
FlexRadio
Software
Defined
Radio

SDR Technology and User Interfaces at FlexRadio

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FlexRadio

Agenda

- User Interfaces
- Digital Modes
- Remote Operation
- Demo!

How do you interact with your radio?

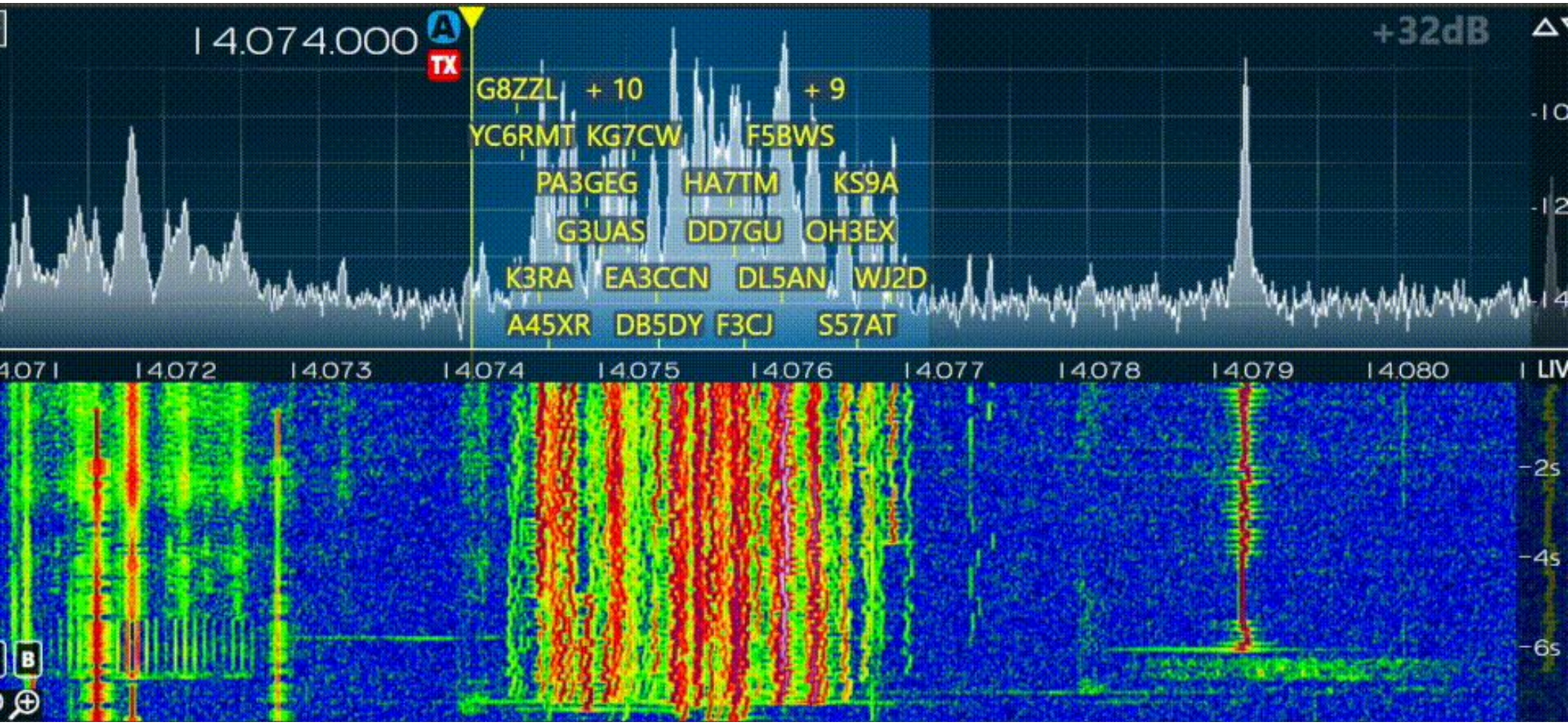
FlexRadio


14.195.000
14.200.000

FlexRadio - Simplicity!

“Every time we add an option checkbox, an angel loses its wings”

