



Thoughts on 200GbE

Gary Nicholl, Cisco Systems

IEEE 802.3 50GE & NGOATH Study Group, March 2016, Macau

Supporters

- Matt Brown, APM
- Brad Booth, Microsoft
- Tom Issenhuth, Microsoft

Potential 200GbE Markets ?

- Data Center
 - focus appears to be on dense 100GbE or 400GbE
 - not seeing a significant interest in 200GbE
- Enterprise
 - 25GbE then 50GbE
 - no interest yet in 200GbE
- Service Provider
 - focus is on 400GbE
 - not seeing a significant interest in 200GbE

Market Success for 200GbE ?

- From both a Standards and product viewpoint, 200GbE and 400GbE are likely to come out at the same time
- How will 200GbE differentiate itself in the market ?
- Will 200GbE be significantly lower cost (\$/Gb) to deploy than 400GbE (when both are assumed to be based on the same 50G/Lane technology) ?
- Will industry investment in two rates fragment the market, and how will this impact both 200GbE and 400GbE ?

200G is not 200GbE

- There has been a lot of talk about 200G in the context of supporting breakout
- Breakout options exist such as 2x100GbE or 4x50GbE
- This is not the same as a new 200GbE MAC rate
- e.g. 4x50GbE breakout
 - primarily a form-factor (e.g QSFP) packaging decision
 - requires an 8-lane MDI to be defined in the 50GbE standard
 - does not require the development of a 200GbE MAC, along with associated RS, PCS, FEC, etc

Summary

- The development of a new 200GbE MAC rate represents a significant investment for the industry
- The development of 200GbE is in addition to, and not instead of, 400GbE
- Concerned that we don't yet fully understand the market value, market timing and market demand