Welcome to the 2019 Automotive Ethernet Technology Day

Detroit, MI

John Schneider
Director – Electrical, Software, Compute, and AI Technologies
Research & Advanced Engineering at Ford Motor Company
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Automotive Electrical Architecture Transformation

Previous transformations:
• First we had initial connections of various integrated systems with nonstandard networks.
  • Emergence of standards
  • Shared sensors
  • AUTOSAR
• Next came the integration of Consumer Electronics
  • Phones and Tablets
  • Introducing Consumer Electronics reusable software blocks

Were now in the midst of a revolution that overshadows all the rest
Ethernet - Key Enabler for Connected Vehicle Revolution

• Last year, Ethernet celebrated its 45th birthday (May 1973)

• Throughout its lifetime, it has shown its ability to change and adapt to new Use Cases

• Automotive is the latest industry to make use of Ethernet
The Ethernet Connected Vehicle

- Global Standardization of Ethernet
  - New Electrical Architectures
  - Security
  - Over the Air Updatable Vehicles
  - Driver assist to Autonomous Vehicles
  - Remote Features
  - New Revenue for the company
Ethernet Enables New Dynamic Software Architectures

- Enabling complex distributed software platforms
- Introduction of Service Oriented Architectures
- Multiple virtual operating systems
  - Virtual Machines – (Multiple operating systems on one Host)
  - Containerization – (self contained applications)
- Large compute platforms that can share resources
Automotive Architecture challenges

• Automotive electrical applications are expected to change at the rate of consumer electronics

• Unlike Consumer Electronics (short lifetime 2-3 years max), the life of the vehicle will still remain at 15+ years

The challenge is to design architectures that need to be adaptable and upgradable through their entire lifetime
Henry Ford Quote that still applies today

• If I had asked them what they wanted they would have said a faster horse.
2019 Automotive Ethernet Content

• Program
• Presentations
• Vendor Displays
• Panel Session with industry experts