

Top 100 in the Broadband Properties Market

Sources: Company web sites, public and government databases, and staff reporting.

1. 3M Company

www.3MTelecommunications.com
512-984 4533; 888-3M-HELPS

Key Products: Connection, protection, termination, insulation, and testing products for broadband networks

Summary: It's not just Post-It notes and Scotch tape. The company started working in this sector more than 30 years ago. Some examples: Discrete and multi-fiber splices and tools; epoxy, epoxyless and hot melt connectors in FC, SC and ST configurations; glass/glass/polymer fiber designed to be more flexible than standard fibers; cross-connect and interconnect fiber cable management systems (ODF, FDU's) and fiber organization trays for central office/headend, outside plant, customer premises or OEM applications; sealed and free-breathing aerial, buried and underground splice closures and terminals; indoor and outdoor cabinets. 3M Co. comprises more than 40 business units operating worldwide in seven markets: Health Care; Industrial; Display and Graphics; Consumer and Office; Safety, Security and Protection Services; Transportation; Electro and Communications. Worldwide in 2004, 3M had 67,071 employees and sales of \$20.011 billion. The company earned 585 U.S. patents last year. The Electro and Communications business generated sales worth \$1.873 billion, a 3.2 percent increase over 2003 sales. There was strong growth in the Latin America, Africa and Canada markets, and an increased focus on the Asia Pacific area.

2. Acome

http://www.acome.fr/index_en.html

Paris, France: +33 (0)1 42 79 14 00; Mortain, France:
+33 (0)2 33 89 31 00

Key Products: Wiring, cable, ducts

Summary: Acome, based in Paris, develops and markets innovative wiring, cable, and ductwork for the telecommunications, electrical equipment and building industries. The company operates internationally in Europe, Asia and South America, through plants and headquarters in Mortain, Normandy (France); Xintai and Wuhan, China; and Irati, Brazil. Acome's products include optical fiber, finished optical fiber cable, LF (low frequency) and HF (high frequency) copper twisted-pair

cables, HF coaxial cables, connectors and accessories, multi-conductor cables, hydraulic and electrical heating/cooling systems and equipment, and ducts. In the telecommunications industry, the company focuses on fixed and mobile telecommunications networks, residential networks, video communications and LANs. Customers include Deutsche Telekom, France Telecom, Orange, Sprint and T-Mobile. Overall, the company employs about 1,000 in Europe (it is France's largest worker-owned company) and has annual revenues of well over \$200 million.

3. Activision, Inc.

www.activision.com
310-255-2000

Key Products: Videogames

Summary: Activision is a global developer, publisher and distributor of interactive entertainment software products. The company maintains a diverse portfolio that spans a wide range of categories and target markets and can be used on a variety of game hardware platforms and operating systems, including the Sony PlayStation 2 and PlayStation, Microsoft Xbox, Nintendo GameCube and Game Boy Advance, and personal computers. The company has created, licensed and acquired a group of highly recognizable brands that it markets to a growing variety of consumer demographics. Activision's products cover the action, adventure, action sports, racing, role-playing, simulation and strategy game categories. Founded in 1979, the company has 1,728 employees and posted net revenues of \$1.4 billion for the fiscal year ended March 31, 2005. Activision maintains operations in the U.S., Canada, the United Kingdom, France, Germany, Italy, Japan, Australia, Scandinavia, Spain and the Netherlands.

4. ADC Telecommunications Inc.

www.adc.com
952-938-8080; 800-366-3889

Key Products: Central office service platforms, broadband switches and routers, and wireless gear, systems engineering

Summary: ADC Telecommunications is a worldwide supplier of infrastructure products and services for delivery of data, video, and voice services to consumers and businesses over wireline, wireless, cable, broadcast, and enterprise networks. The company's products include frames, digital cross connects,

fiber termination and outside plant equipment, small-form-factor connectors, fiber and copper management systems, remote test and monitoring products, and structured cabling solutions. ADC has approximately 7,500 employees worldwide, holds hundreds of patents, and had sales of \$784 million in its fiscal year 2004. With sales, manufacturing and development offices in more than 35 countries, the company sells into more than 150 countries. ADC is headquartered in Eden Prairie, MN, and has regional sales offices in Berlin, Shanghai, and Berkeley Vale, Australia. ADC's customers include Bank of England, Bell South, Bloomberg, Chase Manhattan, Cingular, Deutsche Telekom, Ford, Hong Kong Telecom, Morgan Stanley, Nextel, SBC, T-Mobile, Qwest and Verizon. As we went to press, ADC announced purchase of FONS, number 43 on our list.

5. Adtran

www.adtran.com

256-963-8000

Key Products: Local loop access and deployment products for fiber, DS3, T1/E1, wireless T1/E1, Digital Subscriber Line (HDSL, HDSL2, HDSL4, SDSL, SHDSL), Frame Relay, Asynchronous Transfer Mode (ATM), Integrated Services Digital Network (ISDN), and Digital Data Service (DDS) digital services – including multi-service access platforms and Integrated Access Devices (IADs) for converged voice and data networks

Summary: Adtran supplies network access products for digital telecommunications applications, including Internet access, telecommuting, corporate connectivity, distance learning, video-conferencing, and teleradiology. The company's customers include RBOCs, ILECs, independent carriers, competitive service providers, interexchange carriers, ISPs, and private and public enterprises worldwide. Headquartered in Huntsville, Alabama, Adtran is a NASDAQ 100 Index stock. It operates sales offices throughout the United States and around the world – in Australia, Canada, China, Germany, Ireland and Mexico. In 2004, Adtran had revenue of \$454.52 million, and 1,593 employees.

6. AFL Telecommunications LLC

http://www.alcoa.com/afl_tele/en/home.asp

864-433-0333; 800-235-3423

Key Products: Splicers, test equipment, fiber and copper interconnect products, systems engineering

Summary: AFL Telecommunications provides fiber optic products, engineering expertise and integrated services to the telecommunications industry for the transmission of video, voice and data. AFL, which has more than 2,000 employees worldwide, is a division of Alcoa Fujikura Ltd., an Alcoa company. Sales, manufacturing and administrative offices are located in the U.S., United Kingdom, Mexico and China. The company serves the electric utility/carrier, broadband, telco, OEM, wire-

less and private network markets. Its customers include regional and long distance telephone carriers, electric utilities, cable television operators, wireless service providers, data communication providers, private network operators and equipment manufacturers. AFL Telecommunications is headquartered in Nashville, Tenn. Its brands include Fujikura splicers, Noyes test and inspection equipment and Keptel fiber and copper interconnect products.

7. Alcatel

www.alcatel.com

972-519-3000

Key Products: Network management tools, optical fiber, fiber cable, connecting hardware and accessories, right of way solutions, and optical transmission equipment.

Summary: Alcatel is a worldwide supplier of video, voice and data communications solutions to telecommunications carriers, Internet service providers and enterprises, over fixed and mobile broadband networks. The Paris-based company has three business groups: Fixed Communications; Mobile Communications; Private Communications. Alcatel sells its products and services in more than 130 countries worldwide, and sales in 2004 totaled \$15.8 billion. It frequently partners with other firms in specific markets such as greenfield developments. The company has 55,718 employees, and customers include British Telecom, China Unicom, Swisscom, and T-Mobile. In March, Alcatel acquired Native Networks, Inc., a provider of carrier-class optical Ethernet transport solutions, for \$55 million in cash. Native Networks is headquartered in Maidenhead, UK.

8. Allied Telesyn, Inc.

www.alliedtelesyn.com

800-424-6596

Key Products: Layer3 switches, fiber/copper multi-service access platforms, CPE, NICs, media converters, unmanaged switches

Summary: Allied Telesyn is a worldwide supplier of end-to-end Ethernet/IP solutions – including access, aggregation and core transport systems – for businesses of all sizes. The company was the first to design and manufacture a full range of 10/100/1000 Gigabit switches for networks of all sizes. It deployed the world's first end-to-end IP/Ethernet triple play network in 2003. The company is based in Bothell, Wash. Recent customers include Agilent, Honeywell, Lockheed Martin Aeronautics, LodgeNet, Mercedes, Micron PC, Motorola, NCR, Olivetti, Philips Medical Systems, Siemens AG, Stanford University, Sun Microsystems, Time Warner, the U.S. Army and the U.S. Postal Service, Vodafone and Xerox. Its 520 employees rack up annual sales of over \$200 million.

9. Alloptic

www.alloptic.com

925-245-7600; 866-255-6784

Key Products: Symmetrical Gigabit Ethernet Passive Optical Network (GEPON) solutions

Summary: Alloptic is a privately held company based in Livermore, Calif. It provides open standards-based passive optical equipment to simplify FTTP deployment to homes, multi-dwelling units and businesses. In addition to service providers, Alloptic's customers include developers, municipalities, public utility districts and multiple system operators. The company sells a complete suite of central office and customer premise equipment to service providers who deliver video, voice and data services to homes and businesses. This GEPON pioneer was founded in 1999, holds two patents and has 16 patents pending. Alloptic counts C-Cor, Extreme Networks, Minerva Networks, OFS and Pace among its technology partners, and maintains ongoing multi-vendor interoperability and compatibility certification of its solutions. The company, which has 52 employees, would not divulge annual sales. Its last round of financing, in 2003, raised \$35 million.

10. Alvarion, Inc.

www.alvarion-usa.com

650-314-2500

Key Products: Network management solutions, antennas and accessories

Summary: Alvarion provides wireless broadband infrastructure to telecom carriers, ISPs and private network operators. Its products enable delivery of business and residential broadband access, corporate VPNs, wireless hotspots, mobile base station feeding, community interconnection and public safety communications. The company also extends coverage of GSM and CDMA mobile networks in developing countries. Based in Mountain View, Calif., Alvarion is active in the WiMAX Forum, as well as in the IEEE and HiperMAN standards. It is a unit of Alvarion, Ltd. of Tel Aviv, Israel, which in 2004 had revenue of \$201.51 million and 743 employees. Alvarion, Ltd. also has operating units in Japan, Brazil, Mexico, U.K., and Uruguay. Alvarion has deployed more than 2 million units in 130 countries.

11. Amedia Networks, Inc.

www.amedia.com

732-440-1992

Key Products: FTTP and FTTP Ethernet switched optical network systems

Summary: Amedia, based in Eatontown, NJ, supplies FTTP-oriented electrical/optical systems to network operators for use in service centers, in the field and at the subscriber's premises,

for the delivery of video, voice and data services. Its technology is licensed from Lucent. The company's customers include municipalities, ILECs, cable MSOs, utilities, IXCs, CLECs, major/full service LECs, and government. The company, a promising startup, was started in 2004. It had no revenue last year, with 20 employees. Its net loss was \$5.682 million.

12. American Power Conversion Corp. (APC)

www.apc.com

800-788-2208

Key Products: Data center and server rooms, rack systems, cooling solutions, UPS, management tools, surge protection and power conditioning, audio-video solutions, power distribution, power generation, DC, broadband power systems, notebook and mobility solutions, networking and cable solutions

Summary: American Power Conversion is a global leader in AC and DC power availability solutions for both home and corporate environments. Its products improve the manageability, availability and performance of sensitive electronic, network, communications and industrial equipment. These products include uninterruptible power supply (UPS) devices, electrical surge suppressors, power conditioners, direct current (DC) power systems, racks and enclosures, cooling solutions, and desktop and notebook PC and mobile accessories. APC focuses its business on four primary application areas: Home/Small Office; Business Networks; Data Centers and Facilities; and Access Provider Networks. The company is based in West Kingston, RI, and operates sales offices worldwide and manufacturing facilities on three continents. APC has 6,455 employees and in 2004 had sales revenue of \$1.7 billion. The company is listed on the NASDAQ 100 and the S&P 500 index, as well as on the Fortune 1000 list of the largest U.S. corporations, the Forbes 500 list, and the Forbes 400 list of the best big companies in America.

