

# OFC/NFOEC'11 Review

Dig deeper

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# Netlab's Collection

- **NTuB7** *Future bandwidth demand favors TDM PON, not WDM PON*
- **OThK5** *Next-generation Components for Optical Access Networks*
- **OWK1** *Universal Gigabit Optical Access*
- **OTuD1** *ROADM Switching Technologies (tutorial)*
- **OThR3** *Optical Switch Architectures for Emerging CDC ROADM Networks*

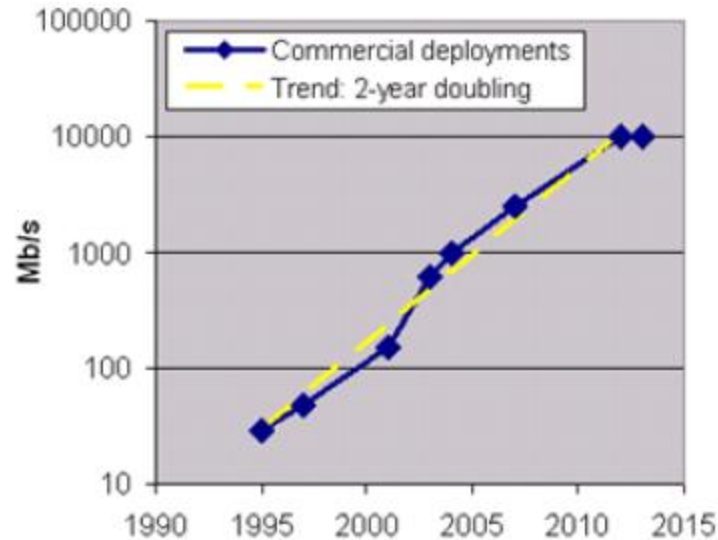
# NTuB7 Future bandwidth demand favors TDM PON, not WDM PON – Alcatel Lucent

□ Premise

□ TDM PC

□ WDM F

□ TDM POI



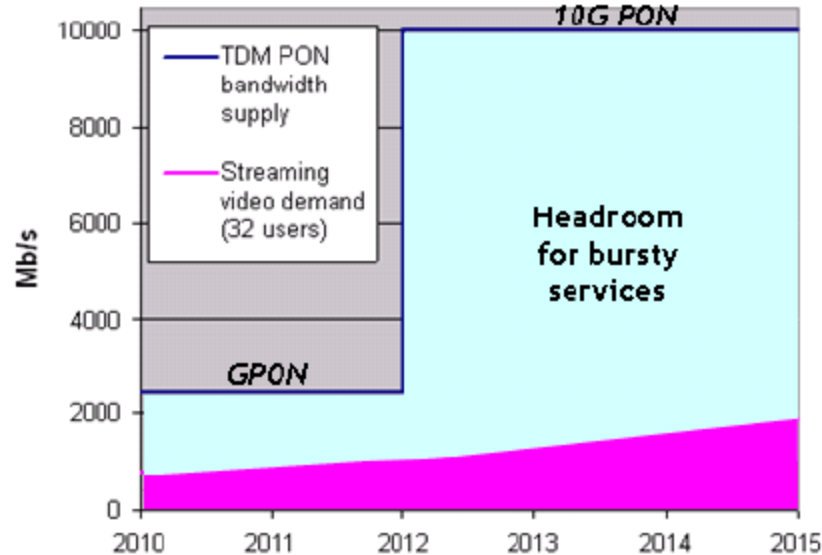
n

system

two years

# NTuB7 Future bandwidth demand favors TDM PON, not WDM PON

- Streaming video bandwidth demand growth



## NTuB7 Future bandwidth demand favors TDM PON, not WDM PON

- Other arguments
  - ▣ TDM is more efficient to carry bursty traffic
  - ▣ Upstream bandwidth demand can be well met by current TDM PON system

*In conclusion, there is no bandwidth-based argument for an operator to pay a premium for WDM PON.*

# OWK1 Universal Gigabit Optical Access -- Google

- Dedicated fibers
  - ▣ Shared PON is not future-proof
  - ▣ Privacy and security
- Gigabit symmetric access
  - ▣ Will enable new forms of web content caching

# OWK1 Universal Gigabit Optical Access

- Ascendency of wireless devices
  - ▣ Primary method of accessing warehouse computing resources
  - ▣ Radio spectrum scarcity
  - ▣ Mobile devices should be able to take advantage of FTTH networks

# OWK1 Universal Gigabit Optical Access

- In service self diagnosis
  - ▣ Live monitoring and fault localization
- High density and low power consumption
- Fiber to the Home project



# OTuD1, OThR3 CDC ROADM

