

Satellites, from the ground up (page 2)

By Susan M. Menke, GCN Staff

GCN: How does managing a satellite network differ from wired network management?

MARSHALL: There's not a lot we can do to manage a satellite that's owned by somebody else. We don't send the commands to keep it in orbit. But we can monitor the customer's signal as it goes through the satellite to make sure there are no anomalies, no sun outage [the sun is a wideband radio source] or other hiccups.

That's network monitoring. We also do network management of the ground terminals. They each have an antenna and a coaxial connection to a small, integrated receiver-decoder. The box converts the satellite signals to video or data that goes to a PC or a monitor.

To manage the network, we ship smart cards to the customers. The cards let particular customers receive exactly the signals for which they're authorized—just as you would be authorized to receive certain tiers of programming from DirecTV. We do the same thing for our government customers.

We can control transmissions to groups, subgroups, East or West Coast and so on. Some transmissions are for everybody in all the offices, others may be just from the commissioner to his field lieutenants.

We segregate the signals through the smart card. We can control it in real time. If someone at a remote office trips over an antenna wire, we send out a technician. I outsource this, I outsource as many things as I can in all 50 states.

Everything's put together and configured and tested here, then we ship the whole bundle out to the location. A technician meets it there and puts everything up and brings it down from the antenna.

If we have to go back for any reason, we have a database of everything that's there—serial numbers of cards and boxes, the whole bit.

GCN: How many sites do you support?

MARSHALL: ICE has about 250 locations right now. We just picked up IRS TV, which has about 150 locations. We're bidding on a Customs and Border Patrol network, which potentially could be on the same private government channels.

We recently picked up NASA TV. We're the prime contractor for the space segment, and we resell bandwidth from Americom Government Services to disseminate the video.

GCN: What kinds of programming do these agencies have?

MARSHALL: It varies from agency to agency and with the time of day. Sometimes it might be a direct broadcast from the director or commissioner out to his folks, or it might be a deputy or associate commissioner.

Often they'll bring in trainers to do distance learning. They'll rebroadcast their canned programs in a semi-live manner. For example, SSA teaches new employees how to use customer service applications and forms.

The training could be as generic as learning Microsoft Windows, or it could be for first responders or health care workers.

GCN: How about security?

MARSHALL: Everything we do is encrypted by an algorithm that changes about every 10 seconds, and that is very close to what the military and National Security Agency are using. For non-DOD agencies we use the Advanced Encryption Standard.

GCN: How does EagleStreams work?

MARSHALL: It's an encrypted digital platform on which a customer can put different sizes and kinds of services—any IP application. We have contracts with Turner Broadcasting, NBC, Fox News and so on, live to the desktop at 300 Kbps. It's just like looking at TV, except it's on your desktop or notebook PC, video plus audio. It's real time, no delay.

Right now there are a lot of government entities that are capturing TV streams illegally and digitizing the packets from a cable feed. That's infringement. They need to get the rights and site licenses to do that.

GCN: Do you do any business in Southwest Asia?

MARSHALL: No. They're buying from different contracts through the Defense IT Contracting Office.

At the beginning of Operation Iraqi Freedom, we did get called in to support unmanned aerial vehicles. A charter plane came on New Year's Eve 2002 to pick up two of my guys to work on disseminating the live video—mostly the Predator but also Global Hawk.

And we're the technical architects for DOD's Global Broadcast System. A lot of things we learn on the DOD side, we leverage for non-DOD customers.