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Modified Wavelength Plan B, 1+3: cost optimized

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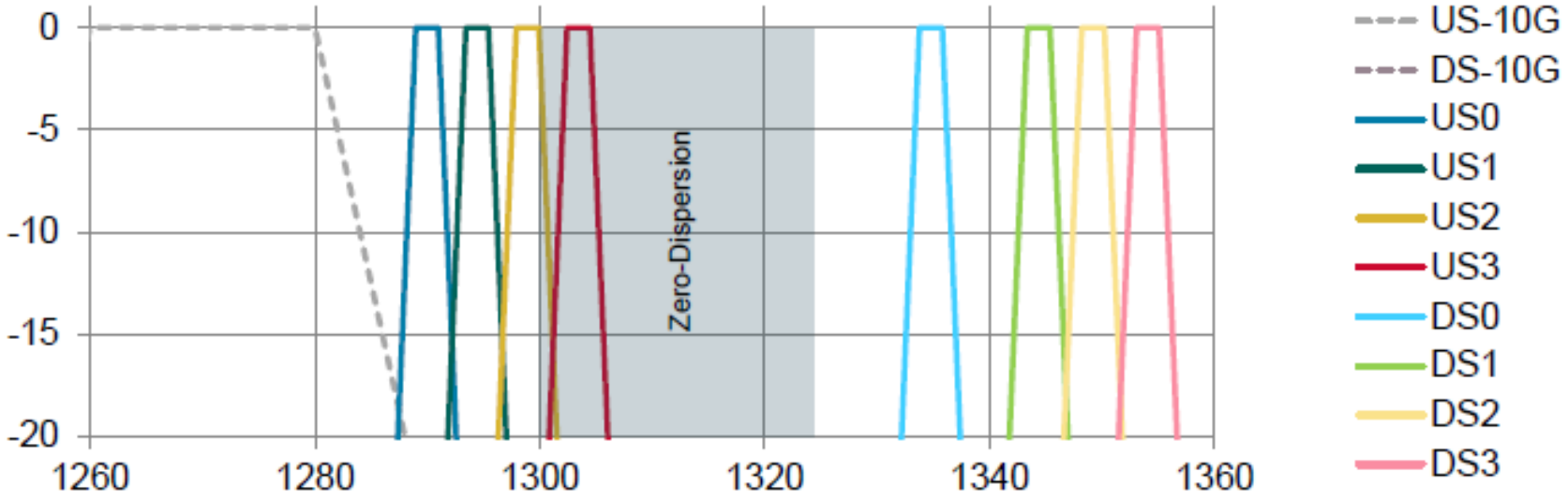
Proposed Wavelength Plan A (from johnson_3ca_1a_0916)



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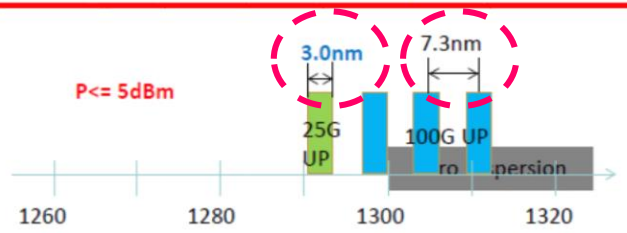
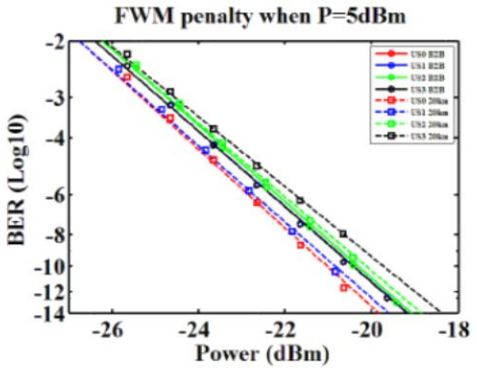
Cost optimizations proposed for Plan A (from zhang_3ca_1_1116)

One revision for US plan and associated FWM analysis



	Center freq	Center WL	PB width (THz)
US0	232	1292.21	0.54
US1	230.7	1299.49	0.54
US2	229.4	1306.85	0.54
US3	228.1	1314.30	0.54

- 5dBm maximal power for each channel is limited to avoid FWM penalty risk
- 3nm width for each US channel relax the ONU wavelength tolerance and decrease the cost of optics
- 10.7nm guard band is left between 10G EPON and 25G EPON upstream
- 5dBm maximal launch power limitation's impact on power budgets and optics cost needs further study



