Two options of 2 x 25G

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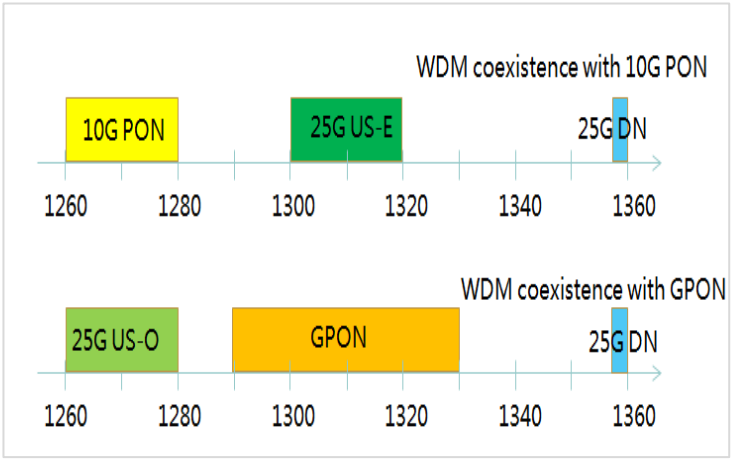
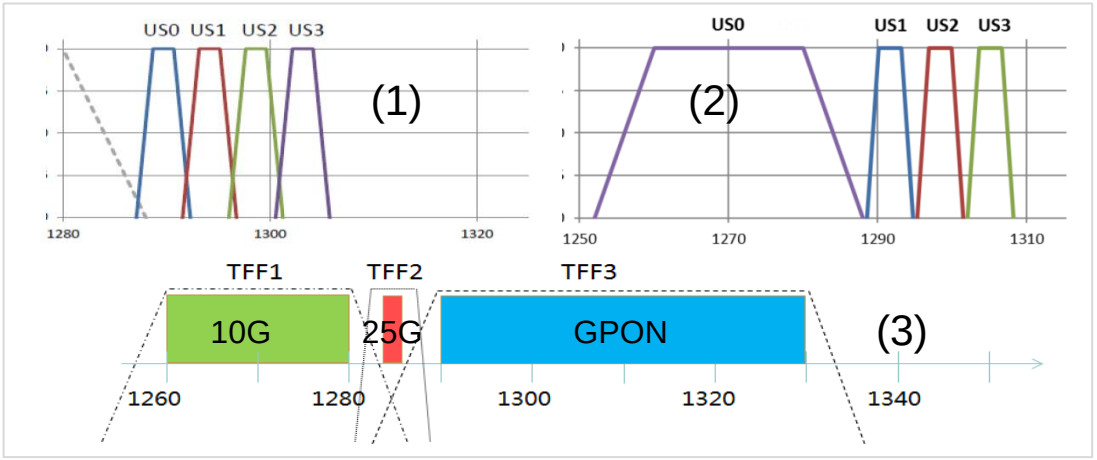
The reason we define two options for 1*25G

The motion we passed finally



The motions we failed



We have to:

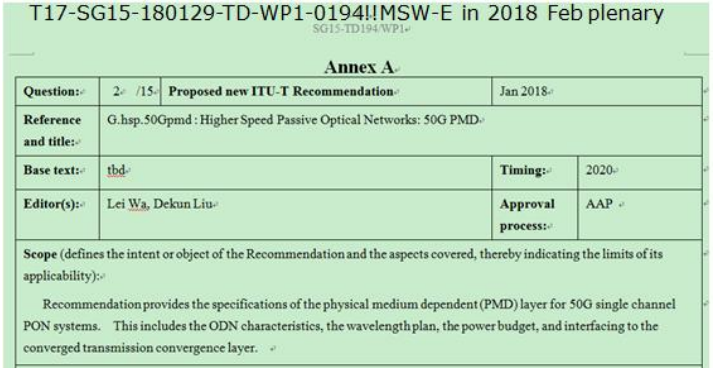
- Both GPON and 10G PON are required to be coexistent with 25G EPON by WDM from operators
- Vendors don't want to sacrifice the low cost feature for 1*25G

We can do :

- For 1*25G, the "either or" plan can support WDM coexistence with both GPON and 10G PON
- Two wide bands(low cost) are available in the O-band spectrum

There is no requirement to define two options on 2*25G

- Support coexistence with 10G-EPON
  - Optical power budgets to accommodate channel insertion losses equivalent to those supported by the 10G-EPON standard
  - Wavelength allocation allowing concurrent operation with 10G-EPON PHYs
- Wavelength allocation allowing concurrent operation of 25G-EPON and G-PON reduced wavelength set (1290nm-1330nm) PHYs



