HEALING THE FRACTURED ETHERNET MARKET

Scott Kipp, Director of Engineering, Brocade
President of the Ethernet Alliance, Chair of Roadmap Subcommittee

TEF, 2016

September 29, 2016

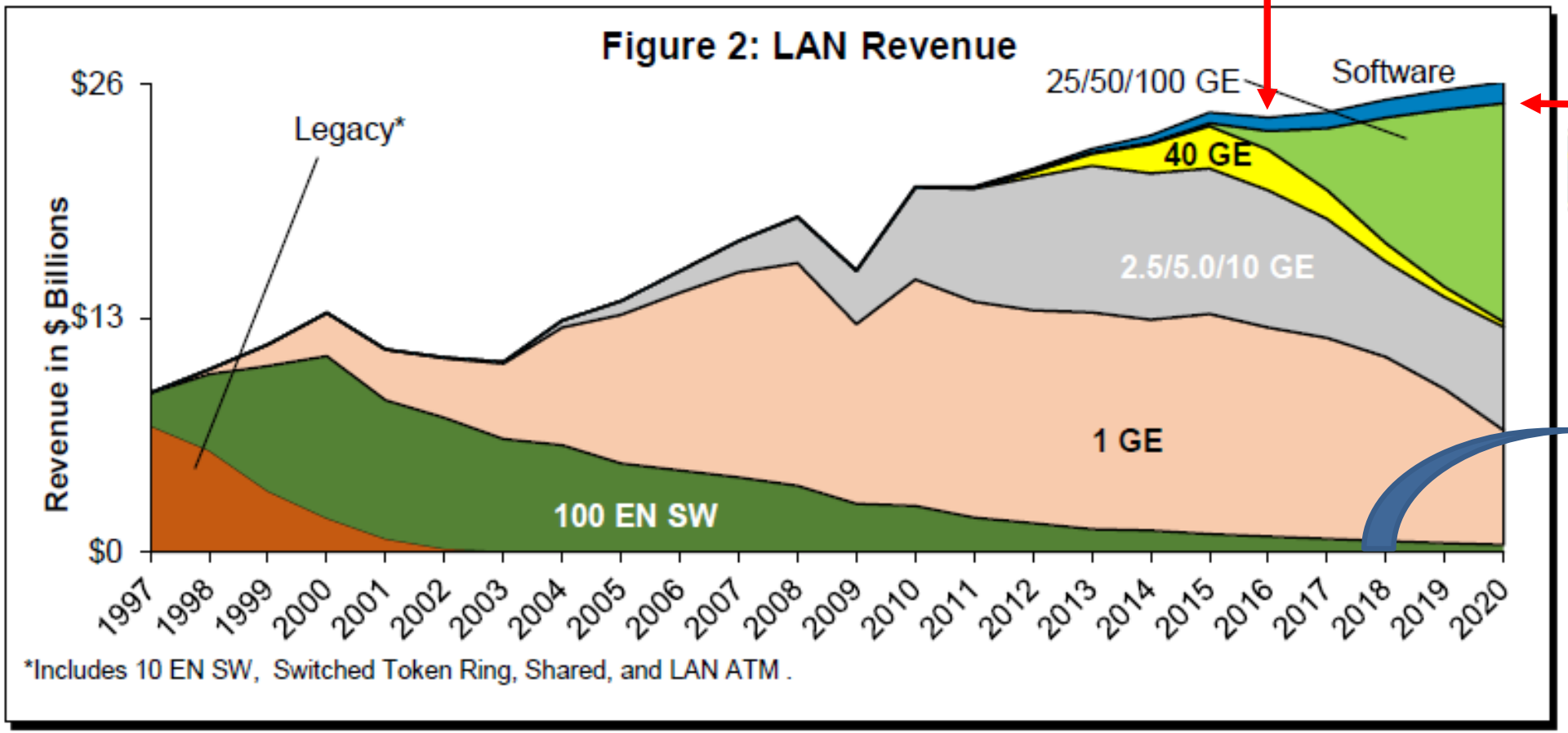
ethernet alliance

Disclaimer

- The views expressed in this presentation are the views of the presenter and not of the Ethernet Alliance

