

Statement by

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Broadband Mapping: Small Carrier Perspectives on a Path Forward

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INTRODUCTION

Chairman Golden, Ranking Member Stauber, and members of the Subcommittee, thank you for the opportunity to testify on the importance of rural broadband mapping.

My name is Beth Osler. I have worked in the telecommunications industry for over 50 years, and I am currently the Director of Customer and Industry Relations for UniTel, Inc. headquartered in Unity, Maine. UniTel, Inc. (“UniTel”) is a local rural telecommunications provider serving portions of Central Maine. Founded in 1902, UniTel has delivered a wide variety of telecommunications services to sparsely populated rural areas spanning approximately 280 square miles and serving all or portions of 16 communities in parts of three counties for over 117 years. My remarks today are on behalf of UniTel, as well as NTCA–The Rural Broadband Association, which represents approximately 850 rural community-based carriers that offer advanced communications services throughout the most sparsely-populated areas of the nation. NTCA members and companies like them serve just under five percent of the U.S. population spread across approximately 35 percent of the U.S. landmass; in most of this vast expanse, they are the only fixed full-service networks available.

Today UniTel operates a digital network offering the latest services including high-speed broadband at speeds up to 1 Gigabit symmetrical. In 2015, UniTel made substantial investments in a fiber optic network within its footprint. In 2016, with support from ConnectME state grants, we extended the Fiber to The Home network further still. This fiber deployment allows us to offer some of the fastest broadband speeds in Maine and the U.S. – and to serve not only our citizens, but our local town offices, three volunteer fire departments, a community center, a rural health center, and businesses and non-profit organizations throughout our area. We do it all with fewer than 25 employees.

But the extremely rural nature of our service territory presents unique issues. Because the population density is so low, the ability to build a business case for investment in new or upgraded network additions is limited. While fiber offers the most promise now and into the future to give rural Maine the connections it needs to the rest of the world, the upfront costs of deployment and the ongoing costs of maintenance and operations are difficult to justify and then recover from small rural customer bases. Therefore, it takes support at the federal, state, and/or local levels along with entrepreneurial spirit and community commitment to realize our national vision of broadband in rural Maine and across rural America.

To be clear, getting broadband to and keeping broadband in rural areas truly requires the best kinds of public-private partnership. Much of the extensive network in Maine today is a result of private investment. UniTel has spent millions of dollars getting broadband to our customers. But for those places where densities are low and returns on infrastructure investments are measured in decades, government support is important to help make the business case.

This then brings us to the important question of broadband mapping. To be able to determine where limited resources for support should be spent, and to ensure that incentives exist for private investments where they can be justified, mapping of broadband availability and

identification of unserved areas are critical. Unfortunately, our maps have kept pace neither with consumer demand nor the evolution of the broadband marketplace, and now is the time to develop a process of mapping – and validating – the information that will help us to target resources better toward building and sustaining broadband networks.

UNITEL’S EXPERIENCE WITH BROADBAND MAPS

Broadband mapping is significant for consumers in rural areas and for companies like UniTel that need to leverage public-private partnerships to deploy networks and deliver services in such areas. Maine has attempts underway through its broadband agency, ConnectME, to more accurately identify unserved and underserved areas. But, as it stands today, the Federal Communications Commission (“FCC”) maintains the most accurate maps available in most states. At the same time, like most – if not all – providers and other users of the maps produced by the FCC, we have found the results of these mapping efforts to be unreliable. In fact, we find it is not unusual for “conditions on the ground” to look very different from those depicted on national maps.

For instance, we do not use FCC maps to do any of our market analysis, and certainly not for our own internal planning or engineering. Instead we find ourselves using valuable work hours verifying and attempting to correct errors in order to identify both what is truly unserved and to identify also those areas where, with the help of government support, we are the only provider willing to serve there. To provide some basic understanding of how the current FCC maps miss the mark, they show an entire census block as served when even just one location in that block is served – meaning that a census block becomes ineligible for support funding. An additional concern is that no one is charged with thoroughly validating the data that are used to create the maps – providers submit it, and depending on the support program the FCC may not provide for any opportunity to correct that information before deciding support should be eliminated in an area that is in fact unserved by any other provider.

These sorts of “false positives” of coverage hit close to home and directly affect consumers who may never see broadband (or may lose access to broadband over time) as a result of such mistakes. As an example, there are six census blocks in one of the towns we serve that are identified by the FCC as served because another provider reported them as such. But, one of the advantages of the small size of our company is our deep knowledge of our service territory. We knew that the map was in error, and that no other provider was present there. But even with that local knowledge we are considered ineligible for support in those census blocks. And, more troublingly still, there is currently no process to correct or challenge the status of any census block – meaning UniTel loses support and the consumers there suffer as a result.

