Innovation
Defines Our Future

DV4Server:

A stable, economical and scalable interconnection of different digital voice networks

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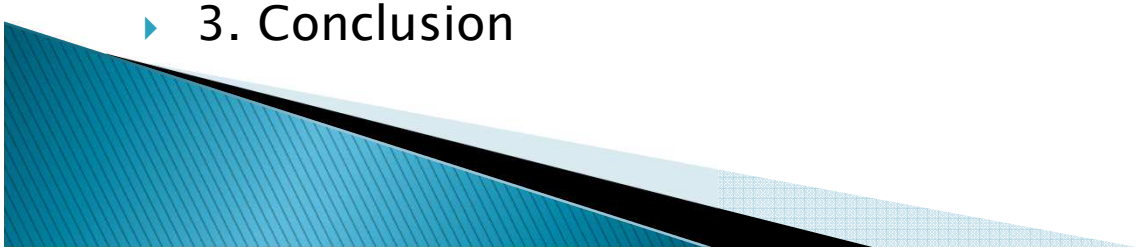
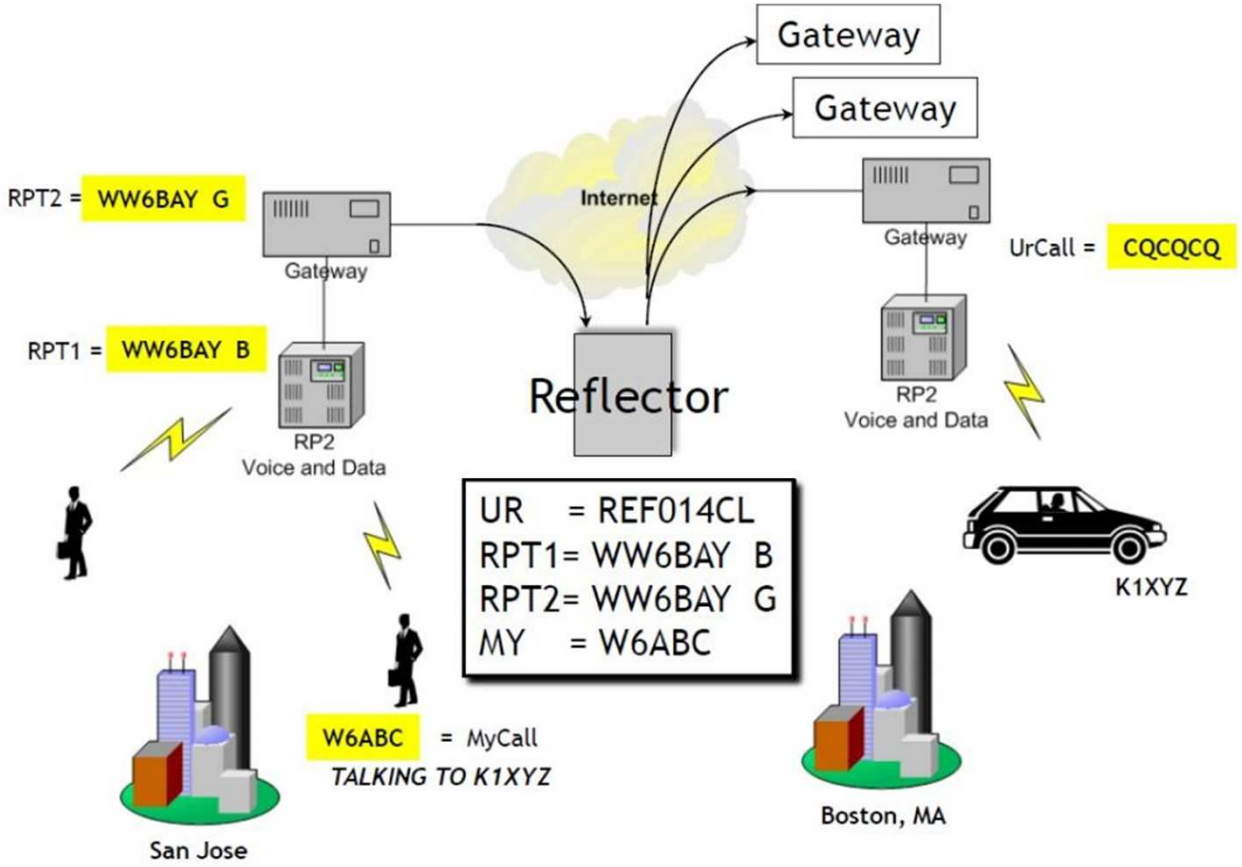
Agenda

