

## **Allied Radio Matrix for Emergency Response (ARMER) Standards, Protocols, Procedures**

Document Section 2	<b>Configuration and Allocation</b>	<b>Status: Approved</b>
State Standard Number	<b>2.9.1</b>	
Standard Title	<b>Talkgroup Site Access and Roaming</b>	
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Replaces Document Dated	<b>2.9.0 (03/26/2015) and 2.11.0 (06/27/2013)</b>	
Date Revised	<b>n/a</b>	

### **1. Purpose or Objective**

This standard establishes a policy for system and subscriber unit programming to provide ARMER users with wide area access, as needed, while minimizing roaming and preventing unnecessary system loading.

### **2. Technical Background**

#### **▪ Capabilities**

The ARMER network and subscriber radios may be programmed to allow a talkgroup or radio to affiliate with all ARMER repeater sites and to roam between them or to restrict a talkgroup or radio from specific repeater sites.

#### **▪ Constraints**

Each ARMER repeater site has a limited number of channels able to provide talkpaths available to carry radio transmissions. If care is not taken to program talkgroups and radios to be allowed only on certain sites or prefer certain sites, radio traffic could unnecessarily overburden a site preventing some radio messages from being sent.

### **3. Operational Context**

Radio users have no control over where their public safety responsibilities take them nor do they have the ability to control to which repeater sites their radios affiliate. Site affiliation permission must be proactively managed by sound system and radio programming guidelines. Not all scenarios can be defined by standard so system administrators should communally develop and share best practices.

#### **4. Recommended Protocol/ Standard**

MnDOT shall keep a Best Practices Guide to provide programming guidance for questions not clearly defined in this standard. The guide shall be available to all System Administrators and kept current through a collective process.

Site Access Profiles define talkgroup access to ARMER repeater sites. They serve as the preferred tool for managing repeater site access. The following Site Access Profiles are established:

- In-County Operations: Includes all sites within a county and may include sites outside of the physical boundaries of the county but engineered to serve the county. Talkgroup examples: Administrative, Car-to-Car/Truck-to-Truck, and Public Works.
- Border (aka Adjacent Site): Includes all sites included in the In-County Operations profile plus one ring of sites encircling the In-County Operations profile. Talkgroup examples: Law/Fire/EMS mains.
- Regional Sites: Includes all sites within an Emergency Communications/Services Board region plus one ring of sites encircling the Regional Sites profile. Talkgroup examples: NE 2-12, SR 2-12, and ME TAC 1-10.
- Statewide Sites: Includes all ARMER sites. Talkgroup examples: STACs, LTACs, SIUs, and ROAMs.
- Custom Sites: Certain entities with atypical geographic boundaries may require a custom Site Access Profile. These profiles must be approved by the impacted site's owner and the Operations and Technical Committee.
- Requested Site profiles will always broadcast specified radio traffic regardless of site affiliation with the repeater site. Example: A rural county relies on another county's repeater sites for coverage in a border area and car-to-car traffic (utilizing an In-County Operations profile) is not carried through that neighboring county's repeater. Requested Site profiles must be approved by the neighboring site's owner and the Operations and Technical Committee.

Deviations from these Site Access Profiles must be approved in writing by the site owner(s). Ownership is defined as who owns the physical site and who purchased RF channels found on that site. In the case of state-owned sites, approval must come from the Operations and Technical Committee.

The following Site Preference procedures are established to define individual radio access to ARMER repeater sites:

- Generally, talkgroup personalities should not have special site access permissions as site access should primarily be managed by Site Access Profiles.
- Generally, talkgroup personalities should be set to prefer the home infrastructure of the radio owner over that of non-home infrastructure.
- Generally, talkgroups with wide area access (e.g. statewide) should be set not to prefer one repeater site over another.

Deviations from these Site Preferences must be approved in writing by the impacted site owner(s). Ownership is defined as who owns the physical site and who purchased RF channels

found on that site. In the case of state-owned sites, approval must come from the Operations and Technical Committee.

The following is a Prohibited Action:

- Selecting a talkgroup (by choosing it as the transmit channel on a radio) for which one has no reasonable need to monitor (as defined by the impacted system administrator) is known as “parking on a talkgroup” and is prohibited. This does not prohibit one from including a talkgroup in a scan list while the radio is legitimately affiliated to another talkgroup.

Exceptions to any item in this standard should be decided on a case-by-case basis by either the Operations and Technical Committee or the Interoperable Committee of the Statewide Emergency Communications Board and are subject to the Board’s approval.

Emergency exceptions to this standard or emergency resolutions of site access issues may be temporarily authorized by agreement between a Level One System Administrator and the Chair (or Vice Chair if unable to reach the Chair) of the Statewide Emergency Communications Board (SECB) or the Chair (or Vice Chair if unable to reach the Chair) of the SECB’s Operations and Technical Committee (OTC). Temporary authorization may exist until the next meeting of the OTC or sixty days, no longer.

## **5. Recommended Procedure**

System Administrators are responsible for ensuring that radios and infrastructure under their control comply with this standard and that all Best Practices established by the Minnesota Department of Transportation are, when possible, implemented.

The Statewide System Administrator will provide regular reports detailing site capacity, consumption, roaming, and similar.

## **6. Management**

ARMER System Managers are expected to self-police this standard. Conflicts should be handled through the Compliance and Conflict Resolutions processes established in Section seven of the ARMER standards.