



DU PAGE COUNTY

ETSB - Policy Advisory Committee

Final Summary

421 N. COUNTY FARM ROAD
WHEATON, IL 60187
www.dupagecounty.gov

Monday, December 4, 2023

8:15 AM

Room 3500B

1. CALL TO ORDER

8:15 AM meeting was called to order by Chair Dina at 8:15 AM.

2. ROLL CALL

Attendees:

Director Linda Zerwin, DuPage Emergency Telephone System Board, non-voting Member

Matt Theusch, DuPage Emergency Telephone System Board

Gregg Taormina, DuPage Emergency Telephone System Board

Eve Kraus, DuPage Emergency Telephone System Board

Andy Saucedo, Motorola System Manager (Remote)

Scott Bukovic, Westmont PD

Dave Dato, Citizen

Jeanine Krull, DU-COMM

John Nebl, OHSEM

Steve Rauter, ETS Board Citizen Representative

Marilu Hernandez, ACDC (Remote)

Bob Murr, College of DuPage (Remote)

Observer (Remote)

On roll call, Members Dina, Baarman, Hermes, Johl, Rivas, and Selvik were present, which constituted a quorum.

PRESENT Dina, Johl, Baarman, Hermes, Rivas, and Selvik

3. CHAIRMAN'S REMARKS - CHAIR DINA

Chair Dina provided a brief introduction to Mr. Dave Dato who volunteered his time to speak with the PAC regarding encryption. Chair Dina thanked Mr. Dato and said he would provide more information under Agenda Item 8: DuPage Encryption Discussion.

4. PUBLIC COMMENT

There was no public comment.

5. CONSENT ITEMS

5.A. [24-0124](#)

ETSB PAC Minutes - Regular Meeting - Monday, November 6, 2023

On voice vote, all Members voted "Aye", motion carried.

Attachments: [2023-11-06 ETSB PAC Minutes Summary.pdf](#)

RESULT:	ETSB RECEIVED AND PLACED ON FILE
MOVER:	Roy Selvik
SECONDER:	Pat Johl

5.B. [24-0018](#)

DEDIRS November Maintainer Report

Chair Dina commented on the radio repair process. He said he knows an email had been sent reminding users that the contract with DU-COMM as the radio maintainers ended last month. Chair Dina said DU-COMM Techs would like to take a moment to thank the ETSB and all DuPage radio users for the opportunity to service your radio needs. The radio service process would remain the same, users should open Zendesk tickets to report issues and ETSB will coordinate the radio repairs with Motorola. Chair Dina said please be safe this holiday season and practice polite radio etiquette.

Ms. Zerwin said an email was sent to the radio points of contact and the agency Chiefs to remind them of this transition.

On voice vote, all Members voted "Aye", motion carried.

Attachments: [2311ETSBRadioMaintenanceReport.pdf](#)

RESULT:	ACCEPTED AND PLACED ON FILE
MOVER:	Pat Johl
SECONDER:	Roy Selvik

6. PARENT COMMITTEE APPROVAL REQUIRED

6.A. [ETS-R-0038-23](#)

Resolution to approve Policy 911-005.2: Access to the DuPage Emergency Dispatch Interoperable Radio System (DEDIRS).

On voice vote, all Members voted "Aye", motion carried.

Attachments: [911-005.2 Access to the DuPage Emergency Dispatch Interoperable Radio System 12.13.23 draft.pdf](#)
[911-005.2 DEDIRS Application and Confidentiality Agreement 12.13.23 draft.pdf](#)

RESULT:	APPROVED AS AMENDED
MOVER:	Michael Rivas
SECONDER:	Pat Johl

7. DEDIRS PORTABLES AND MOBILES**7.A. Police**

Member Rivas had nothing to report.

7.B. Fire

Chief Johl had nothing to report. Chair Dina said the last time the PAC met they talked about the Tentative Interim Amendment (TIA) going to the NFPA Committee and that the first TIA was denied and would not go to the Committee because everything that Fire Focus wanted was lumped into one TIA. He said the good news was that they agreed to push forward the ability to turn on the radios outside of the hazard zone without any user intervention. This means that when the radio is turned on, it would function as any other radio and would not enter the hazard zone. Chair Dina said that was a big victory. He said that Fire Focus took one item out of the initial TIA and submitted a second TIA for limiting the repeating voice announcements. Chair Dina said that was unanimously approved and will go to the full NFPA Committee meeting today. He said that Fire Focus had made some great progress and recognized retired Deputy Chief Connolly's efforts in pushing a lot of the items through.

8. DU PAGE COUNTY ENCRYPTION DISCUSSION

Chair Dina introduced Mr. Dato and said, Mr. Dato has over 48 years of progressive experience and responsibility in all aspects of the fire service and emergency communications. He began his career as a volunteer with the Wauconda (Illinois) Fire Protection District in 1978, moving into a full-time position in 1984 and rose through the ranks to Chief and Administrator in 1992. Mr. Dato retired in 2015. During his tenure as Chief, Mr. Dato served as a member of multiple organizations, such as the Illinois Statewide Interoperability Executive Committee, and the MABAS Communications Committee along with numerous National organizations. He also served the Lake County ETSB as its Chairman for 28 years and remains a member today. During his tenure with Interoperable Communication Technical Assistance Program (ICTAP), he has supported a variety of ICTAP projects, most notably co-authoring the National Special Security Communications Unit Planning Toolkit, co-authoring the consolidated communications plans for the 2016 Democratic National Convention, co-author and author of the communications plans for the last two Presidential Inaugurations, and has performed communications planning for numerous Super Bowls. Mr. Dato currently serves as the Chairman of the IL Statewide Interoperability Executive Committee, Technical subcommittee Encryption Working Group. Chair Dina commented that it is an impressive resume which probably left a few things out. He thanked Mr. Dato for being there and turned the floor over.

Mr. Dato thanked Chair Dina and the PAC for inviting him. He said encryption is one of his passions and he had done it for quite a few years through various offices. Mr. Dato said one of his specialties is the technical assistance for encryption and has worked with many state entities. Mr. Dato said he is not at PAC today in his official capacity; that he is here on his time to help his neighbors. He said he looked through DuPage's material, with the assistance of Mr. Nebl of OHSEM and Chair Dina, and said DuPage is no different than what everyone else has gone through and that it is a good start. He said the materials include the Statewide Interoperability Talk Group which had changes made last week by the state tech committee and that the changes

should be incorporated prior to implementation. Mr. Dato said he compiled some slides which start with an introduction to encryption and get more technical as the presentation goes on because he wants DuPage to be aware of the technical aspects. The presentation was shared onscreen and is attached at the end of these minutes.

The beginning slides included Mr. Dato's contact information and useful resources and moved into things to keep in mind to reach the end goal of operability and interoperability. Mr. Dato provided examples of interoperability between law, fire and the Sheriffs, of keys that were shared between personnel from radio shops thus hindering police movement, and physical access to the system to make it easy to encrypt. The more complicated the security, the harder it is to use, there is a balance to be found.

Mr. Dato discussed how many keys are needed between local dispatch and a common key. He said levels are created so only the people who have to listen are listening. He talked about console patching versus audio patches, resources, and busies.

Mr. Dato said Key Management Organization, National SLN Assignment Plan, Key Generation and Distribution, the elements in red on the slide Elements of Encryption Best Practices are the more important items up front.

Chair Dina asked for the difference between OTEK and wi-fi. Mr. Dato explained that OTEK is how the KMF talks to the consoles, generally. He said the wi-fi is how programming can be done, but not keyloading.

Mr. Dato ended his presentation and asked for any questions/comments.

Member Rivas asked about the crypto period and whether there is a recommended or average time of when they should re-key. Mr. Dato said that with the average security levels, once a year is probably fine, and again, provided examples to accompany his answer. He said that if you wait longer than a year, you would probably forget how it needs to happen.

There was general discussion regarding next steps including training and policies.

There were no further questions for Mr. Dato. Chair Dina said to Mr. Dato, we appreciate your knowledge and expertise and appreciate you volunteering your time. Mr. Dato said he does not want to see the original encryption nightmare that had to be unraveled with the State, he wants to see DuPage be successful in their encryption efforts; you need more than one key but you do not need fifty.

