

IEEE 802.3 Next Generation Enterprise/Campus/Data Center Ethernet Ad Hoc

Agenda and General Information

John D'Ambrosia, Dell

September 16, 2015

Agenda

- Patent Policy
- Introduction – John D’Ambrosia, Dell
- Presentations
 - Kohichi Tamura, Oclaro – “25G SMF Optics for Next Generation Enterprise /Campus/Data Centre Applications“
 - Mark Nowell, Cisco – “50GbE CFI Considerations”
 - Scott Kipp, Brocade – “nX50G PCS with m PMDs”
- Discussion
- Review of Proposed ICAID
- Liaison – OIF Flex E
(http://www.ieee802.org/3/minutes/sep15/incoming/OIF_to_802d3_FlexE_Aug_2015.pdf)
- Next Steps

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- **Don't discuss the interpretation, validity, or essentiality of patents/patent claims.**
- **Don't discuss specific license rates, terms, or conditions.**
 - Relative costs, including licensing costs of essential patent claims, of different technical approaches may be discussed in standards development meetings.
 - Technical considerations remain primary focus
- **Don't discuss or engage in the fixing of product prices, allocation of customers, or division of sales markets.**
- **Don't discuss the status or substance of ongoing or threatened litigation.**
- **Don't be silent if inappropriate topics are discussed... do formally object.**

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See *IEEE-SA Standards Board Operations Manual*, clause 5.3.10 and “Promoting Competition and Innovation: What You Need to Know about the IEEE Standards Association’s Antitrust and Competition Policy” for more details.

This slide set is available
at <https://development.standards.ieee.org/myproject/Public/mytools/mob/preparslides.ppt>

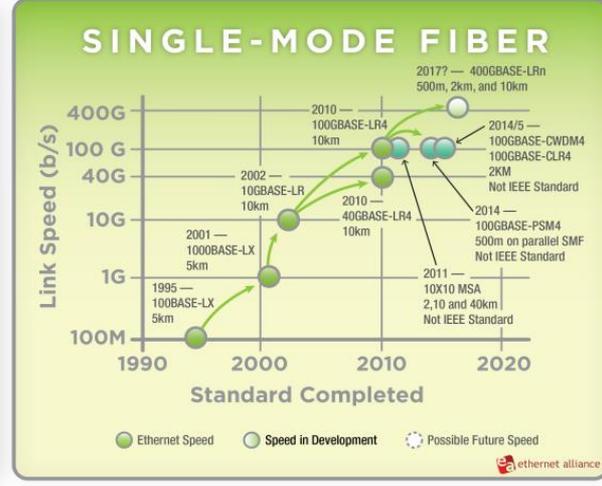
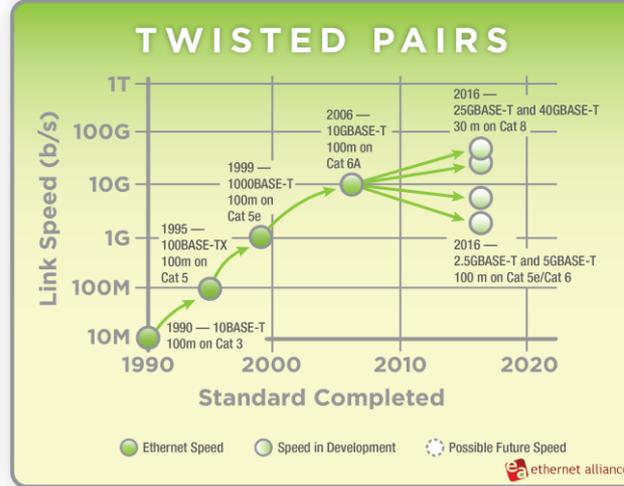
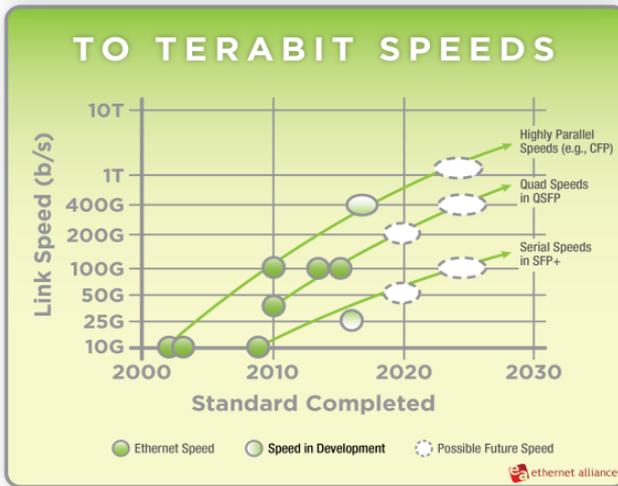
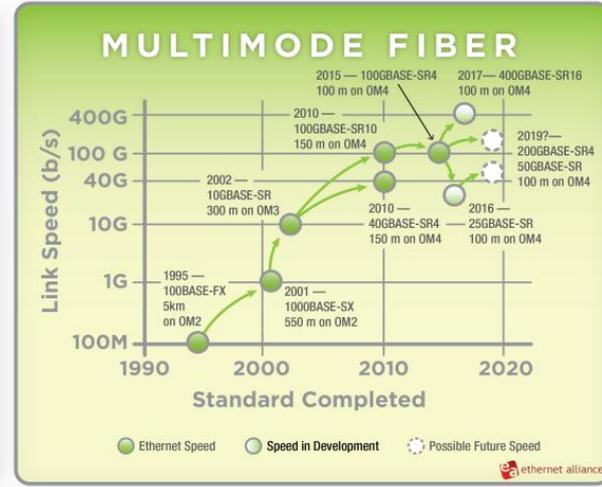
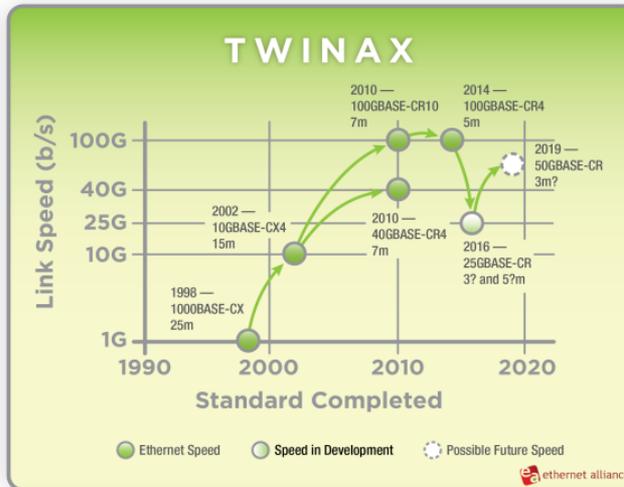
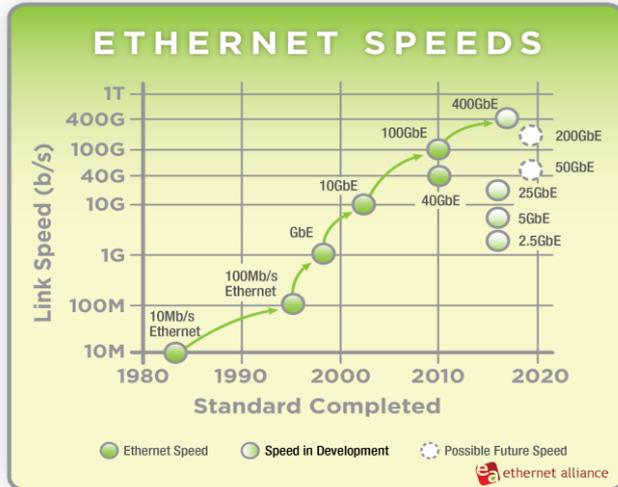
March 2015

