

7. P25 Project Update

Meeting Notes

SLIDE 5

SLIDE 6

This will be fairly quick, given the in-depth update provided yesterday and this morning.

Of course, we are addressing any tickets that are submitted. But the overall key aspects we are working on are:

SOFTWARE UPDATE:

- As a recap, this is the update that incorporates our items from our punch list that was created shortly after cutover completion. There are things included in the update that we did not expect would be, and were a pleasant surprise.
- This will be a three-step project. The first step is applying the updated software to the towers. This began over a week ago. We “tested” it on our Mahogany site and then began the rollout to the Utah County sites, and then on to the Salt Lake County sites. We will immediately continue the rollout to all sites throughout the State.
- As noted yesterday, we have seen significant value related to the considerable reduction in the busy bonks that we are seeing. The statistics were better than we expected after applying the first of three applications.
- The second step will be to apply the new software to the consoles. We have a meeting today at 3 to discuss this process and determine a rollout plan. We know, through testing, that this will resolve additional items and, therefore, are motivated to get this update pushed out.

- The third step includes updating the software that manages our databases. We do not have this scheduled at this time.

ISSI GATEWAY NV/UT/AZ

- As a reminder, some testing was performed in Mesquite, and although, in concept, it worked, there were some issues that popped up on the radios in Mesquite that were not a part of the testing. We took a break from the process for L3H to run some tests to try to understand what happened.
- They have since been able to figure out what happened and are working on a resolution. In the meantime, additional testing is still on hold.

ANTENNA PROJECT

- 93 of 109 antennas have been replaced. Eighteen of those have been replaced since our last meeting. They include:

SLIDE 7:

Baldy, Sanpete

Book Cliffs, Grand

Howell, Box Elder

Salt Lake County Jail, Salt Lake

Francis, Davis

Logan Peak, Cache

Levan Upper, Juab

Liberty, Weber

Draper, Salt Lake County

Promontory, Box Elder

SLIDE 8:

Humpy, Summit

Rudd's Roost, Iron

Scotts Hill, Salt Lake

New Harmony, Washington

Webb Hill, Washington

Pisgah Peak, Cache

Hansel, Box Elder

Jordanelle, Wasatch

Pilot Peak, Box Elder

Eagle Point, Iron

SLIDE 9:

Most of our expansion sites are coming along nicely.

Clay Hills – San Juan: Construction on this site is complete. We have received the L3Harris site equipment, and this will be scheduled ASAP.

Henderson Point – Garfield: Construction on this site is complete, P25 equipment installed today, system configuration to occur next week, and then the site will be online.

Marysvale Canyon – Sevier: Moved to the BDA/DAS list

Tucker – Utah: We were blocked by the HOA on the original contract we had with the landowner. We have worked hard to find another option, and we have succeeded. Fortunately, we have an alternative way to make this site happen. We will work to get it under contract and then move forward. Unfortunately, this much-needed site has been significantly delayed.

Phelps Hill – Carbon: Construction on this site is complete. We have received the L3Harris site equipment, and this site is a priority for installation.

Jack’s Peak – Beaver: Construction has been completed. We will be at the site this afternoon to complete the punch list with the contractor. We will be scheduling the P25 equipment install as soon as possible.

SLIDE 10:

As reported earlier today, the final full sites for FY26 are as follows:

Parker Mountain – Piute

Navajo Mountain – San Juan

Thousand Lake Mountain – Sevier/Wayne

Monte Cristo Hwy – Rich

Hanna, SR 35 – Duchesne/Wasatch

Blue Mountain – Uintah

SLIDE 11:

DAS:

American Fork Canyon – Utah

Big Cottonwood Canyon – Salt Lake

BDA:

Marysvale Canyon – Sevier

Old Highway 91/Gunlock – Washington

Hole in the Rock – San Juan

Dog Valley/I-15 – Millard

Crescent Junction – Grand
SR 31, Energy Loop x2 – Sanpete/Emery

Micro:

Kingston Canyon – Piute

SLIDE 8

- Burn-In Process Halted

- With a burn-in process, part of the process includes leaving the system, as is, without making changes to ensure that it works effectively, identify any issues, and resolve them.