[24-0227](#)

DuPage Encryption Dec 2023

Attachments: [DuPage Encryption Dec 2023.pdf](#)

9. OLD BUSINESS

There was no old business.

10. NEW BUSINESS

There was no new business.

11. ADJOURNMENT**11.A. Next Meeting: Monday, January 8 at 8:15am in Room 3-500A**

Member Johl made a motion to adjourn the meeting at 9:34am, seconded by Member Selvik. On voice vote, motion carried.

Respectfully submitted,

Eve Kraus



ETSB PAC Other Action Item

421 N. COUNTY FARM
ROAD
WHEATON, IL 60187
www.dupagecounty.gov

File #: 24-0124

Agenda Date: 12/4/2023

Agenda #: 6.C.1.



DU PAGE COUNTY

ETSB - Policy Advisory Committee

Draft Summary

421 N. COUNTY FARM ROAD
WHEATON, IL 60187
www.dupagecounty.gov

Monday, November 6, 2023

8:15 AM

Room 3500A

1. CALL TO ORDER

8:15 AM meeting was called to order by Chair Dina at 8:15 AM.

2. ROLL CALL

Attendees:

Director Linda Zerwin, DuPage Emergency Telephone System Board, non-voting Member

Matt Theusch, DuPage Emergency Telephone System Board

Gregg Taormina, DuPage Emergency Telephone System Board

Eve Kraus, DuPage Emergency Telephone System Board

Jason Blumenthal, DuPage County Board Office

Jim Connolly, Village of Addison

Nick Kottmeyer, DuPage County Board Office

Steve Rauter, ETS Board Citizen Representative

Bill Srejma, ACDC

Pat Tanner, West Chicago Fire

Kurt Bluder, Hinsdale Township High School District 86 (Remote)

Rich Cassidy, Glenside Fire (Remote)

Kevin Dempsey, Addison PD (Remote)

Kevin Fleege, Oak Brook Fire (Remote)

Bob Murr, College of DuPage (Remote)

Will Sperling, Citizen (Remote)

John Sullivan, Village of Addison (Remote)

On roll call, Members Dina, Baarman, Johl, Rivas, and Selvik were present, which constituted a quorum.

PRESENT	Dina, Johl, Baarman, Rivas, and Selvik
ABSENT	Hermes

3. CHAIRMAN'S REMARKS - CHAIR HAYDEN

Chair Dina welcomed Member Selvik to the PAC.

4. PUBLIC COMMENT

There was no public comment.

5. CONSENT ITEMS

5.A. [23-3607](#)

ETSB PAC Minutes - Regular Meeting - Monday, October 2, 2023

Attachments: [2023-10-02 ETSB PAC Minutes Summary.pdf](#)

RESULT:	ETSB RECOMMENDED FOR APPROVAL
MOVER:	Pat Johl
SECONDER:	Michael Rivas

5.B. [23-3608](#)

DEDIRS October Maintainer Report

Attachments: [2310ETSBRadioMaintenanceReport.pdf](#)

RESULT:	ETSB RECEIVED AND PLACED ON FILE
MOVER:	Pat Johl
SECONDER:	Michael Rivas

5.C. [23-3609](#)

2024 Meeting Calendar - Policy Advisory Committee

Attachments: [PAC 2024 Meeting Schedule.pdf](#)

RESULT:	ETSB RECOMMENDED FOR APPROVAL
MOVER:	Pat Johl
SECONDER:	Roy Selvik

6. PARENT COMMITTEE APPROVAL REQUIRED

6.A. [ETS-R-0038-23](#)

Resolution to Amend Policy 911-005.2: Access to the DuPage Emergency Dispatch Interoperable Radio System (DEDIRS).

Ms. Zerwin said that since this item was tabled last month, it had to be brought forward as is. She then reviewed the changes to the policy since the last meeting as follows as provided in the draft document showing the redline changes which is attached to these minutes.

Chair Dina confirmed the eight existing InterOps would be maintained and DUCALL would be added as a ninth STARCOM channel, and that the even numbered channels would be encrypted, the odd channels would not.

Member Baarman asked if the encrypted channels would utilize the same key. Member Rivas said he believed the focus was to narrow the number of keys so they would be on the same key. He asked Member Baarman if there were any issues either way. Member

Baarman said if these InterOps are what they were giving outside agencies to talk to DuPage and they are encrypted with the same key, they would potentially be giving encrypted access to all the groups. Member Rivas replied he would have no problem with that.

Member Baarman then asked if the InterOps would be earmarked for first use by PSAP. There was a short discussion as to how the InterOps are assigned today and whether the assignments would be part of this policy or operational. The consensus was that the assignments of InterOps talkgroups is operational and would not be part of the policy. Generally, InterOps 1 through 4 would be utilized by DU-COMM with two talkgroups being clear and two talkgroups encrypted and InterOps 5 through 8 would be utilized by ACDC with two talkgroups being clear and two talkgroups encrypted.

Chair Dina asked for a motion to amend Policy 911-005.2. Member Rivas made a motion to amend the policy as discussed, seconded by Member Selvik. On voice vote, the motion to amend the policy carried.

Attachments: [911-005.2 Access to the DuPage Emergency Dispatch Interoperable Radio System clean draft.pdf](#)
[911-005.2 DEDIRS Application and Confidentiality Agreement clean draft 8.9.23.pdf](#)

RESULT:	AMENDED
MOVER:	Michael Rivas
SECONDER:	Roy Selvik

6.B. [ETS-R-0057-23](#)

Resolution approving Change Order #3 to Motorola Solutions, Inc. PO 921054/5522-1 for Group Messaging Services on the APX numbered series portable and mobile radios. (Change Order not to exceed amount \$150,905.60; New contract total: \$37,354,782.23)

Chair Dina opened the item for discussion. Ms. Zerwin said the PAC would be making a recommendation to the ETS Board on this item.

Member Baarman said this service would not include the APXNext radios and asked if it covered the other radio models remaining in the system. Chair Dina clarified it would cover the mobiles in the system as well as some of the portable models such as the APX8000, APX6000, and APX4000s. Member Baarman asked if this took into consideration the APX4000s in the field. Ms. Zerwin asked, which 4000s? Member Baarman said there are agency owned APX4000s. Ms. Zerwin replied that all the radios in the fleet were counted and it would be an agency decision on whether they wanted to add the service. Member Baarman said so they may be treated like the Sheriff and have a cost and Ms. Zerwin confirmed. Ms. Zerwin said the Sheriff's Office is discussing this option internally and will advise their decision. They already have a system set up internally for administration and jail radios. A short discussion ensued regarding the radios in the system to be covered by this service. Member Baarman also asked if this would only cover alias updates, not any other service that would be available, Chair Dina confirmed.

Attachments: [Motorola 921054 Change Order 3.pdf](#)
 [Motorola 921054 Requisition.pdf](#)
 [Motorola 921054 Decision Memo.pdf](#)
 [QUOTE-2378059-1 DuPage ETSB Group Services Flashkits 10 26 2023.pdf](#)
 [QUOTE-2394597-1 DuPage Sheriff Group Services Flashkits 10 26 2023.pdf](#)

RESULT:	ETSB RECOMMENDED FOR APPROVAL
MOVER:	Pat Johl
SECONDER:	Michael Rivas

7. DEDIRS PORTABLE AND MOBILE REPLACEMENT

7.A. Police

Member Rivas had nothing to bring forward for discussion.

7.B. Fire

Chair Dina said Fire Focus had discussed Group Messaging which was just approved for recommendation. He said they were in discussions with the NFPA Committee and said they would have more information at the next meeting. He said they have a Fire Focus meeting that morning and would discuss this further.

Member Baarman asked if they had submitted the TIA and asked for any preliminary information. Chair Dina said they submitted the TIA and the PAC Memo (approved by the ETS Board) along with several videos to demonstrate to the task group and subcommittee the challenges associated with the standard. He said many of the members of the NFPA task group are on the NFPA subcommittee and that it looks favorable. Member Baarman asked if there was a date for their decisions, and whether the subcommittee could table the items. Chair Dina agreed and said they are meeting with Motorola and would ask Motorola to work on the changes based on the pending NFPA approval.

