Joint SAFECOM-National Council of Statewide Interoperability Coordinators (NCSWIC) Executive Summary | Wednesday, June 8, 2022

Photo: Penny Rubow, Arkansas SWIC, addresses SAFECOM and NCSWIC at the opening of the joint meeting on June 8.

Welcome Back: World Crises, Silver Linings, and a Tribute to You!

Chief Gerald Reardon, SAFECOM Chair and SAFECOM At-Large (City of Cambridge Fire Department, Massachusetts), welcomed participants and shared his enthusiasm for the meetings. He shared a photo montage of public safety's response to disasters to thank and remind the group of all the dedicated work they have done over the years. Penny Rubow, Arkansas Statewide Interoperability Coordinator (SWIC), expressed gratitude for the ability to meet in-person. She shared an excerpt from President Theodore Roosevelt's speech, *The Man in the Arena*, from the Sorbonne (Paris, April 23, 1910) that emphasizes the importance of the person who works hard, not the critic who points out shortcomings. Billy Bob Brown, Jr., Cybersecurity and Infrastructure Security Agency (CISA) Executive Assistant Director (EAD) for Emergency Communications, thanked SAFECOM and National Council of Statewide Interoperability Coordinators (NCSWIC) members for their work and expressed gratitude for the opportunity to serve.

Keynote: Emergency Communications—"Your Mission is Our Mission"

Photo: DDIR Nitin Natarajan, CISA

CISA Deputy Director (DDIR) Nitin Natarajan joined the group virtually to give the keynote address, stressing the need to get "the right information to the right people at the right time" and recognizing the key roles SAFECOM and NCSWIC play to ensure this occurs. He recognized targets for attack are no longer just large cities and that resources must be readily accessible for communities of all sizes at all times. By leveraging community expertise and relationships established by SAFECOM and NCSWIC, CISA can maximize its impact and improve the emergency communications landscape across the nation.

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Stronger than the Weakest Link: Building Redundancy and Resiliency in the Face of Third-Party Reliance

In 2018, the SAFECOM Nationwide Survey found that over 35% of respondents had indicated significant equipment failures outside of the organization's control, which led to an inability for vital public safety organizations to efficiently communicate during times of crisis. Panelists, including Phil Mann, SAFECOM Joint Technology Policy Committee Chair and American Public Works Association; Karen White, National Association of Telecommunications Officers and Advisors (NATOA); Travis Johnson, CISA Emergency Communications Coordinator (ECC) for Region 6; and Ted Lawson, CISA, explored real-world examples of network disruptions (e.g., land mobile radio [LMR], broadband, 911, cloud-based/cyber) as a result of third-party dependencies, and discussed lessons learned from these cases.

Mr. Johnson shared his lessons learned after facing five consecutive storms in one season. He learned to assume that out of the Primary, Alternate, Contingency, and Emergency (PACE) Communication Plan, the primary, alternate, and contingency plans are likely to fail, potentially simultaneously. Mr. Johnson explained this vulnerability often originated from third-party dependencies and a reliance on terrestrial communications. To address the concern, Mr. Johnson suggested involving High Frequency Radio, Amateur Radio, and Satellite Radio in future exercises to promote interdependencies and minimize chances of multiple communications plan failures.

Ms. White continued with additional caveats and precautions to take when collaborating with third-party dependencies. She shared her experience and best practices from the Boston Optical Network (BoNet). Boston Public Safety conducted a competitive solicitation to increase BoNet service locations by over 150, utilizing a 20- or 30-year right of use contract. She shared best practices and emphasized the need for a knowledgeable network team and counsel that understands the technology and needs of both parties, such as a Quality Assurance Plan and a Disaster Preparedness and Recovery Plan included in the contract. It is important to explicitly define technical specifications and the testing required. During the expansion of BoNet, this included explicitly defining the industry-accepted fiber standards and allowable losses for connections as well as detailing what the test reports would include and outlining the review process. Additionally, she suggested all third parties be included in the design phase through final acceptance testing to familiarize all of those involved with the system.

