



## On The Cover/Top Stories

Lighten Up  
04.11.05

Back to [Ride the Light](#)

Luxtera's chip speeds data out of another chip by printing electrical signals on light waves. Here's how it works: Laser light is fed through tiny waveguides and split into two silicon channels. Meanwhile, a stream of bits from a microprocessor is fed into an electronic driver, which applies voltages to the silicon corresponding to the bits, changing the phase of the light. The two waves recombine to form distinctive peaks and valleys. The light can travel any distance via fiber-optic cables and then be converted back into electronic signals.