

Q: What is PSCR doing to ensure MC PTT is interoperable across carriers?

PSCR is involved in two areas to ensure or increase interoperability across networks:

- PSCR has recently awarded a cooperative agreement with Nemergent Solutions titled "BroadImPort: Importing European BroadPort MCX concepts to US market needs." The goal of the award is to address interoperability across networks in regard to MCX (MCPTT, MCVideo, MCDData). Some issues have arisen from a lack of 3GPP-compliant solutions. Some of the issues stem from the use of proprietary technology, among other things. The concept of the solution is to use fully standardized procedures. This project will also include LMR-MCX interworking capabilities. More information can be found here:
<https://www.nist.gov/ctl/pscr/funding-opportunities/past-funding-opportunities/psiap-2022/broadimport-importing-european>
- PSCR is the lead rapporteur in the 3GPP for MCX conformance test case creation. MCX, as defined by the 3GPP, is inherently designed to be interoperable across multiple networks. But without conformance to standards, interoperability across carriers and between different devices and applications becomes uncertain. To help promote the execution of the created test cases, PSCR has given 4 awards (3 cooperative agreements and a procurement) to equipment manufacturers to create test equipment that supports the 3GPP MCX test cases. Certification labs need the test equipment to verify MCX functionality and ensure conformance requirements of devices and applications. Some of the awardees have also worked on defining the certification process that the certification labs will use. More information can be found here:
<https://www.nist.gov/ctl/pscr/funding-opportunities/past-funding-opportunities/psiap-mcv-test-equipment>

Q: Will the use of lidar/radar/ and infrared play a role together with interior personnel location?

Lidar, radar, and infrared detection are all sensing modalities that can aid in indoor localization. Lidar, especially, is a proven technology for creating accurate 3D models of indoor spaces. Accurate 3D models will play an important role in the display of indoor location information of personnel.

Q: Are there still continuing opportunities for Public Safety to support the center?

Yes, please reach out to pscr@nist.gov if you are interested in engaging with PSCR for future research activities or to come tour the PSITC.

Q: How do you keep the tester safe while using the physical staircase in the ITC space?

A safety plan has been created for using the staircase in the ITC, including training, hardhats, and appropriate usage. This system is only deployed for indoor location testing and will not be used for VR or AR studies.

Q: Is there a way to compare the effectiveness of different content? Some randomized evaluation capability? I'm trying to develop effective training content but it is difficult to scaffold advancements in training without a baseline of performance.

There are a variety of methods to approach this but one that is NIST PSCR and AR relevant may be this resource:

<https://www.nist.gov/publications/augmented-reality-ar-usability-evaluation-framework-case-public-safety-communications>

Q: XY and Z axis location will only be of use if the spatial relationships of the internal environment are understood in real time (floors, ceilings, ingress egress etc.). Is the goal to have this real time common operating picture? Without this, the disconnect will hinder the usability of location as merely a data point within a structure.

Yes, indoor location information must be known relative to the structure of the building for it to be most useful for public safety. PSCR has worked, and continues to work, with external collaborators to explore the use of lidar and camera based mapping systems that can rapidly produce accurate 3D models of structures. These concepts will also be an important part of the FRST Challenge and the CommanDING Tech Challenge.