Mr. Mann echoed Mr. Johnson's message about third-party dependencies and added context from the 2020 Nashville bombing. Due to the bombing's proximity to cell towers, service companies were delayed in restoring their facilities during the investigation. Mr. Mann reminded participants that third-party providers prioritize the state or highest-paying customer, regardless of another state's financial limitation, which several other participants agreed with based on their experiences during emergencies. Mr. Mann shared several questions for public safety officials to ask vendors before entering a service-level agreement, including: What are your other contracts on the table? How do I fit in? What is your capacity? More detailed information about lessons learned during the Nashville bombing incident is available in the *Communications Dependencies Case Study: Nashville Christmas Day Bombing*.

Figure 1: Document cover, credit SAFECOM and NCSWIC

Mr. Mann reported a cybersecurity audit exposed several gaps including lack of staffing and training. He emphasized the need for staff to have up-to-date information technology training, especially considering the active war in Ukraine. He recommended having third parties explicitly define their ability and willingness to support system maintenance after installment and especially during emergencies. Mr. Mann urged participants to read and disseminate the *Public Safety Communications Dependencies on Non-Agency Infrastructure and Services*, developed by the Joint Technology Policy Committee as a resource for working with third-party dependencies.

Budge Currier, California SWIC, shared that when developing a Service Level Agreement or contract, it is crucial to build a good relationship with a strong procurement official. The relationship can keep managers and officials from paying for services that do not work when they need them the most.
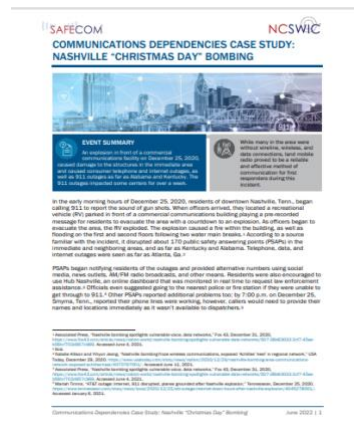
Panelists concluded by addressing questions from the audience, including concerns regarding the lack of resources available to tribes. Theron Rutyna expressed that a mutually-beneficial agreement can be made between small counties and tribes. A majority of participants expressed that a solution needs to be developed to address the gap in communications among third-party representatives withholding information about a broken circuit, which causes an unnecessary loss in resources during times of crisis.

Standard Talkgroup Names for Public Safety Broadband

Jessica Kaputa, CISA, moderated a panel consisting of Deputy Chief Chris Lombard, InterAgency Board for Emergency Preparedness & Response and SAFECOM At-Large (Seattle Fire Department); Kim Coleman Madsen, First Responder Network Authority (FirstNet); and Theron Rutyna, National Congress of American Indians, to discuss the Push-to-Talk Mutual Aid focus group established in 2021 involving SAFECOM, NCSWIC, CISA, FirstNet, and other public safety agencies. This initial effort was meant to develop a system-agnostic standard naming convention for public safety broadband talkgroups.

The group aimed to create a clear structure to ensure familiarity. Mr. Rutyna stressed the group's intent to establish and implement a naming design structure around which the technology can be built, and not the other way around. Currently, there is no nationally-accepted mutual aid framework for public safety to use when adopting and operationalizing critical voice communications over long-term evolution (LTE). The proposed structure is a general naming format that utilizes Channel Use Designators (see Table 1, page 4) based on locality and regional or local use. It is capable of being more specific based on needs, jurisdiction, and events. The standard format proposed criteria within the following example:

National and State	Broadband Frequency (BF) – State/National/Territorial (AA) – Channel Use Designator (Type) – Channel Identifier (##) – Modifier (M)
Regional and Local	Broadband Frequency (BF) – State/Territory/Tribe (ST) – City or County Name (CTY) – User Defined

The panel addressed questions on the implementation of the structure, coordination with the U.S. Border Patrol, and questions on how the group will enforce the naming structure to minimize redundancy. The proposed structure will be sent to SAFECOM and NCSWIC for input and feedback. Members are asked to share their edits, comments, and suggestions to their corresponding CISA ECC.

