

WIRES-X Yaesu System Fusion

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WIRES-X and YSF

- WIRES-X is an acronym properly written in all caps: **W**ide-coverage **I**nternet **R**epeater **E**nhancement **S**ystem
- YSF, an abbreviation in common use: **Y**aesu **S**ystem **F**usion

Objectives

Present

Present a model of YSF/WIRES-X that participants can use to better understand how YSF/WIRES-X can work for them.

Demonstrate

Demonstrate making a WIRES-X connection to a repeater's node radio using the new DR-2X repeater at 444.050 MHz in Darby.

Demonstrate

Demonstrate searching by name and directing by Room number to WIRES-X Rooms

Demonstrate

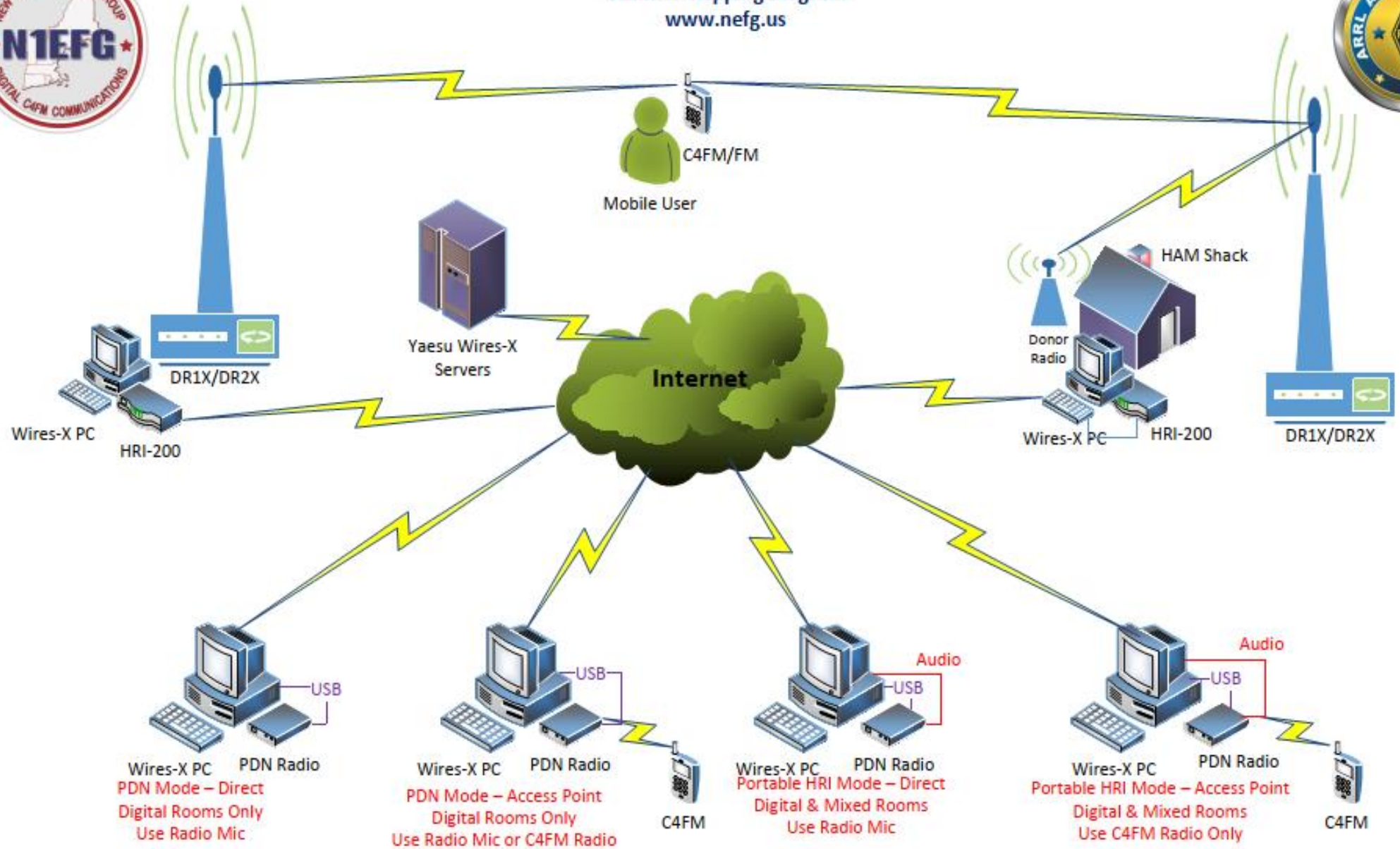
Demonstrate creating a Favorites List (FT-991A and maybe FT-70D)