With that being said, due to the length of our system being installed before usage and the extended rollout, it became apparent during the burn-in process that we needed basic software updates.

Therefore, we paused burn-in, reevaluated our list of “issues” and have agreed with L3H that we will move forward with resolving the items identified, which also includes our substantial antenna replacement project. Once we have completed the list, we will move into a formal burn-in phase and then work towards system acceptance.

- Channel Lockups

- I reported in the last meeting that we have experienced some episodes where a channel on a site will essentially get stuck open. For users affiliated with the site where the channel is open, they will receive a quick, repetitive beep. For users who are not

affiliated with that particular site, they don't experience any issues with the talk group.

Since the last meeting, L3H has provided an exception release fixing the locked channel issues. A UCA/L3H team updated the software on the Nelson Peak and Mahogany RF sites, as they have been the most prone to experiencing a channel lockup. There have been no lockups since the software was installed. Barring any issues, the new software will be rolled out to the North and South Simulcast sites on August 26th at 2:00 am and 2:30 am, respectively.

This update will cause a 15-minute outage at the site; however, during the outage, the radios will switch to other sites, and dispatch will be able to contact field units as they normally do.

The intent is to update every site over time.

- ISSI Gateway NV/AZ
 - UCA and L3H continue to work on the ISSI roaming project. We are moving towards L3H testing the system beginning September 7th and 8th.
 - UCA will then perform testing and final acceptance testing on September 9th and 10th.
 - On September 22nd, we will be meeting with the agencies impacted (Law, Fire, and EMS agencies in Kane County, UHP, and State Parks) to discuss roll-out and responsibilities
 - On October 8th, we will be on site in Kane County to reprogram radios and cutover.
 - This is a really big deal, especially for our agencies that live on the borders of our State. For us to be able to provide additional sites/coverage will be a game-changer. Especially agencies like

the Kane County Sheriff's office, where they have a written agreement to provide law enforcement services in Fredonia, AZ.

Miscellaneous Site Repairs

We have had several sites that we have had miscellaneous repairs to perform, such as a new roof at our Lake Mountain site, building remediation on the Asphalt Ridge Building, and a door replacement at our Ensign Peak location. The work is never-ending with the number of sites that we have.

SLIDES 9

Agency Site Visits.

We were recently invited to meet with field units from eleven agencies in the county. I am not going to say which county, as I am going to share some general data from what we found.

During our site visits, we had a UCA tech and a third-party vendor, whom UCA hired, for the site visits. The intent of the visits was to look at the radios of the field units that were experiencing consistent issues with their radios.

You will see we have this chart broken down into three categories.

One: Portable Radios: Percentage of radios that failed the automated tuning tests.

If you recall, we have been saying for years that if an agency plans on using its legacy radios, it should have them tuned. Much like a piano, a radio can get out of tune, and then it can be symptomatic and unreliable.

You will see that Agency 5 had the smallest percentage of radios failing the tuning process during the initial tests.

From there, the percentages grow to 22%, 25%, 33%, 40%, 44%, 46%, 50%, and then they jumped up to 77% and Agency 11 had 93% of the radios we tuned fail the test.

Part of the tuning process is to resolve the issues and retest the radios so they will “pass” the test. Some radios take more work than others to get them to a place where they can pass the test. I will get into additional details in the upcoming slides.

The second test recorded was a physical exam of the portable radios and tuning. For a variety of reasons, not all of the radios underwent both tests; that is why there are many N/A listed. As you can see, Agency 6 had 50% of the radios that failed both the physical test and the tuning test, whereas Agency 7 had 0% of the radios that failed both tests.

