

100754

**VILLAGE OF LOMBARD**  
**REQUEST FOR BOARD OF TRUSTEES ACTION**  
**For Inclusion on Board Agenda**

District: All

- Resolution or Ordinance (Blue)**
- Recommendations of Boards, Commissions & Committees (Green)**
- Other Business (Pink)**

**TO :** PRESIDENT AND BOARD OF TRUSTEES

**FROM:** David A. Hulseberg, Village Manager *dah*

**DATE :** August 23, 2010 **B of T:** September 2, 2010

**SUBJECT:** A Resolution Authorizing the Village President and Village Clerk to sign a Letter of Intent to participate in a county-wide emergency radio interoperability project with DuPage County and the Emergency Telephone System Board (ETSB).

**SUBMITTED BY:** Raymond J. Byrne, Chief of Police

**BACKGROUND/POLICY IMPLICATIONS:**

The DuPage County Emergency Telephone System Board (ETSB) has been researching a county-wide interoperable emergency radio system for several years. The proposed system would provide a significant upgrade in emergency capabilities for first responders and dispatch centers. It is a very comprehensive approach to emergency communications that is dependent on municipalities and fire protection districts participating. Funding for most equipment purchases and operating fees for the first four years are proposed to be paid for by the ETSB. Local governments will be responsible for costs after four years or for equipment that is not covered initially. The ETSB is asking for a letter of intent (non-binding) by September 7, 2010 to participate in the project so they can determine if enough users are interested to make the project viable.

**Fiscal Impact/Funding Source:** None

Review (as necessary):

|                        |            |
|------------------------|------------|
| Finance Director _____ | Date _____ |
| Village Manager _____  | Date _____ |

**NOTE:** All materials must be submitted to and approved by the Village Manager's Office by 12:00 noon, Wednesday, prior to the Agenda distribution.

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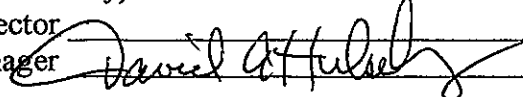
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Staff further recommends that this matter be referred to the Finance Committee for a final recommendation prior to the Village binding itself to said project.

**Fiscal Impact/Funding Source:** None

Review (as necessary):

|                  |                                                                                     |      |         |
|------------------|-------------------------------------------------------------------------------------|------|---------|
| Finance Director | _____                                                                               | Date | _____   |
| Village Manager  |  | Date | 8/26/10 |

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## LOMBARD POLICE DEPARTMENT



DATE: August 24, 2010

TO: David A. Hulseberg, AICP, ICMA-CM  
Village Manager

FROM: Raymond J. Byrne  
Chief of Police

**SUBJECT: DuPage County ETSB Radio Interoperability Project**

### Introduction

Since 2006, the DuPage County Emergency Telephone System Board (ETSB) has been researching the feasibility of a county-wide interoperable emergency radio network. In theory, this system would allow all DuPage County emergency response agencies (police, fire, EMS, sheriff) to communicate on a digital system, and perhaps more importantly, to communicate with each other. Communications interoperability has been a desired public safety goal since the terrorist attacks of September 11<sup>th</sup> and natural disasters like Hurricane Katrina exposed the weaknesses of first responders to talk to each other.

As you might imagine, this has proven to be a long and complex process involving technology, financing, intergovernmental cooperation, and federal grants. There are many stakeholders involved in this endeavor to include police departments, fire departments, fire protection districts, the DuPage County Sheriff's Department and the DuPage Mayors and Managers Association. It is a multi-million dollar project that is now reaching a critical point in terms of its moving forward. In order to be successful, the project will require a commitment from most public safety agencies in DuPage County. On the other hand, the more agencies that participate should help to keep costs down and increases the overall goal of true communications interoperability.

The ETSB is now requesting that municipalities and fire protection districts indicate their desire to participate in the radio interoperability project by signing a letter of intent. The letter is non-binding and subject to the approval of an actual intergovernmental agreement. However, based upon the number of letters of intent received, the ETSB will be able to make a decision about moving forward with equipment purchases and the intergovernmental agreement.

### Executive Highlights

In order to better understand the scope and purpose of the project, it would probably prove beneficial to provide information on some of the key components:

- Public safety agencies in DuPage County communicate on a variety of public safety bands (UHF, VHF, 700 or 800 MHz). Agencies on different bands cannot communicate with each other. This project would migrate all agencies onto a digital 700/800 MHz system within a statewide radio network known as STARCOM21. STARCOM21 is an existing statewide radio system that would be expanded to include all of DuPage County.
- The ETSB is proposing to pay for significant equipment upgrades for dispatch centers including dispatch consoles as well as additional towers to expand the STARCOM21 radio network. They would also pay for an initial purchase of portable radios for all first responders in the county (estimated to be approximately 2,700).
- STARCOM21 is a Motorola communications system that requires monthly airtime fees for radios. The ETSB will pay these airtime fees for the first four years the system is in operation.
- DuComm, the village's dispatching center, stands to be a significant benefactor under this proposal. DuComm has an infrastructure that is old and outdated. Under the interoperability project, DuComm would receive a new radio console system (almost \$1,750,000 in equipment).
- One of the lingering issues DuComm has been trying to address is the lack of an adequate back-up facility. A STARCOM21 system will improve overall back-up communications for DuComm and eliminate obstacles for further consolidation into DuComm or the creation of a second facility.
- The DuComm Chief's Operations Committee (police and fire) have endorsed the proposed interoperability radio system for DuComm. DuComm's Executive Director, Brian Tegtmeyer, fully supports the proposed project and will support it as a member of the ETSB. DuComm's ultimate participation in the project is subject to the approval of the DuComm Board of Directors.

### **Recommendation**

Interim Fire Chief Bill Balling and I recommend that the Village Board approve the Letter of Intent indicating our desire to be a part of the radio interoperability project at this time. This is a non-binding commitment that will allow the ETSB to make a determination as to what, if any, next steps are to be taken. There are still many financial aspects to be considered before signing any intergovernmental agreement. If an agreement and the financial aspects can be resolved, our community and the county stand to gain a superior, state of the art technology and communications system. It would represent a major upgrade in dispatching and first responder capabilities. There are a myriad of backup materials available for review on this project. If you should have any questions, or would like additional information, please do not hesitate to contact me.

R \_\_\_\_\_ 10 RESOLUTION

**A RESOLUTION AUTHORIZING THE VILLAGE PRESIDENT TO SIGN A LETTER OF INTENT TO PARTICIPATING IN AN INTERGOVERNMENTAL AGREEMENT WITH DUPAGE COUNTY AND THE EMERGENCY TELEPHONE SYSTEM BOARD FOR A COUNTY-WIDE INTEROPERABLE EMERGENCY RADIO SYSTEM**

WHEREAS, DuPage County, on behalf of its Emergency Telephone System Board (ETSB) has been researching a county-wide interoperable emergency radio dispatch system; and,

WHEREAS, DuPage County has made a significant monetary investment towards county-wide radio interoperability; and,

WHEREAS, DuPage County has asked all stakeholders to issue a Letter of Intent to participate in an intergovernmental agreement to participate in the project subject to any final intergovernmental agreement; and,

WHEREAS, the Corporate Authorities deem it to be in the best interest of the Village of Lombard to approve the Letter of Intent,

NOW, THEREFORE, BE IT RESOLVED BY THE PRESIDENT AND BOARD OF TRUSTEES OF THE VILLAGE OF LOMBARD, DU PAGE COUNTY, ILLINOIS as follows:

SECTION 1: That the Village President is hereby authorized to sign on behalf of the Village of Lombard the Letter of Intent as attached hereto.

SECTION 2: That the Village Clerk be and hereby is authorized to attest said Letter of Intent as attached hereto.

Adopted this \_\_\_\_\_ day of \_\_\_\_\_, 2010.

Ayes: \_\_\_\_\_

Nays: \_\_\_\_\_

Absent: \_\_\_\_\_

Approved this \_\_\_\_\_ day of \_\_\_\_\_, 2010.

Resolution No. \_\_\_\_\_

Page 2

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William J. Mueller  
Village President

ATTEST:

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Brigitte O'Brien  
Village Clerk

APPROVAL AS TO FORM:

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Thomas P. Bayer, Village Attorney

September 2, 2010

Patrick J. O'Shea, Chairman  
Emergency Telephone System Board of DuPage County  
421 N. County Farm Rd.  
Wheaton, IL 60187

Dear Chairman O'Shea:

In consideration of DuPage County's significant monetary investment towards county-wide radio interoperability, this letter of intent expresses our commitment to participating in an intergovernmental agreement with DuPage County on behalf of its Emergency Telephone System Board (ETSB) as part of the ETSB's implementation of a county-wide interoperable emergency radio dispatch system through the use of Motorola, Inc.'s STARCOM21 infrastructure. The Village of Lombard certifies that we will participate in the project with the understanding that any final intergovernmental agreement will provide that:

- 1.) The DuPage County ETSB will fund the purchase of the proposed interoperable emergency radio dispatch system utilizing surcharge funds at a level that also allows for the continued operation and maintenance of the 9-1-1 infrastructure;
- 2.) The Village of Lombard will be responsible for all costs not funded by ETSB, including additional equipment purchased by our agency, costs associated with the installation of mobile radio equipment and PSAP site preparation;
- 3.) The Village of Lombard will be responsible for contracting with Motorola, Inc. for a service agreement for the use of the Starcom21 radio network and understand that the ETSB will reimburse us for these costs for a period not to exceed (4) four years as set forth in the Agreement;
- 4.) The Village of Lombard will be required to comply with all Federal Communications Commission (FCC) rules regarding narrowbanding and the release of unused frequencies to the FCC's Regional Planning Council;
- 5.) The Village of Lombard will ensure that all equipment provided pursuant to the Agreement be assigned to only first responding personnel, i.e. sworn police officers, firefighters, and paramedics and used primarily for the purpose of responding to emergency calls to 9-1-1; and
- 6.) That DuPage County and the ETSB will not be responsible for any injuries related to or resulting from the Agreement other than through their own intentional torts.

The Village of Lombard further understands that any such agreement will recognize that in the event of a loss of funding for the ETSB, including the unavailability of funds from the 9-1-1 surcharge authorized by 50 ILCS 750/15.3 *et seq.*, we will be required to assume any remaining costs associated with the purchase of the equipment. In such an event, we understand that the agreement will provide for the transfer of the ownership of such equipment to us from the ETSB. The Village of Lombard further understands that this project cannot proceed without the



participation of a sufficient number of governmental entities in DuPage County and that the County will rely on this letter and the understandings contained herein in proceeding with the project and may enter into binding agreements with vendors in reliance on our participation in the project.

Sincerely,

William J. Mueller  
Village President

Attest:

Brigitte O'Brien  
Village Clerk

DUPAGE E.T.S.B. PROPOSED  
DIGITAL INTEROPERABLE RADIO  
SYSTEM - STARCOM21 & ITS  
IMPACT TO DU-COMM & OUR  
MEMBER AGENCIES



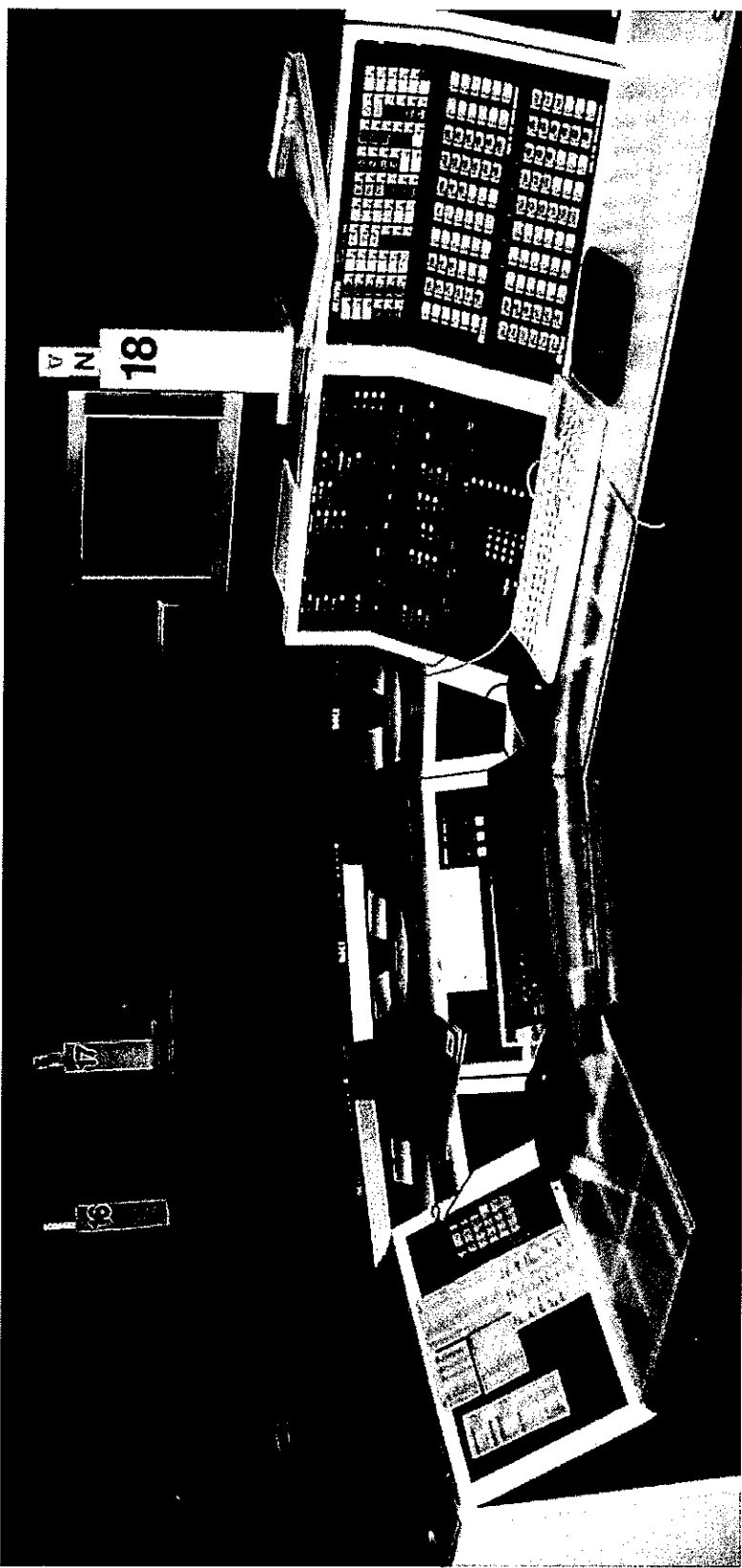
August 13<sup>th</sup>, 2010 – DU-COMM Chiefs Meeting

# Outline

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- Current DU-COMM Radio System
- System Overview
- Comparison of STARCOM21 verse DU-COMM system.
- DU-COMM Recommendations
- Determining DU-COMM Agency needs
- Financial Decisions
- Next Steps for DU-COMM

# Current DU-COMM Radio System



# DU-COMM RADIO SYSTEMS

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- DU-COMM Systems
  - All owned by DU-COMM and self maintained.
  - The majority of the infrastructure is old and outdated.
  - Not compliant with 2013 Narrowbanding.
- 6 Main Police UHF Channels
  - Channel 5, Channel 9, and UHF Tac Channels.
- 4 Main Fire VHF Channels
  - IFERN, IFERN2
- Additional Channels
  - Point to Point, IREACH, ISPERN, and UHF repeat of ISPERN and IFERN.

