PSCR

Public Safety
Broadband Stakeholder Meeting

AGENDA - DAY 1

Tuesday, July 9, 2019
The Westin Michigan Avenue Chicago

NIST

#PSCR2019

PLENARY WILL TAKE PLACE IN THE GREAT LAKES BALLROOM

LEGEND

- ● Location-Based Services
- ● Security
- ● Resilient Systems
- ● Analytics
- ● Enhanced UI/UX
- ● Mission Critical Voice
- ⚙ Open Innovation Session

Level of Technicality
- ●○○ Beginner
- ●●○ Intermediate
- ●●● Advanced

Time	Session
7:00 – 8:00 AM	**ARRIVE AND CHECK-IN**
8:00 – 9:00AM	**WELCOME AND OPENING REMARKS** | **Walt Copan -** *Under Secretary of Commerce for Standards and Technology, NIST Director* **Keynote Speaker, Jonathan Lewin -** *Bureau of Technical Services Chief at Chicago Police Department*
9:00 – 9:30AM	**PSCR PROGRAM OVERVIEW** | **Dereck Orr** - *Division Chief, NIST PSCR*
9:30 – 10:00AM	**BREAK**
10:00 – 10:45AM	**PSCR PORTFOLIO OVERVIEWS**
10:45 – 11:30AM	⚙ **HAPTIC INTERFACES FOR PUBLIC SAFETY** | **Scott Ledgerwood** - *NIST PSCR*, **Megan Waldock** - *Yet2*
11:30 – 1:00PM	**LUNCH BREAK** *Please note that lunch will not be provided*

Time	ONTARIO	HURON	GREAT LAKES AB	GREAT LAKES DE
1:00 – 1:30PM	**NIST Identity, Credential, and Access Management (ICAM) Workshop Outcomes:** Bill Fisher, *NIST NCCoE* ●●○	**Evaluating Speech Analytic Technology Tasks in Simulated Public Safety Related Communications:** Fred Byers, *NIST* ●○○	**Indoor Mapping & Navigation Pilot - Improved First Responder Preplanning through Open Standards:** Bart De Lathouwer, *Open Geospatial Consortium* ●●○	**LMR Data Modeling for LTE:** Chris Dennis, *NIST* Don Bradshaw, *NIST* ●●○
1:35 – 2:20PM	**Current State of Mobile Application Security:** Michael Ogata, *NIST ITL* ●●○	**Extensible Toolkit for Analytics in Public Safety:** Jason Corso and Brian Moore, *VOXEL 51* ●●○	**Point Cloud City:** Lan Wang, Eddie Jacobs, *City of Memphis Enfield Fire Dept.*, Joel Lawhead, *Hancock County, MS* ●●○	**Coverage, Capacity, & Resilience Enhancement in Limited Public Safety Networks:** Hyeong-Ah Choi and Amrinder Arora, *George Washington University and Miami University* ●●○
2:25 – 3:10PM	**Evaluating Voice and Hand Tracking in Virtual Reality and the Impact They Have on Users:** Cole Sandau, Justin Mette, and John Dwyer, *Health Scholars* ●○○	**Accelerating Data-Driven Operations in the Fire Service:** Tyler Garner, *Prominent Edge LLC* ●○○	**Hyper-Reality Helmet with Multimodal Interfaces:** Yang Cai, *Carnegie Mellon University* ●●○	**Open Ecosystems in Public Safety Communications: Mission Critical Open Platform Lessons Learned and Future Steps:** Fidel Liberal, *University of the Basque Country*, Jani Lyrintzis, *BITTIUM*, Bartolo Scanavino, *ENENSYS/EXPWAY*, Harald Ludwig, *TCCA* ●●○
3:15 – 4:00PM	**Cognition-driven Display for Navigation Activities (Cog-DNA): Personalized Spatial Information System Based on Information Personality of Firefighters:** Eric Jing Du, *University of Florida, Texas A&M*, Ryan Qi Wang, *Northeastern University*, Yingzi Lin, *Northeastern University*, Patrick Suermann, *Texas A&M University* ●●○	**Information-Driven Video Communication for Public Safety Networks:** Rui (April) Dai, *University of Cincinnati* ●●●	**Accelerating Adoption and Use of Emerging Location Based Services by Public Safety:** Paul Doherty, PhD and Jared Doke, *National Alliance for Public Safety GIS (NAPSG) Foundation* ●○○	**End-to-End Mission Critical Push-to-Talk – Pushing for the Future:** Robert Escalle, *Sonim* Jose Oscar Fajardo, *Nemergent Solutions* ●●○
4:05 – 5:30PM	**DEMOS** **LOCATION:** ERIE AND MICHIGAN BALLROOM			**Bridging Non-ISSI LMR and LTE Mission Critical Push-To-Talk:** Chris Walton, *NIST*, Don Bradshaw, *NIST* * This sessions ends at 4:35PM* ●●○