Realizing these optimizations with Plan A will be difficult if not impossible

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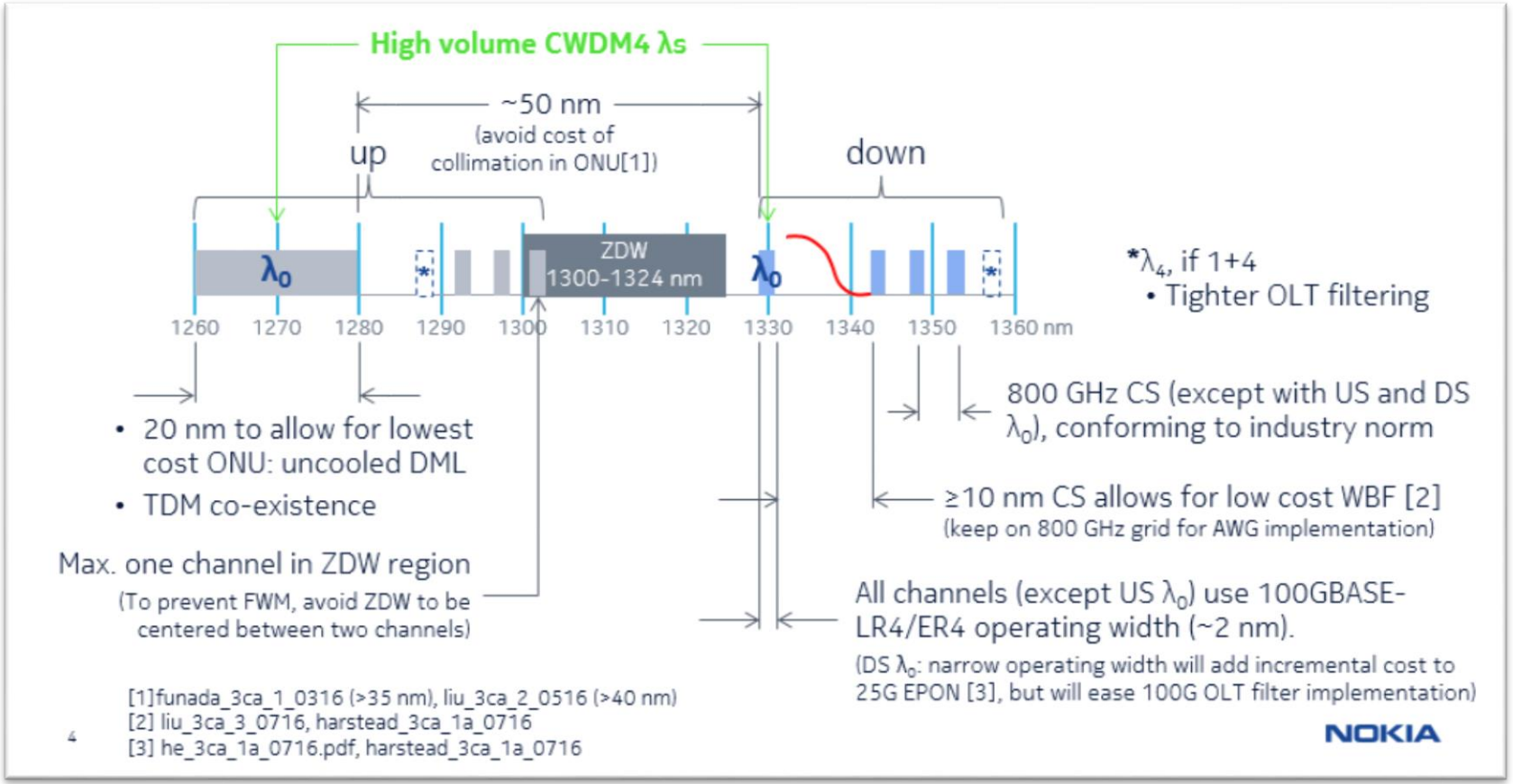
Original Plan B (from harstead_3ca_2b_0916)



