



SEPTEMBER 2020

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Critical Connect will help Michigan, Indiana offer mutual aid

Once again, MPSCS is on the cutting edge of new technology designed to help public safety agencies better perform their jobs to the benefit of Michigan residents.

On Sept. 24, MPSCS and several Indiana police agencies will conduct a field functional test of Critical Connect by Motorola, a cloud-based P25 interoperable interface that connects land mobile radios (LMR) with LTE push-to-talk devices (smartphones) across state lines. Both mobile and portable radios will be used to test transmission of voice data to responders in the field.

Besides MPSCS, other participating agencies from Michigan will include the Berrien County Sheriff's Department and Berrien County Central Dispatch, the Galien Fire Department, Niles Fire/EMS, and Chikaming Township Fire/EMS.

Indiana confirmed participants include the Integrated Public Safety Commission (IPSC), Clay Township Fire Department, St. Joseph County Police Department, and St. Joseph County 9-1-1. Depending on the results, Indiana and Michigan hope to have Critical Connect available for cross-border interoperability by October.

According to Southwest Region Supervisor **Rich Melbow**, who will oversee the test, the teams will employ two use cases. One will simulate a pursuit by law enforcement that will test automatic roaming onto an out-of-state system; the other will test manual roaming that fire departments would use whenever they traveled across a border to a state that is part of the agreement.



Critical Connect can be activated when needed, or set up as a constantly available service. Major events or disasters sometimes require that out-of-state law enforcement officials be called upon to support local forces. Without Critical Connect, first responders crossing state lines lose connection to their home network. Radio programmers must then undertake the time-consuming task of reprogramming radio equipment for the out-of-state agency.

INSIDE:
Page 2 - Strict Patching Regimen Keeps NCC Secure
Page 3 - MPSCS Builds Mini-Site for Michigan Tech

Critical Connect will ensure that whenever Indiana and Michigan forces need to back each other up, seamless, interoperable communications will aid their response efforts. For more information, see the Aug. 10 [story](#) in *Mission Critical Communications* detailing the two states' Critical Connect testing and implementation plans. ■

MPSCS Marks Silver Anniversary

Congratulations to MPSCS on its 25th Anniversary! The agency began operations on Sept. 14, 1995.

The MPSCS YouTube page (linked underneath "Stay Connected") features videos in which retired MSP Capt. Jeff Steffel and retired Motorola project manager Chuck Cousino recount the challenges of helping MPSCS grow into the world's second largest trunked communication system.

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MPSCS Update is produced by MPSCS Communications & Outreach. For questions, corrections, or story ideas contact Tom Black, Communications Representative, at BlackT8@michigan.gov.



A Strict Patching Regimen Helps Keep NCC Secure

IN an age of growing cyber security threats, the MPSCS Network Communications Center (NCC) stays vigilant 24/7, with a continuous regimen of software patches and anti-virus protection.

Hackers often target private and public sector organizations with an eye toward financial gain achieved through ransomware. Their software blocks access to a computer system, and a ransom must be paid to “free” the system.

Ransomware is one of the top five cyber security threats to MPSCS. The others are denial of service, unauthorized network access, unauthorized data access, and swatting (prank calls made to 9-1-1 centers to prompt a massive police response at a certain address). These threats underscore the importance of staying current on system patches and antivirus updates, said NCC Manager **Josh Draskowski**. Software developers regularly issue security patches to eliminate vulnerabilities and remedy deficiencies. A

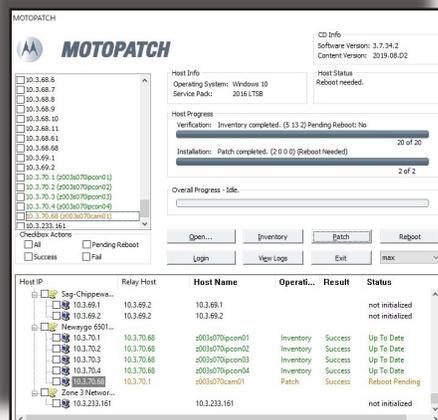
methodical regimen takes place monthly that involves Microsoft, Motorola, NCC staff, and dispatch centers that belong to the MPSCS system.

