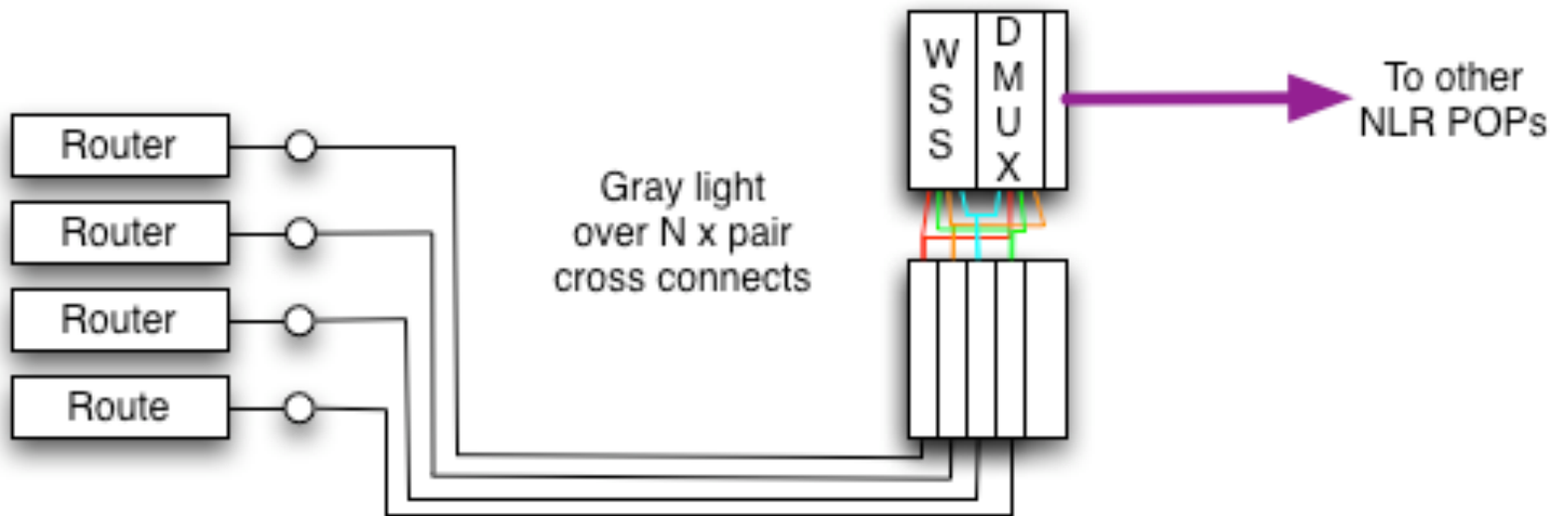


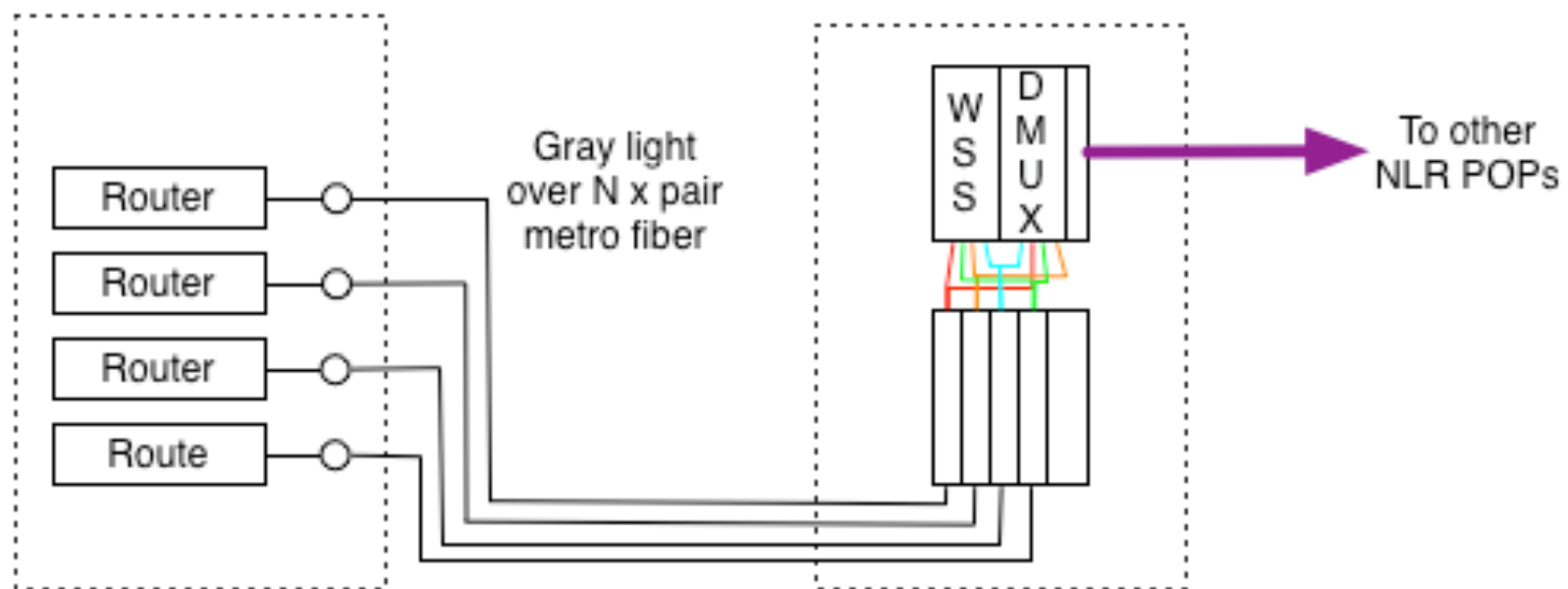