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AGENDA - DAY 2

Wednesday, July 10, 2019
The Westin Michigan Avenue Chicago

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PLENARY WILL TAKE PLACE IN THE GREAT LAKES BALLROOM

LEGEND

- ● Location-Based Services
- ● Security
- ● Resilient Systems
- ● Analytics
- ● Enhanced UI/UX
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- ●●○ Intermediate
- ●●● Advanced

8:00 – 9:00AM

WELCOME & KEYNOTE ADDRESS
Ed Horowitz - *FirstNet Board Chairman*

9:00-10:00AM

⚙ **TECH TO PROTECT: DESIGNING APPS THAT FURTHER THE MISSION OF EMERGENCY RESPONDERS | Craig Connelly** - *NIST PSCR*

10:00-10:45AM

BREAK *DEMOS OPEN & LOCATED IN ERIE & MICHIGAN BALLROOM*

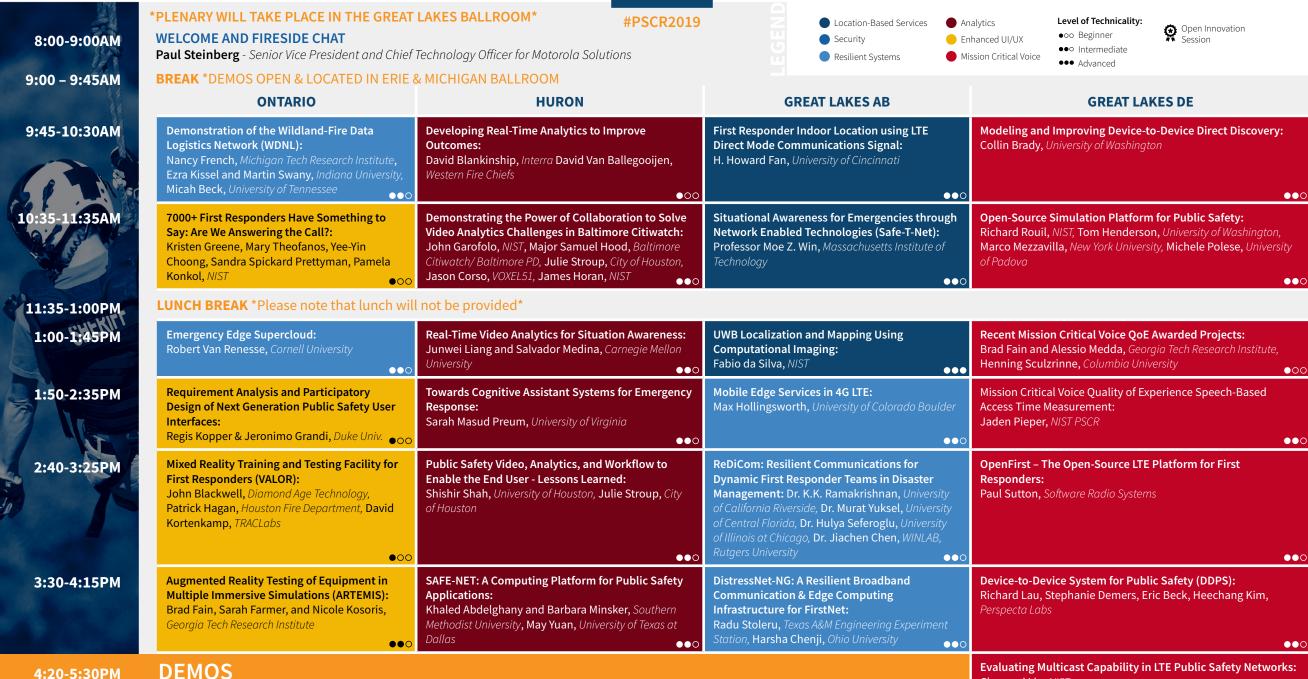|	ONTARIO	HURON	GREAT LAKES AB	GREAT LAKES DE
10:45-11:30AM	⚙ **Improving the Security and Authentication Features on First Responders' Mobile Devices:** John Beltz, *NIST PSCR,* Mike Bartock, *NIST ITL,* Sarah Hughes, *NIST PSCR,* Bill Fisher, *NIST NCCoE,* Santosh Rajvaidya, *Nok Nok Labs* ●●○	**Body-Worn Camera Analytics:** Jason J. Corso, *University of Michigan* ●●●	**Ultimate Navigation Chip – Chip-Scale Personal Navigation System Integrating Deterministic Localization and Probabilistic Signals of Opportunities:** Andrei M. Shkel and Zak Kassas, *University of California Irvine* ●●○	**Propagation Channel Models & System Performance:** Andreas Molisch and Hussein Hammoud, *University of Southern California* ●●○
11:30-1:00PM	**LUNCH BREAK** *Please note that lunch will not be provided*			
1:00-1:45PM	**Securing First Responder Mobile and Wearable Devices – Going Beyond the Public Safety Use Case:** Gema Howell, *NIST ITL,* Michael Ogata, *NIST ITL* ●●○	⚙ **Imagine a World Where Data Is Shared Safely:** Terese Manley, *NIST,* Christine Task, *Knexus Research Corporation,* Challenge Winners, Community First Responder ●○○	**An Infrastructure-Free Localization System for Firefighters:** Anthony Rowe, *Carnegie Mellon University* ●●○	**Enabling Service Continuity Using UE-to-Network Relays:** Richard Rouil, David Griffith, *NIST* ●●●