# POLICE

## 6 Main Dispatch

**Channel 1 West - 470.6875**

Bartlett (Bravo)  
Carol Stream (Charlie)  
Hanover Park (Yankee)

**Channel 3 West - 471.1375**

Glen Ellyn (Golf)  
Wheaton (Tango)

**Channel 7 West - 470.3125**

Warrenville (Delta)  
West Chicago (Zebra)  
Winfield (William)

**Channel 1 East - 470.3875**

Lombard (Lincoln)  
Villa Park (Victor)

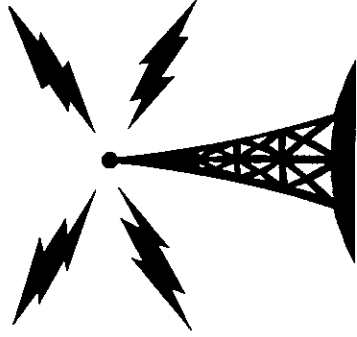
**Channel 3 East - 470.8875**

Elmhurst (Echo)  
Oakbrook Terrace (Ocean)

**Channel 1 North - 470.1875**

Roselle (Robert)  
Channel 5 Area Wide - 471.0125  
Channel 9 Area Wide - 476.4125  
IREACH - 155.055  
ISPERN - 154.475

Point-To-Point - 155.370



# FIRE

## 4 Main Dispatch

**Fire East - 154.4150**

Addison  
Elmhurst  
Lombard  
Oakbrook Terrace  
Villa Park  
York Center

**Fire North - 154.1750**

Carol Stream  
Glen Ellyn  
Glenside  
West Chicago  
Wheaton  
Winfield

**Fire South - 151.3850**

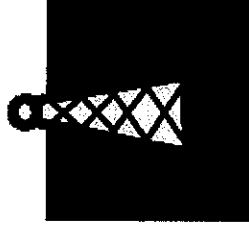
Lisle-Woodridge  
Warrenville

**Fire West - 154.3100**

Bartlett  
Hanover Park  
Roselle  
IFERN - 154.265  
Red Fireground - 153.830  
White Fireground - 154.280

# DU-COMM Radio Needs

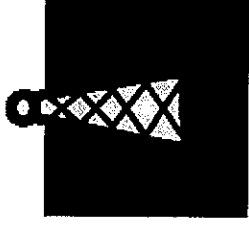
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- DU-COMM has to replace its aging radio infrastructure.
- Overall age of equipment
- Narrowband compliance
- Integrate equipment into newer radio console systems
- Cost Estimates
  - Police (6 Primary channels and 2 Secondary) \$2,000,000
  - Fire (4 Primary channels and 2 Secondary) \$1,500,000

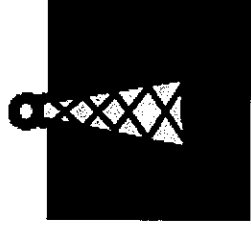
# DU-COMM Radio Needs

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- DU-COMM Police Agencies need new Portable radios.
- Currently use HT1000's
  - Over 10 years old
  - Most are not narrowband capable
- DU-COMM Fire Agencies need more reliable dispatch systems
- Fire NORTH and Fire WEST are simplex and have many issues in overall coverage and reliability.



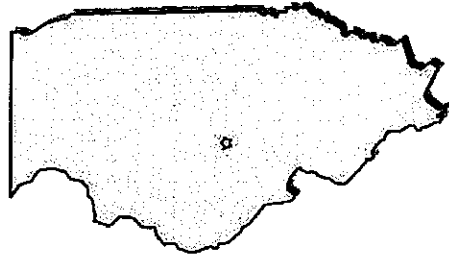


# DU-COMM Radio Needs

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- DU-COMM and its member agencies should have the interoperability with other agencies in DuPage County, metropolitan region, and the State.
- DU-COMM should have a radio solution that not only addresses the 2013 issues, but also looks further into the future.

# System Overview



**MOTOROLA**

# System Overview

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- ▣ In November of 2007 DuPage ETSB entered into a contract with DU-COMM for project management for a new 700-800 MHz county-wide interoperable radio system based on the needs of its Users.
- ▣ The Detailed Design Phase and Intergovernmental Agreement for this system progressed until November of 2009. At that time DuPage ETSB abandoned the design and build of a privately-owned DuPage County system when it established that the project was cost prohibitive reaching projected costs of 48 million dollars for infrastructure with personnel and maintenance costs estimated at approximately 2 million dollars annually.

# System Overview - Continued

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- ❑ The Radio Project Steering Committee was charged with review and comment on the technical viability of the Motorola STARCOMM 21 ·1 2dB Radio System. The Steering Committee engaged in a rigorous review process to evaluate the technical feasibility of the Motorola STARCOM21 ·1 2dB proposal.
- ❑ The Steering Committee determined the STARCOMM21 System appeared to meet the needs of DuPage ETSB Public Safety Users with a plan to use the current eight channel, four site DuPage STARCOM21 simulcast cell and an additional four sites to complete the necessary coverage and grade of service desired by the Users. With that determination, DuPage ETSB staff and radio project managers, along with Motorola, began to develop this proposal for the Users.

# System Overview - Continued

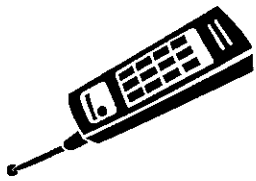
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- ❑ Careful consideration was given to the Fire Service concerns addressed in their White Paper, a copy of which is included in the project binder. To that end, a paging and toning solution was developed and proposed by the Radio Steering Committee Fire Subcommittee. Information on that proposal is also included in the binder.
- ❑ Additional consideration was given to the DuPage Mayors and Managers' concerns outlined in their letter to DuPage ETSB. We believe the Interoperable Radio Project Proposal, contained in this binder, meets these concerns.

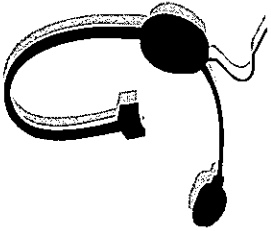
# System Overview – How it will work

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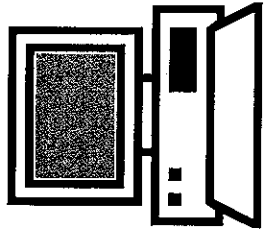
- The ETSB STARCOM21 proposal is intended as a radio dispatch system. Its purpose is to ensure that Telecommunicators have a reliable way to dispatch public safety responders to citizens who call 9-1-1.
- The following slides show how the system will be set up and utilized from a DU-COMM point of view.



9-1-1 call is placed



9-1-1 call is answered by a Telecommunicator



Telecommunicator dispatches call on new MCC7500 radio console



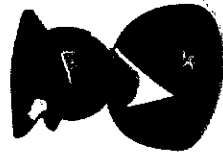
Police Officer uses a Dual Band 700/800 / UHF APX7000 Radio



Radio transmission is received by police officer on a digital "talkgroup" which has the same agencies on it as DU-COMM 's UHF networks



# Police Operations



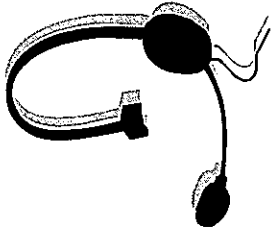
- 
- Pro's of STARCOM21
  - Interoperability, local county, and state.
  - Narrowband and P25 compliant infrastructure
  - New portable units
  - Encryption
  - Wide area talk groups
  - Dual Band UHF radios
- Con's of STARCOM21
  - System is not owned or under direct control of DU-COMM
  - Replacement costs of subscriber units
  - Airtime costs beyond ETSB commitments
  - Work within larger statewide governance structure



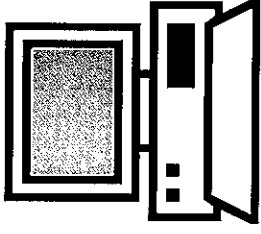
# FIRE



9-1-1 call is placed



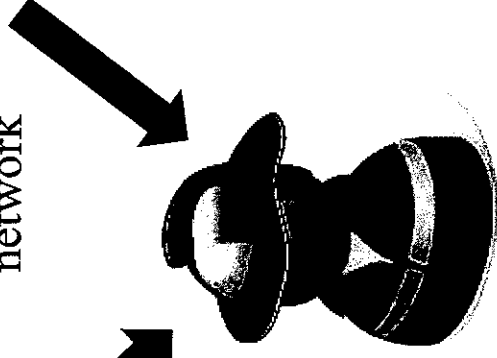
9-1-1 call is answered by a Telecommunicator



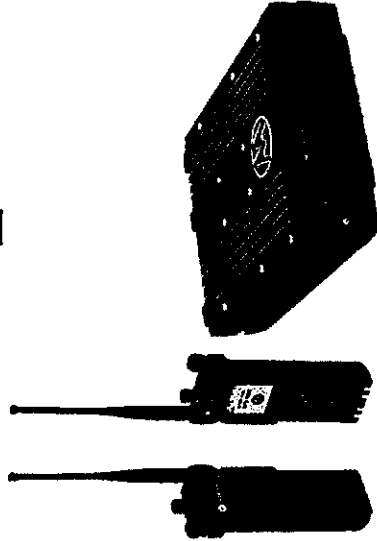
Telecommunicator dispatches call on new MCC7500 radio console



Through a "multicast" patch, tones are also activated on the VHF network

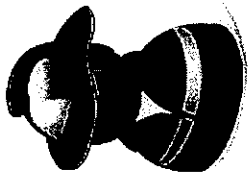


Radio transmission is received by Fire personnel on a digital "talkgroup" which has the same agencies on it as DU-COMM 's VHF networks.



Fire personnel use a Dual Band 700/800 / VHF APX7000 Portable Radio or a APX 7500 Dual Band Mobile Radio

# Fire Operations



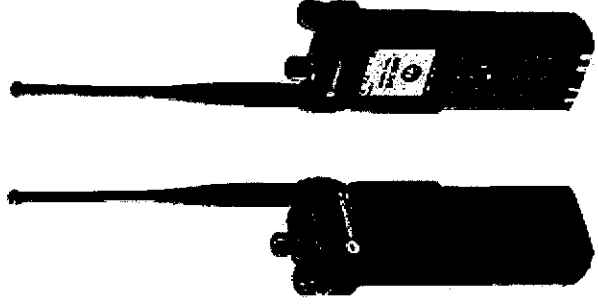
- Pro's of STARCOM21
  - Con's of STARCOM21
- Interoperability, local county, and state. (Police Fire and PW)
- Meets White Paper
  - Narrowband and P25 compliant infrastructure
  - Dual Band VHF radios
  - Dual System (digital and analog paging)
- Increased coverage and wide area talk groups (Fire inspectors)
- Dual Band VHF radios
- DU-COMM
  - Replacement costs of subscriber units
  - Airtime costs beyond ETSB commitments
  - Work within larger statewide governance structure

# STARCOM21's Impact on DU-COMM

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- ❑ ETSB purchase includes new radio console system for DU-COMM (almost \$1,750,000.00 in equipment).
- ❑ Solves the 2013 narrowbanding issues for main dispatch channels. Fire paging networks and ancillary channels (IFERN, IREACH, ISPERN) will still need to be replaced.
- ❑ Pays for Fire network upgrade and replacement (\$954,000 in reimbursement from ETSB)
- ❑ Improves overall back-up communications for DU-COMM.
- ❑ Elimination of obstacles for further consolidation into DU-COMM or the creation of a second center.

# Comparison of STARCOM verse DU-COMM Alternate Plan



# DU-COMM Alternate Plan

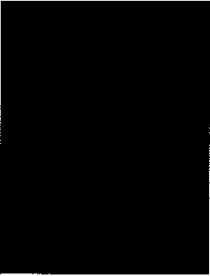
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- DU-COMM has developed an draft alternate plan (plan B) for the replacement of current radio infrastructure.
- Replacement of all radio networks with narrow band analog radio equipment. Following the Fire NORTH upgrade (in progress) the likely equipment would be Tait Communications.
- Six (6) Police UHF networks, and two (2) wide area
- Four (4) Fire VHF networks, and two (2) wide area
- Agency's would retain resposibility for portable radio purchase, maintenance, and replacement.