13. AML Wireless Networks, Inc.

www.amlwireless.com

204-949-2400; 800-663-7902

Key Products: RF voice, video or data signal transmission systems

Summary: AML Wireless Networks designs, manufactures, markets, installs and services broadband RF signal transmission systems that are used to distribute video, voice or data, for applications in CATV, SMATV, MMDS, security, traffic control, education and other wireless applications. The product line includes a complete line of analog and digital indoor and outdoor equipment with two-way capabilities. Multiple frequency plans are available for both point to point and point to multi-point applications. The company's products have served more than 60 million subscribers worldwide since the company was formed in 1969. In addition, AML offers services to its clients including applications system design, field engineer as-

sistance, and training. Based in Winnipeg, Manitoba (Canada), the company also operates a field office in Peabody, Mass.

14. APA Cables & Networks, Inc.

www.apacn.com

763-476-6866; 800-422-2537

Key Products: Passive fiber optic connectivity solutions

Summary: APA Cables & Networks designs and manufactures passive fiber optic connectivity solutions centered upon its Fiber Distribution System (FDS), which supports a wide range of panel configurations and offers panel density from 12 to 288 ports, as well as a suite of complementary products including dense wavelength division multiplexing (DWDM), WDM and passive optical components, connectors and adapter options. In addition, APA Cables & Networks provides fiber and copper assemblies for controlled and outside plant environments. The APACN Fiber Distribution System is utilized by multiple service operators (MSOs) such as Wide Open West (WOW), Adelphia, Comcast and Mediacom, competitive local exchange carriers including AT&T Local Services, and independent telephone companies such as Surewest Communications, CenturyTel, and Paul Bunyan Telephone. APACN is a wholly owned subsidiary of APA Enterprises, Inc., a publicly traded company that designs, develops, manufactures and markets advanced

products for fiber optic communications, including DWDM components and Gallium Nitride compound semiconductor-based ultraviolet detectors, instruments and consumer products. APA Enterprises, based in Blaine, Minn., has 147 employees and in 2004 had revenues of \$11.91 million.

15. Atlantic Engineering Group

www.atlantic-engineering.com

706-654-2298

Key Products: Design, construction, construction management, installation, contract operations services

Summary: Atlantic Engineering, based in Braselton, Ga., provides design (outside plant, head end and central office), construction, construction management, installation and contract operation services to telecommunications infrastructures. The company serves municipalities and utilities, with most projects in the southeast although it has worked in the west and as far north as Massachusetts. Clients have included the city of Clarksville, Tenn., and Provo City Power in Provo, Utah.

BP Top 100

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LABORATORIES INC.

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16. Bechtel Telecommunications

www.bechteltelecoms.com

301-228-7500; 800-946-3632

Key Products: Engineering, construction and project management

Summary: Bechtel Telecommunications, a unit of Bechtel Corporation, is a global engineering, construction and project management company based in Frederick, MD, specializing in telecommunications projects. In 2004, Bechtel had revenue of \$17.4 billion, sales in nearly 60 countries, and 40,000 employees. Bechtel Telecommunications serves Europe and Asia through offices in London and Shanghai. It has deployed more than 60,000 wireless sites and 21,500 kilometers of fiber, as well as POPs, NOCs and data centers. Bechtel Telecommunications' customers include Cingular – to help the wireless company expand its 3G network – and Viatel, for which Bechtel Telecommunications built 5,143 kilometers of a broadband fiber optic network to serve Europe, including two crossings under the English Channel.

17. Belkin Corp.

www.belkin.com

310-898-1100

Key Products: Cabling, networking devices, accessories for PCs, cell phones, PDAs and digital audio players

Summary: Belkin is a global supplier of connectivity solutions for the computer, electronics, and mobile consumer. With a diverse and far-reaching product mix consisting of home and enterprise networking, audio video solutions, KVM (keyboard/video/mouse) and peripheral sharing, power protection and cabling, as well as USB and FireWire devices, Belkin extends its reach to Bluetooth, cellular, and other solutions for mobile computing. Belkin's end-to-end VoIP solution allows wholesale VoIP customers to rapidly deploy a customized branded VoIP service with minimal up-front cost. Belkin products are available through the company's Web site as well as through a network of major distributors, resellers, and superstores. The privately held Compton, CA-based company has 1,000 employees, annual sales of \$460 million, and is one of the fastest growing companies in the United States.

18. Black & Veatch Corp.

www.bv.com

913-458-2000

Key Products: Engineering, consulting and construction services

Summary: Black and Veatch is a global engineering, consulting and construction company specializing in infrastructure development in energy, water, information and government markets. Its solutions include conceptual and preliminary en-

gineering services, engineering design, procurement, construction, financial management, asset management, information technology, environmental, security design and consulting, and management consulting services. Headquartered in Overland Park, Kansas, the employee-owned company has more than 90 offices worldwide and was included in the Forbes 500 Largest Private Companies in the U.S. list in 2004. E.B. Black and N.T. Veatch founded the company in 1915. It currently has more than 6,800 employees worldwide. Revenue in 2004 was \$1.4 billion.

19. Blonder Tongue Laboratories, Inc.

www.blondertongue.com

732-679-4000; 800-523-6049

Key Products: Video headends, high speed data, telephony, microwave, fiber optics, distribution, addressable subscriber provisioning, and test equipment

Summary: Blonder Tongue Laboratories designs, manufactures and sells products for the acquisition, distribution and protection of video, voice and data transmitted via fiber optic, twisted pair, coaxial cable and wireless to homes, multi-dwelling units and businesses. Blonder Tongue's customers include franchised and private cable operators, hospitality, contractors and installers, municipalities, utilities, telephone companies, and housing developers. The company, headquartered in Old Bridge, NJ, has 269 employees and in 2004 had sales of \$35.44 million. Its "triple play offering" comprises video headend and distribution products, as well as fiber transmission, interdigitation, high-speed data and telephony products. Blonder Tongue's Technical Services Group provides training, system design, installation, on-site system engineering and turnkey services.

20. Broadstream Communications, Inc.

www.broadstream.com

425-709-3800

Key Products: All-digital virtual headend network

Summary: The company produces the industry's first all digital headend and IP transport platform that integrates high-quality, low-bit-rate encoding, standard IP protocols for transport and control, and secure satellite based delivery. Broadstream's IP TV is a true finished, outsourced video service platform that enables telecommunications service providers to profitably deliver Internet Protocol video services over traditional copper, fiber and wireless networks easily and cost effectively. Broadstream is headquartered in Bellevue, WA.

21. C-Cor Inc.www.c-cor.com

814-238-2461; 800-233-2267

Key Products: Optical access and transport systems

Summary: C-Cor is a global provider of products and services needed to successfully build and maintain multi-service, two-way broadband communications networks. C-Cor is organized into three divisions: Access and Transport, Network Services and Solutions. The company, based in State College, Pa., has 1,440 employees, and in 2004 had revenue of \$240.92 million. The company maintains regional offices for Europe in Germany and Spain, and for the Asia Pacific region in Australia and China. The company also does business in Africa, the Middle East and South America. Among C-Cor's milestones are, in the 1960s, being the first to introduce integrated circuits on telephone poles and, in the 1990s, pioneering the first optical, 1 Gbps amplifier. C-Cor's customers include Cablevision, Charter, Comcast, Cox, Ericsson, Kabel, Rogers, Telenor, Telestra, and Time Warner Cable.

22. C9 Networkswww.c9networks.com

408-746-0400

Key Products: DOCSIS CMTS-capable wired and wireless systems

Summary: The emphasis is on the needs of small and mid-sized MSOs and MTUs, which need cost-effective DOCSIS solutions to roll out data services. C9 Networks currently offers what is probably the world's lowest cost and most highly integrated cable modem termination system (CMTS) – it is PC-based. The company is also the first to integrate the CMTS, CMTS Servers, upconverters, and Subscriber Management System (SMS) into a single, easy to use platform. C9 is a Silicon Valley startup based in Sunnyvale. The firm's latest technology enables any operator to immediately deploy both fixed wireless (DOCSIS on Air and unlicensed spectrum) as well as WiFi services; upgrades to WiMAX are promised as soon as the WiMAX standard for 2-11 GHz is issued. It has installed its CMTS solutions in Europe, Africa, Latin America, and Canada, as well as in the United States.

23. Capitol Broadbandwww.capband.net

919-674-0036

Key Products: FTTH installation and broadband voice, video, data and security services

Summary: Capitol Broadband, which is based in Cary, NC, partners with leading developers to deliver fiber optics to new communities, including investing its capital to install a fiber infrastructure throughout those communities. This quiet compa-

ny may be second only to Verizon in FTTH deployments in the United States. The company currently is actively implementing FTTH in more than 20 such communities that are home to more than 30,000 residents. Rather than providing services directly, Capitol contracts with leading service providers to deliver voice, video, data, and security to these communities.

24. Canobeam (Free Space Optics division of Canon)www.usa.canon.com/html/industrial_canobeam/canobeam/index.html

201-816-2900; 800-321-4388

Key Products: Optical transceivers

Summary: Canon USA, Inc., markets the Canobeam Free Space Optics line of optical transceivers to businesses and other users that want to transmit data on beams of light over the air. The models in the Canobeam series deliver a wide range of data speeds and cover a wide range of distances – from 25Mbps to 1.25Gbps, and from 20 meters to 1,000 meters respectively. Canobeam's Auto Tracking Function constantly maintains beam alignment and compensates for vibrations in the installation base caused by weather and any other factors. Canobeam systems are protocol-independent (like fiber), and require no radio-frequency permits or licenses. Canobeam users include a wide range of business, government, and educational institutions. Canobeam is marketed by Canon USA's Broadcast and Communications Division, headquartered in Englewood Cliffs, NJ. Canon USA is based in Lake Success, NY and is a unit of Canon, Inc., which was the third-largest patent awardee in the U.S. last year, when it had worldwide revenue of \$33.3 billion.

25. Caspian Networks, Inc.www.caspiannetworks.com

408-382-5200

Key Products: High-performance flow-state QoS systems

Summary: Caspian Networks is a manufacturer of high-performance flow-state IP QoS systems for service provider networks. Caspian's flow-state routers are based on a new intelligent flow-state architecture and allow service providers to control and manipulate IP traffic while reducing the cost of running an IP network and providing the same hard service guarantees as ATM and Frame Relay. Basically, its routers look at a flow of packets at once, rather than at one packet at a time. Network service providers can use Caspian's flow-state routers in conjunction with existing equipment to offer P2P traffic control; IP videoconferencing; and premium real-time IP services including voice, video, and gaming. Headquartered in San Jose, Calif., the company has offices in Research Triangle Park, NC, as well as in Tokyo, Japan; Hong Kong, China; Seoul, Korea; and London, U.K. The company is privately held and has raised four rounds of funding from investors including U.S. Venture Partners, Morgenthaler, Oak Investment Partners, New Enter-

prise Associates, Merrill Lynch, Vulcan Ventures, Lucent Venture Partners, Alloy Ventures, WorldCom Ventures, Salomon Smith Barney and Caspian employees. The company says it has more than 110 employees, and is hiring.

26. Charles Industries, Ltd.

www.charlesindustries.com

847-806-6300

Key Products: Outside plant environmental protection solutions for copper, fiber, coax and wireless applications; voice and data transmission products

Summary: Charles Industries is a privately held company with headquarters in Rolling Meadows, Ill., and five U.S. manufacturing centers with more than 650 employees. The Charles Telecommunications Group has been in business for more than 30 years and counts every major (North American) RBOC among its customers, in addition to the major ILECs, CLECs and IOCs. Charles employs more than 100 engineers in “in-house” engineering research and development. They work on all aspects of design including mechanical and electrical, printed-circuit board layout and software applications.

