

PULLING THE *FUTURE FORWARD*

ABOUT
PSCR

5 KEY
RESEARCH AREAS

STRATEGIC
TOPIC AREAS

RESEARCH
PARTNERS

INTRAMURAL
IMPACTS

EXTRAMURAL
IMPACTS

The Public Safety Communications Research (PSCR) Division is the primary federal laboratory conducting research, development, testing, and evaluation for public safety communications technologies. It is housed within the Communications Technology Laboratory (CTL) at the National Institute of Standards and Technology (NIST). It addresses the R&D necessary for critical features identified by public safety entities beyond the current generation of broadband technology.

MISSION

PSCR is driven towards advancing public safety communications technologies by accelerating the adoption and implementation of the most critical communications capabilities to ensure the public safety community can more effectively carry out their mission to protect lives and property during day-to-day operations, large scale events, and emergencies.

PROMISE

PSCR accelerates innovation by investing in research to transform the future of public safety communications, technology, and operations.

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LMR TO LTE



LOCATION-BASED
SERVICES



TWO CROSS-CUTTING
RESEARCH AREAS

SECURITY



RESILIENT
SYSTEMS



MISSION
CRITICAL
VOICE (MCV)



USER INTERFACE
USER EXPERIENCE



PUBLIC SAFETY
ANALYTICS



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As the leading research facility, PSCR supports the development of a nationwide network and impacts the following strategic priority areas:



AI TO INCREASE
OPERATIONAL
RESPONSE

PUBLIC SAFETY
RESILIENT
COMMUNICATIONS

LIVE 3D
INDOOR
TRACKING

5G IOT SENSOR
NETWORKS FOR
PUBLIC SAFETY

PUBLIC SAFETY
NEXT GENERATION
HEADS UP
DISPLAYS

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PRODUCTS

MEASUREMENT METHOD METRICS



MCV QUALITY OF
EXPERIENCE



PUBLIC SAFETY
PUSH-TO-TALK MODELING



VIRTUAL REALITY
ENVIRONMENT



PUBLIC SAFETY ANALYTICS
OPEN FRAMEWORK



INDOOR LOCALIZATION
ACCURACY

TOOLS

12

OPEN SOURCE
SOFTWARE

PUBLICATIONS

77

STANDARDS

LTE

483 CONTRIBUTIONS FOR PUBLIC SAFETY
SERVICE & FEATURE REQUIREMENTS,
ARCHITECTURE, & PROTOCOL
SPECIFICATIONS

LMR TO LTE

3GPP-STANDARDS BASED LMR TO LTE
INTERFACES FOR PUBLIC SAFETY

UNIQUE RESOURCES

PUBLIC SAFETY INNOVATION LAB



40-GIGABIT
CORE LTE NETWORK



P25 PHASE 1 AND 2
LMR SYSTEM



2 RF CHAMBERS
FOR TESTING DEVICES



INTEROPERABILITY LAB
INTERCONNECTING LMR AND LTE SYSTEMS



VIRTUAL & AUGMENTED
REALITY LAB



MOBILE RESEARCH VEHICLE
FOR FIELD MEASUREMENTS

REACH

HOSTED EVENTS

MORE THAN
60

STAKEHOLDER
ENGAGEMENTS
SINCE 2016

LABORATORY VISITORS

MORE THAN
1,300
VISITORS SINCE 2016

STAFF

99

OF NIST STAFF
WORKING ON PSCR'S MISSION

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EXTRAMURAL RESEARCH

GRANTS AND COOPERATIVE AGREEMENTS

OVER **\$58M**

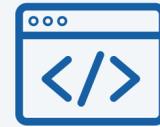
IN GRANTS
AWARDED

TO DATE

167 TOTAL
AWARD RECIPIENTS
SUBCONTRACTORS &
PUBLIC SAFETY PRACTITIONERS

1 PATENT GRANTED
FOR RESILIENT SYSTEMS
AWARD RECIPIENT

OVER **20**



PUBLICALLY AVAILABLE
OPEN SOURCE CODE
INCLUDING VR ENVIRONMENTS
& ANALYTICS FRAMEWORKS

3 PATENT APPLICATIONS
SUBMITTED FOR
LOCATION-BASED SERVICES AWARD RECIPIENTS

WHICH WORDS BEST DESCRIBE PSCR'S ANNUAL STAKEHOLDER MEETING?

CUTTING EDGE
INNOVATION FUTURISTIC
RELEVANT **COMMUNITY** ORGANIZED EDUCATIONAL
INTERESTING **INFORMATIVE**
DEDICATION **NETWORKING** WELL-RUN
TECHNOLOGY USEFUL **COLLABORATION**

OPEN INNOVATION

PARTICIPANTS
FROM **20**
STATES
& **7**
COUNTRIES

12 CHALLENGES
LAUNCHED

WINNERS:
130 TEAMS

OVER **\$2.1M**

IN PRIZES
AWARDED
TO DATE

OVER **350**
TOTAL
SUBMISSIONS

RESEARCH PUBLICATIONS

EXTRAMURAL

77

PSIAP AWARD RECIPIENT
PUBLICATIONS

73 PROFESSIONAL JOURNAL/
CONFERENCE PROCEEDINGS

4 OTHER PUBLICATIONS