

VE2CRA – Upgrades and Improvements

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*In the beginning, GOD created the mountains,
One was named 'Camp Fortune'...*



Then George came along and put a repeater on it!



The Early Days

- **First installed in 1964**
- **Crystal controlled**
- **146.46/146.94**



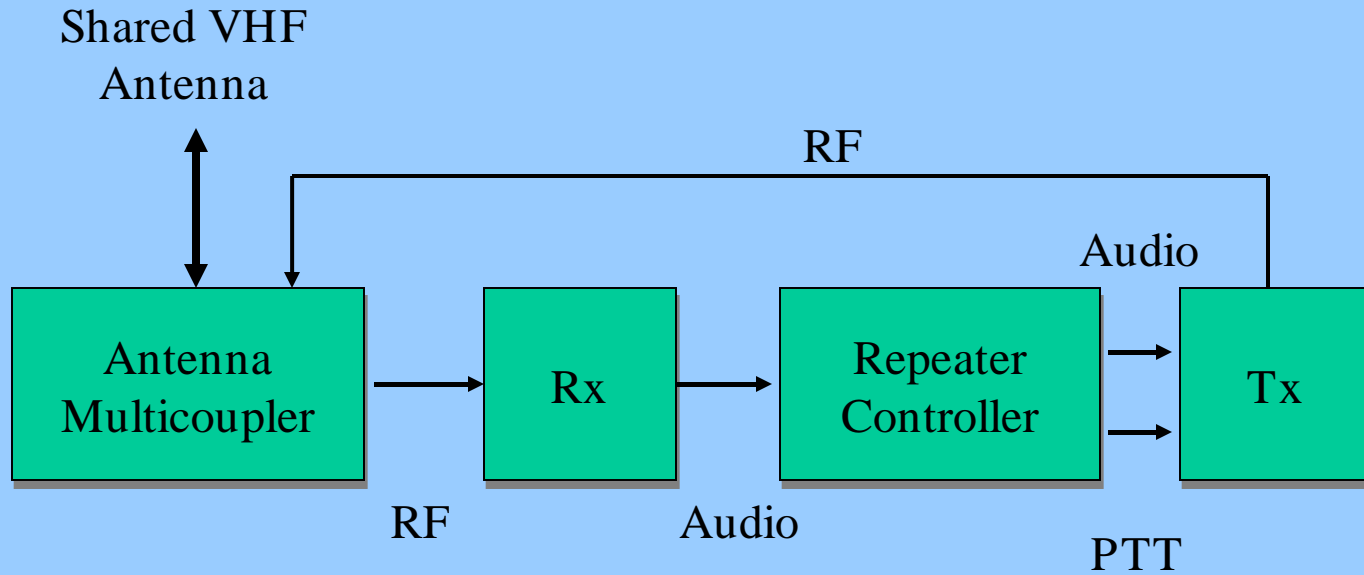
Performance Issues

- 4 pole antenna 120 ft above ground
- It's a long way to:
 - Downtown, 9 miles
 - Orleans, 16 miles
 - Bells Corners, 12 miles
- Drop outs, especially downtown
- The solution? *Slave Receivers*.