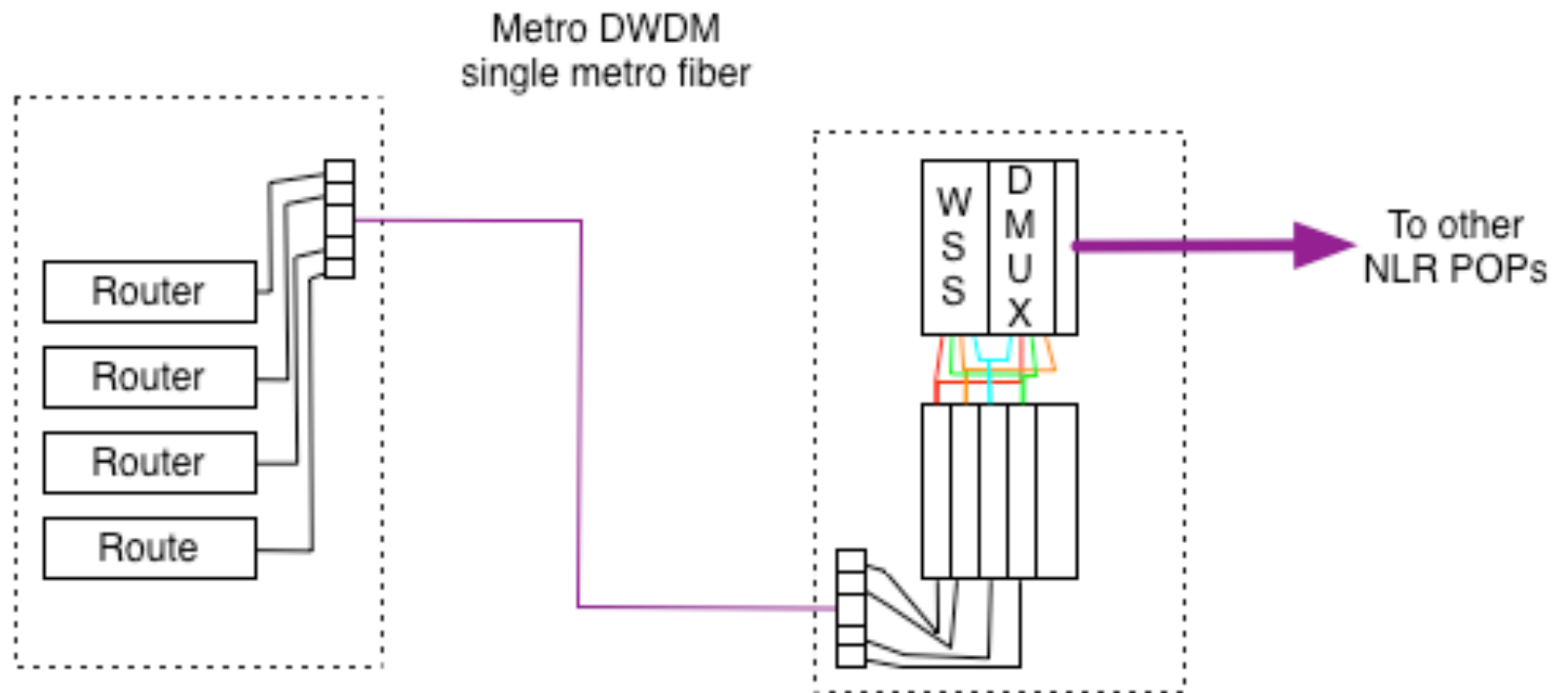
NATIONAL LAMBDA RAIL

