AUG Workshop 2019
ALERT2 Analytics
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ALERT2 Analytics

- Station Performance
- Time Check
- Repeater Status
- Base Station Diagnostics
## Time Check

### SCHEDULED PROCESS

Runs once per day from the system scheduler and emails a report showing system clock times of all network components.

### System Times:

<table>
<thead>
<tr>
<th>Hostname</th>
<th>IP Address</th>
<th>TimeStamp</th>
</tr>
</thead>
<tbody>
<tr>
<td>NovastarHost1:</td>
<td>cubs5-64</td>
<td>Mon Sep 30 08:30:25 PDT 2019</td>
</tr>
<tr>
<td>NovastarHost2:</td>
<td>bulls5-64</td>
<td>Mon Sep 30 08:30:24 PDT 2019</td>
</tr>
<tr>
<td>NovastarHost3:</td>
<td>63.239.71.242</td>
<td>Mon Sep 30 08:30:26 PDT 2019</td>
</tr>
<tr>
<td>A2XHost1:</td>
<td>172.20.227.201</td>
<td>Mon Sep 30 15:30:26 UTC 2019</td>
</tr>
<tr>
<td>A2XHost2:</td>
<td>172.20.227.202</td>
<td>Mon Sep 30 15:30:27 UTC 2019</td>
</tr>
</tbody>
</table>
Base Station Diagnostics

SCHEDULED PROCESS

Runs once per day from the system scheduler and quantifies data reception at the base station.
SCHEDULED PROCESS

Runs once per day from the system scheduler and quantifies data reception at the base station.
Base Station Diagnostics

SCHEDULED PROCESS

Runs once per day from the system scheduler and quantifies data reception at the base station.

**ALERT2 Report Count**

- Red line: 900003 Line 6: ALERT2 Freq. 1 (169.5125 MHz)
- Blue line: 900004 Line 8: ALERT2 Freq. 2 (169.4750 MHz)
**Base Station Diagnostics**

**MARKET**

**SCHEDULED PROCESS**

Runs once per day from the system scheduler and quantifies data reception at the base station.
Base Station Diagnostics

SCHEDULED PROCESS

Noise level of received ALERT2 packets received by the base decoder

![Graph showing noise level for different radio paths](attachment:image.png)

- Radio Path "Poor"
- Radio Path "Marginal"
- Radio Path "Marginal"
- Radio Path "Strong"

- 3001091 Angel Peak Repeater - A2X Noise Level
- 3001191 Mt Potosi Repeater - A2X Noise Level
- 3001591 Boulder City Repeater (Red Mountain) - A2X Noise Level
- 3044191 Las Vegas Wash at Nellis - Noise Level
SCHEDULED PROCESS

Daily quantification of reports received from each repeater
Repeater HL50386/A2X

ALERT1 RX

HL50386

A2X

ALERT2 RX

ALERT2 TX
A2X RADIO REPEATER DIAGNOSTICS

Internal temperature from each repeater A2X board
Data received and sent from the A2X at each repeater.
MARKET ANALYSIS
A2X RADIO REPEATER DIAGNOSTICS

GPS status of the A2X at each repeater

A2X Repeater GPS Status

No GPS Lock
GPS Drift
GPS Lock

09/25/2019 00:00:00 to 09/28/2019 16:16:21

- 3001096 Angel Peak Repeater - A2 A2X GPS Lock
- 3001196 Mt Potosi Repeater A2X GPS Lock
- 3001296 Virgin Peak Repeater A2X GPS Lock
- 3001396 Wildcat Wash A2X GPS Lock
- 3001496 Spirit Mountain (Christmas Tree Pass) A2X GPS Lock
- 3001596 Boulder City Repeater (Red Mountain) A2X GPS Lock
HL50386 Repeater input and output totals on an hourly basis:

- **ALERT2**
- **ALERT1**

![Graph showing Angel Peak (1 hour total) from 09/25/2019 00:00:00 to 09/28/2019 16:22:27. Key lines include:
  - 3001084 Angel Peak 5052 (HL) ALERT2 Receiver Count
  - 3001087 Angel Peak 5052 (HL) ALERT2 Transmit Count (includes self report)
  - 3001085 Angel Peak 5052 (HL) ALERT2 Repeater Count
  - 3001082 Angel Peak 5052 (HL) ALERT1 Receiver Count
  - 3001083 Angel Peak 5052 (HL) ALERT1 Repeater Count]
HL50386 Repeater
Total number of resets

Repeater HL 5052/50386 Reset Count

- 3001081 Angel Peak 5052 (HL) Reset Count
- 3001581 Boulder City Repeater (Red Mountain) Reset Count
- 3001181 Mt Potosi 5052 (HL) Reset Count
- 3001481 Spirit Mountain - 5052 (HL) Reset Count
- 3001281 Virgin Peak 5052 (HL) Reset Count
- 3001381 Wildcat Wash - 5052 (HL) Reset Count
Comparison of battery voltage between HL50386 and A2X
MARKET ANALYSIS
A2X & HL50386 RADIO REPEATER DIAGNOSTICS

Helps to identify issues with various components at a repeater.
Station Performance

Increment count of A2 data packet (APDUID)
Station Performance

Increment count of A2 data packet (APDUID)
Station Performance

APDUID Performance (%)

Average daily station performance over time

09/25/2019 00:00:00 to 09/30/2019 09:53:26
Thank You