

Session #1: “Evolving Beyond 400 Gb/s”

The Road Beyond 400 Gb/s Ethernet

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Ethernet Bandwidth Assessment, Part II

- **Charter and Scope**
 - Evaluate Ethernet wireline bandwidth needs of the industry
 - Reference material for a future activity
 - The role of this ad hoc is to gather information, not make recommendations or create a CFI
- **Webpage** - http://www.ieee802.org/3/ad_hoc/bwa/index.html
- **Reflector** - http://www.ieee802.org/3/ad_hoc/bwa/reflector.html

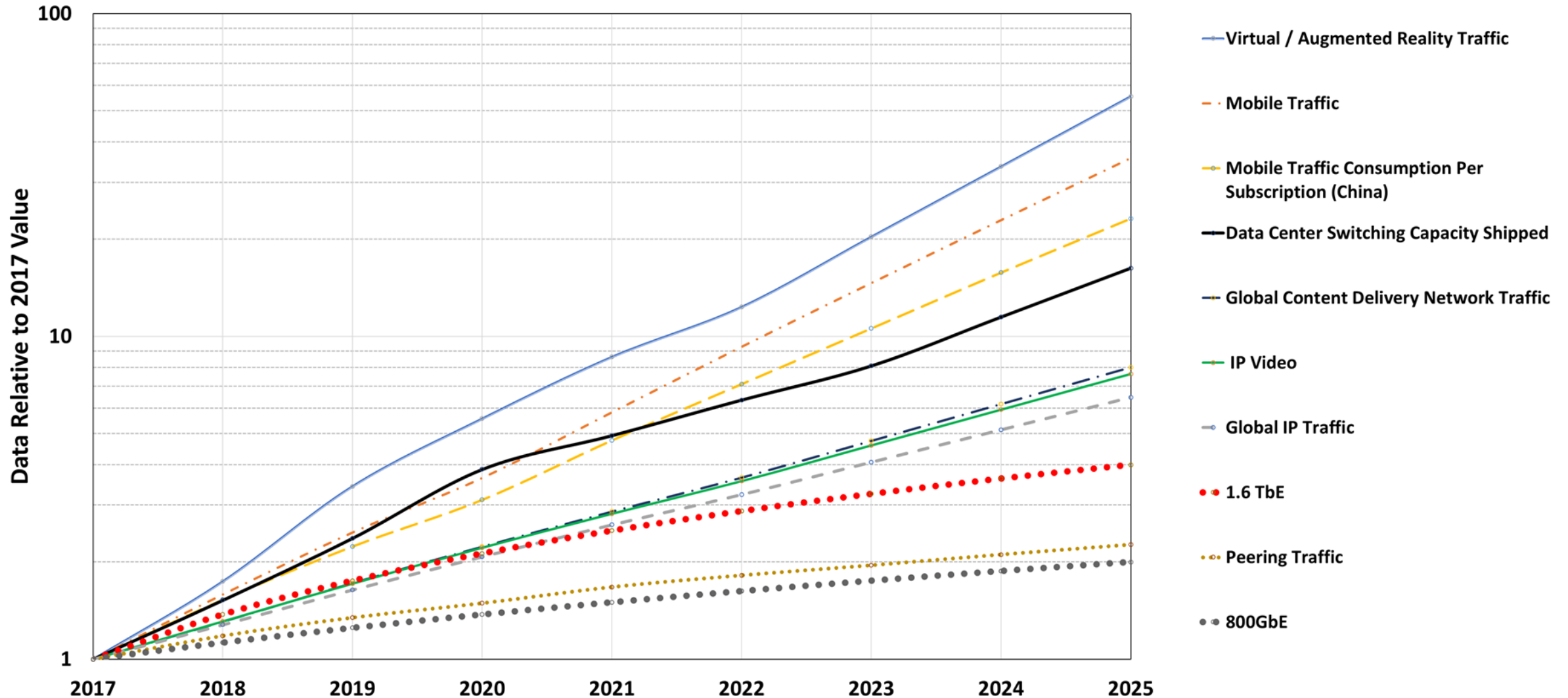
A Simple Equation

$$\begin{array}{ccccccc} \text{Increased} & & \text{Increased} & & \text{Increased} & & \text{Bandwidth} \\ \text{\# of users} & \times & \text{access} & \times & \text{services} & = & \text{Explosion} \\ & & \text{methods} & & & & \\ & & \text{and rates} & & & & \end{array}$$