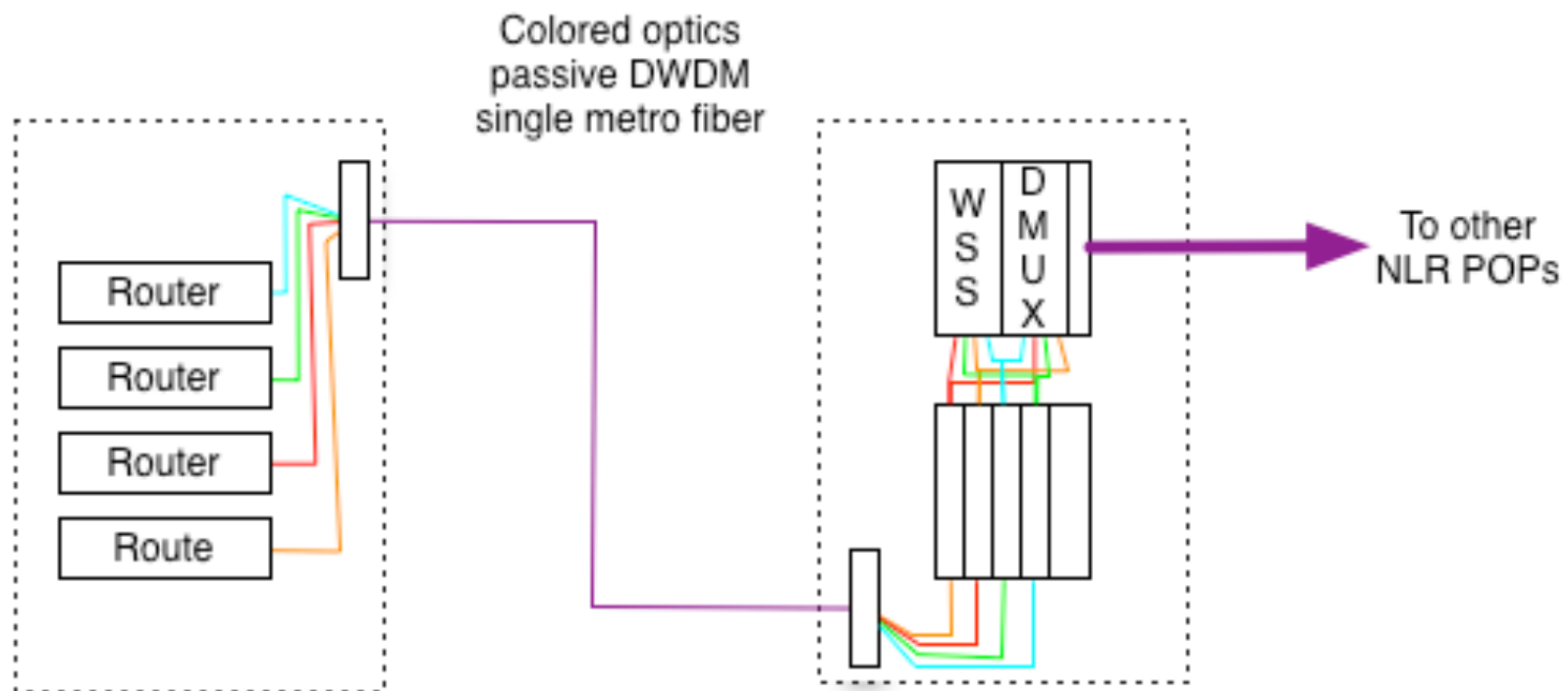
Overcoming shorter distances

