Connectivity After the Storm

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About Me

- 16 years in the Fire Service
- 14 years in Fairfax
- CAD officer since February 2018
- NCR-IMT member since 2017
- PTBs in FACL, GSUL

Disclaimer

- This is my open presentation, with my own views, using material that is either available online or that was gathered during the event.
- Other than the IMT paying for my attendance here, I have no financial tie or incentives to anyone or any company that may be discussed during the presentation.

Objective

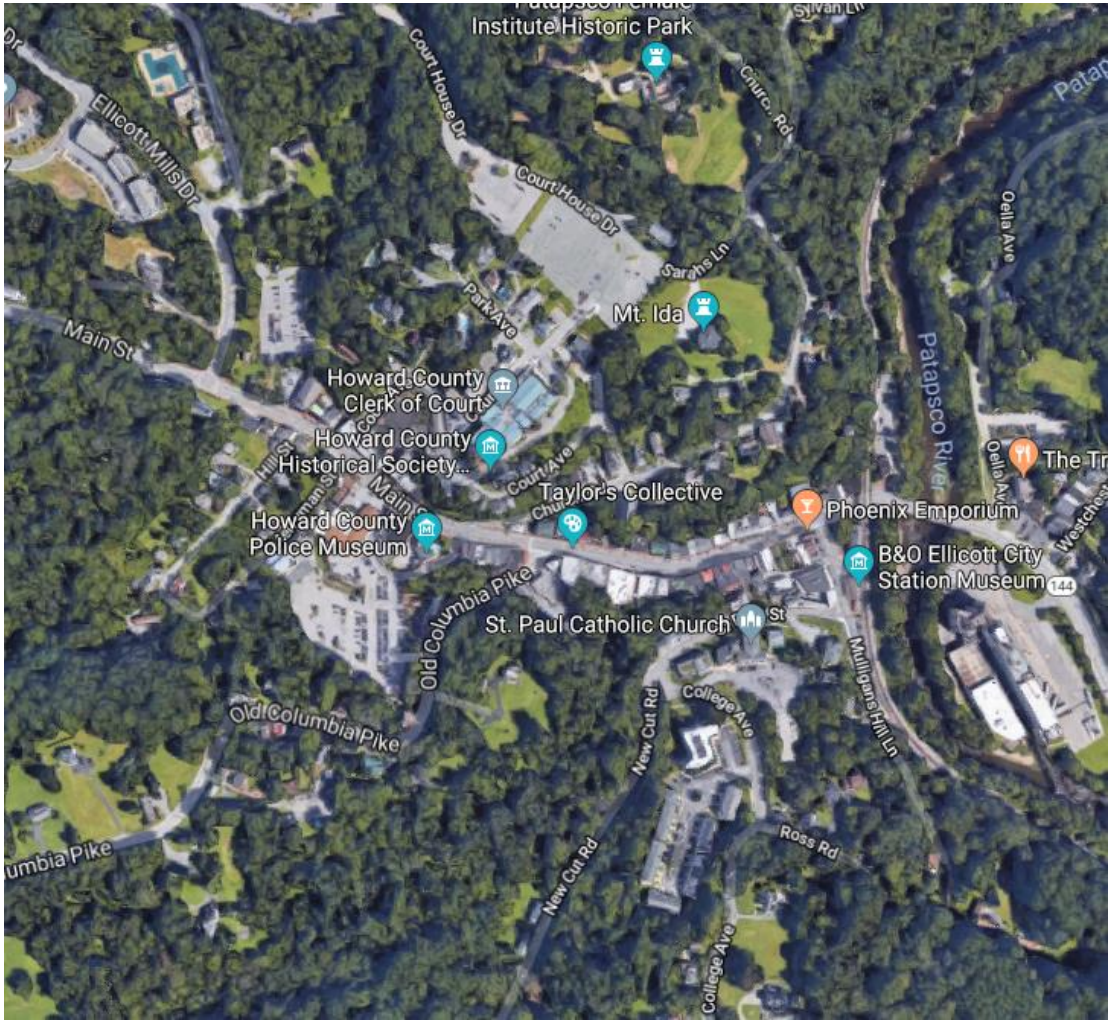
- Discuss the NCR-IMT’s approach to IT and connectivity
- Use a case study to talk about connectivity challenges
- Lessons learned from Ellicott City

