

# Propose to standardize 50G TDM-PON

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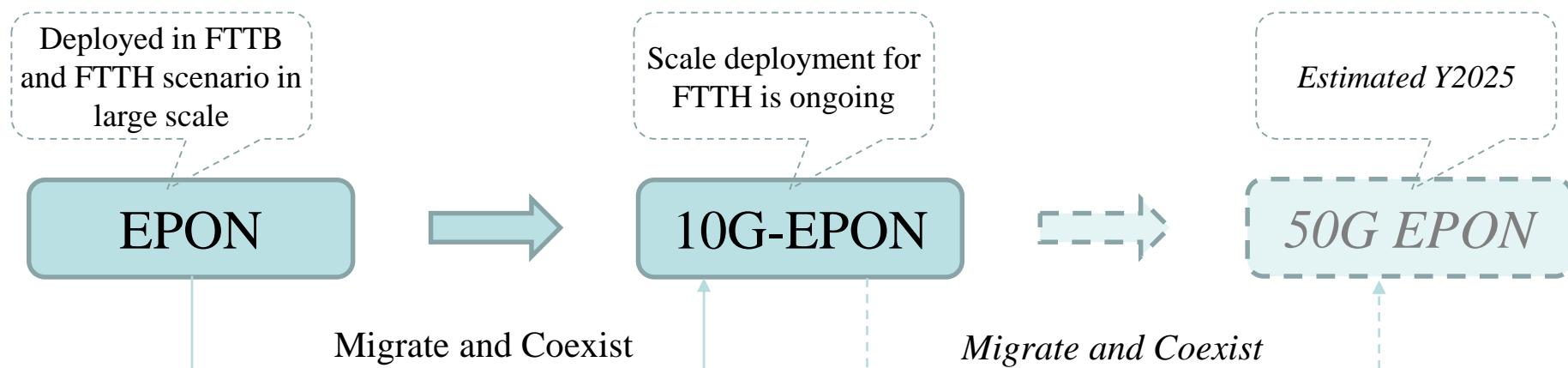
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# FTTH Deployment in China Telecom and China Unicom

<b>Broadband Subscriber Status by 2017.06</b>	<b>Total Subscribers</b>	<b>FTTH ratio</b>	<b>Subs Bandwidth Structure</b>
China Telecom	128.10 M	91.5%	Providing 50M and more for 57% subscribers
China Unicom	76.8 M	74%	Providing 50M and more for 52% subscribers

# EPON Evolution Paths and Views update - China Telecom



- ❑ 10G PON satisfies BW requirement for Y2018-2025, given services forecast for FTTH
  - ❑ Next generation EPON after 10Gb/s is expected to satisfy the service requirements
- AFTER 2025**
- ❑ Successful deployment of TDM PON (EPON/GPON) has proved great advantages of TDM-PON. Hence strong desire is to replicate the proved success: maximally maintain the technology and just enhance the line rate to 50Gb/s if technical possible.
  - ❑ The concern is whether the technology is available in IEEE and industry when required

# Key technical requirements for 50G EPON

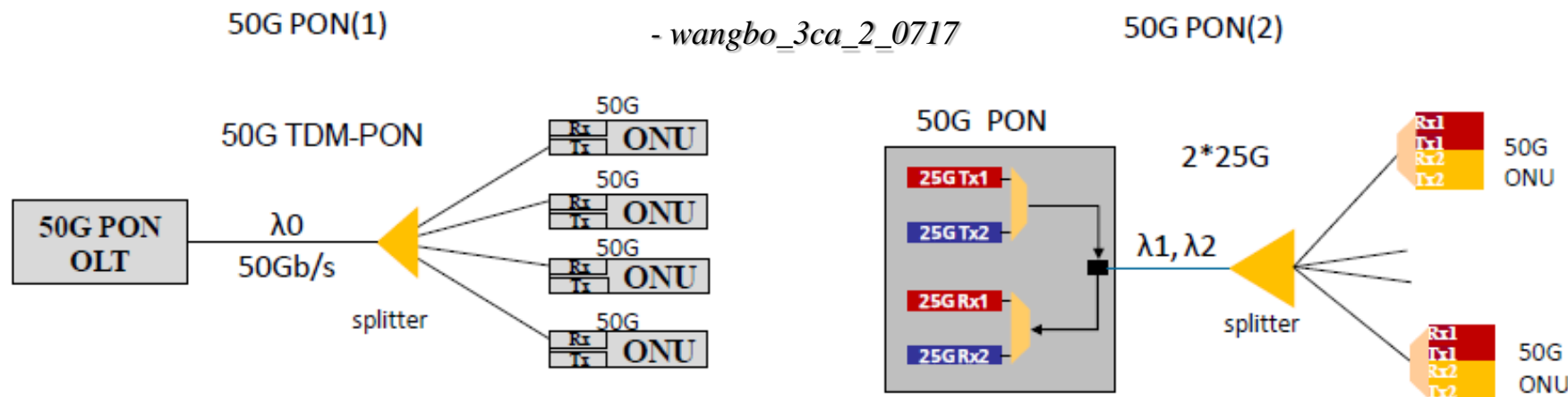
## ❑ Line rate combinations:

- 50G/10G, targeting major FTTH residential users
- 50G/25G, targeting partial residential users and business users
- 50G/50G, targeting small port of high end business users in the long term
- Can be deployed in the same ODN

❑ **ODN:** passive, at least maintain PR30 (29dB) with 1:32 split

❑ **Coexistence:** 10G-EPON (both 10G/10G and 10G/1G, note that narrowed 1260-1280nm for 1G US)

# Why in favor of 50G TDM-PON



- ❑ In the long run, equipment cost in option 1 is expected to be lower due to less optics used in OLT & ONU.
- ❑ From deployment point of view, higher density of OLT equipment, less power consumption (OLT and ONU) are desired, which Option 1 perfectly fits.
- ❑ From operation point of view, operation procedures for TDM-PON are almost mature. Engineers have enough experience to handle all associated affairs and failures. Unfortunately not applied for option 2.
- ❑ Option1 can help PON Convergence with ITU high speed PON standardization which was already started in Feb.2018.

*Thank you!*