

THE SIREN



A First Responders Group (FRG) Newsletter

November/December 2015



FRG: Giving Responders an Edge to Take Advantage of Emerging Technologies!

The 2015 International Association of Chiefs of Police (IACP) annual meeting, held October 24-27 in Chicago, Illinois, offered many opportunities to make new acquaintances by engaging exhibitors in the Expo Hall, attending one of many educational sessions or simply riding the shuttle. Most importantly, it allowed attendees to share highlights of how FRG works with the business community to accelerate the development of new technology solutions to make the jobs of first responders safer and more effective. Frequent discussion at the conference focused on the importance of government efforts to bolster industry partnerships to identify, test and train first responders in the adoption of emerging technology solutions. In the face of evolving threats and demanding natural disasters, these discussions make the mission of FRG more important than ever.

FRG Director Dan Cotter led the Science and Technology Directorate's (S&T) team at IACP, which was part of a larger DHS delegation led by DHS Deputy Under Secretary Alejandro Mayorkas. While speaking at committee meetings and workshops, both discussed how delivering innovative solutions requires governments to change mindsets and engage all levels of industry.

S&T's resolve to accelerate the pace for developing new technology solutions to make responders and the communities they serve more secure and resilient was also a major talking point at the launch of the [International Forum to Advance First Responder Innovation \(Forum\)](#). The Forum, created by S&T and international partner countries, focuses on enhancing and expanding the development of affordable, innovative technology for first responders worldwide. Forum partners from Israel, Canada, Germany and the United Kingdom met with leaders from law enforcement, academia, business and government to discuss common obstacles and opportunities with identifying and deploying technology solutions.

A panel on the [Chicago Long Term Evolution \(LTE\) Project](#) discussed the integration of law enforcement technologies in the District of Chicago and how it is expected to quickly and reliably deliver information to both police and emergency management personnel. The panel discussion covered lessons learned and suggestions for future research from the [Chicago LTE pilot technical report](#). Additionally, the panelists discussed their collaboration with the U.S. Coast Guard in Chicago to test the [Video Datacasting](#) system, a way to transmit encrypted data over existing broadcast television signals to a targeted audience on the water. The pilot resulted in a perfect video feed eight miles out from the harbor!

Events such as IACP 2015 provide great opportunities to discover new ideas and build lasting relationships.

Dan Cotter officially named Director of FRG!

Congratulations to Dan!

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Also check out the [Forum](#), [Chicago LTE](#) & [Datacasting](#) videos!



Homeland Security

Science and Technology

FRG in the News

[First Responders Group evaluates emergency notification methods](#)

[Technology confronts disasters](#)

[Chicago cops, Motorola bring streaming video to crime scenes](#)

[Smartphones Could Benefit From New Emergency Alert Technology to Fine-Tune Warnings](#)

[Johns Hopkins University APL Unveils Location-Specific Emergency Alert Tech](#)

[Department of Homeland Security Adds Solution to Improve Wireless Geo-targeting Accuracy](#)

Check out the latest FRG Blogs & Articles

[Responding to People with Mental Illness](#)

[Value of IoT in the Federal Mission](#)

[Ensuring our Communities Have Technologies for Disaster Response](#)

[Getting Ahead of the Storm](#)

Be sure to subscribe to these on [firstresponder.gov!](http://firstresponder.gov/)

RIC-M: Technology “Gift” That Keeps Giving

In the November 12 S&T All Hands meeting, several FRG'ers took the stage with S&T Chief of Staff Dr. Christina Murata and a big check. FRG Director Dan Cotter, R-Tech Deputy Director Bill Stout and R-Tech Program Manager Christine Lee joined Dr. Murata to accept the first royalty payment for the [Radio Internet-Protocol Communications Module \(RIC-M\)](#) which was [licensed to two vendors](#) over the summer. RIC-M inventor Richard Brockway presented the check. Mr. Brockway is president of Christine Wireless Inc., one of S&T's partners licensed to manufacture and sell the device in the commercial market.



RIC-M is a groundbreaking interface device that allows first responder communications equipment — dispatch consoles, base stations and radios — to operate seamlessly regardless of manufacturer. The technology revolutionizes how first responders communicate; it makes new and legacy systems interoperable, reduces costs and allows seamless transition when devices are upgraded or need to be replaced.