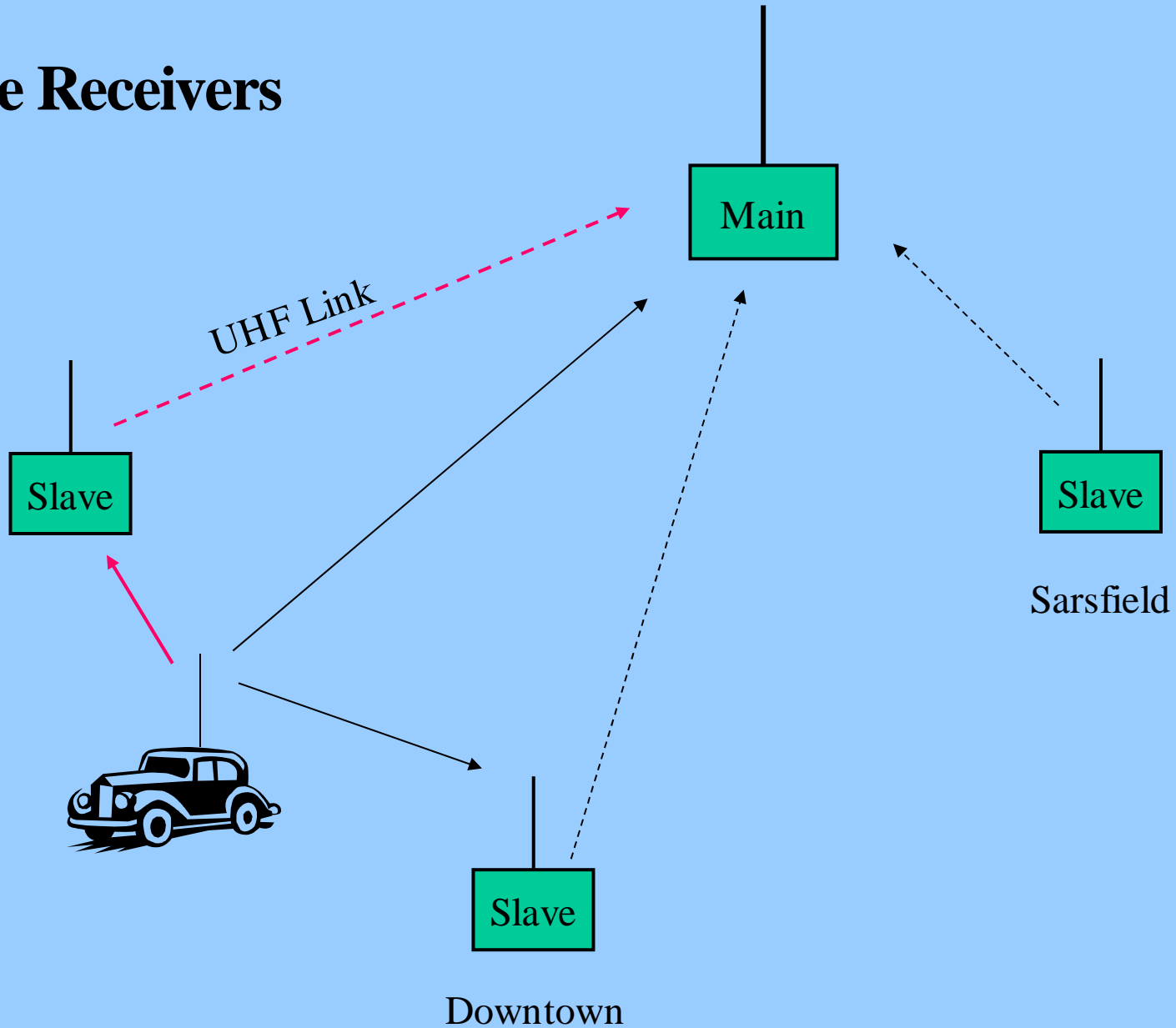
It's a long way from there to here!



