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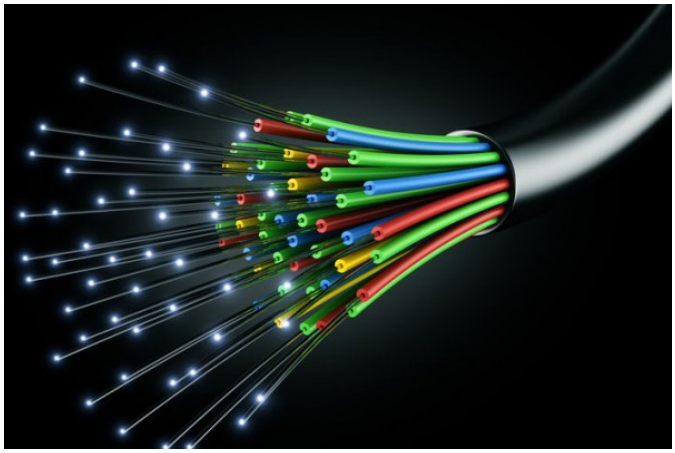
Alcatel-Lucent research arm Bell Labs announces an optical networking breakthrough with a first demonstration of a real-time space-division multiplexed optical multiple-input-multiple-output (MIMO-SDM) system.



According to the company MIMO-SDM can increase current 10-20Tbps fibre capacities to Petabit-per-second-- the equivalent of 1000Tbps, making it able to handle the future demands of 5G wireless technology and the Internet of Things (IoT). It also overcomes the capacity limitations of current optical fibre imposed by the non-linear Shannon limit.

Essentially, the 6x6 MIMO-SDM experiment uses real-time processing to remove crosstalk from multiple signals on special fibre supporting 6 parallel optical signal paths. The technique, Bell Labs claims, brings the technology closer to reality compared to previous off-line processing techniques.

“This experiment represents a major breakthrough in the development of future optical transport. We are at the crossroads of a huge change in communications networks, with the advent of 5G Wireless and cloud networking underway," Alcatel Lucent says. "Operators and enterprises alike will see their networks challenged by massive increases in traffic. At Bell Labs we are continuously innovating to shape the future of communications networks to meet those demands.”

Go Alcatel-Lucent Technology to Shatter Capacity Limits of Optical Networks