I. PURPOSE

The purpose of this policy is to define a Radio System “Patch”, and its usage, as it relates to the St. Louis Area Trunked Emergency Radio System (SLATER). It is not the intention of ECC to deter the use of radio patching capabilities but rather to define correct usage with an eye towards maximizing the resources of the radio system countywide. ECC is responsible for ensuring system performance is maximized at all times for all users.

II. DEFINITIONS

A. A Patch is defined as an interface between a SLATER system talkgroup and another SLATER system talkgroup or the interface providing audio communications between two disparate radio systems.

B. A Patch is a gateway of interoperability used by First Responders. A Patch allows First Responders to communicate with non-SLATER First Responders.

C. Patch Types
   Two types of approved Patches are identified in this policy:

   1. Permanent Patch
   2. Temporary Patch

D. Grade of Service (GoS) is a measurement used to help quantify system loading. It helps describe a subscriber’s ability to access the system considering existing or predicted radio traffic volume. It is generally expressed as a percentage, which represents the probability of being “denied” access due to the unavailability of radio channels to support the call. In essence it is a measure of how congested or busy the radio system is.

III. USAGE

When an agency requests the use of any type Patch, a “St. Louis Area Emergency Trunked Radio Patch Form” must be submitted to the ECC Radio System Manager. When the application is approved by the Radio System Manager, construction of the Patch by the Agency may begin. The Patch must be tested and approved by the Radio System Manager prior to placing the Patch into operation. In the case of emergency operational need a Temporary Patch can be constructed without Radio System Manager approval. However,
Agency must advise ECC staff of this Patch as soon as possible.

The Radio System Manager may disable active patches operating on the System if there is a negative impact to the SLATER system. Radio System Manager will remotely disable the radios only after attempting to rectify the problem and then only upon 5 days advance written notice to the agency. However, in the event of an emergency, as determined by the Radio System Manager, the offending patches may be immediately disabled. The Radio System Manager will make a good faith effort to verbally advise the agency in the event of an emergency that necessitates disabling a Patch. The implementation of the Patch hardware, interface, radio, labor, etc. is the responsibility of the requesting agency. The Emergency Communication Commission may invoice the agency for any technical support supplied by County personnel or Vendors.

IV. DEPLOYMENT PROCEDURE

The following guidelines shall be used for a SLATER Patch deployment:

A. Permanent Patches

1. Permanent Patches will be approved after need has been demonstrated. The SLATER Grade of Service will be considered in the approval of a permanent Patch.
2. Permanent Patches are to remain active at all times on the talkgroup specified within the Patch form. This requirement is to provide the Public Safety users with a consistent and functioning communications path between the radio systems.
3. Only one proprietary talkgroup will be programmed into a permanently patched interface radio console to ensure the radio remains on the patched talkgroup.
4. A local jurisdiction may implement multiple permanent Patches if the Radio system Grade of Service allows the additional traffic. If the radio system Grade of Service falls below an acceptable level of service by the additional Patches, the requesting agency will be required to purchase additional radio infrastructure to support additional traffic load.
5. The patch must function in a technically and operationally consistent manner.
6. The activation time (key-up) of the patch shall be less than 2 seconds.
7. The release time between messages should be less than 4 seconds.
8. The audio quality should be a close representation of the original audio as heard on a typical subscriber radio.
9. The audio shall be free of hum, clicks, or other extraneous noise.
10. No radio may be used as a Patch radio without prior approval.
11. No console may be used to facilitate a Patch without prior approval.
12. SLATER Encrypted talkgroups cannot be permanently patched.
13. MOSWIN Statewide talkgroups cannot be permanently patched.
14. The Patch and associated equipment shall remain fixed and be available for inspection by SLATER personnel.
15. The permanent Patch shall be tested and approved by Radio system Manager prior to implementation.
16. Maintenance of a permanent Patch is the responsibility of the requested agency.
B. Temporary Patches

1. The Agency must notify the Radio System Manager of any temporary Patch enabled and identify the talkgroup used in the Patch.
2. ECC personnel may disable a temporary Patch if it causes communications problems on the radio system users.
3. If a Patch talkgroup is proprietary to a specific jurisdiction, the authority of that jurisdiction must sign a Memo of Understanding (MOU) granting use of the proprietary talkgroup(s).
4. The Patch must function in a technically and operationally consistent manner.
5. The activation (key-up) of the Patch shall be less than 2 seconds.
   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.
6. No Radio may be used as a Patch radio without prior approval.
7. No console may be used to facilitate a Patch without prior approval.
8. St. Louis County I/O talkgroups may be temporarily patched with ECC approval.
9. MOSWIN Statewide talkgroups may not be patched.
10. The temporary Patch facilities and associated equipment shall be available for inspection by ECC personnel.
11. The temporary Patch facilities shall be tested and approved by ECC personal prior to implementation.
12. Maintenance of the temporary Patch and facilities is the responsibility of the member agency.
13. The agency shall continuously monitor and respond to calls on the Patch.