8. POLICY 911-005.8: ACCESSORY APPROVAL REQUEST - HOLSTER

Member Rivas said they reviewed the holster and the concern is if an altercation takes place and the radio falls out. He said the holster allows for the option of wearing the radio on the vest as well as the belt. Member Selvik made an adjustment to the strap on the holster to move the loop from the channel knob to the antenna. Member Rivas said taking a second look today, he would have no problem with the product. Ms. Zerwin said that Motorola would not certify a product unless it goes through their product group. She said the vendor would have to reach out to Motorola. Ms. Zerwin said the holster is not Motorola certified. The policy is vague regarding the holster because they are on the agency. She said the insurance deductible on the radios is \$5,000 and if the renewal is approved by the ETS Board on Wednesday, the deductible would drop to \$2,500. She said, the question is if PAC does not want to inhibit the holster, if they approve the holster, the deductible if an altercation happens, would be on ETSB. If the PAC does not approve the holster, the agency would sign off on the modification forms and would be liable for any damages including the deductible. Member Selvik asked if Motorola had a Molle

solution of their own. Ms. Zerwin said not yet, but ETSB inquired. A short discussion ensued. Member Johl asked if the radios are falling out today, using the Motorola product as it was supplied, if ETSB was liable. Ms. Zerwin said Motorola would be as it is their product; they would be liable to replace it. Member Rivas said the ETS Board could vote no, that they would not want to incur the liability. Ms. Zerwin said she believed the policy gave the PAC the authority to make that decision. The policy was brought onscreen for the wording of whether ETSB or PAC had the authority to approve accessories. Section V of the policy states "...the ETS Board authorizes the PAC to make changes/additions/deletions to Appendices (which includes the accessories list) without having to bring such changes to the ETS Board." Member Rivas said there would need to be outreach to the agency if not approved. Ms. Zerwin said the agency would need the policy forms so ETSB staff would reach out. Member Baarman asked if there was a timeframe from Motorola for a new holster. Ms. Zerwin said no, but that she had reached out to the manufacturer of this model holster so they could discuss it with Motorola. A motion was made by Member Selvik, seconded by Member Johl to add the holster to the accessory list within the policy appendices. On voice vote, all Members voted "Nay", motion failed.

RESULT:	DEFEATED
MOVER:	Roy Selvik
SECONDER:	Pat Johl

9. OLD BUSINESS

There was no old business.

10. NEW BUSINESS

There was no new business.

11. ADJOURNMENT

11.A. Next Meeting: Monday, December 4 at 8:15am in Room 3-500A

Member Johl made a motion to adjourn the meeting at 8:41am, seconded by Member Rivas. On voice vote, motion carried.

Respectfully submitted,

Eve Kraus

24-0026

Amendments to Policy 911-005.2: Access to the DuPage Emergency Dispatch Interoperable Radio System

Attachments: [911-005.2 Access to the DuPage Emergency Dispatch Interoperable Radio System redline 11.1.23.pdf](#)



ETSB Other Action Item

421 N. COUNTY FARM
ROAD
WHEATON, IL 60187
www.dupagecounty.gov

File #: 24-0018

Agenda Date: 12/4/2023

Agenda #: 5.B.



DU-COMM

DuPage Public Safety Communications
420 N. County Farm Road
Wheaton, IL 60187

Matthew Baarman
Deputy Director
Support Services
mbaarman@ducomm.org
630.260.7514 Direct

Memorandum

TO: Linda Zerwin, ETSB Executive Director
DATE: Wednesday, November 29, 2023
FROM: Matthew Baarman, Deputy Director
RE: DEDIRS Maintenance Status Report – November

Starcom System Outages:

Unplanned Work:

- 11/08/2023 – Radio System entered Fail-soft for less than a minute due to technician clearing alarms at the master site.
- 11/10/2023 – LTE Smart Connect outage occurred due to planned 8-hour upgrade, which wasn't advertised to DuPage users. The outage persisted past the completion of the upgrade. The APXNext product team identified an issue that impacted all APXNext radios nationwide.

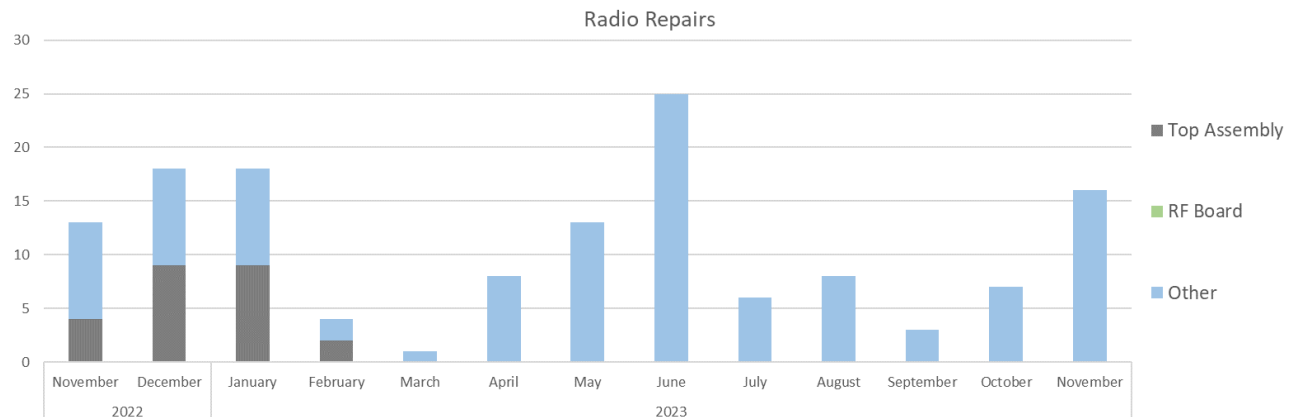
Planned Work:

- 11/14/2023 – Argonne yearly RF site maintenance completed.
- 11/03/2023 – Burr Ridge RF site maintenance completed.

Radio Repairs:

This is DU-COMM's last month as the ETSB radio maintainer, and DU-COMM Techs would like to take a moment to thank the ETSB and all DuPage radio users for the opportunity to service your radio needs. The radio service process will remain the same; agencies should open ZenDesk tickets to report issues, and ETSB will coordinate the radio repairs with Motorola. Please be safe this holiday season and practice polite radio etiquette.

Repairs for the last 13 months follow:



A few highlights include:

- 39 Fire batteries replaced
- 1 VHF/7/800 antenna replaced
- 2 RSM replaced
- 3 RSM repaired
- 5 Radio repaired
- 5 Radio swaps
- 4 Radio ID changes

Talkgroup Usage:

The twenty (20) busiest DuPage talkgroups on the DEDIRS STARCOM21 site from November 1, 2023, thru November 28, 2023, follows (all time in seconds):

Talkgroup Alias	Total Group Time	Group Count	Longest Call Time	Group Busy Count	Longest Busy Time	Count of Rejects
DU ACDC 2	240,377	70,837	32	0	0	1,122
DU ACDC 3	226,421	65,744	44	0	0	844
DU 3EAST	199,635	61,924	35	0	0	1,394
DU 1EAST	195,379	56,282	40	0	0	1,256
DU 1SOUTH	176,058	52,908	34	0	0	816
DU DPSO F1	170,738	47,977	43	0	0	721
DU 1WEST	165,146	50,642	47	0	0	934
DU 3WEST	164,649	49,394	38	0	0	846
DU 3SOUTH	161,705	50,031	34	0	0	985
DU 7SOUTH	128,824	39,430	33	0	0	619
DU 1NORTH	126,581	40,455	40	0	0	465
DU 7WEST	122,405	36,381	33	0	0	336
DU FIRE NORTH	122,109	24,391	30	0	0	296
DU FIRE SOUTH	95,795	18,946	30	0	0	299
DU FIRE EAST	91,916	16,906	56	0	0	233
DU ACDC 1	91,206	26,331	41	0	0	369
DU DPSO JAIL	88,415	29,506	28	0	0	1,657
DU FDACDC1	71,396	11,996	30	2	1	187
DU FDACDC2	62,563	11,817	38	0	0	120
DU DPSO COURT	62,372	19,094	58	0	0	1,388

November Issues:

- Number of New Tickets = 9
- Number of Closed Tickets = 11
- Number of Open Tickets = 2



ETSB PAC Resolution

421 N. COUNTY FARM
ROAD
WHEATON, IL 60187
www.dupagecounty.gov

File #: ETS-R-0038-23

Agenda Date: 12/13/2023

Agenda #: 7.E.1.

