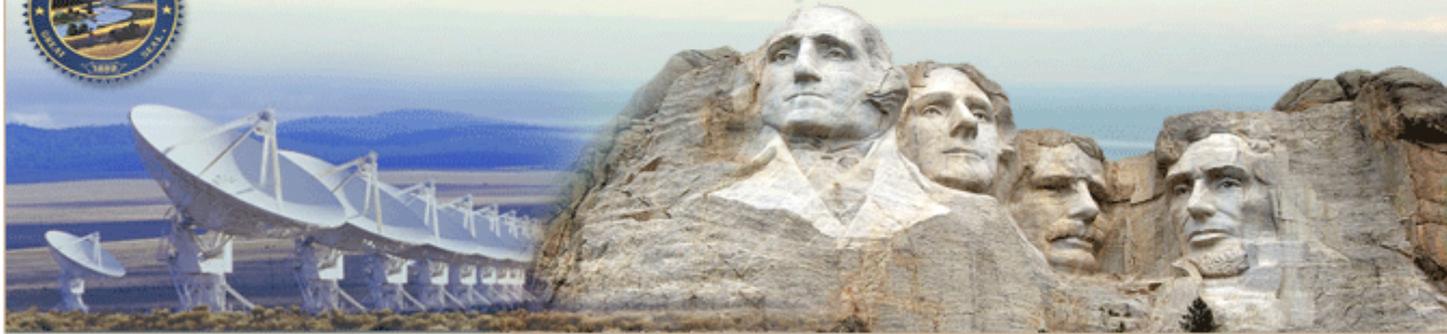




South Dakota Public Safety Communications Council



September 2019 Meeting

Pierre

9-12-2019

Agenda

Call to order – Chair Goodwin Roll Call of Members

Police Chiefs – Jason Jones
Sheriffs Organization – Steve Swenson
Division of Criminal Investigation – Scott Rechtenbaugh
South Dakota Game, Fish, & Parks – Bruce Nachtigall
South Dakota Department of Transportation -- Brad Maupin
South Dakota National Guards – WO1 David Goodwin
South Dakota Emergency Managers Association – Harold Timmerman
South Dakota Fire Fighters Association – Charlie Kludt
South Dakota Association of Health Care Organizations – Tim Rave
South Dakota Department of Public Safety – Casey Collins
South Dakota APCO/NENA Chapter – Kevin Karley
South Dakota Emergency Medical Technicians Association -- J.D. Geigle
South Dakota Department of Agriculture/ Wildland Fire – Paul Reiter
South Dakota Association of County Commissioners – Gary Jaeger
South Dakota Department of Health -- Rick LaBrie
Tribal Government – Open
Federal Government – Andy Barth
Bureau of Information and Telecommunications -- Jeff Pierce
911 Coordinator – Interim/Maria King
SD House – Representative Doug Barthel
SD Senate – Open

Additional Agenda Items

Approval of June meeting minutes --

New business

1. New Council Members/Changes

- Charlie Kludt – SD Firefighters
- Kevin Karley – SD APCO/NENA
- Senator Cronin resigned seat.
- Tribal position still open.

2. New Council Chair, organization & group vision outline

3. Test site

- We will not have 100% confidence in programming template until tested.
- Working on final cost to add site, we have some of the needed pieces.
- Hope to get in as soon as possible if we can afford.

