

PARC REPEATER SYSTEM UPDATE

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Current Situation - The Good, The Bad and The Ugly

Larch Mountain	Mount Scott	Mount Scott	Mount Scott
146.840	147.180	146.940	443.775

- Great sites !
- Great equipment
- Great core team of volunteers
- Low activity
- 3 Repeaters concentrated at Mount Scott
- Isolated islands – *Where do you hangout?*

Goals

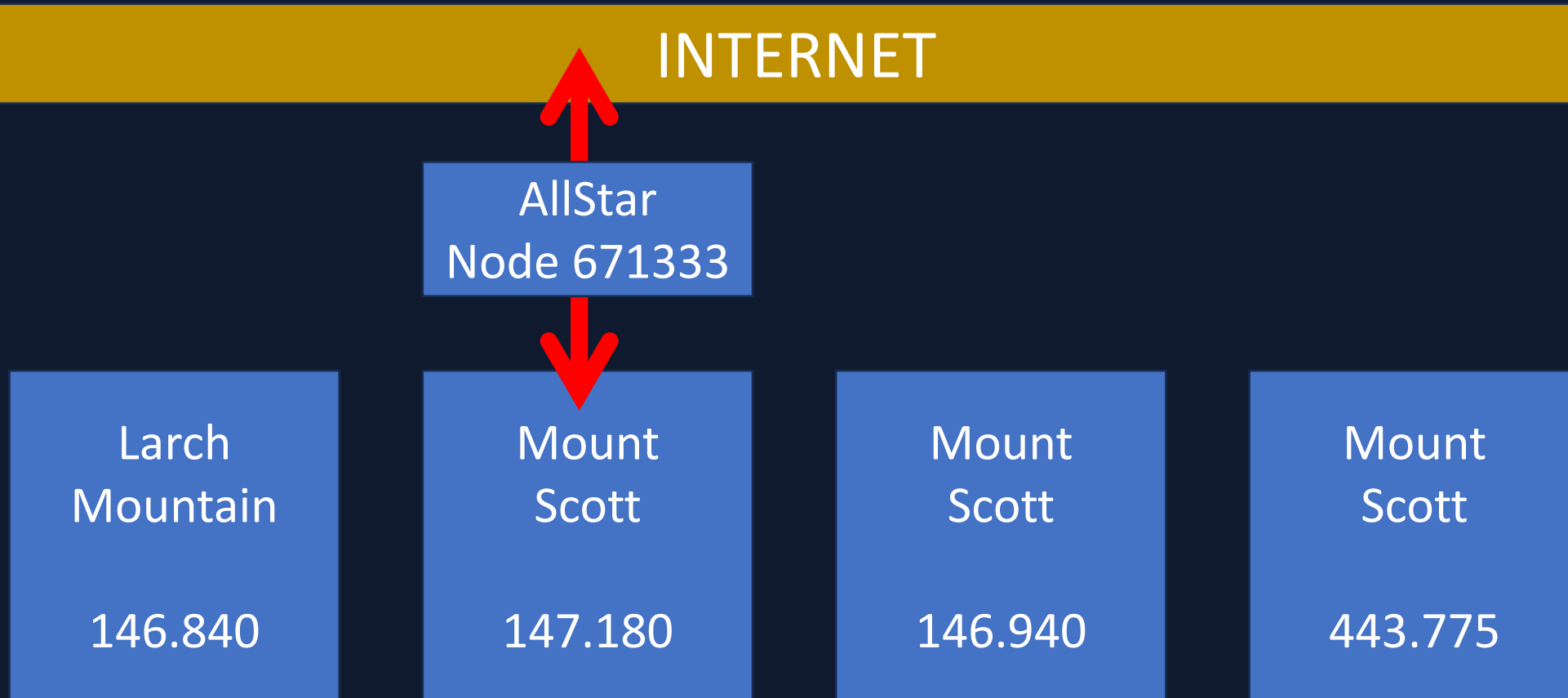
- Make the repeater system a valuable resource to PARC members
- Unify the repeaters into one system
- Add functionality
- Improve coverage and reliability
- Be a resource in times of emergency
- Increase activity

Step #1 – Upgrade Repeaters

New 100 Watt Motorola Quantar Repeater on 147.180 Thanks to Wayne and Pete



Step #1 – Upgrade Repeaters



- Add AllStar node to 147.180 repeater
- Use AllStar (Radio Over IP) to connect to the outside world
- Provide access to other systems on a temporary basis

Step #1 – Upgrade Repeaters

Station Controller – Monitor voltage, temperature, power, etc.
Raspberry Pi 5 AllStar Node and Interface