- 1. basic architecture of a reflector system
- 1.1 currently used reflector systems in amateur radio
- 2. interconnection of different reflector systems
- 2.1 basic setup, network initiated
- 2.2. complex setup, user initiated
- 2.3. connection at the point of access (PoA)
- 3. Proposed Solution
- 3.1 Point of Access devices
- 2.1.1 DV4mini
- 2.1.2 DV4Server - concept
- 2.1.2.1 physical structure
- 2.1.2.2 software structure
- 2.1.2.3 implementation
- 2.1.2.4 common user interface
- 3. Conclusion



1.Basic architecture of a reflector system

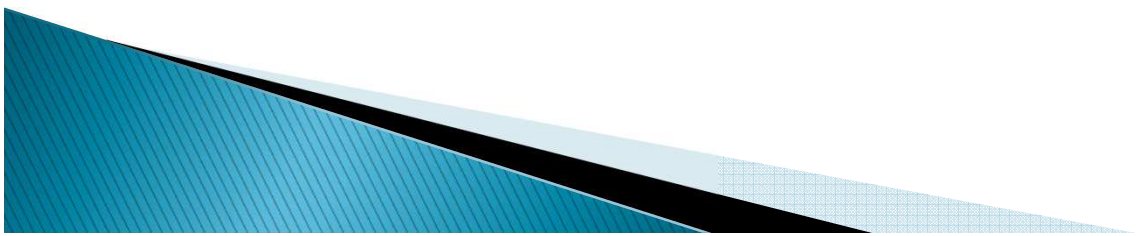


Slide courtesy George Zafiropoulos KJ6VU

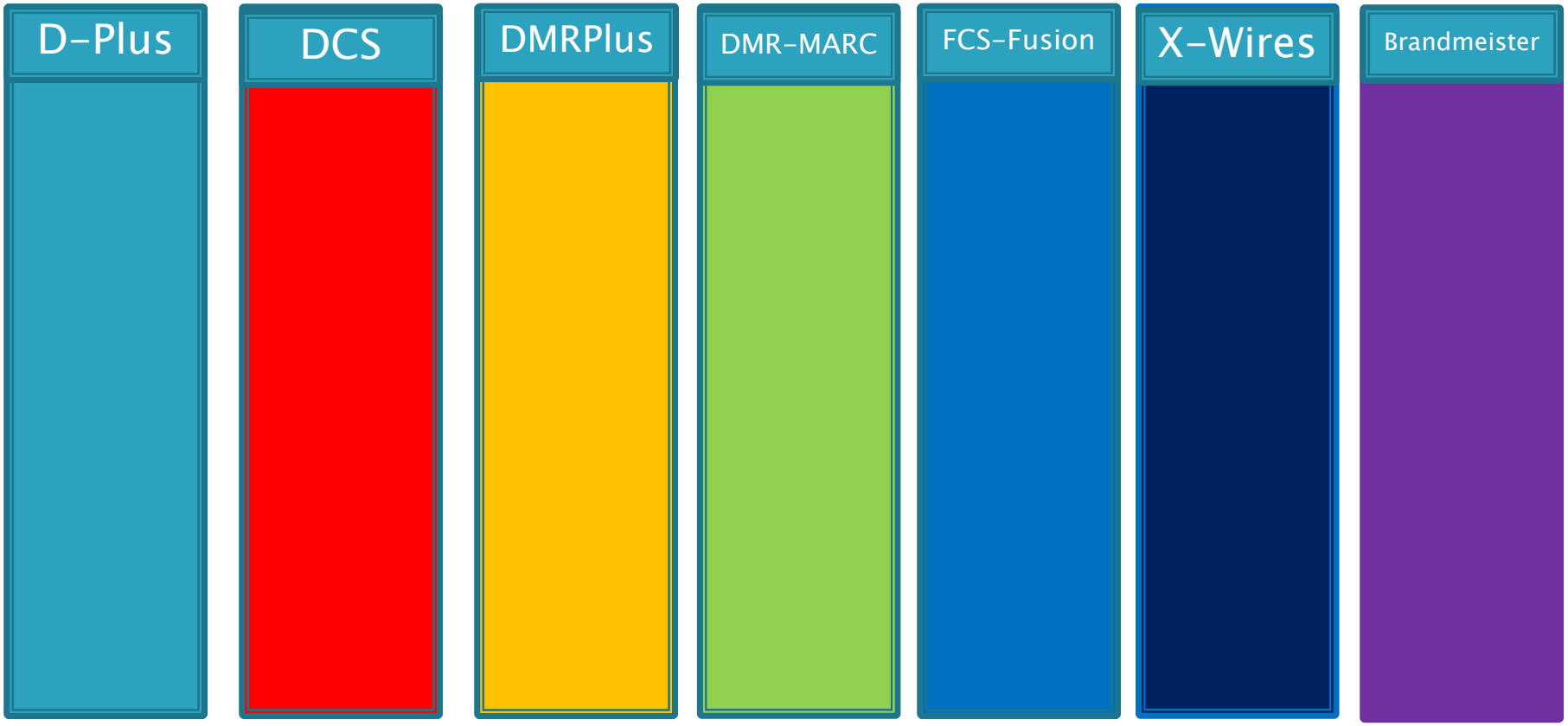
1.Basic architecture of a reflector system