# STARCOM21 – Alternate Plan

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- STARCOM21
  - County wide communications
  - Enhanced coverage
  - Dual Band Radio's
  - Talk Group flexibility
    - Wide area
    - Storm Mode planning
    - Special events
    - Tactical/Investigative
    - Fire Inspectors/Admin
  - Ability to communicate on statewide channels
  - Increases DU-COMM's back-up
- DU-COMM Alternate Plan
  - Coverage limited to actual radio network
  - Only talk on one band. (VHF, UHF, or 800)
  - Only have dispatch channels and area channels. No ability to add other channels without adding frequencies.
  - Would be self owned and maintained at DU-COMM's control and expense.



# DU-COMM Agency Equipment Recommendations



# Recommendations

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## □ DU-COMM

- Recommend all members of DU-COMM sign one user agreement with Motorola.
- Individual agency's costs will be billed by DU-COMM to the agencies as part of our quarterly billing.
- Work with the ETSB and Motorola for DU-COMM to provide Tier 1 support for portable and mobile radios to include:
  - Coordination of radio ID's and issuance
  - Maintaining larger cache of spare radios
  - Have cache of radios for outside agencies (COMM-1)
  - Stock parts and accessories for standard re-bill to agencies

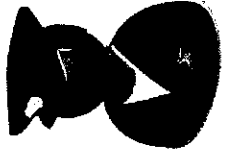


# Recommendations

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- DU-COMM (continued)
  - Limit different types of subscriber units
    - APX 7000 Dual Band UHF (Police portable)
    - APX 7000 Dual Band VHF (Fire Portable)
    - APX 7500 Dual Band VHF (Police or Fire Mobile)
  - Lower tier radio for civilian ??? Will not have back-up system capabilities

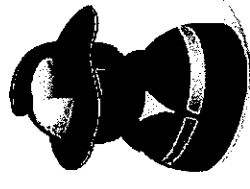
# Recommendations



- 
- Police
    - Dual Band UHF Portable Radios
      - Additional cost, but what was budgeted in ETSB Binder
      - Allows DU-COMM to narrowband UHF Channel 5 and possibly expand Channel 9 to allow for “back-up” communications in event of STARCOM21 failure
    - If mobile radio is wanted (Command or Communications vehicles), use a VHF mobile (ISPERN, IREACH, or other disciplines). Also Dual Head mobiles available.
    - Utilize a common portable programming.

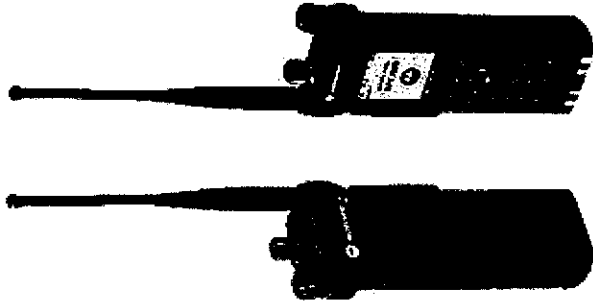
# Recommendations

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- Fire
  - Dual Band VHF Portable Radios
  - Mobile radios should also be Dual Band VHF, and consider Dual Head for Chief, Command or communications vehicles.
  - Based on overall radio count issue, maintain VHF legacy portables.

# DU-COMM Agency Needs



# Establish Agency Needs

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- Police
- Personally issued Portables?
- Purchase additional portables for non-sworn personnel  
or for numbers not included in the ETSB/PSIC totals?
  - Cost of radios
  - Cost of monthly service agreement (immediate, not just after 4 years)
  - Additional equipment, mobiles, accessories, BDA's

| POLICE RADIO COUNTS |                  | Sworn      |                    |            | Total      |            | PSIC/ETSB  |                      | RADIO'S             |  | One Time Purchase |  | Annual Service |  |
|---------------------|------------------|------------|--------------------|------------|------------|------------|------------|----------------------|---------------------|--|-------------------|--|----------------|--|
|                     |                  | Officers   | Civilian Personnel | Total      | RADIOS     | NEEDED     | Difference | Radio Costs          | Agreement           |  |                   |  |                |  |
| 1                   | Bartlett         | 56         | 5                  | 61         | 54         | 61         | 7          | \$ 42,770.00         | \$ 3,276.00         |  |                   |  |                |  |
| 2                   | Carol Stream     | 64         | 7                  | 71         | 68         | 71         | 3          | \$ 18,330.00         | \$ 1,404.00         |  |                   |  |                |  |
| 3                   | Elmhurst         | 70         |                    | 70         | 70         | 70         | 0          | \$ -                 | \$ -                |  |                   |  |                |  |
| 4                   | Glen Ellyn       | 40         | 3                  | 43         | 43         | 43         | 0          | \$ -                 | \$ -                |  |                   |  |                |  |
| 5                   | Hanover Park     | 57         | 5                  | 62         | 52         | 62         | 10         | \$ 61,100.00         | \$ 4,680.00         |  |                   |  |                |  |
| 6                   | Lombard          | 73         | 6                  | 79         | 73         | 79         | 6          | \$ 36,660.00         | \$ 2,808.00         |  |                   |  |                |  |
| 7                   | Oakbrook Terrace | 21         | 0                  | 21         | 22         | 21         | -1         |                      |                     |  |                   |  |                |  |
| 8                   | Roselle          | 36         | 2                  | 38         | 36         | 38         | 2          | \$ 12,220.00         | \$ 936.00           |  |                   |  |                |  |
| 9                   | Villa Park       | 43         | 4                  | 47         | 42         | 47         | 5          | \$ 30,550.00         | \$ 2,340.00         |  |                   |  |                |  |
| 10                  | Warrenville      | 32         | 2                  | 34         | 31         | 34         | 3          | \$ 18,330.00         | \$ 1,404.00         |  |                   |  |                |  |
| 11                  | West Chicago     | 50         | 3                  | 53         | 52         | 53         | 1          | \$ 6,110.00          | \$ 468.00           |  |                   |  |                |  |
| 12                  | Wheaton          | 66         | 4                  | 70         | 70         | 70         | 0          | \$ -                 | \$ -                |  |                   |  |                |  |
| 13                  | Winfield         | 20         | 0                  | 20         | 21         | 20         | -1         |                      |                     |  |                   |  |                |  |
| <b>TOTAL POLICE</b> |                  | <b>628</b> | <b>41</b>          | <b>669</b> | <b>634</b> | <b>669</b> | <b>35</b>  | <b>\$ 226,070.00</b> | <b>\$ 17,316.00</b> |  |                   |  |                |  |



# Establish Agency Needs

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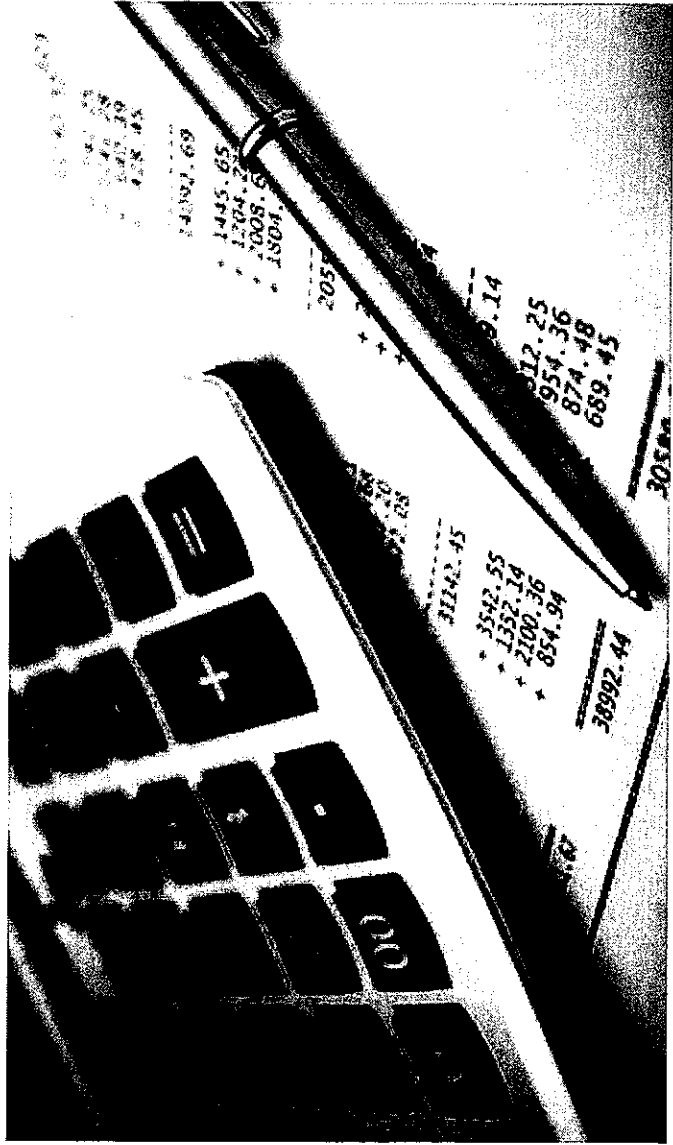
- Fire
  - Mobile verse portable for apparatus and duty personnel
    - Apparatus Headsets
    - Legacy Portable use
    - Fire Ground Communications
  - Additional radios needed to be purchased
    - Fire Inspectors to utilize new talk groups?
  - Additional costs and equipment
    - Dual Heads, Command Vehicles, BDA's

| FIRE RADIO COUNTS |                  | Mobile   |            | Portable   |            | Total      |            | PSIC/ETSB<br>RADIOS |            | RADIO'S<br>NEEDED |          | Difference |           | One Time Purchase<br>Radio Costs |           | Annual<br>Service Agreement |          |
|-------------------|------------------|----------|------------|------------|------------|------------|------------|---------------------|------------|-------------------|----------|------------|-----------|----------------------------------|-----------|-----------------------------|----------|
|                   |                  |          |            |            |            |            |            |                     |            |                   |          |            |           |                                  |           |                             |          |
| 1                 | Addison          | 0        | 52         | 52         | 52         | 52         | 52         | 52                  | 52         | 52                | 0        | 0          | \$        | -                                | \$        | -                           | -        |
| 2                 | Bartlett         | 0        | 50         | 50         | 50         | 50         | 50         | 50                  | 50         | 50                | 0        | 0          | \$        | -                                | \$        | -                           | -        |
| 3                 | Carol Stream     | 0        | 50         | 50         | 50         | 50         | 50         | 50                  | 50         | 50                | 0        | 0          | \$        | -                                | \$        | -                           | -        |
| 4                 | Elmhurst         | 0        | 38         | 38         | 38         | 38         | 38         | 38                  | 38         | 38                | 0        | 0          | \$        | -                                | \$        | -                           | -        |
| 5                 | Glen Ellyn       | 0        | 50         | 50         | 50         | 50         | 50         | 50                  | 50         | 50                | 0        | 0          | \$        | -                                | \$        | -                           | -        |
| 6                 | Glenside         | 0        | 30         | 30         | 30         | 30         | 30         | 30                  | 30         | 30                | 0        | 0          | \$        | -                                | \$        | -                           | -        |
| 7                 | Hanover Park     | 0        | 40         | 40         | 40         | 40         | 40         | 40                  | 40         | 40                | 0        | 0          | \$        | -                                | \$        | -                           | -        |
| 8                 | Liste-Woodridge  | 0        | 80         | 80         | 80         | 80         | 80         | 80                  | 80         | 80                | 0        | 0          | \$        | -                                | \$        | -                           | -        |
| 9                 | Lombard          | 0        | 48         | 48         | 48         | 48         | 48         | 48                  | 48         | 48                | 0        | 0          | \$        | -                                | \$        | -                           | -        |
| 10                | Oakbrook Terrace | 0        | 17         | 17         | 17         | 17         | 17         | 17                  | 17         | 17                | 0        | 0          | \$        | -                                | \$        | -                           | -        |
| 11                | Roselle          | 0        | 28         | 28         | 28         | 28         | 28         | 28                  | 28         | 28                | 0        | 0          | \$        | -                                | \$        | -                           | -        |
| 12                | Villia Park      | 0        | 34         | 34         | 34         | 34         | 34         | 34                  | 34         | 34                | 0        | 0          | \$        | -                                | \$        | -                           | -        |
| 13                | Warrenville      | 0        | 38         | 38         | 38         | 38         | 38         | 38                  | 38         | 38                | 0        | 0          | \$        | -                                | \$        | -                           | -        |
| 14                | West Chicago     | 0        | 44         | 44         | 44         | 44         | 44         | 44                  | 44         | 44                | 0        | 0          | \$        | -                                | \$        | -                           | -        |
| 15                | Wheaton          | 0        | 46         | 46         | 46         | 46         | 46         | 46                  | 46         | 46                | 0        | 0          | \$        | -                                | \$        | -                           | -        |
| 16                | Winfield         | 0        | 28         | 28         | 28         | 28         | 28         | 28                  | 28         | 28                | 0        | 0          | \$        | -                                | \$        | -                           | -        |
| 17                | York Center      | 0        | 30         | 30         | 30         | 30         | 30         | 30                  | 30         | 30                | 0        | 0          | \$        | -                                | \$        | -                           | -        |
| <b>TOTAL FIRE</b> |                  | <b>0</b> | <b>703</b> | <b>703</b> | <b>703</b> | <b>703</b> | <b>703</b> | <b>703</b>          | <b>703</b> | <b>703</b>        | <b>0</b> | <b>0</b>   | <b>\$</b> | <b>-</b>                         | <b>\$</b> | <b>-</b>                    | <b>-</b> |





# Financial Overview



# Financial Overview

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- Assumptions Made:
  - Numbers are based upon PSIC/ETSB radio counts at this time. Additional radio needs will increase agency's total costs.
  - DU-COMM used a not-to-exceed cost of \$39.00 a month for STARCOM21 user agreement monthly cost. See email from ETSB Coordinator Linda Zerwin for discussion on this number.
  - Comparison to DU-COMM alternate plan
  - Cost savings by eliminating police UHF primary networks.

