Doug Webster, Vice President, Service Provider Marketing, Cisco
Subcommittee on Commerce, Manufacturing, and Trade
Hearing: "Disrupter Series: Wearable Devices"
Thursday, March 3, 2016, 10am

Thank you Mr. Chairman and Members of the Subcommittee:

The Internet has revolutionized the world around us – transforming the way that we use and share data to communicate, collaborate and consume entertainment and information.

Yet, the new wave of transformation isn't just about moving data from one place to another. Today, the challenge is connecting physical objects to the Internet, on an unprecedented scale.

Increasingly, the "things" being connected are the shirts on our backs, the glasses on our foreheads, the watches on our wrists, and the jewelry around our necks. Collectively, these emerging devices are referred to as "wearables."

To be sure, some wearables are mere novelties, such as the selfie hat.

However, many others - like the Fitbit or Apple Watch – can actually help improve our health and wellness by tracking our daily activities. And the most advanced, purpose-built wearables can save lives and improve patient outcomes.

- For instance, there's an FDA approved heart rate monitor that provides precise information from cardiac patients to their physicians between visits to the doctor's office.

- Another device looks like a typical smartwatch. But in reality it helps epileptic patients manage their stress and alert family members and physicians when a convulsive seizure happens.

- A third, a prototype in development, is a glucose-monitoring contact lens that allows diabetics to monitor their blood sugar continuously.

The possibilities are endless, and limited only by our imaginations.

There are virtual reality goggles, connected yoga pants, bracelets that help you fight food cravings, and rings that you can use for mobile payments. And that's just the tip of the iceberg.

The one feature that unites these devices is their wireless connectivity to the Internet. Each of these devices contains a tiny radio transmitter that sends data to a receiving device – such as a Wi-Fi router or smartphone. Then, the data is transmitted over an IP network to a server or data storage facility.

Once online, software allows you to visualize and analyze the data to help improve decision-making – whether it's information about your daily run, your average number of steps per day, health metrics, or even simply storing video so you can later decide whether to post it on YouTube or Facebook.

At Cisco, we've been monitoring the growth of wearables for three years, and it's fair to say that these devices are poised to accelerate with consumers, health care providers, and even on the assembly line. Here's the forecast from our most recent mobile visual network index report.

- Cisco forecasts that there will be 601 million wearable devices globally by 2020, up from 97 million in 2015, a compound annual growth rate of 44 percent.

- By 2020, fewer than 15 percent of those devices will be directly capable of transmitting on a cellular network – most will use technologies such as Wi-Fi or Bluetooth to connect to the Internet.

- The data generated by this category of devices represents a tiny trickle in the larger bucket of mobile data, mainly because few of these devices are being used to transmit video. Traffic from wearables will account for about 1 percent of total mobile data traffic by 2020, even as the amount of data generated by each device is expected to grow.

- North America has a 40 percent share of global connections today – we are early adopters. But that falls to 30 percent by 2020 as European and Asian consumers catch up with us. By 2020, there will be over 180 million wearable devices in use in North America, compared to around 40 million today.

Given this growth, it's important for policymakers to understand that the issues affecting wearables are significant.

- We need to ensure that radio spectrum is available with the right set of rules to make sure these devices can transmit.

- We need to encourage policies that support investment in the wireless networks and wired networks needed to transport data to the Internet.

- We need policies that encourage start ups and small companies by ensuring access to venture capital, pro-growth tax policies that support research & development, as well as encouraging more young people to enter careers in the STEM fields.

- And we need to ensure that device manufacturers understand the privacy and security threats, and take proactive steps to protect their devices and the personal information of consumers.

Today, wearables represent a measurable component of the mobile landscape and they are projected to have a significant growth trajectory. They also hold incredible promise to improve our lives. Public policies that encourage the development of the category should be supported so that the U.S. can continue to be a leader in this next chapter of the Internet.

Thank you for your attention, and I look forward to answering your questions.