Automotive

Draft version 1.0

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JASPAR

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**

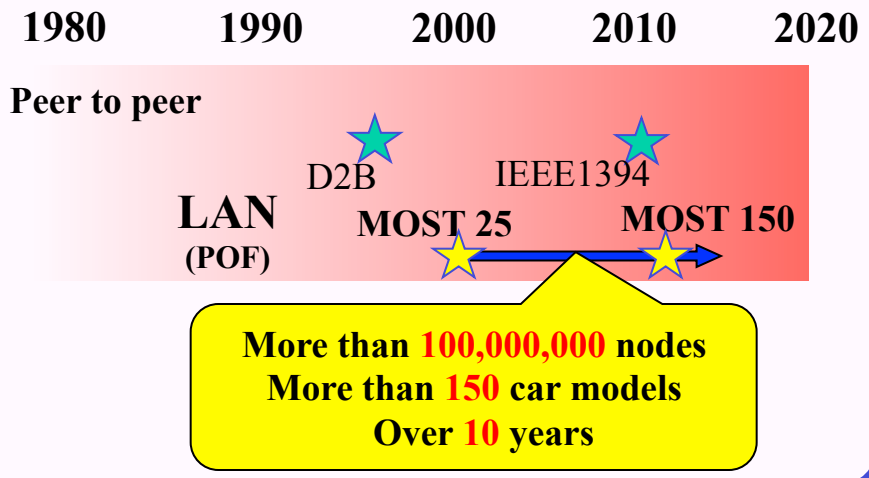
Nissan, Honda, Denso, Renesas Electronics, Sumitomo Electric, Murata Manufacture, Toyoda Gosei, Clarion, Bosch Japan, NXP Japan, Micrel Japan, Yazaki, Furukawa Electric, Toyota Central R&D Labs, Marvell Japan, TE Connectivity, Nippon Seiki, Fujitsu TEN, Nippon Seiki, Isuzu Motor, Clarion, Mitsubishi 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 Network Systems for Automotive

Optical Communication in Cars

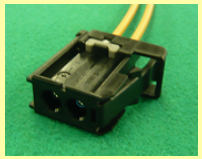


Features of Optical Components

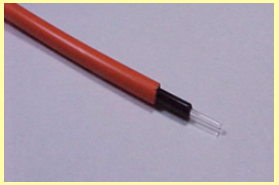
- High speed
- Scalability/Expandability
- EMC/EMI
- Dimensions
- Weight
- Small cable diameter
- Small bending radius