1:50-2:35PM	**Security Standards Influence Public Safety Communication:** Mike Dolan, *First Responder Network Authority,* Jeff Cichonski, *NIST ITL,* Adam Lewis, *Motorola,* Bill Fisher, *NIST NCCoE* ●●○	**Video and Imagery Dataset to Drive Public Safety Capabilities:** Andrew Weinert, *MIT Lincoln Laboratory in partner with New Jersey Office of Homeland Security and Preparedness* ●○○	**Robust First Responder Tracking and Mapping with Thermal, Inertial, and Radar Sensing:** Jamie Cousins, *HFRS,* Dr. Pedro Porto Buarque de Gusmao, Dr. Johan Wahlstrom, Niki Trigoni and Andrew Markham, *University of Oxford* ●●○	**Improving ProSe Off-Network Coverage:** Dan Ericson, *Harris* ●●○
2:40-3:25PM	**Towards the Development of a VR-Based Emergency Response Scenario and Intelligent User Interface:** Randall Spain, *North Carolina State University,* Donia Slack, *RTI International* ●●○	**Cognitive Mobile Edge Computing: Video Analytics Use Case:** Zongru (Doris) Shao, *Spectronn* ●○○	**First Responder 3D Mapping and Location:** Jeff Kunst, *TRX, Inc.* Matt Herbert, *Battalion Chief, Arlington County* ●●○	**Public Safety Communications Above Six GHz – Challenges and Opportunities:** Marco Mezzavilla, *New York University* ●●○
3:30-4:15PM	**FirstSimVR: Evaluating Future Tools Using Today's VR:** Jason Jerald, Jason Haskins, Charles Laird, and Blake Boyd, *NextGen Interactions* ●●○	**Next Generation First Responder Deployables and Internet of Things (IoT) Technology:** Sam Ray, Alison Kahn, Max Maurice, Hien Nguyen, *NIST* ●○○	**Decimeter Accurate, Long Range Non-Line-of-Sight RF Wireless Localization Solution for Public Safety Applications:** Hun-Seok Kim, *University of Michigan* ●●○	**Mission Critical Voice Quality of Experience Measurement Methods:** Tim Thompson, *NIST PSCR* ●●○
4:20-5:30PM	**DEMOS** **LOCATION:** ERIE AND MICHIGAN BALLROOM			

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AGENDA - DAY 3

Thursday, July 11, 2019
The Westin Michigan Avenue Chicago

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LEGEND
- ● Location-Based Services
- ● Security
- ● Resilient Systems
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Level of Technicality:
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🏅 Open Innovation Session

PLENARY WILL TAKE PLACE IN THE GREAT LAKES BALLROOM

Time				
8:00-9:00AM	**WELCOME AND FIRESIDE CHAT** — **Paul Steinberg** - *Senior Vice President and Chief Technology Officer for Motorola Solutions*			
9:00 – 9:45AM	**BREAK** *DEMOS OPEN & LOCATED IN ERIE & MICHIGAN BALLROOM			