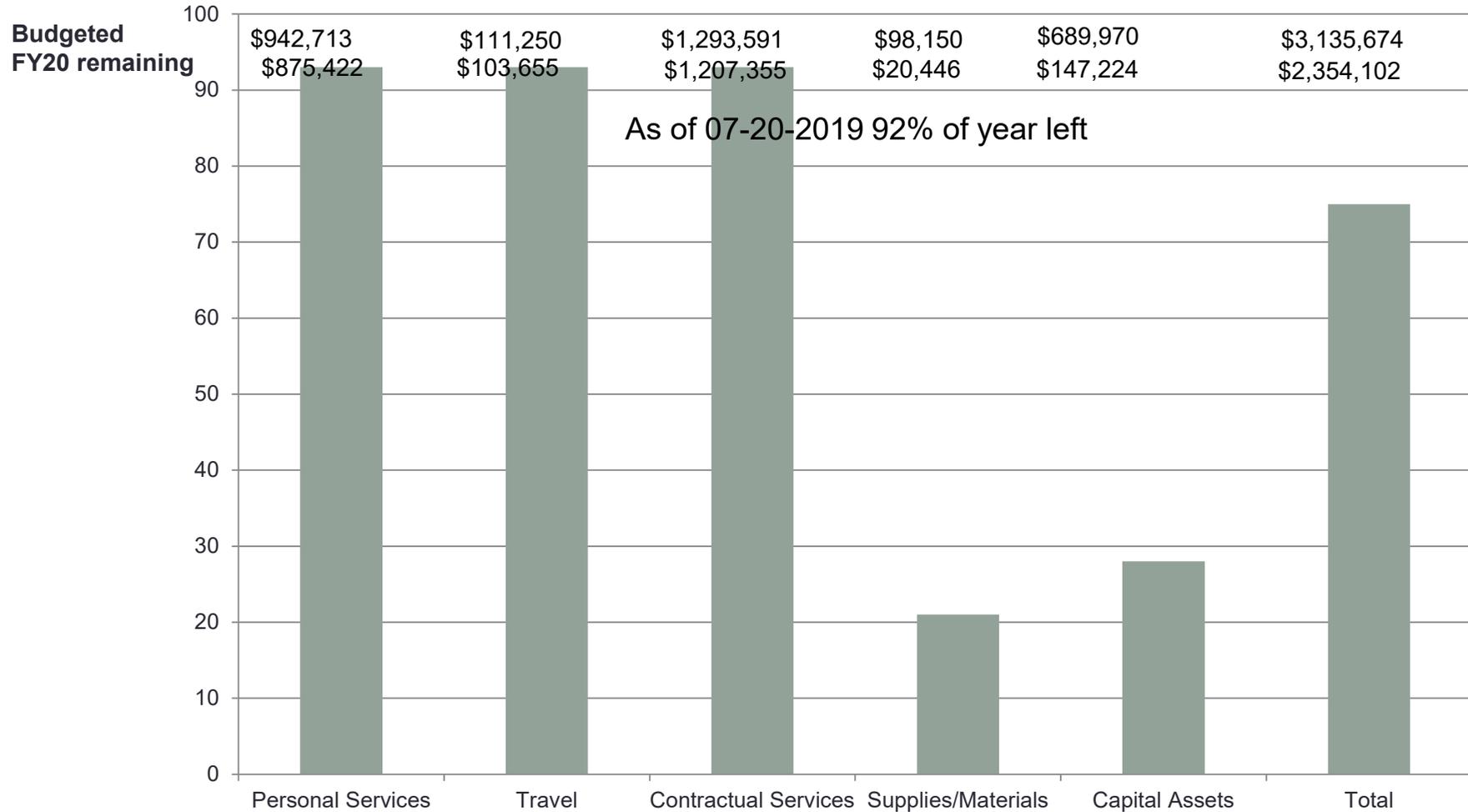
4. Over the air programming

- Not included in system quote
- Trying to identify other means that do not require system & option in radios

Old Business

1. 2021/2022 Budget

- All budget lines in order. Payment to Motorola out of Cap Assets, and working on correction to Supplies/Materials.
- Requesting around \$230k for updated system support & \$5.1M for balance of system cost, FY22.



