architect, THALES Communications

1015 – 1030 Morning Refreshments

1015 – 1215 **Session 7: Developing Communication Systems Using MDA**
Chair: Piya Bhaskar, Systems Engineer, Lockheed Martin

1015-1055 **Delivering Optimized Portable SBC Software**
John Hogg, CTO, Zeligsoft

1055-1135 **A Methodology for Coherent Functional Description & Hardware Abstraction in RF Front Ends**
Sabeur Lafi, A. B. Kouki & J. Belzile, École de Technologie Supérieure
A. Ghazel, École Supérieure de Communication de Tunis

1135-1215 **Considerations of the Waveform/Platform Boundary in the HC3 Architecture**
Jerry Kazin, Senior Principle Software Engineer, David Hendry, Engineering Fellow, George Vachula, Engineering Fellow, Paulo Barroso, Senior Systems Engineer, Raytheon-Network Centric Systems

1215 - 1315 Lunch

1315 – 1515 **Session 8: Case Studies for The Software Defined Radio**
Chair: Mark Scoville, Software Architect, L-3 Communications

1315-1345 **Implementation of WIBRO Smart Antenna Base Station System With Open Architecture for SDR Functionality**
Taeyoul Oh, Namkyu Ryu, Yusuk Yun and Seungwon Choi, Hanyang University
Jinsung Choi, Mobile Communication Tech Research Lab., CTO, LG Electronics

1345-1415 **Software Defined Radio on Small Form Factor Systems**
Philip Balister, Tom Tsou, Graduate Research Assistants, Virginia Tech
Jeffrey H. Reed, Director of Wireless@Virginia Tech

1415-1445 **Software Radio Cooperative Research Program (SRCRP)**
Jimmie Marks & Roy Bell, Staff Software Engineers, Raytheon

1445-1515 Session 8 Q&A and Discussion