IEEE802.3 HSSG

40GE/100GE – Network Operator's View

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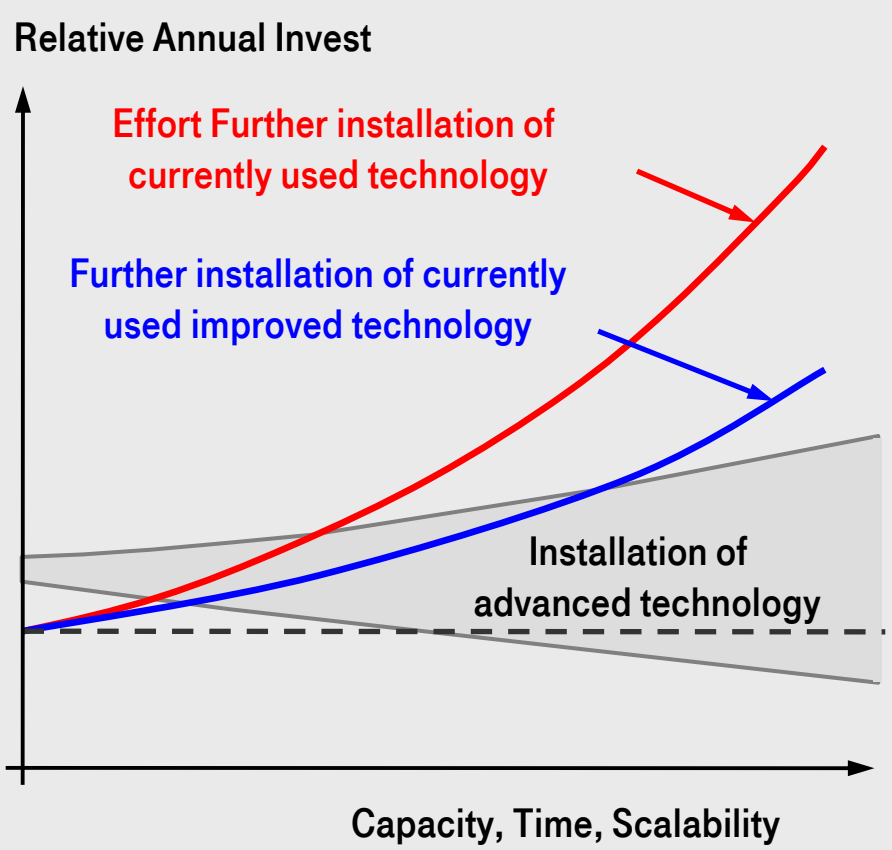
HSSG – Network Scalability needs Technological Breakthroughs



- Increase of the network traffic capacity is expected to exceed Moore's Law.
- Forecasts expect 10 fold in 4 years

  ⇒ Factor of 100 in 8 Years
- The traffic of today would be only 1% of that traffic which is expected in about 8 years

  ⇒ Network build up for this demand

⇒ Need for high-speed interfaces at 100 Gbit/s or later on at 1 Tbit/s in the future networks

⇒ Technological breakthrough is required for cost effective solutions

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HSSG – 100 Gbit/s Interface and 40 Gbit/s OTN Compatibility Required

- Deutsche Telekom does not see a large need for a 40GE interface standardized at the IEEE 802.3
- However, if such a 40GE interface is an HSSG objective, then a seamless mapping into the ODU3 container of the OTN (Optical Transport Network, ITU-T Rec. G.709) must be ensured

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HSSG – Conclusion

- Proceed to agree on an IEEE 802.3 100GE Task Force
- Support the 40 GE objectives presented at the last interim meeting in Geneva
  - Support a speed of ~ 40 Gb/s at the MAC/PLS service interface while ensuring compatibility with OTN infrastructure
  - Define a family of physical layers for 40 Gb/s operation
    - Support at least 100m on OM3 MMF
    - Support at least 10m over a copper cable assembly
    - Support at least 1m over a backplane
- Support Liaisons with ITU-T ensuring compatibility of the 40Gbit/s and 100Gbit/s signals with the OTN infrastructure

Thank you

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