

TELECOMMUNICATIONS SAMPLE PAGES

This InfoGrid provides information on telecommunications activities of U.S. energy utilities and energy companies, both in the U.S. and in overseas markets. In the first column, entries are listed alphabetically by company name, with additional details on the telecom activity noted on the entry row. New developments and changes will be tracked and entered as they occur. Entries under “Company Name” are shaded if new information has been added since the previous edition of this InfoGrid, with the new additions highlighted for ease in locating the latest data. (More details on specific on-line ventures and business-to-business activities and programs can be obtained from SCIENTECH’s E-Commerce InfoGrid)

Abbreviations and Acronyms Used

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| ASP – applications service provider | IP – Internet protocol | PCS – personal communications services |
| C/I – commercial/industrial | ISDN - integrated services digital network | SONET- synchronous optical network |
| CLEC – competitive local exchange carrier | ISP – Internet service provider | WAN – wide area network |
| DSL – digital subscriber line | LAN - local area network | |
| | MAN – metropolitan area network carrier | |

Date revised 3/1/2002

Company Name	Type of Activity	Description of Activity	News, Additional Information
<p>Adelphia Business Solutions Coudersport, PA</p> <p>(subsidiary of Adelphia Communications)</p> <p>www.adelphia-abs.com</p> <p>Start date:</p>	<p>Fiber optics</p>	<p>Adelphia Business Solutions provides integrated communication services to business customers over its state-of-the-art fiber optic network. By the end of 2001, Adelphia Business Solutions will serve approximately 80 cities over its fully redundant, 18,000 mile long-haul fiber optic network in the eastern half of the United States, which combined with an estimated 8,000 local fiber route miles in its operating markets, will support a full line of communication service offerings.</p>	<p>1/3/02 Adelphia Business Solutions, Inc. announced that it will not make the payment in kind dividend scheduled for January 15, 2002 on its 12 7/8% Senior Exchangeable Redeemable Preferred Stock (the “Preferred Stock”). Under the terms of the preferred stock, dividends will continue to accrue until paid. Adelphia Business Solutions, Inc. provides integrated communications services to business customers through its state-of-the-art fiber optic communications network.</p>
<p>AEP Communications, LLC Columbus, OH</p> <p>(American Electric Power subsidiary)</p> <p>www.aep.com</p> <p>Start date: 1997</p>	<p>Offers fiber, wireless and information services to wholesale and retail customers</p>	<p>Has more than 2,000 miles of bandwidth infrastructure, wireless antenna structures, PCS equity investments, and IP-based energy information services.</p>	<p>2/12/02 American Electric Power has named Dave Trego as vice president telecommunications. The promotion is in recognition of the broad scope and importance of telecommunications to AEP, according to Glenn Files, senior vice president – electric distribution.</p> <p>3/21/00 Joins GPU Telecom, Allegheny Communications Connect, FirstEnergy Telecom, CFW Communications, and R&B Communications to form America’s Fiber Network LLC (AFN). (See <i>America’s Fiber Network LLC</i> entry for more details).</p> <p>2/7/200 Forms American Fiber Touch LLC with Touch America (MT Power).</p> <p>6/23/99 Interconnects fiber optic network with respective networks of Allegheny Communications Connect, FirstEnergy Telecom Corp., and GPU Telecom Services, Inc.</p> <p>1/22/99 Teams with American Tower Corp. to jointly build communications towers and offer build-to-suit services in the Midwest. American Tower will also provide marketing services for AEP’s existing tower structures.</p>

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<p>Ceragon Networks Ltd. Mahwah, NJ</p> <p>www.ceragon.com</p> <p>Start date:</p>	<p>Internet, communications, broadband wireless equipment</p>	<p>Ceragon Networks Ltd enables global communications service providers to deliver high-speed Internet access and seamlessly integrated data, video and voice services. Ceragon introduced commercial FibeAir deployments in 1998, and today has thousands of commercial live traffic installations with leading service providers in over 25 countries, including North America, Asia, Latin America and Australia.</p>	<p>2/2/02 Ceragon Networks Ltd. announced that it was awarded first place in the Deloitte & Touche 2001 Israel Technology Fast 50 Program.</p> <p>1/14/02 Ceragon Networks Ltd. introduced EncryptAir -- an advanced security solution for the high-capacity wireless market. The patentpending EncryptAir solution integrates an encryption mechanism, based on the DES (Data Encryption Standard) algorithm, which is built into Ceragon's FibeAir™ system.</p> <p>11/5/01 Ceragon Networks Ltd. introduced its QuickAir Partner Program. The QuickAir Partner Program was designed to enable broadband wireless systems integrators, distributors and value-added resellers (VARs) to better meet the growing demand for high-capacity connections in the enterprise marketplace.</p> <p>9/25/01 Ceragon Networks Ltd. named Ran Oz its chief financial officer, effective immediately.</p>
<p>CoServ Corinth, TX</p> <p>(Formerly Denton Country Electric Cooperative)</p> <p>www.coserv.com</p> <p>Start date: 1937</p>	<p>Telephone, cable, broadband, Internet</p>	<p>As a multiple utilities service provider, Coserv installs and maintains all the services modern families and businesses expect, from basics such as electricity, gas, telephone, and cable, to increasingly demanded options like internet, security/fire - even broadband services.</p>	<p>2/8/02 CoServ Telecom Holdings, L.P. announced that the U.S. Bankruptcy Court has extended the deadlines pertaining to the bid-auction process for CoServ's telephone and cable companies by approximately 10 days.</p> <p>2/1/02 CoServ Electric announced that it has voluntarily sought Chapter 11 protection. The company cited the failure of continued negotiations with its lender, National Rural Utilities Cooperative Finance Corporation to result in a satisfactory resolution of the significant differences between the two companies. The Chapter 11 filing stops the foreclosure action CFC had filed against certain CoServ assets. Concurrent with the Chapter 11 filing, CoServ has filed suit against CFC alleging lender liability and fraudulent conveyance.</p> <p>1/13/02 CoServ Telecom Holdings, L.P. announced that it has filed a motion in U.S. Bankruptcy Court setting a deadline of February 11, 2002, for potential purchasers of its telephone and cable companies.</p>