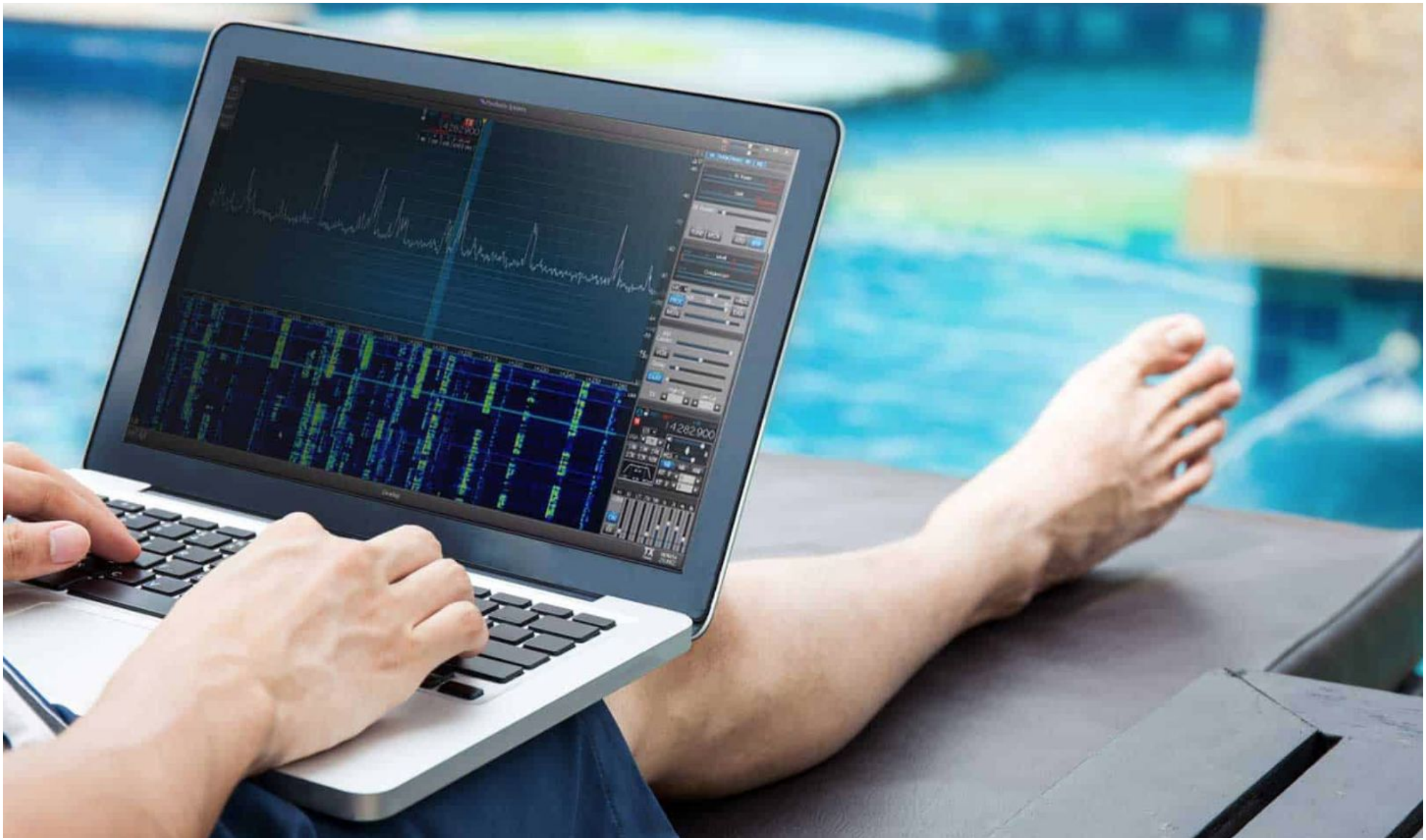

FlexRadio Systems
Software Defined Radios
Maestro
A
RX_B ANT1
TX
MENU
B
RX_B ANT1
TX
USB 2.7 NB NR ANF QSK AGC-M DIV
14.304.000
RF PWR
50
USB 2.7 NB NR ANF QSK AGC-M DIV
14.340.000
WNB +40dB
LIVE
DISPLAY
METERS
A
AF
AGCT
SQL
LOW
SHIFT
HIGH
WIDTH
SOLO
BW SELECT
B
AF
AGCT
SQL
LOW
SHIFT
HIGH
WIDTH
SOLO
BW SELECT
MOX
TUNE
ATU
BYPASS
MIC
SPEED
PWR
F1
F4
F2
F5
F3
F6
TX MENU
RX
RIT
TX
XIT
A·B
A>>B
RX
RIT
TX
XIT
A
STEP
B
A
LOCK
B
A MENU/CLR
B MENU/CLR


14.074.000
A
TX
+32dB
G8ZZL + 10 + 9
YC6RMT KG7CW F5BWS
PA3GEG HA7TM KS9A
G3UAS DD7GU OH3EX
K3RA EA3CCN DL5AN WJ2D
A45XR DB5DY F3CJ S57AT
-10
-12
-14
14.071
14.072
14.073
14.074
14.075
14.076
14.077
14.078
14.079
14.080
LIV
-2s
-4s
-6s
B