50-400GbE Needs a Plan

100GbE took 6 years to reach $1B revenue



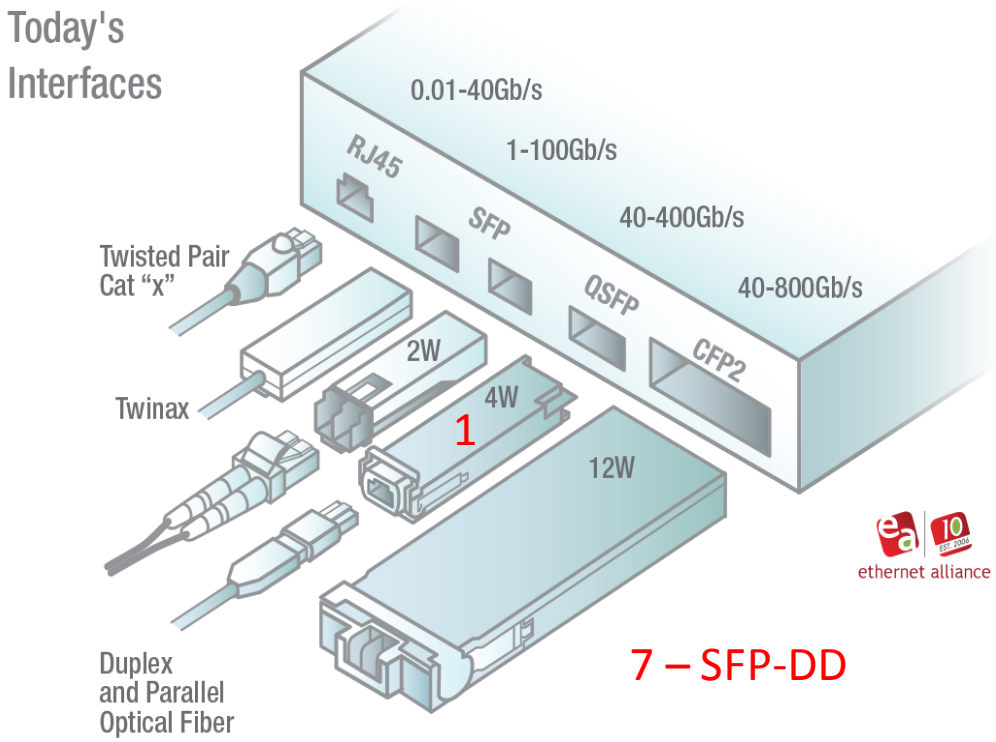
50-400GbE trying to squeeze in here

6 Years is too long for 50-400GbE

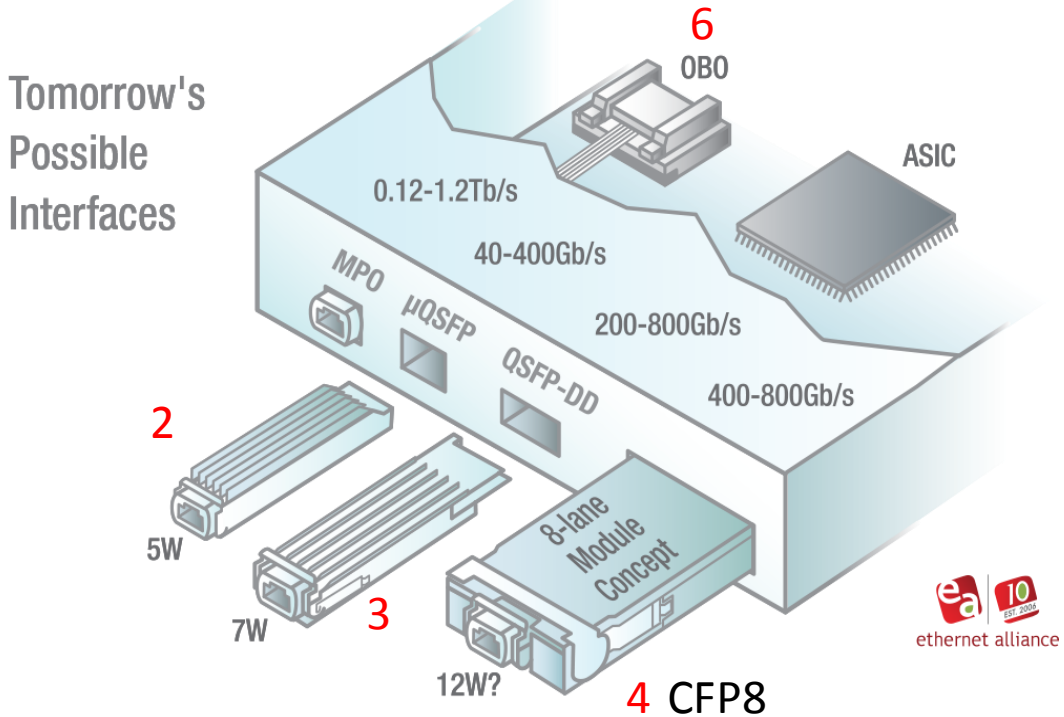
Source: Dell'Oro

Form Factor Diversification

6-7 Likely Form Factors for 50-400GbE