Step #1 – Upgrade Repeaters

Station Controller Dashboard

☰ PARC Mt Scott - Station Controller

Relays

Relay 1	<input checked="" type="checkbox"/>	RY1 ON	RY 1 OFF
Relay 2	<input type="checkbox"/>	RY 2 ON	RY 2 OFF
Relay 3	<input checked="" type="checkbox"/>	RY 3 ON	RY 3 OFF
Relay 4	<input type="checkbox"/>	RY 4 ON	RY 4 OFF
Relay 5	<input type="checkbox"/>	RY 5 ON	RY 5 OFF
Relay 6	<input checked="" type="checkbox"/>	RY 6 ON	RY 6 OFF
Relay 7	<input checked="" type="checkbox"/>	RY 7 ON	RY 7 OFF
Relay 8	<input checked="" type="checkbox"/>	RY 8 ON	RY 8 OFF

Digital Inputs

(1) IN 1	<input type="checkbox"/>
(1) IN 2	<input type="checkbox"/>
(1) IN 3	<input type="checkbox"/>
(1) IN 4	<input type="checkbox"/>

Volt Meters

12 Volt Power Supply

14.63 Volts

Volt Meter 2

0 Volts

Volt Meter 3

0 Volts

Volt Meter 4

0 Volts

Temperature

147.180 PA Temp