Client-Server Architecture

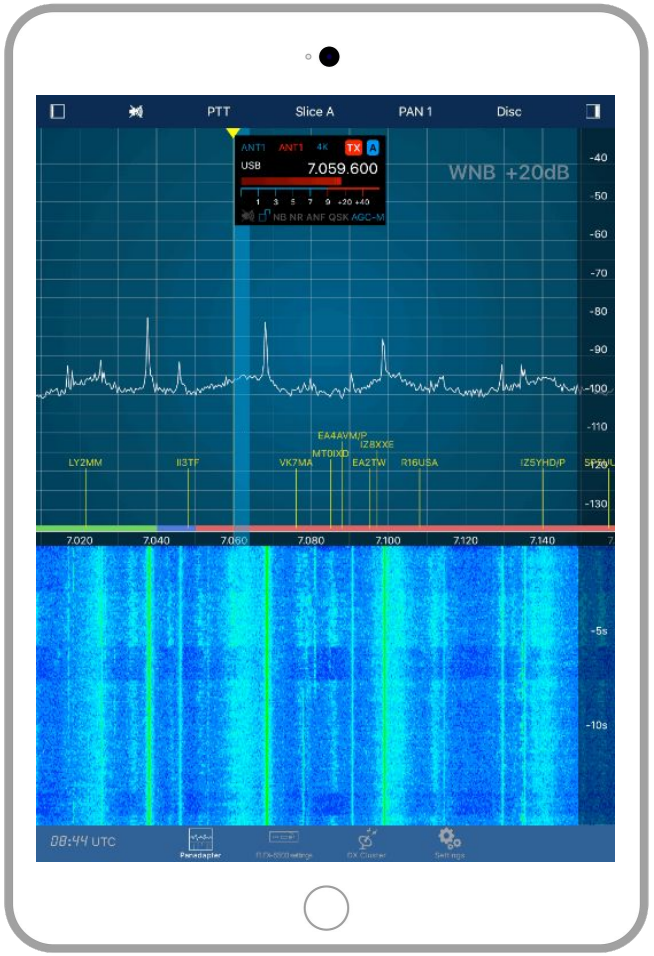
Flex-6000 Client-Server Architecture

- Radio becomes a *server*
- Radio does the heavy lifting, use *thin clients* to control
- Designed with *networking* in mind
- *Open API* - anyone build their own *App* that controls the radio




