

Telecommunications

# Possibilities Made Real



CORNING

With Corning ClearCurve® products, endless broadband possibilities are right around the corner.



## The Challenge

Verizon dreamed of taking fiber right to the home, not only in traditional neighborhoods, but to densely populated apartment buildings as well. The company saw great opportunity in the multiple-dwelling unit (MDU) market, which represents more than 25 million apartment homes in the United States.

The problem was costly and cumbersome installation in high-rise buildings. In many of the older apartment buildings in New York City, where Verizon initially hoped to deploy its MDU solution, existing infrastructure is highly congested where the shafts and conduits are full, and tight corners present formidable challenges to fiber-optic cable installation. Routing over and under these tight obstacles with conventional optical fiber would sacrifice critical signal strength with every twist and turn.

## The Breakthrough

Corning scientists set about re-creating the molecular structure of optical fiber to prevent signal loss. A nanoStructures™ ring around the fiber's core acts as a microscopic "guardrail" to keep light from escaping—even when the fiber is bent tightly, over and over again.

To help Verizon overcome the installation challenges in such tight quarters, Corning also created a new cable design that is flexible, rugged and compact—able to withstand stapling and other realities of network deployment. Compatible, smaller hardware provides simplicity and ease during installation.

The resulting innovative product suite—the ClearCurve® fiber-optic solution—was lauded by *Time* magazine as one of 2007's Inventions of the Year.

## The Impact

Near-infinite bandwidth will provide lightning-fast connections and high-definition content for movies, games and other data-rich files to Verizon customers wherever they live—even in urban apartments and high-rise condominiums. Given the average apartment installation involves twelve 90° bends, rugged ClearCurve optical cable can carry that data around every corner with an installation ease that equals copper—while able to transmit over 3 million times the capacity. And new residents subscribing to Verizon's high-bandwidth services can be added quickly with ClearCurve system hardware.

For Verizon, providing this service to customers is now faster and more economical because the old installation challenges have become a thing of the past.

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