

Joint contribution: WDM requirements for fronthaul application

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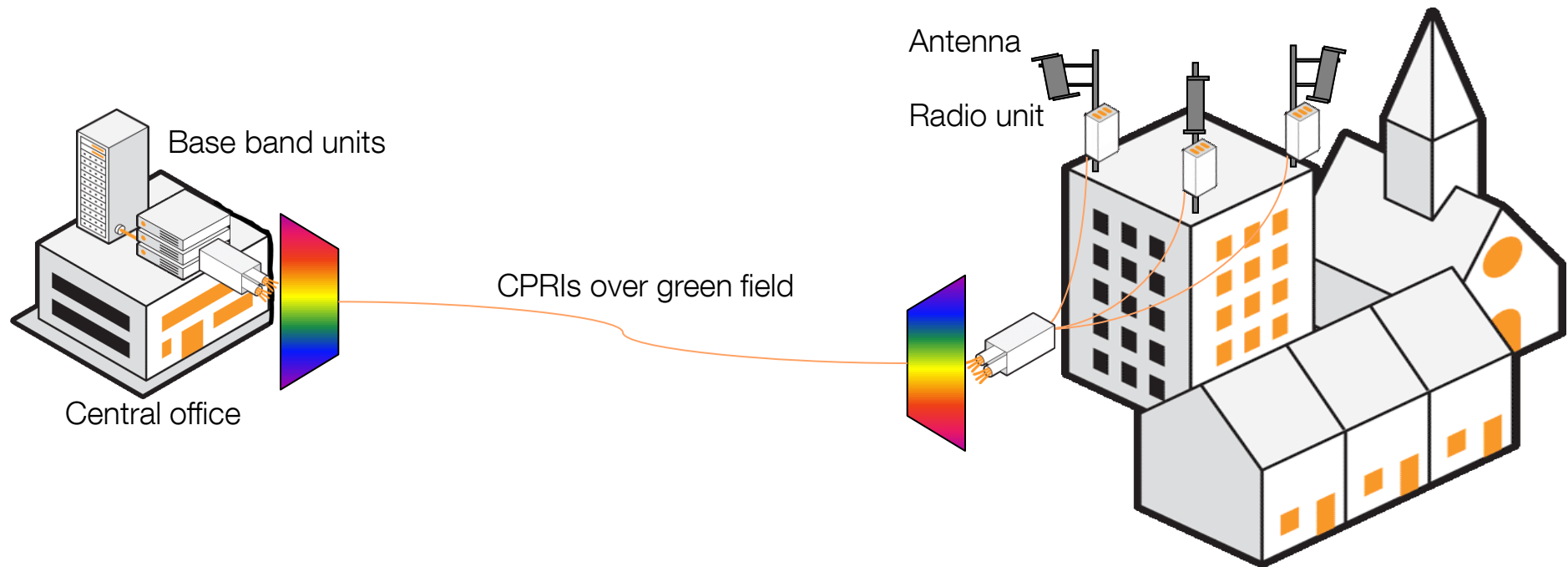
FSAN, NG-PON session

