

# Automotive

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*One voice of JAPAN - JASPAR was established, in 2004, in order to pursue increasing development efficiency and ensuring reliability, by standardization and common use of electronic control system software and in-vehicle network which are advancing and complexing.*

**Board:** TOYOTA, Nissan, Honda,  
DENSO, Toyota Tsusho Electronics

**Members:** Regular: 75 / Associate: 56 (as of Jan. '14)

## WGs:

- **Next Generation High-Speed Network WG**
- Functional Safety WG
- AUTOSAR/FlexRay Standardization WG
- Multimedia Architecture WG
- Bluetooth Conformance WG
- Mobile Device Interface WG

## Next Generation High - Speed Network WG

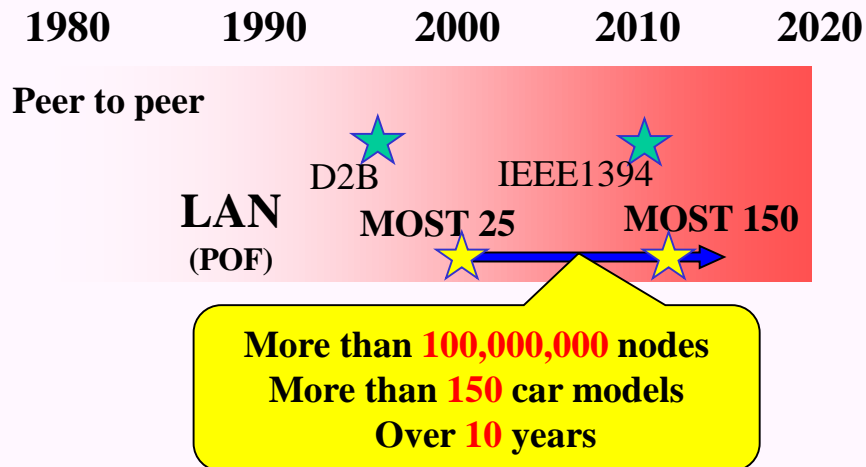
Chair: **TOYOTA**

Nissan, Honda, Denso, Renesas Electronics, Sumitomo Electric, Murata Manufacture, Toyoda Gosei, Clarion, Bosch Japan, NXP Japan, Micrel Japan, Yazaki, Furukawa Electric, Toyota Central R&D Labs, Marvell Japan, TE Connectivity, Nippon Seiki, Fujitsu TEN, Nippon Seiki, Isuzu Motor, Clarion, Mitsubishi Electric, Fujitsu Semiconductor, Toshiba Information Systems, Hitachi Automotive Systems, Calsonic Kansei, Micware, OTSL, Analog Devices, Vector Japan, ETAS, Marvell Japan, Sunny Giken, Telemotive AG, Ricoh, MegaGhips, Tokai Rika

## Requirements Definitions of the WG

- Recommendation's application
- Network
- Function profiles
- Physical layer and wiring design
- Data description format