27. Cisco Systems and Cisco Linksys

www.cisco.com and www.linksys.com

408-526-4000 or 800-553-6387 (Cisco), 949-261-1288; 800-326-7114 (Linksys)

Key Products: Routers, switches, gateways, firewalls, telephony, home and enterprise wireless, network cards

Summary: It is hard to imagine the Internet without Cisco. In 1984 Cisco connected two networks with a router, and started a revolution – an easily assembled network of networks. The public sees the company as fiber-oriented and Internet-only, but it is also a technology leader in cable systems and wireless. The company’s connectivity solutions are designed to enable the sharing of broadband access, voice, video, and data. Last year, the company had revenues of \$22 billion and employed 34,000. The consuming public sees Cisco as mainly Linksys, a supplier of wireless routers, network cards and USB adapters for home and small business users, corporate workgroups and enterprise environments. Linksys products for consumers and small businesses are sold through retail and e-commerce channels, and for corporate workgroups and enterprise environments through VARs and catalogs. Linksys was acquired from its founders by Cisco in 2003 for \$500 million in stock. Now named Cisco-Linksys LLC, it is based in Irvine, Calif. Cisco Systems itself is headquartered in San Jose.

28. City Telecom (HK) Ltd.

www.ctihk.com

212-815-2354

Key Products: Broadband Internet access, VoIP, IPTV, corporate data services

Summary: City Telecom provides integrated telecommunications services in Hong Kong, and a wholly-owned subsidiary, Hong Kong Broadband Network Ltd. (HKBN), now is the largest alternative residential voice and broadband carrier in Hong Kong. HKBN has deployed a metro Ethernet network that passes 1.2 million homes and serves an aggregate customer base of 500,000 subscribers with voice, broadband and IPTV services. With fiber to the basement, it delivers Gbps service to Hong Kong apartment blocks. Established in 1992, City Telecom is based in Kwai Chung, Hong Kong. The company has 3,500 employees and in 2004 had revenues of \$150.53 million.

29. Coaxsys, Inc.

www.coaxsys.com

408-317-6300

Key Products: Ethernet-over-Coax networking and distribution solutions

Summary: Coaxsys, Inc. manufactures high-speed networking and distribution solutions using standard coaxial cable. Its technology helps spur demand for fiber backhaul. Established in 2002, Coaxsys is headquartered in Los Gatos, California. The company’s line of TVnet products enables telcos, cable operators, and satellite providers to deliver and distribute voice, data, and video throughout the home. TVnet transforms coax receptacles into a high performance multimedia network, creating new applications for digital communications and entertainment - without having to install CAT-5 cable throughout the home. Coaxsys also licenses its TVnet technology to partners, such as set-top box and semiconductor companies. Current partners include Alloptic, Calix, Occam Networks, and Pannaway. Because no formal standard for Ethernet-over-Coax exists today; Coaxsys is licensing its technology to set-top box makers and set-top box chip companies in an attempt to establish an open platform for Ethernet-over-Coax delivery. The company has about 30 employees.

30. Comcast Corp.

www.comcast.com

215-665-1700

Key Products: Cable, entertainment and communications products and services

Summary: Comcast is the nation’s leading provider of cable, entertainment and communications products and services. Currently, Comcast has 21.5 million cable customers, 7.4

million high-speed Internet customers, and 1.2 million VoIP customers. The company divides its business into two principal areas: the development, management and operation of broadband cable networks, and the delivery of programming content. Among Comcast's content networks and investments are E! Entertainment Television, Style Network, The Golf Channel, Outdoor Life Network, G4, AZN Television, PBS KIDS Sprout, TV One and four regional Comcast SportsNets. Comcast also has a majority ownership in Comcast-Spectacor, whose major holdings include the Philadelphia Flyers NHL hockey team, the Philadelphia 76ers NBA basketball team and two large multipurpose arenas in Philadelphia. Based in Philadelphia, the company has 74,000 employees and in 2004 had revenues of \$20.3 billion.

31. Corning, Inc.
www.corning.com
 607-974-9000

Key Products: Optical fiber and cable, telecommunications hardware and equipment

Summary: Corning engineers developed the first fiber optic cable for communications in 1970. Today, Corning Optical Fiber is continually developing new fiber designs at its Sullivan Park Research & Development facility in Corning, New York, and introducing high-performance optical fibers that form the foundation of optical networks worldwide. Corning Optical Fiber is a unit of the Telecommunications business segment of Corning, Inc., which in 2004 had sales of \$3.85 billion and 24,700 employees. Corning Optical Fiber has deployed more fiber than any other fiber manufacturer. The leadership also extends to patents; the company was awarded more than 125 U.S. optical fiber patents in the last three years. In addition to optical fiber and cable, the Telecommunications segment produces hardware and other equipment for the the global telecommunications industry. (Corning also has business segments covering Display Technologies, Environmental Technologies and Life Sciences.) The markets and applications served by Corning Optical Fiber include broadband, premises, metro/access, long-haul, submarine, utilities, telephony and CATV.

32. Cox Communications, Inc.
www.cox.com
 404-843-5000

Key Products: Cable-TV, high-speed Internet access, local and long-distance telephone service

Summary: Cox Communications is a multi-service broadband communications company with 6.7 million customers, including 6.3 million basic cable subscribers, 2.4 million digital cable subscribers, and 2.5 million Internet access subscribers. With more than 23,000 employees, the company had 2004 sales of \$6.425 billion. Cox is the nation's third largest cable-television provider. In addition to analog and digital cable TV (featuring

digital video recording, HDTV and VOD), high-speed Internet access, local and long-distance telephone service, the company also offers home networking, and commercial voice and data services. In addition, Cox is an investor in TV programming services, such as Discovery Communications, Inc., and broadband technology companies. Cox is headquartered in Atlanta, Ga., and is a wholly owned subsidiary of Cox Enterprises, Inc., which also owns major newspapers and broadcast stations.

33. CTS (Communication Technology Services, LLC)
www.cts1.com
 508-393-1992

Key Products: Network design, construction and management

Summary: Founded in 1990 as a structured cabling company, CTS has grown into a national organization providing a broad array of communication infrastructure services and solutions (structured cabling, wireless local area networks, IP PBX, etc.). Financial reporting services estimate the firm, which is based in Marlborough, Massachusetts, has 80 employees, and it lists a network of more than 600 project managers and affiliated technicians around the country. They generated more than \$25 million in sales last year, often in huge projects. Last year, CTS got the contract to handle customer premises work at UTOPIA, including installation, maintenance, termination devices, wiring and other home-side equipment for what will eventually be 140,000 premises passed. CTS also performs site survey, installation and on-site service support at hotels, MDUs, and commercial sites for Wi-Fi service providers and broadband equipment manufacturers. For a wireless service integrator and carrier, CTS completed an extensive wireless site survey and installation to accommodate a voice and data application utilized by more than 1,000 users at a California medical center. Because the application was so critical to hospital staff, the requirements included 100 percent coverage (including elevators and helipad) with 50 percent overlap and redundancy. The survey and installation was in five buildings totaling 1 million square feet, with more than 300 access points. More typical projects involve one to 6 access points.

34. D-Link Corporation/D-Link Systems, Inc.
www.d-link.com
 800-326-1688

Key Products: Broadband, LAN and Bluetooth devices

Summary: D-Link is a global designer and developer of networking, broadband, digital electronics, voice and data communications solutions for home, small office/home office, small and medium size businesses, and workgroup and enterprise environments. Among D-Link's offerings are remote routers, firewalls, Ethernet switches, KVM switches, broadband networking devices and Bluetooth products. D-Link is the largest wireless LAN provider in China and Europe, and in 2004 posted

revenues of \$966 million. The company is based in Taiwan and has 3,200 employees.

35. Digeo, Inc.
www.digeo.com
425-896-6000

Key Products: Moxi Media Center set-top box

Summary: Digeo partners with cable operators and provides the Moxi Media Center to consumers. The Moxi Media Center is a TV set-top box that provides high-definition cable TV and the functionality of a digital video recorder, digital media management of photos and music, content sharing with a PC, live interactive news feeds with Moxi Ticker, Moxi Games, and telephony and multi-room capabilities. It also offers the functionality of a DVD/CD player. A DSL modem is built in, as well. Digeo distributes the Moxi Media Center through deployment partnerships with Adelphia, Bend Broadband, Charter Communications, Comcast, NewWave Communications, and Sunflower Broadband. The Moxi Media Center works with both Motorola and Scientific-Atlanta networks. Digeo is primarily backed by Paul Allen's Vulcan, Inc. The privately held company was founded in 1999 and has offices in Kirkland, Wash., Palo Alto, Calif. and Longmont, Colo. Last year, it won an Emmy for best television interface design. The company has over 200 employees.

36. DirecTV Group, Inc.
www.directv.com
310-964-0808

Key Products: Satellite-TV service, Internet access, telephone service

Summary: The DirecTV Group encompasses digital television entertainment, broadband satellite and network services, and global video and data broadcasting. The company is composed of two main operating units: DirecTV US and DirecTV Latin America. At the end of last year, DirecTV U.S. had approximately 13.9 million subscribers to its U.S. satellite TV service -- counting both commercial and residential customers -- and Latin America had approximately 1.6 million subscribers. The American unit is the leading provider of "direct broadcast satellite," or DBS, service in the U.S. The company has 11,800 employees and last year had revenues of \$11.36 billion. DirecTV U.S. operates eight satellites, which are able to deliver 850 digital video and audio channels. In addition, DirecTV sells telephone service through alliances with Verizon and BellSouth.

37. Ditch Witch/The Charles Machine Works, Inc.
www.ditchwitch.com
580-336-4402; 800-654-6481

Key Products: Trenchers, plows, horizontal directional drilling tool systems, tracking and locating electronics

Summary: The Charles Machine Works designs, manufactures and markets a complete line of Ditch Witch trenching products -- from compact walk-along models to large riding units. The Ditch Witch trenchers are used to bury a wide variety of materials, including water, gas and sewer pipe; power, television and telephone cable and of course fiber. The company also sells horizontal directional drilling tool systems and tracking and locating electronics. Headquartered in Perry, Oklahoma, The Charles Machine Works has more than 1,300 employees, and the company controls the research, design and manufacturing of virtually every piece of equipment in its Ditch Witch product line.

38. Eagle Broadband, Inc.
www.eaglebroadband.com
281-538-6000; 800-628-3910

Key Products: Broadband services, set-top boxes, network management

Summary: Eagle Broadband provides advanced broadband, Internet Protocol (IP) and communications technology and services to broadband providers, including RBOCs, independent telcos, cable companies, hotel operators, municipalities, utilities, and real estate developers that seek to deliver next generation entertainment, communications, Internet and security services. Eagle also serves government, military and enterprise customers with its expertise in satellite communications. The company, which is headquartered in League City, Tex., has 85 employees and in 2004 had sales of \$12.49 million. It is centered on three core offerings: bundled broadband services -- including high-speed Internet, cable TV, telephone and security monitoring -- IP set-top boxes and satellite communications technology. Eagle Broadband also provides managed services, including network monitoring.