Date: December, 2015

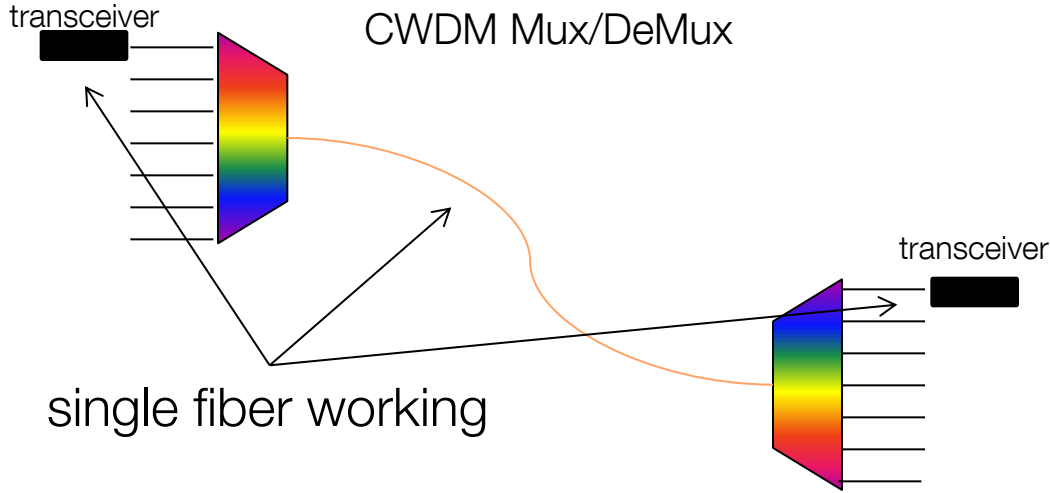
Location: Kuala Lumpur, Malaysia

The existing Fronthaul (eg. CPRI) for green field

- WS ODN is the preferred solution

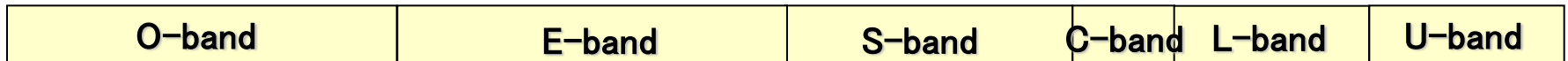
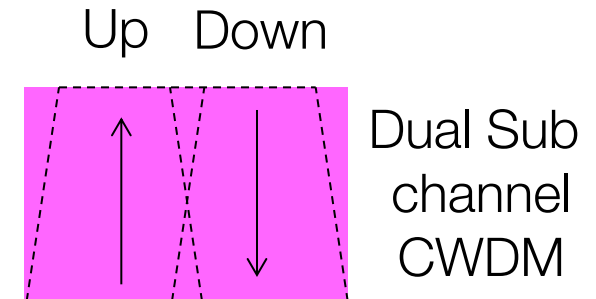


Dual Sub channel CWDM for single fiber working (bidirectional)

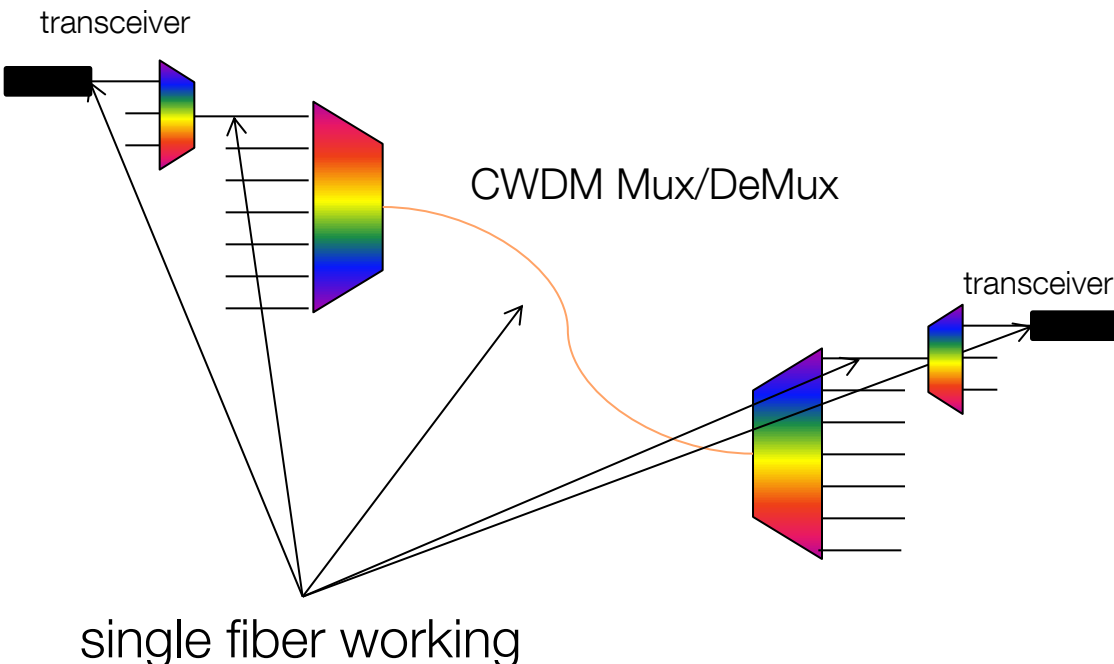


Requirements:

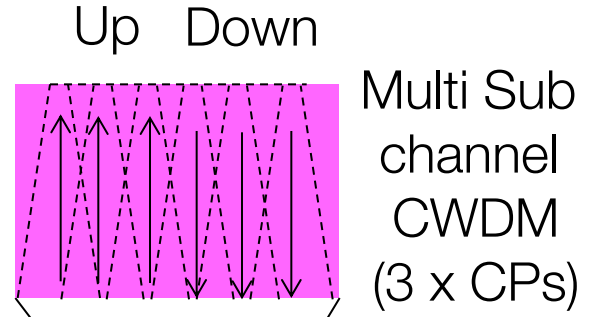
- outdoor compatible
- single fiber working
- optical budget
- OAM with AMCC or OMCI