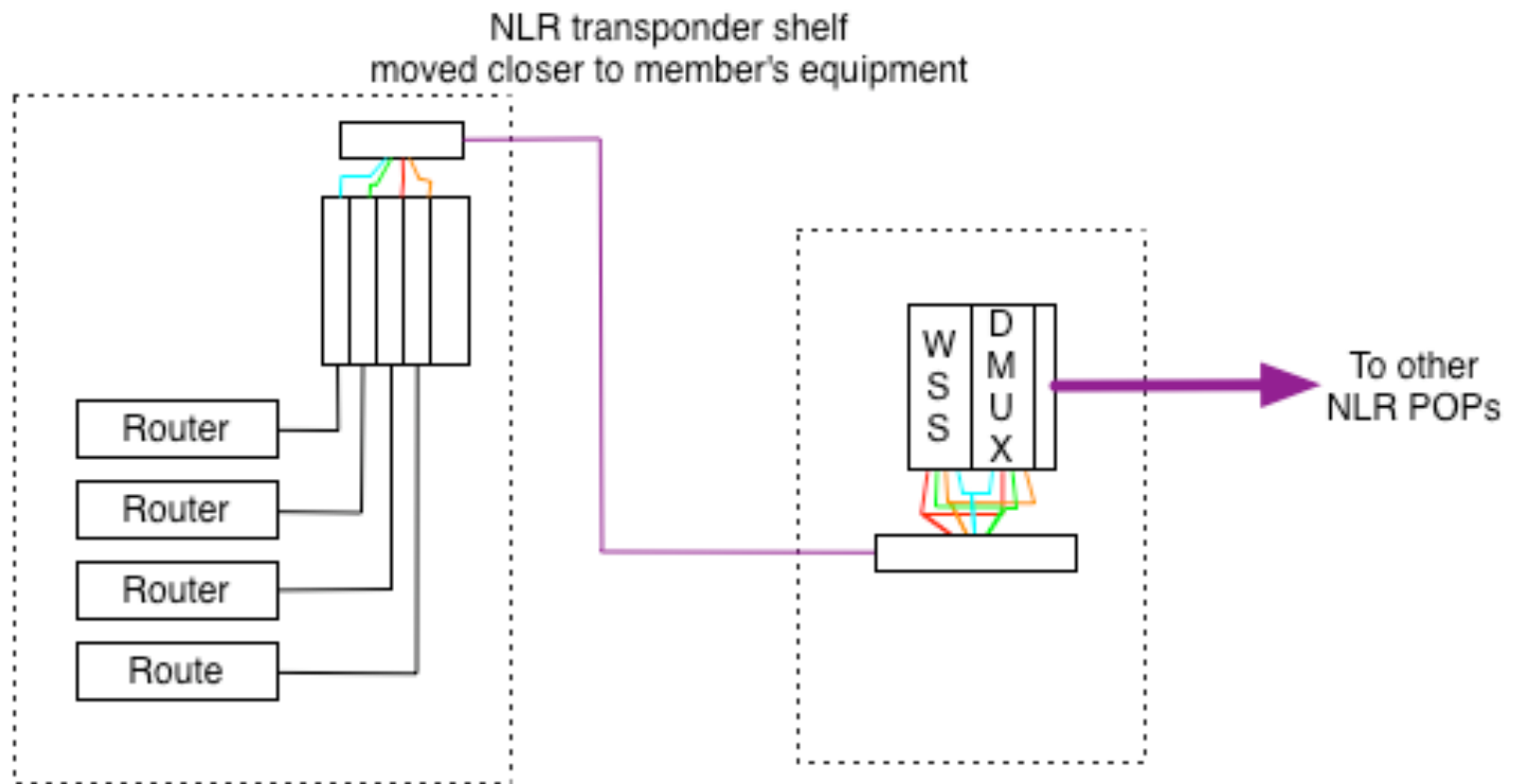
The Network for Advanced Research and Innovation