A Basic Repeater



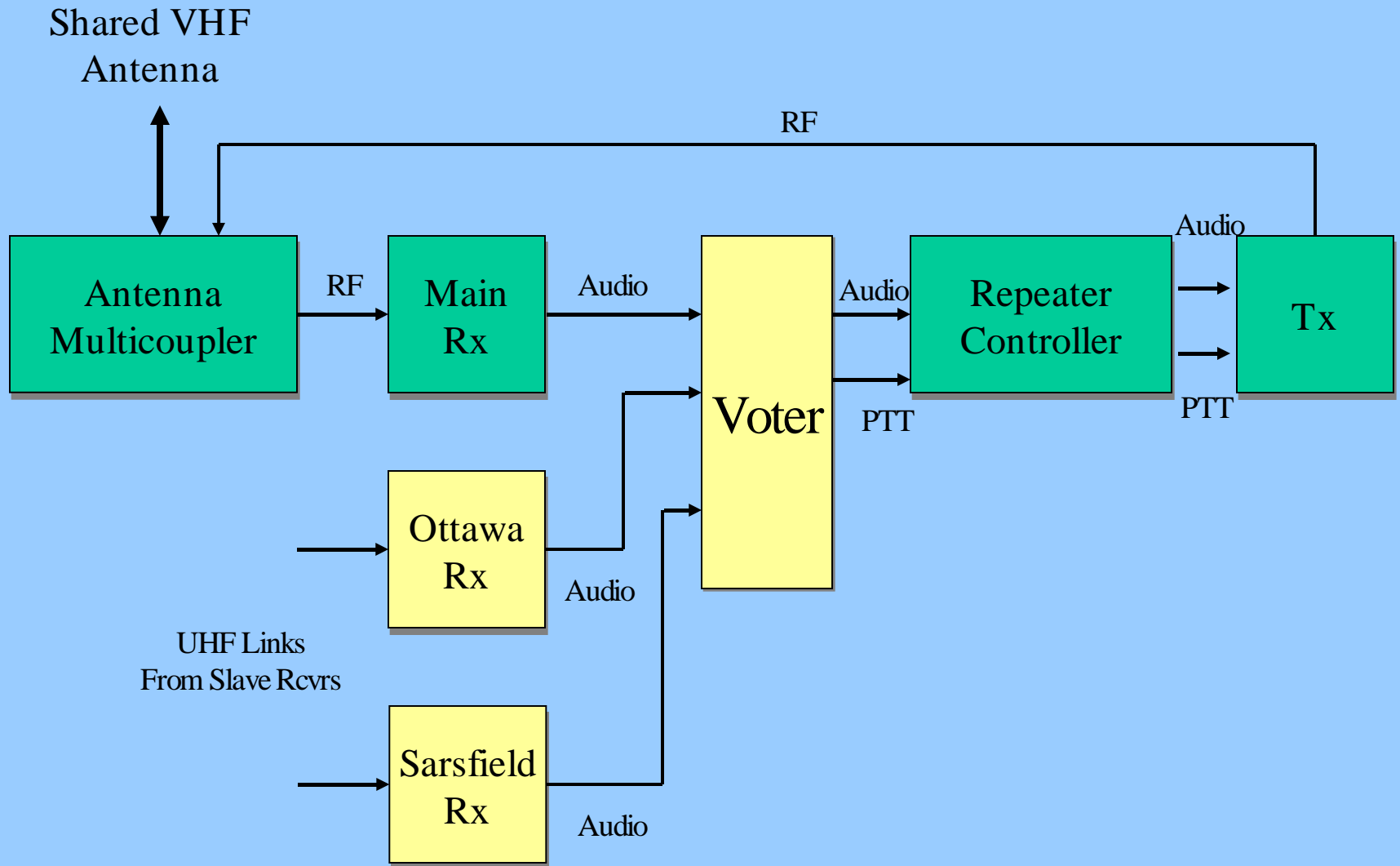
Slave Receivers



A Slave's Eye View of Downtown Ottawa



Repeater Modified With Slave Receivers



The Voter

