

IRLP and Echolink — *The Kissing Cousins*

*Eugene McWherter,
N7OVT (SK)*

*Doug Davis,
AD7LO*



IRLP and Echolink

- Similar VOIP technologies
- Voice over Internet Protocol (*VOIP*)
- Digital voice
 - Like most cell phones
 - Transmitted through Internet connection



Internet Radio Linking Project

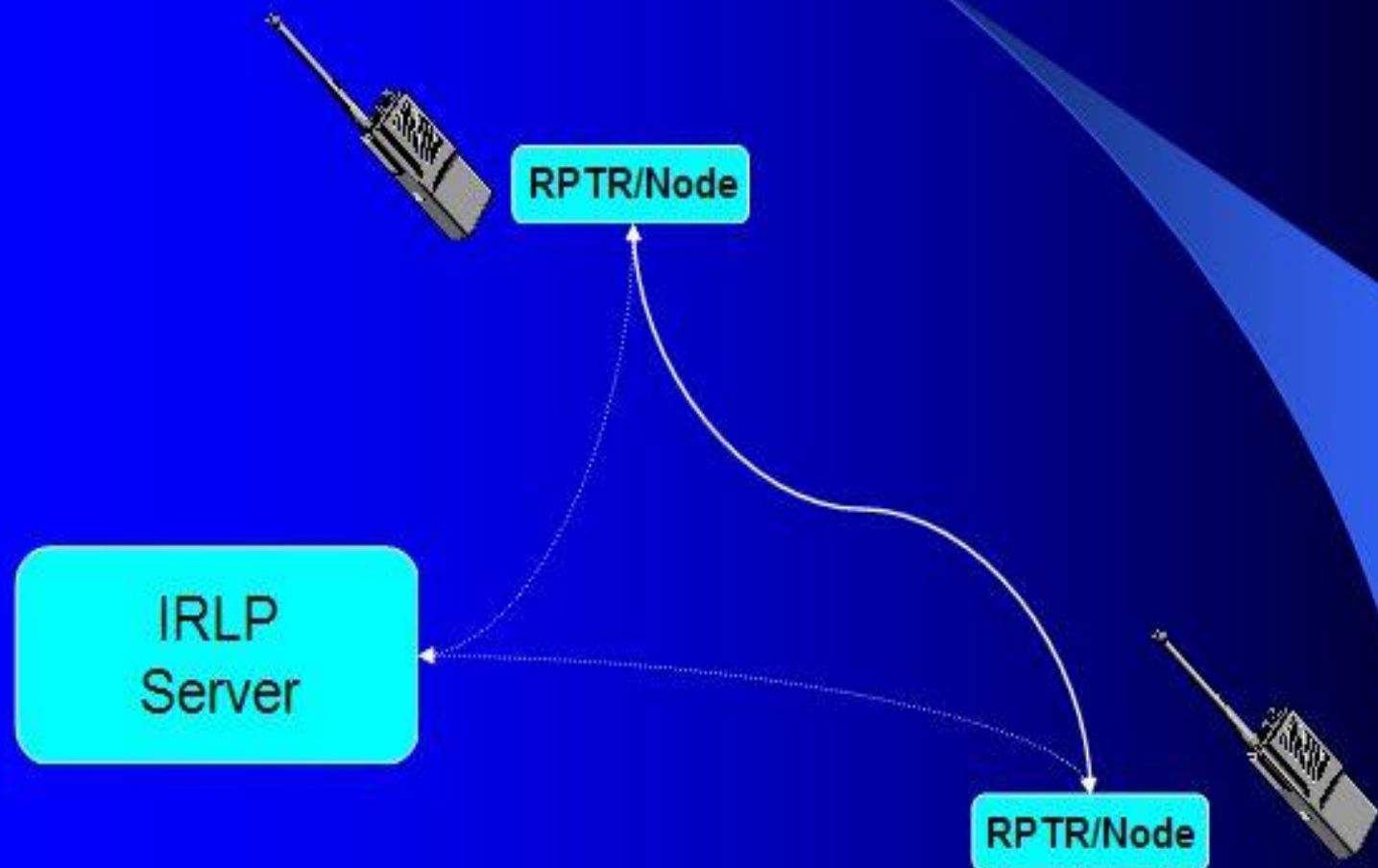


IRLP

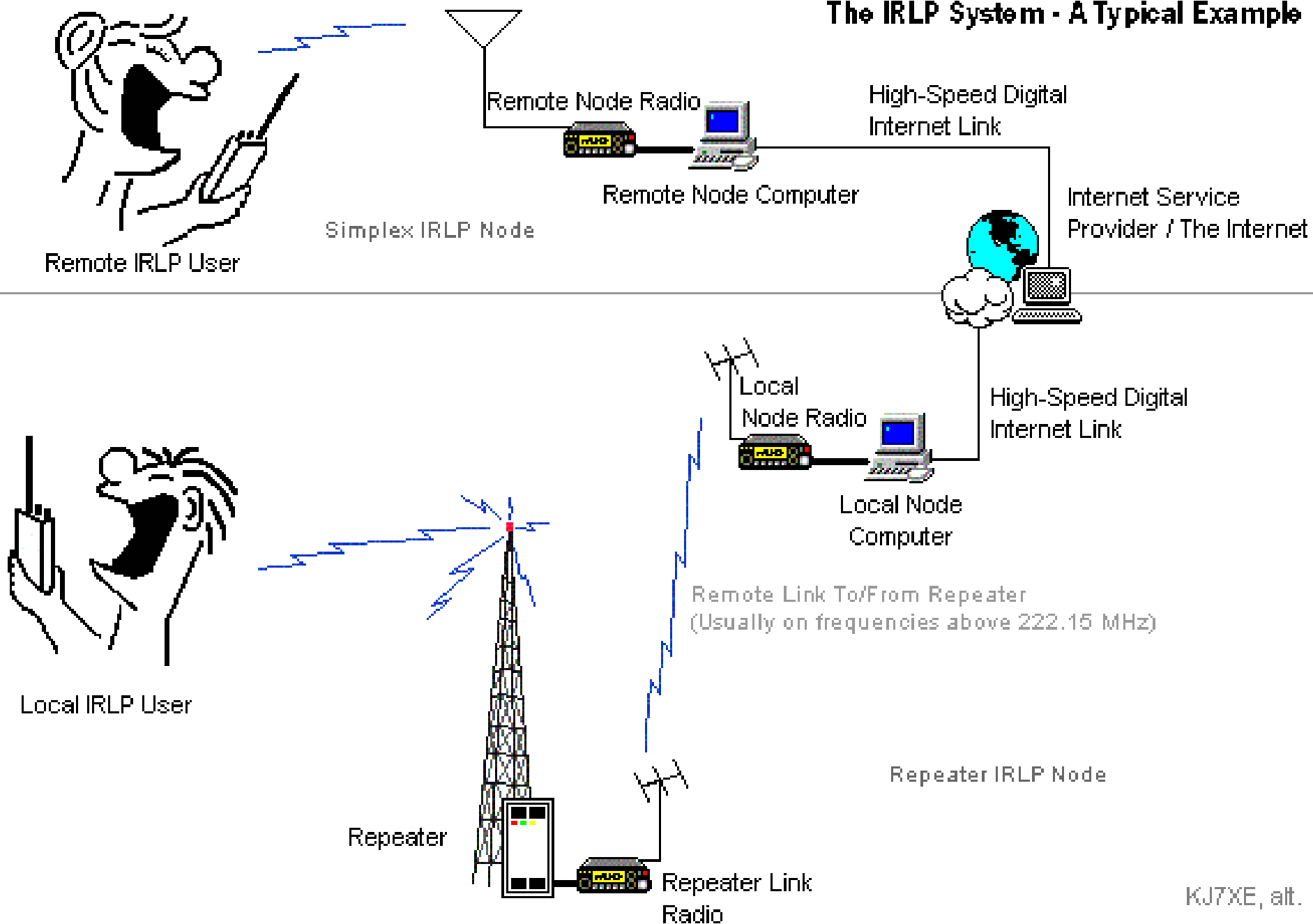
- Radio ↔ node ↔ node ↔ radio
 - “Dial” your party using DTMF tones
 - Node numbers
 - Published
 - In many repeater directories
 - Internet: www.irlp.net [Node Info]
 - Only two users connected,
 - EXCEPT WITH A “REFLECTOR”