Time	ONTARIO	HURON	GREAT LAKES AB	GREAT LAKES DE
9:45-10:30AM	**Demonstration of the Wildland-Fire Data Logistics Network (WDNL):** Nancy French, *Michigan Tech Research Institute,* Ezra Kissel and Martin Swany, *Indiana University,* Micah Beck, *University of Tennessee* ●●○	**Developing Real-Time Analytics to Improve Outcomes:** David Blankinship, *Interra* David Van Ballegooijen, *Western Fire Chiefs* ●○○	**First Responder Indoor Location using LTE Direct Mode Communications Signal:** H. Howard Fan, *University of Cincinnati* ●●○	**Modeling and Improving Device-to-Device Direct Discovery:** Collin Brady, *University of Washington* ●●○
10:35-11:35AM	**7000+ First Responders Have Something to Say: Are We Answering the Call?:** Kristen Greene, Mary Theofanos, Yee-Yin Choong, Sandra Spickard Prettyman, Pamela Konkol, *NIST* ●○○	**Demonstrating the Power of Collaboration to Solve Video Analytics Challenges in Baltimore Citiwatch:** John Garofolo, *NIST,* Major Samuel Hood, *Baltimore Citiwatch/ Baltimore PD,* Julie Stroup, *City of Houston,* Jason Corso, *VOXEL51,* James Horan, *NIST* ●●○	**Situational Awareness for Emergencies through Network Enabled Technologies (Safe-T-Net):** Professor Moe Z. Win, *Massachusetts Institute of Technology* ●●○	**Open-Source Simulation Platform for Public Safety:** Richard Rouil, *NIST,* Tom Henderson, *University of Washington,* Marco Mezzavilla, *New York University,* Michele Polese, *University of Padova* ●●○
11:35-1:00PM	**LUNCH BREAK** *Please note that lunch will not be provided*			
1:00-1:45PM	**Emergency Edge Supercloud:** Robert Van Renesse, *Cornell University* ●●○	**Real-Time Video Analytics for Situation Awareness:** Junwei Liang and Salvador Medina, *Carnegie Mellon University* ●●○	**UWB Localization and Mapping Using Computational Imaging:** Fabio da Silva, *NIST* ●●●	**Recent Mission Critical Voice QoE Awarded Projects:** Brad Fain and Alessio Medda, *Georgia Tech Research Institute,* Henning Sculzrinne, *Columbia University* ●○○
1:50-2:35PM	**Requirement Analysis and Participatory Design of Next Generation Public Safety User Interfaces:** Regis Kopper & Jeronimo Grandi, *Duke Univ.* ●○○	**Towards Cognitive Assistant Systems for Emergency Response:** Sarah Masud Preum, *University of Virginia* ●●○	**Mobile Edge Services in 4G LTE:** Max Hollingsworth, *University of Colorado Boulder* ●●○	**Mission Critical Voice Quality of Experience Speech-Based Access Time Measurement:** Jaden Pieper, *NIST PSCR* ●●○
2:40-3:25PM	**Mixed Reality Training and Testing Facility for First Responders (VALOR):** John Blackwell, *Diamond Age Technology,* Patrick Hagan, *Houston Fire Department,* David Kortenkamp, *TRACLabs* ●○○	**Public Safety Video, Analytics, and Workflow to Enable the End User - Lessons Learned:** Shishir Shah, *University of Houston,* Julie Stroup, *City of Houston* ●●○	**ReDiCom: Resilient Communications for Dynamic First Responder Teams in Disaster Management:** Dr. K.K. Ramakrishnan, *University of California Riverside,* Dr. Murat Yuksel, *University of Central Florida,* Dr. Hulya Seferoglu, *University of Illinois at Chicago,* Dr. Jiachen Chen, *WINLAB, Rutgers University* ●●○	**OpenFirst – The Open-Source LTE Platform for First Responders:** Paul Sutton, *Software Radio Systems* ●●○
3:30-4:15PM	**Augmented Reality Testing of Equipment in Multiple Immersive Simulations (ARTEMIS):** Brad Fain, Sarah Farmer, and Nicole Kosoris, *Georgia Tech Research Institute* ●●○	**SAFE-NET: A Computing Platform for Public Safety Applications:** Khaled Abdelghany and Barbara Minsker, *Southern Methodist University,* May Yuan, *University of Texas at Dallas* ●●○	**DistressNet-NG: A Resilient Broadband Communication & Edge Computing Infrastructure for FirstNet:** Radu Stoleru, *Texas A&M Engineering Experiment Station,* Harsha Chenji, *Ohio University* ●●○	**Device-to-Device System for Public Safety (DDPS):** Richard Lau, Stephanie Demers, Eric Beck, Heechang Kim, *Perspecta Labs* ●●○
4:20-5:30PM	**DEMOS** **LOCATION:** ERIE AND MICHIGAN BALLROOM			**Evaluating Multicast Capability in LTE Public Safety Networks:** Chunmei Liu, *NIST* *This sessions ends at 5:05PM* ●●●