RESOLUTION TO APPROVE POLICY 911-005.2: ACCESS TO THE DU PAGE EMERGENCY DISPATCH INTEROPERABLE RADIO SYSTEM (DEDIRS)

WHEREAS, the DuPage County Emergency Telephone System Board ("DU PAGE ETSB") is an emergency telephone system board, established pursuant to Section 15.4 of the Local Government Emergency Telephone System Act, 50 ILCS 750/15.4 ("Act"); and

WHEREAS, the DU PAGE ETSB is authorized and empowered, pursuant to Section 15.4 (b) of the Act to plan, implement, upgrade, and maintain an Emergency 9-1-1 System; and

WHEREAS, the DU PAGE ETSB shall develop policies in order to plan, implement, upgrade, and maintain the DuPage ETSB 9-1-1 System; and

WHEREAS, the purpose of this resolution is to approve the language of Policy 911-005.2: Access to the DuPage Emergency Dispatch Interoperable Radio System (DEDIRS), initially adopted by the DU PAGE ETSB on April 9, 2018; and

WHEREAS, Policy 911-005.2: Access to the DuPage Emergency Dispatch Interoperable Radio System (DEDIRS) has been reviewed by the DU PAGE ETSB Policy Advisory Committee ("PAC") as Section 5.2.1; and

WHEREAS, the Board members of DU PAGE ETSB have reviewed Policy 911-005.2: Access to the DuPage Emergency Dispatch Interoperable Radio System (DEDIRS) which allows for access to DEDIRS talk groups as detailed in Attachment A of this resolution.

NOW, THEREFORE BE IT RESOLVED, that the DU PAGE ETSB Policy 911-005.2: Access to the DuPage Emergency Dispatch Interoperable Radio System (DEDIRS), be, and it is hereby amended and adopted.

Enacted and approved this 13th day of December, 2023 at Wheaton, Illinois.

GREG SCHWARZE, CHAIRMAN

Attest: _____

JEAN KACZMAREK, COUNTY CLERK

Emergency Telephone System Board Of DuPage County Policy and Procedures



Policy #: 911-005.2

Previous Policy(s): 8.0.2, 8.0.3, 8.0.4, 8.0.5

Effective Date: May 7, 2013

Revised: December 13, 2023

Access to the DuPage Emergency Dispatch Interoperable Radio System (DEDIRS)

Purpose:

The purpose of this policy is to ensure compliance with State of Illinois STARCOM21 and DEDIRS requirements for use and access of DEDIRS talk groups for the purpose of interoperability for emergency communications.

Additional Authority:

50 ILCS 750 Emergency Telephone System Act

OEX-003B-89 Amending Section 40-20 of the DuPage County Code Pertaining to the Emergency Telephone System Board

Goal:

It is the goal of the Emergency Telephone System Board of DuPage County (DuPage ETSB) to provide one seamless method of interoperable communication for use by agencies on DEDIRS or for non-member agencies.

Scope:

This policy shall apply to all Public Safety Answering Points (PSAPs) in the DuPage ETSB 9-1-1 System, including all Telecommunicators and other employees of the PSAP, user agencies or DuPage ETSB staff, contracted vendors or other authorized agents, DEDIRS users and agencies receiving approval to access DEDIRS talk groups.

I. Policy Statement

DuPage ETSB leases a portion of the Motorola Solutions, Inc. STARCOM21 network in Illinois as an integrated component of its emergency dispatch telephone system. The system permits communication between telecommunicators and the first responding personnel they dispatch in response to calls placed to 9-1-1. The system also permits personnel from public safety agencies throughout the County to communicate with each other during emergency joint response situations.

InterOp Talk Groups

DEDIR System will maintain nine (9) multi-use talk groups for the purpose of interoperability with outside agencies who meet the access requirements, herein referred to as "InterOp Talk Groups". The first eight InterOp talk groups will be labeled InterOp 1 through 8 for operational use. The ninth talk group will be labeled DUCALL. This talk group will be monitored by the PSAPs for radio traffic from adjacent agencies requesting access to DEDIR System. Outside agencies will also be provided 10-digit dial telephone numbers for the PSAPs as a secondary form of communication. DUCALL will also be used as a point-to-point channel between DEDIR System and non-DEDIR System PSAPs.

Emergency Telephone System Board Of DuPage County Policy and Procedures



The InterOp Talk Groups will be patched by PSAP Telecommunicators during an event in which interoperability is required. Once the event is completed, the patch will be disabled by the PSAP Telecommunicator.

Any agency that has been granted access to main channel talk groups in applications prior to the most recent reprogramming of subscriber units shall be asked to reprogram their subscriber units to the InterOp Talk Groups at their next reprogramming or within a year of notice, whichever occurs first. If an agency is unable to meet this request, they should seek an extension from the PAC in writing, no later than ninety (90) days prior to the year deadline. Notice shall be in the form of a certified letter to the agency head. Notification shall not be given until a satisfactory test period has been completed.

II. Application Procedure

Any agency that determines it has a need to communicate with an existing DEDIRS member for public safety purposes may apply to DuPage ETSB for use of InterOp Talk Groups 1-8. DUCALL will be a "hailing talk group" that can be monitored by ACDC and DU-COMM for requests for interoperability.

InterOp talk groups 2, 4, 6, and 8 will be AES encrypted and InterOp talk Groups 1, 3, 5, and 7 will be clear for the purposes of interoperability with requesting agencies that do not have AES encryption.

Special Use:

DuPage ETSB will consider applications for specific operational talk groups on a case-by-case basis for adjacent agencies that are non-DEDIRS Members that have daily operational assignments with DEDIRS users (mutual aid, auto aide, task force assignments etc.).

Existing Non-Member users who wish to have access to a main talk group for purposes of communication may continue to have access to that talk group unless that permission is revoked by the ETSB when access to the InterOp Talk Groups established or access to the main talk groups is proven unnecessary for daily operational needs.

Applicant Responsibilities

Application: The applicant must make application to the ETSB and supply the following documents with the application:

1. A completed DuPage ETSB DEDIRS Access Application, including the confidentiality agreement;
2. A brief cover letter/email explaining the need for interoperability. If requesting additional talk groups, provide an explanation as to the need and type of anticipated use (daily, mutual aid, auto aid, task force etc.) and any other pertinent information including which DEDIRS members the requestor will mostly likely communicate;
3. A sponsoring letter from a DEDIR System agency;
4. A completed and executed DuPage Emergency Dispatch Interoperable Radio System Access Talk Group Agreement;
5. Proof of STARCOM21 Membership;

Emergency Telephone System Board Of DuPage County Policy and Procedures



6. The ETSB and DEDIR System sponsoring agency will ensure that the applicant has access to DEDIRS rules and policies and completes relevant DEDIRS training.

The Applicant understands and accepts that any fees or cost incurred will be the responsibility of the Applicant.

The Applicant will agree to provide access to STARCOM21 talk groups to DEDIRS members which they currently have direct access for the purpose of interoperability for mutual aid and emergency communications and according to their own policies. Such access will be reviewed by the PAC for use and distribution.

The rights of the Applicant and the ability to utilize the DEDIRS system will rest with the Applicant and DuPage ETSB and is neither transferable nor can it be expanded upon without a written modification request to the Policy Advisory Committee (PAC).

The Applicant will have authority to program only the approved talk groups on its own subscriber units. The Applicant may not program any other DEDIRS member subscriber units owned by DuPage ETSB. The Applicant may not program any other STARCOM21 user subscriber unit with DEDIRS talk groups unless a contractual arrangement is in place between the Applicant and the third party and the third party has DuPage ETSB permission to use certain talk groups.

The Applicant will train their agency members on any ETSB policies pertinent to access of use of DEDIR System.

Application Modification: If an Applicant acquires additional subscriber units and desires interoperability for the new units, the Applicant must request authorization to expand the number of subscriber units utilizing the InterOp Talk Groups beyond its initial application. An approved application is not blanket permission for any Applicant which may expand its own fleet in the future. If additional subscriber units are added without prior approval, DuPage ETSB has the right to disable the unit.

An application modification must be submitted to PAC. The PAC shall have the authority to allow additional units without bringing the modification to the ETS Board so long as the additions do not impact DEDIRS functionality. The Applicant should submit a Form A and check modification.

