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Issue 10: From the Guest Editors

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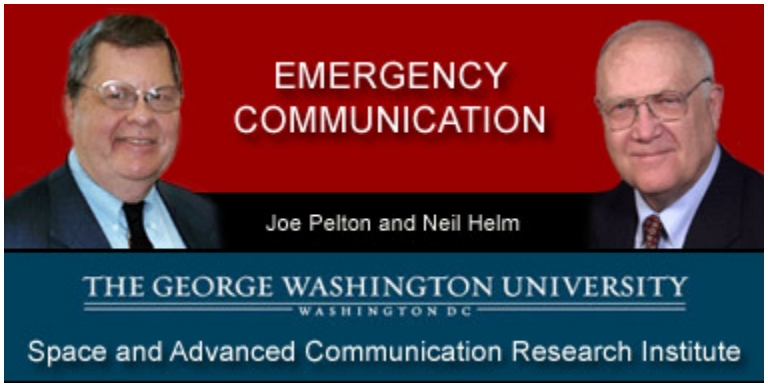

The Space & Advanced Communications Research Institute (SACRI) at George Washington University, assisted by its outstanding industry advisory committee, was pleased to organize the National Conference on Emergency Communications (NCEC) held in Washington, D.C. on December 12-13, 2005.

This event was hastily assembled in the wake of Hurricane Katrina and Hurricane Rita. It was supported by such Gold Level Patrons as Booz Allen Hamilton, Northrop Grumman, Intelsat, and Raytheon and by volunteers and corporate sponsors drawn from Arrowhead Global Solutions, Assured Power & Communications, Bearing Point, Globalstar, Iridium, SAIC and XTAR and individuals representing professional institutes and standards-making bodies, universities and professional associations.

Dozens of informed speakers from the relief community, Federal, State and local governments, as well as the satellite, wireless, and telecommunications industry presented a wealth of information and assisted in the development of a White Paper that summarized the key information and set forth a follow-on action agenda.

The top five recommendations of the White Paper developed from the notes taken by the conference organizers and distilled by the SACRI team that worked on the Conference at George Washington University are as follows:

- Recommendation No. 1

  Priority attention must be given to enhanced training, simulation, modeling, and "broadband information access" programs as reinforced by a uniform national statement of "best practice" guidelines. All of this training plus information access processes must operate on a day-to-day "train as you respond" basis and in conformance with integrated professionally agreed standards These training programs must apply to the provision of emergency relief by first responders, operational personnel and relevant strategic planners and decision makers. Professional

coordination of best practices among police, fire, EMT and telecommunications, power, infrastructure, and utility personnel plus strategic planners is key.

- Recommendation No. 2

  There is a need for a federally-led and integrated approach to coordination of emergency communications that ultimately becomes a fully accepted "National Doctrine" for recovery processes based on continually upgraded and improved communications capabilities. To be effective, this initiative (as coordinated within DHS, NTIA, FCC, DOD and NSTAC) must work in tandem with the professional organizations of fire fighters, police and EMT organizations as well as national associations of U.S. cities, counties, tribes, states, mayors, governors, and other interested entities. A clearer definition of the particular roles within the various U.S. agencies should be clarified by either a Presidential directive or Congressional action. In this process the implementation of SAFECOM must be accelerated to achieve more rapid implementation. Further, the NTIA ICE demonstration program for emergency communications should be strengthened through additional funding.

- Recommendation No. 3

  There should be a concerted attack on the continuing unsolved problem of interoperability among first responders, operational personnel and military personnel as well as the issue of spectrum allocations to support emergency communication systems. This effort must address the acceleration of the planned conversion to 700 MHz and narrow-band radio channels, as well as effective switching between and among the legacy emergency communications systems. Open and compatible air interface standards, open gateway and interoperability standards will be needed. Also, issues of compatibility of Voice over IP as well as "below-IP" network protocols, and incompatible software applications must be considered.

- Recommendation No. 4

  It is equally important to develop more effective emergency communications systems for the general public. Such systems need to be flexible, resilient and pervasive. Expanded provision of reliable and up-to-date information can be achieved via wireless systems. WLANS (i.e., Wi-Fi, and Wi-Max), satellite radio and direct broadcasting networks, Internet messages via PDAs and broadcast wireless systems, conventional radio and television stations and fiber networks are examples. This expanded reach to the public and to businesses is essential so that citizens can ask for help and obtain instructions and receive news. The types of

information will be different from that available to first line responders but still sufficient to avoid panic and allow informed action.

- Recommendation No. 5

  We must continue to devise and implement balanced, modular, flexible and scaleable technologies as well as restorable power systems that can significantly improve emergency communications. This development agenda will include the deployment of cost effective and reliable new 700 MHz, narrow band emergency radio communications systems, easy to deploy VSAT and micro-terminal based satellite communications systems, new ground-based wire and wireless capabilities, airborne relays/cells (on UAVs or HAPS), software defined radios, and hybrid (ground-air-satellite) solutions. This effort must allow a transition to working within universal IP protocol systems and rapid access to interoperability switches. Finally, it must address the availability of restorable power systems for emergency communications.

Many other findings and conclusions are provided in the White Paper highlighted in this issue of the Journal and in the wealth of information contained in the various power point presentations. The state of the art system available for the first time in the On-Line Journal of Space Communication allows you not only to see the graphics, but also to go through the presentation listening to the speakers' actual words on a slide-by- slide basis. For these new interactive multimedia features one must particularly thank the production team at Ohio University and in particular Prof. Don Flournoy and recent Ph.D. graduate Ziad Akir, who is shortly assuming a new teaching/administrative position at Western Illinois University.

Finally we must give a special thanks to all of the NCEC panel chairs, co-chairs, speakers, organizers, patrons and sponsors that made this event a significant success. We can only hope that those in government, standards-making bodies and first responder organizations will not only read the considerable information contained in this on-line journal but also assist in the implementation of the recommendations and actions items found in the White Paper. If there are questions about the contents of this journal you can contact us at:

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