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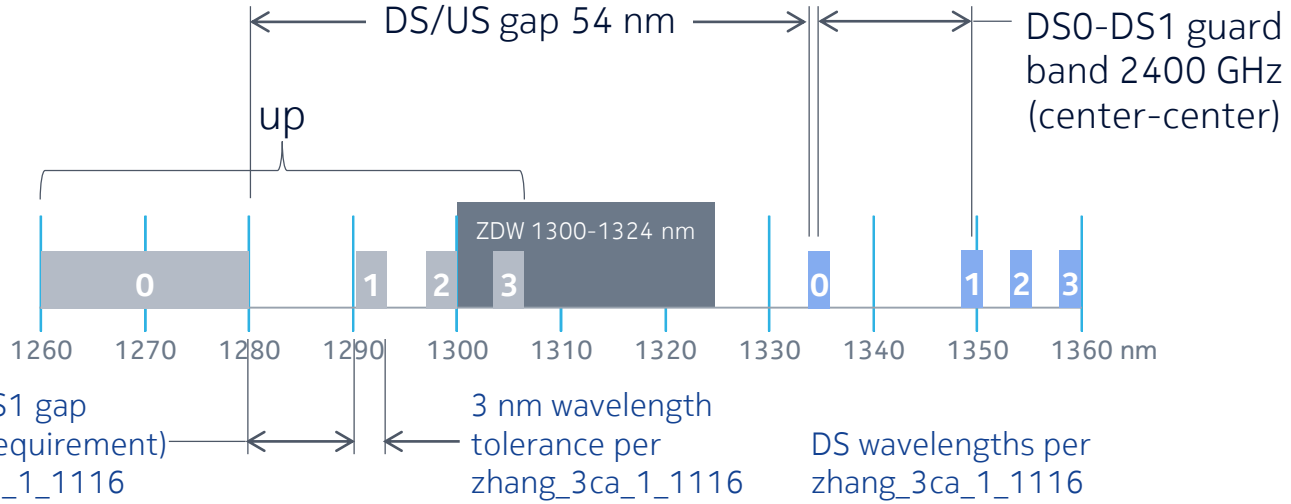
Modified Plan B(1), incorporating cost optimizations from zhang_3ca_1_1116



CS relaxed to 1200 GHz (6.7 nm) to accommodate 3 nm wavelength tolerance

Wavelength (nm)	Frequency (THz)	
1260-1280		US 0
1291.652	232.1	US 3
1298.365	230.9	US 2
1305.148	229.7	US 1

FWM avoided, no 5 dBm limit

Wavelength (nm)	Frequency (THz)	channel
1334.784	224.6	DS 0
1349.201	222.2	DS 1
1354.076	221.4	DS 2
1358.987	220.6	DS 3

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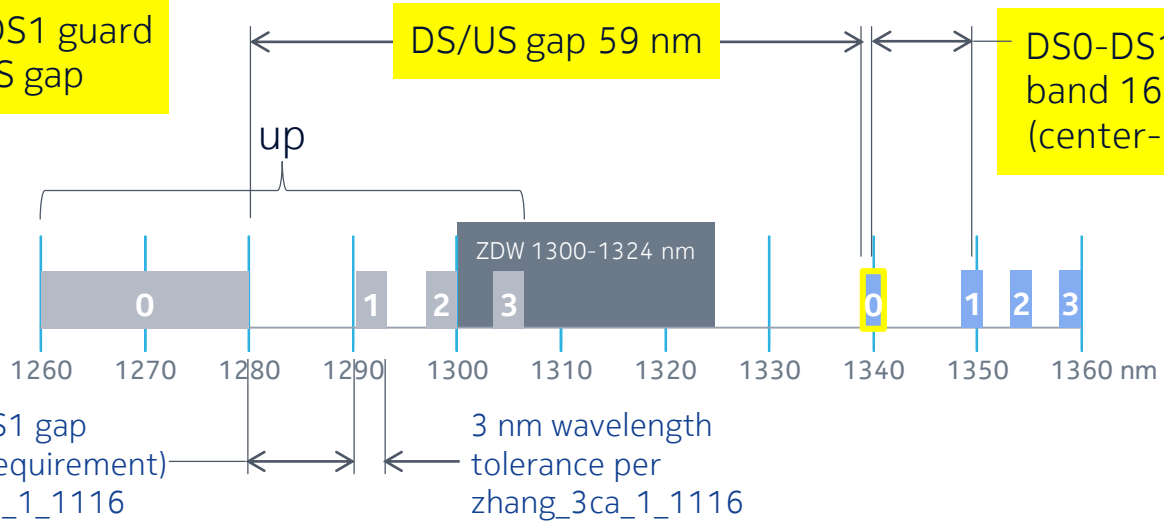
Modified Plan B(2), incorporating cost optimizations from zhang_3ca_1_1116

Can trade-off less DS0-DS1 guard band for increased DS/US gap



CS relaxed to 1200 GHz (6.7 nm) to accommodate 3 nm wavelength tolerance

Wavelength (nm)	Frequency (THz)	
1260-1280		US 0
1291.652	232.1	US 3
1298.365	230.9	US 2
1305.148	229.7	US 1

FWM avoided, no 5 dBm limit

Wavelength (nm)	Frequency (THz)	channel
1339.555	223.8	DS 0
1349.201	222.2	DS 1
1354.076	221.4	DS 2
1358.987	220.6	DS 3

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