

Terabits data transfer speed



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Experiment that achieved a data transmission rate of 26 terabits per second

A research Organization has developed a a world record in data transmission with the successful encoding of data at a rate of 26 terabits per second on a single laser beam and transmitting it over a distance of 50 km (31 miles). The scientists claim this is the largest data volume ever transported on a laser beam and enables the transmission of 700 DVD's worth of content in just one second.

With no electronic processing methods available for a data rate of 26 terabits per second, the team developed a new opto-electric data decoding process. This process relies on purely optical calculations to break down the initial high data rate into smaller bit rates that can then be processed electrically. The record-breaking data encoding also employed the orthogonal frequency division multiplexing (OFDM) scheme based on Fast Fourier Transformation (FFT) mathematical routines that is commonly used in mobile communications networks including digital TV and audio broadcasts.

Because energy is required for the laser and a few process steps only, the team says the new method is not only extremely fast, but also very energy efficient.

For Additional Information please contact info@technologyconcepts.in