D-Star

Cutting Edge Technology for the New Millennium

What Is D-Star

- Icom’s implementation of open standard for FM digital voice and data communications
- Consists of radios, repeaters, linking hardware, and (optional) gateway hardware
- 2 Meter, 440 MHz and 1.2 GHz

Key Benefits

- Digital quality voice communication simplex or via repeater
- ISDN rate data transmission simplex or via repeater (1.2 GHz only)
- Alphanumeric call sign ID and call sign squelch (can be bypassed for emergency traffic)
- Internet linking
- Wireless internet access via repeater

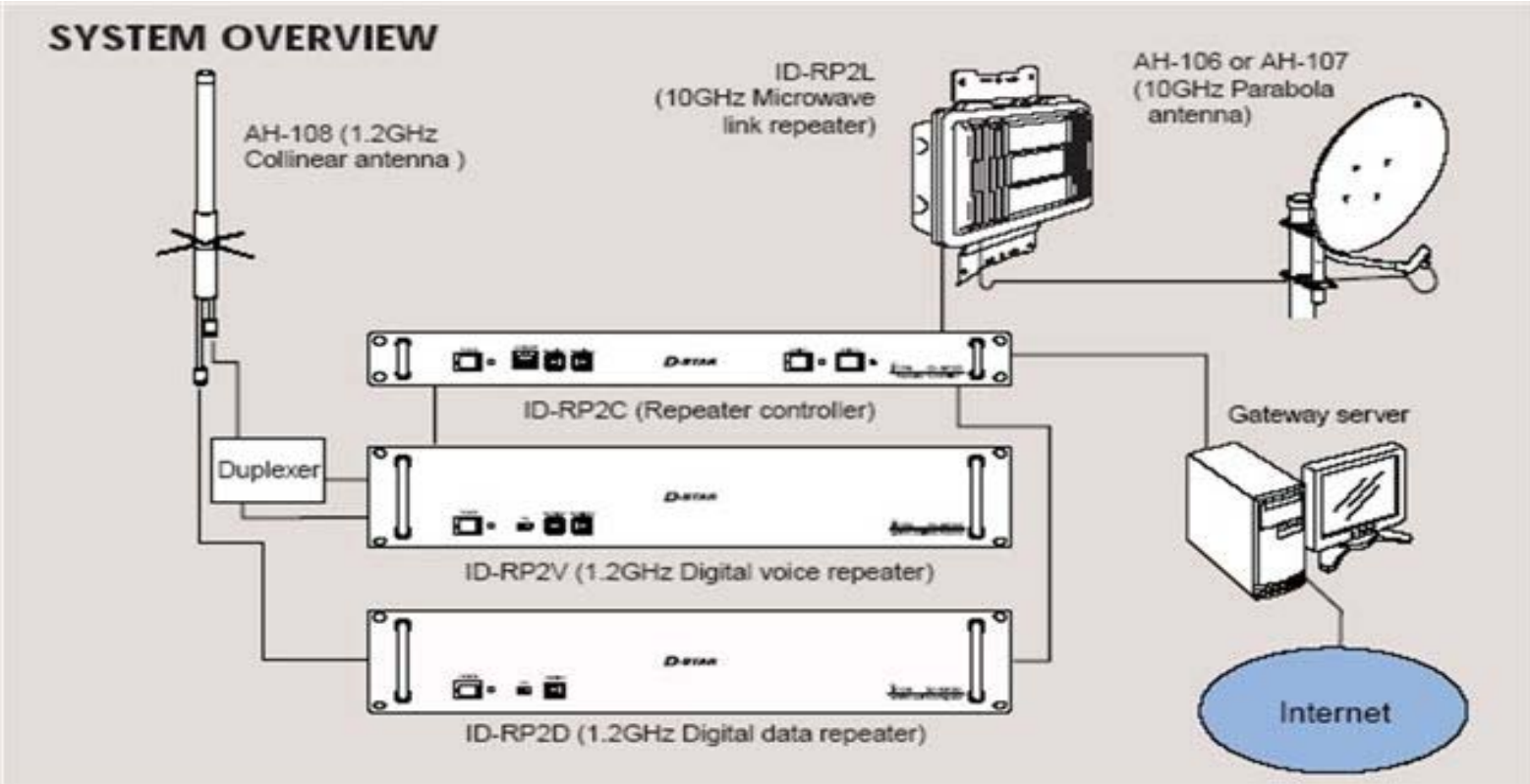
Additional Benefits

- Radios work in both digital and analog modes and dual banders are available
- Lower bandwidth requirements (6.25 KHz vs. 10 KHz)
- Digital messaging in Digital Voice mode (i.e., works on 2 M, 440 or 1.2 GHz)
- Location services (e.g., D-PRS/APRS)