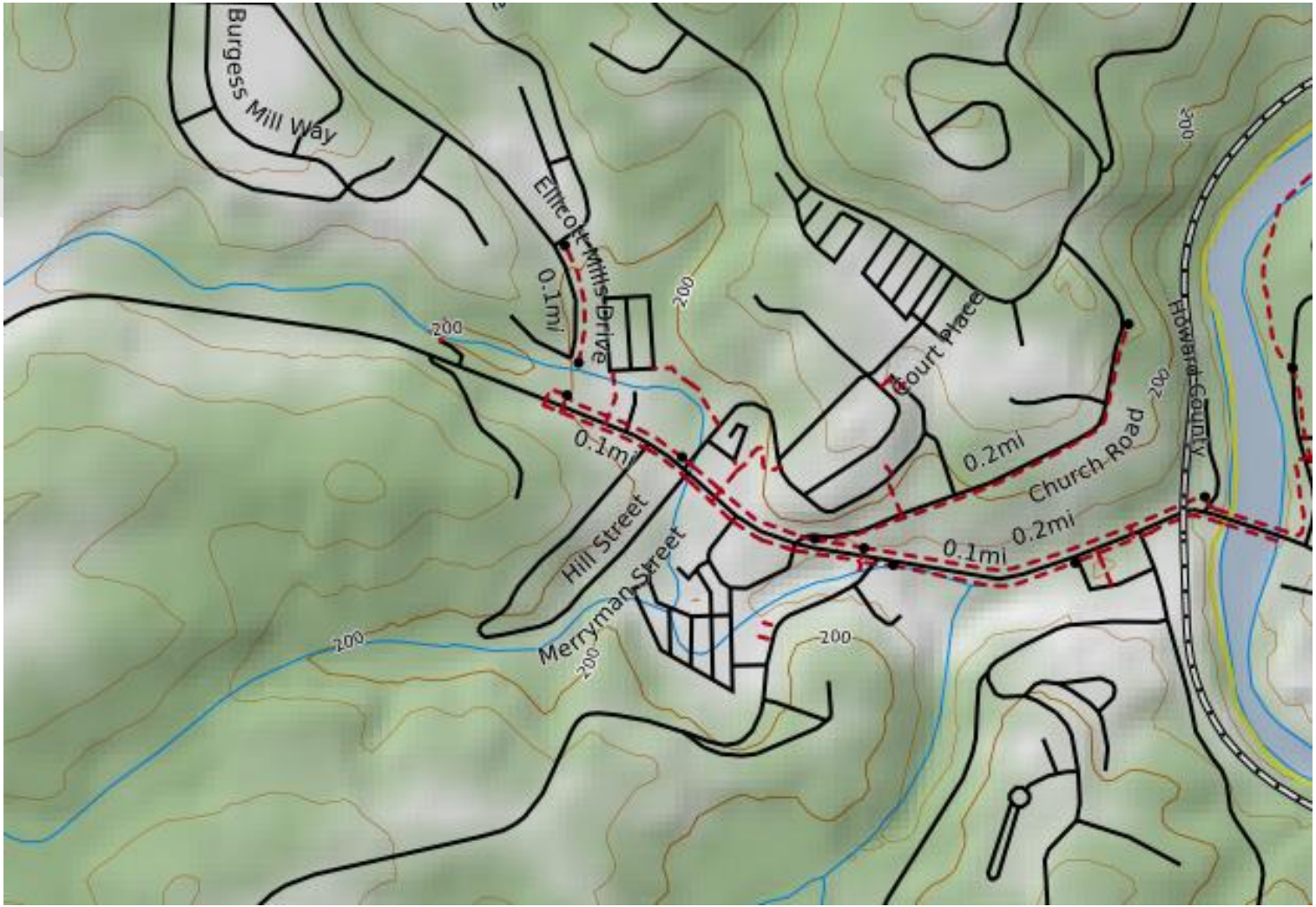
NCR-IMT IT Setup

- Cradlepoint routers in each of the teams
  - AER2200s, AER1600s
  - Long, Short, Initial Response, Planning Trailer
- MyCloud storage for each team
  - Serving as both a local NAS device with the ability to connect and load documents remotely
- Multi-function printer/scanner for each section
- Laptops for the necessary positions
- Cell phones (currently pay for use Sprint)
- On order
  - Plum case to boost connectivity