- What defines a reflector system? (not the air interface)

1. Network protocol
2. Codec(s) used
3. Authentication
4. Routing
5. Features as GPS and texting



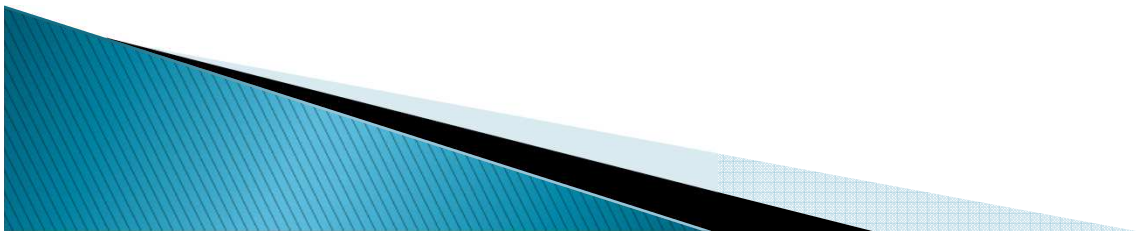
1.1 currently used reflector systems in amateur radio



and many more: XREF, P25, NXDN, dPMR…..

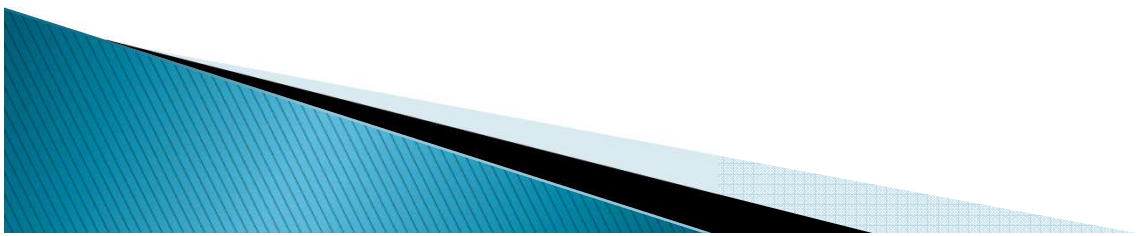
1.1 currently used reflector systems in amateur radio

- Challenge:
  - All these reflector systems are incompatible one way or the other
  - Many of these reflector systems have different authentication
  - Many of these reflector systems have different admin groups
  - The admins may or may not talk to each other
- Users however want to have freedom to roam these reflector systems as they please
- They do not communicate their actions with the admins
- A perfect recipe for disaster!