74.97 Degrees

Mt Scott Room Temp

69.8 Degrees

RF Watt Meters

RF Port 1

Port 1 Forward

Port 1 Reflected

0 Watts

Port 1 - PTT Count

0

RF Port 2

Port 2 Forward

Port 2 Reflected

0 Watts

Port 2 - PTT Count

0

RUN RF WATT METER TEST ON PORT 1

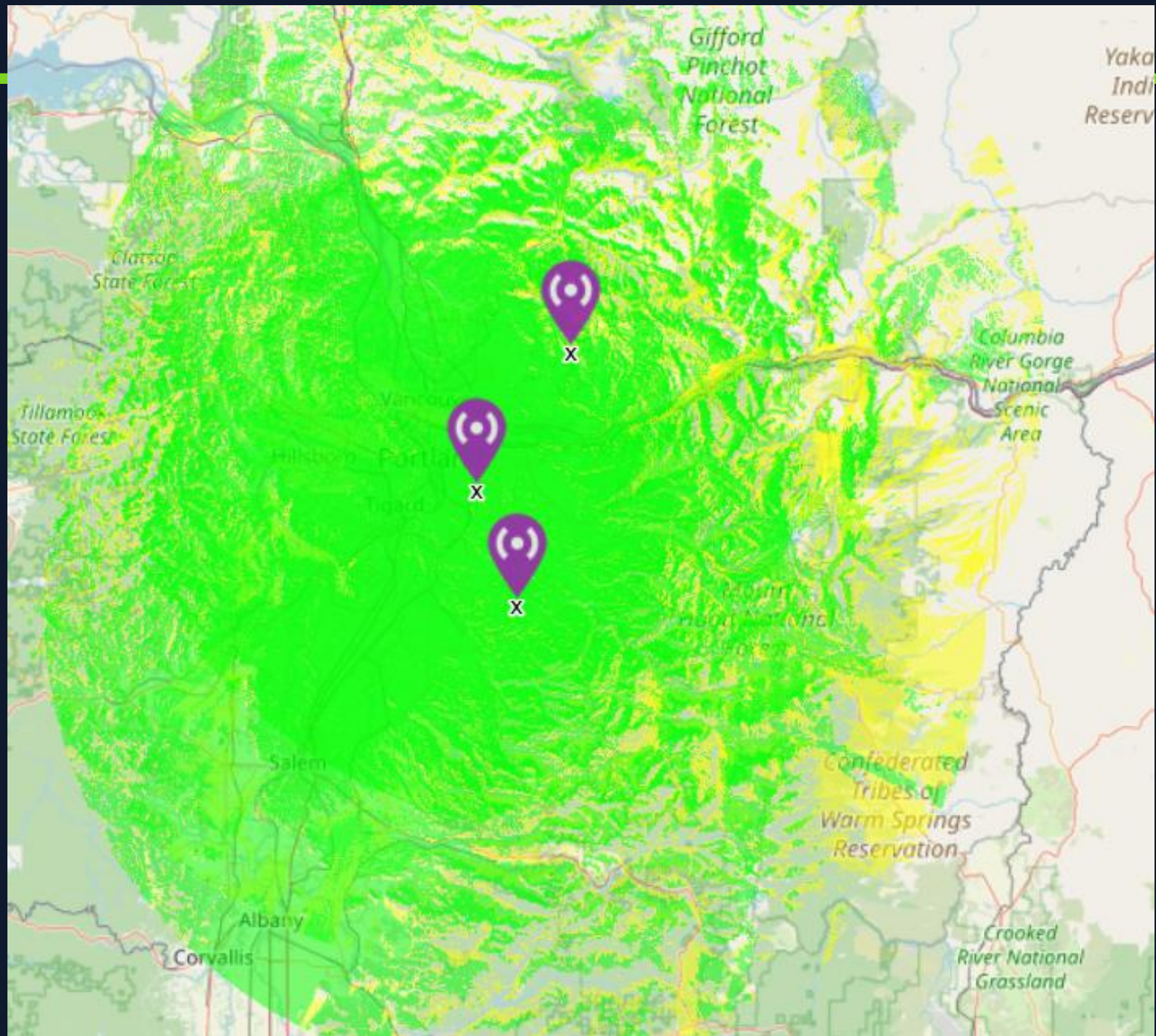
RUN RF WATT METER TEST ON PORT 2

Shack Coax Switch #1

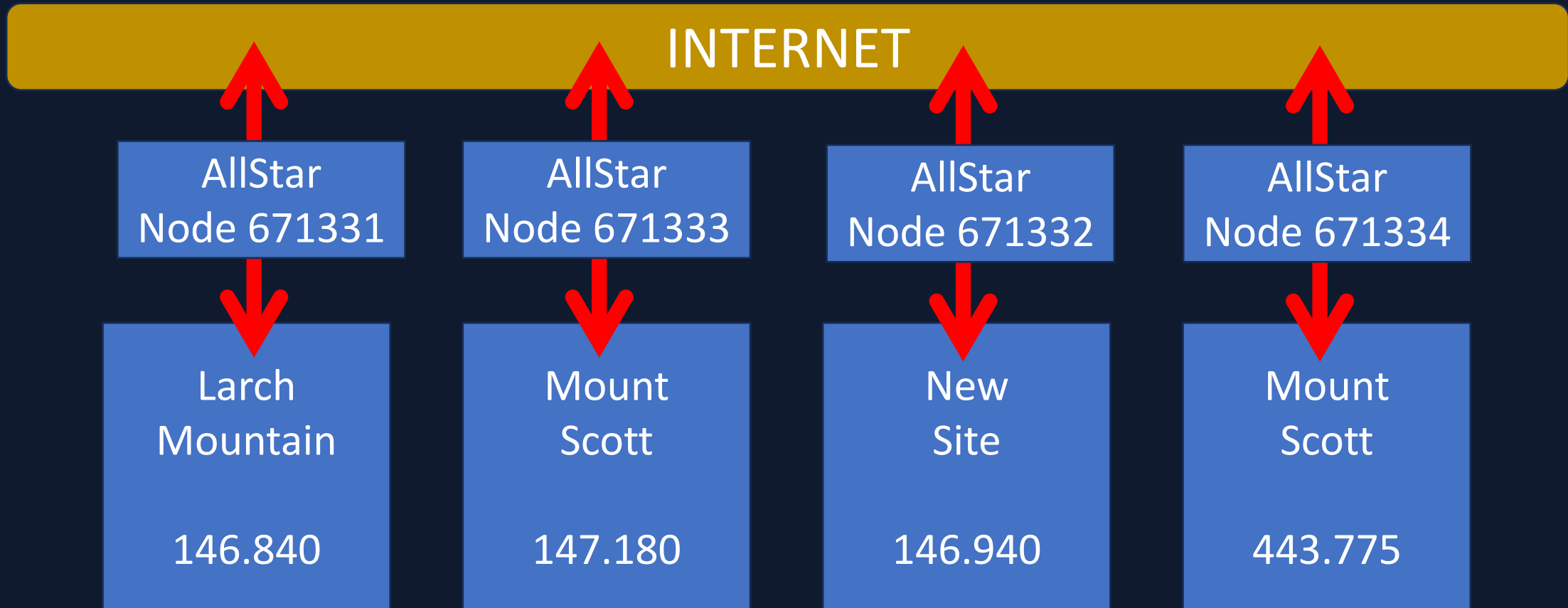
Port 1	<input type="checkbox"/>	VERTICAL
Port 2	<input type="checkbox"/>	LONG WIRE ANTENNA
Port 3	<input type="checkbox"/>	TOWER ANTENNA
Port 4	<input type="checkbox"/>	DUMMY LOAD

Target Coverage

Combined coverage
with three repeaters



Step #3 GOAL – Connect All Three Repeaters



- Use AllStar (Radio Over IP) to connect PARC repeaters
- Connect through the internet or point-to-point IP backhaul
- Provide access to other systems on a temporary basis