Additional Benefits

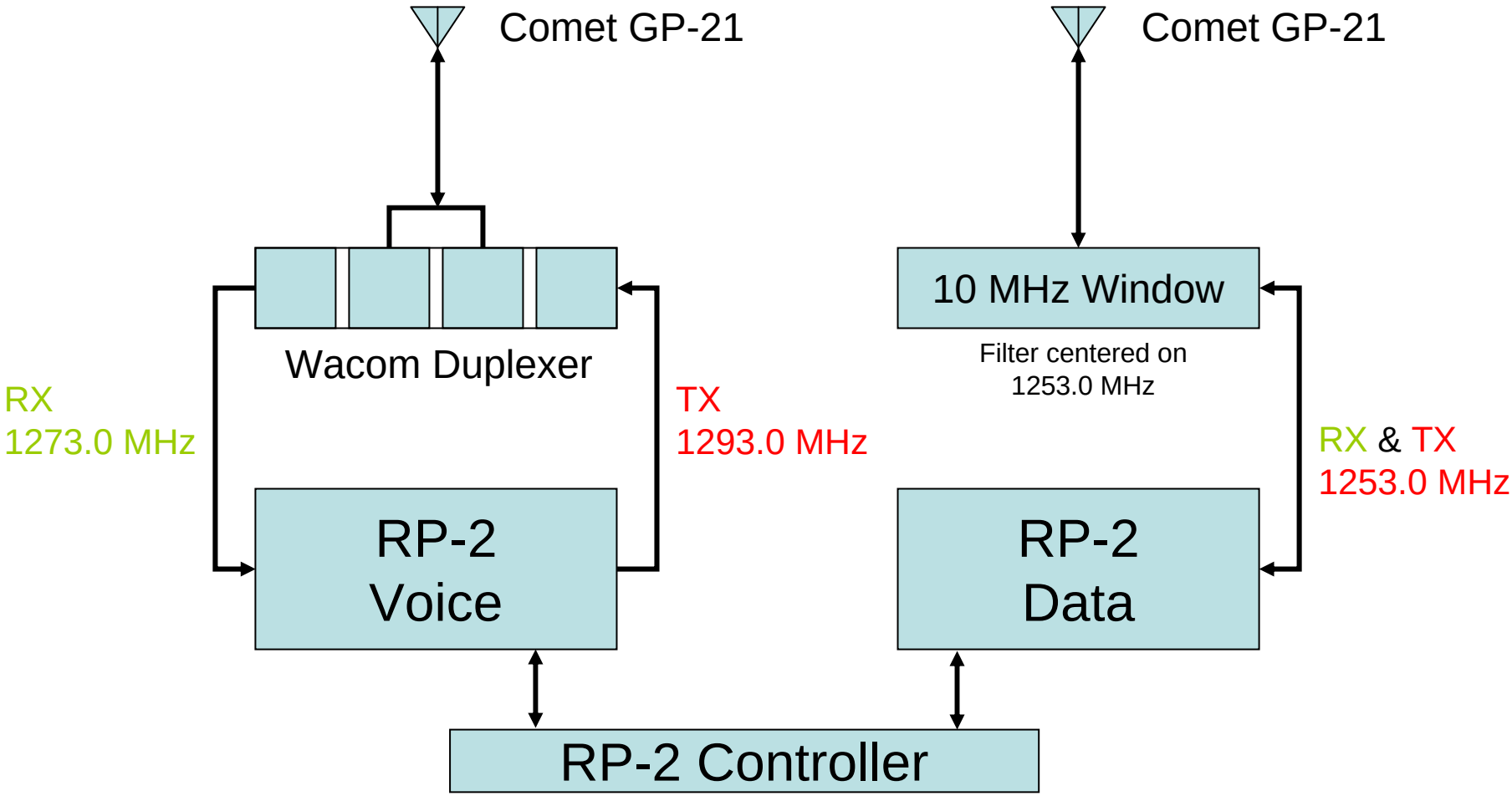
- Optional Gateway allows IRLP-like linking with other D-Star systems via internet
- Potential interoperability with city/county agencies and EMCOMM
- IP compatible, open standard/extensible