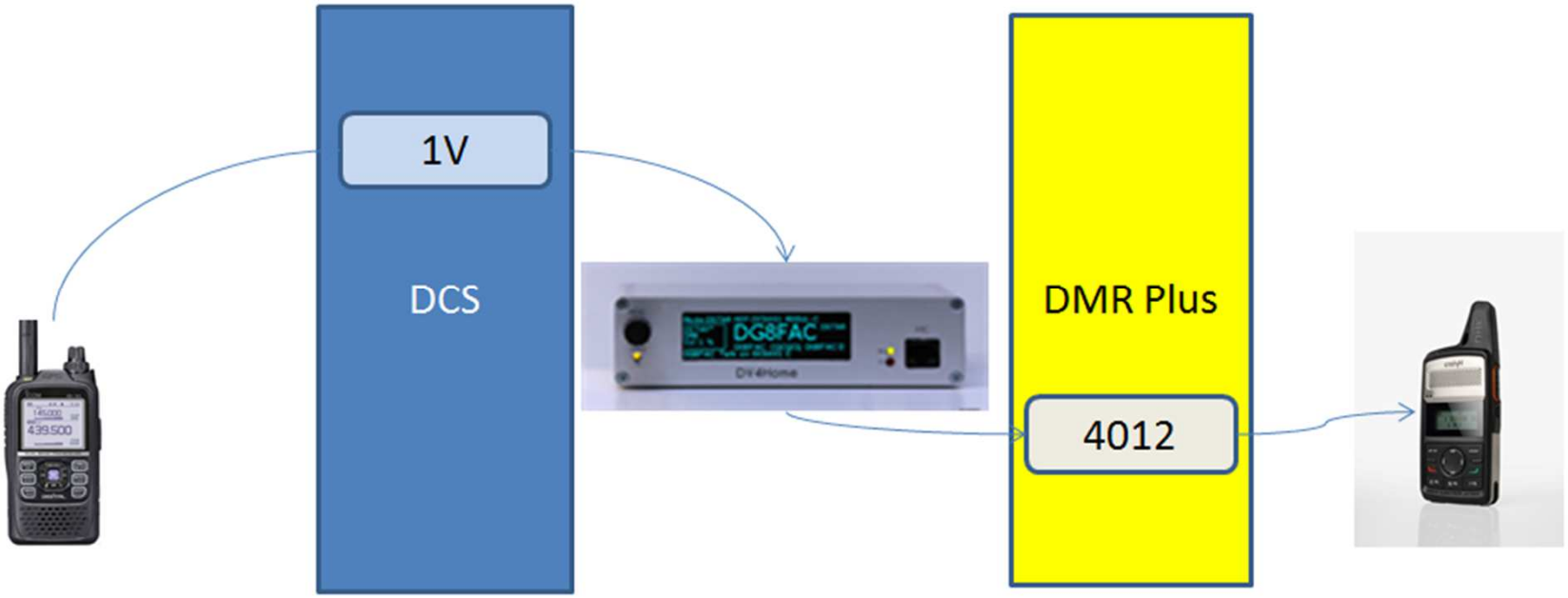
2. interconnection of different reflector systems

- How can we talk between reflector systems?
  - Shared rooms
  - Connected rooms between reflectors
  - Access different reflectors from an end point