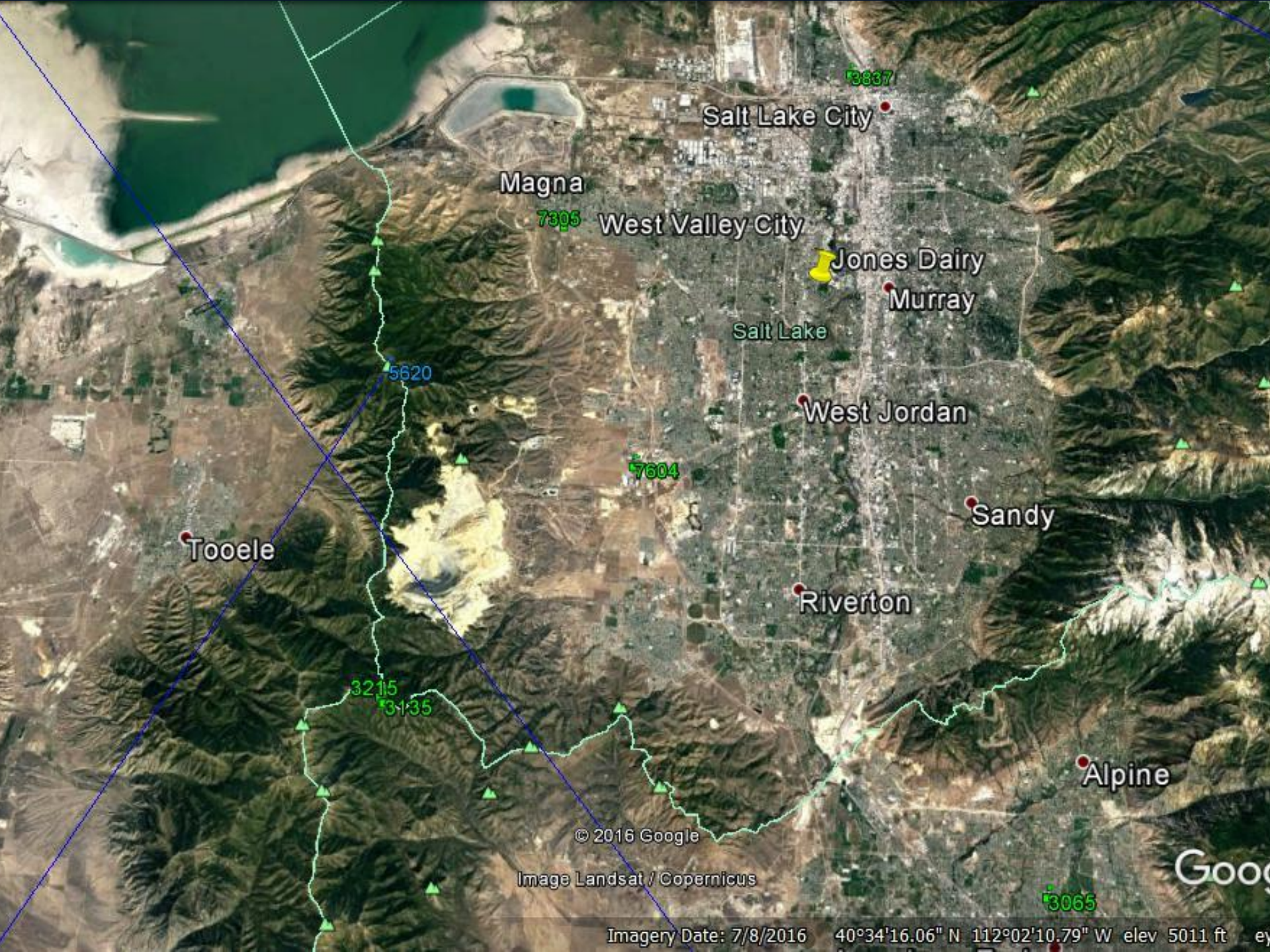


Point-to-Point Mode



The IRLP System - A Typical Example





Salt Lake City

Magna

West Valley City

Jones Dairy

Murray

Salt Lake

West Jordan

Sandy

Riverton

Alpine

Tooele

© 2016 Google

Image Landsat / Copernicus

Google

Imagery Date: 7/8/2016 40°34'16.06" N 112°02'10.79" W elev 5011 ft

IRLP

- Salt Lake often-used nodes
 - Node 5620, WA7GIE
 - 449.425 MHz, CTCSS 100 Hz
 - In Oquirrh mtns, 14 miles
 - Node 3352, W7SP (UARC)
 - 146.760 MHz, no tone
 - Lake Mountain Peak, west of Utah Lake
 - Used by UARC members