7 – SFP-DD



4 CFP8

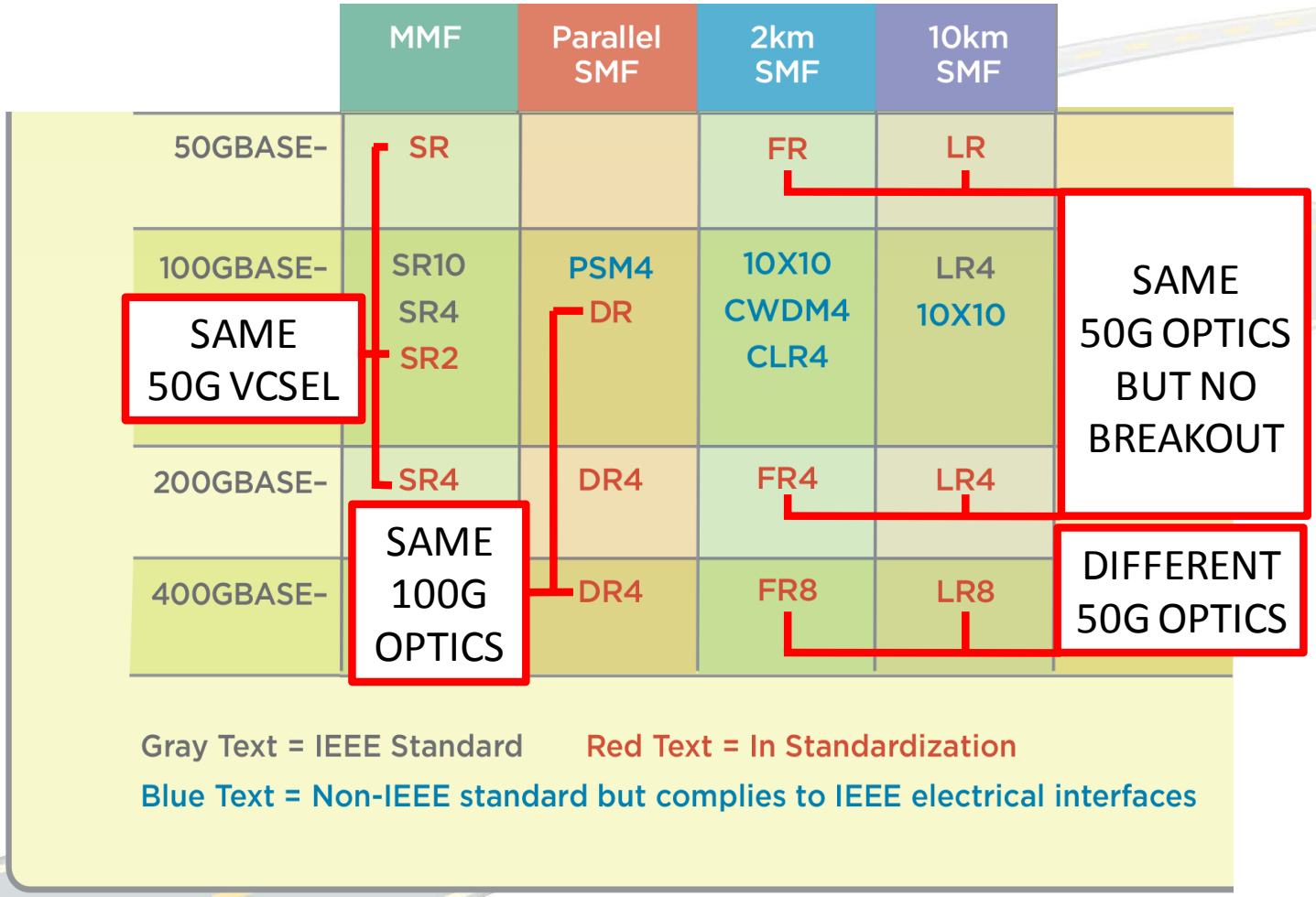
5 OSFP/CFP16

Consolidating 50GbE to 400GbE PMDs

13 New PMDs

ODD MMF OUT:
400GBASE--SR16
100G-SWDM2
–SR2 Competitor

Does400GbE need SR8 or SWDM4 solution better?



200GBASE-DR4
Should we add 50GBASE-DR?

