Tutorial : The Core Photonic Networks – Where Are Things Heading?

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Abstract: *Telecommunications carriers are under great economic pressure to keep their core networks cost effective. To address that, they need to keep reducing the cost-per-bit in the core IP routers and switches as well as the optical transport network which interconnects them. We will discuss the resulting desires for the transport technologies and temper those with Capacity Crunch issues. We will then explore alternate network architectures to better utilize the transport resources. These will include consideration of the pros and cons of a sub-wavelength grooming layer between the Layer 2/3 routers and Layer 1 transport. We will then describe ways to make the "ROADM" layer truly reconfigurable (remotely reconfigurable) and its value*.