Multi Sub channel CWDM for single fiber working (bidirectional)

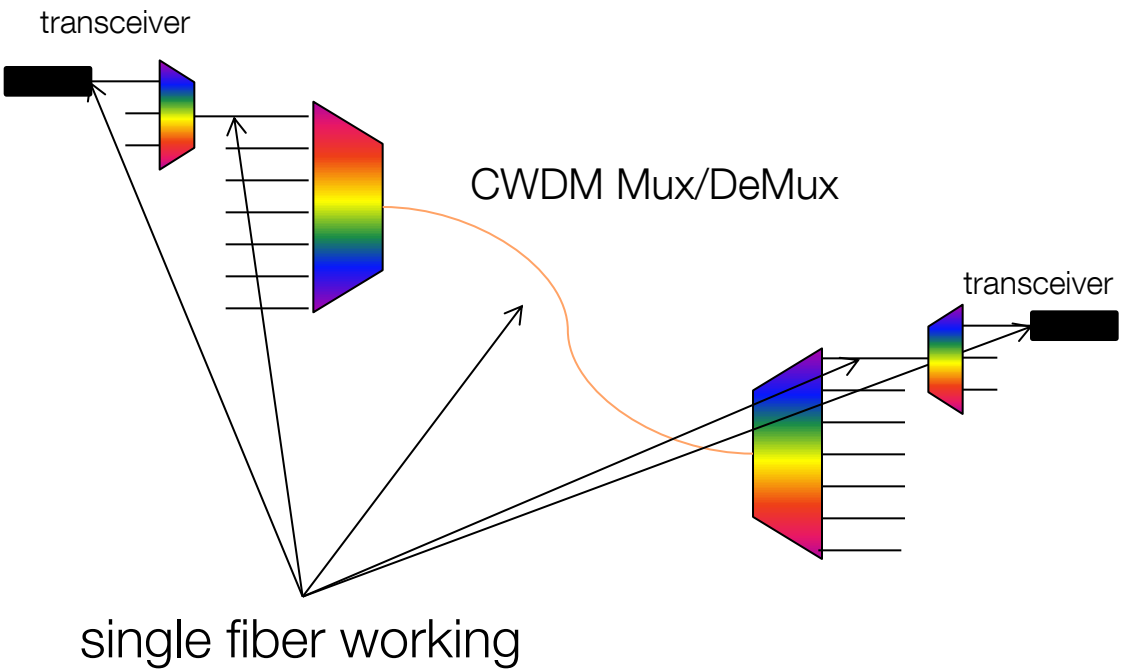


- Requirements:
- outdoor compatible
 - single fiber working
 - optical budget
 - OAM with AMCC or OMCI



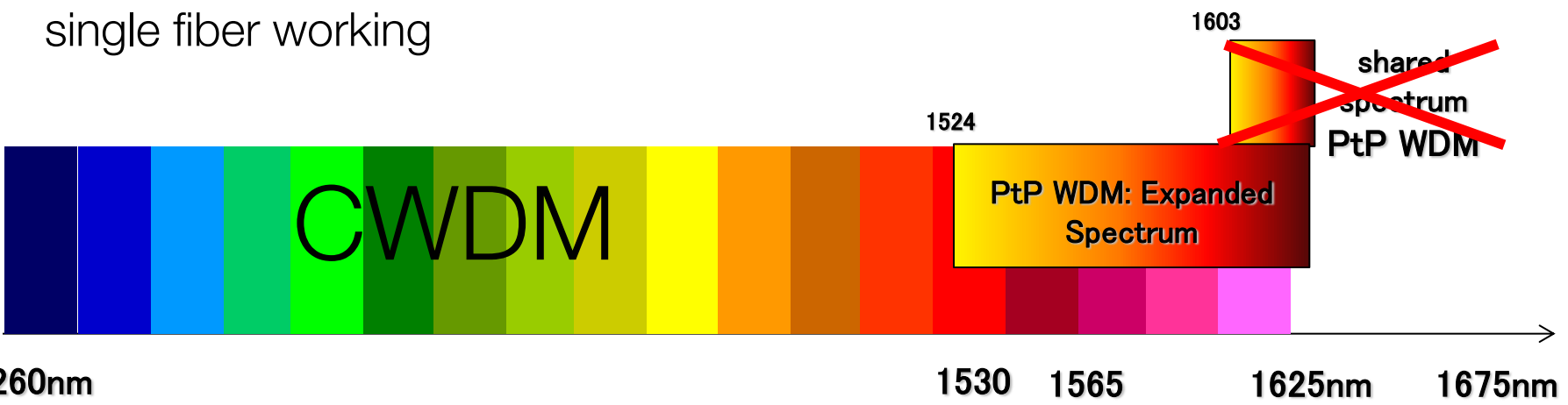
O-band	E-band	S-band	C-band	L-band	U-band
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PtP WDM (G.989.x) 1/3