FlexRadio Systems
Maestro

SmartSDR for iOS



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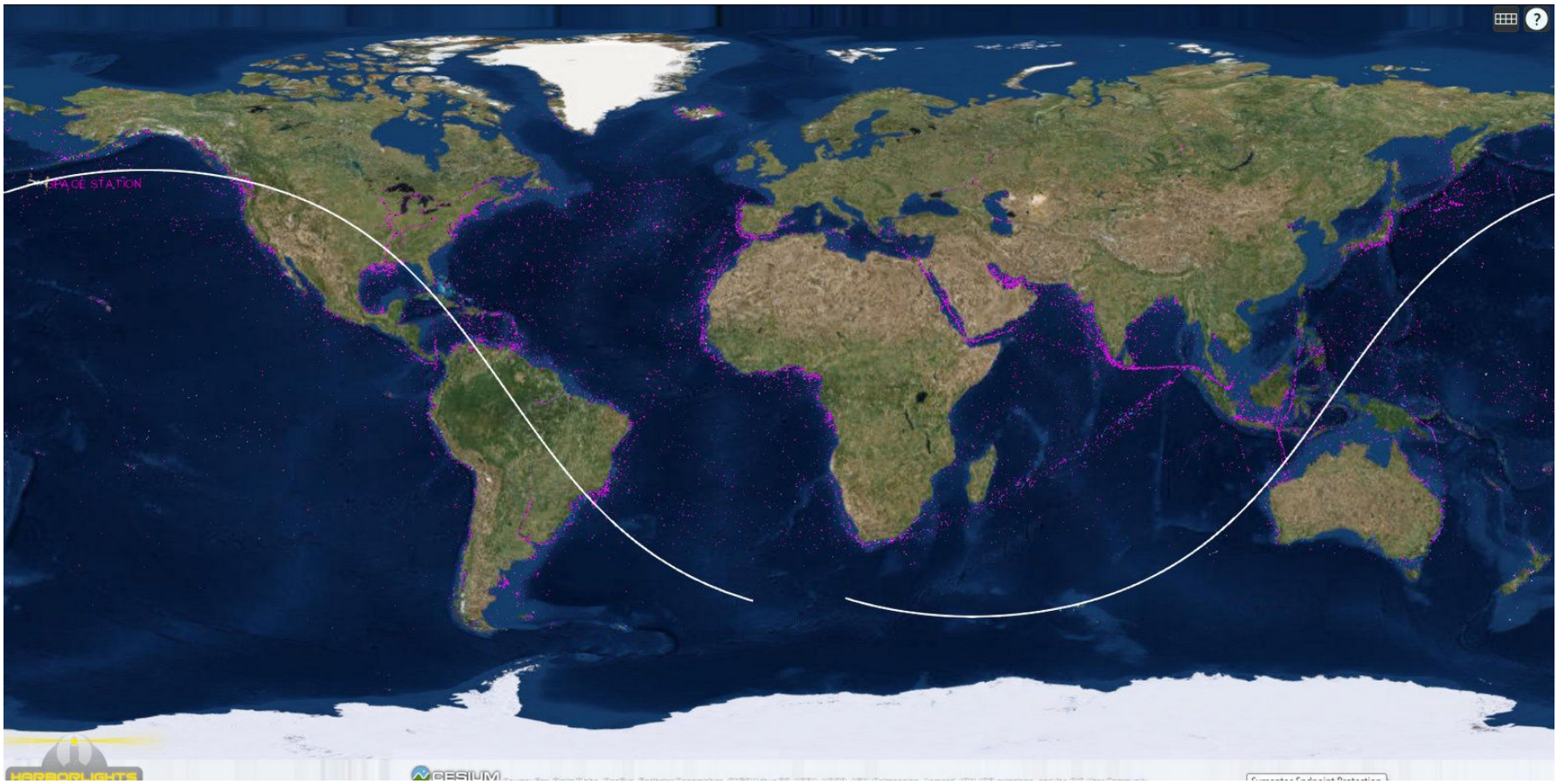
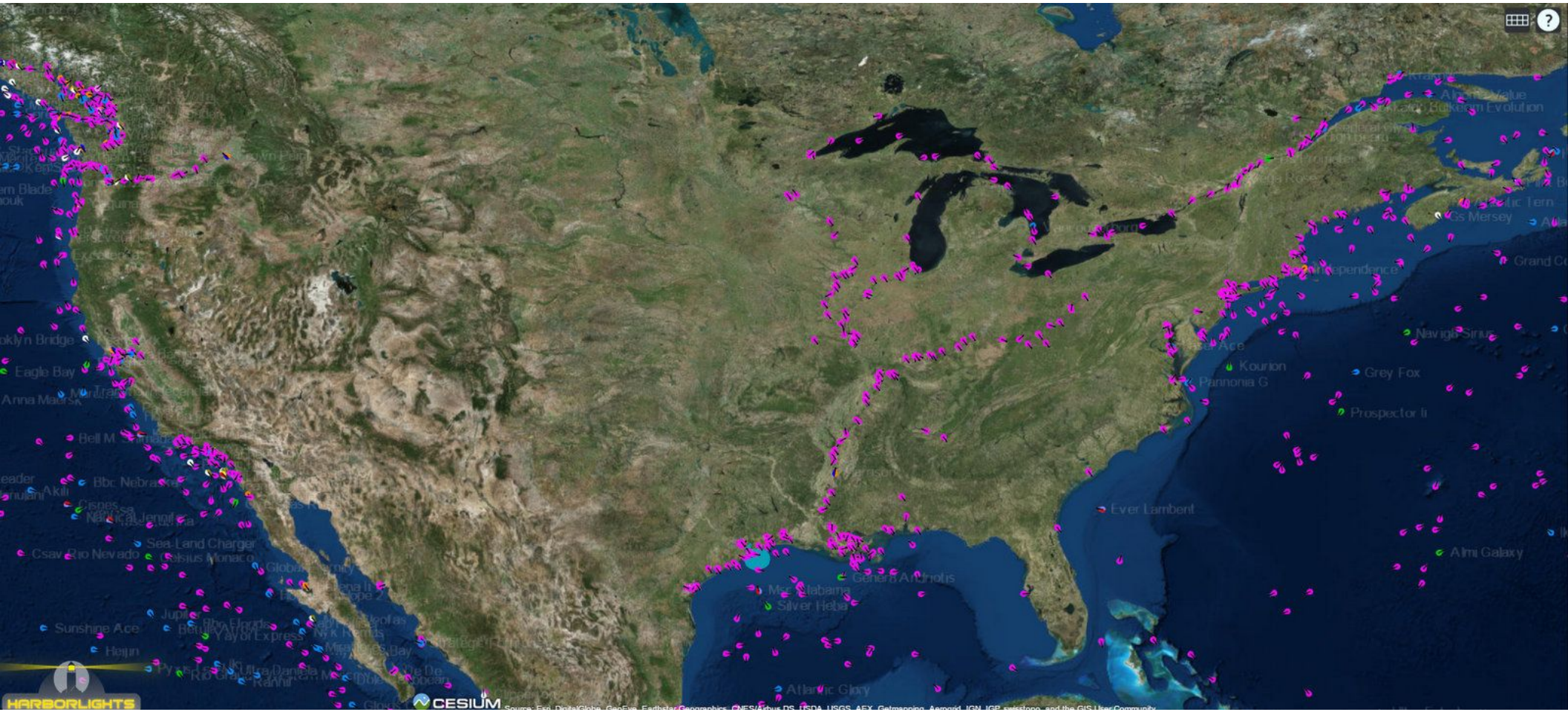
JJRadio by KE5AL