Each Applicant will be responsible for those fees incurred on its behalf. All subscriber fees charged by Motorola for an Applicant's radio maintenance or operations are the responsibility of the Applicant. The PAC, DuPage ETSB or any of its member agencies are not responsible for any equipment or losses directly or indirectly associated with this system or agreement.

DuPage ETSB Responsibilities

Before an Applicant is approved for use of any DEDIRS talk groups, all member police and fire agencies shall be notified with a fourteen (14) day notification window. The process of notification will be outlined below.

Emergency Telephone System Board Of DuPage County Policy and Procedures



Only subscriber units and accessories which the ETSB has previously authorized for such use on the DEDIRS may be utilized on the system. Those subscriber units or accessories or information may be obtained from the ETSB or from an ETSB authorized radio vendor.

The ETSB or its authorized vendor shall provide the hexadecimal ID and program all subscriber units which operate on the DEDIRS. The public safety agency shall supply the serial number, radio identification number, and STARCOM21 identifier to the ETSB prior to the radio becoming operational on DEDIR System.

DuPage ETSB and/or Motorola may disable a subscriber unit or units at any time with or without notice to the requesting agency. DuPage ETSB may disable any subscriber unit or units which adversely impact the performance of the DEDIRS or suspend or revoke the agreement with the Applicant if, in DuPage ETSB's opinion, the Applicant's continued usage on DEDIRS adversely impacts the system or safety of the public safety personnel.

Application Process: The application shall be processed as follows:

- The application, cover letter explaining the request, DEDIR System sponsor letter, and proof of STARCOM21 membership shall be submitted to DuPage ETSB ETSB911@dupageco.org.
- DuPage ETSB shall review the application with the ETSB-approved radio vendor to assess the type of equipment the Applicant proposes to use with DEDIRS, its load potential on the system and other technical items associated with the application, including the code plug development. The approved vendor will provide a recommendation whether to approve or deny the application based solely on operational issues. If the vendor believes that the application should be denied, the vendor shall provide a brief written explanation for PAC and ETS Board consideration.
- DuPage ETSB staff will provide copies of the application to the PSAP Directors. The date that the application is distributed to the PSAPs will start the fourteen (14) day notification window for member review.
- The PSAP Directors will advise their member agencies of the application request. This can be accomplished through their own internal operational process for disseminating information to their agencies (email, committee meetings etc.). PSAPs are encouraged to bring this information through internal committees to promote discussion and consensus.
- The PSAP Directors will advise DuPage ETSB staff via email if there are no objections or of any objections to the application or recommendations within fourteen (14) days of receipt of the application. The objection must be filed in writing by return receipt email to ETSB911@dupageco.org within the allotted fourteen (14) calendar days. A nonresponse shall be deemed an affirmation of the application.
- DuPage ETSB staff shall prepare the application paperwork for the next PAC and ETS Board agendas.

The PAC shall review any application for access. During that review process the PAC shall:

- Ensure that all associated paperwork is complete;
- Shall hear a report from DuPage ETSB staff and maintainer on the status of the fourteen (14) day notification, approvals/objections/recommendations from members and vendor

Emergency Telephone System Board Of DuPage County Policy and Procedures



- recommendations for the application;
- Shall discuss the application and vote to make a recommendation to the ETS Board to either approve or deny the application and forward the application and recommendation to the ETS Board for its next regular meeting.

In the event the PAC denies the application, the application and brief written explanation by the PAC Chairman, or his designee, shall be forwarded to the ETS Board for their information and discussion. In the event the PAC cannot reach a consensus vote, that fact shall be reported to the ETS Board in writing for their information and discussion.

III. Implementation

The Applicant will be notified of the DuPage ETSB decision. If approved, the Applicant may then proceed to program its subscriber units with Access Talk Groups and access to other talk groups, as specified by the ETSB.

Executive Director Zerwin is authorized to make amendments to the Access Application and Confidentiality Agreement so long as the amendments do not alter the substance of the attached Agreement.

Policy adopted: _____

Greg Schwarze, Chairman



DuPage ETSB DEDIRS Access Application

AGENCY INFORMATION	
Type of Application:	<input type="checkbox"/> New <input type="checkbox"/> Modification
NAME OF AGENCY:	
POINT OF CONTACT:	
BUSINESS ADDRESS	
EMAIL ADDRESS:	
BUSINESS TELEPHONE:	
MOBILE TELEPHONE:	

APPLICATION INFORMATION		
Please complete the following information	YES	NO
The Applicant is a unit of local government		
If no, explain: (use a separate sheet if necessary)		
The Applicant is requesting access to DEDIRS for certified sworn police personnel or certified fire service personnel or community service officers.		
The Applicant is requesting monitoring capabilities only		
The Applicant is a member of STARCOM21		
The Applicant understands and accepts that any fees or cost incurred for programming will be the responsibility of the Applicant.		

Applicant Equipment Information	
The total number of portable radios (portable and mobile) covered under this request is:	
The total number of radios which will be affiliated during any daily operational shift is:	
Do the portable radios have encryption: <input type="checkbox"/> No <input type="checkbox"/> AES encryption	
Type of radios to be programmed with a DEDIRS talk group:	
The Applicant is requesting use of: <input type="checkbox"/> InterOp Groups 1-8, <input type="checkbox"/> Any additional talk groups. List on a separate sheet include an explanation as to the need (ie: daily mutual aid etc.)	

Committee/ETS Board Review Process Checklist:

Applicant has submitted proper paperwork	<input type="checkbox"/> Yes <input type="checkbox"/> No
Vendor Technical Review of Application Complete	
14 Day Notice to Members via PSAPs is complete	<input type="checkbox"/> Yes <input type="checkbox"/> No
Posted on Committee Agenda Date: _____	<input type="checkbox"/> Yes <input type="checkbox"/> No
Vote of Committee: Ayes _____ Opposed _____ Abstain _____ Absent _____	Approved
Action or Direction Based on Vote: [ie TOT ETSB, request additional information, denied]	<input type="checkbox"/> Yes <input type="checkbox"/> No
Posted on ETSB Agenda Date: _____	<input type="checkbox"/> Yes <input type="checkbox"/> No
Vote of ETSB Board: Ayes _____ Opposed _____ Abstain _____ Absent _____ Resolution No: _____	Approved
	<input type="checkbox"/> Yes <input type="checkbox"/> No



DuPage ETSB DEDIRS Access Application

DUPAGE ETSB
CONFIDENTIALITY AGREEMENT FOR USE ON
DU PAGE EMERGENCY DISPATCH INTEROPERABLE RADIO SYSTEM (DEDIR SYSTEM)
ON STARCOM 21

As the authorized agent of this agency, I certify that any members of the applicant agency have been:

1. Understand the confidentiality of information that they may learn or have access to over encrypted talk groups of the DEDIR System which is of personal, safety-sensitive or otherwise confidential in nature. Such information includes, but is not limited to incident report information, NCIC/LEADS information, Computer Aided Dispatch/RMS information, and other law enforcement or police related information.
2. Trained that the restrictions of the Confidentiality Agreement regarding disclosure and use of information gained using the DEDIR System shall continue to apply after termination of this relationship with the DEDIR System.
3. Understand that they are prohibited from using any of this information for personal use or benefit or for any other non-Police/public safety business related purposes.
4. Understand that the failure to comply with the confidentiality requirement set forth in this Confidentiality Agreement is actionable, up to and including termination of access to encrypted talk groups.

I have read and understand the access agreement and attest that the members of this agency have been trained and understand they must comply with it in every respect. A list of employees who are party to this agreement is attached to this application.

Dated this _____ day of _____, 20_____

Signature

Printed Full Name

Agency



Presentation

421 N. COUNTY FARM
ROAD
WHEATON, IL 60187
www.dupagecounty.gov

File #: 24-0227

Agenda Date: 12/4/2023

Agenda #:

Presentation to the DuPage County ETSB PAC

UNDERSTANDING AND PLANNING LMR ENCRYPTION



2023

1

Introduction

Dave Dato
ddato@dhsgov.net

Any use of a manufacturer's name in this presentation does not constitute an endorsement.

