

## Why Broadband Internet is important

When this country rolled out rural electrification across the whole nation from 1930 to 1950, people replaced candles and gas lanterns with electric lights and realized that this was great. Then they sought to replace steam and hit and miss engines. So.

- \* Then came refrigerators, washing machines, radios, clothes dryers, telephones, water pumps, electric shaving razors, and food freezers. They paid more for the kilowatts used but didn't need to upgrade to another tier of service or technology.

- \* Then came televisions, food mixers, electric heat, toasters, toaster ovens, coffee makers, electric fans, dishwashers, vacuum cleaners, electric clocks, electric knives, crock pots, electric power hand tools, electric table saws, bench grinders, pressure washers, mainframe and minicomputers, and microwaves. They paid more for the kilowatts used but didn't need to upgrade to another tier of service or technology.

- \* Then came personal computers, laser printers, UPS's, room air conditioners, water softeners, humidifiers and dehumidifiers, air compressors, electric motors, garage door openers, stereos, video cameras, hair dryers, cellphones, electric lawn mowers, and electric automobiles and other vehicles. They paid more for the kilowatts used but didn't need to upgrade to another tier of service or technology.

Then in the 20 years between the early seventies and early nineties, the Internet was created and deployed. Packet-switched networks were created for the devices that needed digital connectivity, so then came dial-up, ISDN, DSL, fiber optic, HFC cable, terrestrial Fixed Broadband Wireless, Cellular

Wireless, and then Satellite. All of these technologies save fiber, had limitations that prevented the expansion of the needed future proof bandwidth. They paid more for the Mbps they used and continuously needed to upgrade to another tier of service or technology.

Our governments and corporations have tried and failed to roll out unlimited bandwidth with fiber optic cables for the past 30 years. This has failed largely, not due to the \$1.2 trillion of public monies, credits, and regulation relief given to the monopolies, but was instead primarily caused by a lack of regulation and competition.

Now, the USA is at least ten years behind Europe and even further behind Asia on affordable and available Internet service. This fact puts this country at a competitive disadvantage in the world.

Our governments may think that 100 Mbps or even 300 Mbps of Internet bandwidth is sufficient in monopoly market rural America for now, while the cities enjoy a competitive market of 1-10 Gbps service. But they have no idea of what is coming with artificial intelligence, telehealth, remote working, home based businesses, and digital home employment, or virtual education, and holography, in the future just as they did not imagine the progress in the 1930's. 50 Gbps and beyond of bandwidth is possible now and should be the target.

Only by now, we do know what will likely happen.