FlexRadio

GLASS (GLobal AIS on Space Station)

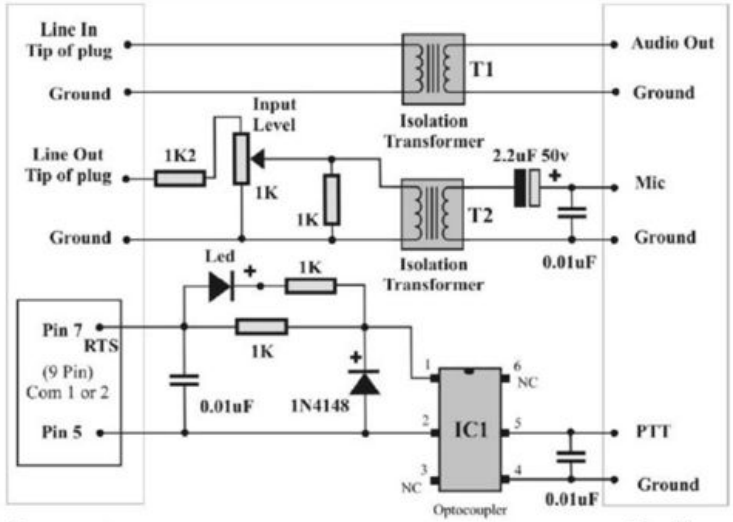



Eagle Bay
Anna Maersk
Bell M
Bbc Nebraska
Akili
Sea-Land Charger
Csav Rio Nevado
Sunshine Ace
Hejun
Ever Lambent
Kourion
Pannonia G
Grey Fox
Prospector Ii
Almi Galaxy
Silver Heba
Atlantic Glory
HARBORLIGHTS
CESIUM

Digital Modes

FlexRadio

Digital Modes



Circuit 1

Components for Circuit 1

3 x 1k ¼ watt resistors - 1 x 1.2k ¼ watt resistors
1 x 1k Potentiometer lin – 1 x 2.2uF 50v capacitor - 3 x 0.01uF capacitors
2 x (T1 & T2) 600 ohm transformers type 9000 RS Number 208-822
1 x IC1 optocoupler 4N25 RS Number 597-289
1 x Red LED (High sensitivity type) - 1 x Diode 1N4148 - 2 x 3.5mm Stereo plugs
1 x 9 Pin D plug (Com port 1 or 2) & cover
Screened cable - Project Box

FlexRadio

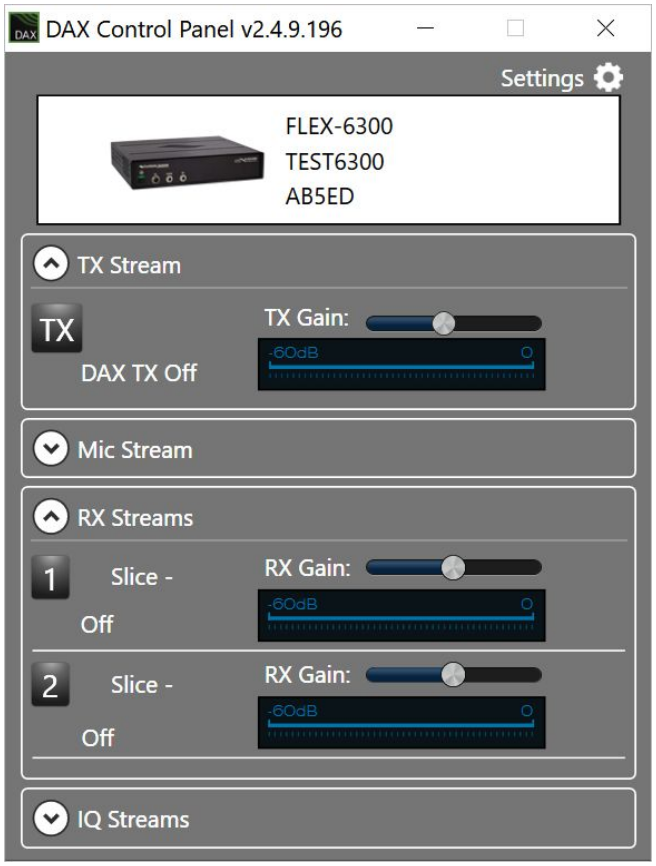
Digital Modes with FlexRadio 6000 Series

ETHERNET

FlexRadio

SmartSDR DAX

- ‘Virtual’ Sound Cards
- Audio over the network
- No additional cables!



