

Research in Emerging Areas: Defense and Homeland Security

Moderator: Ken Heimlich

- I. Identification for Security Needs
 - a. Larry Hornak, CITeR
 - i. Automated biometric systems capture human "signature" involving sensing, imaging, data processing, and database
 - ii. Membership and emphasis shift because of 9-11 ←→ Agencies become "partners"
 - iii. Highlight multidisciplinary from science/engineering to social sciences
 - iv. Large supplementary funding from DHS through NSF
 - b. Gary Strong, DHS
 - i. DHS organization complex, but researchers must be familiar with it
 - ii. Interested in verification of document and person
 - iii. Person - biometric: facial, fingerprint, iris, all three complementary and useful
 - iv. Vulnerability is a big issue: disguise, ID theft
- II. Radiation Hardening
 - a. John Ringo, CDA/DIC
 - i. Successful extension of I/UCRC to AFRL funding of ~ \$1.2M/yr. (similar size to industrial funds)
 - ii. Radiation-tolerant mixed-signal (analog and digital) circuit of interest to AFRL's space interest
 - iii. Important to integrate the needs and resources of agency and industrial partners
 - b. Ken Merkel, AFRL
 - i. Research topic (in this case, radiation-hard electron(s)) must be of interest to agency
 - ii. Must have superior proposal and quality team
 - iii. Balance effort to satisfy IAB and AFRL by the Center