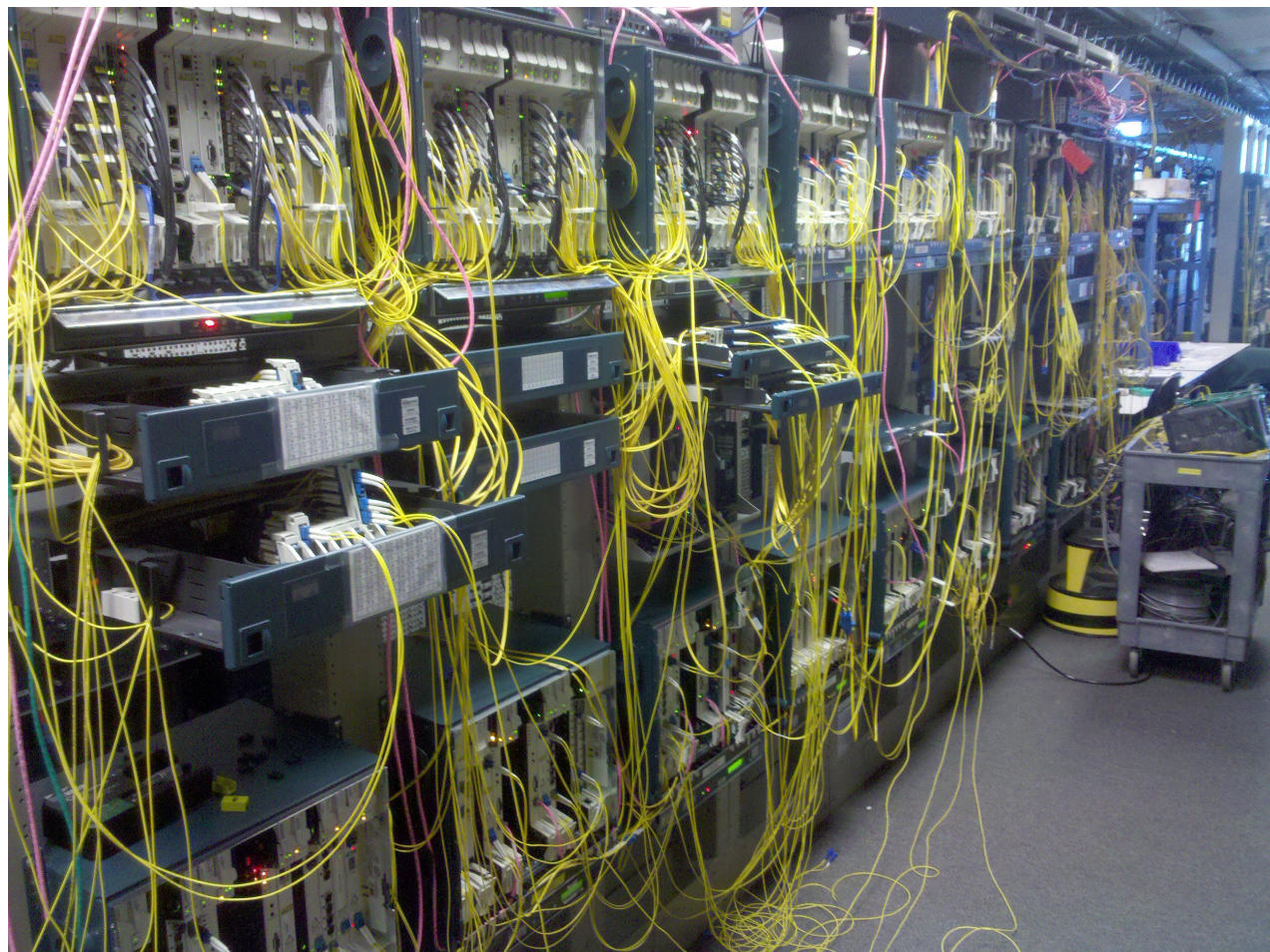










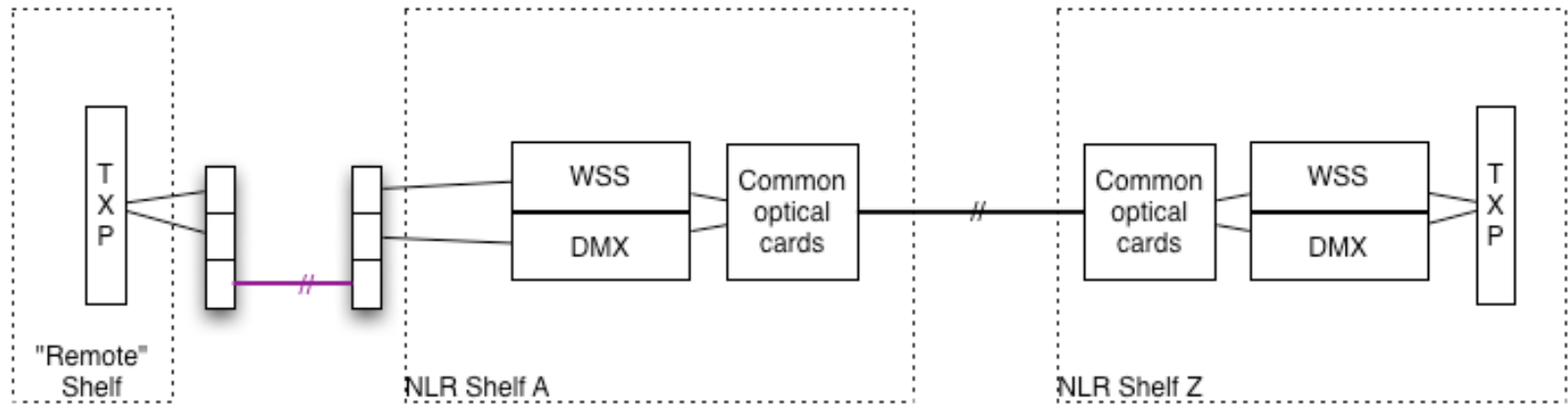


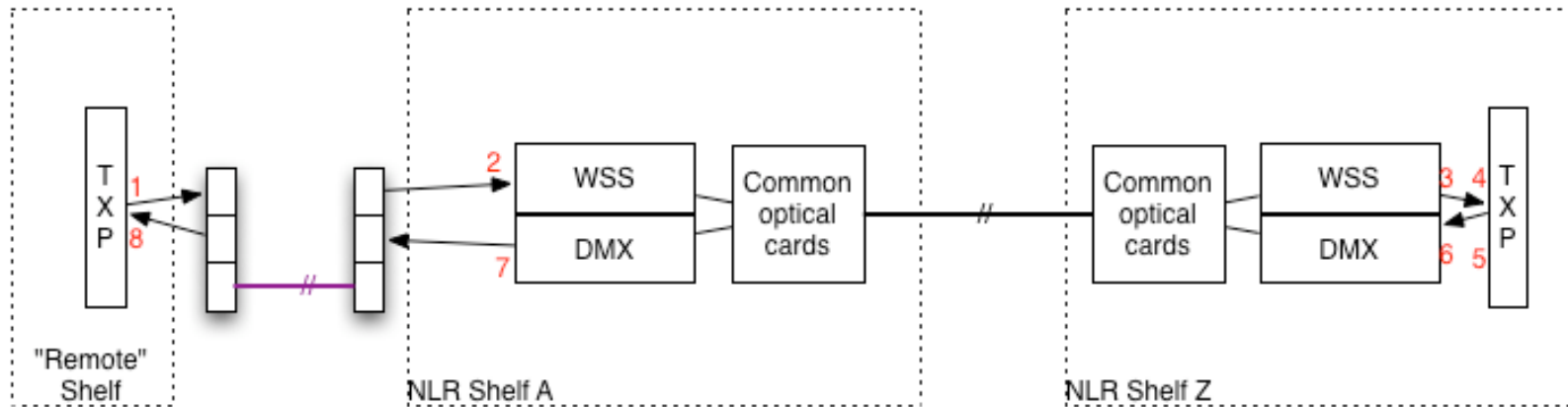
- 15216-FLA-8-60.6
 - Passive DWDM module
 - 8 Channels
 - Insertion loss: 3.4-4.5 db
 - “Cascading” loss: 0.6-1.7db