In-vehicle Optical Components

Header



Connector



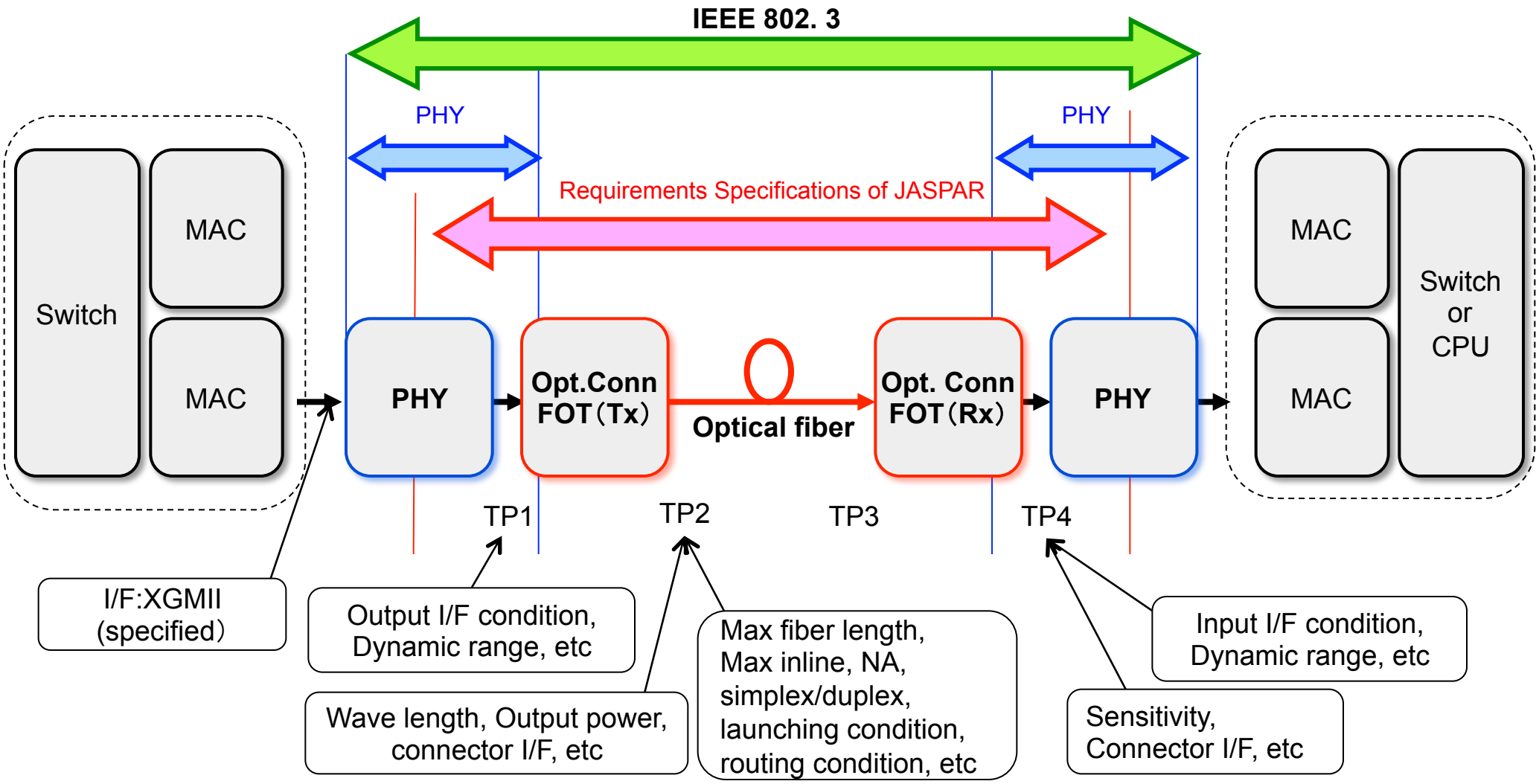
POF

Model link

Cost Competition Strategy

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

Wiring Requirement Specifications of JASPAR

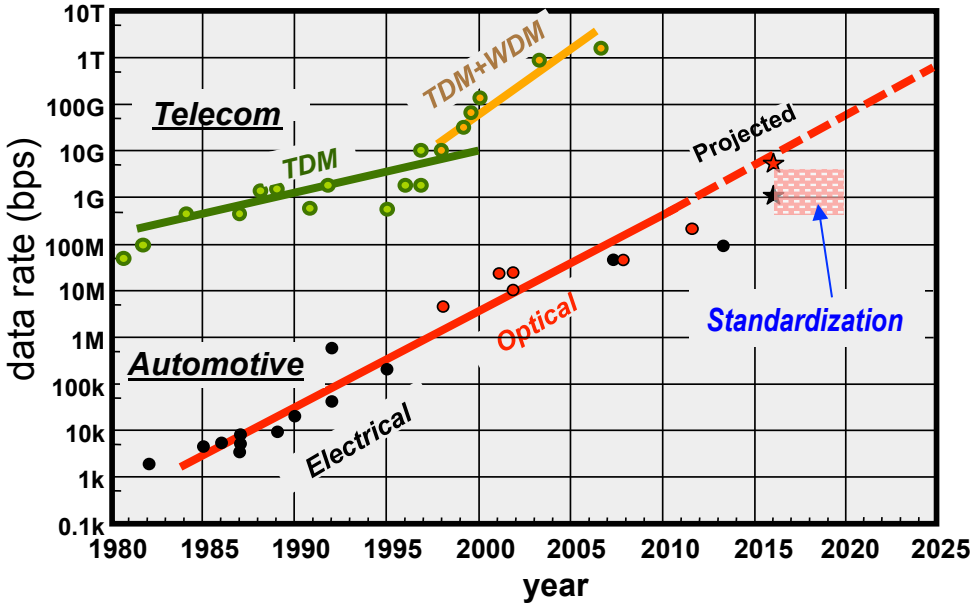


FOT: Fiber Optic Transceiver