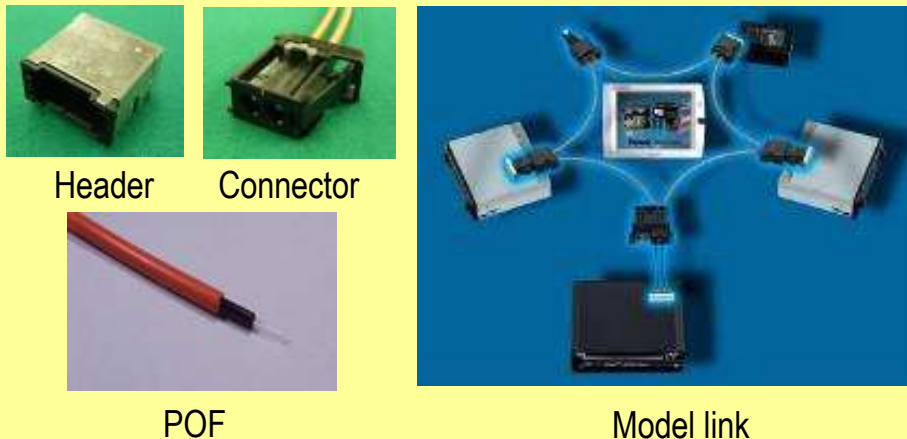
## Optical Communication in Cars



## Features of Optical Components

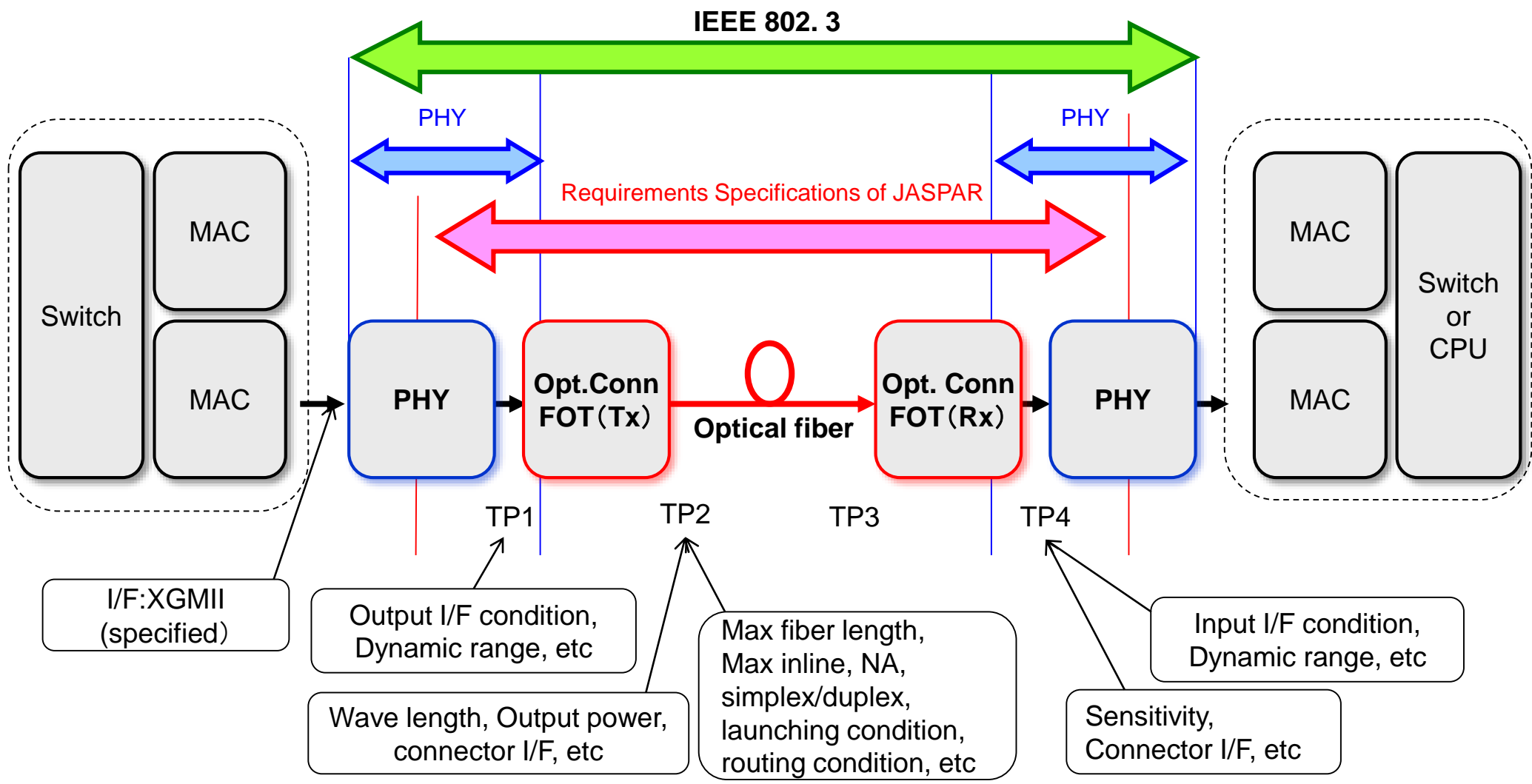
- High speed
- Scalability/Expandability
- EMC/EMI
- Dimensions
- Weight
- Small cable diameter
- Small bending radius

## In-vehicle Optical Components



## Cost Competition Strategy

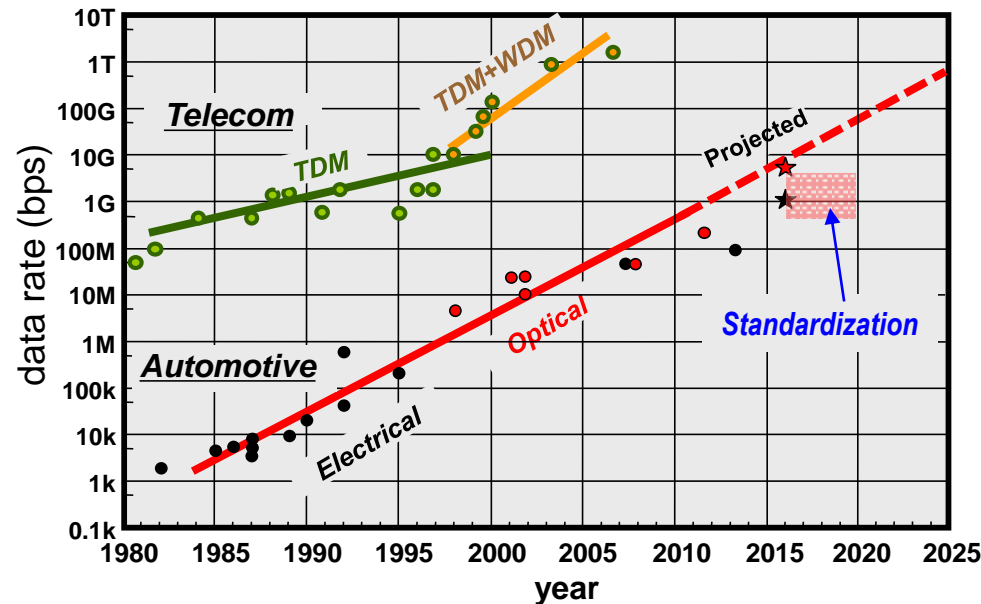
- No more measures against noise
- Standardized test methods and components
- Full automation manufacturing
- Use proven technologies from other industries
- Demonstration project



