The member organizations of the National Public Safety Telecommunications Council are grateful to the Department of Homeland Security’s Science and Technology Directorate, Office for Interoperability and Compatibility (OIC) and the National Protection and Programs Directorate, Office of Emergency Communications (OEC) Points of view or opinions expressed are those of the originators and do not necessarily represent the official position or policies of the U.S. Department of Homeland Security.

Datacasting for Public Safety
Access to Enhanced Technology via Public Television

Thursday, January 17, 2019
2:00 – 3:30 PM Eastern Time Zone
Conference Line: (510) 227-1018 | Conference ID: 446 1830
Screen Share: https://join.me/NPSTCsupport1
Submit Questions Online to: support@npstc.org
Welcome and Opening

• Barry Luke, Moderator
  – Welcome to this Town Hall presentation on public television’s role in improving access to incident and response data
  – Please mute your phone line. If your phone system has the “music on hold” feature, please do not place us on hold.
  – NPSTC staff may mute your phone line, if necessary
  – Please do not use the Join.Me screen share chat bubble to send messages. Use our email instead.
  – We will manage questions via email and will hold them to the end of the presentation.
  – Please submit questions and comments via email to support@npstc.org
Introduction of Panel Members

Patrick Butler
President and CEO
America’s Public Television Stations
pbutler@apts.org

W. Craig Fugate
Former FEMA Administrator
APTS Board Trustee
Craig@CraigFugate.com
NPSTC is a federation of organizations whose mission is to improve public safety communications and interoperability through collaborative leadership.

Introduction of Panel Members

Mark O’Brien
President and Chief Technology Officer
SpectraRep
mobrien@SpectraRep.com

John Contestabile
Program Manager
Johns Hopkins Applied Physics Laboratory
John.Contestabile@jhuapl.edu
Introduction of Panel Members

Shane Rekeweg
Sheriff (retired)
Adams County, Indiana
srekeweg@co.adams.in.us

Jeff Cook
District Chief
Houston Fire Department
Jeffrey.Cook@houstontx.gov
Introduction of Panel Members

Lonna Thompson
Executive Vice President &
Chief Operations Officer
America’s Public Television Stations
lthompson@apts.org
Meeting The Needs Of First Responders:
Public Television Wants to Help

NPSTC is a federation of organizations whose mission is to improve public safety communications and interoperability through collaborative leadership.
Partnering with Public Television
Pat Butler

• Public Safety is faced with an increasing complex mission
• Public Television is fully committed to public safety
  – Public Safety is one of the three Pillars of Public Television
  – Datacasting enables us to partner with public safety
  – Possibilities are enormous, but not well known
• Strength of Public Television’s Nationwide Wireless Network
  – Over 350 stations in all 50 states and 6 territories
  – Prime licensed spectrum
  – Fiber and other backhaul
  – Tall hardened towers
  – Resilient and redundant systems
Partnering with Public Television

Pat Butler

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Partnering with Public Television
Pat Butler

- Datacasting Use Cases To Date
  - Fires
  - Floods
  - Earthquakes
  - Search and Rescue
  - School Safety

- Rapid Wide Area Public Alerting
  - Open alerts to the public

- Encrypted/Targetable Public Safety Information Sharing
  - Secure information to responders
  - Building blueprints, drone video, etc.
FEMA Perspective
Craig Fugate

• Phases of a disaster event
  – Warning
  – Event
  – Cleanup

• Broadcast is the most efficient way to deliver alerts and warnings to large audiences

• Multi-modal – Cell, broadcast, Internet, etc. – is key to effective notifications

• Infrastructure must be resilient to withstand the event that triggered the alert
Datacasting Technology
Mark O’Brien

- What is datacasting?
  - IP data over broadcast television
  - Encryption
  - Receiver targeting
- Leverages existing public television infrastructure
- One-to-Many instant delivery
- Targetable
- Live Video, files and other supporting data
- Unique capabilities
  - Native one-to-many
- Datacasting supports secure agency content
  - Encryption
  - Receiver targeting
Datacasting Technology - Video
Mark O’Brien

- Video sources display in a secure dashboard
Datacasting Technology
Mark O’Brien

- Authorized users can target groups or individuals
Datacasting Technology
Mark O’Brien

- Alerts with file attachments easily created and broadcast to unlimited users
  - Common Alerting Protocol (CAP) for interoperability with existing alerting devices

**Alert Editor**

Subject (ex: Shooter near football stadium)

Description (ex: A white male, black hair, white shirt, and blue...)

