



SDR'11 - WinnComm
 Wireless Innovation Conference
 on Communications Technologies and
 Software Defined Radio



The premier event for bringing next generation radio technologies to life

Welcome to the only event devoted to the advancement of software defined radio, cognitive radio and dynamic spectrum access technologies from research through deployment, attracting over 400+ registered delegates including investors, commercial network operators, radio manufacturers, system integrators, government procurement officials, regulators, engineering service providers and consultants from over 22 different countries.

This program-at-a-glance provides a daily schedule for the event. For more detailed information including papers, presentations, workshop descriptions and more, go online to our event page:

<http://groups.winnforum.org/SDR11-WinnComm>

Access instructions are on the back cover of this publication. Have a wonderful event!



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Daily Program

Monday - November 28

18:00 - 20:00 Early Registration (Regency Foyer)

Tuesday - November 29

07:00 - 12:00 Registration (Regency Foyer)

07:30 - 08:30 Speakers' Breakfast (Capitol Room)

08:50 - 09:40 Morning plenary (Regency Ballroom) with: **Conference Welcome by John Glossner**, Chair

Keynote by **Bruce Perens**, *Open Source and Open Hardware Consultant*

09:40 - 10:00 Break

10:00 - 12:00



Potomac 3, 4	Potomac 5, 6	Regency C	Regency D	Regency E	Regency F
Tutorial 1A Next Generation White Nail Architecture for Future Cognitive Radio Transmitter and Receiver Systems <i>Donald Steinbrecher</i> (Navy, USA)	Tutorial 1B Design and Application of a Hilbert Transformer in a Digital Receiver <i>Matt Carrick (Northrop</i> <i>Grumman, USA); Doug Jaeger</i> <i>(Northrop Grumman, USA);</i> <i>frederick j harris (SDSU, USA)</i>	Tutorial 1C Prototype Implementation of a Realtime 8x8 MIMO LTE- Advanced Downlink <i>Ian C. Wong (National</i> <i>Instruments, USA)</i>	QoS MOS Workshop co-located at SDR'11-WInnComm Begins at 9:30	Workshop 1E Open Source	Workshop 1F Regulatory

12:00 - 13:30 Lunch

13:30 - 15:00 **Afternoon Plenary** (*Regency Ballroom*) with: **Conference Announcements: John Glossner**, Chair

13:40 **Keynote** by **Mark Rich**, DARPA

14:20 **Keynote** by **Rajendra Singh**, World Bank

15:00 **Coffee Break**

15:15 - 17:15

Potomac 3, 4	Potomac 5, 6	Regency C	Regency D	Regency E	Regency F
Tutorial 2A RF, ADC, & IF Design Techniques <i>Part 1: Dr. Ruediger Leschhorn (Rohde and Schwarz); Part 2: Tudor Davies (Spectrum Signal Processing) and Mark Rives (Intersil)</i>	Session 2B Receiver Design - Part 1 <i>Chair: Sm Hasan (GE Global Research, USA)</i>	Session 2C Cognitive Radio and Dynamic Spectrum Access - Part 1 <i>Chair: Harris I. Volos (Vir- ginia Tech, USA)</i>	Session 2D Test and Measurement - Part 1 <i>Chair: Christopher R. Anderson (United States Naval Academy, USA)</i>	Workshop 2E Open Source	Workshop 2F Regulatory

15:00

Welcome Reception and Forum Awards, Sponsored by General Dynamics C4 Systems (Odyssey Boat Tour on the Potomac; busing available)

GENERAL DYNAMICS
C4 Systems

Tuesday, 29 November

Wednesday - November 30

07:30 - 08:30 **Speakers' Breakfast** (*Capitol Room*)

08:30 - 09:20 **Morning plenary** (*Regency Ballroom*) with: **Announcements by John Glossner**, Chair

08:40 **Invited Presentation** by **Bob Bailey**, CAER

09:00 **Invited Presentation** by **Joe Madden**, *Mobile Experts*

09:20 - 09:50 **Break**

09:50 - 11:50

Potomac 3, 4	Potomac 5, 6	Regency C	Regency D	Regency E	Regency F
<p>Session 3A SDR Processors</p> <p><i>Chair: Raghavan Muralidharan (Tata Power SED, India)</i></p>	<p>Session 3B Receiver Design - Part 2</p> <p><i>Chair: Daniel S Iancu (Optimum Semiconductor Technologies, USA)</i></p>	<p>Session 3C Cognitive Radio and Dynamic Spectrum Access - Part 2</p> <p><i>Chair: Haris I. Volos (Virginia Tech, USA)</i></p>	<p>Workshop 3D Requirements and Opportunities: Government R&D Programs</p>	<p>Tutorial 3E Advanced OSSIE SCA-Based SDR, a Hands-on Tutorial</p> <p><i>Carl B. Dietrich (Virginia Tech & Wireless @ Virginia Tech, USA); Frank Kragh (Naval Postgraduate School, USA); Donna Miller (Naval Postgraduate School, USA)</i></p>	<p>Workshop 3F Test and Measurement - Part 2</p> <p><i>Chair: Fanny Mlinarsky (octo-Scope, USA)</i></p>