- Selects best incoming slave signal



Rack

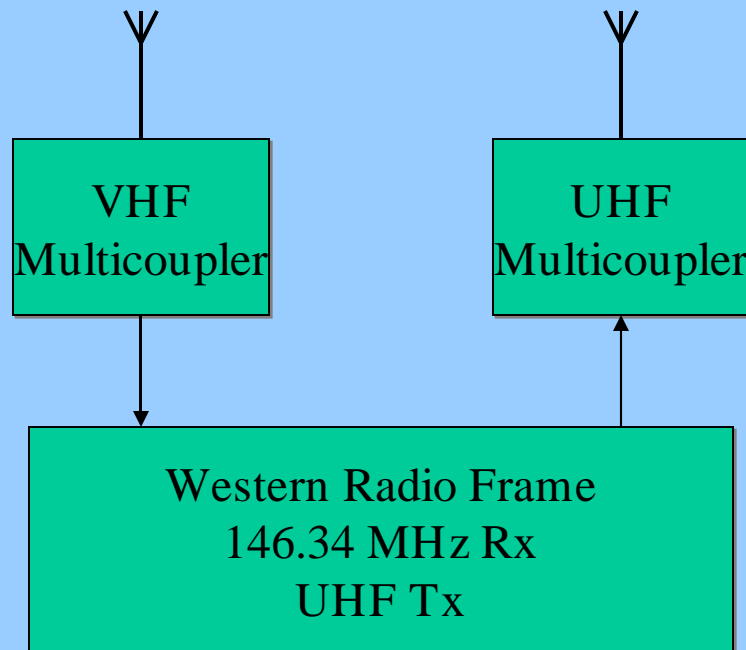


Modules

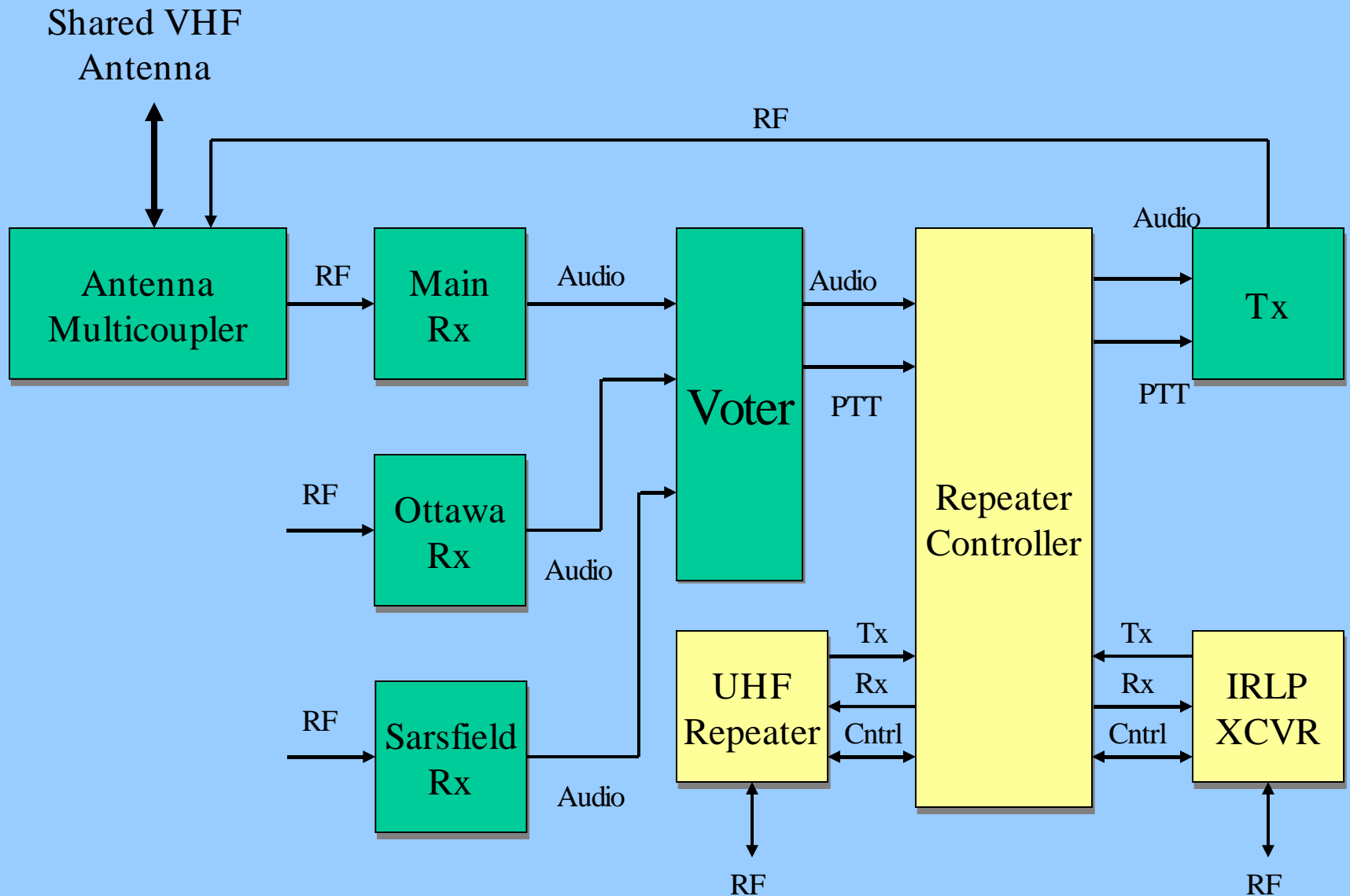
Slave Receiver

VHF From User

UHF Link to
Repeater