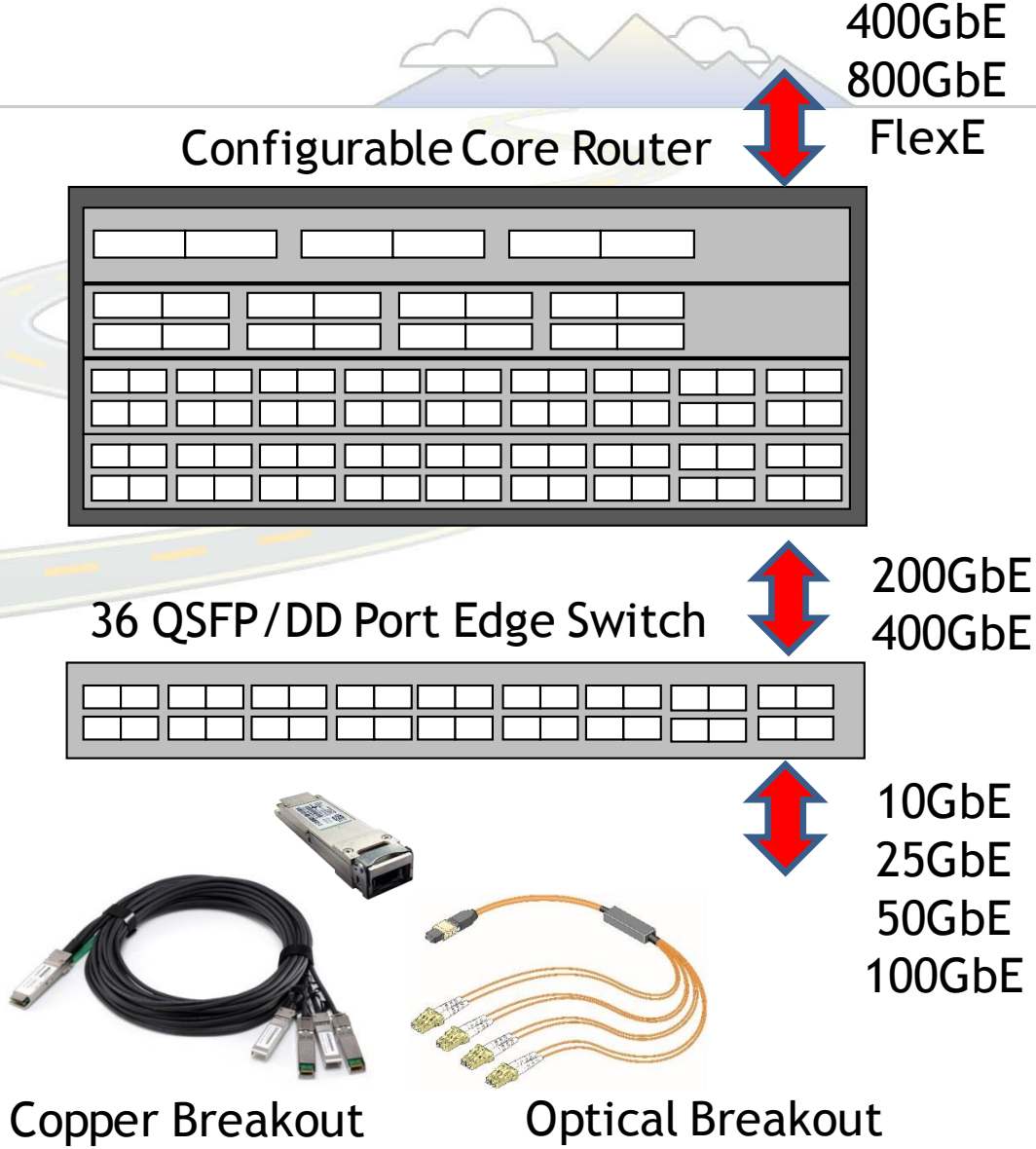
MANY POSSIBILITIES

	200-SR4	200-DR4	200-FR4	200-LR4	400-SRx X = 8 or 4	400-DR4	400-FR8	400-LR8
QSFP56	LOWER PORT COUNT SWITCHES							
uQSFP56	HYPERSCALE SERVER NICHE?							
QSFP-DD56	HIGHER PORT COUNT SWITCHES – MANY CHALLENGES						THERMAL LIMITS	
CFP8					1ST GEN 400GbE ROUTERS (16X and 8X)			
OSFP/CFP16					2nd GEN 400GbE ROUTERS (8X)			
OBO*	NICHE				NICHE			

* OBO is most suited for parallel applications where WDM is not used.

Location of Speeds in 2026

- The 400GbE market is likely to be focused on routers
  - Core networking from edge to DWDM
- The 200GbE market is likely to be focused on switches
  - Edge networking from servers to core
- See more details in:
  - http://www.ieee802.org/3/cd/public/May16/kipp_3cd_01a_0516.pdf



More Challenges

- If hyperscale data centers pick non-IEEE optics, the fractures grow deeper
- Too many vendors divide the market further

Growing Strong Together

- The industry needs to consolidate around a few solutions to drive high volume and low cost for wide adoption