# FINANCIAL BENEFITS TO DU-COMM

| EQUIPMENT                                            | QUANTITY | VALUE     | TOTAL VALUE |
|------------------------------------------------------|----------|-----------|-------------|
| Consoles                                             | 23       | \$71,671  | \$1,648,439 |
| Control Stations                                     | 10       | \$9,683   | \$96,834    |
| Dual-band Radios                                     | 1337     | \$6,063   | \$8,106,231 |
| <b>Fire Paging Solution (one-time reimbursement)</b> |          |           |             |
| North                                                | 1        | \$220,532 | \$220,532   |
| East                                                 | 1        | \$230,192 | \$230,192   |
| South                                                | 1        | \$230,192 | \$230,192   |
| West                                                 | 1        | \$273,038 | \$273,038   |
| Total Fire Paging                                    |          |           | \$953,954   |

**Total Capital Benefits** **\$10,805,458**

|                     |   |               |                 |
|---------------------|---|---------------|-----------------|
| Service Agreement   |   |               |                 |
| Year 1 (\$30)       | 1 | \$ 412,920.00 | \$ 412,920.00   |
| Year 2-4 (NTE \$39) | 3 | \$ 536,796.00 | \$ 1,610,388.00 |

**Total Operational Benefits** **\$ 2,023,308.00**

**TOTAL BENEFITS (Years 1-4 plus equipment)** **\$ 12,828,765.98**

# Ten (10) Year Costs to DU-COMM

| Annual Maintenance and User Agreements Cost | 1                  | 2               | 3                | 4                | 5                | 6                | 7                | 8                | 9                | 10               |
|---------------------------------------------|--------------------|-----------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|                                             | FYE 11/12          | FYE 12/13       | FYE 13/14        | FYE 14/15        | FYE 15/16        | FYE 16/17        | FYE 17/18        | FYE 18/19        | FYE 19/20        | FYE 20/21        |
| 23 Consoles, 10 Control Station             | \$0                | \$72,726        | \$74,218         | \$75,754         | \$77,337         | \$78,967         | \$80,941         | \$82,965         | \$85,039         | \$87,165         |
| APX User Agreement                          | \$0                | \$0             | \$0              | \$0              | \$536,796        | \$536,796        | \$536,796        | \$536,796        | \$536,796        | \$552,900        |
| <b>Total Operational Costs</b>              | <b>\$0</b>         | <b>\$72,726</b> | <b>\$74,218</b>  | <b>\$75,754</b>  | <b>\$614,133</b> | <b>\$615,763</b> | <b>\$617,737</b> | <b>\$619,761</b> | <b>\$621,835</b> | <b>\$640,065</b> |
| <b>TEN (10) Year Operational Costs</b>      | <b>\$3,951,992</b> |                 |                  |                  |                  |                  |                  |                  |                  |                  |
| <b>Savings</b>                              |                    |                 |                  |                  |                  |                  |                  |                  |                  |                  |
| Phone Line Reduction                        | FYE 11/12          | FYE 12/13       | FYE 13/14        | FYE 14/15        | FYE 15/16        | FYE 16/17        | FYE 17/18        | FYE 18/19        | FYE 19/20        | FYE 20/21        |
| 1 East                                      | \$0                | \$0             | \$23,968         | \$24,687         | \$25,428         | \$26,191         | \$26,976         | \$27,786         | \$28,619         | \$29,478         |
| 3 East                                      | \$0                | \$0             | \$23,491         | \$24,195         | \$24,921         | \$25,669         | \$26,439         | \$27,232         | \$28,049         | \$28,890         |
| 1 West                                      | \$0                | \$0             | \$18,570         | \$19,127         | \$19,700         | \$20,291         | \$20,900         | \$21,527         | \$22,173         | \$22,838         |
| 3 West                                      | \$0                | \$0             | \$16,712         | \$17,214         | \$17,730         | \$18,262         | \$18,810         | \$19,374         | \$19,955         | \$20,554         |
| 7 West                                      | \$0                | \$0             | \$22,896         | \$23,583         | \$24,291         | \$25,019         | \$25,770         | \$26,543         | \$27,339         | \$28,159         |
| 1 North                                     | 0                  | 0               | \$5,710          | \$5,881          | \$6,058          | \$6,239          | \$6,427          | \$6,619          | \$6,818          | \$7,023          |
| Fire (Savings unknown)                      |                    |                 |                  |                  |                  |                  |                  |                  |                  |                  |
| <b>Total Savings</b>                        | <b>\$0</b>         | <b>\$0</b>      | <b>\$111,346</b> | <b>\$114,687</b> | <b>\$118,127</b> | <b>\$121,671</b> | <b>\$125,321</b> | <b>\$129,081</b> | <b>\$132,953</b> | <b>\$136,942</b> |
| <b>Net TEN (10) Year Costs</b>              | <b>\$2,961,862</b> |                 |                  |                  |                  |                  |                  |                  |                  |                  |

# DU-COMM Alternate Costs

| <b>FIRE DISPATCH</b>         | <b>NUMBER</b> | <b>COST</b> | <b>TOTAL COST</b>  |
|------------------------------|---------------|-------------|--------------------|
| Fire NORTH**                 | 1             | \$250,000   | \$250,000          |
| Fire EAST                    | 1             | \$250,000   | \$250,000          |
| Fire SOUTH                   | 1             | \$250,000   | \$250,000          |
| Fire WEST                    | 1             | \$250,000   | \$250,000          |
| <b>Subtotal</b>              |               |             | <b>\$1,000,000</b> |
| <b>POLICE DISPATCH</b>       | <b>NUMBER</b> | <b>COST</b> | <b>TOTAL COST</b>  |
| 1 WEST                       | 1             | \$250,000   | \$250,000          |
| 3 WEST                       | 1             | \$250,000   | \$250,000          |
| 7 WEST                       | 1             | \$250,000   | \$250,000          |
| 1 EAST                       | 1             | \$250,000   | \$250,000          |
| 3 EAST                       | 1             | \$250,000   | \$250,000          |
| 1 NORTH                      | 1             | \$250,000   | \$250,000          |
| <b>Subtotal</b>              |               |             | <b>\$1,500,000</b> |
| <b>OTHER EQUIPMENT</b>       | <b>NUMBER</b> | <b>COST</b> | <b>TOTAL COST</b>  |
| Portable Radios              | 1337          | \$1,500     | \$2,005,500        |
| Radio Consoles               | 23            | \$50,000    | \$1,150,000        |
| <b>Subtotal</b>              |               |             | <b>\$3,155,500</b> |
| <b>TOTAL ALTERNATE COSTS</b> |               |             | <b>\$5,655,500</b> |

# DU-COMM Alternate

## Monthly Radio Costs- Equivalent

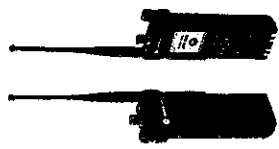
| FIRE DISPATCH                   |                                                        | New Infrastructure EQUIPMENT |                    | # of Subscribers   | Subscriber | Cost of        | # of     | CAD Activity | MONTHLY Cost | MONTHLY Cost |
|---------------------------------|--------------------------------------------------------|------------------------------|--------------------|--------------------|------------|----------------|----------|--------------|--------------|--------------|
|                                 |                                                        | Units                        | Units              | Units              | Units      | Circuits       | Agencies | 2009         | PER RADIO    | CAD Activity |
| Fire NORTH**                    | \$2,083.33                                             | 248                          | \$3,100            | \$1,552.25         | 6          | 18,995         |          | \$27.16      | \$0.35       |              |
| Fire EAST                       | \$2,083.33                                             | 219                          | \$2,738            | \$2,720.85         | 6          | 18,936         |          | \$34.44      | \$0.40       |              |
| Fire SOUTH                      | \$2,083.33                                             | 118                          | \$1,475            | \$1,651.95         | 2          | 7,125          |          | \$44.15      | \$0.73       |              |
| Fire WEST                       | \$2,083.33                                             | 118                          | \$1,475            | \$1,535.83         | 3          | 8,447          |          | \$43.17      | \$0.60       |              |
| <b>Subtotal</b>                 | <b>\$8,333.33</b>                                      | <b>703</b>                   | <b>\$8,787.50</b>  | <b>\$7,460.88</b>  | <b>17</b>  | <b>53,503</b>  |          |              |              |              |
| POLICE DISPATCH                 |                                                        | New Infrastructure EQUIPMENT |                    | # of Subscribers   | Subscriber | Cost of        | # of     | CAD Activity | MONTHLY Cost | MONTHLY Cost |
|                                 |                                                        | Units                        | Units              | Units              | Units      | Circuits       | Agencies | 2009         | PER RADIO    | CAD Activity |
| 1 WEST                          | \$2,083.33                                             | 174                          | \$2,175            | \$1,416.15         | 3          | 125,674        |          | \$82.61      | \$0.05       |              |
| 3 WEST                          | \$2,083.33                                             | 113                          | \$1,413            | \$1,274.50         | 2          | 100,188        |          | \$42.22      | \$0.05       |              |
| 7 WEST                          | \$2,083.33                                             | 104                          | \$1,300            | \$1,746.10         | 3          | 69,814         |          | \$49.32      | \$0.07       |              |
| 1 EAST                          | \$2,083.33                                             | 115                          | \$1,438            | \$1,827.85         | 2          | 67,489         |          | \$46.51      | \$0.08       |              |
| 3 EAST                          | \$2,083.33                                             | 92                           | \$1,150            | \$1,791.43         | 2          | 59,922         |          | \$54.62      | \$0.08       |              |
| 1 NORTH                         | \$2,083.33                                             | 36                           | \$450              | \$435.45           | 1          | 21,028         |          | \$82.47      | \$0.14       |              |
| <b>Subtotal</b>                 | <b>\$12,500.00</b>                                     | <b>634</b>                   | <b>\$7,925.00</b>  | <b>\$8,491.48</b>  | <b>13</b>  | <b>444,115</b> |          |              |              |              |
| <b>POLICE &amp; FIRE Totals</b> | <b>\$20,833.33</b>                                     | <b>1337</b>                  | <b>\$16,712.50</b> | <b>\$15,952.36</b> | <b>30</b>  | <b>497,618</b> |          |              |              |              |
| <b>\$250,000.00</b>             | <b>Average Annual Equipment over 10 Years</b>          |                              |                    |                    |            |                |          |              |              |              |
| <b>\$191,428.32</b>             | <b>Annual Circuit Cost</b>                             |                              |                    |                    |            |                |          |              |              |              |
| <b>\$441,428.32</b>             | <b>TOTAL ANNUAL COST</b>                               |                              |                    |                    |            |                |          |              |              |              |
|                                 | <b>Average Monthly "Airtime" Cost per Radio</b>        |                              |                    |                    |            |                |          |              |              |              |
|                                 | <b>Average Monthly "Airtime" Cost per CAD Activity</b> |                              |                    |                    |            |                |          |              |              |              |
|                                 | <b>\$45.67</b>                                         |                              |                    |                    |            |                |          |              |              |              |
|                                 | <b>\$0.26</b>                                          |                              |                    |                    |            |                |          |              |              |              |

DUPAGE E.T.S.B. PROPOSED  
DIGITAL INTEROPERABLE RADIO  
SYSTEM - STARCOM21

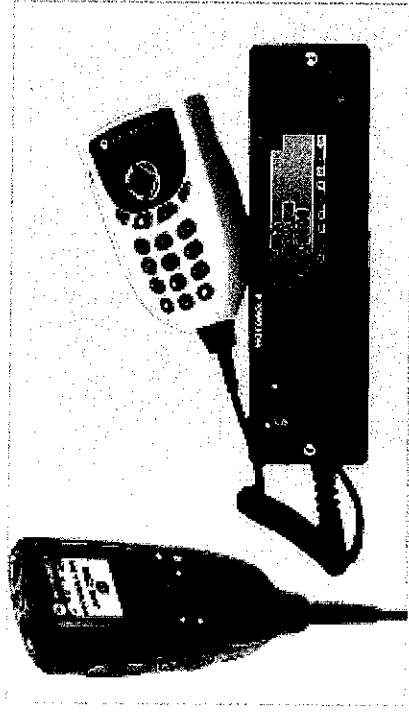


# Outline

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- DU-COMM and DuPage ETSB Overview
- History
- STARCOM21 System
- Comparison of STARCOM21 verses DU-COMM  
alternate system.
- Financial overview
- Next steps for DU-COMM
- Next steps for Villa Park
- Questions





# What is DU-COMM

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- ❑ DU-COMM is a unit of local government formed under the Intergovernmental Cooperation Act (5 ILCS 220) by the member municipalities and fire districts.
- ❑ DU-COMM is a PSAP
- ❑ Public Safety Answering Point
- ❑ Not a part of the County, but is an independent PSAP that operates within the DuPage Emergency Telephone System
- ❑ DU-COMM is the largest consolidated 911 center in Illinois.