Type	Definition	Type	Definition	Type	Definition
AG	Air to Ground Ops	EM	Emergency management	MOB	Deployable Assets
CACHE	Non-discipline specific caches	EVAC	Transportation Services supporting evacuation	MIL	Military Agencies
CALL	I/O Calling	FIRE	Fire Agencies	P-WORKS	Public Works
COR	Corrections	GOV-F; GOV-S GOV-L; GOV-T	Interagency comms by gov (county/municipal) agencies. Federal (F), State (S), Local (L), Tribal or Territorial (T)	SAR	Search and Rescue
DATA	Data transmission only (secondary voice)	GTAC	Interagency comms between PS and NGOs	TAC	PS Agencies for Tactical Purposes
DOT	Roads/Streets/Highways	LAW	Law Enforcement Agencies	UTIL	Utilities
ECC	Emergency Communications Center (911)	MED	EMS and Healthcare Agencies	VIDEO	Video streaming or transmission
EDU	K-12/Universities				

Table 1: Push-to-Talk Mutual Aid Working Group proposed channel designators

Working Session: The Evolution of On-Scene Communications

Emerging tools and capabilities are changing the landscape of on-scene communications throughout America. SAFECOM Education and Outreach Committee members hosted this interactive session to include Chief Jay Kopstein, SAFECOM Second Vice Chair and SAFECOM At-Large (New York State Division of Homeland Security and Emergency Services Communications and Interoperability Working Group); Mike Davis, SAFECOM Education and Outreach Committee Chair and SAFECOM At-Large (Ulster County 9-1-1 Emergency Communications); J.M. Rowe, SAFECOM At-Large (Arkansas Department of Emergency Management); and Wes Rogers, CISA. The focus of this session was to gather feedback from SAFECOM and NCSWIC members on valuable updates to the 2019 *Public Safety Communications Evolution Brochure*. The *Public Safety Communications Evolution Brochure* is a critical document initially published in 2012 and refreshed in 2019 to educate stakeholders, including elected and appointed officials, on the use and value of cutting-edge solutions to augment critical systems (e.g., voice and data).

Mr. Davis and Mr. Rowe discussed the history of the evolution of on-scene communications and leveraged the *Public Safety Communications Evolution* graphic to show initial thoughts on depicting the ever-evolving lanes of integrated technology components, which include administrative data, mission critical data, administrative voice, and mission critical voice. The graphic and brochures show gradual technological advancements within those lanes, such as two-way LMR, Nationwide Public Safety Broadband Network, existing private/commercial mobile data, and emerging technologies.

During the discussion, panelists shared lessons learned and historical on-scene communications success stories. Most notably, the Deepwater Horizon Oil Spill of 2010 led to the development of the Gulf Coast Wireless Information Network (Gulf WIN), a 700/800 MHz interoperable radio network featuring fingertip roaming throughout the Gulf Coast region. This connected the U.S. Coast Guard with state and local responders. Panelists also noted success stories from Hurricane Sandy in 2012 and the Boston Marathon Bombing of 2013.

> **INFORMATION COMMUNICATIONS TECHNOLOGY/ NATIONAL INCIDENT MANAGEMENT SYSTEM UPDATE**
>
> Deputy Chief Chris Lombard, SAFECOM First Vice Chair, The InterAgency Board for Emergency Preparedness & Response, and SAFECOM At-Large (Seattle Fire Department), provided SAFECOM and NCSWIC members an overview and update on the Information Communications Technology (ICT)/National Incident Management System (NIMS) guidance document developed by the Communications Section Task Force in collaboration with the Federal Emergency Management Agency.

Following the presentation, both SAFECOM and NCSWIC members began working at their tables to complete a feedback worksheet soliciting input on the following:

- Purpose of the *Public Safety Communications Evolution Brochure* today
- Intended audience
- Format (e.g., length, document type)
- Driving force behind the Brochure and what the public safety community can leverage by creating and sharing it (e.g., legislative buy-in, funding, training)

With the feedback gathered from this working session, the SAFECOM Education and Outreach Committee will work with CISA to develop an updated *Public Safety Communications Evolution Brochure*.