S&T recently patented and trademarked RIC-M, and the Directorate owns the Intellectual Property (IP) rights to the technology which is now available for response agencies to purchase. RIC-M truly is a gift that will continue to bear fruit in months and years to come — S&T will continue to receive royalties on the sale of every RIC-M device for at least the next five years. All of the royalties will be used to fund new S&T technology development for first responders.

Mini FINDER: Small Radar with Huge Impact!



FRG and commercial partners R4 Inc. and SpecOps Group recently demonstrated the latest [Finding Individuals for Disaster and Emergency Response \(FINDER\)](#) prototypes with members of the Interagency Board at the Virginia Task

Force One training facility in Lorton, Virginia. These new prototypes are smaller in size to facilitate transport and use while mobile. Shown here are units produced by R4 — now hexagonal-shaped — which were mounted on a drone and motorcycle.

FINDER is a low-power microwave radar that helps responders find victims buried in rubble by detecting small movements from a heartbeat or breathing and guides responders to the trapped individual's location. FINDER prototypes were deployed to Nepal to assist with rescues during the devastating earthquake earlier this year.

First Responders Meet Innovators at NGFR Drone Demo



On October 19, FRG held a field demonstration with first responders to test its new technology solutions for search and rescue operations. Among the new technology solutions evaluated during the two-day event were an exterior drone that can detect cellphone signals through rubble or concrete and sensors that can detect and locate Bluetooth-enabled devices. FRG continues its long-standing partnership with the MIT Lincoln Laboratory (MIT/LL) through its [Next Generation First Responder \(NGFR\) Apex program](#).

During the demonstration at Fairfax County Fire and Rescue's training facility in Lorton, Virginia, Sensing Location via Exterior Drone technology (SLED) was deployed for a rapid, wide-area assessment. A single drone successfully scanned the area for cell phone signals in less than 20 minutes, providing real-time heat maps of cell phone activity. Based on the location of cell phone signals, canine and human teams focused their searches on high probability locations of victims.

BLIPS (Bluetooth Indoor Proximity System) were deployed inside structures to detect and locate Bluetooth enabled devices. This allowed victims with cell phones to exchange messages and images with rescuers. BLIPS also enabled incident commanders to track and monitor rescuers and maintain communication with rescuers searching within rubble.

Through FRG's NGFR Apex program and the tangible results of FRG's partnership with MIT/LL, first responders will be better protected, connected and fully aware.

FRCoP, a Collaboration Platform for First Responders and Public Safety Practitioners

Created by S&T, First Responder Communities of Practice (FRCoP) is an online community of first responders and public safety practitioners from across the country who collaborate on emergency preparedness, response, recovery and other homeland security topics and issues. Members must provide a sponsor and are vetted to verify their identity before they join. Vetting helps ensure that members can interact with colleagues on the site without fear of misrepresentation or solicitation from vendors. FRCoP has been certified and accredited by DHS and is accessible from government and non-government locations. The trusted nature of the site also allows for the storage of For Official Use Only (FOUO) and Sensitive But Unclassified (SBU) materials.

Members can join or create communities around a particular topic, mission, project or area of interest. FRCoP communities can be either open or restricted. Open communities are used for more general discussion and collaboration, while restricted communities offer a secure space to collaborate on specific projects or initiatives. Restricted communities' membership is controlled by the community administrator(s) who requested the community. Community administrators can add or remove members as necessary.

The [Electronic Recovery and Access to Data \(ERAD\) Prepaid Card Reader](#) is one of the newest projects using FRCoP. The restricted Prepaid Card Reader Community is for law enforcement officers to view limited distribution documents, including an operational field assessment on the technology, and learn more about the technology's capabilities. The community will also be used as an information exchange site and to share lessons learned from the Prepaid Card Reader in day-to-day operations.

To learn more about FRCoP, please visit the [website](#) to sign up. If you have any questions or wish to set up a community for your project, please contact fr.communities@hq.dhs.gov.

