FCC Mobility Fund Challenge

Strategy and Planning Project

June 1, 2018 Meeting Minutes

Meeting Called by: Kath Mullholand, Director, Regulatory Innovation and Strategy Division, NH PUC

Also Present:

- Carol Miller, Dept. of Business and Economic Affairs
- Jan Gugliotti, Business Analyst, Regulatory Innovation and Strategy Division, NH PUC
- Jeanne Dietsch, NH Commission on Rural Affairs, and Town of Peterborough
- Jo Lacillade, Town of Haverhill
- John Stevens, NH Dept. of Safety
- Kevin Shea, Wireless Partners
- Maura Weston, JD, MM Weston and Associates, on behald of AT&T
- Tom Buckley, Wireless Partners

Issues Discussed:

1. **Coverage areas as claimed by carriers**
   Kath presented confidential coverage maps for six carriers – AT&T, Sprint, T-Mobile, US Cellular, Verizon and VTel -- who have claimed in FCC Form 477 submissions that they cover varying parts of New Hampshire with a minimum 4G LTE service with a benchmark of 5 Mbps download speed.

   Kath discussed the treatment of the confidential maps, and everyone present signed a non-disclosure agreement.

2. **What conditions make a specific area "challengeable" under current FCC Challenge rules?**
   There was strong agreement that areas of the maps purported to be covered by the carriers do not meet the FCC's definition of minimum service strength and speed: download speeds of at least 5 Mbps. Participants had a question from the FCC's presentation regarding areas reported to be served by two or more carriers (for example, Town of Haverhill): are they presumed to be adequately "covered," and not eligible for challenge?

   Update: Kath received confirmation from the FCC that any grid currently ineligible for funds may be challenged. It is up to the challenger to show that none of the reporting carriers pass the download speed standard.

3. **How many speed readings are required within each challenged 1 kilometer square to be persuasive to the FCC? What is the ratio of passed readings versus failed readings within a grid to constitute an overall pass or fail score? How long will it take to test a grid?**
   Kath has been told by FCC that tests from nine different locations within a 1 k grid will be adequate.

   Update: Kath received confirmation from the FCC that the standard is not the number of tests in a grid but that the area covered by a 400-meter radius from each test spot overlap sufficiently to cover the entire grid. Initially the FCC specified tests every 400 meters (200-meter radius per test) but has since changed that requirement to tests every 800 meters (400-meter radius per test).

   We estimate a single test (arrive at a spot, leave the vehicle and run the test, drive a half mile to the next spot) will take about 3 minutes. If our goal is 9 tests per grid, a single test team can test two grids per hour, or 16 per day. Tom Buckley questioned whether so-called "drive-time" tests would be acceptable.

   Update: Kath confirmed that the FCC will accept drive-time tests that are done with specific software on specific phone sets. Once the phone set list is public (see below) Kath will post phone set and software details on the PUC website.

4. **How many potentially challenged grids does New Hampshire have?**
   The entire state south of the Notches contains about 7500 square miles. This amounts to about 20,000 total 1 k sq. grids or 10,000 test days if all of this area is challenged. Assuming half of the area has adequate service, the number of test teams needed to work 8 hours per day, 7 days per week in order to finish by the end of October is 34 (5000 test days divided by 150 days available June through October).

5. **Do we need a carrier-specific phone to run a test?**
   Yes. If a carrier has declared it serves an area, we have to show that the carrier does or does not meet the 5 Mbps test. This is true even if the carrier is one of two or more claiming to serve the area. If the other carrier(s) fail, this carrier has to be tested to be certain that it also fails. Further, the carriers have specified three or more particular phones from which they will accept tests. This list of phones is currently confidential, however Tom Buckley pointed out that the FCC has issued a ruling that will make the list of phones public June 5 (assuming no carrier raises an objection that the FCC has to address.)

6. **Can any person test the assumptions?**
   Maybe. The FCC limited the challenge itself to state and town governments and wireless carriers, and has expressed some reservations about volunteer testers, however the two towns present mentioned that they were planning on using DPS and police crews, which would pose no problems. We think that so long as the people testing are doing so at the town or state's

direction, and have been fully instructed on how to ensure that the tests are carried out as the FCC expects, we shouldn't have any problems.

Kath requested that anyone testing, receiving or reviewing tests keep Jan and Kath in the loop so that we don't duplicate our efforts.

7. **What's the time frame for submitting a completed challenge?**
   August 27, 2018, however at the meeting there was speculation that the FCC had extended that deadline.

   Update: While there are reports that the FCC intends to extend the deadline as requested by several US Senators, there has not yet been an order from the FCC making that official.

   CONCLUSIONS:

- It appears to be feasible to conduct an extremely wide-area mobility challenge in New Hampshire's rural areas, and to finish by the FCC November deadline.
- The effort will depend heavily on volunteers to run the tests and upload results to a central site for consolidation, certification and upload. We assume volunteers will be willing to use their own phones. However, use of personal data plans is an open concern; see below.
- The project team believes that we may need to purchase three handsets of carrier-specific phones with data plans, and may need to subsidize upgrading volunteers' data plans to accommodate testing. RISD is working on establishing costs for those handsets and data plans. Funding sources will be investigated as a high priority.
- The project will run an initial pilot on the Town of Haverhill and near surroundings, and the Town of Peterborough and a section to its west in the Monadnock Region. These pilots will verify our assumptions about time and effort to run the tests, data usage and storage requirements, grid-by-grid test plans and availability of volunteers. We hope to complete the pilot (at least to the point of acceptance or modification) by early July.

Other Action Items

- Get back to Kath with information on local testing volunteers, availability of area roadmaps and availability of privately-owned handsets that can be used in the test.
- For Jeanne, confirm if Peterborough's intern and GIS expert will be available part-time to help with the project.
- For Jan, price out carrier-specific mobile phones for purchase or lease, and available data plan costs. Investigate a Drop Box type solution for uploading completed test results from the field. Investigate requirements for automatically combining and formatting test results for upload to the FCC, and to drive an ongoing map of test-by-test, grid-by-grid test results to be displayed on a project website.