FUSION, DMR, D-STAR

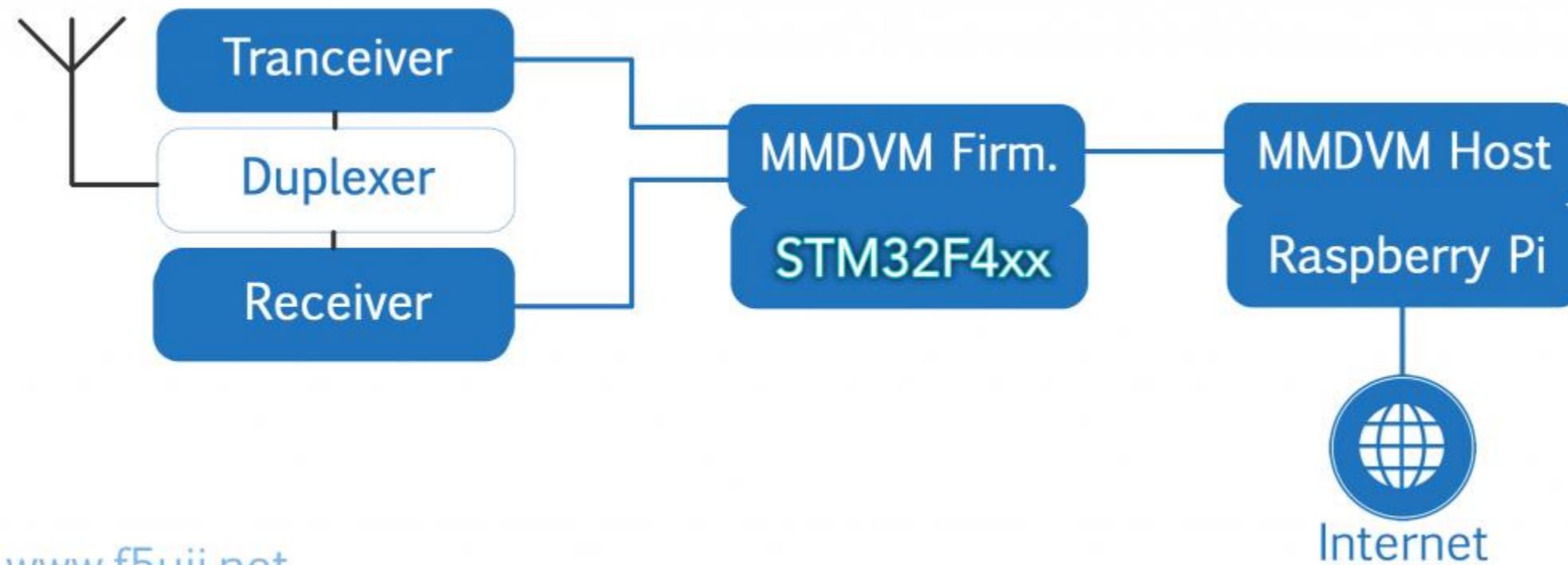# HOTSPOT COMMUNICATION

Digital Mode "Hotspots"

Even if you are not involved in or have not tried VHF /UHF digital modes beyond Packet and Winlink you have probably heard the buzz words of HOTSPOTS, OPEN SPOTS, JUMBO SPOTS, etc. Those words are generic words referring to a process of either extending the reach of various digital modes or providing INTEROPERABILITY between the various popular digital modes.

We are NOT going to discuss the relative merits of the various digital modes NOR how to set up a particular mode for a particular brand of radio.

We want to specifically address of how it is possible to use a device to allow communications between some specific popular digital modes. Those modes are DMR (Digital Mobile Radio - an open source code or a "flavor"of digital modes), Yaesu Fusion and D-Star (Proprietary modes). More specifically we will explain how, wherever you are (as long as you have a way to get internet service) you can call into a location that ties two modes together (DMR and Fusion) and, regardless of what "flavor" of the three popular modes, you can still communicate to a common "Room". This is a Fusion term that makes more generic sense than the descriptions used by the other modes (ie: enclosed section of a building designed for specific purpose).

Having said all that let's get down to the heart of our discussion, ie: How in the dickens to you do all that.

The specific hotspots we are going to discuss are based around a magic board called an MMDVM (Multiple Mode Digital Voice Modem). This is a basic block diagram of what it is.
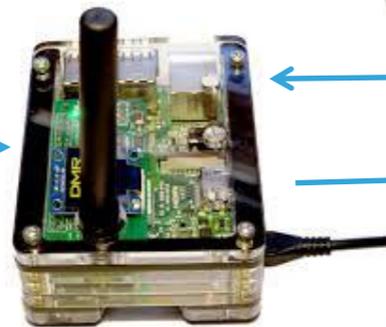
www.f5uii.net

It can be programmed via Pi-Star (free) software to operate in and out or translate between any two of the following modes: DSTAR, DMR, YSF, P25, NXDN, YSF2DMR, YSF2NXDN, YSF2P25, DMR2YSF, DMR2NCDN and POCSAG. The board also contains an rf section that can operate as simplex or duplex, and interfaces to a small Raspberry Pi board. The Raspberry Pi provides the interface WiFi to an internet source (home WiFi connection or Cellphone hotspot).

DMR

D-STAR

HOT
SPOT

YAESU
FUSION

INTERNET

FUSION ROOMS

Rag chew

YSF REFLECTOR
US DAVIS UTAH

BRIDGE

DMR TALK
GROUP 31492
DAVIS

3149 UTAH

DMR TALK
GROUPS

INTERNET

FUSION CAPABLE REPEATER

FUSION CAPABLE REPEATER

YAESU 446.500 Digital FT-70D

YAESU 446.500 Digital FT-70D

ROOMS