Resources

Resource Materials

- [!\[\]\(95b42f0077faf7439a26242a54e021ec_img.jpg\) Guidelines for Encryption in Land Mobile Radio Systems - 2016](#)
(PDF, 222.55 KB)
- [!\[\]\(e097ab4c08b8186dd0908330bbc2dc28_img.jpg\) Best Practices for Encryption in P25 Public Safety Land Mobile Radio Systems - 2016](#)
(PDF, 634.25 KB)
- [!\[\]\(1e9d865c5de095f8e3304757c49e79d7_img.jpg\) Developing Methods to Improve Encrypted Interoperability in Public Safety Communications \(Fact Sheet\) - 2016](#)
(PDF, 162.26 KB)
- [!\[\]\(735b10d724a5f0ec5005c4eb3eb9c9d1_img.jpg\) Considerations for Encryption in Public Safety Radio Systems - 2016](#)
(PDF, 321.33 KB)
- [!\[\]\(e6250f05bc27fa93236b816562b699f9_img.jpg\) Considerations for Encryption in Public Safety Radio Systems Fact Sheet - 2016](#)
(PDF, 183.94 KB)
- [!\[\]\(d190cc638f389909d4b049d6c19e4cb2_img.jpg\) Encryption Key Management Fact Sheet - 2020](#)
(PDF, 134.80 KB)
- [!\[\]\(4d34001966c7597a8c3e4293694bde37_img.jpg\) Operational Best Practices for Encryption Key Management - 2020](#)
(PDF, 3.00 MB)
- [!\[\]\(70b9adae95aa76ce55f26a9fb944efce_img.jpg\) Communications Security – Protecting Critical Information, Personnel, and Operations White Paper - 2022](#)
(PDF, 445.92 KB)

Tip of the Iceberg

The goal this morning is to hit on a few key points about encryption planning and implementation.

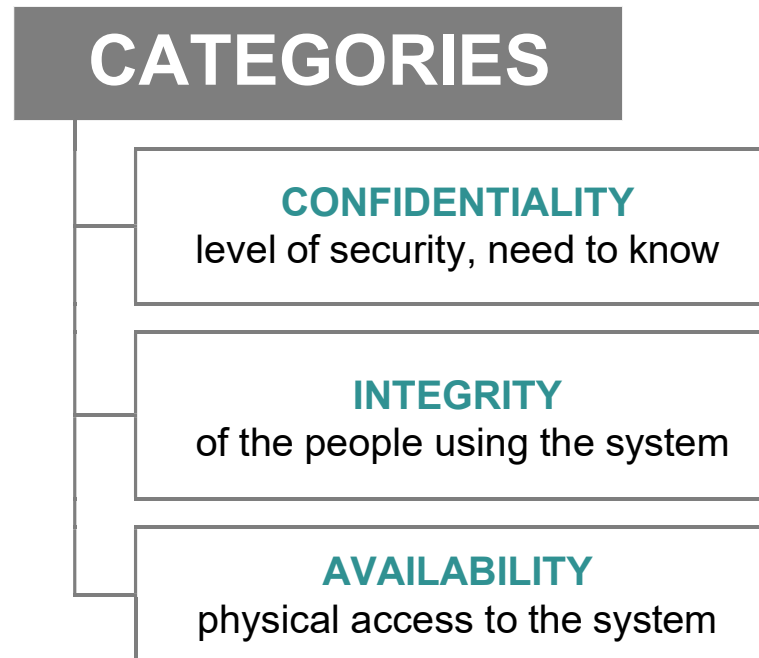
Keep These Items In Mind

- Best practices
- The technical basics of encryption
- Tools and hardware

The End Goal

To ensure operability and interoperability while utilizing encryption.

Security



There is an inverse relation between ease-of-use and level of security.

How Many Keys Are Needed?

Statewide Key 1 is the patch key...Do you have the correct key 1

- LAW

- Local dispatch (Common Key)
 - Law general
 - Law tactical
 - Shared Ops LE / Fire
- Regional Secure TGs or channels
 - SWIT Secure TGs
 - Neighboring agencies
- National Shared Keys
 - Fed IR and LE UHF and VHF
 - CG Com & CG Tac

- FIRE

- Local dispatch (Common Key)
 - Fire general
 - Fire tactical
 - Shared Ops LE / Fire
- Regional Secure TGs or channels
 - SWIT Secure TGs
- National Shared Keys
 - Fed IR
 - CG Com CG Tac

Elements of Encryption Best Practices

Key
Management
Organization

Key Generation and
Distribution

Standards Based Encryption

National SLN Assignment
Plan

Education and Training

Outreach

Subscriber device
programming

Key Management Facility
(KMF)

Crypto Period Considerations

Exercise and
Testing

FIPS 140-3 Standard

Communications
System Planning

Encryption Best Practices

Standards Based encryption

Utilize the P25 Advanced Encryption Standard (AES)-256. It is the algorithm identified not only in the P25 standard but also in grant requirements where encryption is specified as part of a grant funded purchase.

ADP IS WEAK AND ANY USE SHOULD BE CAUTIONED!
WILL YOU PATCH YOUR SECURE TGs TO AN ADP TG ?

Encryption Best Practices

National SLN assignment plan

Adopt a standardized Storage Location Number (SLN) and key ID (KID) plan that minimize operational conflicts. (Already Completed at the state level)

National Interoperability Keys

National Interoperability Keys

SLN	KID	Algorithm	Use	SLN Name	Crypto Period Annual Changes are completed on 1 st working Monday of October
1		DES	Public Safety Interoperable	ALL IO D	Annual
2		DES	Federal Interoperable	FED IO D	Annual
3		AES	Public Safety Interoperable	ALL IO A	Annual
4		AES	Federal Interoperable	FED IO A	Annual
5		DES	National Law Enforcement State and Local Interoperable DES	NLE IO D	Static
6		AES	National Law Enforcement State and Local Interoperable AES	NLE IO A	Static
7		AES	US-Canadian FED Law Enforcement Interoperability	FED CAN	Static
8		AES	US-Canadian PS Interoperability	USCAN PS	Static
9		DES	National Tactical Event	NTAC D	Single Event Use-Not to exceed 30 Days
10		AES	National Tactical Event	NTAC A	Single Event Use-Not to exceed 30 Days
11		DES	Multiple Public Safety Disciplines	PS IO D	Static
12		AES	Multiple Public Safety Disciplines	PS IO A	Static
13		DES	National Fire / EMS/ Rescue	NFER D	Static
14		AES	National Fire / EMS/ Rescue	NFER A	Static
15		DES	National Task Force Operations	FED TF D	One time use as needed for special ops
16		AES	National Task Force Operations	FED TF A	One time use as needed for special ops
17		DES	National Law Enforcement Task Force (one time only operation)	NLE TF D	One time use as needed for special ops
18		AES	National Law Enforcement Task Force (one time only operation)	NLE TF A	One time use as needed for special ops
19		AES	Federal-International Law Enforcement Interoperability	FED INTL	When needed by operational requirement
20		AES	Federal-International Law Enforcement Interoperability	PS INTL	When needed by operational requirement

Encryption Best Practices

Subscriber device programming

Be sure that subscriber device programming personnel (in-house technicians and radio shops) understand not only the technical aspects of encryption use, but also the operational requirements of the public safety users.

Encryption Best Practices

Crypto periods

Develop reasonable policies and plans as they relate to why, when and how to change encryption key material.

Encryption Best Practices

Key generation and distribution

Determine who (what agencies) will be responsible for generating keys and how they will be distributed.

Private Entity vs. Public Safety Agency

Encryption Best Practices

Outreach

Share encryption plans and implementation information with all agencies whether they utilize encryption or not, as they may in the future.

Technical Basics

Know the Rules

- Encryption may not be used on the Nationwide interoperability calling channels and designated tactical channels in the VHF, UHF, 700 MHz, and 800 MHz bands.
 - VCALL10
 - UCALL40
 - 8CALL90
 - 7CALL50, 7CALL70
 - VTAC (VTAC11-14) & (VTAC33-38)
 - UTAC (UTAC41-43)
 - 8TAC (8TAC91-94)

FCC R&O PS DOCKETS No. 13-209 and 15-199 Revising section 90.20(i).