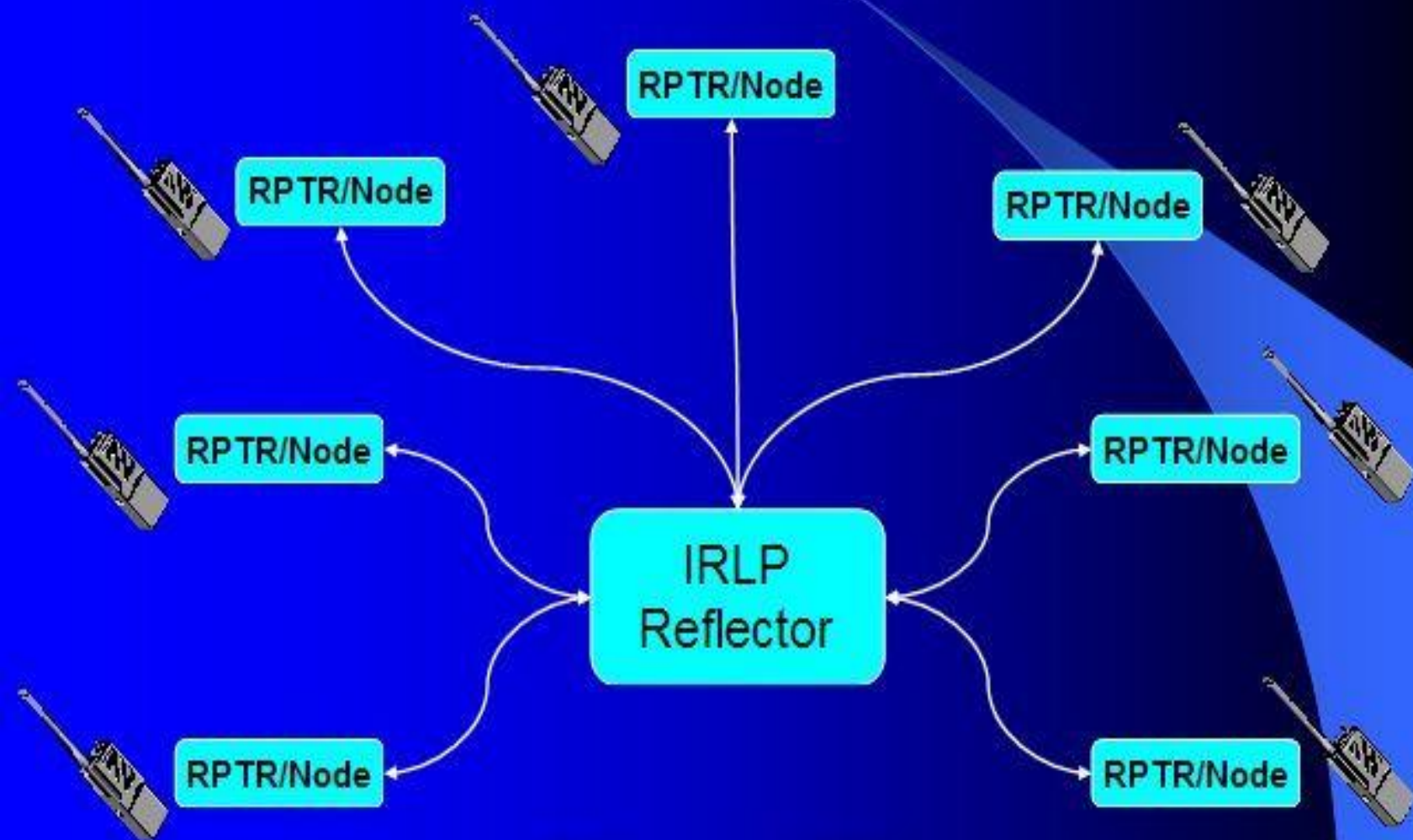


IRLP

- What is a Reflector?
 - A party line, or chat room!
 - Many users can connect together, just like a net on the air!
 - A reflector is a special kind of node, with one or more node numbers
 - May not even have any radios!
 - List on www.irlp.net



Reflector Mode



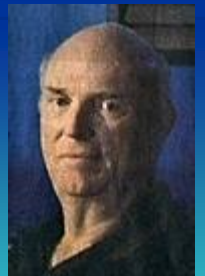
IRLP

- The Western Reflector:
 - Ten channels, each with an assignment and a node number
 - Channels 0 through 9 (node numbers 9250 through 9259)
 - 9250 is for calling and rag chew
 - 9257 is for emergency communications, and scheduled EMCOMM nets (including by Utah RACES)



