

# County Wide Interoperability System

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DOJ/Homeland Security Grant

2003

\$238,000.00

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5/5/04



# County Wide I-Call/ I-Tac Interoperability Project



LVMPD

SNACC

NLVPD





# Goals

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- ✦ Establish a network of repeaters that link existing radio communications infrastructures to other agencies.
- ✦ Use a simple approach to achieving communications interoperability without regard for manufacturer or band.
- ✦ Establish operational plans based on FEMA ISC (Incident Command System).

# Architecture – Basic Equipment

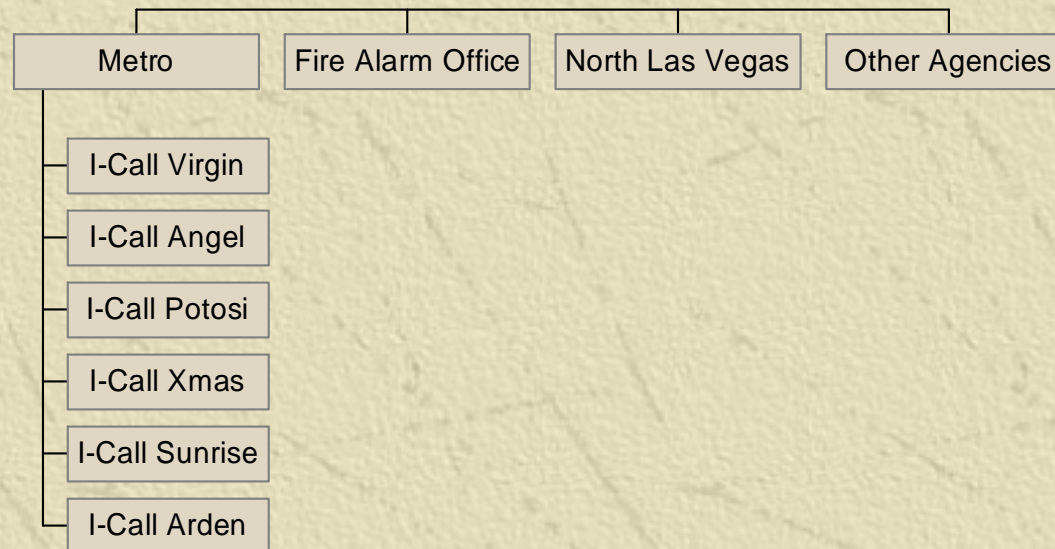
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- ✦ 12 each conventional 150 MHz repeaters
  - ✦ 12 each conventional 800MHz repeaters
  - ✦ JPS voter system
  - ✦ 150MHz & 800MHz antennas, combiners, & duplexers
  - ✦ Misc R.F connectors, coax and hardware
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- ✦ Each of six locations will be equipped with two pairs of repeaters.
  - ✦ Each pair will consist of a 150MHz repeater and an 800MHz repeater connected together to function as a single dual band repeater.
  - ✦ The two pairs will consist of one dual band ‘Call-in’ channel and one dual band ‘Tactical’ channel



# Architecture – Call-in channel

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# I-Call Pair – 6 Locations

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I-Call 150MHz  
155.1450 tx  
155.7150 rx  
PL=203.5

I-Call 800MHz  
866.0125 tx  
821.0125 rx  
PL=156.7



# Operational Design

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- ✦ The initial incoming call from the first responder would be made on the I-Call channel
- ✦ The I-Call signal 150MHz or 800MHz will use available microwave channels to terminate at Metrocomm where the signals will be voted for best signal and multicast back to all sites.
- ✦ The signal will also appear on any participating dispatch center consoles.
- ✦ The dispatching console operator will determine the appropriate Tactical channel ( I-Tac 1-4) using a coverage chart.
- ✦ All responding users will be directed to the assigned I-Tac channel, freeing up the I-Call channel for other traffic.

# Availability

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- ✦ The system is available to all first responder agencies.
- ✦ Access to the system is conventional narrow band 150MHz or 800MHz.
- ✦ Radios from any Manufacture can be used including the new 700MHz/800MHz models
- ✦ Metro applied for and received a special high power licenses on the 150MHz frequencies. (WPYV858)
- ✦ Both Metro and North Las Vegas are licensed for the 800MHz frequencies. (WPZR673)
- ✦ In addition to the 6 fixed locations in each band, we are authorized for a temporary fixed or base station at any unspecified location in Clark county.



# I-Tac 1

Virgin & Low Potosi



I-Tac 1 150MHz  
154.265 tx  
155.160 rx  
PL=156.7

I-Tac 1 800MHz  
866.5125 tx  
821.5125 rx  
PL=156.7

# I-Tac 2

Arden



I-Tac 2 150MHz  
154.280 tx  
155.475 rx  
PL=156.7

I-Tac 2 800MHz  
867.0125 tx  
822.0125 rx  
PL=156.7



# I-Tac 3

Angel & Xmas Tree



I-Tac 3 150MHz  
154.295 tx  
155.655 rx  
PL=156.7

I-Tac 3 800MHz  
867.5125 tx  
822.5125 rx  
PL=156.7

# I-Tac 4

Sunrise



I-Tac 4 150MHz  
156.075 tx  
155.160 rx  
PL=156.7

I-Tac 4 800MHz  
868.0125 tx  
823.0125 rx  
PL=156.7



# Site Installation & Maintenance

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✦ Metro

✦ Virgin

✦ Low Potosi

✦ Xmas Tree

✦ Sunrise

✦ Metro Dispatch

✦ SNACC

✦ Angel

✦ Arden

✦ Fire Alarm Office

✦ NLVPD

✦ NLVPD Dispatch



# Typical Site Equipment

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