2. Grant Status, all grants --

- SLIGP 2.0 is now in effect, total over 2 years is \$247,251 with \$50,591 match from the state.
- 2018 HSGP changes will need to be monitored this year to see how compliance requirements affect communications equipment procurement and to what extent.
 - a. Have a designated SWIC
 - b. Align all communications projects to SCIP
 - c. Updated THIRA using new methodology
 - d. Investment in cybersecurity required
 - e. Coordinate and consult with interoperability governance (that's us)

3. Digital Radio Infrastructure Updates

Proposed Project Timeline

ACTIVITY	2020	2021	2022	2023	2024	2025	2026	2027
P25 Fleetmap and Subscribers	[Orange bar]							
Deploy P25 Test Site	[Blue bar]							
Upgrades		[Green bar]			[Green bar]	[Green bar]		[Green bar]
P25 Contract Negotiations		[Purple bar]						
Layer 3 Ethernet Backhaul Deployment	[Purple bar]							
SmartX to P25 Upgrade			[Cyan bar]	[Cyan bar]				
Potential T1 Network Decommissioning					[Grey bar]			



P25 Upgrade Process

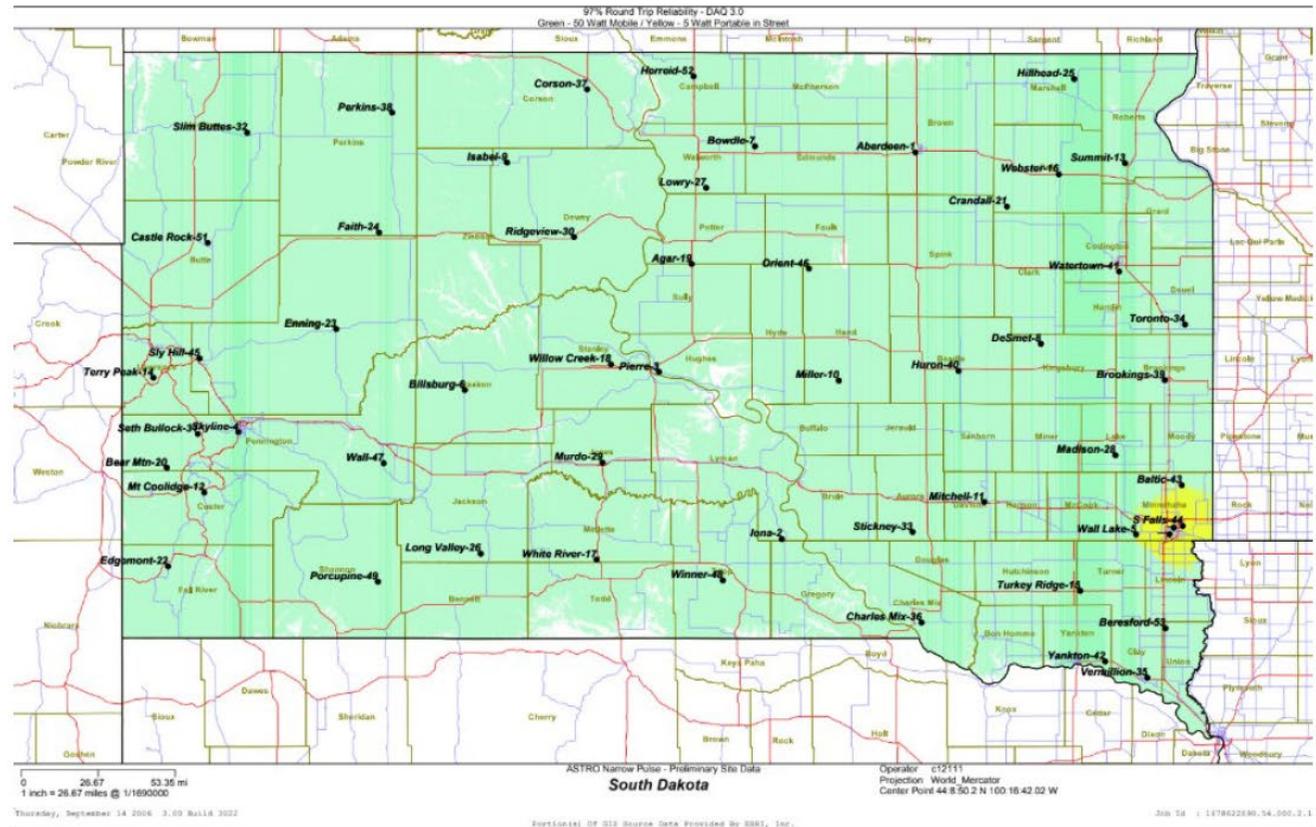
Preliminary Design

- **Kick-off and Collaborative Planning**
- **Secure Fleetmap and program subscribers for 3600 and P25 personalities.**
- **Insure readiness of Ethernet Site Links. (ESL)**
- **Convert Sioux Falls Simulcast Cell, bringing up half of the channels on 9600.**