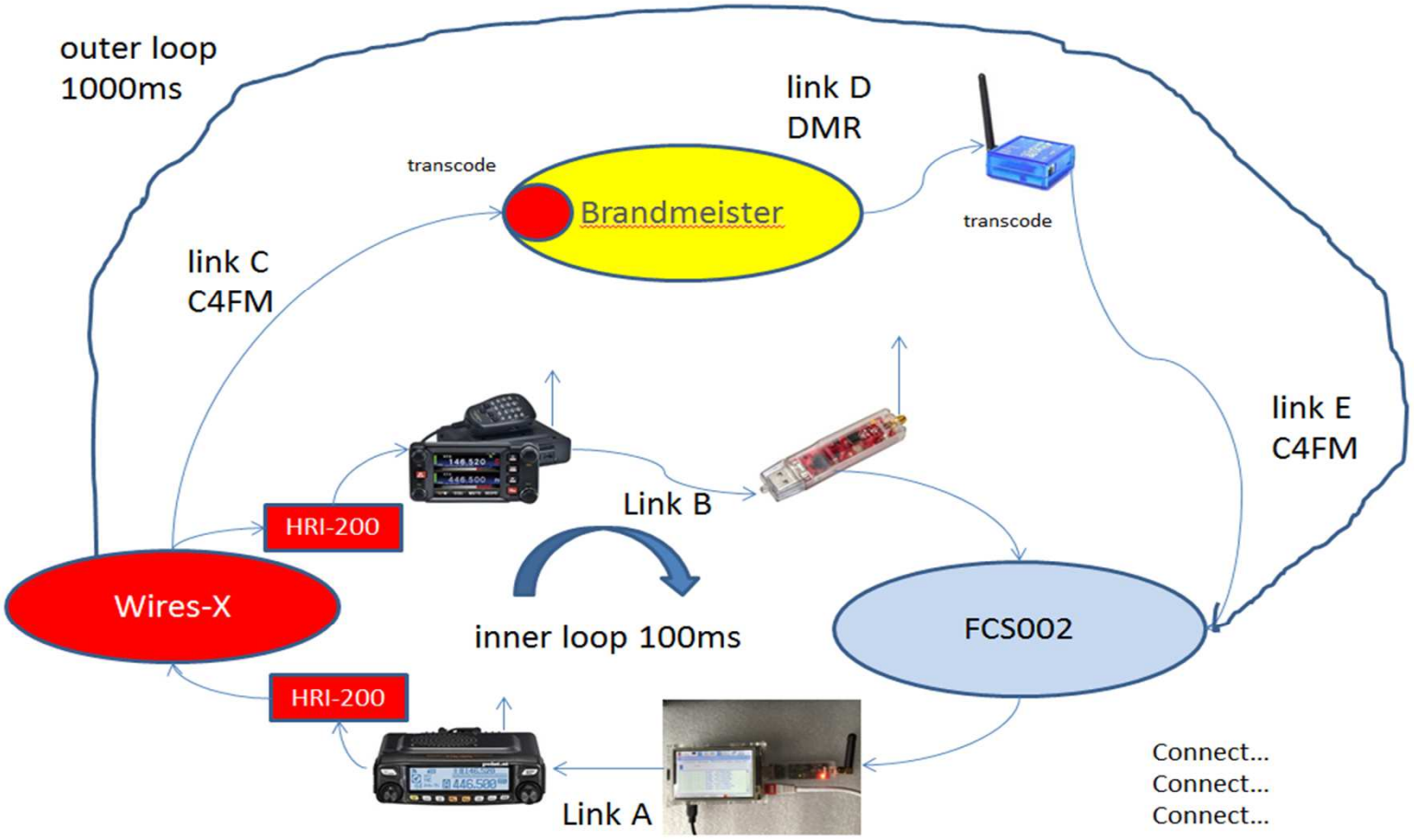


2.1 basic setup, network initiated

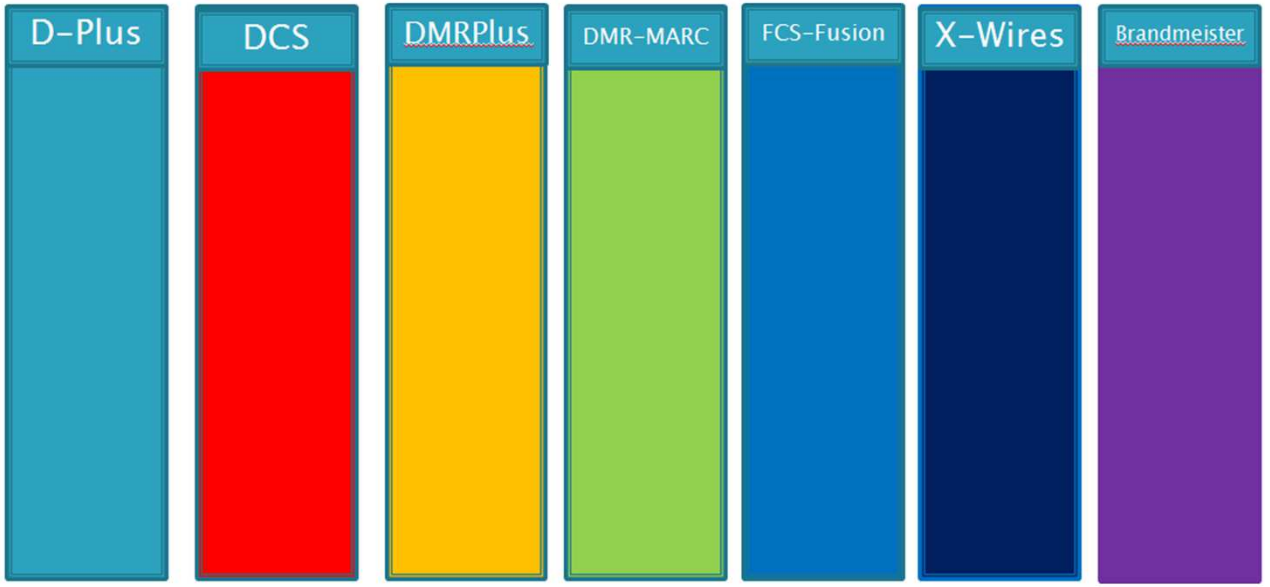
shared room



2.2. complex setup, user initiated