Setup





Baseline:

1) +4.9 2) -11.6 (+4.7) 3) -14.0 4) -15.2
 5) +1.5 6) -11.6 7) -14.4 8) -15.1

Filters only:

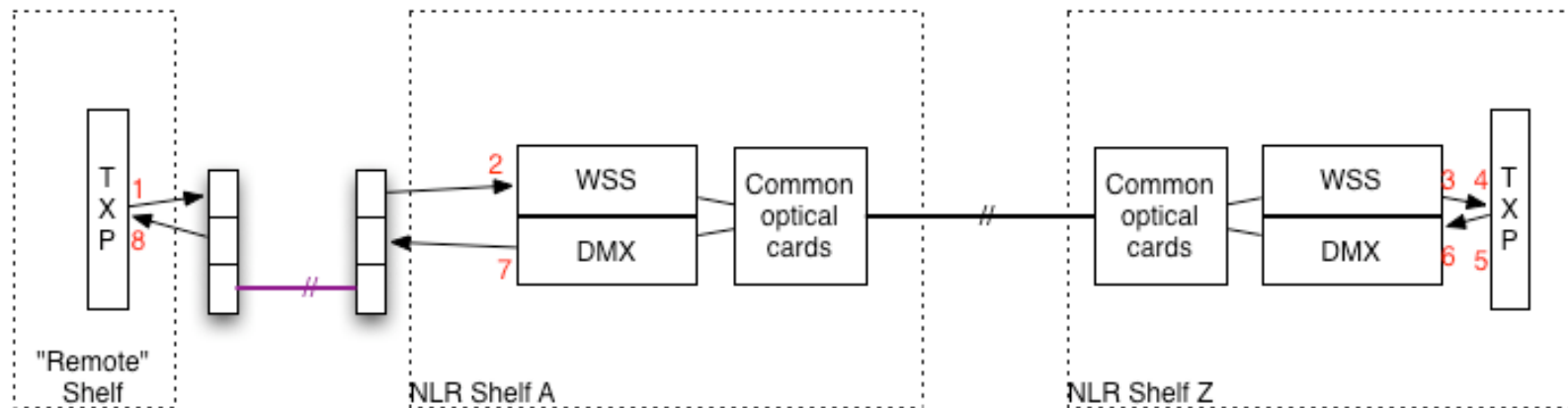
1) +4.9 2) -11.6 (-2.1) 3) -14.0 4) -15.2
 5) +1.5 6) -11.6 7) -14.4 8) -21.8

Filters and 3db attenuator:

1) +4.9 2) -11.6 (-5.6) 3) -14.0 4) -15.2
 5) +1.5 6) -11.6 7) -14.4 8) -24.2

Filters and 5db attenuator:

1) +4.9 2) -12.6 (-7.2) 3) -14.0 4) -15.2
 5) +1.5 6) -11.6 7) -14.4 8) -26.2



Baseline:

- 1) +4.9 2) -11.6 (+4.7) 3) -14.0 4) -15.2
 5) +1.5 6) -11.6 7) -14.4 8) -15.1

Filters only:

- 1) +4.9 2) -11.6 (-2.1) 3) -14.0 4) -15.2
 5) +1.5 6) -11.6 7) -14.4 8) -21.8

Filters and 8db attenuator:

- 1) +4.9 2) -16.4 (-11) 3) -14.0 4) -15.2
 5) +1.5 6) -11.6 7) -14.4 8) -28.2

Two filters chained:

- 1) +4.9 2) -11.6 (-3.3) 3) -14.0 4) -15.2
 5) +1.5 6) -11.6 7) -14.4 8) -22.9



Conclusions

- Filters we used added 6.8db of loss
- System could tolerate about 4db of additional loss without alarm or error
- Insertion loss on a 40 ch WSS is about 2db less than a 32 ch WSS

The End Questions?



NATIONAL LAMBDA RAIL