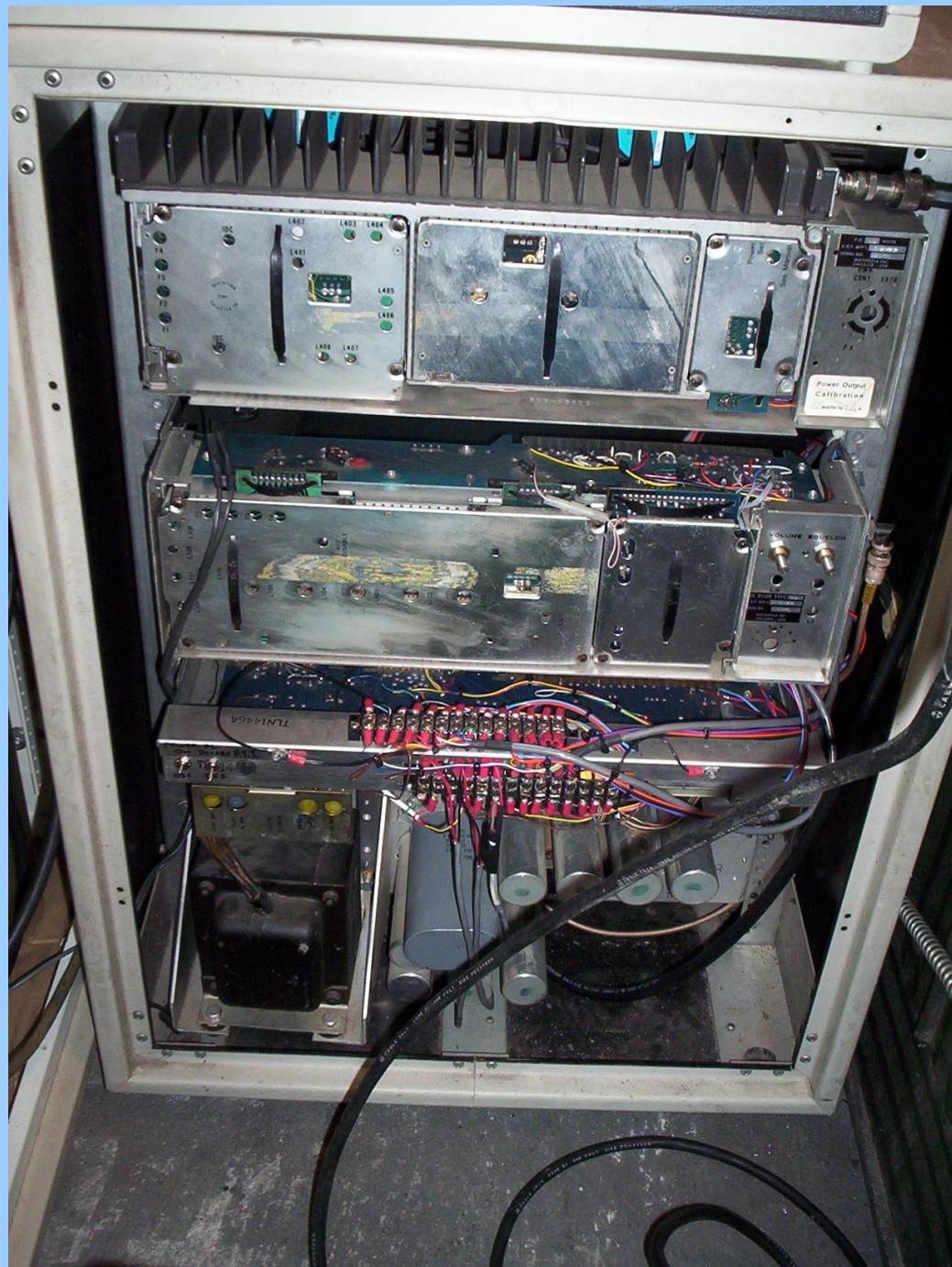
Repeater With UHF and IRLP Links



A Typical Repeater Controller

- Remote control via DTMF
- IDer
- Tail
- Timeout
- Multiple ports:
 - Audio input
 - CTCSS tone input
