Fourth Tri-Service Waveform Diversity Workshop

14 – 15 November 2006
Naval Research Laboratory (NRL)

Tuesday, 14 November

0715 – 0750  Check-In

0750 – 0800  Welcome
Aaron Shackelford (NRL)

0800 – 0830  Historical Overview of Waveform Diversity
Eric Mokole (NRL)

0830 – 0900  Overview of AFRL Waveform Diversity Activities
Michael Wicks (AFRL)

0900 – 0930  Army Research Laboratory’s Architecture for Supporting Waveform Diversity
Marvin A. Conn, Geoffrey H. Goldman (ARL)

0930 – 1000  Morning Break

1000 – 1030  Overview of NRL Waveform Diversity Activities
Eric Mokole (NRL)

1030 – 1100  50 Million Years of Waveform Diversity
Christopher J. Baker, Hugh D. Griffiths, Michele Vespe (University College London)

1100 – 1130  Adaptive Waveform Scheduling and Testing with the NRL Advanced Multifunction RF Concept Testbed
Richard Chen, Greg Tavik, Kevin Wagner (NRL)

1130 – 1230  Lunch
1230 – 1300  Recent Distributed Coherent Aperture Measurements for Next Generation BMD Radar
Scott Coutts, K. Cuomo, J. McHarg, F. Robey, D. Weikle (MIT Lincoln Laboratory)

1300 – 1330  Waveform Diversity for Distributed Aperture Radars – Experimental Verification
Russell Brown (Stiefvater Consultants), Richard Schneible (AFRL), Michael Wicks (AFRL), Robert McMillan (SMDC)

1330 – 1400  Waveform Diversity Considerations for the Distributed Imaging Radar Technology Program
Stephen Welstead (Radiance Technologies Inc.)

1400 – 1430  Afternoon Break

1430 – 1500  Experiments for the Direction of Arrival Using a Vector Antenna
Badria Elnour, D. Erricolo (University of Illinois at Chicago), M. Hurtado, A. Nehorai (Washington University in St. Louis)

1500 – 1530  Adaptive Pulse Compression Preliminary Experimental Results
Aaron Shackelford, Jean de Graaf, Sukomal Talapatra (NRL), Shannon D. Blunt (University of Kansas), Karl Gerlach (NRL)

1530 – 1600  Photonically-Synthesized Phase-Precompensated Waveforms to Combat Broadband Antenna Phase Distortions
Jason McKinney (NRL), Dimitrios Peroulis, Andrew M. Weiner (Purdue University)

1600 – 1630  Advanced Radar Capabilities Enabled by S2 Material Based Photonic Signal Processing Hardware
Kristian D. Merkel (S2 Corporation)

1630 – 1700  Overview of Day 1
**Wednesday, 15 November**

0730 – 0800  Check-In

0800 – 0830  Waveform Preconditioning for Clutter Rejection  
*Birsen Yazici, T. Varslot, C. E. Yarman, M. Cheney, L. Scharf*  
*Rensselaer Polytechnic Institute*

0830 – 0900  Waveform Design for Agile Sensing In Clutter  
*Sandeep P. Sira, Antonia Papandreou-Suppappola, Darryl Morrell, Douglas Cochran*  
*Arizona State University*

0900 – 0930  Joint Transmitter and Receiver Diversity using Information Theory  
*Jaime R. Roman, John W. Garnham*  
*Science Applications International Corp.*,  
*Paul Antonik*  
*AFRL*

0930 – 1000  Morning Break

1000 – 1030  Using a Phase Space Statistic to Identify Resonant Objects  
*Thomas Carroll*  
*NRL*

1030 – 1100  Application of Waveform Diversity to Improve Surface Moving Target Indicator (SMTI) System Performance  
*John W. Garnham, Jaime R. Roman*  
*Science Applications International Corp.*,  
*Paul Antonik*  
*AFRL*

1100 – 1130  Denial of Access to Radar Radiations  
*Russell Brown, Yuhong Zhang, Richard Scheible*  
*Stiefvater Consultants*,  
*Michael Wicks*  
*AFRL*,  
*Christopher Prosser*  
*USAF AFRL*

1130 – 1230  Lunch

1230 – 1300  The Implications of Radar and WiMAX  
*Larry Cohen*  
*NRL*

1300 – 1330  Generation of Spectrally Confined Transmitted Radar Waveforms  
*Jean de Graaf, Hugh Faust*  
*NRL*

1330 – 1400  Spectral Reduction of Pulse Compression Waveforms  
*Frank Kretschmer*

1400 – 1430  Afternoon Break
1430 – 1500  Adaptive Construction of Informationally Optimal Space-Time Radar Transmit Functions
Jim Stiles (University of Kansas)

1500 – 1530  Multistatic Ambiguity Function and Waveform Diversity for Distributed Sensing
Ivan Bradaric, G. Capraro, C. Capraro (Capraro Technologies, Inc.)

1530 – 1600  Ambiguity and Sidelobe Behavior of CAZAC Coded Waveforms
Ioannis Konstantinidis, Andrew Kebo, John J. Benedetto, Mike Dellomo, Jeffrey M. Sieracki (University of Maryland)

1600 – 1630  Overview of Day 2