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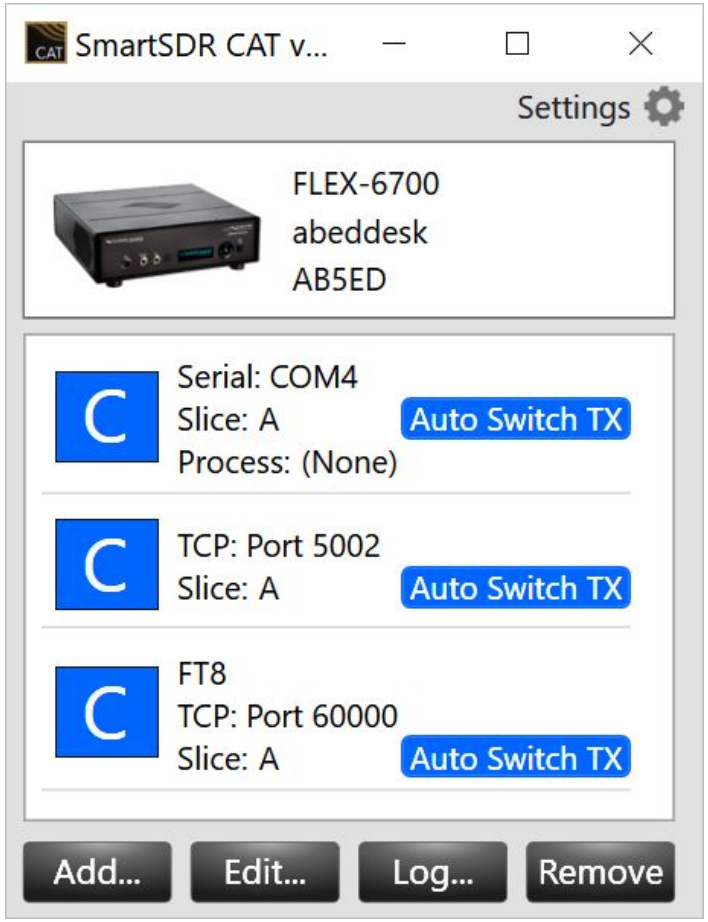
SmartSDR CAT

- ‘Virtual’ Serial Ports
- Serial to Network Translation
- OTRSP, CAT, PTT, Winkey Emulation



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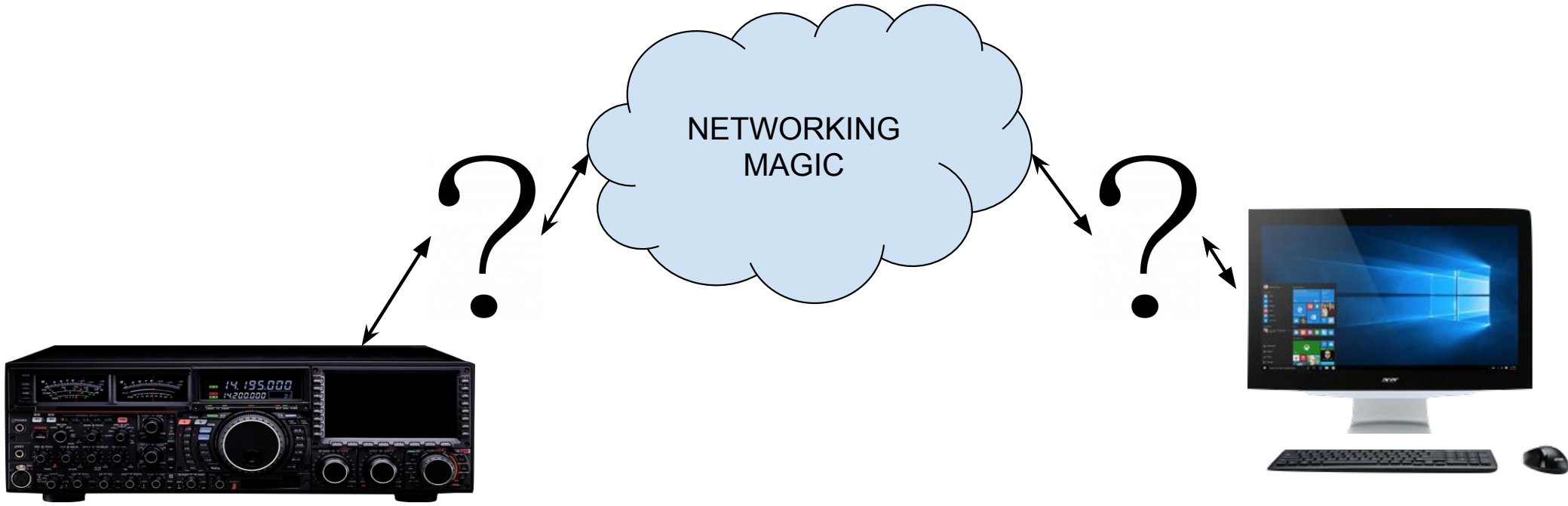
Remote Operation