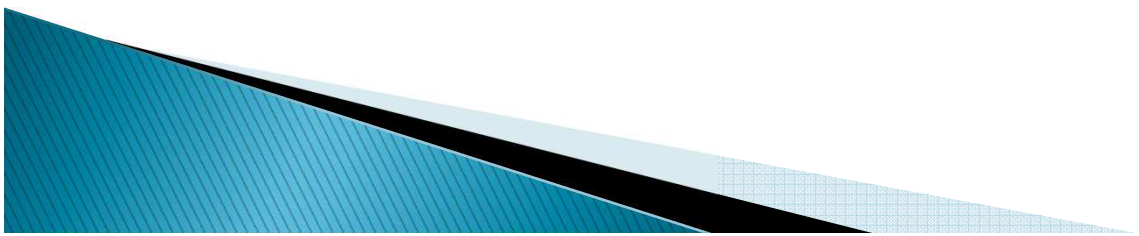


2.3. connection at the point of access (PoA)



3. Proposed Solution

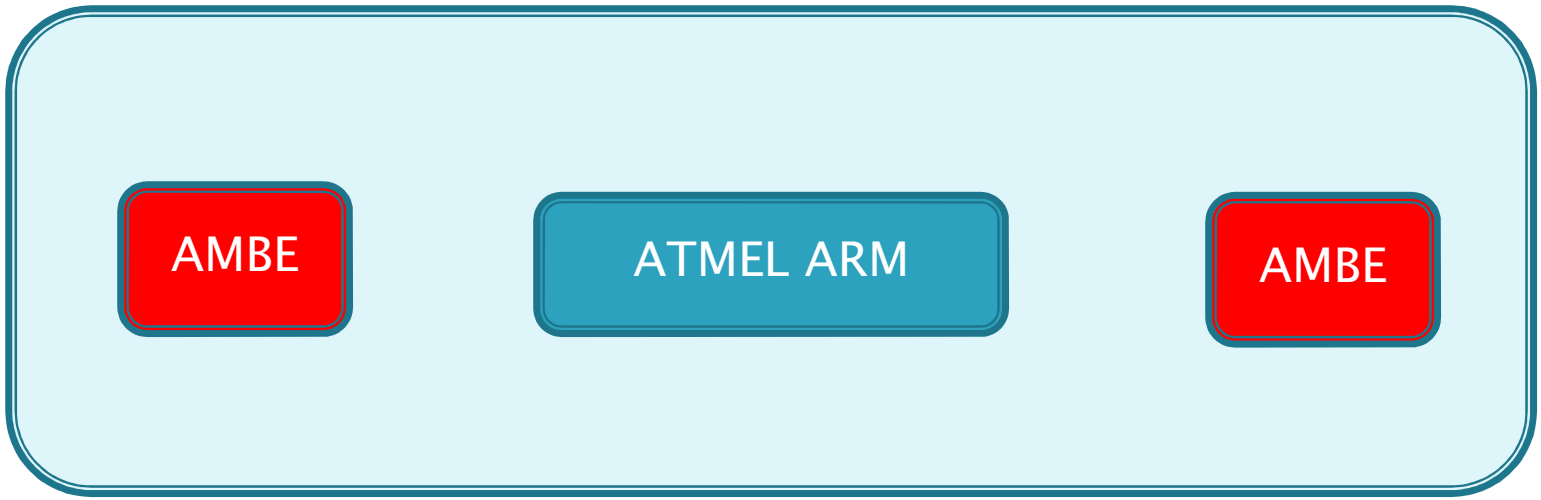
- How can we overcome this dilemma?