Ellicott City Case Study

Ellicott City


Institute Historic Park
Court House Dr
Church Rd
Ellicott Mills Dr
Court House Dr
Oella Ave
Sarahs Ln
Park Ave
Mt. Ida
Main St
Howard County
Clerk of Court
Howard County
Historical Society...
Court Ave
Patapsco River
Taylor's Collective
Phoenix Emporium
Howard County
Police Museum
B&O Ellicott City
Station Museum
144
St. Paul Catholic Church
Old Columbia Pike
Old Columbia Pike
College Ave
Mulligans Hill Ln
New Cut Rd
Ross Rd
New Cut Rd
College Ave


Burgess Mill Way
Elliott Mills Drive
0.1mi
200
Court Place
Howard County
0.2mi
Church Road
0.1mi
0.2mi
0.1mi
Hill Street
Merryman Street
200
200
200
200
200
200

2016- ‘1-1000 year rainstorm…’

- Portions of the town have flooded more nearly 30 times since the early 1800s
- July 30, 2016 storm drops 6” of rain in 2 hours
- Two people killed
- NCR-IMT played a supporting role in the response and recovery
- Street reopened to pedestrian and vehicle traffic 2 months later

Fullscreen

Cleanup begins in Ellicott City after the '1-in-1000' year rainstorm

A submerged car is visible in the Patapsco River, seen from the Howard County side of Patapsco Valley State Park after the sidewalk caved in due to the flooding in Ellicott City, Md. Amy Davis, AP

Capital Weather Gang • Analysis

The second 1,000-year rainstorm in two years engulfed Ellicott City. Here's how it happened.

- May 27th, 2018
- More than 8" of rain in 2 hour span
- 1 person was killed

Zachary Landow
Ellicott City, Maryland
BREAKING NEWS
BUILDINGS COLLAPSE AS STREETS FLOOD IN MARYLAND
NEWSROOM

ALL
TIME
TOYS
• ACTION FIGURES

Previous Response

- Large number of responders
- Large number of cleanup contractors
- Large number of residents
- Areas with limited connectivity in the immediate downtown area due to topography

Cell-based Connectivity Options

Sprint

Pros

- Allowed pay by use options
- Good data speeds
- Public safety friendly

Cons

- Limited coverage in and around the areas where the NCR-IMT works, trains and deploys most frequently

AT&T/ Firstnet

Pros

- Public Safety network built off AT&T platform
- Provides priority service for Firstnet users
- Allows IMT staff to uplift users for priority and preemption
- Doesn’t throttle data speeds
- Unlimited Data
- Free access to deployable network assets
- Unlimited plans are well priced

Cons

- Unproven
- Infrastructure was still being built
- Lots of promises that had yet to be seen

Verizon

Pros

- Good Coverage in our area
- Well known carrier
- Large infrastructure

Cons

- Less interested in working with us directly on a solution

And well...

“Verizon Throttled California Firefighters’ Internet Speeds Amid Blaze (They Were Out of Data)”- NYT

Ellicott City and the NCR-IMT's response

- Team had been undergoing a transition from a Verizon/Sprint based network to AT&T/Firstnet
    - Based on cost, promise of unlimited data and ability to "Uplift" the priority of our devices on the network

- IT members met with Firstnet the week before to hear about their new deployable solutions

- IMT was waiting for USB modems and SIMs to be delivered from the Fire Department's IT section

VIRGINIA
EAC
EAC
EAC
EAC

AT&T
FIRSTNET
Built with AT&T

COMMUNICATIONS
UNIT LEADER

Lessons Learned from this Deployment

- Have an account admin on the team
- Have your account manager’s work/personal cell phone number
- Be prepared for unsolicited vendors
- Evaluate your situation before you ask for something
- Ask the right questions of the service provider

AT&T
FIRSTNET™
Built with AT&T

Upcoming connectivity sources

- SAT Colts Firstnet and AT&T
- Drones
- RDKs
- Plum Cases
- Subscriber Accounts

Final Thoughts

- Choose the service provider that is right for your teams needs
- Know what services that provider can give you and how to get them
- Know your account owners
- And make sure you ask specifically for what you need. Don’t assume the service provider will send you what you need.

Questions?

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