T17-SG15-180129-TD-WP1-0194!!MSW-E in 2018 Feb plenary

SG15-TD194/WP1

Annex A

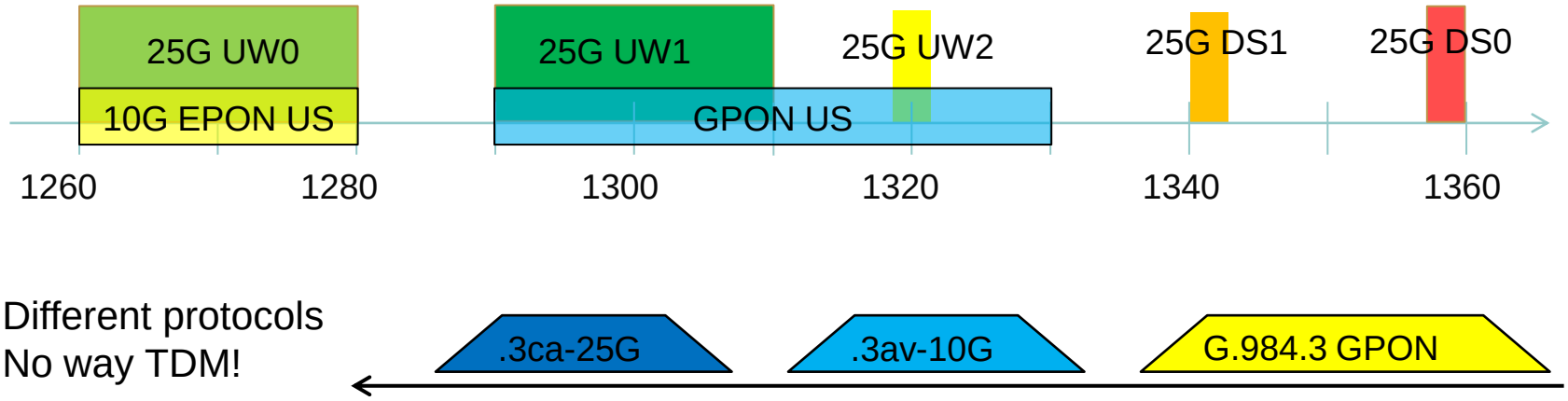
Question:	2/15	**Proposed new ITU-T Recommendation**	Jan 2018
Reference and title:	G.hsp.50Gpmd : Higher Speed Passive Optical Networks: 50G PMD		
Base text:	tbd	**Timing:**	2020
Editor(s):	Lei Wa, Dekun Liu	**Approval process:**	AAP

Scope (defines the intent or object of the Recommendation and the aspects covered, thereby indicating the limits of its applicability):

Recommendation provides the specifications of the physical medium dependent (PMD) layer for 50G single channel PON systems. This includes the ODN characteristics, the wavelength plan, the power budget, and interfacing to the converged transmission convergence layer.

- Only 25G EPON are required to be coexistent with GPON
- ITU has started 50G TDM-PON project, it's high unlikely for GPON evolve to 2*25G directly

2*25G can’t support “either or” coexistence



- UW1 and UW2 are overlapped with GPON upstream wavelength, 2*25G EPON can’t coexist with GPON by WDM even by the “either or” way
- GPON are based on GEM frame, which uses a different clock with 2*25G EPON. It’s high unlikely to be coexist with 2*25G by TDM
- **The option “UW0+UW1” can’t coexist with GPON nor 10G EPON!**

There are two many PON standards and options already

- What we have in current PON standards:
  - EPON, GPON,10G EPON, XG-PON, TWDM-PON, 100G EPON, 50G TDM-PON, …
  - PR10, PR20, PR30, PR40, class B+, class C+, N1, N2, E1, E2,…
  - Asymmetric /symmetric , multi upstream rate/single upstream rate, such as PRX vs PR, 25/10, 50/25, 50/10
  - Different solutions in a similar rate: 4*10G, 2*25G, 1*50G
  - Different options for a same case: 25G-E vs 25G-O
- A more converged and uniform standard will benefit all the PON industry chain
- Do we want to continue the two options for future PONs (such as 100G, 200G ?)

Summary

- There is no requirement to have two options on 2*25G
- Two options of 2*25G can’t support “either or” WDM coexistence with GPON and 10G EPON
- The option “UW0+UW1” can’t support coexistence with GPON nor 10G EPON, there is no application scenario for such option
- There is no necessity and benefit continue to define two options on 2*25G EPON

Thank you

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