

*Thanks to Cindy for bringing this to my attention.*

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Fareed Zakaria "GPS" – The Battle Over 5G and Why China Is Going To Win

[10:31:30]

ZAKARIA: Now for our "What In the World" segment. All of a sudden it seems 5G is everywhere, from TV ads to presidential tweets. The next generation of mobile technology, 5G, promises speeds up to 100 times faster than our current networks. That means Internet so fast it could spur the growth of automated factories, smart cities and driverless cars.

But Americans must not be fooled by the ads. The U.S. doesn't have 5G at any sort of scale. According to a new report by the Defense Innovation Board, an advisory committee to the Department of Defense, China is winning the race for 5G dominance. That's not just because of its giant telecom companies or the power and vision of Xi Jinping.

As the report argues, it's primarily because of Spectrum, the airwaves that deliver data from cell towers to cell phones. Spectrum is the foundation of mobile Internet. Its frequencies determine how much data can be transferred and how fast. It's a national asset. It's in limited supply.

Earlier this month Trump announced that the U.S. was opening up for auction the most Spectrum of any country in the world. But these air waves the government is opening up for 5G may well be the wrong kind. They are high frequency, enabling a huge amount of data to be transferred incredibly quickly, but they operate at a minuscule range, as limited as a few hundred feet.

As the Defense Innovation Board report notes, 5G built for such frequency would require many millions of base stations and all kinds of other infrastructure. That would take time to build as well as lots of money, \$400 billion, the authors estimate.

And the U.S. isn't China. The government isn't going to lavish funds on digital infrastructure. Today, already, China has nearly 10 times as many 5G base stations as the U.S., and it plans to launch the first widespread 5G commercial network by 2020.

Huawei is becoming expert at 5G networks, which could make it one of the world's leaders in that technology. And China has already assigned air waves for 5G at a mid-level frequency to its three state telecom companies. This mid-range frequency is at the sweet spot of range and speed, requiring fewer base stations and enabling a faster, cheaper rollout of 5G.

So if middle-frequency Spectrum would translate to a quicker rollout of 5G in the U.S., why isn't Trump announcing its auction? Because much of it is already used by the Pentagon. And while possible, it's a bureaucratic headache to get the government and the commercial sector to share Spectrum; 5G represents a huge economic opportunity. Think about our current 4G networks. The U.S. led the world in 4G's development and rollout.

In 2016, 4G added \$100 billion to America's GDP. It flooded American tech companies with revenues. From 2011 to 2014, industry jobs increased by 84 percent. A much more intense version of this transformation will happen with 5G. And unless the U.S. government acts fast, the main beneficiary will be China.

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