- **Have users switch to operations on P25**
- **Bring up remaining RF channels on P25.**
- **Repeat for Rapid City**
- **Convert Single RF sites to P25 Operation.**
 - **Roll out per Dispatch area**
 - **Multiple work groups to reduce cut-over time.**
- **Punchlist clean-up & closeout**

P25 System Overview



- M3 Zone Core
- 2 Trunking Simulcast Cells
 - 3 Sites Each
 - Sioux Falls
 - Rapid City
- 53 ASR Trunking Sites
- 6 MCC 7500 Centers
 - 43 Operator Positions



4 / 5 CHANNEL SINGLE SITE RF (INTELLI-REPEATER SITE TO ASTRO REPEATER SITE)

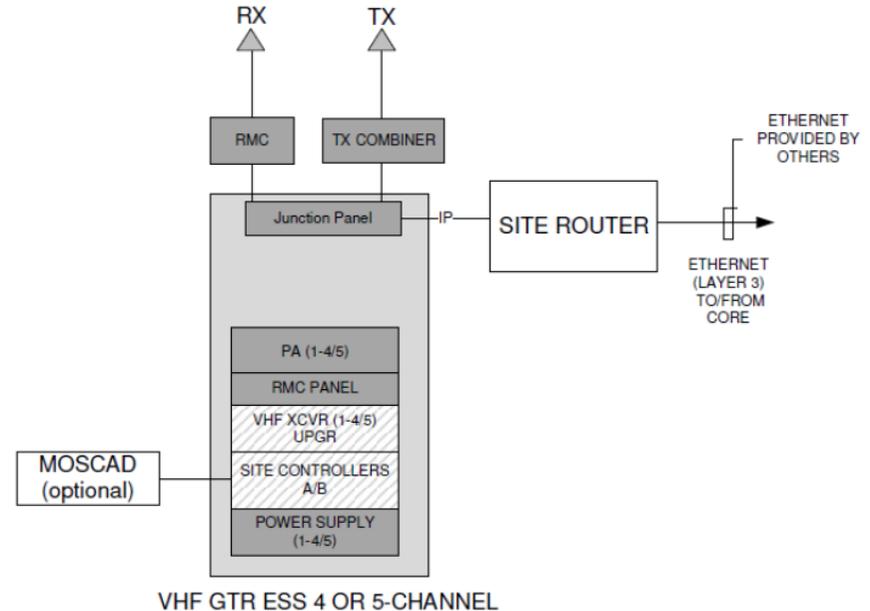
- Upgrade base radios (GTR8000) to P25 and IP.
- Upgrade site controllers (GCP8000) to P25.
- Add one (1) site router (Juniper SRX345).
- Eliminate SmartX channel banks.

4-CHANNEL ASR SITES (33):

1 - Aberdeen
 3 - Pierre
 7 - Bowdle
 8 - Desmet
 9 - Isabel
 10 - Miller
 11 - Mitchell
 15 - Turkey Ridge
 16 - Webster
 19 - Agar
 21 - Crandal
 24 - Faith
 25 - Hillhead
 27 - Lowry
 29 - Murdo
 30 - Ridgeview
 33 - Stickney
 35 - Vermillion
 36 - Radar Hill
 37 - Corson
 38 - Shade Hill
 40 - Huron
 42 - Yankton
 43 - North Minnehaha
 46 - Winner
 47 - Orient
 49 - Porcupine
 50 - Castle Rock
 51 - Herreid
 52 - Beresford
 53 - Pine Ridge
 54 - McPherson
 55 - Union

5-CHANNEL ASR SITES (4):