IRLP

- The Western Reflector, continued
 - 449.425 MHz repeater (node 5620)
 - Connected 24/7 to channel 0
 - Repeater owner gives permission for approved operators to change repeater channel
 - For specified nets
 - From channel 0 to channel 7
 - Dave Williams, WA7GIE, owner



IRLP

- The Western Reflector Annex
 - Node 909X, Channels 0-9
 - Specific uses, often idle



Connecting Amateurs



ECHOLINK



Throughout The World



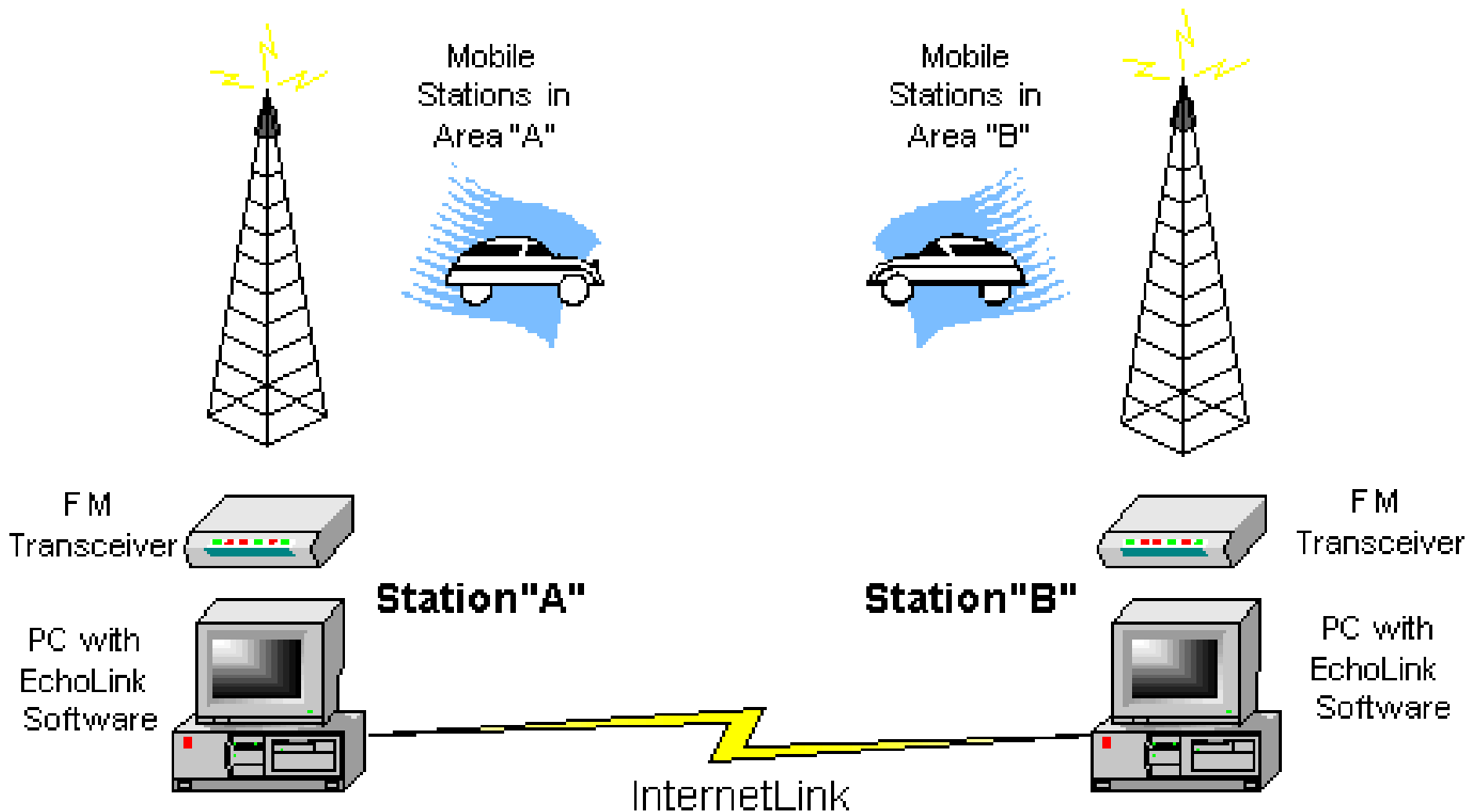
Echolink

(The other VOIP cousin)