Conversely, there are “false negatives” as well – for example, our review of FCC maps of our area has shown gaps in coverage where we know we have active customers. Without the ability to identify and correct errors in the data we had supplied to the FCC, limited federal support dollars might have been used to duplicate an existing network.

Accurate mapping data is therefore critical to the ability to deliver and sustain service in rural America – and bad mapping data risks leaving rural consumers stranded without broadband. Without any meaningful validation process or the ability to challenge the “FCC Form 477” reports submitted by providers that are translated into the FCC’s maps, much-needed support through the FCC’s Universal Service Fund (USF) program is being denied in areas where that support is in fact very much needed – which then translates into rural consumers not getting served. And that is perhaps the most important part of this problem. While improving the maps on the front end is undoubtedly important and is attracting much of the attention these days, without any ability to validate or correct on the back end the self-reported data that gets populated into these maps and is then used by agencies to decide where funding should go, the end user is ultimately the one who suffers. Thus, even as there is a push to improve the standards and granularity of how providers report, it is equally important not to forget the importance of making sure that there is some opportunity to “double-check” the accuracy of the data being self-reported by providers.

WHAT DRIVES INACCURATE BROADBAND MAPS?

The accuracy of broadband availability maps is often in question, as maps show services as available where consumers cannot get them at all, and in other places these maps show speeds available at levels that cannot consistently be delivered. The examples above illustrate these common problems. There are several reasons that these issues arise.

First, current broadband maps are based mostly, if not entirely, on information received from service providers themselves. While providers certify the accuracy of their reports, the processes used to verify the information can vary greatly at the state level and are all but nonexistent at the federal level. Therefore, the maps essentially say whatever the providers who populate them say. Moreover, the standards for reporting this data vary and make it very challenging to verify – there is, for example, no specific standard to ensure a wireless provider is reflecting the actual propagation of its spectrum capabilities in a given area, rather than just drawing a coverage circle around an antenna based upon the theoretical reach of that spectrum.

Second, as I mentioned earlier, a census block is reported as served on the Form 477 that feeds into the FCC’s broadband map simply because one location in that block could *in theory* be served by a provider. In rural census blocks that can stretch large distances, this means that the delivery of service to just *one* customer in a census block can result in the denial of funding for voice and broadband to *another* customer *located miles away* in the same census block. This disparity results in many unserved homes and businesses looking served, especially in rural areas where census blocks can be large.

Third, the current standard for reporting an area as served depends upon advertised rather than actual speeds, and also allows an area to show as served if a provider believes it could deliver service there at some point soon, rather than having the actual capability to do so in the near term. In other words, there may be no service actually installed at all in a census block, or the speeds actually delivered in that block may not be equal to what is advertised – and, yet, a provider can claim that it serves that area and thus have them shown as served on the maps.

Finally, the current map does not capture buildout in progress that is occurring pursuant to governmental initiatives like the FCC's USF or United States Department of Agriculture Rural Utilities Service (RUS) lending/grant programs. This means that there is the potential for multiple governmental programs to in effect "overbuild each other," allowing duplicative and competing networks to be built through two different programs.

WHAT IS THE SOLUTION?

My testimony above describes how the "rubber meets the road" in terms of what bad mapping data means when it affects the ability to serve specific rural areas. "False positives" – locations shown as served when they are not – can result in a denial of financing or funding needed for a small, local committed company like UniTel to deploy and operate a broadband network, especially in rural areas where the business case for doing so is so difficult. On the other hand, "false negatives" – locations appearing as unserved when they are already served or are in the process of having networks built to them – can result in a waste of financing and funding resources on duplicative networks.

The reality is that any map will practically be outdated by the time it is published. It is also the case that no one is going to validate independently each piece of data and claimed coverage submitted by a service provider the moment it is submitted. We recognize too that there is a balance to be struck in terms of obtaining more accurate and granular data while trying not to impose burdens that have providers spending more time reporting coverage than advancing coverage through network deployment. However, all this does not mean we should not strive to improve this process.

Many different proposals are being presented to the FCC, and each of them holds some promise to make the maps much better than they are today. These proposals warrant significant consideration, and they may provide a much-needed path forward toward better maps. But, at the end of the day, as long as any map is based upon self-reported data from providers and as long as that data is not vetted thoroughly by an independent source, there will be a need for a challenge process prior to relying upon the map to make decisions about where funding or support should either go or be withdrawn. A more granular map will certainly help identify more accurately where broadband is available, and getting more detailed information on a basis below the census block level is an important objective. At the same time, however, a meaningful and robust challenge process will remain critical to validate both fixed and mobile data prior to any map being used by the FCC or RUS (or any other governmental agency) to make final decisions on funding or financing. In other words, we need to aim to get both more granular *and* more accurate through upfront standards and back-end processes that will yield better, more useful maps.