5 - Wall Lake
 12 - Mt Coolidge
 23 - Enning
 28 - Madison



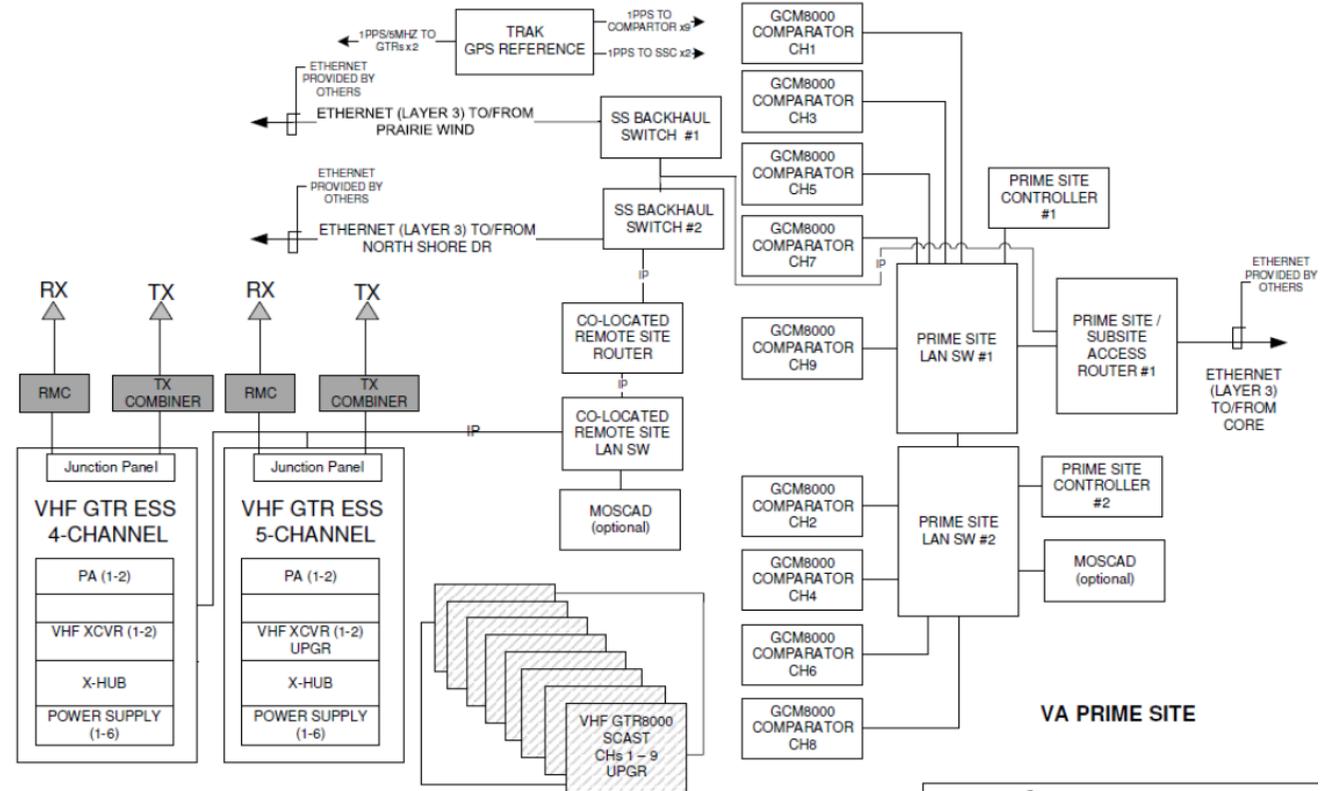
SIMIULCAST PRIME SITE

- Add two (2) Motorola ESS GTR8000 2 channels each.
- Upgrade existing base radios (GTR8000) to P25 and IP.
- Replace prime site controllers (GCP8000) for P25 operation.
- Add one (1) prime site router (SRX1500) to ASTRO core.
- Add two (2) prime site LAN switches (redundant).
- Replace P25 and IP-capable comparators (GCM8000).
- Add two (2) Backhaul LAN switches for connection to remote sites.
- Replace one (1) GPS reference (TRAK9100) and use existing GPS antenna systems.