11:50 - 13:50 **Lunch and Exhibits** (*Independence A&B*) (exhibitors listed on page 10)

Potomac 3, 4	Potomac 5, 6	Regency C	Regency D	Regency E	Regency F
Session 4A SDR Systems <i>Chair: Babak Beheshti (New York Institute of Technology, USA)</i>	Session 4B Receiver Design - Part 3 <i>Chair: Christophe Moy (SUPELEC/IETR, France)</i>	Session 4C <i>Cognitive Radio and Dynamic Spectrum Access - Part 3</i> <i>Chair: Friedrich K. Jondral (Karlsruhe Institute of Technology, Germany)</i>	Workshop 4D Requirements and Opportunities: Government R&D Programs	Tutorial 4E SCA-Next: Benefits and Impacts in Migrating to a New Architectural Paradigm <i>Vincent J Kovarik, Jr (Prismtech, USA); Mike Williams (PrismTech Canada)</i>	Workshop 4F LTE Network for Nationwide Broadband Public Safety Communications <i>Fanny Mlinarsky (octo-Scope, USA)</i>

15:45 - 16:00 **Break**16:00 - 18:00 **Afternoon Plenary** (Regency Ballroom) with:**Keynote** by **Dennis Martinez, Harris****Panel: SCA and Waveform Portability**, moderated by **Scott Leubner, Harris**

Panelists:

- Fabio Casalino, *Selex Elsag*
- David Deacon, *Etherstack*
- Chuck Linn, *Harris Corporation*
- Steve Bernier, *CRC*

18:00 - 20:00 **Exhibits and Technology Showcase** (*Independence A&B*) (exhibitors and showcase listed on pages 10-11)20:00 GNU Radio Users Meeting,
sponsored by Ettus Research

(Regency C)



Wednesday, 30 November

Thursday - December 1

07:30 - 08:30 **Speakers' Breakfast** (*Capitol Room*)

08:30 - 09:20 **Morning plenary** (*Regency Ballroom*) with: **Announcements** by **John Glossner**, Chair

08:40 **Keynote** by **Paul Garnett**, *Microsoft*

09:20 - 09:50 **Coffee Break**

09:50 - 11:50

Potomac 3, 4	Potomac 5, 6	Regency C	Regency D	Regency E	Regency F
Session 5A RF, IF and ADC - Part 1 <i>Chair: Chayil Timmerman (MIT Lincoln Laboratory, USA)</i>	Session 5B Advanced Signal Processing - Part 1 <i>Chair: frederic j harris (San Diego State Univ, USA)</i>	Session 5C Compilers, Software, and Tools - Part 1 <i>Chair: Raghavan Murilidharan (Tata Power SED, India)</i>	Workshop 5D Requirements and Opportunities: How to Win SBIR Phase 1, 2 & 3	Workshop 5E The Future of Whitespace Communications	Tutorial 5F Cyber Warfare in the Wireless World: What You Don't Know CAN Hurt You <i>Dane Brown (United States Naval Academy, USA); Owens Walker (United States Naval Academy, USA); Christopher R. Anderson (United States Naval Academy, USA)</i>

11:50 - 13:50 **Lunch and Exhibits** (*Independence A&B*) (exhibitors listed on page 10)

13:50 - 15:45

Potomac 3, 4	Potomac 5, 6	Regency C	Regency D	Regency E	Regency F
<p>Session 6A RF, IF and ADC - Part 2 <i>Chair: Kuan Collins (SAIC, USA)</i></p>	<p>Session 6B Advanced Signal Processing - Part 2 <i>Chair: Fa-Long Luo (Element CXI, USA)</i></p>	<p>Session 6C Compilers, Software, and Tools - Part 2 <i>Chair: Michael L Dickens (University of Notre Dame, USA)</i></p>	<p>Workshop 6D Requirements and Opportunities: Intro to US Export Controls and ITARS</p>	<p>Workshop 6E The Future of Whitespace Communications</p>	<p>Tutorial 6F Software Communications Architecture "Next" Release</p>

15:45 - 16:00 **Break**

16:00 - 18:00 **Afternoon Plenary** (Regency Ballroom) with:

16:00 **Keynote** by **Kevin Wolf**, *US Dept. of Commerce*

16:40 **Keynote** by **Miguel Pellon**, *Motorola Solutions*

18:00 - 20:00 **WinnForum Members' Reception and Annual Meeting** (Forum Members Only) (Regency Ballroom)