# DuPage ETSB

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- The DuPage County ETSB is formed under the Emergency Telephone System Act (50 ILCS 750).
- It represents all Public Safety agencies in DuPage County (Except Naperville and Burr Ridge)
- ETSB Collects 9-1-1 Surcharge
  - \$0.50 per landline phone (by local referendum) a month.
  - \$0.75 per wireless phone (by State law, ETSB receives \$0.49 of the fee) a month.
- Board consists of eight (8) voting members and two (2) non-voting (Secretary and Treasurer).

# DuPage ETSB Voting Board

## Members

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DuPage County Board

Patrick O'Shea, Chairman

DuPage Chiefs of Police

Brad Bloom, Hinsdale

DuPage County

**OHSEM**

DuPage Fire Chiefs

Jim MacArthur, Itasca

George Detalla

**DU-COMM**

Public Member

Brian Tegtmeyer

Jim Raisins

DuPage Mayors &

DuPage County Sheriff

**Mangers Conference**

Benjamin Mott

David Williams, Itasca

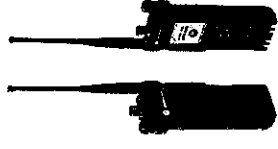
# DuPage ETSB Digital Interoperable Radio System – STARCOM21



- History of project
- Major events on a national and local level have identified communications as an area needing improvement.
  - September 11, 2001, Hurricane Katrina (2005)
- F.C.C. has required public safety radios to be “narrowbanded” by 2013
  - Narrowbanding is similar to the issue of the digital TV conversion. The need to get more bandwidth in the current frequencies.
  - Digital TV conversion, created a 700 MHz spectrum for Public safety.

# Digital Radio Project

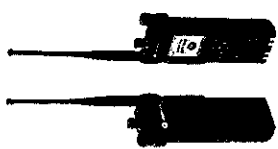
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- History of Project – continued...
- DuPage Emergency Telephone System Board (ETSB) identified the need for a county-wide radio system in 2006.
- After local Public Safety officials met, a private system was contracted between the ETSB and Motorola in September of 2006.
- The system was in design for several years. During that time changes were made to the private system which greatly increased the cost.

# Digital Radio Project

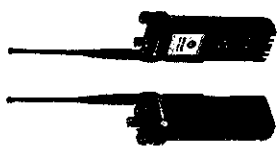
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- History of Project – continued..
- In 2009 the ETSB identified the STARCOM21 statewide system of as an alternative solution with lower costs.
- Agencies in DuPage County have already applied for and received 2.3 million dollars from a PSIC grant towards radios for this system.
- ETSB Radio Sub-Committee (representatives from police and fire) reviewed and tested the STARCOM21 and recommended it to the ETSB.

# STARCOM21 System

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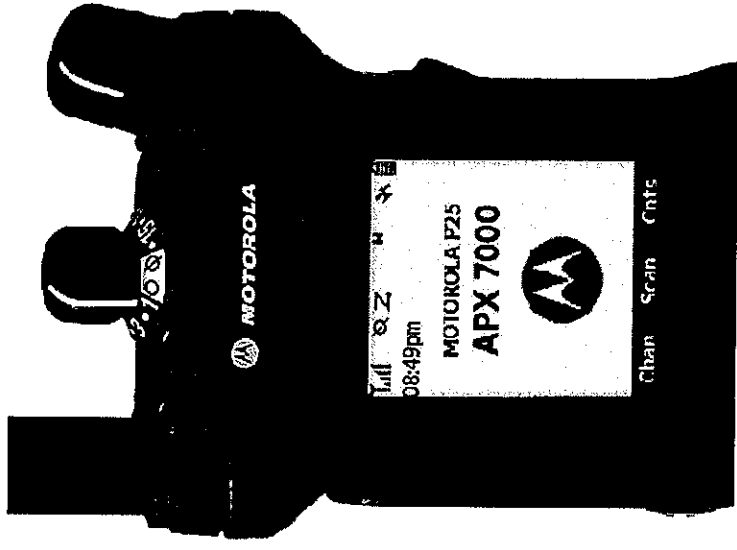
- ❑ STARCOM21 is a public private partnership between Motorola and the system users.
- ❑ System is statewide system with areas that have enhanced coverage areas for local public safety use.
- ❑ Digital Radio solution that is narrowband and meets open standards of public safety communications (P25).
- ❑ Enhanced grant eligibility.
- ❑ Advanced features/functionality.

# STARCOM21 System

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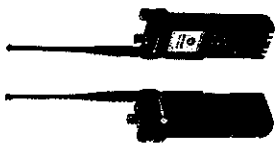


- New Digital Radios have enhanced features
- Dual Band capabilities (700/800 & VHF or UHF)
- Digital Signaling
- Status Messaging
- Push-to-Talk ID (PTT-ID)
- Emergency Call/Alarm
- GPS/AVL
- Over The Air Programming
- Public Safety Encryption





# STARCOM21 Participants



## State Agencies

Illinois State Police  
IDOT  
Toll Authority  
Secretary Of State  
Argonne Labs  
Corrections  
Commerce Police  
Natural Resources  
IEMA  
FBI – Springfield  
ISP Statewide Task Forces (30 total)  
Illinois Terrorism Task Force (>1500 agencies)  
Department of Public Health

## Non-Governmental Agencies

Ameren Energy

## County/Local Agencies

St. Clair County  
McLean County  
Ogle County  
Madison County  
McHenry County  
Henry County  
Prairie Shield (PSIC)  
Bond County (PSIC)  
City of Glen Carbon  
Macon County/Decatur (PSIC)  
City of Belvidere  
Sangamon County/Springfield (PSIC)  
Boone County  
DuPage Forest Police  
City of Rockford  
Lee County  
Village of Plainfield Police  
DuPage Water Commission  
Champaign – Urbana Public Health  
Clinton County Public Health  
Wabash County E911  
Stephenson County/City of Freeport  
Cook County  
Village of Romeoville

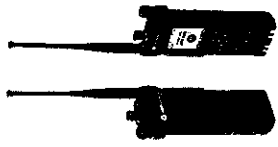
# STARCOM21's Impact on DU-COMM

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- Provides DU-COMM with a new radio system that is interoperable on a local, regional, and state level.
- Meets the 2013 narrowbanding deadline and is compliant with new radio standards (P25).
- Replaces aging radio infrastructure.
- Improves the backup abilities of DU-COMM by allowing dispatch to be performed at any County 9-1-1 center for DU-COMM agencies.
- Eliminates barriers to further consolidation into DU-COMM. Further consolidation reduces members costs.

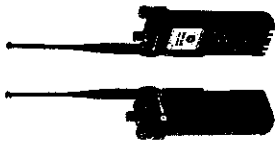
# DU-COMM Alternate Plan

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- DU-COMM has developed a draft alternate plan for the replacement of current radio infrastructure.
- Replacement of all radio networks with narrowband analog radio equipment.
  - Six (6) Police UHF networks, and two (2) wide area
  - Four (4) Fire VHF networks, and two (2) wide area
- Agency's would retain responsibility for portable radio purchase, maintenance, and replacement.

# STARCOM21 – DU-COMM



## Alternate Plan

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- STARCOM21
  - County-wide communications.
  - Enhanced coverage.
  - Dual band radio's.
  - Talk Group flexibility.
    - Wide area
    - Storm mode planning
    - Special events
    - Tactical/Investigative
    - Fire Inspectors/Admin
  - Ability to communicate on statewide channels.
  - Increases DU-COMM's backup capabilities.
- DU-COMM Alternate Plan
  - Coverage limited to actual radio network
  - Only talk on one band (VHF, UHF, or 800)
  - Only have dispatch channels and area channels. No ability to add other channels without adding frequencies
  - Would be self-owned and maintained at DU-COMM's control and expense.

# Financial Overview

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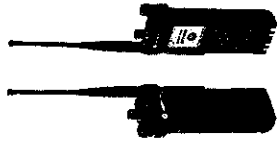


- Over a ten (10) year period of time:
  - The STARCOM21 would be 12.8 million dollars of equipment and usage to DU-COMM and its agencies.
  - DU-COMM and its agencies would be responsible for 3 million dollars to use the system. During the first four years, the ETSB will reimburse the operating costs.
  - The DU-COMM alternate plan would cost over 5.8 million dollars, which is not currently budgeted or in capital reserves.



# Financial Overview

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- For the Village of Villa Park:
  - Police radios provided by the ETSB/PSIC Grant.
    - 42 Units (\$6,110 each) = \$256,620
  - Fire radios provided by the ETSB/PSIC Grant.
    - 34 units (\$6,110 each) = \$207,740

**TOTAL EQUIPMENT VALUE RECEIVED = \$464,360**

- Plus ETSB reimburses for first four (4) years of monthly user fees = \$142,272

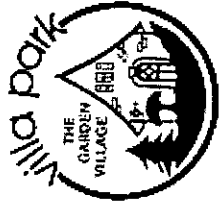
**TOTAL VALUE = \$606,632**

# Next Steps for DU-COMM

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- On August 16<sup>th</sup>, the DU-COMM Chiefs Operations Committee provided a recommendation to the DU-COMM Executive Committee for DU-COMM’s participation in STARCOM21 for all current and future agencies.
- The DU-COMM Executive Committee and Board of Directors will make final decision for DU-COMM.
- ETSB will vote on contract once letters of intent have been received and there is enough interest in moving forward.
- DU-COMM will enter into one “user agreement” for all member agencies



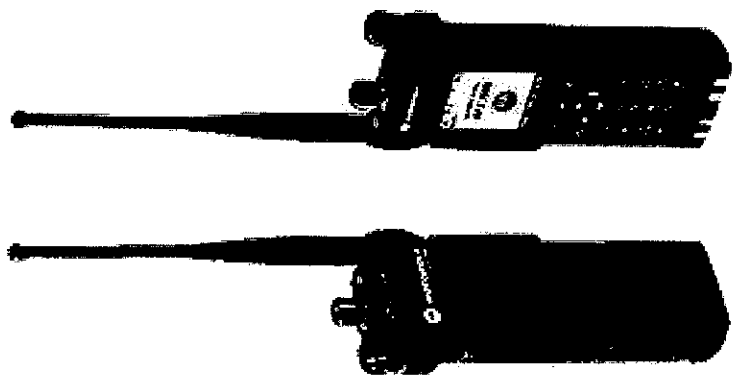
# Next steps for Villa Park

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- Issue a non-binding letter of intent to participate in the system.
- Staff to provide information on equipment configuration to the ETSB project manager.
- Approve the Intergovernmental Agreement (IGA) with the DuPage ETSB when the system contract is finalized.



# Questions?



**DUPAGE E.T.S.B. PROPOSED  
DIGITAL INTEROPERABLE RADIO  
SYSTEM - STARCOM21 & ITS  
IMPACT TO DU-COMM & OUR  
MEMBER AGENCIES**



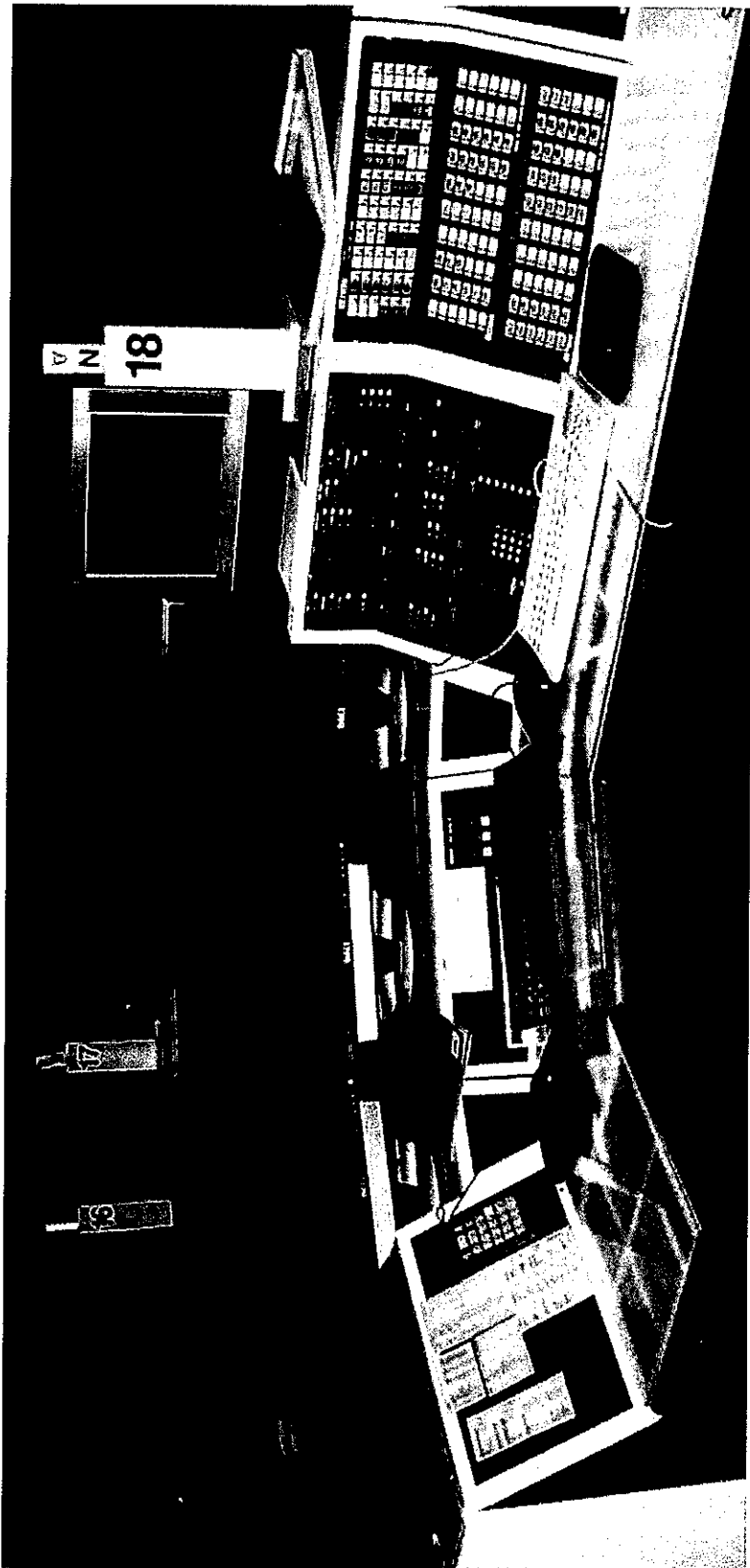
**August 13<sup>th</sup>, 2010 – DU-COMM Chiefs Meeting**

# Outline

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- Current DU-COMM Radio System
- System Overview
- Comparison of STARCOM21 verse DU-COMM system.
- DU-COMM Recommendations
- Determining DU-COMM Agency needs
- Financial Decisions
- Next Steps for DU-COMM

# Current DU-COMM Radio System



# DU-COMM RADIO SYSTEMS

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- DU-COMM Systems
- All owned by DU-COMM and self maintained.
- The majority of the infrastructure is old and outdated.
- Not compliant with 2013 Narrowbanding.
- 6 Main Police UHF Channels
- Channel 5, Channel 9, and UHF Tac Channels.
- 4 Main Fire VHF Channels
- IFERN, IFERN2
- Additional Channels
- Point to Point, IREACH, ISPERN, and UHF repeat of ISPERN and IFERN.