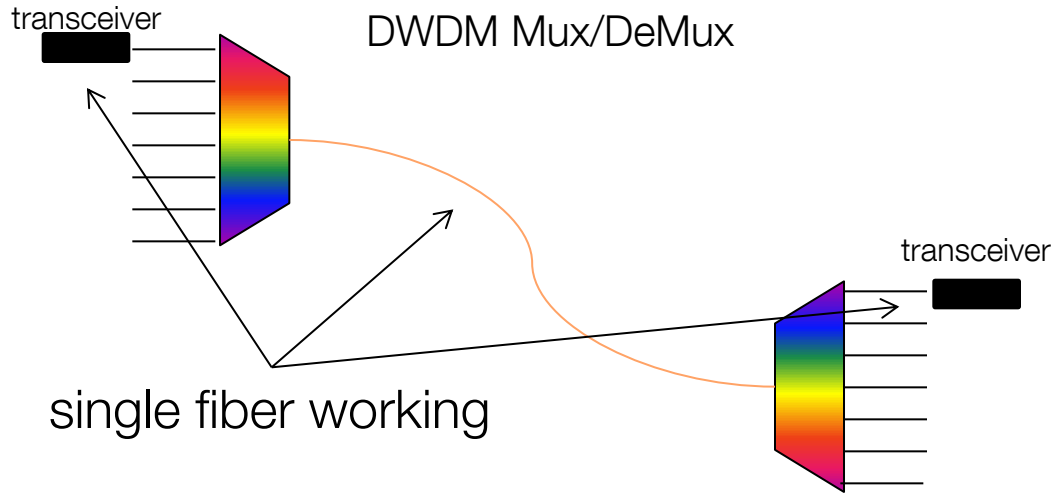
Requirements:

- outdoor compatible
- single fiber working
- optical budget
- OAM with AMCC or OMCI



O-band	E-band	S-band	C-band	L-band	U-band
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PtP WDM (G.989.x) 2/3



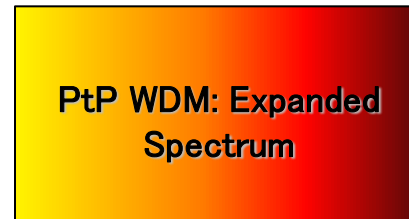
Requirements:

- outdoor compatible
- single fiber working
- optical budget
- OAM with AMCC or OMCI

Issue:

- No technology available to achieve colorless ONU for the full band 1524 to 1625 nm