FOT: Fiber Optic Transceiver

- Competitive technologies, electrical and optical, bring **benefits** for customers
- Optical fiber is a **proven technology** in automotive
- Beyond Gigabit Ethernet enhances **future applications**
- Member companies from **JASPAR** will contribute the standardization works

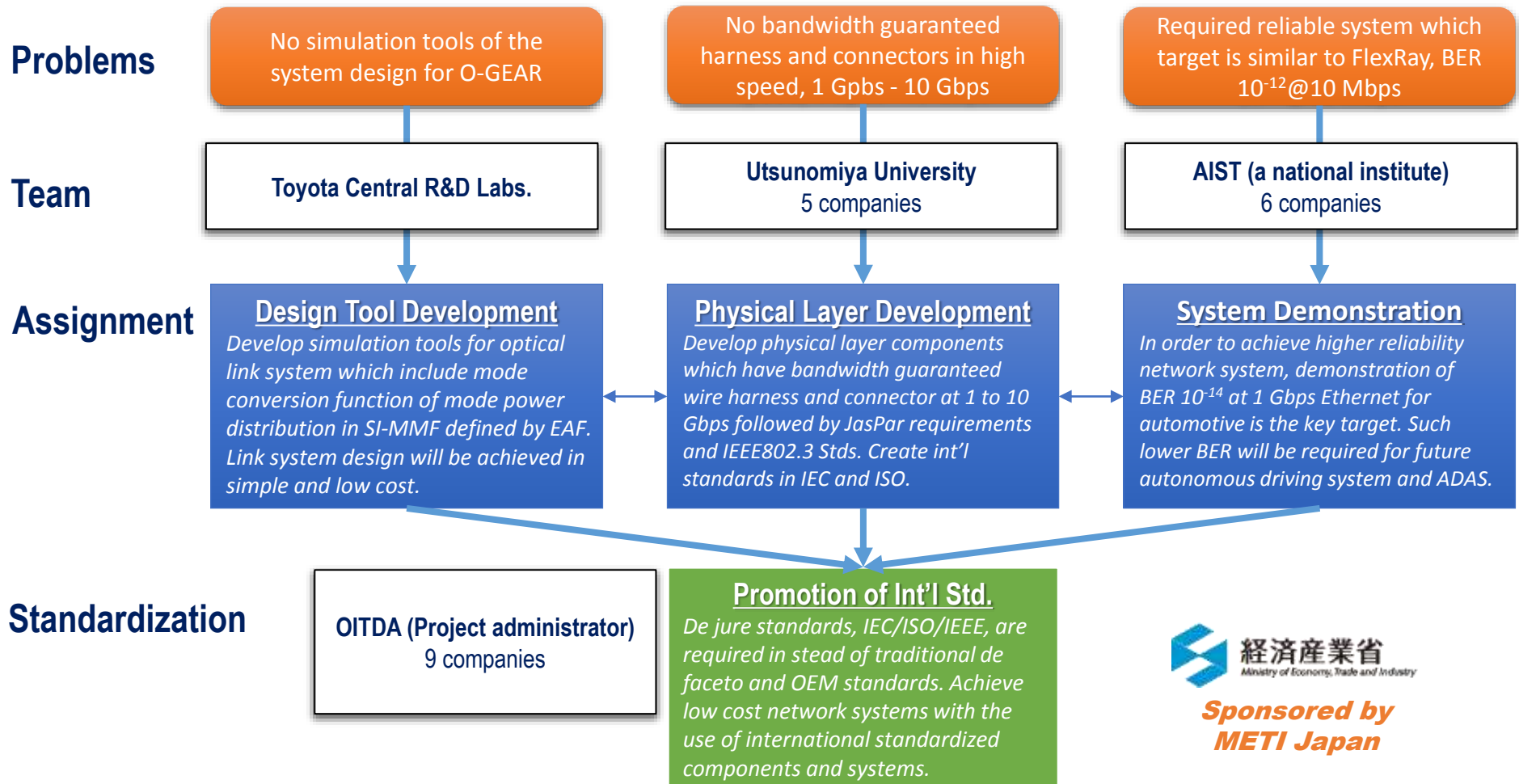
## *Never Shrink Network Traffic*



# International standardization and dissemination project for high-speed communication network performance over large core multimode optical fiber

- Technology integration for **O-GEAR**: Optical Gigabit Ethernet for Automotive aRchitecture

From Oct. 2014 to Mar. 2017



**Sponsored by  
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# Schedule, In-vehicle Gigabit Ethernet