# POLICE

## 6 Main Dispatch

**Channel 1 West - 470.6875**

Bartlett (Bravo)  
Carol Stream (Charlie)  
Hanover Park (Yankee)

**Channel 3 West - 471.1375**

Glen Ellyn (Golf)  
Wheaton (Tango)

**Channel 7 West - 470.3125**

Warrenville (Delta)  
West Chicago (Zebra)  
Winfield (William)

**Channel 1 East - 470.3875**

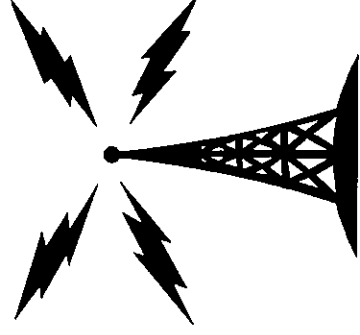
Lombard (Lincoln)  
Villa Park (Victor)

**Channel 3 East - 470.8875**

Elmhurst (Echo)  
Oakbrook Terrace (Ocean)

**Channel 1 North - 470.1875**

Roselle (Robert)  
Channel 5 Area Wide - 471.0125  
Channel 9 Area Wide - 476.4125  
IREACH - 155.055  
ISPERN - 154.475  
Point-To-Point - 155.370



# FIRE

## 4 Main Dispatch

**Fire East - 154.4150**

Addison  
Elmhurst  
Lombard  
Oakbrook Terrace  
Villa Park  
York Center

**Fire North - 154.1750**

Carol Stream  
Glen Ellyn  
Glenside  
West Chicago  
Wheaton  
Winfield

**Fire South - 151.3850**

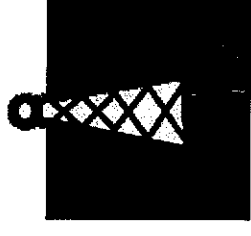
Lisle-Woodridge  
Warrenville

**Fire West - 154.3100**

Bartlett  
Hanover Park  
Roselle  
IFERN - 154.265  
Red Fireground - 153.830  
White Fireground - 154.280

# DU-COMM Radio Needs

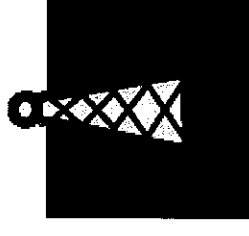
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- DU-COMM has to replace its aging radio infrastructure.
- Overall age of equipment
- Narrowband compliance
- Integrate equipment into newer radio console systems
- Cost Estimates
  - Police (6 Primary channels and 2 Secondary) \$2,000,000
  - Fire (4 Primary channels and 2 Secondary) \$1,500,000

# DU-COMM Radio Needs

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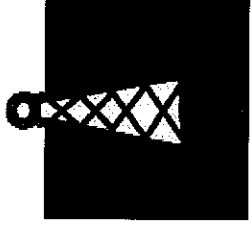


- DU-COMM Police Agencies need new Portable radios.
- Currently use HT1000's
  - Over 10 years old
  - Most are not narrowband capable
- DU-COMM Fire Agencies need more reliable dispatch systems
- Fire NORTH and Fire WEST are simplex and have many issues in overall coverage and reliability.



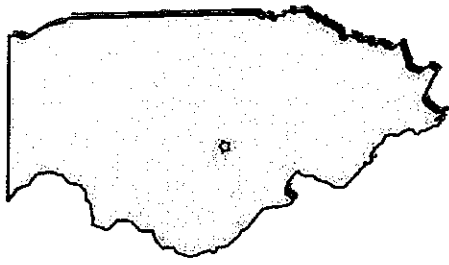
# DU-COMM Radio Needs

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- DU-COMM and its member agencies should have the interoperability with other agencies in DuPage County, metropolitan region, and the State.
- DU-COMM should have a radio solution that not only addresses the 2013 issues, but also looks further into the future.

# System Overview



**MOTOROLA**

# System Overview

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- ▣ In November of 2007 DuPage ETSB entered into a contract with DU-COMM for project management for a new 700-800 MHz county-wide interoperable radio system based on the needs of its Users.
- ▣ The Detailed Design Phase and Intergovernmental Agreement for this system progressed until November of 2009. At that time DuPage ETSB abandoned the design and build of a privately-owned DuPage County system when it established that the project was cost prohibitive reaching projected costs of 48 million dollars for infrastructure with personnel and maintenance costs estimated at approximately 2 million dollars annually.

# System Overview - Continued

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- The Radio Project Steering Committee was charged with review and comment on the technical viability of the Motorola STARCOMM 21 ·1 2dB Radio System. The Steering Committee engaged in a rigorous review process to evaluate the technical feasibility of the Motorola STARCOM21 ·1 2dB proposal.
- The Steering Committee determined the STARCOMM21 System appeared to meet the needs of DuPage ETSB Public Safety Users with a plan to use the current eight channel, four site DuPage STARCOM21 simulcast cell and an additional four sites to complete the necessary coverage and grade of service desired by the Users. With that determination, DuPage ETSB staff and radio project managers, along with Motorola, began to develop this proposal for the Users.

# System Overview - Continued

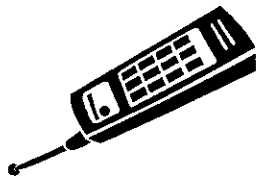
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- ▣ Careful consideration was given to the Fire Service concerns addressed in their White Paper, a copy of which is included in the project binder. To that end, a paging and toning solution was developed and proposed by the Radio Steering Committee Fire Subcommittee. Information on that proposal is also included in the binder.
- ▣ Additional consideration was given to the DuPage Mayors and Managers' concerns outlined in their letter to DuPage ETSB. We believe the Interoperable Radio Project Proposal, contained in this binder, meets these concerns.

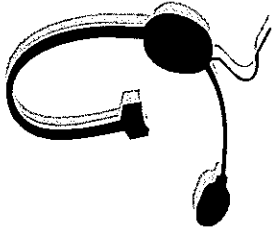
# System Overview – How it will work

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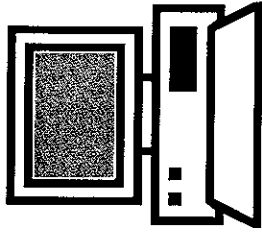
- The ETSB STARCOM21 proposal is intended as a radio dispatch system. It's purpose is to ensure that Telecommunicators have a reliable way to dispatch public safety responders to citizens who call 9-1-1.
- The following slides show how the system will be set up and utilized from a DU-COMM point of view.



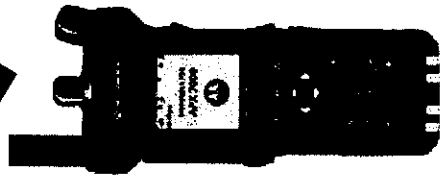
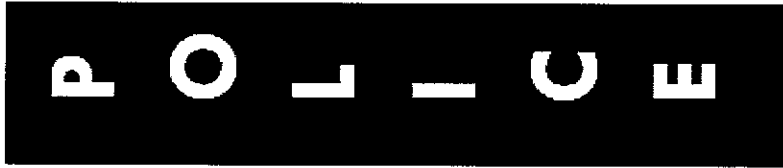
9-1-1 call is placed



9-1-1 call is answered by a Telecommunicator



Telecommunicator dispatches call on new MCC7500 radio console



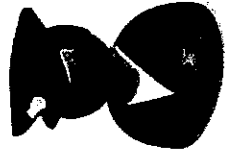
Police Officer uses a Dual Band 700/800 / UHF APX7000 Radio



Radio transmission is received by police officer on a digital "talkgroup" which has the same agencies on it as DU-COMM 's UHF networks



# Police Operations

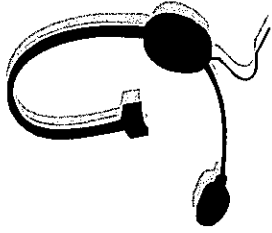


- 
- Pro's of STARCOM21
  - Interoperability, local county, and state.
  - Narrowband and P25 compliant infrastructure
  - New portable units
  - Encryption
  - Wide area talk groups
  - Dual Band UHF radios
- Con's of STARCOM21
  - System is not owned or under direct control of DU-COMM
  - Replacement costs of subscriber units
  - Airtime costs beyond ETSB commitments
  - Work within larger statewide governance structure

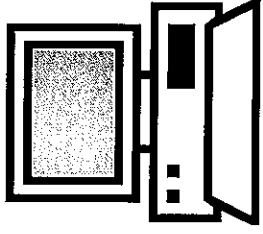




9-1-1 call is placed



9-1-1 call is answered by a Telecommunicator

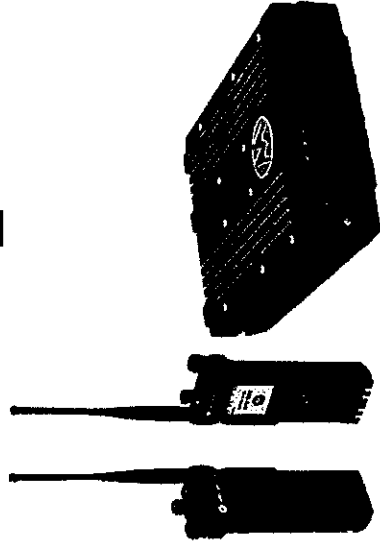


Telecommunicator dispatches call on new MCC7500 radio console

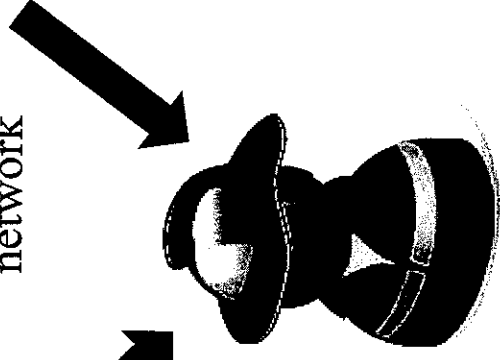


Through a "multicast" patch, tones are also activated on the VHF network

# FIRE

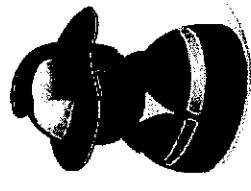


Fire personnel use a Dual Band 700/800 / VHF APX7000 Portable Radio or a APX 7500 Dual Band Mobile Radio



Radio transmission is received by Fire personnel on a digital "talkgroup" which has the same agencies on it as DU-COMM 's VHF networks.

# Fire Operations



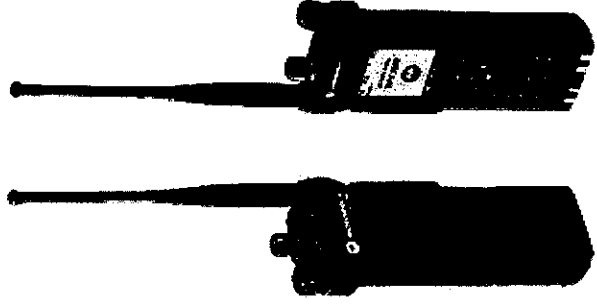
- Pro's of STARCOM21
- Con's of STARCOM21
- Interoperability, local county, and state. (Police Fire and PW)
- Meets White Paper
  - Narrowband and P25 compliant infrastructure
  - Dual Band VHF radios
  - Dual System (digital and analog paging)
- Increased coverage and wide area talk groups (Fire inspectors)
- Dual Band VHF radios
- System is not owned or under direct control of DU-COMM
  - Replacement costs of subscriber units
  - Airtime costs beyond ETSB commitments
  - Work within larger statewide governance structure

# STARCOM21's Impact on DU-COMM

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- ❑ ETSB purchase includes new radio console system for DU-COMM (almost \$1,750,000.00 in equipment).
- ❑ Solves the 2013 narrowbanding issues for main dispatch channels. Fire paging networks and ancillary channels (IFERN, IREACH, ISPERN) will still need to be replaced.
- ❑ Pays for Fire network upgrade and replacement (\$954,000 in reimbursement from ETSB)
- ❑ Improves overall back-up communications for DU-COMM.
- ❑ Elimination of obstacles for further consolidation into DU-COMM or the creation of a second center.