Summary for Automotive Applications

- 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

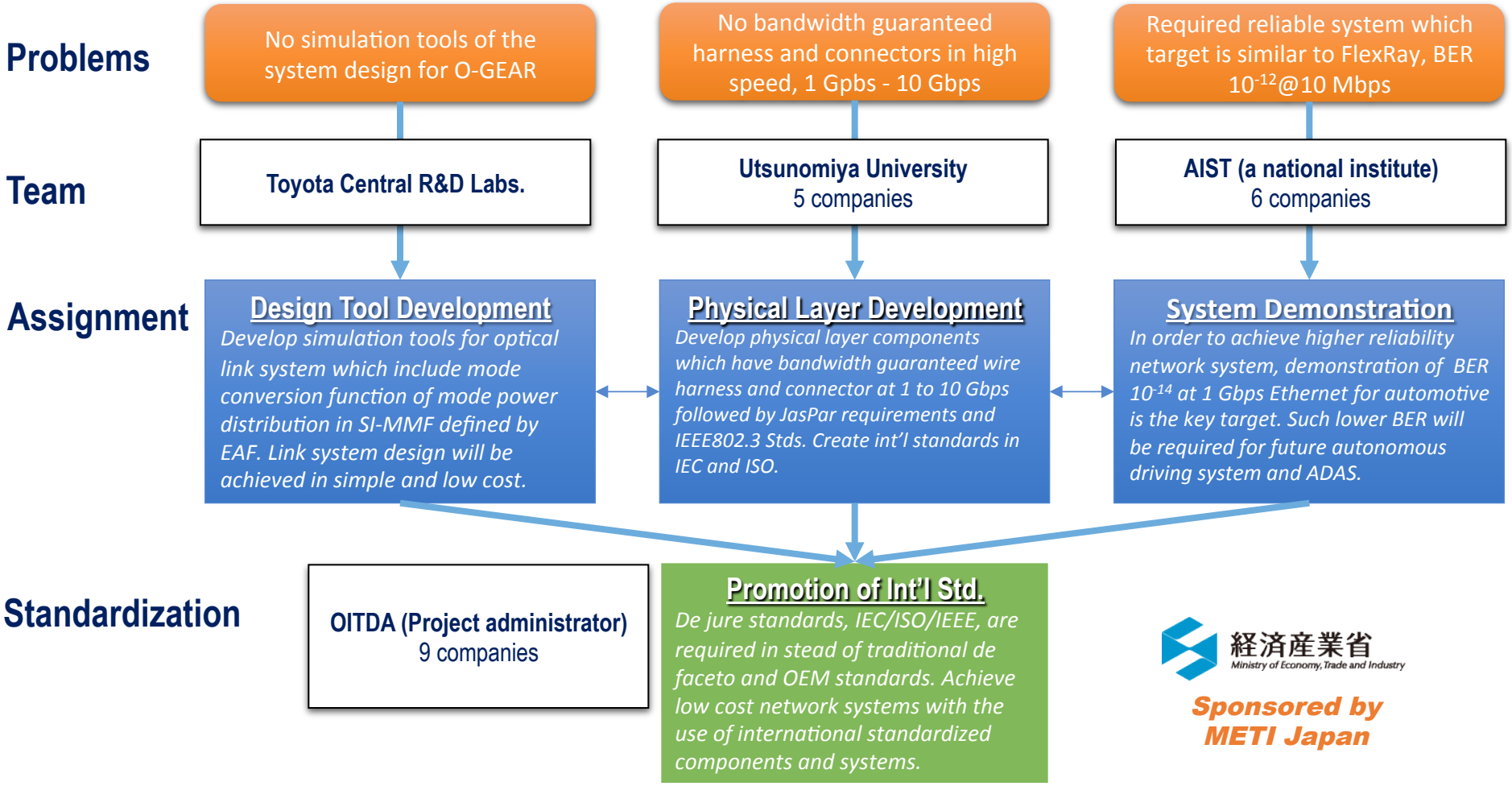
Never Shrink Network Traffic



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



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Schedule, In-vehicle Gigabit Ethernet