

Wireless Communication Commission (WCC)

Title 36: Technology

Part 101 Chapter 4: ENCRYPTION

Rule 4.1 Purpose:

The purpose of this policy is to establish guidelines for encryption of PTT devices and talk groups.

Source: Mississippi Code Ann. 25-53-171(4)

Rule 4.2 Background:

1. The Mississippi Wireless Communication Commission (WCC) is implementing a statewide survivable, reliable, interoperable wireless communication system known as the Mississippi Wireless Information Network (MSWIN).
2. The MSWIN is equipped with over-the-air rekeying (OTAR) capabilities allowing authorized encrypted PTT devices (subscriber units) to be rekeyed over the air without physically touching the device. Encryption keys must initially be loaded locally with 'Key Loader'.
3. Vendors may offer proprietary encryption software in their equipment as a no-cost option. The proprietary nature of the software will not allow the use of the over the air re-keying feature or interoperability with other vendor's devices in the encryption mode.
4. The use of vendor specific proprietary encryption software limits users' choices for PTT devices and other equipment to that vendor.
5. The WCC has adopted the AES encryption software as the preferred system encryption software and discourages the use of vender proprietary encryption software.

Source: Mississippi Code Ann. 25-53-171(4)

Rule 4.3 Procedure:

1. The user must notify the MSWIN Liaison of the user's desire to encrypt the operation of PTT devices.
 - A. The notification will include the number of talk groups, the type of encryption, and the device identification.
 - B. The user must state if encryption will be operator selected or the talk groups will be in encrypted mode full-time.
 - C. Non-AES encrypted devices must be programmed for operator selection only.
2. Special event talk groups will not be encrypted.

Source: Mississippi Code Ann. 25-53-171(4)

Part 101 Chapter 5: NARROW BAND – TDMA SUBSCRIBER DEVICES

Rule 5.1 Purpose:

The purpose of this policy is to establish guidelines for use of FDMA and TDMA subscriber devices on MSWIN.

Source: Mississippi Code Ann. 25-53-171(4)

Rule 5.2 Background:

1. The Mississippi Wireless Communication Commission (WCC) is implementing a statewide survivable, reliable, interoperable wireless communication system known as the Mississippi Wireless Information Network (MSWIN).
2. The WCC adopted the P-25 Phase 2 TDMA narrow banding technology and will retro-fit existing equipment or install TDMA equipment upon availability, anticipated to be June 2012.
3. TDMA will increase the capacity for existing tower equipment two fold with minimal expense.
4. Multiple Vendors offer P-25 Phase 2 ready subscriber equipment as well as P-25 Phase 2 capable (up-gradable) subscriber units.

Source: Mississippi Code Ann. 25-53-171(4)

5.3 Procedure:

1. New subscriber or other equipment purchased for operation on the MSWIN must be TDMA capable or equipped.
2. Users operating TDMA capable devices, on MSWIN, must upgrade the devices within 90 days of notification that MSWIN has initialized TDMA.
3. Users operating non-TDMA capable devices, on MSWIN, must contact the MSWIN Liaison and cooperate in the development of a migration or usage plan to minimize the capacity impact of the continued use of the non-TDMA devices on the MSWIN system.
4. Users operating non-TDMA capable devices, with MSWIN special event talk groups, for emergency or short term event interoperability, must contact the MSWIN Liaison and agree to specific use guidelines.

Source: Mississippi Code Ann. 25-53-171(4)

Part 101 Chapter 6 – MSWIN INTEROPERABILITY PATCH

Rule 6.1 Purpose:

The purpose of this policy is to define a Mississippi Wireless Information Network (MSWIN) Interoperability Patch and establish operational procedures.

Source: Mississippi Code ANN. 25-53-171(4)

Rule 6.2 Background:

Patching the MSWIN system for normal operations creates a high risk of degrading the availability of both the MSWIN and agency's resources. Patching to MSWIN will be strictly monitored and controlled. The implementation and operation of the patch hardware, interface, radio, labor, etc. is the responsibility of the requesting agency. The MSWIN network manager will assign talk groups during large events, including training sessions, requiring more talk group resources than is available from the regional special event talk groups, including the state-wide special event talk group.

1. A MSWIN Patch is defined as an interface between the MSWIN system and any non-MSWIN radio or audio source to provide audio communications between disparate systems, or connecting two or more MSWIN talk groups.

- A. Patching can interconnect the MSWIN to a PBX or other telephone system, cell systems, the internet, satellite phones or another agency's communication system.
 - B. In most cases network patches can be accomplished through dispatch consoles or external gateway devices.
2. Approved MSWIN Patches
- A. Temporarily Established Patches
 - a. A patch for a specific event and disconnected at the conclusion of that event.
 - i. Example 1: Patching a channel from an agency responding from out of state to a MSWIN agency talkgroup.
 - ii. Example 2: A high speed pursuit crossing jurisdictional line requiring talkgroups from different law enforcement agencies to be patched to MSWIN.
 - B. Permanently Established Patch
 - a. Patch is set up without regard to an event, designed to remain in place with no time frame for disconnecting.