- Often
computer ↔ node ↔ node ↔ computer
 - Windows, Mac, Linux computer
- Can be radio ⇒ node using digital interface
 - Rigblaster, etc.
 - Custom (through www.echolink.org)
 - Home-brew



Linking Example



Echolink

- Installing Echolink on your computer
 - Download from www.echolink.org
 - Submit your call sign and email address
 - Run program
 - Registers your call sign
 - Only one call sign at a time allowed
 - Validate yourself to Echolink
 - Are you really you?
 - Choose a password





5,063 stations on newest.echolink.org (21% are busy)

- + Locations
- + Node Types
- Alarms (5)
- New
- Favorites (6)

Station	Location/Description
DCF-ARC	Emcomm Nets [1/200]
NV-GATE	Las Vegas, NV [3/200]
VKEMCOMM	VK Emergency Comms [0/500]
WX_TALK	Skywarn & NHC Nets
KE6TZG-R	San Bernardino Mts.
W2NJR-R	In Conference N2HHH [2/10]

CONF W2NJR-R [3/10]

->W2NJR-R EchoIRLP
AD7LO Doug

Welcome to W2NJR-R EchoIRLP
NJRA Link System
NJ Statewide Coverage

Index View Explorer View

Connected to: W2NJR-R

United States

65.119.247.164



AD7LO>Text box test message

Send

File Edit Station Tools View Help

5,072 stations

- Lo
- No
- Al
- Ne
- Pa

Transmit Space

Connect Alt+C

Connect To... Ctrl+O

Connect to Test Server

Reconnect to *WX_TALK*

Disconnect Alt+D

Request Version

Info...

Find... Ctrl+F

Refresh List F5



Station	Location/Description
DCF-ARC	Emcomm Nets [1/200]
NV-GATE	Las Vegas, NV [3/200]
VKEMCOMM	VK Emergency Comms [0/500]
WX_TALK	Skywarn & NHC Nets
E6TZG-R	San Bernardino Mts.
W2NJR-R	In Conference N2HHH [2/10]

Index View Explorer View

[Not in QSO]
Last connection: *WX_TALK*

Send

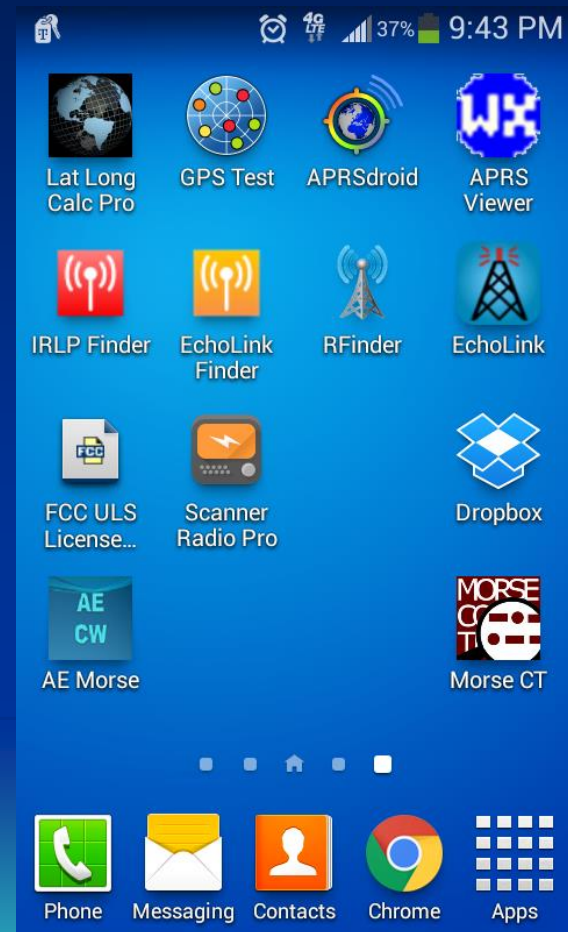
Echolink for Smartphones

- Download to your smartphone
- Available for iOS and Android
- Validation of second device is minimal
 - Enter call sign and password



