The Optical Internet: Industry Challenges

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Abstract
It is now clear that the Internet and its role in enabling e-commerce is pervasive and is unstoppable.

Over the past few years optical networking has emerged as a key requirement for the evolution of global telecommunications networks to enable the scalability and dependability required for the Internet to support the mission critical applications necessary for present and future e-commerce activities.

The attributes of the Internet ultimately depend on the underlying component and product capabilities that support the necessary packet transport and routing functions.

Currently the inter-city Internet backbone network is being built with multiple 10 gb/s systems operating over a single fiber with dense wavelength division multiplexing. Capacities of greater than 1 terabit per second per fiber have been implemented with this technology which is expected to be deployed in the near future for Metropolitan network applications.

This presentation will describe the challenges associated with scaling the internet with optical technology and the systems validation and testing required to achieve the reliability and performance required.

Biography
Brian McFadden was appointed Vice President and General Manager of Metro Optical Solutions for Nortel Networks in January 2000. Brian was the leader of Nortel’s team which successfully completed the acquisition of Cambrian Systems (an Ottawa based optical networking start-up) in December 1998.

Brian has 20 years of experience with Nortel Networks in various positions in the telecommunications transmission business including systems engineering, product marketing and product management. Prior to his current assignment Brian led the High Capacity Transport team which had global product line responsibility for Nortel’s industry leading OC-192 and OC-48 fiber optic transmission systems.

Brian’s career with Nortel Networks has included assignments in Seoul, Korea; Maidenhead, England; as well as Ottawa and St. Laurent in Canada.

Brian obtained his B.A.Sc. in Electrical Engineering from the University of Waterloo in 1977. He is married and has two children.