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Goal Of Proposed Industry Connections Activity

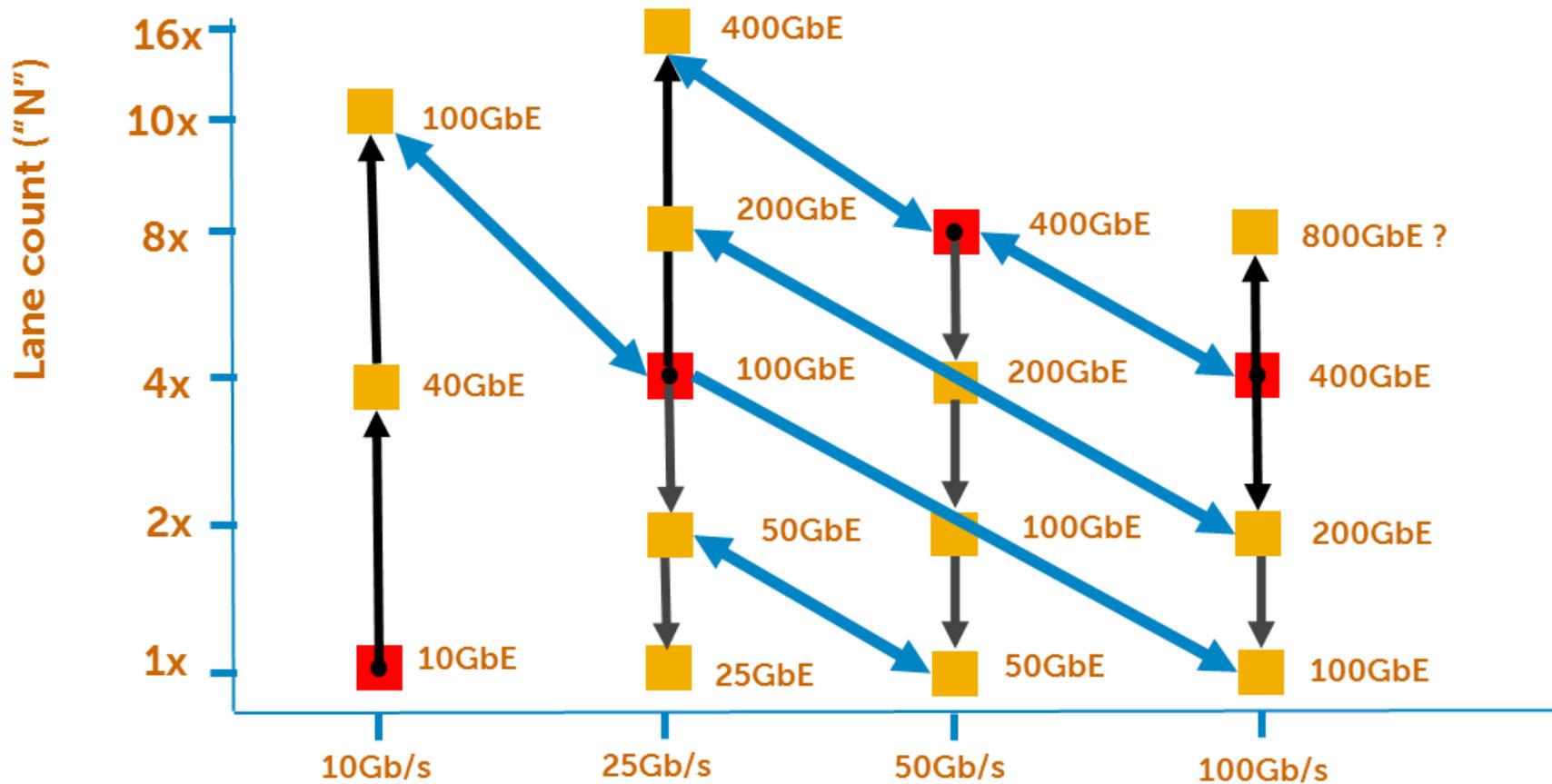
The goal of this activity is to assess emerging requirements for enterprise, campus, and data center networks, identify gaps not currently addressed by IEEE 802.3 standards, and facilitate building industry consensus towards proposals to initiate new standards development efforts.

Introduction



Source: Ethernet Alliance, <http://www.ethernetalliance.org/roadmap/>

The New Rate Paradigm – “N” x “Z”



■ Indicates Ethernet rate at which signaling (optical or electrical) was introduced.

Signaling rate per lane (“Z”)

Considering the Road Ahead

IEEE 802.3 Ethernet Technology Overview (JD Assessment)

		Existing Rates								New Rates			
Media		10G	25G	40G	40G (G2)	100G (G1)	100G (G2)	100G (Gn)	400G (G1)	400G (G2)	50G	200G	
PCB Traces		1x10G	1x25G	4x10G	1x40G	10x10G	4x25G	2x50G 1x100G ?	16x25G 8x50G		1x50G	4x50G	
BP		1x10G	1x25G	4x10G	1x40G		4x25G					1x50G	4x50G
Cu Cable		1x10G	1x25G	4x10G	1x40G	10x10G	4x25G					1x50G	4x50G
MMF		1x10G	1x25G	4x10G	1x40G	10x10G	4x25G			16x25G	8x50G 4x100G ?	1x50G	4x50G
SMF	500m		1x25G		1x40G					4x100G (PAM4)		1x50G	4x50G
	2km		1x25G	1x40G	1x40G				TBD (8x50G WDM PAM4)	4x100G ?	1x50G	4x50G	
	10km	1x10G	1x25G	4x10G WDM	1x40G	4x25G WDM			8x50G WDM (PAM4)	4x100G ?	1x50G	4x50G	
	40km	1x10G		4x10G WDM		4x25G WDM							

Std or in progress

In Debate

Future

Presentations

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DISCUSSION

Our Situation

- Multiple projects underway
- Multiple related topics of interests for potential new projects
- We need to consider
 - What should be addressed?
 - What rates?
 - What PMDs for each rate?
 - Managing resources to be successful
 - Prioritization Discussions?

Example Scenarios

Multiple projects sharing same resources

Task Force	All	Architectural	Electrical	Optical
A. 25GbE	√	√	√	√
B. 50GbE	√	√	√	√
C. 200 GbE	√	√	√	√
A. 400 GbE	√	√	√	√

Schedule task forces on a resource basis.

	Day 1	Day 2	Day3	Day4	Day5			
All	Yellow				Yellow		Yellow	Joint
Arch		Orange	Blue	Red			Orange	Project A
Elect		Blue	Red	Red			Blue	Project B
Optics		Orange	Orange	Orange			Red	Project C