Next Generation 911 Systems and Emergency Communications Centers

Budge Currier, California SWIC and California 911 Administrator, facilitated a session focused on the difficulties localities and states have had in their transition from legacy 911 systems to Next Generation 911 (NG911). Due to California's size, multiple vendors will service various public safety answering points (PSAPs) in the same region, potentially leading to interruptions in voice and data delivery due to the use of different equipment. NG911 will

standardize the equipment and ensure reliable, secure information sharing between PSAPs and first responders. In addition, NG911 will allow PSAPs to process new mediums of data, including text, photos, and videos. The transition to NG911 will create a reliable and secure information sharing network that will allow PSAPs to seamlessly pass information should one go offline. The State of California is working closely with the Department of Defense (DoD), specifically the Defense Information Security Agency (DISA), to integrate the DoD installations with the state NG911 system.

John Holloway, Deputy Director of Public Safety Communications, DISA, shared that the DoD is currently experimenting with 5G for public safety applications, specifically for PSAPs located on military installations. DISA currently oversees 179 PSAPs across the country, as well as 40 overseas PSAPs on military installations around the world. This creates various challenges as multiple vendors provide services to their PSAPs. When addressing the transition to NG911 overseas, the DoD must remain compliant with host-nation rules and regulations as well.

Kate Elkins, National 911 Program, National Highway Traffic Safety Administration, discussed ongoing efforts to address interoperability for state, local, tribal, and territorial (SLTT) partners. There are currently three goals they are trying to meet: 1) convene emergency communications stakeholders, 2) create and share resources to help educate others about NG911, and 3) administer grant funding for improved 911 services. These efforts will continue through the next year with the hopes of guiding further legislation and standards development for the transition to NG911.

Making Cents of Federal Emergency Communications Funding: Best Practices and New Opportunities

Figure 2: QR Code for more SAFECOM-NCSWIC Funding Resources

Eric Abdullateef, CISA, facilitated a discussion on lessons learned from previous emergency communications funding, CISA resources for prospective grant applicants, and new and upcoming funding opportunities that may support emergency communications. Panelists included Penny Rubow, Joint Funding and Sustainment Committee Co-Chair and Arkansas SWIC, and Joy Sears, CISA Grants Policy Branch Program Analyst. Ms. Rubow provided an overview of best practices that grant applicants should consider when applying for emergency communications funding. She detailed the importance of paying attention to key grant materials and following the funding opportunity's guidelines. She also advised participants to write clearly on their grant applications and answer all questions in a straightforward manner. Ms. Rubow then explained the value of providing a project schedule or an overview of existing plans that demonstrate how an applicant's agency is already working towards the project goal. Finally, she encouraged participants to leverage relationships with their grant offices and other SLTT contacts to gain additional insight into the grant application and find a project champion.

Ms. Sears reviewed the CISA Grants Policy Branch's role and discussed the history of dedicated emergency communications funding over the last 15 years. She noted that federal grant funding for emergency communications has fluctuated significantly, creating periods of uncertainty for public safety stakeholders trying to implement emergency communications projects. She informed participants that CISA maintains the *List of Federal Financial Assistance Programs Funding Emergency Communications* to assist SLTT agencies in identifying federal grants that may provide funding for emergency communications projects. Ms. Sears previewed several new and upcoming federal funding opportunities that may fund emergency communications and assured participants that applicable programs would be added to the list. Finally, she provided a brief overview of CISA's State and Local Cybersecurity Grant Program, which is set to be released in the coming months. Panelists concluded by answering questions regarding funding opportunities that allow construction costs, cost-sharing or match requirements for tribal applicants, the incorporation of emergency communications into the State and Local Cybersecurity Grant Program, and how federal program managers monitor grant compliance.

Afternoon Remarks

After closing statements from Chief Reardon, Greg Hauser, North Carolina SWIC, and Ralph Barnett, III, CISA, Dusty Rhoads, CISA, shared several fond memories about the groups' evolution over the years. Dusty then announced his upcoming retirement, effective August 1, 2022. Participants concluded the meeting by recognizing Mr. Rhoads' dedication and service throughout his tenure.

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Kicking off an evening of peer-to-peer networking, SAFECOM and NCSWIC participants heard from leads within CISA on the latest and greatest technical assistance offerings; Information Sharing Framework efforts; state markers and recent impacts; and priority telecommunications services. SAFECOM and NCSWIC members took a walking tour of booths designed to showcase agency services, programs, and offerings relevant to the emergency communications community.