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Summarized Article: <http://cacm.acm.org/magazines/2013/10/168173-tuning-in-to-graphene/fulltext>

Other Article:

<http://www.infoworld.com/t/government/how-the-government-shutdown-will-affect-tech-227825?page=0,1>

Wireless is now a commonality in today’s data-driven world. More often than not, almost all of our devices are equip with a wireless radio, and more often than not, are within range of a WiFi-equip router. Accessing the internet has become as easy as finding an open router to connect to. How fast we can transmit data through these routers, has however, become the center of further research in wireless computing today.

In his article, George Tech researcher Ian Akyildiz describes that efforts recently revealed a new technology that could effectively “allow for terabit-per-second transfer speeds,” which could allow for a fast enough download speed to transmit a HD movie in a “fraction of a second.” Akyildiz describes that researchers at Georgia Tech were able to create radio “nano-antennas” based out of graphene, a chemical that is about the size of a single atom that has some pretty powerful characteristics. These characteristics allow data to be transferred at rates multitudes faster than most wireless radios can today. Although new and exciting, the technology is still in its infantile stages. Akyildiz goes on to point out the disadvantages, mainly that the radios “are distance-limited, because it is so fine-grained that the water particles and gas molecules in the air affect the signal propagation.”

Although it obviously has some downfalls, there are a few areas that it might be profoundly useful. Transmission between close-range devices (a replacement to blue-tooth possibly), or even inter-device transmission as Ian points out, are some areas where this technology might be useful. Maybe with further research too, researchers might be able to overcome the hurdles that are before this technology. This is definitely an area that should be actively pursued, as it could produce even greater outcomes in computing speed and the speed of data transmission.