No files attached

01/04/2019 12:50 PM 01/04/2019 1:20 PM

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Datacasting Technology - Receivers
Mark O’Brien

Today

Future

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Next Generation
Broadcast TV Standard

Broadcast TV is undergoing a major technology transformation

- Mobile reception on phones and tablets
- Built-in hooks for LTE and Internet integration
  - Hybrid broadcast/broadband services
  - HTML 5
- More efficient spectrum usage
- Higher power, denser signals
- Deeper building penetration
- Single Frequency Networks
- Advanced public alerting
- Native IP transport
Public Safety Use of Data
John Contestabile

• Demand for data is growing
  – Public safety communications is expanding beyond LMR voice
  – Video becoming prevalent
  – Existing wireless networks, including FirstNet, expanding to meet demand
  – Rural coverage and urban congestion remain a concern

• How Datacasting can Enhance FirstNet
  – Rural coverage
  – Congestion relief
  – New licensed spectrum
    • Optimized for data
  – One-to-many delivery
Public Safety Use of Data
John Contestabile

- DHS S&T Demonstrations of Datacasting:
  - Boston
  - Chicago
  - Houston
  - Indiana

- Reports available on the DHS web site*


*Video Datacasting:
Chicago Pilot After Action Report
First Responders Group
October 2015
Homeland Security
Science and Technology
NPSTC is a federation of organizations whose mission is to improve public safety communications and interoperability through collaborative leadership.
Datacasting and School Safety
Sheriff Shane Rekeweg (retired)

- Adams County, Indiana
- School safety
  - Unique rural area issues
- Sharing Across Agencies
  - Improved Interoperability
    - Police
    - Fire
    - EMS
    - Hospital
    - Bomb Squad
- Lessons Learned
Another Tool in the Toolbox

- Stream video from Divisions to Command Post
- Stream video from incident scenes to EOC/Forward Command Post
- Stream video updates of real time conditions to EOC
- Stream video from scene to responding specialty units (HazMat, Technical Rescue)
- Send Safety Data Sheets to responders or incident command post
- Send maps, floorplans, and other files to incident command post
- Send alerts/emergency messages to field responders (active shooter on scene, shelter in place, etc)
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Multi-Discipline, Multi-Jurisdiction Tool
Larger Coverage Area Than Cellular/Radios
Planned Large Scale/Complex Events
  - Super Bowl, World Series, Final 4, Marathon
Unplanned Daily Events
  - Wildland, Structure, Hazmat, Rescue
Allows for Sharing Multiple Tools
  - Cell Phone App, Portable Cameras, Web-based Data
State of Tennessee’s New Deployment
Lonna Thompson

- New statewide datacasting network
  - 7 TV transmitters cover the entire state
- Public safety advisory committee set up to steer deployment and innovation
- The 2016 Great Smokey Mountain fires triggered Governor Haslam to look for solutions
  - Public television demonstrated how the stations can help
- Public alerting as well as first responder information
Thank You for Your Time Today!
Lonna Thompson

• Public Television is committed to supporting Public Safety
• Public Television’s nationwide network is available to you
• Contact APTS to learn more about working with your local public television station and to set up a live demonstration
• Lonna Thompson
  – lthompson@apts.org
  – 202-654-4215
Audience Submission of Questions

- Please send your questions to Support@npstc.org
- The moderator will present questions to a panel member and ask other panel members if they have additional comments.
Moderator Q&A

• Why are public television stations willing to share their spectrum with public safety?

• Is Datacasting complimentary to systems like FirstNet on the AT&T network, or other cellular systems?

• How hard was this to set up the Datacasting solution in Houston?
Thank You for Participating with our Town Hall Session Today

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