# Comparison of STARCOM verse DU-COMM Alternate Plan



# DU-COMM Alternate Plan

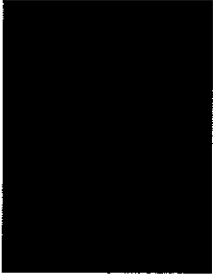
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- DU-COMM has developed an draft alternate plan (plan B) for the replacement of current radio infrastructure.
- Replacement of all radio networks with narrow band analog radio equipment. Following the Fire NORTH upgrade (in progress) the likely equipment would be Tait Communications.
- Six (6) Police UHF networks, and two (2) wide area
- Four (4) Fire VHF networks, and two (2) wide area
- Agency's would retain responsibility for portable radio purchase, maintenance, and replacement.

# STARCOM21 – Alternate Plan

---

- STARCOM21
  - County wide communications
  - Enhanced coverage
  - Dual Band Radio's
  - Talk Group flexibility
    - Wide area
    - Storm Mode planning
    - Special events
    - Tactical/Investigative
    - Fire Inspectors/Admin
  - Ability to communicate on statewide channels
  - Increases DU-COMM's back-up
- DU-COMM Alternate Plan
  - Coverage limited to actual radio network
  - Only talk on one band. (VHF, UHF, or 800)
  - Only have dispatch channels and area channels. No ability to add other channels without adding frequencies.
  - Would be self owned and maintained at DU-COMM's control and expense.



# DU-COMM Agency Equipment Recommendations



# Recommendations

---

## □ DU-COMM

- Recommend all members of DU-COMM sign one user agreement with Motorola.
- Individual agency's costs will be billed by DU-COMM to the agencies as part of our quarterly billing.
- Work with the ETSB and Motorola for DU-COMM to provide Tier 1 support for portable and mobile radios to include:
  - Coordination of radio ID's and issuance
  - Maintaining larger cache of spare radios
  - Have cache of radios for outside agencies (COMM-1)
  - Stock parts and accessories for standard re-bill to agencies



# Recommendations

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- DU-COMM (continued)
  - Limit different types of subscriber units
    - APX 7000 Dual Band UHF (Police portable)
    - APX 7000 Dual Band VHF (Fire Portable)
    - APX 7500 Dual Band VHF (Police or Fire Mobile)
  - Lower tier radio for civilian ??? Will not have back-up system capabilities

# Recommendations

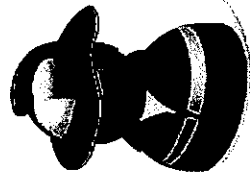
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- Police
  - Dual Band UHF Portable Radios
    - Additional cost, but what was budgeted in ETSB Binder
    - Allows DU-COMM to narrowband UHF Channel 5 and possibly expand Channel 9 to allow for “back-up” communications in event of STARCOM21 failure
  - If mobile radio is wanted (Command or Communications vehicles), use a VHF mobile (ISPERN, IREACH, or other disciplines). Also Dual Head mobiles available.
  - Utilize a common portable programming.

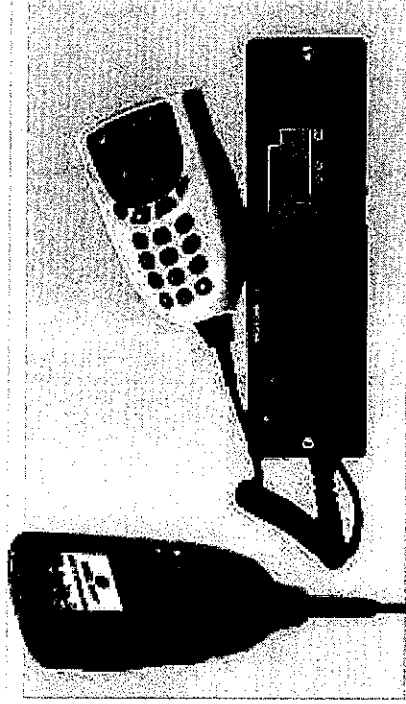
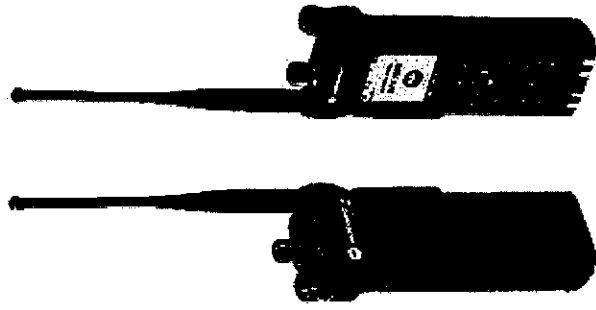
# Recommendations

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- Fire
  - Dual Band VHF Portable Radios
  - Mobile radios should also be Dual Band VHF, and consider Dual Head for Chief, Command or communications vehicles.
  - Based on overall radio count issue, maintain VHF legacy portables.

# DU-COMM Agency Needs



# Establish Agency Needs

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- Police
- Personally issued Portables?
- Purchase additional portables for non-sworn personnel  
or for numbers not included in the ETSB/PSIC totals?
  - Cost of radios
  - Cost of monthly service agreement (immediate, not just after 4 years)
  - Additional equipment, mobiles, accessories, BDA's

| <b>POLICE RADIO COUNTS</b> |                  | <b>Sworn</b>    |                           |                  | <b>Total</b>  |               | <b>PSIC/ETSB</b>  |                      | <b>RADIO'S</b>      |  | <b>RADIO'S</b> |  | <b>One Time Purchase</b> |  | <b>Annual Service</b> |  |
|----------------------------|------------------|-----------------|---------------------------|------------------|---------------|---------------|-------------------|----------------------|---------------------|--|----------------|--|--------------------------|--|-----------------------|--|
|                            |                  | <b>Officers</b> | <b>Civilian Personnel</b> | <b>Personnel</b> | <b>RADIOS</b> | <b>NEEDED</b> | <b>Difference</b> | <b>Radio Costs</b>   | <b>Agreement</b>    |  |                |  |                          |  |                       |  |
| 1                          | Bartlett         | 56              | 5                         | 61               | 54            | 61            | 7                 | \$ 42,770.00         | \$ 3,276.00         |  |                |  |                          |  |                       |  |
| 2                          | Carol Stream     | 64              | 7                         | 71               | 68            | 71            | 3                 | \$ 18,330.00         | \$ 1,404.00         |  |                |  |                          |  |                       |  |
| 3                          | Elmhurst         | 70              |                           | 70               | 70            | 70            | 0                 | \$ -                 | \$ -                |  |                |  |                          |  |                       |  |
| 4                          | Glen Ellyn       | 40              | 3                         | 43               | 43            | 43            | 0                 | \$ -                 | \$ -                |  |                |  |                          |  |                       |  |
| 5                          | Hanover Park     | 57              | 5                         | 62               | 52            | 62            | 10                | \$ 61,100.00         | \$ 4,680.00         |  |                |  |                          |  |                       |  |
| 6                          | Lombard          | 73              | 6                         | 79               | 73            | 79            | 6                 | \$ 36,660.00         | \$ 2,808.00         |  |                |  |                          |  |                       |  |
| 7                          | Oakbrook Terrace | 21              | 0                         | 21               | 22            | 21            | -1                |                      |                     |  |                |  |                          |  |                       |  |
| 8                          | Roselle          | 36              | 2                         | 38               | 36            | 38            | 2                 | \$ 12,220.00         | \$ 936.00           |  |                |  |                          |  |                       |  |
| 9                          | Villa Park       | 43              | 4                         | 47               | 42            | 47            | 5                 | \$ 30,550.00         | \$ 2,340.00         |  |                |  |                          |  |                       |  |
| 10                         | Warrenville      | 32              | 2                         | 34               | 31            | 34            | 3                 | \$ 18,330.00         | \$ 1,404.00         |  |                |  |                          |  |                       |  |
| 11                         | West Chicago     | 50              | 3                         | 53               | 52            | 53            | 1                 | \$ 6,110.00          | \$ 468.00           |  |                |  |                          |  |                       |  |
| 12                         | Wheaton          | 66              | 4                         | 70               | 70            | 70            | 0                 | \$ -                 | \$ -                |  |                |  |                          |  |                       |  |
| 13                         | Winfield         | 20              | 0                         | 20               | 21            | 20            | -1                |                      |                     |  |                |  |                          |  |                       |  |
| <b>TOTAL POLICE</b>        |                  | <b>628</b>      | <b>41</b>                 | <b>669</b>       | <b>634</b>    | <b>669</b>    | <b>35</b>         | <b>\$ 226,070.00</b> | <b>\$ 17,316.00</b> |  |                |  |                          |  |                       |  |



# Establish Agency Needs

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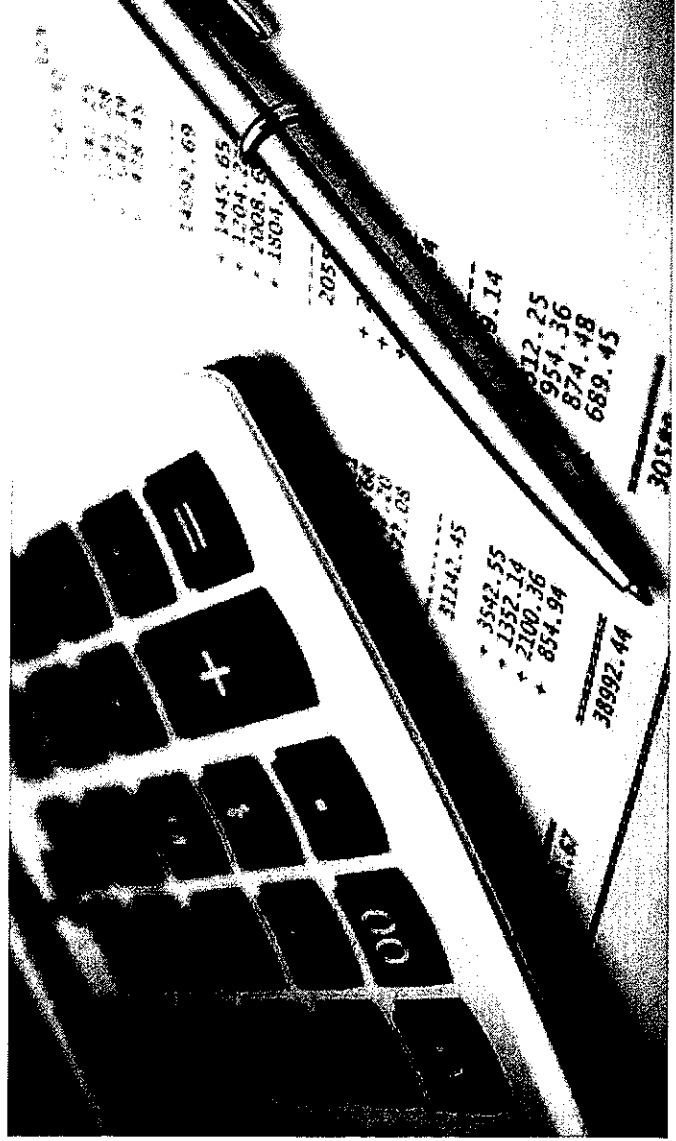
- Fire
- Mobile verse portable for apparatus and duty personnel
  - Apparatus Headsets
  - Legacy Portable use
  - Fire Ground Communications
- Additional radios needed to be purchased
  - Fire Inspectors to utilize new talk groups?
- Additional costs and equipment
  - Dual Heads, Command Vehicles, BDA's

| FIRE RADIO COUNTS |                  | PSIC/ETSB |            |            |            | RADIO'S    |            | One Time Purchase |                   | Annual    |          |
|-------------------|------------------|-----------|------------|------------|------------|------------|------------|-------------------|-------------------|-----------|----------|
|                   |                  | Mobile    | Portable   | Total      | RADIOS     | NEEDED     | Difference | Radio Costs       | Service Agreement |           |          |
| 1                 | Addison          | 0         | 52         | 52         | 52         | 52         | 0          | \$                | -                 | \$        | -        |
| 2                 | Bartlett         | 0         | 50         | 50         | 50         | 50         | 0          | \$                | -                 | \$        | -        |
| 3                 | Carol Stream     | 0         | 50         | 50         | 50         | 50         | 0          | \$                | -                 | \$        | -        |
| 4                 | Elmhurst         | 0         | 38         | 38         | 38         | 38         | 0          | \$                | -                 | \$        | -        |
| 5                 | Glen Ellyn       | 0         | 50         | 50         | 50         | 50         | 0          | \$                | -                 | \$        | -        |
| 6                 | Glenside         | 0         | 30         | 30         | 30         | 30         | 0          | \$                | -                 | \$        | -        |
| 7                 | Hanover Park     | 0         | 40         | 40         | 40         | 40         | 0          | \$                | -                 | \$        | -        |
| 8                 | Lisle-Woodridge  | 0         | 80         | 80         | 80         | 80         | 0          | \$                | -                 | \$        | -        |
| 9                 | Lombard          | 0         | 48         | 48         | 48         | 48         | 0          | \$                | -                 | \$        | -        |
| 10                | Oakbrook Terrace | 0         | 17         | 17         | 17         | 17         | 0          | \$                | -                 | \$        | -        |
| 11                | Roselle          | 0         | 28         | 28         | 28         | 28         | 0          | \$                | -                 | \$        | -        |
| 12                | Villa Park       | 0         | 34         | 34         | 34         | 34         | 0          | \$                | -                 | \$        | -        |
| 13                | Warrenville      | 0         | 38         | 38         | 38         | 38         | 0          | \$                | -                 | \$        | -        |
| 14                | West Chicago     | 0         | 44         | 44         | 44         | 44         | 0          | \$                | -                 | \$        | -        |
| 15                | Wheaton          | 0         | 46         | 46         | 46         | 46         | 0          | \$                | -                 | \$        | -        |
| 16                | Winfield         | 0         | 28         | 28         | 28         | 28         | 0          | \$                | -                 | \$        | -        |
| 17                | York Center      | 0         | 30         | 30         | 30         | 30         | 0          | \$                | -                 | \$        | -        |
| <b>TOTAL FIRE</b> |                  | <b>0</b>  | <b>703</b> | <b>703</b> | <b>703</b> | <b>703</b> | <b>0</b>   | <b>\$</b>         | <b>-</b>          | <b>\$</b> | <b>-</b> |





# Financial Overview



# Financial Overview

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- Assumptions Made:
  - Numbers are based upon PSIC/ETSB radio counts at this time. Additional radio needs will increase agency's total costs.
  - DU-COMM used a not-to-exceed cost of \$39.00 a month for STARCOM21 user agreement monthly cost. See email from ETSB Coordinator Linda Zerwin for discussion on this number.
  - Comparison to DU-COMM alternate plan
  - Cost savings by eliminating police UHF primary networks.