Source: Mississippi Code Ann. 25-53-171(4)

Rule 6.3 Procedure:

1. Any agency or private sector emergency response organization desiring to operate on MSWIN or having access to Special Event talk groups, will, through an authorized representative, execute the Mississippi Interoperability Channel Plan (MICP) Memorandum of Understanding prior to the issuance of system identification numbers.
2. The MSWIN network manager will be notified prior to the use of the state-wide special event talk groups. In the event of an emergency the network manager will be notified as soon as possible.
3. Depending on the event regional MSWIN special event talk groups should be utilized prior to state-wide MSWIN special event talk groups.
4. Temporarily Established Patches

- A. No prior approval is required for MSWIN member agencies establishing temporary patches to their own talk groups.
- B. The MSWIN network manager will be notified of any temporary patch in place for more than twelve hours.
- C. The patch must function in a technically and operationally consistent manner.
 - a. The release time between messages should be less than 4 seconds.
 - b. The audio quality should be a close representation of the original audio as heard on a typical subscriber radio.
 - c. The audio shall be free of hum, clicks, or other extraneous noise.
 - d. There shall be no clipping of the first syllables or loss of audio through the patch.
- D. The agency will continuously monitor and respond to calls on the patch.
- E. Although necessary, patches have the ability to degrade the performance of the MSWIN system, as such; agencies are requested to disconnect temporary patches as soon as possible.

5. Permanent Patches

- A. The MSWIN network manager must approve permanent patches prior to implementation. The possible impact on the MSWIN Grade of Service (GOS) and other users will be considered prior to the approval.
- B. Permanent patches are to remain active at all times on the talk groups specified within the MOU. This requirement is to provide the users with a consistent and functioning communications path.
- C. When utilizing external patching devices or bridging equipment such as an ACR 1000, only one talk patch will be programmed into a permanently patched MSWIN interface radio.
- D. The patch must function in a technically and operationally and consistent manner. Guidelines in section 4A – 4C.d are applicable for permanent patches.

6. Network Patch Communications Request

- A. When an agency needs to perform a temporary/permanent patch lasting more than twelve hours to MSWIN, requiring no MSWIN assistance, the agency must provide the MSWIN manager the following:
 - Agency requesting network patch.
 - Contact information for the requesting agency.

- Reason for request/event type description.
 - Details of the patch including the types of systems. Frequencies, or talk groups.
 - All involved agencies requiring interoperability.
 - Expected duration of event.
 - Bridging equipment physical locations.
- B. Agency to MSWIN requiring MSWIN assistance
- a. Agencies may request use of the technical resources from MSWIN by providing the information as required in Section 6A.
- C. The National Incident Management System (NIMS) procedures should be followed by the Incident Commander and MSWIN personnel.
- a. Avoid using an agency's primary dispatch channel.
 - b. Require participating agencies to check in at the command post and provide portable radios and frequency/talk group channels for use during the incident to the Communication Unit Leader (COML).
 - c. Assign radio call sign/designator information to connected agencies.
 - d. Instruct MSWIN on where to setup and operate the tactical equipment if assigned.
 - e. Inform MSWIN personnel which agencies are participating.
 - f. Provide MSWIN with agency provided radios and an Incident Command Structure (ICS).
 - g. Confer with MSWIN personnel concerning what command level or other specific talk groups should be patched.

Source: Mississippi Code Ann. 25-53-171(4)

Rule 6.4 Network Patch Deactivation

1. When interoperable communications are no longer required, agencies should follow these guidelines:
 - A. The Incident Commander or designee shall:
 - a. Make an announcement on the command channel to all, advising them that the network patch is being deactivated.
 - b. Contact the MSWIN or console operator to shut down the network patch.
2. Individual agencies are responsible for retrieving the portable radios and associated equipment provided during the operation.

Source: Mississippi Code Ann. 25-53-171(4)

Rule 6.5 Problem ID and Resolution

1. If an issue or problem is identified during the network patch, the MSWIN network manager will determine who will take corrective action. If the issue or problem cannot be identified, the network manager shall contact the appropriate technical personnel.

Source: Mississippi Code Ann. 25-53-171(4)

Rule 6.6 Network Patch Test Procedures

1. To ensure that equipment components of the network patch operate properly, each agency will test their resources according to their agency's individual policies and procedures. Below are recommended procedures:
 - A. Representatives from each agency should meet on a regular basis to test communications.
 - B. Testing should include deployment, setup, operation, and deactivation of the network patch.
 - C. Agency representatives should arrive at the test location to test their ability to communicate with other agencies utilizing the patch.

Source: Mississippi Code Ann. 25-53-171(4)

Rule 6.7 Grade of Service

1. If a patch negatively impacts the MSWIN GOS, MSWIN may remotely disable a patch after attempting to rectify the problem and in the case of a permanent patch only after 30 days written notice.
2. In the event of an emergency, as determined by the MSWIN network manager, the patch radios will be immediately disabled. The MSWIN network manager will make a good faith effort to notify the agency.

Source: Mississippi Code Ann. 25-53-171(4)