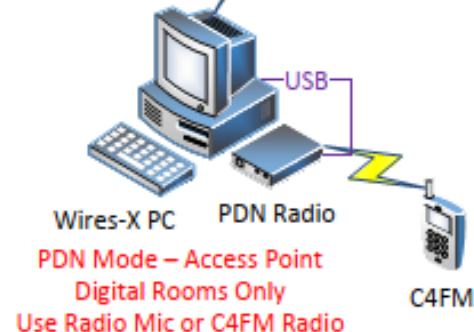
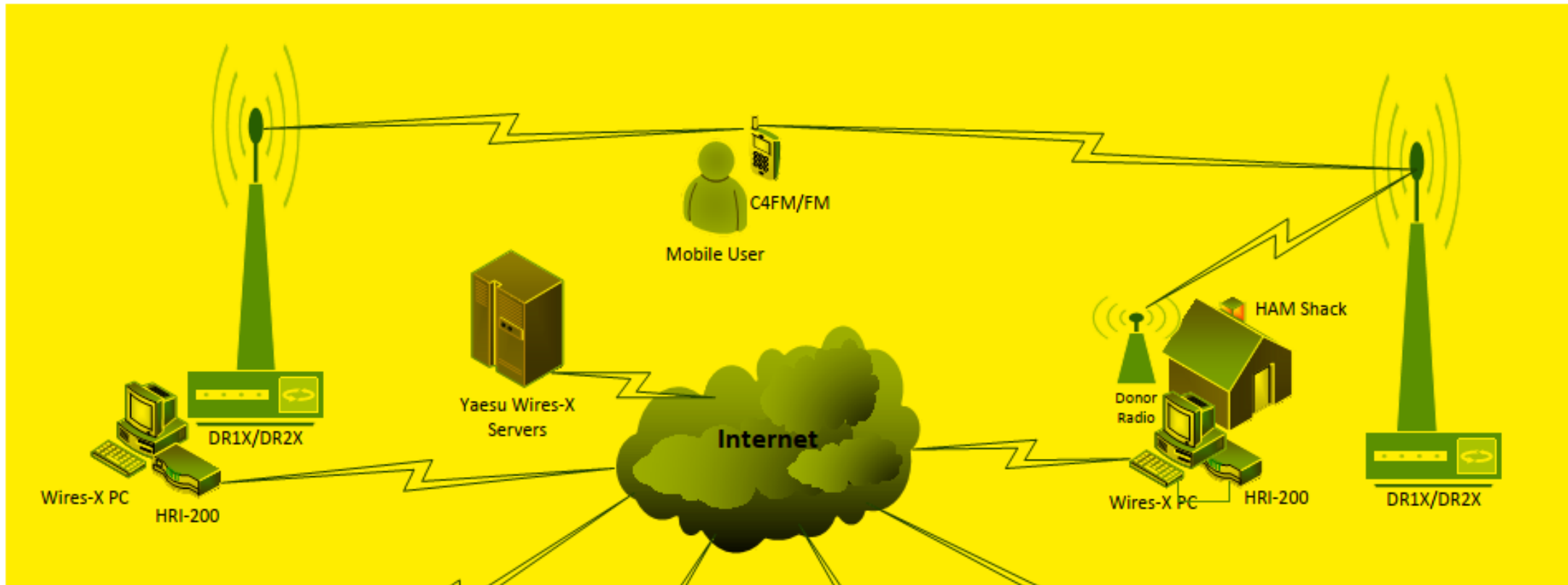
Expose

Expose participants to the difference between WIRES-X and FCS/YSF/XLX reflectors



New England Fusion Group
Wires-X Mapping Diagram
www.nefg.us





Why through a repeater?

Community



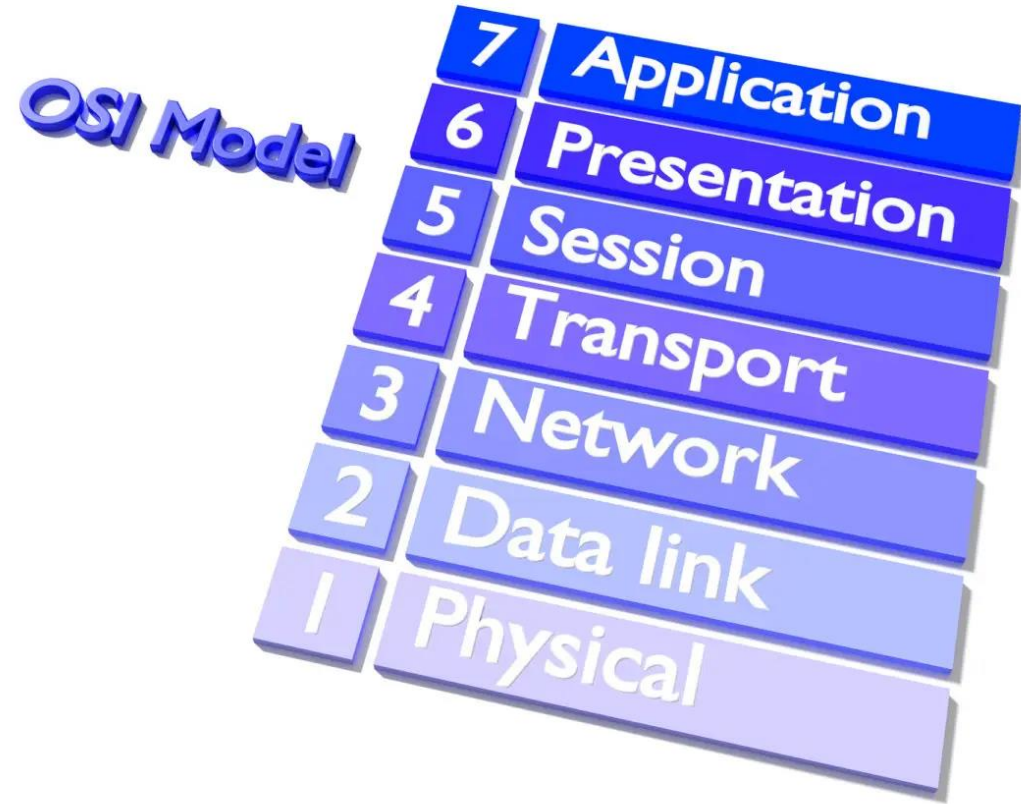
Your own
Node?