Microsoft issues new patches once a month that are intended to resolve exploited software code or operating system functions. But before NCC gets them, Motorola puts the patches through a process of testing and compliance validation, which takes about a month.

Motorola then bundles the patches together and posts the bundle on a website accessible by NCC. NCC personnel download the bundle, also known as a “MotoPatch,” then the NCC pushes it out to the 95 MPSCS-affiliated dispatch centers.

The NCC performs weekly audits of remote dispatch consoles on the radio network and, as required, pushes the latest MotoPatch to each console. Each week, the Field Resource Center notifies agencies that just received a new MotoPatch, instructing them to reboot their dispatch consoles.

NCC staff also download virus definitions from Motorola each week and distribute them to the MCC7500 dispatch console, AIS, CAM and NICE logging computers connected to the MPSCS network, replacing the old definition files without any user intervention or rebooting required. ■



A screen shot of the MotoPatch installation software.



Regular patching takes place in the Network Communications Center to guard against viruses and malware.

ABOUT THE MPSCS SYSTEM

MPSCS's cutting edge network provides interoperable state-wide coverage for over 113,000 radios used by Michigan's first responder community. MPSCS serves 2,056 agencies at all levels: State, local, federal, tribal & private public safety agencies all rely on MPSCS for critical public safety communication services. We provide world class infrastructure, expertise and 24/7/365 support to public safety agencies within Michigan.



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MPSCS Team Builds Mini-Site Prototype for Michigan Tech

MICHIGAN Technological University (MTU) in Houghton is the first location to benefit from an MPSCS mini-site that will enhance communications capability in areas with obstacles such as tall trees or uneven terrain.

MPSCS Tower 9007 is on higher ground than the MTU campus, and the forest between them has grown upward, further obstructing radio signals. Signal penetration inside of campus buildings was weak, and the tower also could not serve the City of Houghton.

Because it was difficult to establish a point-to-point (PTP) link between Tower 9007 and a structure in the heart of campus, the Mechanical Engineering and Engineering Mechanics (MEEM) Building, an MPSCS team went to work on a solution.

Eric Holmer and **Gregg Farrer** headed up the project to develop a mini-site – cabinets containing radios, a DC power source, and other components. Using the Capital Region Service Center as a staging area, they worked on the cabinets last summer, and familiarized radio technicians **Dennis Wilde**, **Bob Olson** and **Dave Barnett** with the units.

The cabinets were disassembled in August 2019 and transported 500 miles to Houghton. Wilde, Barnett, Olson and **Del Rajala** installed the main cabinet atop



the MEEM Building in late August. A few weeks later, technicians and steeplejacks attached coaxial cables, placed microwave dishes on Tower 9007 and installed the PTP relay station on top of the Mt. Ripley ski hill across the valley from the campus.

The new arrangement allows connection into the MPSCS through Tower 9007 by the PTP connection mounted on Mt. Ripley. The relay site then provides a connection to the mini-site cabinet on the MEEM

Building roof. An omnidirectional RF antenna on the MEEM rooftop provides coverage to the campus and City of Houghton.

The mini-site will serve as a prototype for about 10 other sites, including Mackinac Island and Central Michigan University in Mt. Pleasant.

Holmer said he can build about 90 percent of each unit, and technicians will need to customize the units to suit local specifications. ■



MPSCS steeplejack Dan Fitzpatrick prepares his worksite on the MEEM Building rooftop. The Mt. Ripley ski hill can be seen in the distance.

System Snapshot

(current as of September 15, 2020)



113,962
RADIOS



282
TOWER SITES

Includes 99 sites locally owned but integrated into MPSCS



86
9-1-1 DISPATCH CENTERS

Supporting 466 console positions



13 million **PUSH-TO-TALKS PER MONTH**



6,866
FIRE PAGERS LIVE



2,056
AGENCIES SERVED

Includes State, Local, Federal, Tribal & Private Public Safety Agencies