We applaud the efforts of members on both sides of the aisle and both sides of Capitol Hill for their recent legislative efforts to address the broadband mapping problem. In the House, Representative McMorris Rodgers has introduced the Broadband Data Improvement Act (H.R. 3162); a companion bill has been introduced as well by Senator Capito (S. 1522). This bill would

improve broadband data collection, mapping, and validation to support the effective deployment of broadband services to all areas of the United States. It would improve the accuracy of such maps by requiring broadband providers to report data in a way that more accurately reflects locations served, which is a change from current reporting requirements. It would seek to create a new National Broadband Map that is more accurate and granular – and, perhaps most importantly, be subject to an ongoing challenge, validation, and refinement process beyond taking providers' self-reported data as gospel. These are the core elements of an effective broadband mapping process.

Similarly, Senator Wicker has introduced the Broadband Data Act (S. 1822). This bill would require the FCC to collect granular service availability data from wired, fixed wireless, and satellite broadband providers, and set strong parameters for data collected from mobile broadband providers to ensure accuracy. It too captures many of the vital components of sound mapping strategy.

The primary goals in these pieces of legislation – and in any other initiatives related to mapping – include several essential elements. No matter what policy route is taken, these characteristics must be present in any broadband mapping effort.

First, there should be a movement toward more granular maps through shapefiles in the near-term with the objective of implementing location or address-based maps in the longer-run. Taking this step would help to minimize, if not eliminate, the errors that arise from census block-based reporting. Next, policy makers should develop standards for reporting by various platforms; this is particularly important in the case of spectrum-based offerings (such as fixed wireless services) in order to more realistically capture what they can and cannot do in coverage, rather than once again just drawing large circles around antennas and calling that entire area “served.” Finally, there must be challenge and other data validation processes regardless of what mapping solution is adopted. Whether shapefiles or location-based reporting, someone needs to validate the data that providers self-report so that funding is directed to where it is needed and so that funding is not eliminated based upon false positives of “unsubsidized competition,” – and consumers, other operators, and other entities familiar with local conditions (such as local governments) should be able to weigh in if and when they see errors in the self-reported data and coverage maps.

The three steps outlined above – moving to shapefiles “on the way to” even more granular service availability data; standardizing how providers can determine and report on asserted coverage; and adopting validation and challenge processes – will result in the best possible maps showing where services are available or not while recognizing that there is no singular magic “silver bullet” that will yield perfect results. These recommendations also strike a reasonable balance in terms of the work that providers will need to do in reporting more granular data while also minimizing the scope of challenge processes due to more granular reports than are available today.

In the past, agencies like the FCC and RUS have developed and used challenge processes that treat service coverage information like Form 477 data as *informative* but not *dispositive*.

Unfortunately, however, such processes are not always employed, and even when used, they have not been consistently applied. Certainly, the recent experiences with the FCC's Mobility Fund show the value and wisdom of continuing to use a challenge process. Without such a process, the concerns that have been raised about overstated mobile coverage would never have been identified. At the same time then, it has been disappointing to see the FCC moving away from challenge processes in the fixed service context. Specifically, the FCC has refused recently to permit any challenge process at all in the context of ACAM support, and it is now proposing to eliminate the existing challenge process to validate Form 477 data in the context of other USF support – meaning that it would now instead default to treating the self-reported Form 477 data effectively as gospel.

If UniTel's own experience in rural Maine provides any lesson, it is that a meaningful challenge process is a necessity in determining where funding should go or where it should be denied. We therefore are hopeful that the FCC will reverse course on its suggestion to eliminate a challenge process in the context of distributing USF to support fixed networks, and that it will commit to a data-driven process that ensures rural consumers are not left on the wrong side of a digital divide due to inaccurate information. We hope that an evidence-based challenge process will be used in all contexts going forward to make sure that even improved maps are as accurate as possible prior to funding or financing decisions being made by agencies like the FCC or RUS.

CONCLUSION

UniTel continues to strive to provide great service to its customers in rural Maine. However, as long as broadband maps remain unreliable and riddled with erroneous, overly broad coverage claims, we will not be able to maximize our efforts to reach all unserved areas or to sustain services in areas where funding is needed to do so.

Developing more granular maps is an important prerequisite to driving better decision-making, and there are a number of proposals being developed that would do just this. At the same time, this is only one step among several that must be taken to get mapping right. In particular, we also need better standards for what providers can report on the front end to populate those maps, and then we need validation processes, including the ability to challenge data on the baseline map as inaccurate, to ensure these maps can effectively contribute to the ultimate goal of connecting every American and keeping every American connected.