

Single Wavelength 400 GbE Signal Demonstration

AT&T recently demonstrated an industry-leading, new technology on our network that enables data at speeds of 400 gigabits per second. And we did it in a way that's more efficient than any previous method. This is vital for our data- and video-hungry consumer and business customers.

There were 4 unique aspects of this trial:

- A groundbreaking 400 gigabit Ethernet (GbE), using single-wavelength technology that enables the highest bandwidth service.
- A software-configurable OpenROADM photonic network to transport the wavelengths.
- An open source SDN (software defined network) as a control platform.
- A white-box packet switch that generates some of the traffic running across the network.

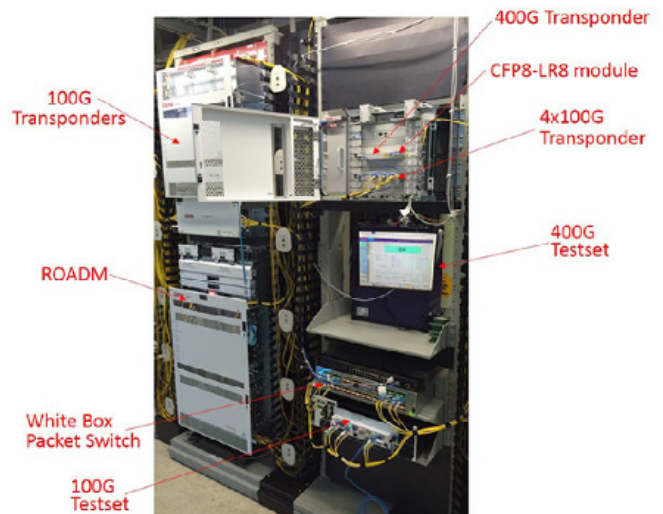
A 400 GbE service can provide 4x the bandwidth across the network compared to the 100 GbE services that are used today. The increased bandwidth lets us pump more services down each lane. It's like replacing regular buses on city streets with quadruple-deckers.

Putting all the energy into one lane meant that the data could travel a shorter distance. This trial was done on our metro network, where the distances are cross-town instead of cross-country. Eventually, work in this area will allow us to increase those distances.

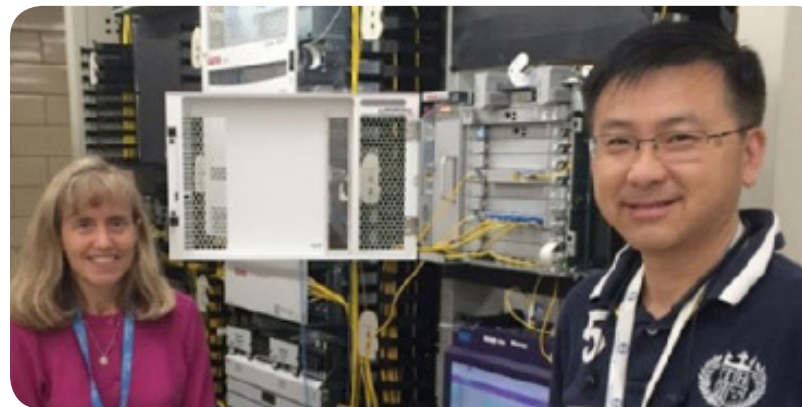
To our knowledge, the single wavelength 400 GbE signal sent between our offices is the first field demonstration of this technology.

We ran our 400 GbE wavelengths across a deployed metro network in Cleveland. This network used equipment based on the OpenROADM Multi-Source Agreement (MSA), defined by a set of open APIs and models. This let us use different suppliers in our network.

This work aligns with our shift to an open and software-centric network, giving our customers more network flexibility.



Our customers need more bandwidth and flexibility than ever. Trials like this one push the envelope of technology and open automation to meet those needs. Working with our suppliers lets us learn about the readiness and limits of the technology while driving automation with our open and flexible software-controlled efforts.



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For more information click [here](#)



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