

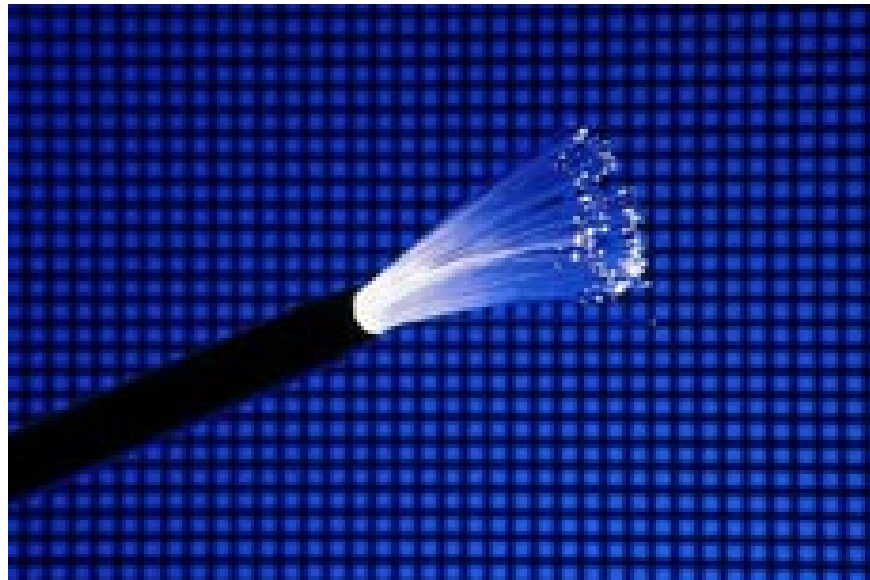
New technology speeds up data through optical fiber

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Recently, researchers at Massachusetts Institute of Technology (MIT) said they have overcome a major obstacle on the track to achieve the full power of data exchange with the speed of light wavelengths. , allowing signals to be no longer weakened by random or horizontal polarization while the data is encoded into light moving through long distances of the fiber network, data packets Huge data is transmitted immediately.

In the past, there were still tools to calibrate the signal that were received via fiber optic cable, but the price of that type of device was quite expensive to deploy on a large-scale network. MIT scientists' invention is a solution that makes use of the available capabilities of the standard for processor chips made of silicon materials that are very popular. That is a promise of a boom in broadband video networks with a tendency to increase consumer demand but the current setback is that transmission technology is still limited.

That polarization is like sunglasses that block the wavelengths of light making them redirected in different directions. To overcome this problem, researchers have created a smart device that can divide light beams while they move through a loop. The device then rotates the polarized beams before both the beam of light is polarized and the crystal is reconnected together on a circuit exit, to preserve the strength of the signal.



At the same time their invention is also a premise method that allows you to think of a way to integrate that type of circular circuit with the circuit circuit on the same silicon chip. Expressing the joy of this achievement, Erich Ippen, a professor of MIT research, said: " *It is a great step forward for the future that no scientist has ever done before. in a way that can make and improve the performance of silicon chip processing technology* ".

To date, many target hunters have figured out a way to isolate the potential power of light waves, as well as sketch out how to make that kind of circuit at a cost. low and racing to a wide range of applications to establish the manufacturing process of the semiconductor industry. However, they often suffer from incompatibility problems between silicones and light sources, but in recent years there have been advances in the discovery of techniques for these materials to work together. .

The MIT team showed a circuit that works on a chip that could be reproduced using silicon-building techniques that have been developed at a high level.

According to technology experts, the invention could later create a new generation of processing chips for many telecommunications devices, and devices to help determine that. Which to set up information transmission networks with optical signals. Overcoming the current barrier of computer networks that makes each strong operation center take hours to install the correct equipment. Instead, the technique is to print on a chip made of silicon material and no need for someone to align it. The efficiency is greatly increased and the demand for workers and precision tools will dramatically decrease.

This technological advancement appears to be timely with the trend of many companies seeking technical solutions to promote the performance of low-cost optical devices, while the technology is increasingly attractive. Communication service providers invest heavily in their network upgrade projects.

At present, video images are always consumed thousands of times more than the network capacity compared to e-mail services, which is a dominant factor for Internet service providers to quickly upgrade network infrastructure. , to meet the growing needs of users for digital content download services from websites such as YouTube, and TV service providers are gradually preparing to convert to good Internet TV formats. IPTV, allowing TV programs to be transferred over a broadband network.

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