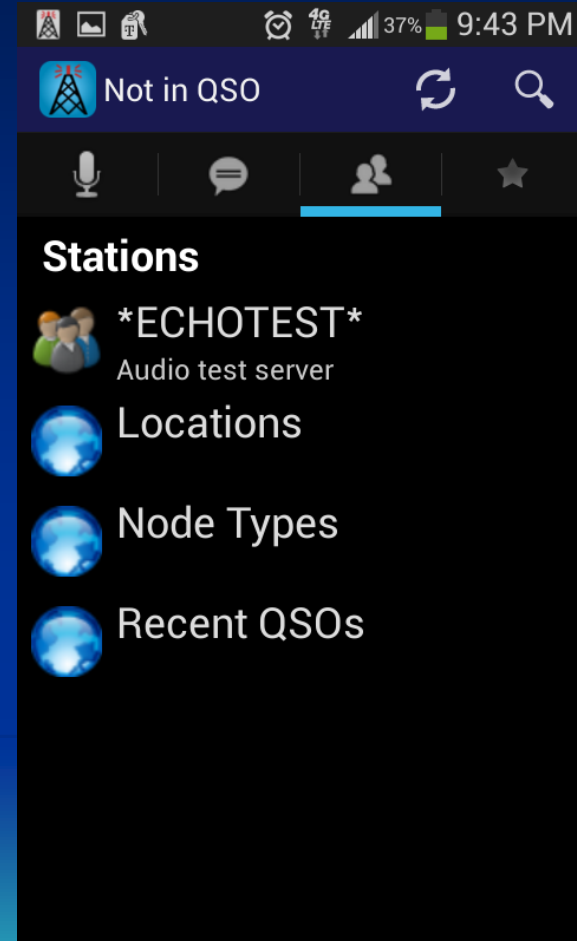
Echolink for Android

- My Android, with some ham radio apps
 - Echolink
 - RFinder (repeater list)
 - Scanner radio (streaming audio)
 - APRSdroid
 - APRS view
 - Lat-Long converter



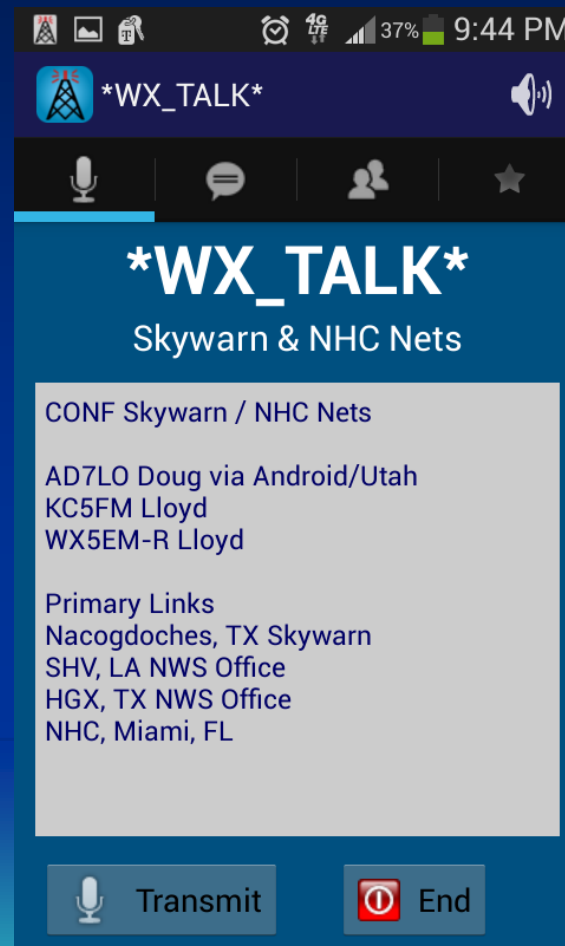
Echolink for Android

- Echolink running “Stations” screen
- Notice selection bar at top of screen
- Station category list



Echolink for Android

- Echolink in QSO
- Transmit button:
 - Tap to talk
 - Transmit screen appears
 - Tap to listen
- End button:
 - End QSO



IRLP and Echolink

- References

- ✓ www.irlp.net IRLP home
- ✓ www.narri.org Western Reflector
- ✓ www.echolink.org Echolink home
- ✓ www.qsl.net/kd6lvp/irlp.htm How To...
- ✓ iOS App Store or Android Play Store



IRLP and Echolink Summary

- The purpose of both IRLP and Echolink:
- Link amateur radio systems together
 - Reliably and inexpensively
 - Without RF linking, satellites, or land lines
- Both systems are free to use
- Both require users to be licensed hams
- Both give hams new communications capability