39. ECI
www.ecitele.com
954-772-3070

Key products: Multi-service access gateway (MSAG), Optical transport IP/MPLS routing and NGN VoIP solutions

Summary: This Israel-based company provides advanced telecommunications solutions to leading carriers and service providers worldwide. ECI's platforms provide solutions for converged telecom networks. ECI maintains a global customer support network, as well as a host of strategic channel relationships worldwide. It has more than 12 years' experience in optical transport networking, with platforms that combine instant provisioning with on-demand network scalability. ECI's flagship XDM MSPP (Multi Service Provisioning Platform) offers ATM and Ethernet Layer 2 over SDH/SONET, CWDM and DWDM. ECI Telecom is also a world leader in MSAG (Multi Service Access Gateway) Broadband markets, with an installed base of over 7 million lines. Its Hi-FOCuS broadband access

platform allows carriers to deploy triple-play services while reducing initial and ongoing operational costs. They handle thousands of subscriber lines of all types: ADSL, ADSL2, ADSL2+, G.SHDSL, VDSL, PON, Fiber, POTS, and ISDN. Revenue in 2004 was \$496 million. The company's workforce worldwide was more than 2,600 last year, of whom 56 were in the United States. The company's US offices are in Ft. Lauderdale and San Jose.

40. EFJ, Inc.
www.efji.com
 972-819-0700

Key Products: Wireless communications products and security systems

Summary: EFJ designs, develops, markets and supports private wireless communications products and security systems. Its arsenal includes wireless radios, wireless communications infrastructure and systems, and secured communications encryption technologies for analog wireless radios. The company's products and services support homeland security, defense, public safety and public service and international markets. EFJ also is the parent company to EFJohnson, one of the first developers of "Project 25" mobile communications products compliant with federal government interoperability standards, and Transcript International, a leader in secure voice communication solutions. Based in Irving, Tex., EFJ has 260 employees and in 2004 had revenues of \$80.87 million, with about one-third of sales generated by one customer, the U.S. Department of Defense. Other customers include state, local and foreign governments.

41. Entrisphere, Inc.
www.entrisphere.com
 408-850-0340

Key Products: Multi-service access solutions, fiber-fed terminals, multi-service element management system

Summary: Entrisphere, headquartered in Santa Clara, Calif., serves incumbent telephone carriers with its BLM-1500 multi-service access platform. The services it covers include FTTP, FTTC, FTTN, SDV, IPTV, packet voice, next-generation wireline, ADSL-2+, Ethernet, POTS, DSL and DS3. In addition, Entrisphere markets the T-Series fiber-fed terminals. These are for single family, business, and multi-dwelling applications, as well as modular ONTs and ONUs – and are interoperable with B-PON and G.983-compliant OLTs. Entrisphere's EntriView multi-service element management system supports legacy OSSs, and next-generation management systems. The company has 125 employees and was funded by leading venture capital firms including Accel Partners, Benchmark Capital, Crosspoint Venture Partners, Duff Ackerman & Goodrich, El Dorado Ventures, and others.

42. Emtelle
www.emtelle.com
 617-621-3041

Key Products: Ducted network and blown fiber technology

Summary: Emtelle is one of the world's leading providers of air blown fiber solutions, under the brand name Fibreflow. The company's North American headquarters is in Cambridge, Mass. It complements the global network of Emtelle offices in Europe, the Far East and Australia and develops and supports Emtelle's growing network of partners and deployments across this continent. To-date, Emtelle's air blown fiber solution is at the heart of more than 40 FTTH deployments worldwide, and the company has customers in more than 20 countries. The company expects \$55 million in revenue this year. It has 160 employees worldwide.

43. FONS Corp.
www.fons.com
 508-303-9352; 800-FONS-995

Key Products: High-performance passive optical components, fiber optic cable packaging, distribution and connectivity solutions

Summary: FONS – Fiber Optic Network Solutions – is a privately held company based in Marlboro, Mass. It designs and manufactures high-performance passive fiber-optic components and inter-connect solutions to implement FTTP networks. The biggest customer, Verizon, uses FONS to connect FiOS fiber to homes. But the company's suite of products extends through all areas of the network, including the central office/headend, outside plant, and LAN/data communications applications. In addition to its corporate headquarters, FONS has overseas operations in Ireland, Mexico, Japan and China, occupying nearly 200,000 square feet total. Among the markets served by FONS are RBOCs, IOCs, municipalities and utilities, MSOs, developers, enterprise, government and original equipment manufacturers (OEMs). The company has about 450 employees worldwide. It does not divulge revenue, but Boston Business Journal estimates that \$200 million is not out of the question for 2005.

44. Front Door Networks
www.frontdoornet.com
 386-672-4075; 800-544-5113

Key Products: Fiber optic, Ethernet, fixed wireless and WiFi networks for MDUs

Summary: Front Door Networks, based in Ormand Beach and Pompano Beach, Fla., is a high-speed Internet system provider for MDU developers and MDU service providers. (Broadband Properties LLC has a marketing partnership with the firm.) The company operates fiber optic, Ethernet, fixed wireless and WiFi

networks within exclusive communities and marinas in Florida. Front Door's networks are custom-engineered to utilize existing infrastructure and includes a branded community portal and advanced management devices on site. Front Door Networks currently manages high-speed Internet networks installed in over 1,100 apartment units in Florida. Each community also is serviced by Front Door's in-house resident call center.

45. GigaBEAM Corp.
www.gigabeam.com
571-283-6200

Key Products: Wireless point to point communications access solutions

Summary: Gigabeam, an innovative startup, designs, develops, sells, leases, installs and maintains high-performance wireless point to point communications access solutions that operate in the licensed 71-76 GHz and 81-86 GHz radio spectrum bands. Gigabeam equipment operates at multi-gigabit-per-second speeds. The company characterizes its WiFiber product as a true replacement for fiber in the last mile, increasing network capacity while lowering access costs. Gigabeam, founded in 2004, is headquartered in Herndon, VA. It has about 30 employees.

46. HDNet
www.hd.net
214-651-1446; 888-919-HDTV

Key Products: High-definition television programming

Summary: HDNet is the first national television network broadcasting all of its programming in "1080i," the highest-quality flavor of high-definition television (HDTV), all in a widescreen (16:9) format. The company, based in Dallas, Tex., has its programming carried by Adelphia, Charter, DirecTV, DISH Network, Insight Communications, Mediacom Communications, Time Warner Cable, and several National Cable Television Cooperative (NCTC) cable affiliate companies. HDNet programming includes original series such as Bikini Destinations; licensed series such as Smallville, and The Agency, from Paramount, Warner Bros., Sony and other studios. It also distributes live sports, such as National Hockey League and Major League Soccer games, NASCAR Grand National Division auto racing, NCAA football and basketball games, HDNet Boxing and The HDNet Horse Racing Challenge. HDNet says it produces and televises more hours of original HDTV sports, entertainment and news programming each week than any other network. An HDNet HD Broadcast Center in Denver is equipped with editing rooms and an MPEG-2-based digital switching facility. In addition, the network owns two HD mobile production trailers paired with digital satellite uplink trucks. The company has about 100 employees.

47. Hitachi Telecom (USA), Inc.
www.hitel.com
770-446-8820

Key Products: Access, optical and PBX products

Summary: Hitachi Telecom, headquartered in Norcross, GA., is a subsidiary of Hitachi America, Ltd., which in turn is a subsidiary of Hitachi, Ltd. of Japan. In 2004, Hitachi Ltd. had sales of \$82.28 billion and 347,424 employees. Hitachi Telecom's business is focused on developing and manufacturing telecommunications solutions for the U.S. market. Hitachi Telecom's optical transport products group sells to network service providers. The company offers high-speed optical networking equipment such as DWDM and SONET for the long-haul market. Hitachi Telecom also offers a full suite of fiber access products that allow service providers to deliver bundled video, voice and data services to businesses, neighborhoods or homes over a single optical fiber. Hitachi's PBX group offers communications systems for general business, lodging, RV, nursing home and residential markets. Hitachi claims to be the market leader in PBX lines shipped to the lodging industry.

48. HoloDek
www.holo-dek.com
603-758-1010

Key Product: Interactive gaming theater

Summary: Expand your idea of what users will be doing with bandwidth in a few years by visiting HoloDek in Hampton, New Hampshire. The facilities there include consoles for interactive gaming with the action projected onto large screens. Players compete against one another on a blindingly fast network. Be sure to ask for a tour of "The Sphere," a not-yet-finished pod with 360-degree views. Gamers sit inside, immersed in the graphic environment.

49. InfiniSys, Inc.
www.electronicarchitect.com
386-238-0072

Key Products: Engineering, project management, service provider contract negotiations

Summary: InfiniSys is a design firm that provides full-service technology-based amenity solutions for new or previously owned apartment complexes, condominium projects, planned development communities, commercial office projects, hospitality projects and college dormitories. The company works in conjunction with architects to design the property's low-voltage infrastructure, create a bundled amenities solution and provide the proper physical infrastructure. The infrastructure allows the client to choose any service provider while maintaining ownership of the property's cable plant. InfiniSys will negotiate with service providers on the client's behalf, to retain a share of the

service's revenue opportunities. InfiniSys is headquartered in Daytona Beach, Fla. It has 15 full-time employees.

50. KT Communication Consulting, Inc.

www.ktcom.tv
877-485-3557

Key Products: TV programming

Summary: KT Communication is a programming aggregator that serves private cable operators, multi-dwelling units, and other commercial facilities such as RV parks, hotels, hospitals and dorms. The company provides programming over C-band or over DirecTV's Bulk or L-Band. KT Communication is based in Columbia, MO. It has six full-time employees, and had revenue of \$3.5 million in 2004.

51. Marconi Corp.

www.marconi.com
724-742-4444

Key Products: Telecommunications products and services

Summary: Headquartered in Coventry, UK, Marconi operates regional offices in Warrendale, Pa., and Richardson, Tex. Marconi's operations span North America, Europe, the Middle East, Africa, Central and Latin America, and the Asia-Pacific region. The company is a multi-regional designer, manufacturer and supplier of telecommunications and information technology products and services. Its business is divided into two core areas: Network equipment and network services. Network equipment covers the design and supply of communications systems that transmit and switch voice, video, data (including optical networks, broadband routing and switching), and broadband access. Network services include consultancy, installation commissioning and maintenance, and value added services for telecommunications operators and other providers of communications networks. Marconi's customers include BellSouth, Sprint and Coca-Cola. The company's revenue in its 2005 fiscal year, ended March, was \$2.527 billion. The company has 15,000 employees.

52. MetaSolv Software, Inc.

www.metasolv.com
972-403-8300

Key Products: Service fulfillment software solutions for communications service providers

Summary: MetaSolv Software is a global provider of communications management solutions that help service providers optimize their traditional and next-generation communications networks and services. MetaSolv products integrate and automate key communications management processes, from network planning and engineering to activation, operations and customer care. The company markets comprehensive service

fulfillment software solutions for communications service providers and offers multi-service order management, inventory management, and service activation capabilities to automate the order-to-activate provisioning process for traditional and next-generation IP-based wireline and mobile service providers. The company's customers include Allegiance Telecom, ALLTEL, BellSouth, Brazil Telecom, British Telecom, Cable & Wireless, KVH (Japan), Mobilkom (Austria), Qwest, SBC, Saudi Telecom, Sprint, Verizon, and Vodafone, Orange, France Telecom, and Sonera, AT&T, Cable & Wireless, and Telstra. MetaSolv, headquartered in Plano, Tex., was founded in 1992. The company has 487 employees and in 2004 had revenues of \$81.16 million.

53. Microsoft TV

www.microsoft.com/tv
425-882-8080

Key Products: IPTV applications and service platforms, and interactive program guide

Summary: Microsoft TV is a family of software solutions from Microsoft Corp., the dominant maker of computer operating systems, aimed at broadcast cable operators and broadband providers. Microsoft TV Foundation Edition and Interactive Program Guide (IPG) are standards-based client/server software platforms that allow broadcast cable operators to offer video-on-demand, digital video recording, IPG and HDTV over established cable infrastructures. IPTV Solutions allow broadband providers to offer competitive pay-TV options – including instant channel changing, multiple picture-in-picture and VOD – alongside voice and data services. Customers of Microsoft TV include Comcast, Cablevision Mexico and Cablevision Monterrey in Mexico, Swisscom's Bluewindows in Switzerland, and Reliance Infocomm in India. In 2004, Microsoft Corp. had sales of \$36.835 billion and 57,000 employees.

54. Motorola Broadband

<http://broadband.motorola.com>
888-944-HELP

Key Products: Broadband access and delivery products and technologies

Summary: Motorola Broadband is the Horsham, Pa., based unit of Motorola, Inc. specializing in core broadband solutions that enable the delivery of advanced services over a variety of network architectures and access platforms, including copper, optical, hybrid fiber coax and broadband wireless. Motorola Broadband is the world leader in cable modem shipments, and is establishing itself in markets for advanced home services such as home monitoring, and Voice over Internet Protocol (VoIP). Digital video headend technology from Motorola feeds more than 80 million homes around the globe. Motorola pioneered digital television, including the development of the world's first all-digital, HDTV system. In addition, Motorola is the global

leader in digital set-top box shipments. In 2004, Motorola, Inc. had sales of \$31.323 billion and 68,000 employees. Motorola, Inc., the parent company, is based in Schaumburg, Ill.

55. Multiband Corp.

www.multibandusa.com

763-504-3000; 800-475-7135

Key Products: Video, voice and data services

Summary: Multiband provides video, voice and data services to multi-dwelling units – including apartment houses, condominiums and time share resorts – and to business and government customers. The company has two operating divisions: Multiband Business Solutions and Multiband Subscriber Services. Multiband also is an MSO for DirecTV and services DirecTV customers through a nationwide base of independent system operators. Based in New Hope, Minn., in 2004 Multiband had sales of \$22.64 million and 100 employees. The company's customers are concentrated in Minnesota, Missouri, California, Colorado, Illinois, Texas, Florida, New Jersey, Connecticut and New York.

56. Multidyne Video & Fiber Optic Systems

www.multidyne.com

516-671-7278; 800-4TV-TEST

Key Products: Fiber optics, test signal and sync generators, switchers

Summary: MULTIDYNE Electronics, based in Locust Valley, New York, manufactures fiber optics for the transport of video, audio, serial digital video and HDTV, as well as fiber optic transport systems for broadcast-quality 12-bit digital video and 24-bit digital audio; test signal and sync generators to automatically test continuity and performance of video and audio circuits; video and audio Source ID Generators; Count-Down Generators; Video and Audio Loss Detectors with Automatic Switchover; Video Cable Equalizers; Automatic Gain and Equalization AGCs for Video and Audio; Analog & Digital Distribution Amplifiers; Hum Buckers and high speed clambers; Audio VU and Level Meters; Analog and Digital Routing Switchers; XLR Audio Break-out panels for industry standard Audio Distribution Amplifier Trays and Routing Switchers; IFB, Cue and Audio Announcing Systems for satellite and terrestrial circuits as well as television and video accessories. Multidyne's products are used by ABC, CBS, Fox, NBC, Turner Broadcasting, cable TV networks such as CNN and CNBC, cable TV companies such as Time Warner Cable, telephone companies such as Sprint, and government agencies and production facilities, including the Department of Transportation.

57. Multilet

www.multilet.us

856-795-9490

Key Products: Converts coax wiring to Ethernet

Summary: Multilet is a wholly owned subsidiary of Macab AB, a Swedish firm. In business over 20 years, Macab AB is well known for a wide range of quality products providing superior solutions for MDU, CATV and SMATV applications. Headquarters is in Trelleborg, Sweden. The US office is in Cherry Hill, NJ, and US distribution is handled mainly through DF Countryman, a full-service distributor. The coax-to-Ethernet technology was originally developed by Ericsson Business Innovation in August 1999.

58. Multilink Broadband, Inc.

www.multilinkbroadband.com

440-366-6966

Key Products: Telecommunications network components

Summary: Multilink Broadband is a manufacturer of telecommunications network components, and serves traditional cable-TV MSOs, CLECs, RBOCs, independent telcos, regulated utilities, and LAN providers and end users. The company counts the fifty largest MSOs among its customers. New product development has been focused on fiber optic-based product solutions. With this focus, Multilink Broadband aims to become an end-to-end bundles solution communications product supplier and integrator instead of a component manufacturer. The American headquarters is in Elyria, Ohio. It has about 130 employees.

59. Netgear, Inc.

www.netgear.com

408-907-8000; 888-638-4327

Key Products: Wired and wireless hubs, routers and switches

Summary: Netgear designs technologically advanced branded networking products for consumers and small and medium size businesses. Netgear's gear enables users to share Internet access, peripherals, files, digital multimedia content and applications among multiple personal computers and other Internet-enabled devices. The products include wired and wireless hubs, routers, and switches, network interface cards, adapters and bridges, peripheral servers, access points and VoIP products. Netgear products are sold through distributors to retailers. Distributors selling Netgear products include Ingram Micro and Tech Data. Retailers selling Netgear products include Best Buy and Circuit City. Netgear also sells its products online at the company's own Web site. Headquartered in Santa Clara, Calif., the company has 269 employees and in 2004 had revenues of \$383.14 million. Approximately 40 percent of Netgear's sales are in international markets, including China and India.

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60. Nexans

www.nexans.com
919-577-2300

Key Products: Broadband copper and advanced plastic fiber cables and components

Summary: Nexans provides cables and systems to upgrade networks, including broadband copper and advanced plastic fiber solutions for home networking. The company manufactures a range of high-performance telecommunications and energy cables and components, and designs, manages and delivers complex turnkey projects for both telecommunications and energy networks. The company's three key markets are Infrastructure, Industry and Buildings. With industrial presence in 29 countries and commercial activities in 65 countries, Nexans employs 20,000 people, including 450 researchers, and had sales in 2004 of euros 4.9 billion. Based in Paris, the company is listed on the Paris stock exchange. Its U.S. subsidiary is Nexans USA, Inc. based in New Holland, Pa.

61. Nokia Corp.

www.nokia.com
905-427-6654

Key Products: mobile phones and wireless networks

Summary: Nokia is the global leader in cell phones, and in 2004 had revenues of \$35.6 billion. The company has 55,505 employees and has four business groups: Mobile phones, Multimedia, Enterprise Solutions, and Networks. The mobile phones division markets handsets for GSM, CDMA and TDMA to customers in more than 130 countries. The multimedia division markets set-top boxes, home satellite systems and mobile gaming devices. The enterprise solutions division markets business-centric wireless systems. The networks division markets wireless switching and transmission equipment for GSM, EDGE and WCDMA to carriers. Nokia is based in Finland has 15 manufacturing facilities in nine countries and conducts research and development in 12 countries. It is a broadly held company, with listings on the Helsinki, Stockholm, Frankfurt and New York stock exchanges. Its U.S. headquarters is in Irving, TX.

62. OFS; Optical Fiber Solutions

www.ofsoptics.com
770-798-5555; 888-342-3743

Key Products: Optical fiber, optical cable, optical connectivity and specialty photonics

Summary: OFS, based in Norcross, Ga., was formed in 2001 by Furukawa Electric Co., Ltd., which purchased the Lucent Technologies Optical Fiber Solutions business from the former Bell Labs spin-off. Under Bell Labs, in 1976, OFS was the first commercial volume producer of optical fibers (the technology

had been invented at Corning). The company also counts numerous other firsts in its history, including developing the first application-specific fiber, the first optical connectors, the first ribbon cables, and the first attenuators. OFS has four divisions – Optical Fiber, Optical Cable, Optical Connectivity and Specialty Photonics – plus OFS Labs, which continues some of the research heritage of Bell Labs. The OFS manufacturing plant in Norcross is one of the world's largest fiber-optic manufacturing facilities. In addition to it, the company operates fiber-optic plants in Germany, Denmark, Russia and multiple U.S. locations. Furukawa Electric Co. is a multi-billion dollar firm founded in 1884 – 41 years before Bell Labs was formed by AT&T and Western Electric to pool their research and engineering resources.

63. Omnitron Systems Technology, Inc.

www.omnitron-systems.com
949-250-6510; 800-675-8410

Key Products: Fiber optic media converters and access products

Summary: Omnitron Systems, headquartered in Irvine, Calif., manufactures and sells unmanaged and SNMP-managed copper-to-fiber and fiber-to-fiber media converters for enterprise LAN and metropolitan MAN applications. Omnitron's products support speeds and protocols to Gigabit Ethernet, T1/E1, T3/E3, OC3, OC12 and serial technologies with dual-fiber and single-fiber transmission. Omnitron's products are available through resellers, VARs, system integrators and distributors worldwide. In addition to enterprises and metropolitan area broadband service providers, the company serves government, military, transportation and industrial markets. Sales last year were about \$15 million; the company has 50 employees.

64. Optical Cable Corp.

www.occfiber.com
540-265-0690

Key Products: Optical cable

Summary: Optical Cable Corporation pioneered the design and production of special tight-buffered cables for the most demanding military field applications in the early 1980s. At its Roanoke, Virginia, plant the company manufactures a broad range of fiber optic cables for indoor and outdoor use. The firm's tight-buffered coating process provides excellent mechanical and environmental protection for the optical fiber. The current product portfolio is built on the evolution and refinement of the original fundamental technology into a comprehensive and versatile product line to provide end-users with significant value. Sales in 2004 were over \$43 million.

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Lee Domanico
CEO of El Camino Hospital, frequent speaker, and author on strategic planning, technology and public health policy



Lance Perry
Vice President of IT for Cisco Systems, leader of Customer Strategy and Success Group, and a trusted advisor for infrastructure IT policy and process



65. Optical Solutions, Inc.
www.opticalsolutions.com
763-268-3300; 888-674-3884

Key Products: FTTP central office and premises equipment, system management tools

Summary: Optical Solutions markets FTTP systems for the delivery of IPTV, within voice, video and data deployments to homes and the broader community – businesses, multi-dwelling units and single-family homes. The company's products use industry standard GPON. Based in Minneapolis, Minn., Optical Solutions serves independent telephone companies, competitive and incumbent local exchange carriers, utilities, municipalities and housing developers. To-date, the privately held company has raised \$128 million in equity and debt financing. It has about 100 employees.

66. PacketFront
www.packetfront.com
603-888-5100

Key Products: Integrated control and provisioning system, switches, routers, IPD, DSLAMs

Summary: PacketFront, headquartered in Stockholm, Sweden, has a small office in Nashua, New Hampshire to serve North America. It develops and markets solutions to enable truly operator-independent broadband networks that support multiple service providers. The company was founded in 2001 by former employees of Cisco and the pioneering broadband operator B2 with the idea that a "True Broadband Network" uses an all-IP, open-access infrastructure and lets subscribers choose which services they want – from among several concurrent TV channels, HD telephony streams, Internet access, storage, gaming, video conferencing, software on demand and more – at what price and when. PacketFront's products include the BECS integrated control and provisioning system, the SMT subscriber management tool, customer-placed multi-service switches, IPD, all-IP DSLAMs, and purpose-built broadband routers for fiber or copper Ethernet. PacketFront also operates a branch office in Tokyo. The company has about 100 full-time employees.

67. Paradyne Corp.
www.paradyne.com
727-530-2300

Key Products: IP-based broadband access solutions for voice, video and data

Summary: Paradyne develops, manufactures and distributes IP-based broadband access solutions for the transport of voice, video and high-speed data services. The company's products include BLCs, DSLAMs, Ethernet-over-copper network extenders, IADs, and CPE. Paradyne's products support both residential triple play solutions and business class bonded SHDSL,

ADSL2+, T1/E1, and DS3 bonded solutions for LAN extension and cell site data backhaul applications. Paradyne's solutions also support multimedia traffic management (MTM) and lower carrier operational expenses through operational intelligence (OplIQ). Based in Largo, Fla., the company also operates a dedicated IP Voice R&D facility in Research Triangle Park, North Carolina, as well as a dedicated IP development team in Portsmouth, New Hampshire. Paradyne's R&D organization is the largest U.S.-based engineering team exclusively dedicated to DSL. Paradyne operates its own manufacturing facility located at the corporate headquarters. The company has 375 employees and in 2004 had revenues of \$102.29 million.

68. Pico Macom, Inc.
www.picomacom.com
818-493-4300; 800-421-6511

Key Products: Headend electronics, installation hardware, jumper cables, amplifiers, switches, filters, transformers

Summary: Pico Macom engineers, develops and manufactures broadband gear, including electronics, systems equipment and installation components for the franchised cable, private cable and satellite TV industries. The company's equipment is used in residences, hotels and motels, schools, hospitals, and in private and smaller-to-medium cable environments. Based in San Fernando, Calif., Pico Macom maintains manufacturing facilities in the U.S., Mexico and Southeast Asia. Pico, the original company, was one of the first in the cable business; it started in 1962 making etched nameplates and expanded into printed circuits three years later. It was making cable security products by 1976. It is now part of Steren Electronics International, privately held.

69. Primal Solutions, Inc.
www.primal.com
949-260-1500; 800-438-0921

Key Products: Advanced IP mediation; real time event rating; prepay solutions for voice and data services on Internet Protocol (IP) networks and a convergent billing software solution

Summary: Primal Solutions is a communications software company whose solutions and services allow usage-based billing for IP services. To help manage customer usage on multi-service networks, Primal's solutions and services act as a bridge between new network services and existing business systems. The company, based in Irvine, Calif., serves five markets: cable and broadband; rural broadband; VoIP long distance (it is a major supplier to Time-Warner); managed IP services; and wireless. Primal's products offer advanced IP mediation; real time event rating; prepay solutions for voice and data services on Internet Protocol (IP) networks and a convergent billing software solution. The products can be implemented in conjunction with other solutions as modular components of an overall operations support system strategy or as a comprehensive "quick start"

platform for providers of voice, data, content, and enhanced services. Also, Primal's products are aimed at both startup service providers with few customers and at large, established service providers with millions of customers and mixed networks. Revenue in 2004 was about \$7.6 million.

70. Pulte Homes, Inc.

www.pulte.com

248-647-2750; 800-777-8583

Key Products: Home building and financial services

Summary: Pulte Homes, based in Bloomfield Hills, Mich., is the largest builder in the country in terms of annual revenues and second largest in terms of homes built last year. Pulte has 13,000 employees and in 2004 generated total revenues of \$11.7 billion from operation in 47 markets and 27 states. Last year the company closed 38,612 domestic home sales. Pulte is the charter member of Corning's Connected Community Program to help homebuilders and community developers incorporate fiber optic infrastructure into their plans. During its 55-year history, the company has constructed more than 408,000 homes. Also In 2004, Pulte entered into an exclusive marketing agreement with Verizon to market Verizon's communications services in Pulte communities wired by the telecom giant, and in the same year J.D. Power and Associates named Pulte the inaugural recipient of its Platinum Award for Excellence in Customer Service among America's leading homebuilders. J.D. Power ranked Pulte No. 1 in 14 markets, and among the top three in 23 of 25 markets surveyed. Pulte Mortgage LLC is a nationwide lender and offers Pulte customers a wide variety of loan products and superior customer service.

71. Pulver.com, Inc.

www.pulver.com

631-961-8950

Key Products: IP hardware, software, and communications services, conferences and publications

Summary: The Pulver.com group of companies, based in Melville, NY, strives to promote the IP industry and change the way people communicate through new, enabling, innovative IP Communications technologies. The group focuses on IP hardware, software, and communications services, demonstrating that IP Communications makes it possible to do new things with telecommunications that can't be done with the traditional PSTN network. Pulver.com Enterprises owns a number of companies including Free World Dialup, LibréTel, PulverInnovations, and Blue Lava Software, and is headed by IP Communications entrepreneur Jeff Pulver. He is the publisher of The Pulver Report and VON magazine, and creator of the industry standard Voice on the Net (VON) conferences, where all sectors of the IP Communications industry come together to discuss, debate, and advance the industry. Additionally, Mr. Pulver is the founder of a number of IP Communications com-

panies and has testified before the FCC, the United States Congress, and numerous agencies that have a growing interest in IP Communications. Mr. Pulver also was named by *Business Week* magazine in 2003 as one of its "Gurus of Technology."

72. RAD Data Communications, Inc.

www.radusa.com

201-529-1100; 800-444-7234

Key Products: WAN access equipment and solutions

Summary: RAD Data Communications is the U.S. arm of RAD Data Communications, Ltd. of Israel. The privately held company markets WAN access equipment and solutions for data communications and telecommunications applications. Its solutions include mature technologies such as TDM, Frame Relay and voice compression, and emerging, high-growth technologies such as ATM, IP, TDM over IP, and fiber optics. The company markets to both service providers and enterprises, and has a particular expertise in complex, international networks. Worldwide, RAD has 18 offices and more than 200 distributors in 105 countries. The company's installed base exceeds eight million units and includes more than 150 carriers and operators worldwide. In the U.S., RAD has 80 employees as well as a well-established network of value added resellers. The company also has formal relationships with AT&T, Verizon, MCI/Worldcom, Qwest, Southwestern Bell and Sprint. It also has resale arrangements with Alcatel, Ericsson, Siemens and Lucent/Avaya.

73. Renaissance Integrated Solutions, Inc.

www.rensols.com

914-273-6811

Key Products: Sewer rehabilitation and fiber optic communications network infrastructure

Summary: Renaissance Integrated Solutions has created and patented a method for rehabilitating a municipality's sewer system with fiber network infrastructure. The company's solutions directly reach residential and commercial buildings, supporting the delivery of next-generation communications services and applications. The FCC has named these solutions one of the leading technologies that could advance fiber infrastructure buildouts. Renaissance has been in the sewer rehabilitation and fiber networking construction management businesses for nearly 20 years. Members of the management team pioneered many of the trenchless sewer rehabilitation technologies that are widely used today and also managed the majority of fiber construction projects in New York City for companies such as AT&T, MFS, and MFN, one of the original fiber networking communications companies in the U.S.

74. Riverstone Networks, Inc.
www.riverstonenetworks.com
408-878-6500

Key Products: Routers, switches, line cards

Summary: Riverstone Networks provides carrier Ethernet infrastructure solutions for business and residential communications services, including video, voice and data. Riverstone's products include routers and switches and line cards that allow carriers to allocate bandwidth and manage traffic more efficiently, and to offer new services over existing revenue-generating networks – as well as to expand the networks' bandwidth and evolve to a next-generation Ethernet infrastructure. The company, based in Santa Clara, Calif., has offices worldwide – in Beijing; Hong Kong; Shanghai; Japan; Korea; Singapore; Taiwan; England; France; Italy; Spain; Sweden; Brazil; and Mexico. Riverstone's customers include British Telecom and EarthLink. The company has about 350 employees. Sales in the last quarter were \$16.6 million.

75. Road 9 Inc.
www.road9.net
303-468-1829; 877-542-4915

Key Products: Network design, network services, customer support services

Summary: Road 9 is a closely held company, based in Greenwood Village, Colo. The Chairman and the CEO/President, and their related interests, own 90 percent of the company and there are no outside investors. The company specializes in FTTH in master-planned communities, including designing triple-play networks based on a turnkey approach and business and technical analysis. Partners include Wave7 Optics, Alcatel, and Broadstream Communications.

76. Roseland Property Company
www.roselandproperty.com
973-218-2300

Key Products: Upscale broadband-equipped homes

Summary: Roseland Property Company is the premier urban redeveloper of luxury apartments and homes in the Northeast. Over the past ten years, it has established a reputation for quality and creativity in developments stretching from Virginia to Massachusetts and across the Atlantic to France. Beginning on the Hudson River's Gold Coast in New Jersey, Roseland has slowly spread its vision of master-planned communities on the East Coast's spectacular waterways. Properties include Port Imperial, a two-mile community growing directly across from mid-town Manhattan on the Hudson Riverfront. The company has a standard broadband package for all homes.

77. SBC Communications, Inc.
www.sbc.com
210-821-4105

Key Products: Wireless and wireline phone services, broadband through DSL and FTTN

Summary: SBC is a Fortune 50 company whose subsidiaries, operating under the SBC brand, provide a full range of voice, data, networking, e-business, directory publishing and advertising, and related services to businesses, consumers and other telecommunications providers. SBC holds a 60 percent ownership interest in Cingular Wireless, which serves 50.4 million wireless customers. SBC companies provide high-speed DSL Internet access lines to more American consumers than any other provider and are among the nation's leading providers of Internet services. The company is expanding fiber operations, offering FTTH in greenfield settings as well as FTTN elsewhere; its plans are for 17 million premises passed by fiber by 2008. SBC companies also offer satellite TV service. SBC, based in San Antonio, Tex., has 162,700 employees and in 2004 had revenues of \$40.787 billion. The company operates in the U.S. and has financial interests in 14 countries.

78. Scientific-Atlanta, Inc.
www.scientificatlanta.com
770-236-5000

Key Products: Headend equipment, addressable network management systems, cable modems, and digital set-top boxes and accessories

Summary: Scientific Atlanta is a leading provider of electronics and test equipment used by broadband service providers to build end-to-end networks. Headquartered in Lawrenceville, Ga., the company had sales of \$1.708 billion in 2004, and 7,538 employees. The company also maintains North American regional offices in Conshohocken, Pa.; Englewood, Colo.; Scarborough, Ontario (Canada); and Mexico City (Mexico). Overseas, Scientific-Atlanta maintains offices in Argentina; Australia; Belgium; Brazil; China; Denmark; France; Germany; India; Italy; Japan; Korea; Lebanon; Netherlands; Russia; Spain; U.A.E.; and U.K. Scientific-Atlanta's products range from headend equipment to home entertainment servers. In April, the company demonstrated its Explorer 8200HDJ set-top box, which provides high-resolution graphics, dual conditional access, a multi-network interactive program guide, HTML and BML (broadcast markup language) middleware, and video-on-demand. It was shown at the NCTA show in the U.S. It already has been deployed in Japan.



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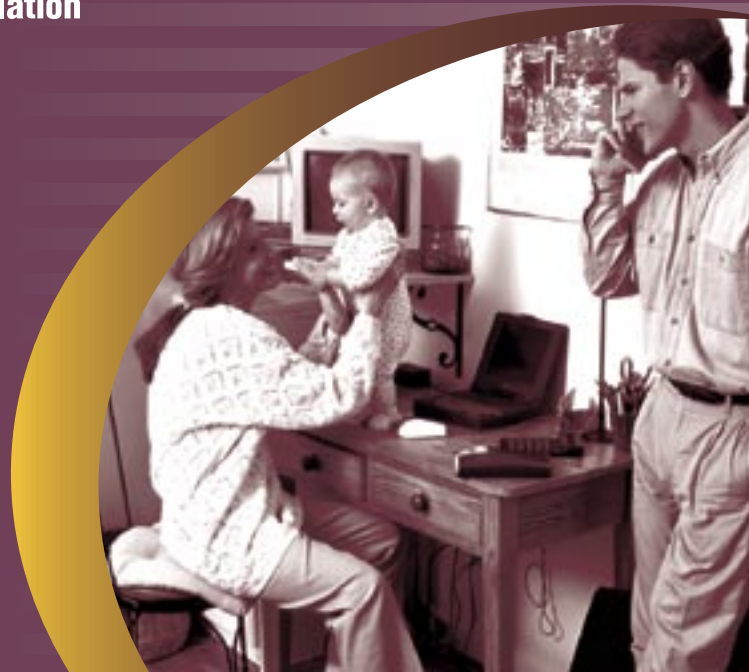
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79. SMC Networks

www.smc.com
800-762-4968

Key Products: Networking products (including wireless) for home and small business use, hospitality, and public hotspots

Summary: SMC maintains a global presence through regional offices located in the Americas, Europe, Africa, Asia-Pacific and Japan. The company's worldwide headquarters are in Irvine, California. SMC was founded in 1971 and in 1997 became a subsidiary of Taiwan-based Accton Technology Corporation. Revenue for Accton in 2004 was \$750 million. There are two key product families: EZ Networking, designed for the networked home and small office, and Tiger, SMC's line of secure, high-speed, feature-rich products for corporate and workgroup environments.

80. SMS – Satellite Management Services

www.smstv.com
800-788-8388

Key Products: Video transport, focusing on PCOs

Summary: Satellite Management Services provides equipment, programming, and system construction, offering "one-stop shopping" to the private cable industry, multi-unit property owners and private cable operators. Customers include apartment complexes, condominium projects, mobile home parks, hotels and motels, prisons, colleges and universities, and office buildings as well as the operators supporting these clients. The company was founded in 1985. It's headquartered in Tempe, Arizona.

81. Sumitomo Electric Lightwave Corp.

www.sumitomoelectric.com
919-541-8100; 800-358-7378

Key Products: Optical fiber and optical cable, ribbon-configured solutions, cable assemblies, fiber management systems, fusion technology, and fiber cabling systems

Summary: Sumitomo Electric Lightwave is a privately held company specializing in tailored network solutions for the public communication and enterprise network markets. Based in Research Triangle Park, NC, the company is associated with Sumitomo Electric, which is one of the largest manufacturers of wire and cable in the world. Sumitomo Electric, based in Osaka, Japan, last year had revenue of \$14.6 billion. Sumitomo Electric Lightwave's target customers include ILECs, public network providers, ASPs, contractors, systems integrators, enterprise network operators, and equipment, component and contract manufacturers.

82. Tandberg Television, Inc.

www.tandbergtv.com
678-812-6300; 407-380-7055

Key Products: Control and monitoring equipment, encoders, decoders, multiplexers, modulators, digital SNG, portals/middleware, DENG/Wireless, N2 on-demand solutions, operational support services

Summary: Tandberg designs and develops professional systems for the delivery of live digital video and on-demand content. Its solutions enable the digital transmission of video, voice and data across various networks including cable, satellite, terrestrial, IP and telecom. The company provides open standards-based technology solutions, systems integration, support and monitoring through operations in the Americas, Asia, Australia and Europe. Tandberg's U.S. base is in the broadband city of Duluth, Ga., with other U.S. offices in Orlando, Fla., Littleton, Colo., and Irvine, Calif. Its global headquarters is in the UK. Research and development offices are in the UK, the U.S. and Germany, and sales, support and monitoring operations are maintained in Australia, China, France, Germany, Hong Kong, Italy, Norway, Poland, and Spain. Tandberg TV's customers include many of the major broadcasters, network operators, telephone companies, cable operators and content owners around the world. In January, Tandberg TV acquired N2 Broadband.

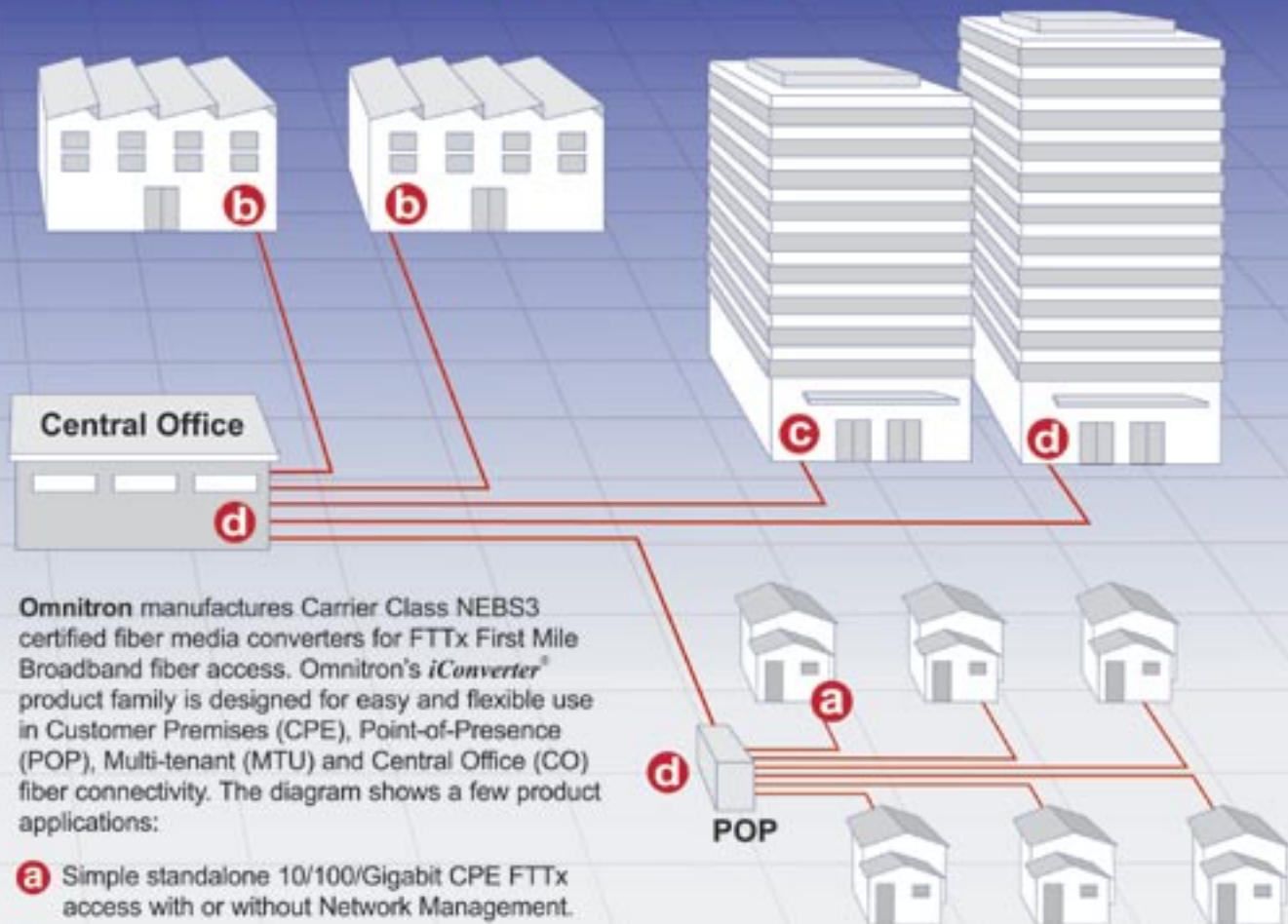
83. Team Fishel

www.teamfishel.com
614-274-8100; 800-347-4351

Key Products: Distribution systems for telecom, broadband CATV, gas and electric utilities

Summary: Team Fishel, headquartered in Columbus, Ohio, is a multi-disciplined aerial and underground utility contractor that designs, builds and maintains distribution systems for telecom, broadband CATV, and gas and electric utilities nationwide. In the telecom arena, the company's expertise ranges from long-haul transmission to metropolitan fiber rings and last mile fiber deployments. The services it offers in this sector include engineering and design, professional surveying, construction, installation, service and maintenance, and project management. Team Fishel's customers include AT&T Local Network Services, Bell South, Charter, Comcast, Level 3, MCI, Qwest, SBC, Sprint, Time Warner, and Wiltel. Currently, Team Fishel has 21 offices in 10 states – Arizona, California, Florida, Georgia, Indiana, Kentucky, Ohio, Tennessee, Texas, and Virginia. It has 1,300 employees. Revenues were about \$150 million in 2004.

The ABCs of FTTx



Omnitron manufactures Carrier Class NEBS3 certified fiber media converters for FTTx First Mile Broadband fiber access. Omnitron's *iConverter*[®] product family is designed for easy and flexible use in Customer Premises (CPE), Point-of-Presence (POP), Multi-tenant (MTU) and Central Office (CO) fiber connectivity. The diagram shows a few product applications:

- a** Simple standalone 10/100/Gigabit CPE FTTx access with or without Network Management.
- b** 2-Module 10/100/Gigabit CPE FTTx with VLAN/QoS for Voice/Video/Data IP access.
- c** 5-Module 10/100/Gigabit POP or MTU FTTx fiber distribution.
- d** 19-Module 10/100/Gigabit POP, MTU or CO fiber distribution.

The *iConverter* family supports managed or unmanaged fiber/copper and fiber/fiber converter modules with multimode, single-mode and single-fiber options for 10/100/Gigabit Ethernet, T1/E1, T3/E3 and OC3/OC12.

The products feature SNMP/Telnet management for remote monitoring and control, and support VLANs, QoS, Port Access Control and Bandwidth Control. The *iConverter* chassis feature redundant AC/DC power supplies.



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84. Telecast Fiber Systems, Inc.www.telecast-fiber.com

508-754-4858

Key products: Fiber systems and test equipment for the video industry

Summary: Telecast is a leading manufacturer of portable and fixed fiber optic systems for television broadcast production and other high performance video/audio communications. Its video, audio and communications systems are used worldwide by TV networks, teleproduction companies, private and government institutions and facilities, and telecommunications providers. The company is particularly well known for its Rattlers, miniature fiber optic serial digital video transmission modules (the red ones transmit, the blue ones receive) that offer the industry's broadest range of digital rates while maintaining excellent signal quality. Just three inches long and easy to power, these tiny modules can be deployed almost anywhere. The transmitter modules include equalization for long lengths of coaxial cable, for use at nearly any point in your HD/SDI chain. The company, based in Worcester, MA, was established in 1991 and has 34 employees.

85. Teledyne Technologies, Inc.www.teledyne.com

310-893-1600

Key Products: Aerospace, aviation, defense and energy components, equipment and solutions

Summary: Teledyne is a provider of components and subsystems for wireless and satellite systems, and data acquisition and communications equipment for airlines and business aircraft. The company also provides systems engineering solutions and information technology services for space, defense and industrial applications, and manufactures general aviation and missile engines and components, as well as on-site power generation systems. Teledyne's customers include major communications and other commercial companies, government agencies, aerospace prime contractors and general aviation companies. The company is organized into four business units: Electronics and Communications; Systems Engineering Solutions; Aerospace Engines and Components; and Energy Systems. Based in Los Angeles, Teledyne has 6,600 employees and in 2004 had revenues of \$1.017 billion. Approximately 57 percent of total sales in 2004 was to commercial customers and the balance was to the U.S. Government, as a prime contractor or subcontractor. International sales accounted for approximately 19 percent of total sales in 2004.

86. Telkonet, Inc.www.telkonet.com

240-912-1800

Key Products: PlugPlus system, with bridges, gateways and couplers

Summary: Telkonet designs, develops, deploys and supports powerline communications solutions, using the company's technology, for the commercial and residential markets – including office buildings, hotels, schools, shopping malls, government buildings, and multi-dwelling residential buildings. The company serves customers in the U.S. and Europe, including Choice Hotels International. Based in Germantown, Md., Telkonet had sales of \$700,000 in 2004 – an increase of nearly 652 percent over 2003 sales – and 57 employees. Besides the headquarters, Telkonet has sales offices in Baltimore and Arlington, VA.

