TRIUMPH

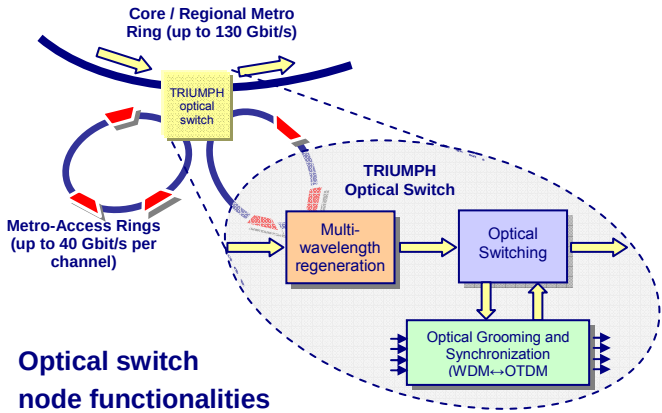
Transparent Ring Interconnection Using Multi-Wavelength Photonic Switches

Building new functionalities for metro networks

The TRIUMPH project is developing systems that will enable a new broadband paradigm in future metro and core networks. A switch node with optical grooming and multi-wavelength regeneration functionalities is being developed for transparent optical ring interconnection.

Future network scenario

TRIUMPH envisions a high capacity OTDM/WDM network with transparent connectivity between core/regional-metro rings and metro-access rings using an advanced optical switching node.



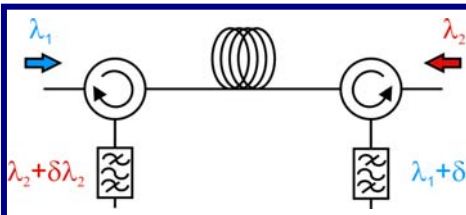
Optical switch node functionalities

- Transparent connectivity between rings
- Dynamic optical switching
- Synchronization, bit-rate adaptation, optical grooming and aggregation
- Multi-wavelength regeneration

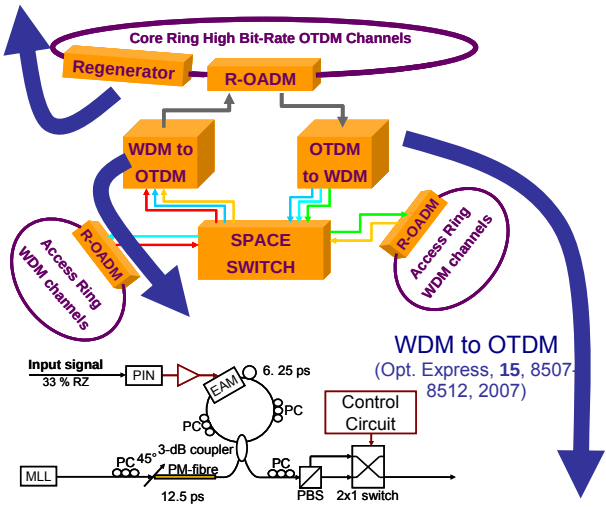
www.ihq.uni-karlsruhe.de/research/projects/TRIUMPH/

Sixth Framework Programme

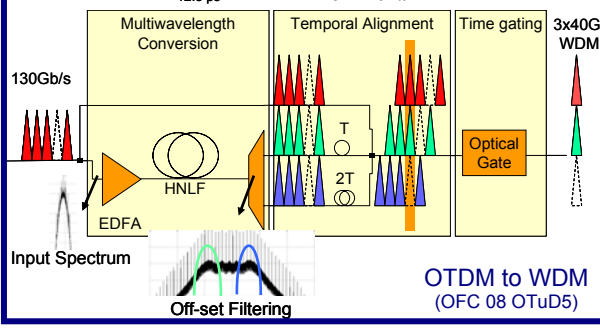
Physical Implementation



Multi-channel Regenerator
(Opt. Express, **16**, 2264-2275, 2008)



WDM to OTDM
(Opt. Express, **15**, 8507-8512, 2007)



OTDM to WDM
(OFC 08 OTuD5)

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