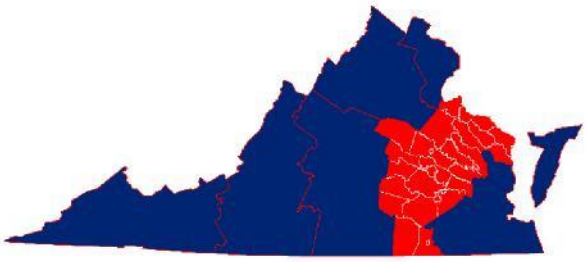
# RPAC-I Region 1 Meeting

Friday, June 1st, 2018
1000 hours
Eanes-Pittman Public Safety Training Center



## Minutes

Attendees:

| | |
|---|---|
| **Charles Smith, Hanover, Chair** | Kent Emerson, Amelia |
| Marty McLain, DHS | Rich Troshak, Chesterfield |
| Denice Crowder, Dinwiddie | Ranna Cope, Amelia |
| Rich Troshak, Chesterfield | Mike Schlemmer, Louisa |
| Katie Moody, RRPDC | Steve Parrott, Chesterfield |
| Ben Ruppert, Hopewell | Darshan Parikh, VDEM |
| Alex Raffey, AT&T | Bill Tegatoff, AT&T |
| Pete Hatcher, AT&T | Brian Harrison, AT&T |

### I. Welcome

The Chair called the meeting to order at 10:02 am. He welcomed and thanked all for attending and pointed out the handouts available at the front of the room. Introductions were made.

### II. Minutes

The Chair invited a motion to approve the April 6, 2018 minutes. Motion to approve by Denice Crowder and seconded by Steve Parrott. All approved.

### III. Grant Request Reviews

- The SHSP FY18 grants deadline was extended to June 15th.
- Hanover is submitting a last-minute request for grant proposal from the committee – submitted a proposal for a UAV project. The Chair would like a few volunteers to form an ad hoc committee to review the submissions, and serve as approval for the committee. UAV's are now becoming interoperability tools and public safety tools – aerial video is very useful in many situations. Hanover is already running some of its Fire/EMS through pilot training to have skilled operators in house.
- Ben Ruppert commented that Prince George/Hopewell is also applying for a UAV project. He offered to submit his proposal to the Chair as a reference, along with Hanover's submission.
- The RPAC committee will certainly look at any projects that promote interoperability, and will give its blessing. Denice Crowder offered to serve on the ad hoc committee for reviewing these projects.



### IV. AT&T – LTE Fundamentals

- Alex Raffey is the Regional Manager for First Net with AT&T. Bill Tegatoff handles the Richmond area and Charlottesville West, in terms of First Net. Pete Hatcher handles Fredericksburg and the Commonwealth.
- Brian Harrison is the Technical Communications Manager with AT&T, and his primary area is in Maryland and further north
    - In the 2G world, data become more a priority. Since the iPhone was released in 2007, we have become a data consumptive world. Apps and video streaming are the most dominant features in the network currently. When we introduced 3G, data became more consumable. The technology matured into 4G, speeds were about 12-15 mbps – but was still not useful for keeping up with the data consumption of the average user.
    - In 4G LTE world – promises of speeds up to 1 gbps, and first to reach close to theoretical speeds. A lot of flexibility in having the 3G and 4G overlapping each other.
    - The interoperability to 5G network will be seamless.
    - Key driver when improving networks? Improving the speed and latency – "flatter architecture." Voice calls in 2G-3G world were circuit switched, and data was packet switched. In LTE world, they removed many components to lower latency and get higher speeds. One of the biggest improvements to cellular networks – using fiberoptic instead of copper – which increases reliability and customer experience.
    - When switching to 5G – will be a massive increase in the use of fiber. These improvements will keep up with the data demand.
    - 250,000% increase in data growth since 2007. Data on network today can be very unpredictable – especially with new apps, etc. Most new apps are becoming more efficient in the way they utilize data.
    - In a 4G world, in a 1 sq mile area, there are 2,000 users. This will dramatically increase with 5G, especially with the invention of smart devices, etc, who would be physically connected to the network. There would be no limitations on devices connected to the network – massive connectivity.
    - LTE has "self-optimizing network." Equates to lower dropped calls on the network and smoother data use.
    - We have moved into LTE-A or "LTE Advanced."
    - MIMO – Multiple Input, Multiple Output. Today, we are using 4x4 MIMO. In really good conditions, four streams of data are being sent. In 5G, this will increase significantly. More improved speed and improved efficiency. The Samsung Galaxy as 4 MIMO whereas the iPhone has 3.
    - Phones today have the capability for 3-way carrier aggregation. Three frequencies are bonded into one channel. Currently in the process of swapping all the "brains" in our networks.
    - Streaming video is the key primary driver on the network today – about 60% of the data carried. In 5G, will bring the content closer to the end user.
    - Centralized Radio Access Networks – Go into urban environment with large population (Baltimore, for example), and put in antennas in light posts, etc to provide large network coverage and access
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**V. <u>Roundtable</u>**

Marty:

Katie: Jada is staying with the PDC through the summer. Getting ready to submit all CVEMA's SHSP grants.

Denise:

Rich: