



Fiber!

to the People

Verizon's ambitious fiber-to-the-premises initiative will transform customers' experiences with innovative voice, data, and video services.

On May 19, 2004, Verizon announced that it was embarking on the most significant transformation in over a century of the technology used to carry phone calls, data, and video to and from homes and businesses. This new technology – known as fiber to the premises (FTTP) – uses fiber-optic cable and optical electronics to directly link homes and businesses to Verizon's network.

Verizon is building this network of the future to provide customers with unmatched network reliability, incredible speed, and exciting new options for voice, data, and video connections. Fiber-optics will unleash a range of advanced communications services. This new suite of fiber-optic services is called Verizon FiOSSM.

While the use of fiber-optic technology is common throughout the telecom industry, Verizon is the first company to use fiber to directly connect homes and businesses on a widespread scale.

Since rolling out its FTTP network in 2004, Verizon has passed over one million homes and businesses with the new technology. Verizon plans to pass an additional two million homes and businesses by the end of 2005, with more to

come. Verizon is now building its FTTP network in parts of 14 states – California, Delaware, Florida, Indiana, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Oregon, Pennsylvania, Rhode Island, Texas, and Virginia.

To help build the network across the country, Verizon will hire 3,000 to 5,000 new employees by the end of this year. And, Verizon has opened new customer call centers in Providence, RI; Dallas, TX; Hampton, VA; Thousand Oaks, CA, and Dewitt, NY. Building the FTTP network also will spur new jobs and investment across the country for vendors that partner with Verizon.

FiOS delivers!

"Keller sits at the forefront of the fiber frontier, and our citizens and businesses stand to benefit from an entirely new era of technology that will positively impact their quality of life."

Julie Tandy, Mayor of Keller, TX

"Verizon's fiber-to-the-premises initiative expands the company's broadband capabilities and will create more union jobs. Verizon is giving the CWA access to jobs of the future and the opportunity to be a vital part of a promising growth area." *Andy Milburn, Vice President, District 6, Communications Workers of America*

▼ FiOS Internet Service

Verizon is offering groundbreaking high-speed Internet services over its fiber-to-the-premises network. FTTP will deliver data speeds of up to 30 megabits-per-second (Mbps), which is at least 10 times faster than consumer broadband speeds typically available today. FTTP has the capability of providing over 100 Mbps in both downstream and upstream transmissions.

Connection speeds (downstream / upstream) and pricing offered to FiOS Internet consumers are:

- 5 Mbps / 2 Mbps for \$34.95 a month as part of a package, or \$39.95 a month stand-alone.
- 15 Mbps / 2 Mbps for \$44.95 a month as part of a package, or \$49.95 a month stand-alone.
- 30 Mbps / 5 Mbps for \$179.95 a month as part of a package, or \$199.95 a month stand-alone.

Small businesses in parts of California, Florida, and Texas also can sign up for FiOS Internet:

- 15 Mbps / 2 Mbps for \$59.95 (dynamic IP address) and \$99.95 (static IP address).
- 5 Mbps / 5 Mbps for \$169.95 (dynamic IP address) and \$209.95 (static IP address).
- 30 Mbps / 5 Mbps for \$349.95 (dynamic IP address) and \$389.95 (static IP address).

All FiOS Internet service packages include:

- Ultra high-speed Internet access
- Free installation by Verizon technicians
- Free networking router
- MSN™ Premium Internet software
- 24/7 live technical support
- Up to nine verizon.net e-mail accounts
- Access to newsgroups
- Personal Web space of 10 MB

Digital subscriber line (DSL) service will remain Verizon's most widely available form of high-speed Internet access for the foreseeable future, as the company ramps up FTTP deployment.

▼ FiOS TV Service

Verizon FiOS TV will offer customers a competitive alternative to cable TV or satellite. Customers will be able to buy FiOS TV as a stand-alone service or packaged with voice and FiOS Internet service.

This next-generation technology will have customers watching television in a whole new light. It will be all digital. And with a robust lineup of high-definition programming (HDTV) – FiOS TV customers will get an amazingly clear entertainment experience.

And customers can control it all with Verizon's powerful interactive programming guide. Even more, a digital video recorder (DVR) will give customers more control over their viewing experience, allowing them to record, pause, and rewind any program – even live TV. With an abundant library of video on demand (VOD) titles, customers will be able to watch what they want, whenever they want. And they will have other features like pay-per-view and parental controls.

Verizon is negotiating with a variety of networks to acquire programming for FiOS TV. Programming agreements already signed include:

- **NBC Universal Cable** – 10 networks, including Bravo, CNBC, CNBC World, MSNBC, SCI FI Channel, Trio, USA, ShopNBC, Telemundo, and mun2. Also included are NBC and Universal HD, a service that features high-definition films, TV shows, performing arts, sports, and special events.
- **Showtime Networks** – 11 networks, including Showtime, Showtime Too, Showtime Showcase, Showtime Beyond, Showtime Extreme, Showtime Women, Showtime Next, Showtime Family Zone, The Movie Channel, TMC xtra, and Flix. Also included are Showtime HD and The Movie Channel HD,

Showtime On Demand, and The Movie Channel on Demand.

- **Starz Entertainment Group** – 13 movie channels, including Starz and Encore brands, Starz On Demand, and Starz HDTV.
- **NFL Network** – The first 24-hour network dedicated to the National Football League and the sport of football. Also included are NFL Network in HD and NFL on Demand.
- **Discovery Communications** – 14 networks, including Discovery Channel, TLC, Animal Planet, Travel Channel, Discovery Health Channel, Discovery Kids Channel, Discovery Times Channel, The Science Channel, Discovery Home Channel, Military Channel, Discovery en Español, FitTV, BBC America, and Discovery HD Theater. Also included is Discovery On Demand.
- **A&E Television Networks** – 7 networks, including A&E, The History Channel, The Biography Channel, History International, Military History Channel, The History Channel en español, and Crime & Investigation Network. Also included is video-on-demand content from all of A&E's services.
- **TVN Entertainment** – Video-on-demand programming, including new studio releases, a library of previous releases, independent movies, family and kids programming, and specialty VOD networks.
- **Varsity TV** – The only 24-hour network dedicated exclusively to teenagers, featuring teen-created and professionally produced programming.
- **Gospel Music Channel** – The first 24-hour network devoted to all styles of gospel music.
- **Soundtrack Channel** – Channel featuring music videos from movie and television soundtracks.
- **MavTV** – A new network targeting men aged 15-24, with an emphasis on sports and gaming.
- **Go!TV** – The only bilingual (English/Spanish) channel in the U.S. dedicated to soccer.
- **Si TV** – The only English-language Latino network in the nation featuring hip and irreverent culturally relevant programming.

▼ **Hardware / Software partners**

Westell Technologies has a multi-year contract to manufacture the Verizon One™ communications command center, which fully integrates voice and data services into a single device. The Verizon One device will include several technologies – a broadband modem, 802.11g wireless router, 5.8 Ghz cordless telephone, and a color touch screen. Using the touch screen, customers will be able to:

- Call with one touch from their online address book or SuperPages directory listings.
- Check the weather, news headlines, movie listings, sports scores, stocks, and more.
- Leave notes for other household members with the free-style memo pad.
- Access and manage an online calendar.

Verizon One also will be configured to support additional features for customers subscribing to Verizon's iobiSM Home service, which lets customers manage all of their communications via a single user interface. Verizon will begin offering the Verizon One device to its broadband customers in June 2005.



Tellabs and **Motorola** will provide the central office and customer premises optical electronics for the project – such as Optical Line Terminals, Optical Network Terminals, and video-optimized Optical Amplifiers – also known as the “active” elements of FTTP technology. Motorola also will help build the video capability of the FTTP network, providing head-end technology and digital set-tops.

ADC, Corning Cable Systems, Fiber Optic Network Solutions, Pirelli Communications Cables and Systems North America, Preformed Line Products, Sumitomo Electric Lightwave, and Tyco Electronics will provide the fiber-optic cabling and other outside plant equipment for the project, also known as the “passive” elements of FTTP technology.

Verizon will use the **Microsoft TV** platform with FiOS TV service, which will support high-definition television, digital video recording, on-demand programming, and an interactive program guide.

Yahoo! will provide a fully integrated web portal to Verizon Online’s FiOS and DSL subscribers.

▼ The Basics of Fiber Optics

How does FTTP work? Fiber-optics cables consist of bundles of hair-thin glass strands. Laser-generated pulses of light transmit voice, data, and video signals via the fiber at speeds far exceeding today’s copper-wire systems.

What equipment is needed for FTTP? Several key components are needed for a FTTP network:

- **Optical Line Terminals (OLT)** – Located in Verizon’s central switching office, this equipment serves as the point of origination

for FTTP transmissions coming into and out of the national Verizon network.

- **Optical splitters / splitter hubs** – A focal point for the main fiber feed in a neighborhood or development, where the optical signals from a fiber link are split off to serve multiple customers over individual strands of fiber.
- **Optical Network Terminals (ONT)** – The termination point for fiber at the home or business, where the optical signal is converted into voice, data, or video feeds to equipment in the customer’s premises. A battery backup will provide power for voice service during any loss of commercial power.

What will FTTP do? Serving primarily residential and small-to-medium-sized business customers, FTTP will provide voice service and associated features, while offering nearly unlimited bandwidth for an array of data and video applications. It also will accommodate new broadband products and services not possible with today’s network.

What are the advantages of FTTP? Fiber has a number of advantages over copper-wire:

- FTTP provides nearly unlimited bandwidth.
- FTTP provides more reliable service that is less susceptible to inclement weather and is easier to maintain.
- FTTP enables a wide variety of uses, from interactive content and home shopping to telecommuting to telemedicine and audio / video on demand.
- FTTP is extremely flexible to meet customer preferences – new products and services can be activated remotely, either permanently or on demand.



June 10, 2005



Fiber!

to the People

Verizon is deploying its FTTP network in these communities¹: (*indicates where FiOSSM Internet service may be available)

California

Adelanto
Apple Valley
Beaumont*
Bermuda Dunes
Camarillo
Chino
Chino Hills
Desert Hot Springs
Hermosa Beach
Huntington Beach*
Indio
La Quinta
Lake Elsinore
Malibu*
Murrieta*
Ontario
Palm Springs
Perris
Redondo Beach
Sun City*
Temecula
Victorville

Delaware

Angola
Delaware City
Glasgow
Hockessin
Kirkwood
Middletown
Newark
Red Lion
St. Georges
Talleyville

Florida

Alafia*
Beach Park*
Brandon*
Carrollwood*
Hillsborough Co.
Keystone*
Land O Lakes*
New Tampa*
Pasco Co.

Tampa*
Wesley Chapel*

Indiana

Fort Wayne
New Haven

Maryland

Annapolis
Arden on the Severn
Arnold
Bethesda
Bowie
Boys
Brink
Brookeville
Burtonsville
Cabin John
Chevy Chase View*
Claggettville
Clarksburg
Cloverly
Colesville
Columbia
Crofton
Crownsville
Damascus
Dorrs Corner
Fairland
Forest Glen
Four Corners
Gambrills
Garrett Park*
Germantown
Glen Echo
Glenmont*
Glenn Dale
Guilford
Herald Harbor
Kensington*
Kettering
Laurel
Millersville
Mitchellville
North Bethesda
North Silver Spring

Oakmont
Old Mill
Olney
Parole
Pointer Ridge
Pooks Hill
Potomac
Severna Park
Shipley's Choice
Silver Spring
Spencerville
Wheaton
White Oak
Woodmore

Massachusetts

Andover*
Bedford*
Belmont*
Boxford
Burlington*
Canton
Dedham
Georgetown
Hamilton
Holliston*
Hopkinton*
Lexington*
Lincoln
Littleton
Lynn
Lynnfield*
Marlborough
Middleboro
Nahant
Natick*
Needham
Newton
North Reading*
Reading*
Sherborn
Stoneham
Swampscott
Tewksbury
Topsfield*
Tyngsborough

Wakefield
Wellesley
Wenham
West Newbury*
Westborough
Westwood
Winchester*
Woburn

New Hampshire

Bedford
Derry
Epping
Londonderry
Portsmouth
Salem

New Jersey

Allendale
Alpine
Bernards
Cherry Hill
Closter*
Colts Neck
Demarest
Denville
Emerson
Evesham
Ewing
Fair Haven
Franklin Lakes
Hanover
Harding
Harrington Park
Haworth
Hopewell Township
Lawrence
Little Silver
Long Hill
Mahwah
Medford
Mendham Borough
Mendham Town
Middletown
Midland Park
Montvale

Northvale
Norwood
Oakland
Oakland
Old Tappan
Paramus
Park Ridge
Parsippany-Troy Hills
Passaic
Pennington
Ramsey
Red Bank
River Vale
Rockaway
Rockaway Boro
Rockleigh
Rumson
Saddle River
Sea Bright
Shrewsbury Borough
South Hackensack
Tinton Falls
Upper Saddle River
Voorhees
Waldwick
Westwood
Wyckoff*

New York

Ardley
Armonk*
Baxter Estates
Bayville
Bedford Village*
Bethlehem
Bronxville
Cedarhurst
Centre Island
Chappaqua*
Cicero
Clarkstown
Colonie
Cove Neck
DeWitt
Dobbs Ferry*
East Williston
Eastchester
Elmsford
Fairview*
Fayetteville
Flower Hill
Franklin Square*
Garden City
Grand View
Great Neck Estates
Great Neck Plaza
Great Neck*
Greenburgh
Harrison*
Hastings
Haverstraw
Hempstead
Hewlett Bay Park
Hewlett Harbor
Hewlett Neck
Huntington
Huntington Bay

Irvington
Katonah*
Kensington
Kings Point
Lake Grove
Lake Success
Larchmont
Lynbrook
Mamaroneck*
Manlius
Massapequa*
Mineola
Munsey Park
New City*
North Hempstead
North Hills
Nyack*
Orangeburg*
Orangetown
Oyster Bay*
Pearl River*
Piermont
Plandome
Plandome Heights
Plandome Manor
Pleasantville*
Pomona
Poquott
Port Chester
Port Washington*
Ramapo
Russell Gardens
Rye Brook
Rye*
Saddle Rock
Sands Point
Scarsdale*
Smithtown
South Nyack
Syosset*
Syracuse
Tarrytown*
Thomaston
Tuckahoe*
Upper Nyack
Wantagh*
White Plains
Williston Park
Woodsburgh

Oregon

Beaverton
Hillsboro
Tigard

Pennsylvania

Aleppo
Baldwin
Beechview
Bell Acres
Birmingham*
Bridgeville
Brookline
Buckingham*
Caln*
Castle Shannon
Cecil

Charlestown*
Collier
Dormont
Downingtown*
Doylestown*
East Bradford*
East Brandywine*
East Caln*
East Goshen*
East Pikeland
East Vincent
Exton*
Franklin Park
Glenfield
Green Tree
Hampton
Haysville
Indiana Township
Kilbuck
Leet
Lower Makefield*
McCandless
Middletown*
Mt. Lebanon
New Britain*
Newtown*
Northampton*
O'Hara
Ohio Township
Osbourne
Phoenixville
Plumstead*
Pocopson
Ross
Schuylkill
Scott
Sewickley
Sewickley Heights
Sewickley Hills
Shaler
South Fayette
Upper Makefield*
Upper Providence
Upper St. Clair
Uwchlan*
Warwick
West Bradford*
West Chester*
West Goshen*
West Pikeland*
West View
West Vincent
West Whiteland*
Westtown*
Wrightstown*
Yardley*

Rhode Island

North Kingston
Warwick

Texas

Allen
Carrollton
Colleyville*
Coppell
Flower Mound

Fort Worth*
Garland
Grapevine*
Highland Village
Irving
Keller*
Lewisville
Lucas
Murphy
Parker
Plano
Rowlett*
Sachse*
Southlake*
Westlake*
Wylie*

Virginia

Annandale*
Arcola
Ashburn
Chesterfield County
Falls Church*
Franconia*
Henrico County
Herndon
Leesburg*
McLean*
Oakton
Reston
Richmond
Springfield*
Tyson's Corner*
Virginia Beach

¹Initial FTTP availability may be limited in these communities.



June 10, 2005