V. RESPONSIBILITY RECAP

<table>
<thead>
<tr>
<th>Responsibility</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requestor</td>
<td>Submits application to Radio System Manager.</td>
</tr>
<tr>
<td>Radio System Manager</td>
<td>Meets with parties that may be impacted by the proposed patch interoperability. Purpose of meeting is to validate and define an interoperability plan.</td>
</tr>
<tr>
<td>Requestor</td>
<td>Works through local service provider to deploy and test the patch. Agency is responsible for all project costs. Coordinates training for all public safety personnel that may use the patch. Obtain completed and signed Patch Functional Test. Verify all documentation has been completed and close project.</td>
</tr>
</tbody>
</table>
A. **ECC Responsible Party**

1. Contact for Questions: Radio System Manager
2. Phone: (314) 615-9558
3. Email: rkurtz@stlouisco.com

B. **Applicable Forms**

St. Louis Area Emergency Trunked Radio Patch Form - Attached.

Adopted by the Emergency Communications Commission

By order of:

DAVID J. M. BARNEY
Director

MC:sp
E100

Approved at the regular Commission meeting of November 12, 2015.

WILLIAM G. KARABAS
Chairman
St. Louis Area Emergency Trunked Radio Patch Form

This form is submitted between __________________________ and the Emergency Communications Commission.

☐ The purpose of this form is to authorize permanent patch voice communications interoperability between SLATER System and ________________________.

☐ The purpose of this form is to authorize temporary patch voice communications interoperability between SLATER System and ________________________.

Responsibilities

1. **Configuration** – ECC will configure the system talkgroup/s to provide interoperability within the operational area.

2. **Grade of Service (GOS)** - A permanent Patch is permitted when an acceptable GOS is maintained on the radio system. If the Patch causes a negative impact on the SLATER System GOS due to radio traffic, ECC staff may remotely disable a permanent patch only after attempting to rectify the traffic problem and only after 3 days written notice. However, in the event of an emergency, as determined by the Radio Systems Manager the patch radio/s may be immediately disabled. The Radio System Manager will make a good faith effort to notify the agency in the event of an emergency that necessitates disabling the patch.

3. **Subscribers Radio Programming** – ECC is responsible for providing the patched radio programming archive, as described in the Subscriber Agreement, to facilitate this interoperability solution.

**Audio Patch/Gateway Interoperability Policy** – ECC will develop the Audio Patch/Gateway Interoperability Policy for interoperable communications between the SLATER system and agencies needing the services provided by a Patch.

Joint Responsibilities

1. **Testing and Acceptance** - Jointly conduct the Patch Functionality Test. The Patch must pass the Patch Functional Test before the patch is enabled for use by subscribers. Both parties shall receive the results of these tests.


Agency Responsibilities

1. **Radio/Patch Equipment** – The Agency shall purchase and provide all necessary Patch radio and/or dispatch equipment.

2. **Coordinate Dispatch Console Programming** – The Agency shall coordinate dispatch console programming necessary to patch the agency console to the proprietary talkgroup.

3. **Establish the Communications Protocol** – The Agency shall establish an appropriate protocol for effective communications through the patch. The protocol will be in accordance with established National Incident Management System (NIMS) standards.

4. **Patch Maintenance** – The Agency has the sole responsibility for maintenance and repair work associated with agency equipment. Permanent patches shall be repaired and maintained within 24 hours response. Temporary patches must be repaired in time frame consistent with the Agency’s needs or requirements.

5. **Permanent Patch Operation** – The Agency continuously shall monitor and respond to calls on the patch.

6. **Temporary Patch Operation** - The Agency shall operate the temporary patch in accordance with the SLATER Audio Patch/Gateway Interoperability Policy.
NOTICES TO SLATER RADIO USERS
All notices contained within this form, except for emergency requests, shall be made in writing.

Agency Name: __________________________________________
Contact: ________________________________________________
Address: ________________________________________________
City: __________________________ State: ________ Zip: ________

________________________________________
Authorized Agency Representative

________________________________________
Radio Systems Manager