87. Tellabs, Inc.www.tellabs.com

630-798-8800

Key Products: Digital cross-connect; optical transport; switches; network management; managed access, voice-quality enhancement

Summary: Tellabs designs, develops, deploys and supports solutions for telecom and broadband data service providers – including wireline, wireless, and cable/MSO companies. Based in Naperville, Illinois, the company has 4,125 employees. Its sales in 2004 totaled nearly \$1.232 billion, and it is part of the NASDAQ-100 Index. The company is active in four markets: voice-quality enhancement, broadband data, transport and, since last year, managed access. In 2004, Tellabs acquired two companies in the managed access field: Vinci Systems, Inc., and Advanced Fibre Communications, Inc. Also, Tellabs claims the number one position in the U.S. digital cross-connect market, with more than 4,100 systems deployed. It also claims the leading position in the European cable telephony solutions market, and to be among the top three such providers worldwide. Tellabs also says it is the global leader in the voice-quality enhancement solutions market. The company has customers in almost 100 countries, including Telenor (Norway), TeliaSonera (Finland), Fastlink (Jordan), MobiNil (Egypt), Telmex (Mexico), Embratel (Brazil), and Telekom Malaysia. Tellabs maintains regional headquarters in Singapore (Asia Pacific); High Wycombe, UK (Europe, Middle East and Africa); and Sunrise, Fla. (Latin America and Caribbean region).



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88. TelPlexus, Inc.
www.telplexus.com
615-867-7766

Key Products: Network design, GPS/GIS mapping, CAD drafting, turnkey operations

Summary: The word plexus or “network” reflects the company’s original focus, when it was founded in 1998 as a telecommunications network design and inspection firm, based in Murfreesboro, Tennessee. Today, TelPlexus offers on-site network design, project management and general support services to the U.S. telecommunications industries, as well as GPS/GIS mapping services (as Geodetic Mapping Services, Inc.), professional drafting services (as CAD Drafting Services, Inc.), and a product line (as TelPlexus Products, LLC). Customers include ILECs, long-distance carriers, CLECs, other commercial businesses, and state and local governments. Sales were \$4.5 million last year. The company has 60 employees.

89. Terabeam
www.terabeam.com
703-205-0600

Key Products: WiFi and WiMAX, access points, point-to-point, clients and complete systems

Summary: This is a company more easily explained by its history than its product line. YDI Wireless was the result of a 2003 merger between Telaxis Communications Corporation and Young Design, Inc. Telaxis was a publicly traded company that focused on developing high capacity millimeter wave wireless products. Young Design was a privately held company that developed, produced, and sold wireless data products, primarily in microwave frequencies. In 2004, YDI acquired KarlNet, a pioneer and leader in software development for operating and managing wireless networks. Soon after, YDI acquired Terabeam Corporation, a provider of broadband wireless solutions that use high frequency millimeter wave (60 GHz radio frequency) and free space optics (invisible light beam) technologies. Terabeam had a history of significant losses. YDI reduced capital expenditures and personnel at Terabeam, closed Terabeam’s two offices in the Redmond, Washington area, and consolidated resources at Terabeam’s North Andover, Massachusetts facility. The North Andover facility has been integrated into YDI focusing on millimeter wave and microwave hardware development and support. Because of Terabeam’s positive name recognition, YDI decided to adopt the name “Terabeam Wireless” for its brand (the corporate name remains YDI). Also in 2004, YDI acquired Ricochet Networks, Inc. Ricochet is a leading mobile Wireless Internet Service Provider (WISP) headquartered in Denver. It provides high-speed mobile Internet connectivity in San Diego and Denver and has over 7,000 paying customers. Ricochet used to operate in many major metropolitan cities including New York, Los Angeles, San Francisco, Seattle, Chicago, Philadelphia, Phoenix, Baltimore, Philadelphia, Atlanta,

Dallas/Fort Worth, Minneapolis, and Washington, DC. Ricochet is investigating the feasibility of restoring service in these markets. Ricochet is offering equipment to service providers, WISPs, and municipalities who wish to offer wireless Internet services and become part of Ricochet’s network. As of March, the combined firm had 123 employees. Consolidated revenue in 2004 was almost \$23 million.

90. Time Warner Cable
www.timewarnercable.com
866-689-3678

Key Products: Cable-TV services and products, broadband Internet services

Summary: Time Warner Cable owns or manages cable systems serving 10.9 million subscribers in 27 states, and more than 75 percent of the company’s customers are in systems of 300,000 subscribers or more. Time Warner Cable is an industry leader in delivering advanced products and services such as video on demand, high-definition television, digital video recorders, high-speed data, wireless home networking and VoIP. Time Warner Cable is a majority-owned subsidiary of Time Warner Inc., which has 84,900 employees and in 2004 had revenues of \$42.089 billion. In addition to Time Warner Cable, the parent company’s business contains the Internet service America Online, a filmed entertainment business unit, magazine and book publishing, and a television networks unit.

91. Transition Networks
www.transition.com
800-526-9267

Key Products: Copper-to-fiber media conversion

Summary: In June 2005, Transition Networks, a wholly owned subsidiary of Communications Systems, Inc., announced the industry’s first IEEE Std. 802.3ah-compliant media converter product available for testing at the University of New Hampshire’s InterOperability Laboratory. The company’s 10/100/1000 media converters are designed to support Ethernet in the First Mile (EFM) or Fiber-To-The-Premise (FTTP) deployments such as E-Line and E-LAN, as well as enterprise markets seeking a common platform for remote management of offsite stations. The company works alongside leading networking vendors – Nortel Networks, Hewlett Packard, 3COM, Cisco, Enterasys, Extreme, Foundry, Avaya and others – to provide conversion technology solutions that offer the necessary adaptations without affecting the performance, nature or appearance of the network to the users or the network devices. Based in Minneapolis, Transition Networks distributes hardware-based connectivity solutions exclusively through a network of resellers in 50 countries,

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92. Tyco/AMP**www.ampnetconnect.com****800-553-0938**

Key Products: Connectors and housings for fiber network construction

Summary: Tyco Electronics' AMP division is a major supplier to Verizon's fiber buildout. The AMP NETCONNECT Optical Fiber Systems combine superior bandwidth with easy installation. The systems support the gigabit and even ten gigabit speeds needed for critical backbone networks while also supporting existing horizontal optical technologies. A complete line of products and components is available for end-to-end optical fiber network construction. The company does business worldwide.

93. Verizon, Verizon Avenue**www.verizon.com/fios, www.verizon.com/avenue****866-892-8368 for Avenue; headquarters 212-395-2121**

Key Products: FTTH, DSL

Summary: Verizon's FTTH deployment, FiOS, has received plenty of notice in this magazine. To date, well over 1 million homes have been passed, with a target of 3 million by the end of the year. But Verizon's Avenue service is also noteworthy. With over one million units under contract, Verizon Avenue is the nation's leading multifamily communications provider. Verizon Avenue sells its bundles two ways – on an individual basis to multi-family community residents or to property owners who can buy the service in bulk and offer it to all residents. Annual revenue last year for the corporation was \$71 billion, with 214,000 employees. Corporate headquarters is in New York City.

94. Vonage Holdings Corp.**www.vonage.com****732-528-2600; VONAGE-HELP**

Key Products: Broadband phone service

Summary: Vonage, based in Edison, NJ, offers traditional-style phone service bundled with enhanced IP communications services and an interactive communications portal that is the gateway to advanced features available only through digital telephone service. It is the market leader in VoIP. Vonage technology enables anyone to make and receive phone calls worldwide with an ordinary touch-tone telephone attached to a high-speed Internet connection. Vonage's VoIP service is sold on the web and through national retailers including Sam's Club, Radio Shack, Best Buy, Circuit City, Staples, Fry's Electronics, Office Depot and CompUSA. Founded in 2001, Vonage has more than 1,400 employees, and is privately held. The company serves both residential and small business customers.

95. Wave7 Optics, Inc.**www.wave7optics.com****678-339-1040**

Key Products: Optical broadband access systems

Summary: Wave7 Optics provides optical broadband access systems for video, voice and data services. The company's Last Mile Link system is marketed worldwide to service providers in the IOC, CLEC, MSO, municipal, real estate development and utility categories. The Last Mile Link product suite provides solutions for residential, business and multi-tenant customers. Its Alpharetta, GA headquarters is a state-of-the-art research, design, development, prototype production and testing lab. The company has 80 fulltime and 20 contract employees.

96. Websense, Inc.**www.websense.com****858-320-8000**

Key Products: Employee Internet management solutions

Summary: Websense markets software that allows businesses to enforce how employees use the Internet. The company's employee Internet management solutions provide usage policy enforcement at the Internet gateway, on the network and at the desktop. The goal of the software is to enable organizations to optimize employee use of computing resources and mitigate new threats related to use of the Internet, instant messaging, peer-to-peer, and spyware – thereby enhancing productivity and security, optimizing the use of IT resources and mitigating legal liability for the business customer. The company, based in San Diego, Calif., has 500 employees and in 2004 had revenues of \$111.86 million. Websense products are available through distributors and resellers and have been sold to more than 24,000 customers, ranging from small businesses to multinational corporations to government agencies. About one-third of sales have been to foreign customers; besides the U.S., Websense sells its products into Europe, Latin America and the Asia Pacific region.

97. World Wide Packets**www.worldwidepackets.com****509-242-9000**

Key Products: Optical Ethernet access portals, concentrators, distributors and network management

Summary: World Wide Packets provides solutions for the delivery of simultaneous video, voice and data services over a single network, to residential and business subscribers, using Ethernet over fiber and copper media. The company's LightningEdge broadband access solution consists of access portals, access concentrators, and access distributors, all managed and controlled by the LightningEdge Network Supervisor. Privately held World Wide Packets is based in Spokane Valley, Washing-

ton, and does business worldwide – in countries ranging from Albania to U.K. The company has 97 employees.

98. Ygnition Inc.
www.ygnition.com
206-574-5470

Key Products: Triple-play services for MDUs

Summary: Ygnition provides broadband services – including video, voice and data – to the multi-dwelling unit market. The company is the largest private provider of high-speed Internet services in the national apartment industry, with about 150,000 residential and 1,000 business customers. It currently operates in Washington, California, Oregon, Texas, Colorado, Arizona, and Utah. The firm has about 80 employees and is based in Seattle.

99. Zoomy Communications, Inc.
www.zoomyco.com
970-928-7722

Key Products: Design and engineering services, planning and feasibility studies, project management, network construction management, network operation and maintenance

Summary: ZoomyCo provides design, engineering, construction management and ongoing consulting, operation and maintenance of FTTP networks for real estate developers, municipalities, public utility districts and telecommunication companies. ZoomyCo provides turnkey design and implementation of complete broadband solutions. The company's customers have included Qwest, AT&T Broadband, Level 3 Communications, 360 Networks, Media One and Verizon Wireless, as well as communities including Morgan County, Colo., and Juneau County, Wisc. ZoomyCo is based in Glenwood Springs, Colo. It has 15 employees.

100. ZyXEL Communications Corp.
www.zyxel.com
714-632-0882; 800-255-4101

Key Products: IP DSLAM, VDSL switch, Ethernet switch/adaptor, network management

Summary: ZyXEL Communications Corp., headquartered in Hsinchu, Taiwan, is the world's largest DSL router provider. Its broad line of IP networking solutions includes access multiplexers, customer premise equipment, Internet security and Wireless LAN equipment, enabling high-performance network services for SOHO, small to mid-sized businesses and service providers. ZyXEL maintains offices in Anaheim, Calif. and in Europe and Asia. The company has more than 1,600 employees worldwide, and markets its products in more than 150 countries on five continents through more than 70 distributors. US sales last year were \$35 million; revenue worldwide \$325 million.

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