COLOCATED RF SITE

- Add two (2) Motorola ESS GTR8000 2 channels each.
- Upgrade existing base radios (GTR8000) to P25 and IP.
- Add one (1) co-located remote site router (Juniper SRX345).
- Add two (2) co-located remote site LAN switch.
- Eliminate existing SmartX channel banks.

9 CHANNEL SIMULCAST CO-LOCATED PRIME SITE – SIOUX FALLS SUBNET



INDICATES EXISTING EQUIPMENT

INDICATES UPGRADE EQUIPMENT

INDICATES NEW EQUIPMENT

CO-LOCATED REMOTE SITE – 9CH ESS GTR

- NOTES:
1. ASSUME SINGLE LAYER 3 IP BACKHAUL LINKS AT ALL SITES.
 2. ASSUME A/C POWER AT ALL SITES.
 3. ANTENNAS, FEEDLINE, POWER, SURGE PROTECTION PROVIDED BY OTHERS.
 4. DEDICATED ETHERNET BACKHAUL CONNECTIVITY PROVIDED BY OTHERS.



STATE OF SOUTH DAKOTA
P25 MIGRATION – SIMULCAST
9CH CO-LOCATED PRIME SITE – SIOUX FALLS

ENGINEER: DAN NOHR

DATE: 7/15/2019

SUA DEPTH OF COVERAGE

Dispatch Site

- Operator Position
- Dispatch Interface
- Site Router
- LAN Switch
- Archive Interface System
- Logging Recorder

System-wide

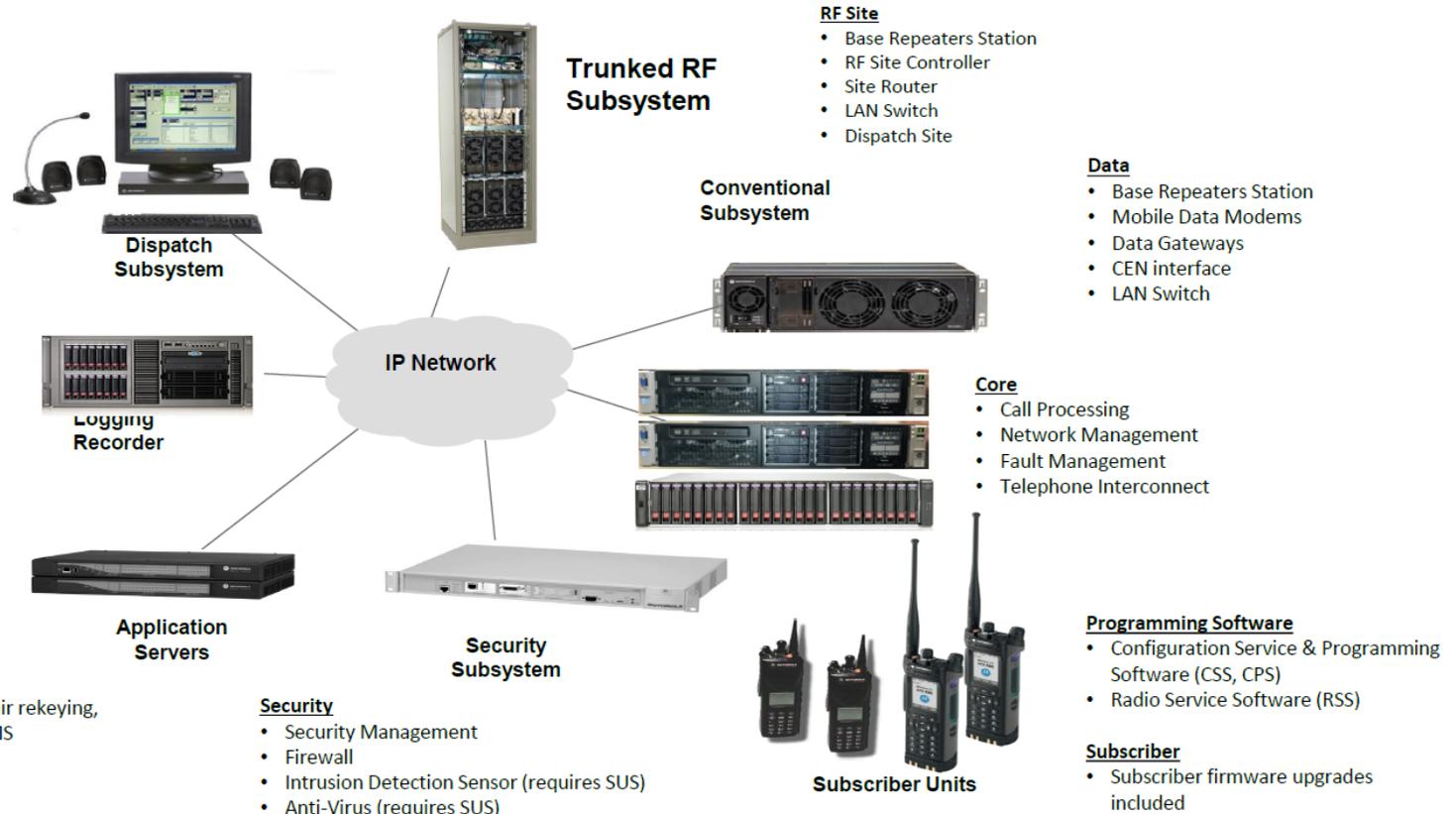
- 3rd Party Operating Systems
 - Windows Client, Windows Server, Red Hat Linux, Sun Solaris, VMWare, LX 4000 Terminal Server
- 3rd Party Applications
 - Oracle, Advenet, Voyence, Crystal Reports, Infovista, SNAP, InReach

