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From the desk of Rouzbeh

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Hello,

You may not realize this, but we recently passed the 45th anniversary for the first cell phone call and for the creation of ethernet. Both these developments have had incredible impacts on our civilization and have led to the creation of major industries. Telecom services have greatly advanced.

IEEE 802 LAN/WAN Standards Committee had a productive meeting in Pittsburgh recently and my colleague Paul Nikolich, its Chairman and an IEEE fellow, reports on recent forward-thinking activities of the committee regarding wired and wireless automotive networking.

Automotive Networking Standards work under way

The committee consists of more than 750 dedicated, hardworking volunteer experts from all sectors of the data communications industry; components, silicon, systems and service providers. Many of these same folks brought us Ethernet and WiFi standards. with respect to automotive networking — in both wired and wireless technologies.

The 802.3 Ethernet Working Group has been working on the single twisted pair wire multi-gigabit per second Automotive Ethernet project (aka P802.3ch) since March 2017 and is roughly halfway through the project with an expected completion date of July 2020. This work, coupled with the Time Sensitive Networking efforts in the 802.1 Bridging Working Group, will be enablers in the transition of legacy automotive networks to Ethernet in support of Advanced Driver Assist Systems that may lead to ubiquitous, safe and reliable autonomous vehicles. See **LINK** for up to date details and recent contributions to the project.

On the other end of the spectrum, a new initiative has begun in the 802.11 Wireless LAN Working Group (commonly known as WiFi) called the 802.11 WLAN Next Generation V2X Study Group. These volunteers are planning to extend the work that was done in the 802.11p project designed for low latency operation in the Dedicated Short-Range Communications (DSRC) frequency band for use in the rapidly varying communication environments found in car-to-car and car-to-infrastructure applications.

These applications include forward collision warning, emergency electronic brake lights, blind spot warning and intersection collision warning, along with motorist conveniences such as connecting their personal devices in and out of vehicles.

The study group is considering the feasibility of enhancing throughput, better efficiency, higher reliability and extending range. It is too early to tell for sure, but given the amount of participation in this work, it almost surely will result in the start of a new project in the November 2018 timeframe. See **LINK** for up to date details. Recent contributions are available at **LINK**.

There is some dissatisfaction with broadband connectivity, pricing and reliability among small businesses.

Broadband Survey of Businesses in New Hampshire is Issued

BCoE helped fund a survey of New Hampshire businesses and broadband that found broadband service is important for current and future businesses to drive economic development. And as is often the case, there is some dissatisfaction with broadband connectivity, pricing and reliability among small businesses, that is those with 10 or fewer employees. These companies were in rural pockets, ran their enterprises on slower service and chose their ISP on pricing vs. quality, the study says. Others funding the survey, conducted by the University of New Hampshire Survey Center, included the state's Telecommunications Planning and Advisory Committee at the NH Division of Economic Development, the NH Broadband Mapping & Planning Program at UNH.

The full **REPORT** is now available.

West Virginia University on the verge of rural power success

Researchers at West Virginia University are working on an experimental power generator that could supply rural communities with a low-cost option for continuous electrical supply. Led by Professor Pariz Famouri, professor, Lane Department of Computer Science and Electrical Engineering, and Associate Chair for Research & Graduate Studies — Benjamin M. Statler College of Engineering and Mineral Resources, the prototype **GENERATOR** has one moving part, can run for 10 years and uses a variety of fuels. The work was reported in April by the Voice of America and is seen as a boon to extending broadband service.

And please remember that BCoE continues in its belief that universally available, low-cost broadband access enables improved quality of life.

Rouzbeh