Complete our survey and be registered to win!
Conference.WirelessInnovation.org

Thursday, 1 December

Friday - December 2

07:30 - 08:30 Speakers' Breakfast (Capitol Room)

08:30 - 10:30

Potomac 3, 4	Potomac 5, 6	Regency C	Regency D	Regency E	Regency F
<p>Session 7A Security and Encryption</p> <p><i>Chair: Rafael Aguado (Indra Sistemas S.A., Spain)</i></p>	<p>Session 7B Government Applications</p> <p><i>Chair: Christopher R. Anderson (United States Naval Academy, USA)</i></p>	<p>Session 7C Standardization and Education</p> <p><i>Chair: Richard Taylor (Harris Corporation, USA)</i></p>	<p>Session 7D Software Communications Architecture (SCA)</p> <p><i>Chair: Eric Christensen (General Dynamics C4 Systems, USA)</i></p>	<p>Tutorial 7E A Rapid Graphical Programming Approach to SDR Design & Prototyping with LabVIEW and the Universal Software Radio Peripheral (USRP)</p> <p><i>Sam Shearman (National Instruments, USA)</i></p>	<p>Tutorial 7F New Directions in Channelized Receivers and Transmitters</p> <p><i>fred harris (San Diego State University, USA)</i></p>

10:30 - 10:45 Coffee Break

10:45 - 11:30 Closing Plenary (Regency Ballroom) with:

Keynote by fred harris, SDSU

Endnote, Paper Awards, Conference Close and Satisfaction Survey Drawing

Thank you for another wonderful event!

Keynotes



Paul W. Garnett
Director, Technology Policy,
Microsoft Corporation



fredric j harris, Ph.D.
Signal Processing Chair,
San Diego State University



Dr. Dennis Martinez
Chief Technology Officer,
RF Communications Division, *Harris*



Miguel Pellon
Vice President, Regulatory Compliance &
Standards, *Motorola Solutions, Inc.*



Bruce Perens
Open Source and Open Hardware
Consultant



Mark Rich
Program Manager,
DARPA/STO



Rajendra Singh
Senior Regulatory Specialist,
World Bank



Kevin Wolf
Assistant Secretary for Export Administration,
U.S. Department of Commerce

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Exhibitors



Agilent Technologies



The DSP Powerhouse

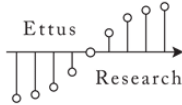


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Optimum Semiconductor
TECHNOLOGIES



Tech Showcase

Experience demonstrations of cutting-edge R&D technologies relevant in the research, design, manufacture and deployment of reconfigurable radio technologies-based systems, featured at a Technology Showcase Wednesday evening.

Rapid FPGA Assembly for GNURadio

Richard Stroop (Virginia Tech & Configurable Computing Laboratory, USA); Peter Athanas (Virginia Tech, USA)

MIMO/OTA (Over the Air) Controlled Environment Testing

Fanny Mlinarsky (octoScope, USA)

Airblue: A Reconfigurable Wireless Transceiver

Kermin Fleming, Jr (MIT, USA); Arvind (Massachusetts Institute of Technology, USA); Alfred Man Cheuk Ng (Qualcomm Inc, USA); Hari Balakrishnan (Massachusetts Institute of Technology, USA)

A Novel Three-Level Hierarchical Algorithm for UL Scheduling in Mobile WiMAX

Ihsan M Shahwan (CCNY, USA)

Rapid SCA Development for the DSP (Demonstration Proposal)

Toby McClean (PrismTech, United Kingdom)

SDR Receiver For Amateur Satellites and CUBESAT Ground Station

Carl B. Dietrich (Virginia Tech & Wireless @ Virginia Tech, USA)

Quality Control: Get Continuous Compliance Checking for your SCA Components

Steve Bernier (The Communications Research Centre Canada), James Ezick (Reservoir Labs), François Lévesque

Running JTRS SCA applications on Android

Steve Bernier (The Communications Research Centre Canada)

Proceedings Access

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CALL FOR PAPERS, PRESENTATIONS AND TUTORIALS

2012 Wireless Innovation Forum
European Conference on Communications Technologies
and Software Defined Radio
(SDR'12 – WInnComm – Europe)
25-28 June 2012 • Brussels, Belgium

This fourth annual conference will include three tracks – one focused on SDR technologies, one focused on Cognitive Radio and Dynamic Spectrum Access technologies,

and one focused on CR and SDR programs and requirements. The Wireless Innovation Forum invites you to submit a paper, presentation or tutorial abstract for any of these tracks on topic areas including software defined radio technologies, cognitive radio technologies and SDR and CR programs.



Papers published in conference proceedings will be peer reviewed, and top papers for this event may be eligible for placement in a leading journal publication. Proposals for presentations from national research and development programs across Europe are especially welcome.

For important dates and a full sample of submission topics, visit:

Europe.WirelessInnovation.org