Proposal of Additional Wavelength Allocation Plan for NG-EPON

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Summary

■ **This contribution proposes to add a 1.3 μm-band as a candidate of wavelength allocation plan for NG-EPON.**

■ **Benefits of using 1.3 μm-band are as follows:**

1) **It is easier to enhance the transmission rate more than 10 Gbps/λ**

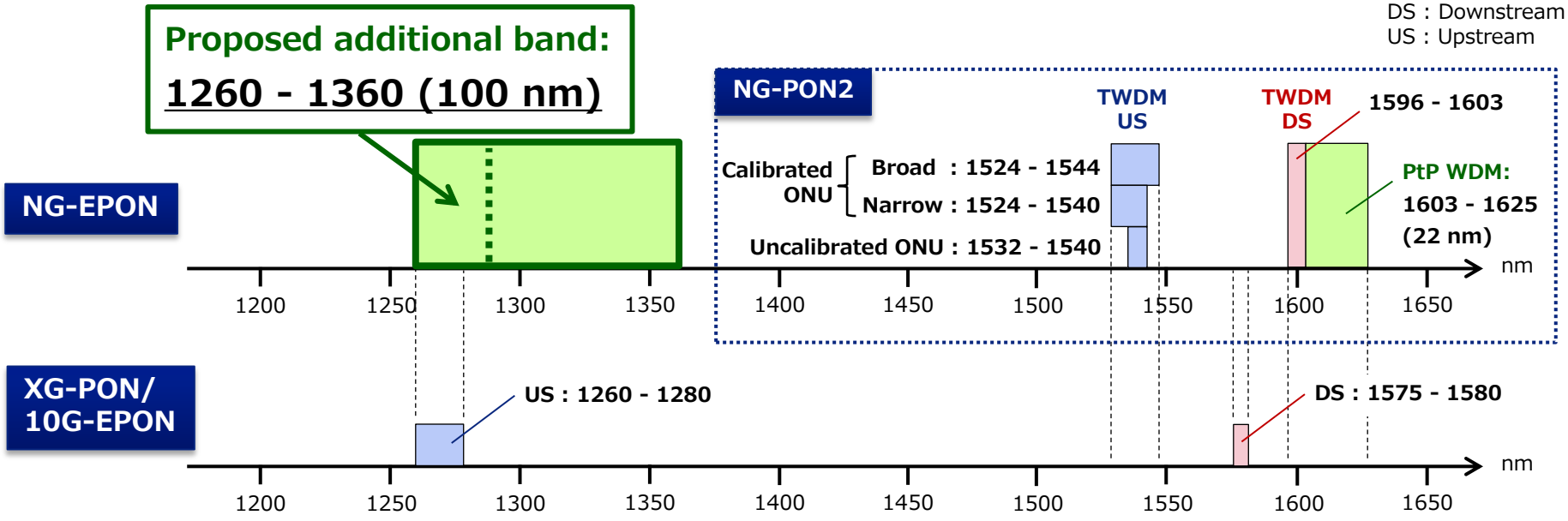
- Compared to a 1.5 μm-band, a dispersion penalty can be mitigated by using 1.3 μm-band.
- Considering future mobile backhaul/fronthaul networks, a required optical line rate per wavelength will be 10 Gbps or more.

2) **Coexistence with 1~2.5 Gbps systems (EPON/GPON) might NOT be needed for mobile backhaul/fronthaul networks**

- Optical access network for mobile backhaul/fronthaul might be deployed as a separated optical fiber network from existing FTTH networks.
- Since the 10 Gbps systems (XG-PON/10G-EPON) may be used for mobile backhaul, it might be preferable to ensure coexistence with XG-PON/10G-EPON.

Candidate of Wavelength Allocation Plan

- **We propose to add a 1.3 μm band (1260 to 1360 nm) as a candidate of wavelength allocation plan for NG-EPON.**
  - Considering a transmission rate of more than 10 Gbps/λ, a 1.3 μm band should be a candidate of wavelength allocation plan for NG-EPON.

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