http://newiprogressive.com/images/stories/S5/internet-rural-s5.jpg



Sen. Smith writes about some of the ways Wisconsin can improve internet speeds and accessibility. This column is the first of two columns describing the importance of broadband expansion in Wisconsin.

MADISON - After spending three days in Denver for a Broadband Summit with legislators from across the country, I came away with even more of an urgency to help Wisconsin catch up to other states on broadband internet expansion.

Wisconsin has a lot of opportunity to improve. In 2016, Wisconsin was ranked 49th in the nation for internet speeds according to the technology firm Speedtest. More recently, Wisconsin jumped to 41st for internet speeds. There's no way around it, we need to provide internet speeds designed to keep up in a global economy.

Speeds may be increasing in Wisconsin, but progress is slow. Slow speeds don't just force our TV streaming services to buffer. It's more than that. Internet speeds determine the education of our children, the health care of our sick and the sales of our local economies. Every second counts on the Internet for almost every facet of our lives.

The Federal Communications Commission (FCC) considers broadband speed to be at least 25 megabytes per second (Mbps) while downloading website content and 3 Mbps while uploading.

If fiber optics reach your home, speed is not an issue. But in rural areas like mine and many of yours, it's like riding a moped on the Interstate – you'll get there eventually, but the rest of the traffic is whizzing by at an alarming pace. For those who use dial-up internet, you know just how important it is to have adequate speeds. For people in rural communities with only satellite internet service, you know the hardships of having spotty internet service and data limits.

Technology continues to advance with new low-orbit satellites, 5th Generation (5G) capabilities, whitespace technology and fixed wireless antennas. The only tried and true method for delivering the speeds needed for today and tomorrow's internet is fiber optics. Installing fiber optics may be expensive, but it provides assurance that Wisconsin can compete in a global economy.

Speed isn't a luxury for internet usage – it's a must. It's truly an accessibility issue when determining whether a user has internet or not.

Understanding which speeds are where is another challenge. Wisconsin is not alone. Across the nation, the data informing regulators where broadband exists and where it doesn't are completely inaccurate. We need honest mapping now.

The FCC uses census blocks to determine what areas are served. Urban census blocks can be as small as a few blocks and rural census blocks can be miles in size. Building broadband maps from these census blocks is a problem because they only show us where broadband MIGHT be available. I say might, because using census blocks, if one house can be connected in that block, then ALL of the homes are considered connected.

Fortunately, the FCC is taking steps to address these egregiously inaccurate maps by using multiple data streams such as shape-file mapping and crowdsourcing. This is important because there is a general belief that 80% of the population is being reached and some of us are skeptical of that claim.



We can't expand broadband to areas unless we know where it is needed. With the right data,

we will not only be able to expand broadband to all areas, but we will be able to effectively lay out our infrastructure more efficiently.

Big things are in store for Wisconsin. During the summit in Denver, we learned about the applications of Artificial Intelligence, Quantum Computers, 10G capability, microbiomes and other mind boggling science. In fact, as we wrestle with decisions on our 5G service, we learned that the science is already complete for 10G service! Technology is advancing at a break-neck pace and Wisconsin needs to keep up.

We need to think ahead for broadband expansion – speeds are the bottleneck of many users and accurate maps are the most immediate issue for understanding where broadband is needed. In my next column, I will be focusing on how we should use our state resources for broadband expansion and new ideas for making progress in our rural communities.

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The 31st Senate District includes all of Buffalo and Pepin counties and portions of Trempealeau, Pierce, Dunn, Eau Claire and Jackson counties and very small portions of Chippewa and St. Croix counties.