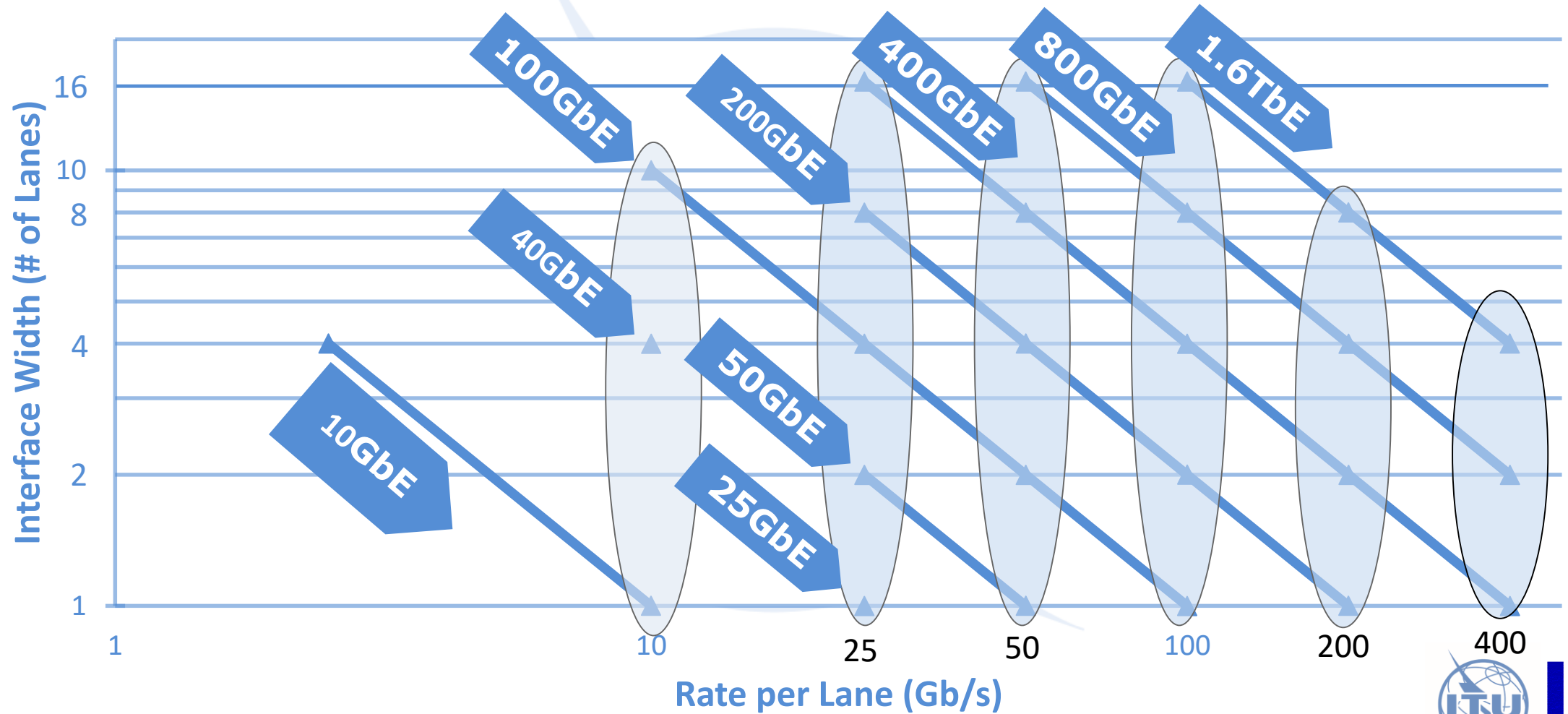
Assessment limitations

- **Assessment Duration: 18 months maximum**
 - One year for information gathering (Sept 2018 – Sept 2019)
 - All potential application spaces may not have been studied
 - Prevent data from becoming dated
 - Information provided snapshot at time of submission
- **Past trends may not be an accurate predictor of the future**
 - Emerging applications
 - Technology
 - Standardization Efforts
 - Will Ethernet cost per gigabit continue to decrease?
- **Underlying assumptions**
 - Market adoption
 - Continuation of applications that require increasing bandwidth

The Ethernet BWA, Part II



The Basic Math of Ethernet



Optical Module Implementation

Definition of these interfaces...

drives complexity of the module implementation