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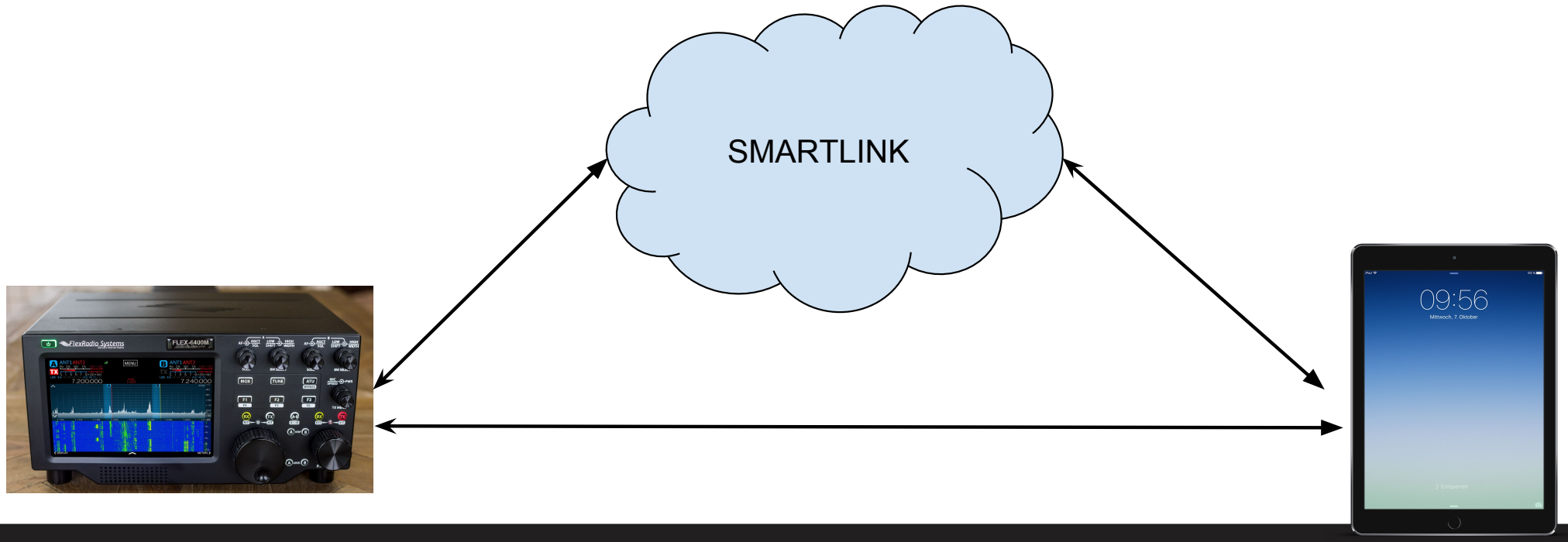
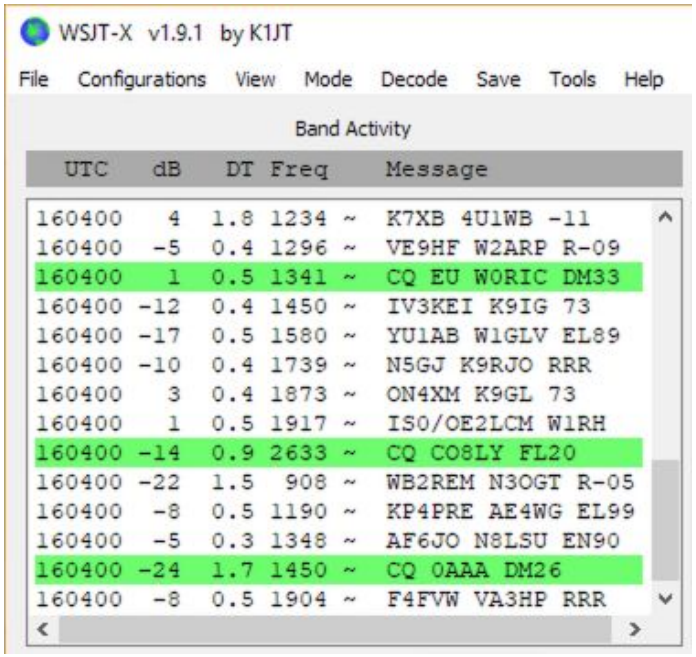
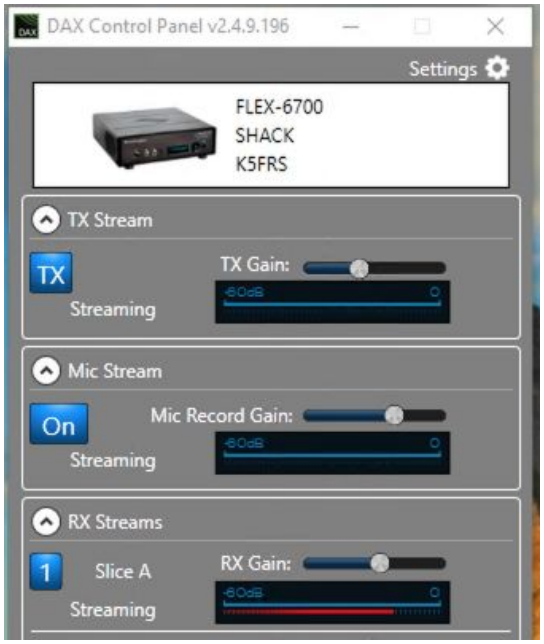
Remote Operation with SmartLink