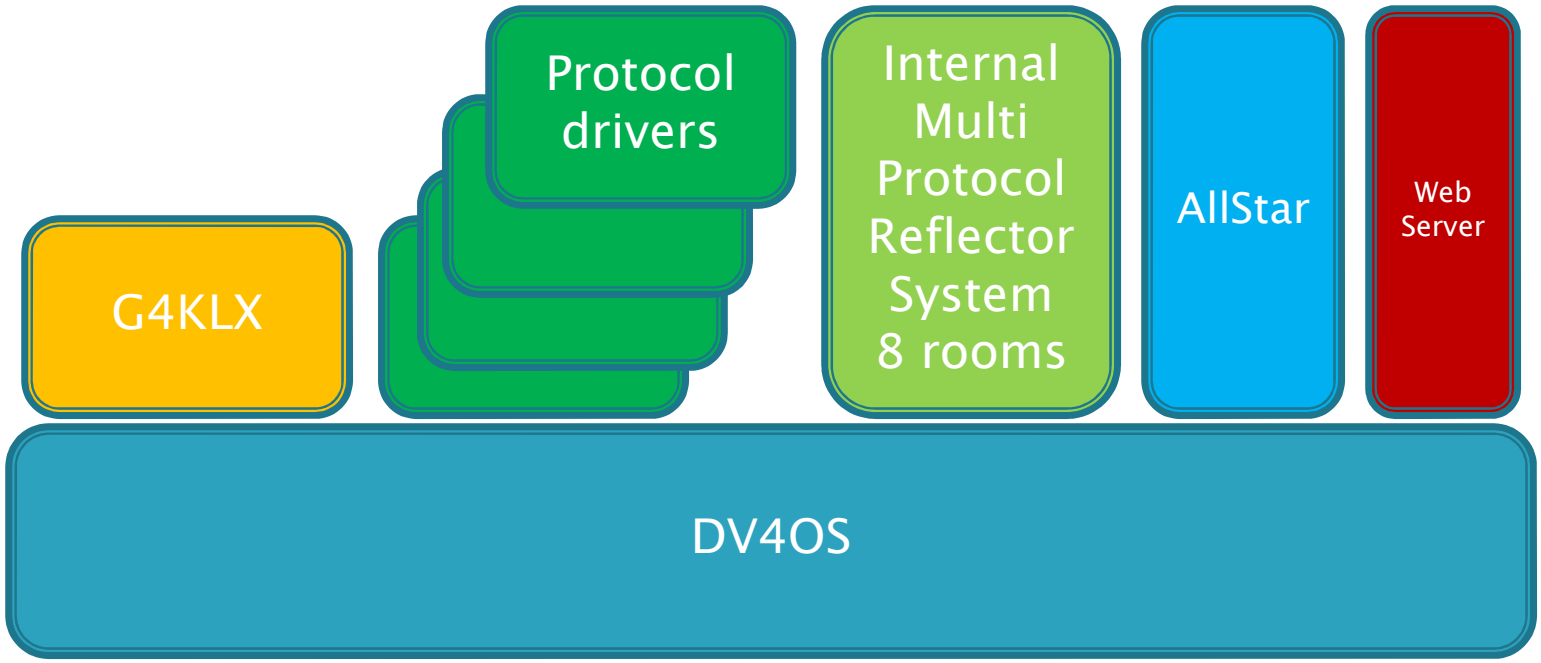
3.1 Point of Access devices

- DVAP
- DV Dongle
- SharkRF
- DV4mini
- DV4home
  - Etc.