 - Carrier Operated Relay (COR) input
 - Audio output
 - PTT output

VHF Rack



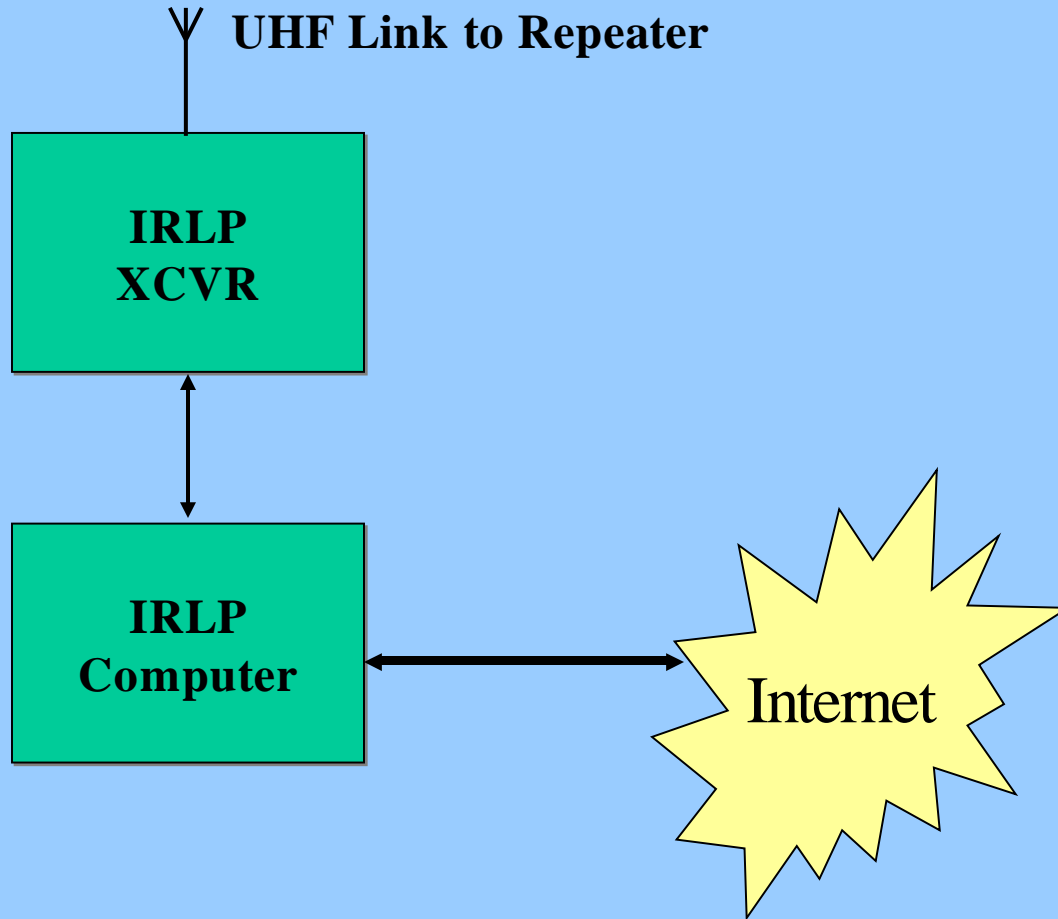
UHF Rack



UHF Repeater



IRLP Node (Cary's Living Room)