Remote Operation - Digital Modes





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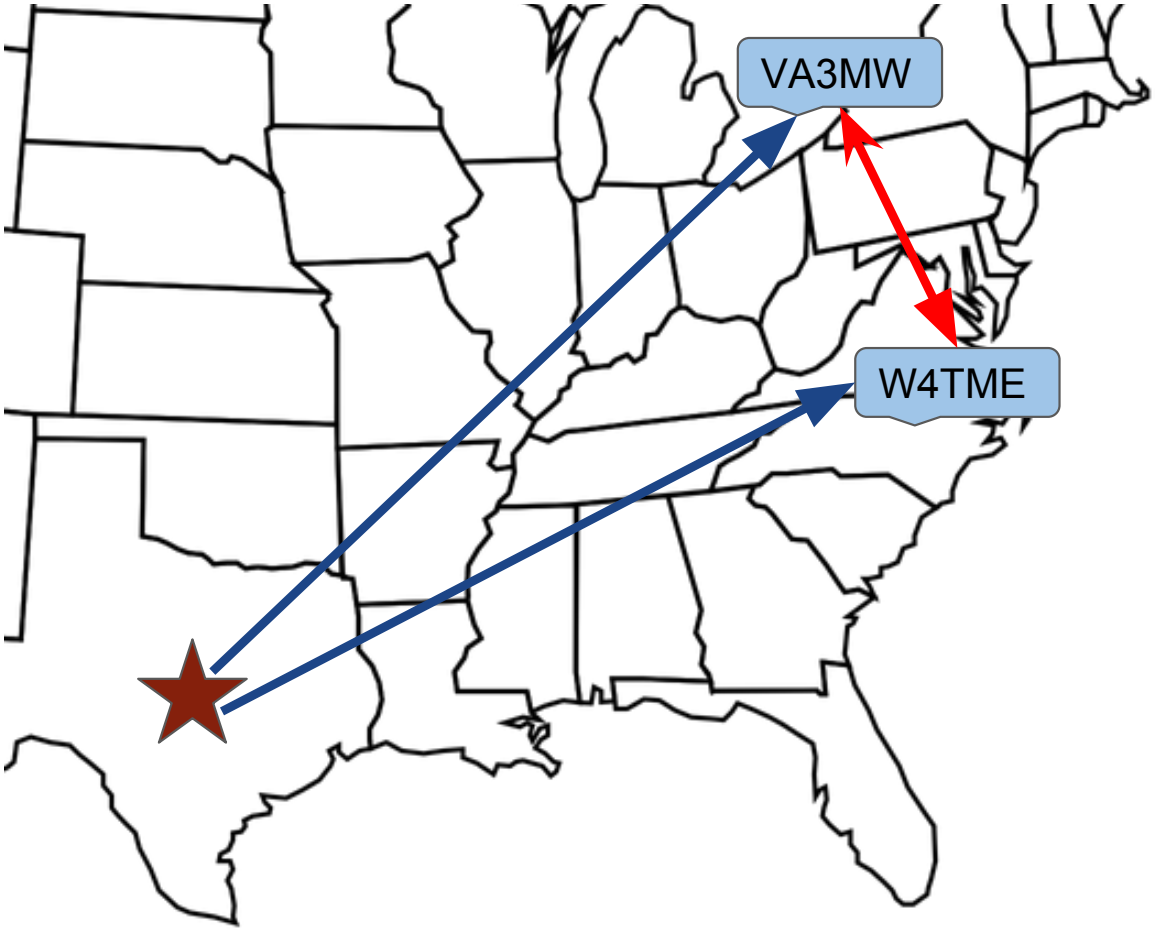
DEMO

Remote FT8 Stations



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Q/A