The third recorded test was the physical and tuning tests of the mobile radios. As you can see, 100% of the mobile radios that we performed both tests on failed. Every mobile radio had an incorrect antenna. Whether that antenna was the wrong band – for 800 only, never having been upgraded for the new system or the wrong style of antenna – low gain/hidden.

Many installers, whether at the request of the agency or otherwise, install antennas in a stealth, hidden fashion and it is not beneficial to the field unit.

SLIDE 10

This is a list of some of the failures we saw, some of the symptoms a field unit would experience with the different failures, and common fixes.

I won’t go through all of these, but what you will see listed as some of the common symptoms is troublesome. For instance:

- Intermittent or consistent garbled audio
- Intermittent ability to key up
- Poor roaming performance
- Reduced range
- Missing audio at dispatch
- Inability to participate in patched communication

Common fixes, which are all simple to complete, include:

- Having the radio tuned

- Correct antenna band
- Correct antenna placement (mobile radios)
- Updated firmware

All of which we have put out to our customers at presentations, meetings, and in written communication.

SLIDE 11

Here is a sample of the specific errors that the radios from Agency 1 experienced and the symptoms.

When we get complaints about issues with the system, we absolutely investigate the issues, no question. But when we test our end, through verification of coverage, verification that the site is on line and performing as expected, we have to have the agency look at their radio(s) and really verify that they have updated the firmware, completed tuning on a radio, especially legacy radios or radios that have been in use for years.

We are going to be completing another site visit in another county on Monday. We plan to complete the same tests to hopefully give them some insight into ways to improve their experience on the system.

SLIDES 12-13

We have continued to be very aggressive with the antenna replacement project. Since our last meeting on June 25th, we have replaced the antennas at 17 sites. Those sites include:

Strawberry, Wasatch

Dutton, Garfield

East Bench, Utah

American Fork, Utah

Red Spur, Rich

Willow, Grand

Big Mountain, Washington

Little Mountain Vernal, Uintah

City Creek, Salt Lake County

Copper Ridge, Garfield

Blackcrook, Tooele

South Creek, Garfield

Nelson, Salt Lake

East Park, Daggett

Goslin, Daggett

Cal Mountain, Box Elder

UCA Warehouse, Davis

SLIDES 14 – 16

Here are a few samples of the difference in coverage at a few of the sites where we have changed the antennas.

In these maps, yellow and green are good.

Willow, Grand

Nelson Peak, Salt Lake

Red Spur, Rich

Most of the improvements we see are in the areas that were low or on the fringe. In some cases, the improvement is only a few decibels (dB) better, while in others, it is as high as 15+ dB better, which is significant.

SLIDE 17

Expansion Sites Update

Clay Hills, San Juan

- Internal Grounding Complete
- Bids received for P25 antenna/line install and external grounding complete and awarded, scheduled to start work week of the 25th.
- P25 Router Installed

Henderson Point, Garfield

- Tower mapping and SA complete
- Backhaul connectivity is in progress
- Formal lease agreement executed with the site owner
- UPS and P25 antenna/line installation, grounding set for scheduling.

Marysville Canyon, Sevier

- No progress.

Tucker, Utah

- SA on tower complete
- Formal lease agreement executed
- Site drawings complete and submitted
- Backhaul engineered, licensed, ordered, and received
- Scope of Work for construction completed
- Shelter ordered and received
- **Waiting for the dispute between the area HOA and the site owners to be settled, allowing UCA to add a new shelter.**

Phelps Hill, Carbon

- All contracts with the land and site owner have been signed
- All site construction is complete

- Tower work at Four Mile is complete to support backhaul
- Backhaul received and installed

Jack's Peak, Beaver

- Completed revised site layout and submitted to BLM
- Received ROW and signed a lease agreement with the BLM for the land use.
- Signed MOU with Beaver County for co-location
- Completed the invitation to bid process for construction bids and awarded the job. Pre-construction meeting set for 8-25, construction to start the same week.
- Received backhaul and all major construction components except the tower, which is scheduled for delivery in the first week of September.