Information from Scott Wright presentation State of Connecticut

Technical Basics

Know the Rules

The FCC Order does not apply to certain channels / frequencies, where encryption may be used:

- Mutual Aid Channels:
 - VFIRE, VMED, VLAW
 - UHF MED frequencies
- 700 MHz Tactical Channels:
 - 7LAW, 7FIRE, 7TAC, 7MED,
 - 700 MHz Air to Ground channels
- NTIA designated channels
 - IR and LE
- State, Regional, and Local Interoperability channels and talkgroups:
 - ***If allowed by SIEC/Local Authority

Keep in mind that where encryption is permissible on interop frequencies by FCC rule, the radios employing encryption must have a readily accessible switch or other readily accessible control that permits the radio user to disable encryption. FCC 47 CFR 90.553

Information from Scott Wright presentation State of Connecticut

Technical Basics

Encryption Terminology

- ***STORAGE LOCATION NUMBER (SLN) AKA Common Key Reference (CKR)***—This is a decimal value between 0 and 4095. SLN is a generic term used to refer to an encryption key slot in a subscriber device.
- The Storage Location Number (SLN) is a “location reference” or “place” in a radio, that the radio program uses to reference what encryption key to send when the radio transmits.

Technical Basics

Encryption Terminology

KEY ID (KID) Provides a unique address to identify a Traffic Encryption Key (TEK). This is expressed as a hexadecimal value between 0000 and ffff (65,535 combinations).

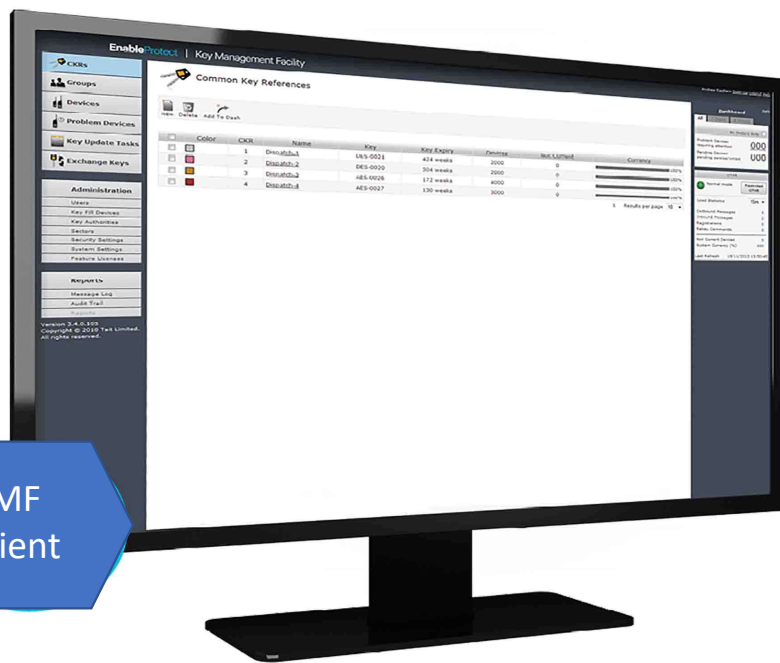
The KID, along with an algorithm identification value are sent as part of the P25 data stream. It is from this information that the receiving radio understands what key to use to decrypt information (audio) sent.

Simple Spreadsheet Tracking of SLNs and KIDs

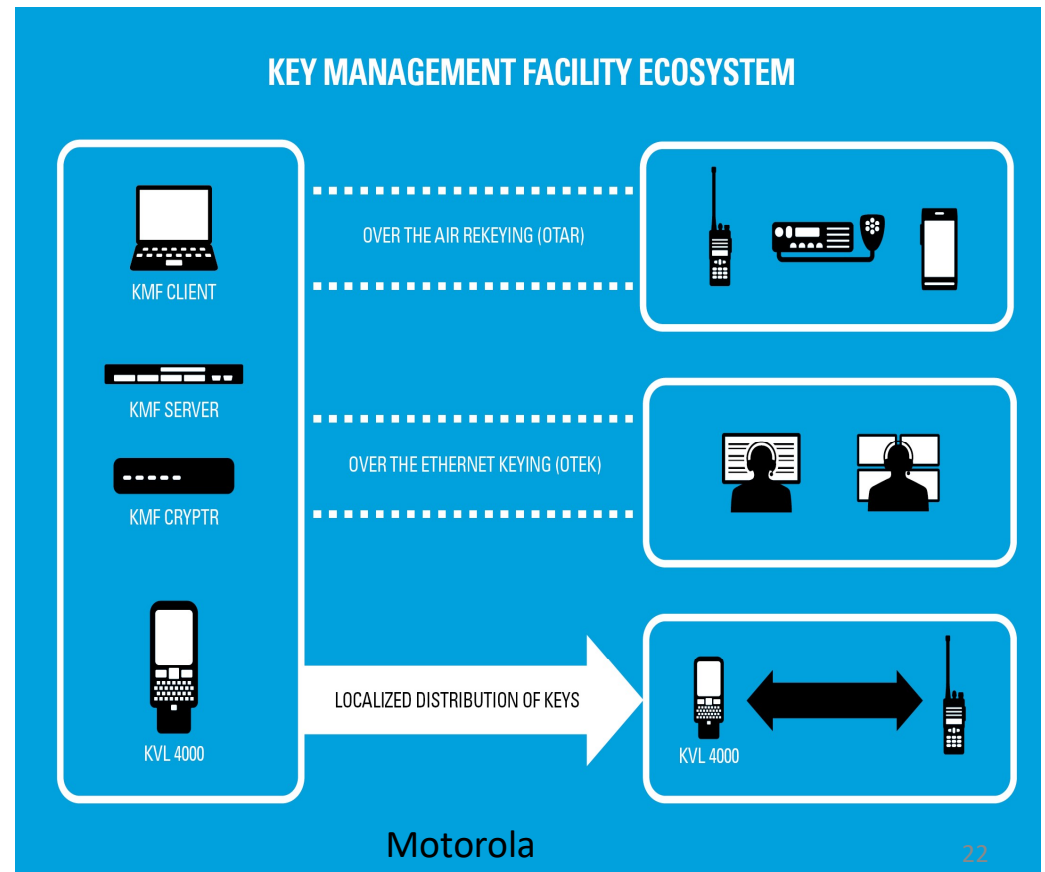
User / Agency	SLN / CKR 1-4095 (Decimal)	Key ID 0000-FFFF (HEX)	Algorithm				
Motorola	1	1	DES				
ICC	1	1	DES				
SOS	1	1	DES				
IDPH	1	1	DES				
Rockford #1	1	1	ADP				
Barrington	12	18	ADP				
Glen Carbon	12	18	ADP				
Cook County #1	13	19	AES				
Maryville	13	19	ADP				
NWCD Dispatch	31	1F	AES				
NWCD Dispatch	32	20	AES				

Tools and Hardware

Key management facility examples from different manufacturers.