Data Applications

- Motorola Bolt-On Apps – Over the air rekeying, Location, Presense Notification, AMS

Security

- Security Management
- Firewall
- Intrusion Detection Sensor (requires SUS)
- Anti-Virus (requires SUS)



4. FirstNet/Broadband

- ATT committed to our 38 site buildout in 2020.
- State level support changes
- Interim application survey results, <https://www.surveymonkey.com/stories/SM-GD86DWMV/>

5. Event/Emergency Response Communications

6. Unified Correspondence

- Correspondence going out to:
 - SD Dept of Ag
 - SDACCO
 - SD DOT
 - SD Municipal League
 - SD Firefighters
 - SD EMA
 - SD Sheriff's Assn

7. Key-File, code-plug template

- A "System Key" file is required to be programmed into any radio needing access to our network. A new Key has been received for the P25 system from both Motorola, and EFJ/Kenwood and work has been underway to develop a template for new & reprogrammed radios to allow programming when radios are in shop.

8. Encryption Standard

- AES-256 is the only standard allowed for funding by DHS
- OEM funding limited number of encrypted devices
- Agencies are not required to run encryption, but if they want to participate with those that do, we recommend that they equip their radios with AES-256.

9. Council Member Terms

- Need to get term dates set up on open meetings site.

10. Other

Travel reimbursement forms

Organizational Reports

Police Chief's Assn. – Jason Jones
Sheriffs Assn. -- Dave Ackerman
DCI -- Attorney General – Scott Rechtenbaugh
GFP -- Bruce Nachtigall
DOT --Brad Maupin
National Guard – SFC David Goodwin
Emergency Managers – Harold Timmerman
Firefighters – Charlie Kludt
Healthcare – Tim Rave
Dept. of Public Safety – Casey Collins
APCO/NENA – Kevin Karley
EMT's -- J.D. Geigle
Wildland Fire/DOA – Paul Reiter
County Commissioners – Gary Jaeger
Health Dept. -- Rick LaBrie
Tribal Governments -- Open
Federal Government – Andy Barth
BIT Engineering -- Jeff Pierce
911 – Interim/Maria King
SD House – Representative Doug Barthel
SD Senate – Open

Closing Comments

Vice-chair – Bruce Nachtigall
Member at Large – Paul Reiter
Chair -- Goodwin

Next Meeting: date, time, location.