RP-2 Schematic



Graphic courtesy of Texas Interconnect

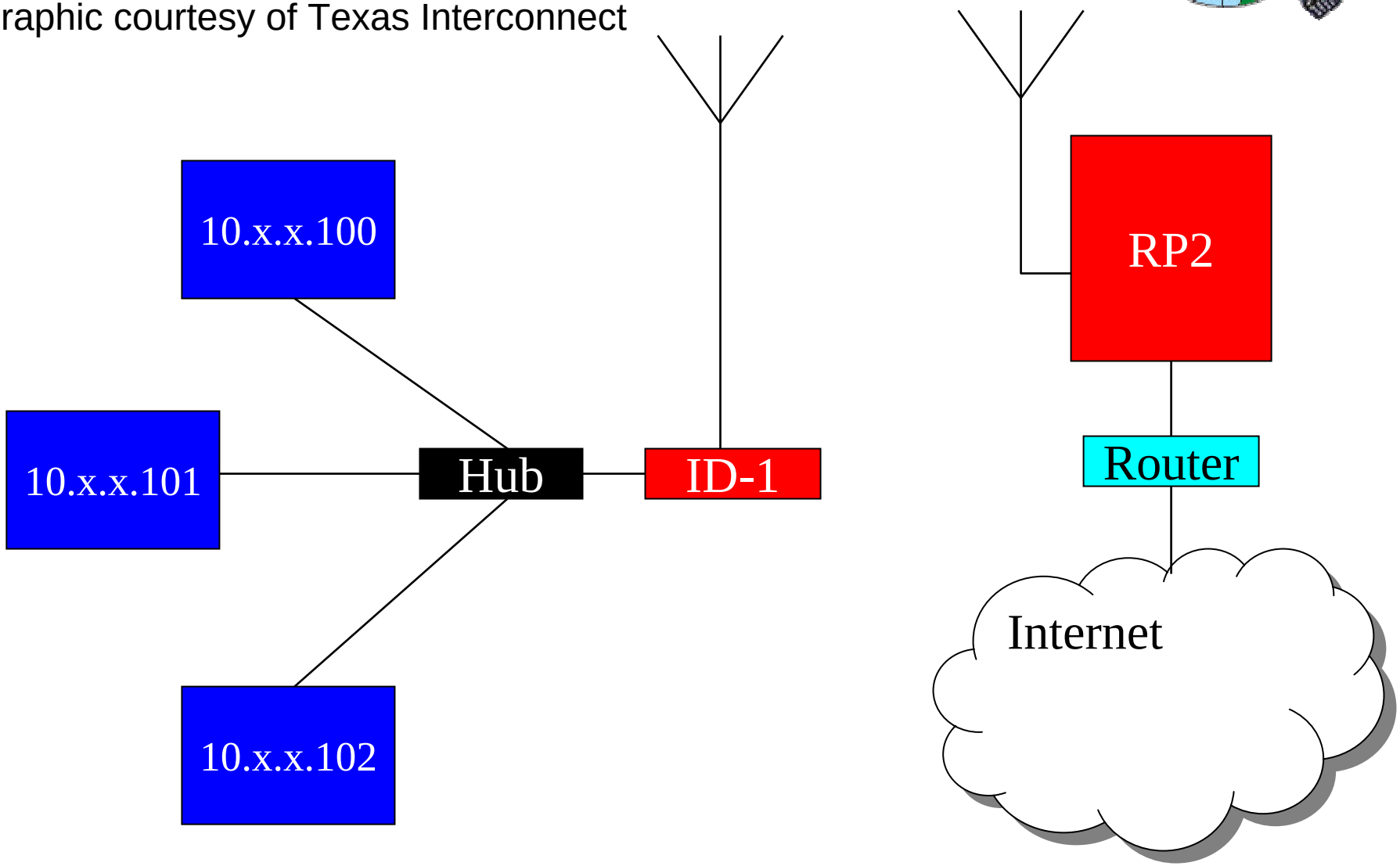
Texas Interconnect
1.2 GHz Implementation



Graphic courtesy of Texas Interconnect

Internet Connectivity

Graphic courtesy of Texas Interconnect



Radios Now Advertised

- **ID-1** 1.2 GHz Mobile (10 Watts, High Speed Digital Data, Digital Voice, Analog Voice)
- **ID-800** 2M/440 Mobile (55 Watt VHF/50 Watt UHF Digital Voice and Data, Analog Voice
- **IC-2200H** 2M Mobile (65 Watt VHF Digital Voice and Data
- **IC-V82/U82** 2M/440 HT (Digital Voice and Data)

Challenges

- Getting coordinated pairs on 440 (may be able to allocate an existing pair)
- Negotiating funding for repeaters and space
- Getting the commitment necessary from interested members to build and tune systems to maximize performance