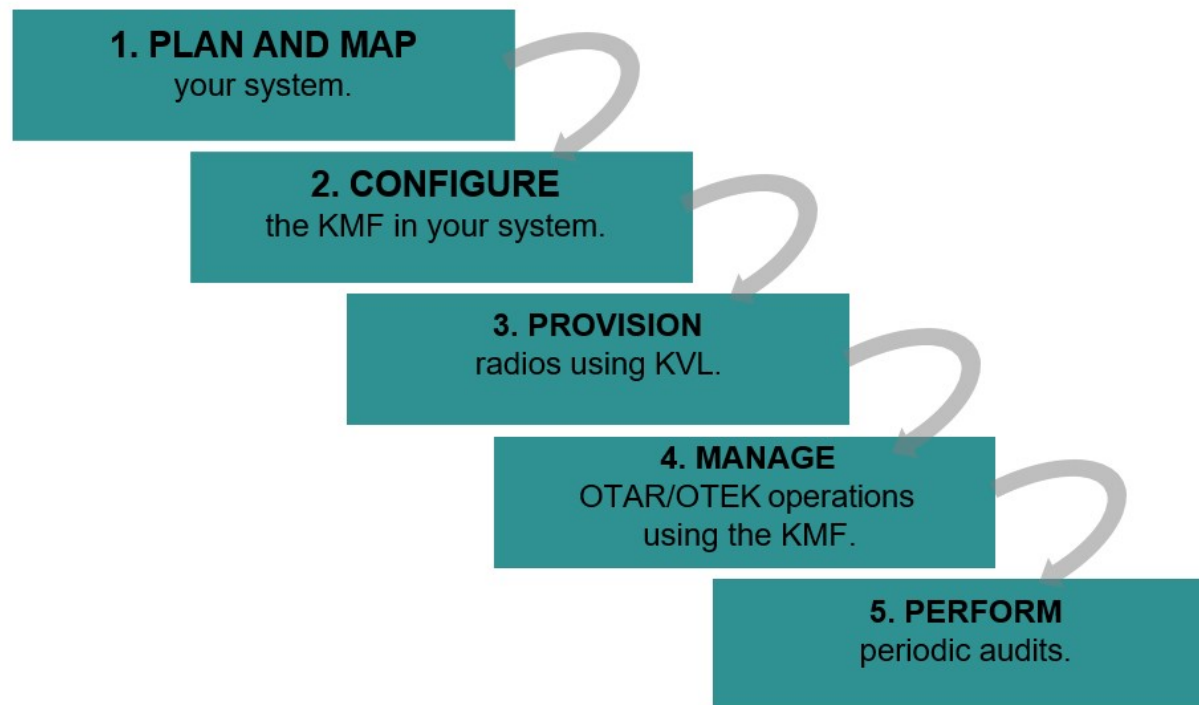


KMF Client



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Set-up and Management of the System



Key Types

Key Type	Description
Master Key	A key used to encrypt and decrypt all key material stored in the KMF database.
Traffic Encryption Key (TEK)	Encrypts voice, data, or Over-The-Air Rekeying (OTAR) and is assigned to Common Key References (CKRs). For OTAR, the TEK is used to outer layer encrypt the KMMs.
Unique Key Encryption Key (UKEK)	A key assigned to a subscriber for encrypting keys within an individually delivered OTAR command. For OTAR, the UKEK is used to inner layer encrypt the KMMs.
Common Key Encryption Key (CKEK)	A key assigned to a group of units for encrypting keys within an OTAR command delivered using the group OTAR method. It is provisioned on the trunking system but only used for conventional OTAR channels.
Key Loss Key (KLK)	Enables a KMF to restore a unit's UKEK after it has been erased by using the unit's Key Loss Key to receive OTAR commands.

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Key use and Storage

Common Key Reference (CKR) and **Physical Identifier (PID)** are two types of Key Storage.

- Dispatch Console with VPM (Trunking and Conventional systems) or CRYPTR , CORE Connected vs. Remote consolette
- Digital Interface Unit (ASTRO® 3.1 Conventional systems)
- RNC Radio Network Controller (ASTRO® 3.1 Conventional systems)
- ASTRO® 25 digital radios
- Key Management Facility (KMF)
- KVL
- CDEM Encryption Unit (Conventional systems)
- Archiving Interface Server (AIS) Recorder
- Dispatch Console without VPM (Software Load or OTEK)
- Provisioning Manager (PM)
- Wave Server (CRYPTR)
- CRYPTR

Key Management

Centralized Key Management	Decentralized Key Management
<ul style="list-style-type: none">• KMF loads keys through KVL and Store and Forward	<ul style="list-style-type: none">• Keys entered with KVL• KMF not used to load keys through Store and Forward

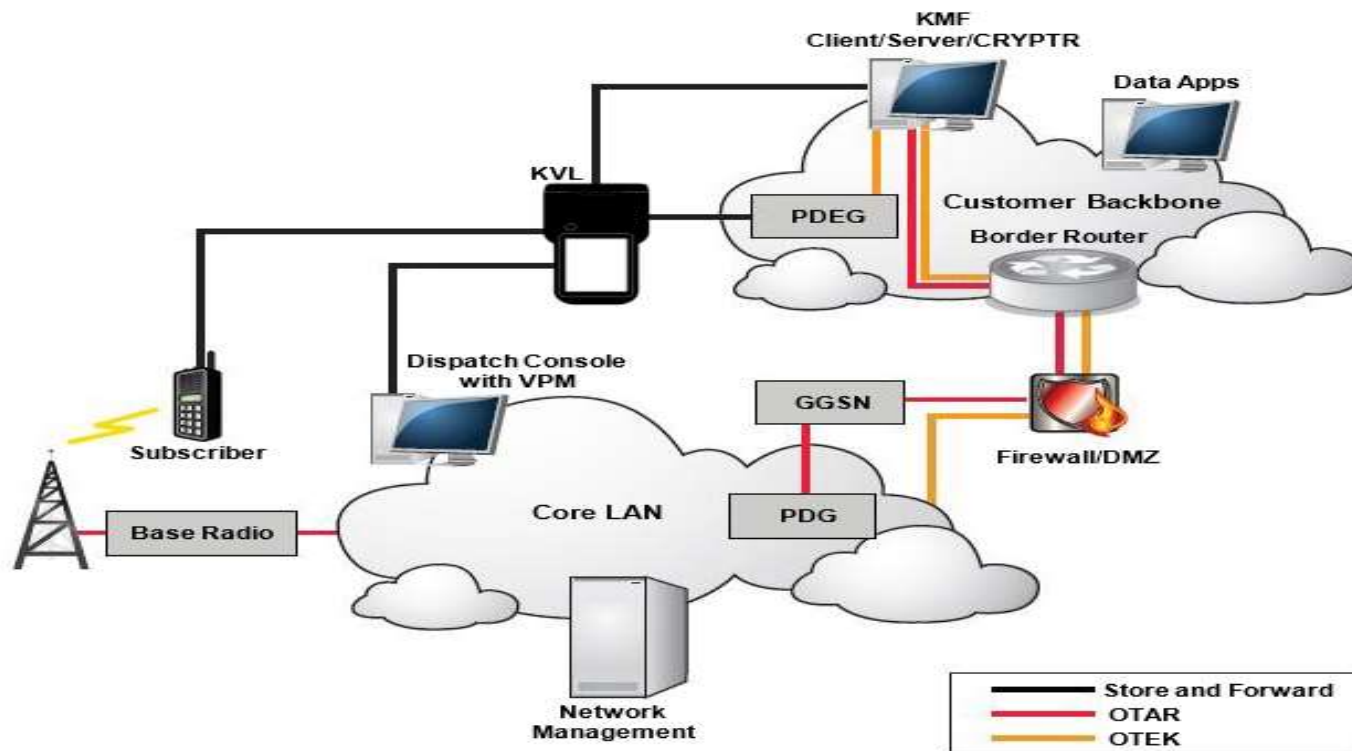
How Will You Keyload ?

- Manual key distribution through the KVL
 - Store and forward rekeying through the KMF
 - Over-the-Air Rekeying (OTAR)
 - Over-the-Ethernet Keying (OTEK)
 - Tactical OTAR
-
- Do the methods fit your needs?

Available KMFs

- Motorola (Stand-alone) (Private)
 - Triad (Kankakee, Grundy, and WESCOM) (Government)
 - Lake County ETSB (Government)
 - Northwest Central Dispatch (Government)
-
- The Starcom Network does not currently have network capacity to provide the ability to tie the KMFs together. Triad, Lake County and NWCD plan on utilizing a different means to connect their KMFs together.

Moving Key Material in the Trunked System



Key Management Security

- **Control Physical Access to All Secure Devices:**
 - Radios
 - Key Management Facility (KMF)
 - Key Variable Loader (KVL)
 - Dispatch console with VPM (trunked or conventional)
 - Dispatch console without VPM (CRYPTR)
 - MGEg (trunked)
 - DIU/RNC (conventional)
 - PDEg Encryption Unit (trunked)/CDEM (conventional)

Provisioning Manager

- Talkgroup Configuration
- Supergroup Configuration
- Secure Private Call
- Secure Interconnect Call

Subscriber Configuration

- OTAR
- CKR Alias
- Erase Previous Keyset
- Infinite Key Retention
- CKR Alias
- Patch Key, Failsoft Key, Dynamic TG Key, Private Call Key...
- Tactical OTAR ??

KVL

- Admin and Operator passwords
- Audit logging
- TEKs , KEKs and UKEKs
- Store and Forward (Downloads KMMs from KMF to KVL to subscriber devices)(Devices a target for keyloading)
- KVL used for provisioning subscriber devices



Questions / Comments



Thank you