Cavities



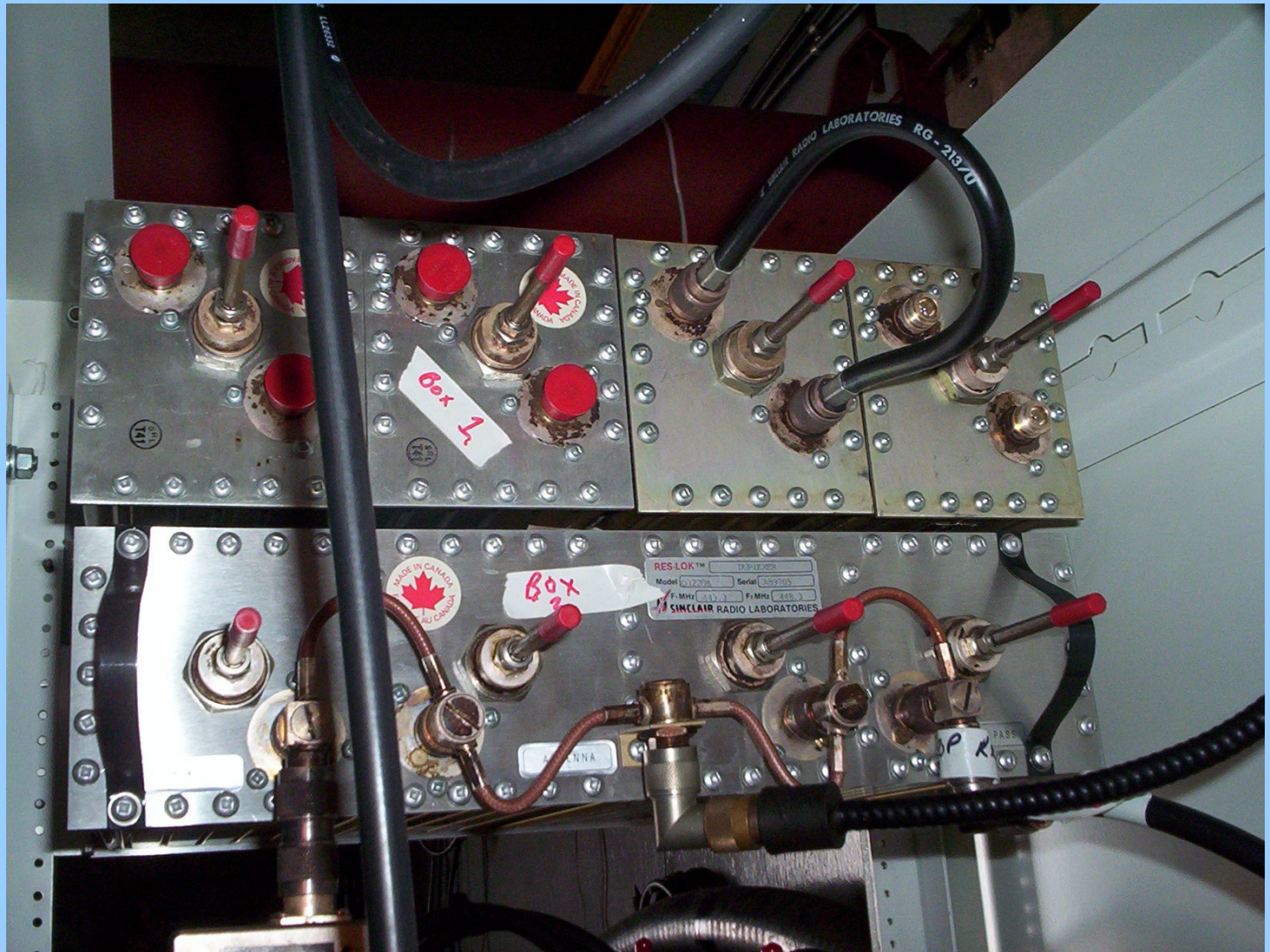
Standby Rack



The New Multicoupler



The UHF Duplexer



VHF Multicouplers



Summary

- 2 remote receivers, expandable
 - Better coverage over the region

- Modern controller
 - ID and tail will work
 - IRLP better integrated