1524



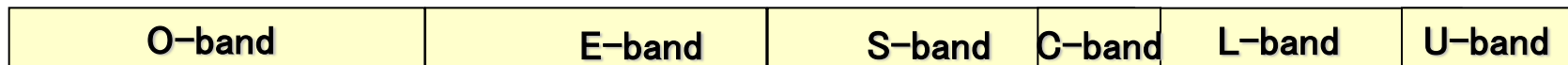
1260nm

1530

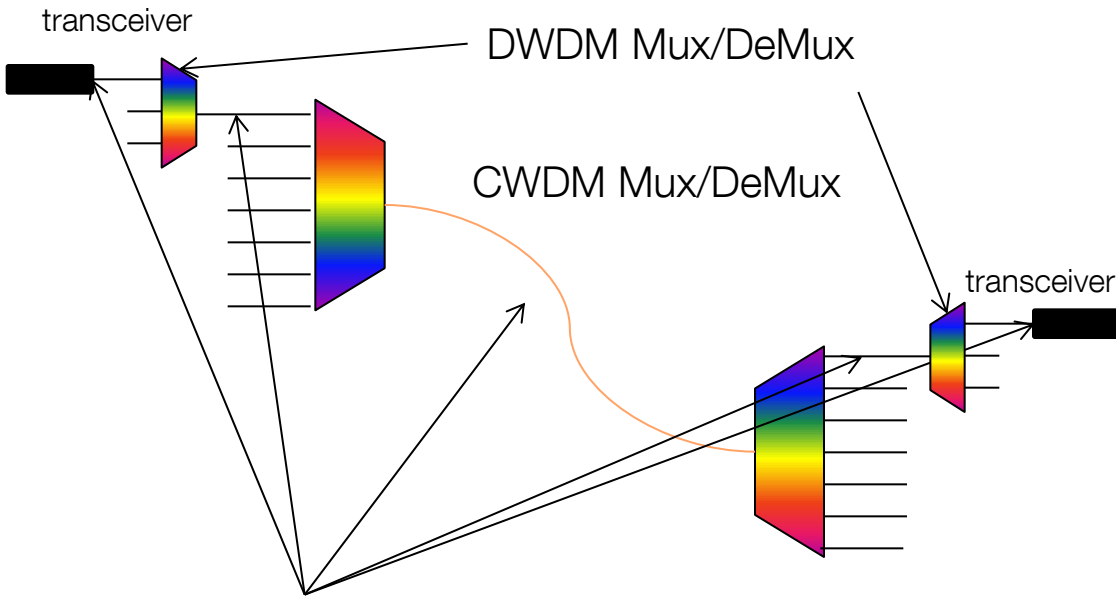
1565

1625nm

1675nm



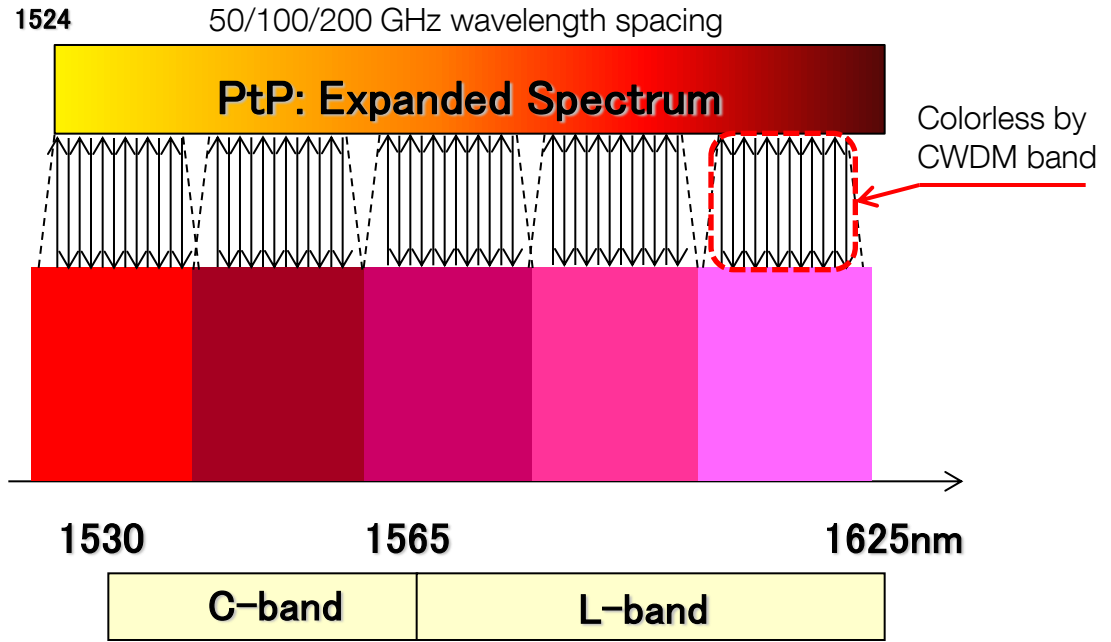
PtP WDM (G.989.x) 3/3



single fiber working

Requirements:

- outdoor compatible
- single fiber working
- optical budget
- OAM with AMCC or OMCI
- Colorless by sub-band



Conclusion

- Proposition of fronthaul standardization actions:
 - Generalization of OAM (operation, administration and maintenance) concept developed inside G.989 with solution based on AMCC and OMCI, for PHY layers based on:
 - Dual Sub channel CWDM bidirectional (Single fiber working)
 - Multi Sub channel CWDM bidirectional (Single fiber working)
 - Colorless PtP WDM by Multi Sub channel CWDM (new. G.989.2 amendment?)

Thank you

Merci

Gràcies

Danke

Grazie

Tack

谢谢

감사합니다

ありがとうございました

Acknowledgements:



5G X Crosshaul
the integrated fronthaul/backhaul