HRI-200 Yay or Nay?

A Node Radio is required
(sometimes called “donor radio”)

**ONLY FTM-100/200/300/400/500
mobiles or FT-2/3/5 HTs suffice**

**FT-991/A; FT-70D; FTM-7250
canNOT serve as a node radio**



Open
Systems
Interconnect
(OSI) model

A WIRES-X Mental Model

Applications- messaging incld EMG, images, QSLs

WIRES-X “Command Mode”- Control the node connected to a repeater you are using

Yaesu System Fusion- Automatic Mode Selection (AMS)

C4FM- ~“transport layer” Voice comms (DN & DW)

RF and Internet- ~ “physical, data link, network layers”

Good Operating Practices for Fusion Repeaters and Nodes.-Odis Carroll W4IOD

- <https://youtu.be/JHE-SFd-LhA>



SEARCH COPY OR ADD THE DOCUMENT TO ANYTIME ANY COMPUTER DEVICE

STATION IDENTIFICATION

Stations should identify themselves using their FCC assigned Callsign upon:

- Initially transmitting on the repeater or node then identify with your Callsign every 10 minutes thereafter, keeping in mind the nodes and repeaters on the WIRES X Network are a mix of analog and digital stations and some amateur operators are visually impaired.
- When you end a QSO, use your Callsign to sign off.

W4IOD - COMBIN 8/11/2021



Do You need a WIRES-X Connection?

- Join an active discussion on the repeater?
- Announce you are monitoring/listening in the WIRES-X Room to which the Repeater's Control Node is already connected?
- Connect the Repeater's Control Node to a WIRES-X Room other than the one to which it is currently connected ("Move the repeater")?

Using WIRES-X “Command Mode”

- WIRES-X protocol connection demonstration
- Only when node is not busy
- Connect to Repeater’s Control Node
- Search and Direct to WIRES-X Room by name or number
- Store five (5) Favorite WIRES-X Rooms in the radio (FT-991A/FT-70D)
- Go to a favorite WIRES-X Room
- Disconnect from Repeater’s Control Node

WIRES-X, Reflectors, Hotspots

- Your hotspot does NOT connect to a WIRES-X Room, unless it is listening to your radio which IS connected to a WIRES-X room.
- Your hotspot can connect to a reflector which is connected to another hotspot which is listening to a radio that's connected to a WIRES-X room.
- Hotspots used this way are creating a “bridge” between a WIRES-X room and a reflector (FCS, YSF, XLX, others). Yaesu doesn't like it, but it's not illegal and done properly (not easy) it has no negative consequences to the WIRES-X room.

WIRES-X/YSF

- Layers: RF/Internet; YSF=analog+digital; WIRES-X=Network of Rooms
- WIRES-X “Command Mode” not needed to speak on a repeater that’s already connected to the room you want to use
- Stay conscious of the COMMUNITY and adhere to good etiquette and good ham practice when using/commanding/steering/moving a repeater and participating in nets.

Thank you

- For follow-up questions, requests for assistance, or efforts at gratuitous harassment please write:

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Steve Davidson K3FZT

April 25, 2023

Further Information

- [Good Operating Practices for Fusion Repeaters and Nodes . . .](#)
- <https://wp.hamoperator.com/fusion/links/>
- <https://wp.hamoperator.com/mnwis/live-data/>
- <https://wp.hamoperator.com/mnwis/fusion-nets/>
- <https://k0rq.com/wires-x-vs-ysf-vs-fcs>

- Local WIRES-X Repeaters (not exhaustive)
 - MARC WB3JOE/R 444.050 Darby
 - MARC WB3JOE/R 445.675 Paoli
 - PHMC W3QV/R 444.800 Roxborough
 - PDRA K3PDR/R 447.475 Wyndmoor
 - PWA W3SK/R 448.225 Southampton
 - DVRA W2ZQ/R 442.650 West Trenton