# FINANCIAL BENEFITS TO DU-COMM

| EQUIPMENT                                            | QUANTITY | VALUE     | TOTAL VALUE |
|------------------------------------------------------|----------|-----------|-------------|
| Consoles                                             | 23       | \$71,671  | \$1,648,439 |
| Control Stations                                     | 10       | \$9,683   | \$96,834    |
| Dual-band Radios                                     | 1337     | \$6,063   | \$8,106,231 |
| <b>Fire Paging Solution (one-time reimbursement)</b> |          |           |             |
| North                                                | 1        | \$220,532 | \$220,532   |
| East                                                 | 1        | \$230,192 | \$230,192   |
| South                                                | 1        | \$230,192 | \$230,192   |
| West                                                 | 1        | \$273,038 | \$273,038   |
| Total Fire Paging                                    |          |           | \$953,954   |

**Total Capital Benefits** **\$10,805,458**

|                     |   |               |                 |
|---------------------|---|---------------|-----------------|
| Service Agreement   |   |               |                 |
| Year 1 (\$30)       | 1 | \$ 412,920.00 | \$ 412,920.00   |
| Year 2-4 (NTE \$39) | 3 | \$ 536,796.00 | \$ 1,610,388.00 |

**Total Operational Benefits** **\$ 2,023,308.00**

**TOTAL BENEFITS (Years 1-4 plus equipment) \$ 12,828,765.98**

# Ten (10) Year Costs to DU-COMM

| Annual Maintenance and User Agreements | 1<br>FYE 11/12     | 2<br>FYE 12/13  | 3<br>FYE 13/14   | 4<br>FYE 14/15   | 5<br>FYE 15/16   | 6<br>FYE 16/17   | 7<br>FYE 17/18   | 8<br>FYE 18/19   | 9<br>FYE 19/20   | 10<br>FYE 20/21  |
|----------------------------------------|--------------------|-----------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| 23 Consoles, 10 Control Station        | \$0                | \$72,726        | \$74,218         | \$75,754         | \$77,337         | \$78,967         | \$80,941         | \$82,965         | \$85,039         | \$87,165         |
| APX User Agreement                     | \$0                | \$0             | \$0              | \$0              | \$536,796        | \$536,796        | \$536,796        | \$536,796        | \$536,796        | \$552,900        |
| <b>Total Operational Costs</b>         | <b>\$0</b>         | <b>\$72,726</b> | <b>\$74,218</b>  | <b>\$75,754</b>  | <b>\$614,133</b> | <b>\$615,763</b> | <b>\$617,737</b> | <b>\$619,761</b> | <b>\$621,835</b> | <b>\$640,065</b> |
| <b>TEN (10) Year Operational Costs</b> | <b>\$3,951,992</b> |                 |                  |                  |                  |                  |                  |                  |                  |                  |
| <b>Savings</b>                         |                    |                 |                  |                  |                  |                  |                  |                  |                  |                  |
| Phone Line Reduction                   | FYE 11/12          | FYE 12/13       | FYE 13/14        | FYE 14/15        | FYE 15/16        | FYE 16/17        | FYE 17/18        | FYE 18/19        | FYE 19/20        | FYE 20/21        |
| 1 East                                 | \$0                | \$0             | \$23,968         | \$24,687         | \$25,428         | \$26,191         | \$26,976         | \$27,786         | \$28,619         | \$29,478         |
| 3 East                                 | \$0                | \$0             | \$23,491         | \$24,195         | \$24,921         | \$25,669         | \$26,439         | \$27,232         | \$28,049         | \$28,890         |
| 1 West                                 | \$0                | \$0             | \$18,570         | \$19,127         | \$19,700         | \$20,291         | \$20,900         | \$21,527         | \$22,173         | \$22,838         |
| 3 West                                 | \$0                | \$0             | \$16,712         | \$17,214         | \$17,730         | \$18,262         | \$18,810         | \$19,374         | \$19,955         | \$20,554         |
| 7 West                                 | \$0                | \$0             | \$22,896         | \$23,583         | \$24,291         | \$25,019         | \$25,770         | \$26,543         | \$27,339         | \$28,159         |
| 1 North                                | 0                  | 0               | \$5,710          | \$5,881          | \$6,058          | \$6,239          | \$6,427          | \$6,619          | \$6,818          | \$7,023          |
| Fire (Savings unknown)                 |                    |                 |                  |                  |                  |                  |                  |                  |                  |                  |
| <b>Total Savings</b>                   | <b>\$0</b>         | <b>\$0</b>      | <b>\$111,346</b> | <b>\$114,687</b> | <b>\$118,127</b> | <b>\$121,671</b> | <b>\$125,321</b> | <b>\$129,081</b> | <b>\$132,953</b> | <b>\$136,942</b> |
| <b>Net TEN (10) Year Costs</b>         | <b>\$2,961,862</b> |                 |                  |                  |                  |                  |                  |                  |                  |                  |

# DU-COMM Alternate Costs

| <b>FIRE DISPATCH</b>         | <b>NUMBER</b> | <b>COST</b> | <b>TOTAL COST</b>  |
|------------------------------|---------------|-------------|--------------------|
| Fire NORTH**                 | 1             | \$250,000   | \$250,000          |
| Fire EAST                    | 1             | \$250,000   | \$250,000          |
| Fire SOUTH                   | 1             | \$250,000   | \$250,000          |
| Fire WEST                    | 1             | \$250,000   | \$250,000          |
| <b>Subtotal</b>              |               |             | <b>\$1,000,000</b> |
| <b>POLICE DISPATCH</b>       | <b>NUMBER</b> | <b>COST</b> | <b>TOTAL COST</b>  |
| 1 WEST                       | 1             | \$250,000   | \$250,000          |
| 3 WEST                       | 1             | \$250,000   | \$250,000          |
| 7 WEST                       | 1             | \$250,000   | \$250,000          |
| 1 EAST                       | 1             | \$250,000   | \$250,000          |
| 3 EAST                       | 1             | \$250,000   | \$250,000          |
| 1 NORTH                      | 1             | \$250,000   | \$250,000          |
| <b>Subtotal</b>              |               |             | <b>\$1,500,000</b> |
| <b>OTHER EQUIPMENT</b>       | <b>NUMBER</b> | <b>COST</b> | <b>TOTAL COST</b>  |
| Portable Radios              | 1337          | \$1,500     | \$2,005,500        |
| Radio Consoles               | 23            | \$50,000    | \$1,150,000        |
| <b>Subtotal</b>              |               |             | <b>\$3,155,500</b> |
| <b>TOTAL ALTERNATE COSTS</b> |               |             | <b>\$5,655,500</b> |

# DU-COMM Alternate

## Monthly Radio Costs- Equivalent

| FIRE DISPATCH                   |                                                        | New Infrastructure EQUIPMENT |                    | # of Subscribers | Subscriber Units   | Cost of Circuits | # of Agencies  | CAD Activity 2009 | MONTHLY Cost PER RADIO | MONTHLY Cost CAD Activity |
|---------------------------------|--------------------------------------------------------|------------------------------|--------------------|------------------|--------------------|------------------|----------------|-------------------|------------------------|---------------------------|
| Fire NORTH**                    | \$2,083.33                                             | 248                          | \$3,100            |                  | \$1,552.25         | 6                | 18,995         | \$27.16           | \$0.35                 |                           |
| Fire EAST                       | \$2,083.33                                             | 219                          | \$2,738            |                  | \$2,720.85         | 6                | 18,936         | \$34.44           | \$0.40                 |                           |
| Fire SOUTH                      | \$2,083.33                                             | 118                          | \$1,475            |                  | \$1,651.95         | 2                | 7,125          | \$44.15           | \$0.73                 |                           |
| Fire WEST                       | \$2,083.33                                             | 118                          | \$1,475            |                  | \$1,535.83         | 3                | 8,447          | \$43.17           | \$0.60                 |                           |
| <b>Subtotal</b>                 | <b>\$8,333.33</b>                                      | <b>703</b>                   | <b>\$9,787.50</b>  |                  | <b>\$7,460.88</b>  | <b>17</b>        | <b>53,503</b>  |                   |                        |                           |
| POLICE DISPATCH                 |                                                        | New Infrastructure EQUIPMENT |                    | # of Subscribers | Subscriber Units   | Cost of Circuits | # of Agencies  | CAD Activity 2009 | MONTHLY Cost PER RADIO | MONTHLY Cost CAD Activity |
| 1 WEST                          | \$2,083.33                                             | 174                          | \$2,175            |                  | \$1,416.15         | 3                | 125,674        | \$32.61           | \$0.05                 |                           |
| 3 WEST                          | \$2,083.33                                             | 113                          | \$1,413            |                  | \$1,274.50         | 2                | 100,188        | \$42.22           | \$0.05                 |                           |
| 7 WEST                          | \$2,083.33                                             | 104                          | \$1,300            |                  | \$1,746.10         | 3                | 69,814         | \$49.32           | \$0.07                 |                           |
| 1 EAST                          | \$2,083.33                                             | 115                          | \$1,438            |                  | \$1,827.85         | 2                | 67,489         | \$46.51           | \$0.08                 |                           |
| 3 EAST                          | \$2,083.33                                             | 92                           | \$1,150            |                  | \$1,791.43         | 2                | 59,922         | \$54.62           | \$0.08                 |                           |
| 1 NORTH                         | \$2,083.33                                             | 36                           | \$450              |                  | \$435.45           | 1                | 21,028         | \$82.47           | \$0.14                 |                           |
| <b>Subtotal</b>                 | <b>\$12,500.00</b>                                     | <b>634</b>                   | <b>\$7,925.00</b>  |                  | <b>\$8,491.48</b>  | <b>13</b>        | <b>444,115</b> |                   |                        |                           |
| <b>POLICE &amp; FIRE Totals</b> | <b>\$20,833.33</b>                                     | <b>1337</b>                  | <b>\$16,712.50</b> |                  | <b>\$15,952.36</b> | <b>30</b>        | <b>497,618</b> |                   |                        |                           |
| <b>\$250,000.00</b>             | <b>Average Annual Equipment over 10 Years</b>          |                              |                    |                  |                    |                  |                |                   |                        |                           |
| <b>\$191,428.32</b>             | <b>Annual Circuit Cost</b>                             |                              |                    |                  |                    |                  |                |                   |                        |                           |
| <b>\$441,428.32</b>             | <b>TOTAL ANNUAL COST</b>                               |                              |                    |                  |                    |                  |                |                   |                        |                           |
|                                 | <b>Average Monthly "Airtime" Cost per Radio</b>        |                              |                    |                  |                    |                  |                |                   |                        |                           |
|                                 | <b>Average Monthly "Airtime" Cost per CAD Activity</b> |                              |                    |                  |                    |                  |                |                   |                        |                           |
|                                 | <b>\$45.67</b>                                         |                              |                    |                  |                    |                  |                |                   |                        |                           |
|                                 | <b>\$0.26</b>                                          |                              |                    |                  |                    |                  |                |                   |                        |                           |

**Next Steps for DU-COMM  
Agencies**



# Next Steps for DU-COMM Agencies

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- Chiefs Operations Committee to provide a recommendation to the DU-COMM Executive Committee for DU-COMM participation in STARCOM21.
- Individual agencies should complete letter of intent. ETSB deadline changed to September 7<sup>th</sup>.
- Individual agencies should complete the ETSB equipment and accessory spreadsheet.
- IGA template has been provided and individual agencies should start internal review process.



# Next Steps for DU-COMM Agencies

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- DU-COMM individual agencies should provide DU-COMM with the overall equipment lists as well as ETSB. DU-COMM can negotiate any purchases beyond the ETSB collectively for our agencies.
- ETSB will then negotiate a contract change order for the move to STARCOM21 assuming enough letters of intent are received. (Date unknown, but the September date is not likely.)
- Once ETSB commits to STARCOM21, agencies will need to approve IGA.

# STAFF RECOMMENDATION

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- As the Executive Director of DU-COMM, I support the ETSB Digital Interoperable Radio System, with the STARCOM21 system based on the information I have been provided to date.
  - DU-COMM and our agencies collectively benefit from the project financially.
  - It is my opinion that this system will perform well, and DU-COMM has considered our own redundancy needs.
  - I feel that the Fire issues have been addressed sufficiently.
  - The overall system coverage, technology, and subscriber units are an enhancement to current equipment
  - True county wide interoperability will be achieved if all agencies participate.
  - DU-COMM's backup is enhanced by a county-wide system
  - Elimination of obstacles of further consolidation into DU-COMM

# Questions?