Communities of Practice | Homeland Security | Science and Technology | FAQs | About Us | Contact Site Administrator

Home | FirstResponder.gov | R-Tech | Community Listing | SIGN IN

CONNECTING THE FIRST RESPONDER COMMUNITY

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FRCoP Instructional Video

First Responder Communities of Practice Instructional Video

First Responder Communities of Practice is a professional networking, collaboration and communication platform created by the Department of Homeland Security Science & Technology Directorate to support improved collaboration and information sharing amongst the nation's First Responders and other Federal, State, Tribal, Territorial, and local governments and private sector stakeholders supporting homeland security efforts. This vetted community of members focuses on emergency preparedness, response, recovery and other homeland security issues.

Who Can Join?

- First responders
- Members of the following groups engaged in homeland security:
 - Government employees
 - Government-sponsored contractors
 - Government-sponsored academia
 - Government-sponsored citizens

What Can I Do Here?

- Join Communities that interest you
- Collaborate on wikis, blogs and discussion boards
- Post, share and store documents and best practices
- Create and search profiles
- Connect, chat, and email with other professionals
- Tap 10 Reasons to join

About Us

The U.S. Department of Homeland Security (DHS) Science and Technology Directorate's (S&T) First Responder Group (FRG) works to protect America against terrorism and disasters by providing first responder solutions for high-priority capability gaps through rapid prototyping, technical assistance, and information sharing to save lives and maximize preparedness.

Site Security

All prospective members of the site are vetted to verify their identity. Members of First Responder Communities of Practice may post public, For Official Use Only (FOUO) or Sensitive But Unclassified (SBU) documents and information. Users may not post, Classified or Law Enforcement Sensitive information or documents to the First Responder Communities of Practice under any circumstance. It is the user's responsibility to avoid the creation of information that could be considered SENSITIVE or CLASSIFIED in aggregate. For more information, [click here](#). To read the site Rules of Behavior, [click here](#).

Frequently Asked Questions

FRG and Partners Receive Grand Platinum Award for Datacasting Technology Pilot Exercise

The 2015 Secured Cities Exclusive Security Innovation Awards honored FRG and partners as the Grand Platinum winner for their Datacasting Technology Pilot Exercise.

For the ninth consecutive year, Security Technology Executive magazine and Secured Cities, the nation's only public/private partnership initiative for public safety and security, honored top innovators in the security industry at their awards luncheon on November 12. The Datacasting Technology Pilot Exercise was unanimously selected as the top overall security project of the year due to its unique scope and application.

[Datacasting](#) is a technology that transmits encrypted live video and data over existing broadcast television signals to a targeted audience, improving data sharing and interoperability at minimal cost and effort. The pilot exercise was conducted in late July 2015 in Houston, Texas, to demonstrate the ability of datacasting to support public safety communications in an operational environment. It also focused on how public/private partnerships can be leveraged to address growing content delivery needs. Participants of this exercise included: the City of Houston Mayor's Office, Houston Police Department, the University of Houston, Texas Medical Center, NRG Stadium, Metro Police Department and the Harris County Sheriff's Office, with project oversight by the Johns Hopkins University Applied Physics Laboratory. Participants touted the installation and operation of the system



as user-friendly and even described datacasting as a potentially life-saving tool. The equipment currently remains in place and is now being evaluated as an operational capability.

While FirstNet, an independent authority within the National Telecommunications and Information Administration charged with the mission to build, operate and maintain the first high-speed, nationwide wireless public safety broadband network will eventually enhance video and data sharing, it is several years away from widespread implementation. FirstNet will also likely use the current cellular unicast technology for distributing live video and potentially experience coverage limitations in rural areas. Datacasting, however, is currently available using existing infrastructure and covers 97 percent of the of the U.S. population, including territories. It also uses broadcast (one-to-many) technology without running out of bandwidth. This lessens congestion on commercial networks. Datacasting will not only provide speedy transmission of video and data as we wait for FirstNet to become available, but it will also serve as a complement upon its release by providing enhanced capabilities to the Nationwide Public Safety Broadband Network.

For more information on the awards and winners, check out the [Out-of-the-box solutions highlight 2015 Security Innovation Award winners](#) article.

Helpful Links



For questions, comments or suggestions, please email: first.responder@hq.dhs.gov.