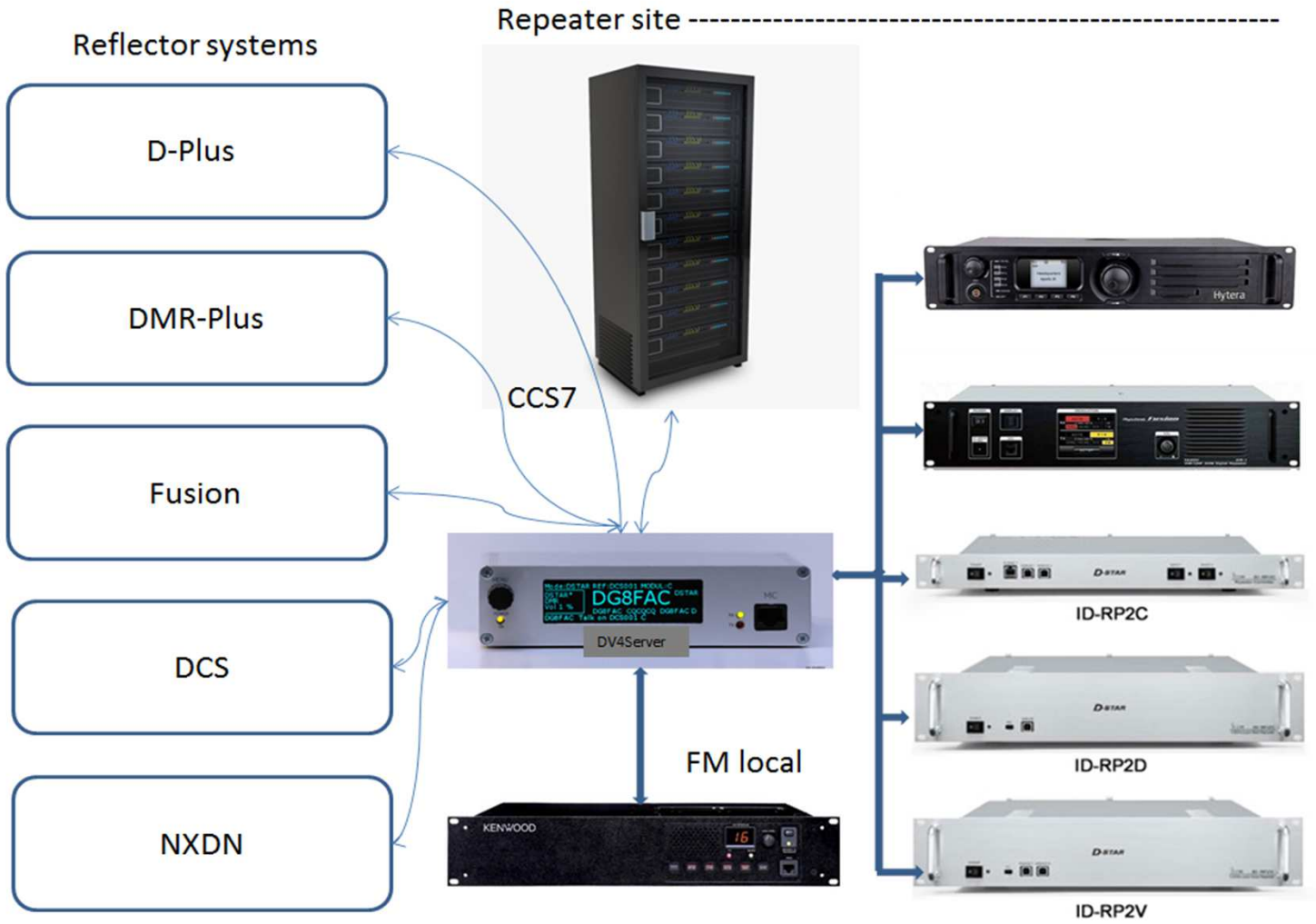
2.1.2 DV4Server – hardware



2.1.2 DV4Server – Software



2.1.2.3 implementation



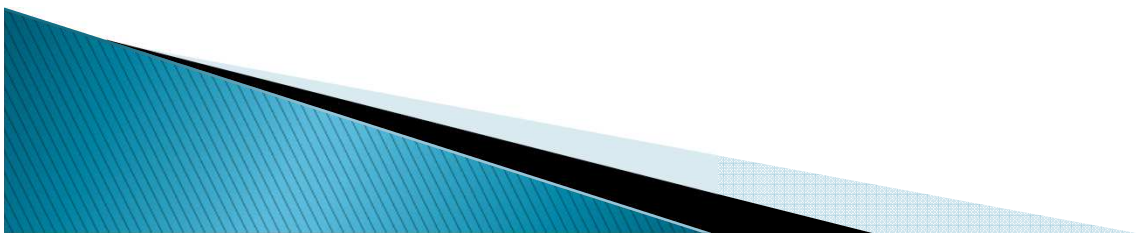
2.1.2.4 common user interface

- On ircDDB (G4KLX):

- *30C = REF030C
- D1C = DCS001C

- So we would need a system for the reflector code + reflector number + reflector room

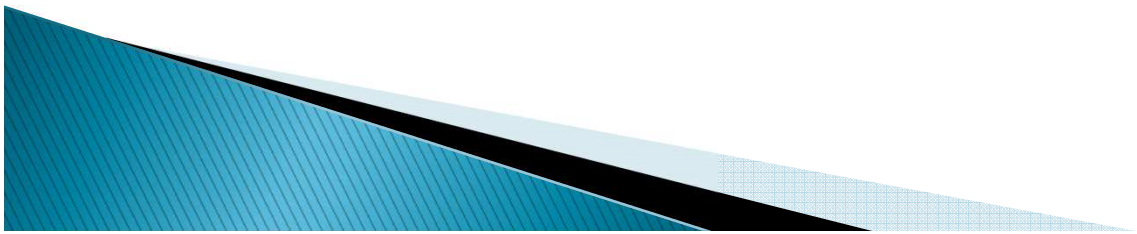
- This is not defined yet



3. conclusion

- A PoA based system allows all users to get into all rooms
  - (main request)

- is independent from the access device type
- saves a lot of hardware cost
- has a common user interface for the admin
- has a common user interface for the hams using their radios
- does not create loops
- New technologies can be added remotely via software
- does not require ongoing coordination between admins



Discussion