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<p>Electric Lightwave, Inc. Vancouver, WA</p> <p>(82% owned by Citizens Communications)</p> <p>www.eli.net</p> <p>Start date: 1990</p>	<p>Integrated communications service provider with a fiber optic network that inter-connects virtually every population center in the West.</p>	<p>A full service provider that offers bundled enhanced data services, switched voice, frame relay, ATM and Internet access solutions to bandwidth intensive businesses and the e-commerce market in the West. Nationwide, the company offers data, Internet, and broadband transport services.</p>	<p>1/30/02 Juniper Networks, Inc. and Electric Lightwave, Inc. announced a new series of nationwide, multiservice metropolitan area networks (MANs).</p> <p>1/22/02 Electric Lightwave, Inc. announced that Michael Golob has been appointed Vice President of Operations and Engineering, effective January 1, 2002. He reports to Daniel McCarthy, President and Chief Operating Officer of ELI.</p> <p>1/2/02 Electric Lightwave, Inc. announced that Daniel McCarthy has been promoted to President and Chief Operating Officer of the company.</p> <p>11/13/01 Electric Lightwave, Inc. reported financial results for the quarter ended September 30, 2001. Revenue for the period totaled \$53.3 million, compared to \$63.6 million for the same period in 2000. Although revenue for the quarter was down 16 percent from the corresponding period in 2000, the Network Services component of revenue grew 21 percent due to sales of additional circuits to new and existing customers as ELI concentrated upon its targeted customer base.</p>
<p>SBC Communications Inc. San Antonio, TX</p> <p>www.sbc.com</p> <p>Start date:</p>	<p>Telecommunications local and long distance wireless, Internet</p>	<p>Under the SBC Southwestern Bell, SBC Ameritech, SBC Pacific Bell, SBC Nevada Bell, Sterling Commerce, Cingular Wireless, Prodigy, and SBC SNET brands, SBC Communications Inc. offers a wide variety of telecommunications products and services to fit almost any need. In addition, under the SBC brand, the company is expanding nationally into 30 top markets outside of its traditional service region. Serving more than 87.3 million voice grade equivalent lines and 10.3 million wireless subscribers, they offer an expansive range of products and services, including voice and data telephone services; local and long-distance wireless communications; Internet access; telecommunications equipment; security systems; voice mail; and directory advertising.</p>	<p>2/11/02 SBC Communications Inc. is again being recognized as a leading employer for Hispanic employees. Two top publications for the Hispanic community, <i>Hispanic</i> and <i>Hispanic Business</i>, have included SBC among their annual rankings of top employers.</p> <p>1/2/02 As a "welcome home" gesture for the armed forces, SBC announced that starting immediately, SBC's telephone companies will offer military personnel who are supporting Operation Enduring Freedom or Noble Eagle the option to reconnect their phone service for free across all of the company's SBC Southwestern Bell, SBC SNET, SBC Pacific Bell, SBC Nevada Bell and SBC Ameritech regions.</p> <p>12/27/01 SBC Communications Inc. agreed to purchase an approximate three percent stake in Yahoo! from SOFTBANK America Inc.</p>

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<p>Touch America Butte, MT</p> <p>(formerly a Montana Power Co. subsidiary)</p> <p>www.tamerica.com</p> <p>Start date: 1983</p>		<p>Has 14,000-mile digital fiber optic network (26,000 miles by end 2001). Offers full line of long distance, dedicated voice, data, video services, and frame relay solutions.</p> <p><i>See also WirelessNorth</i></p>	<p>2/27/02 Touch America Holdings, Inc. reported consolidated net income of 11 cents per share for 2001 compared to \$1.86 per share for 2000. The company reported a loss of 9 cents per share for the fourth quarter 2001 compared to a profit of 95 cents per share for the same period a year ago.</p> <p>2/15/02 Touch America Holdings, Inc. announced it has completed its transition to a stand-alone fiber-optic network and broadband products and services telecommunications company with the sale of its Montana electric and natural gas utility subsidiary to NorthWestern Corporation.</p> <p>2/14/02 Touch America Holdings, Inc. announced it began trading today on the New York and Pacific sock exchanges under the symbol TAA.</p> <p>2/12/02 In a Federal Communications Commission (FCC) formal complaint filed, Touch America claimed Qwest Communications International has violated federal law and engaged in anticompetitive business practices by failing to comply with Commission orders covering Qwest's merger with U S West and the sale of Qwest's long-distance business to Touch America.</p> <p>2/5/02 Touch America filed a complaint late yesterday with the Federal Communications Commission (FCC), asking the federal agency to stop Qwest Communications from selling long-distance services in its 14-state regulated monopoly region in violation of the Telecommunications Act of 1996.</p>
<p>World Wireless Communications Denver, CO</p> <p>(Funding The Pinnacle Fund, Elkron International P.P.A., Tanalux S.A., President & Fellows Harvard College of Boston, Graham Properties, L.P., Lodestone Capital Fund, and Tiedeman Boltres Partners)</p> <p>www.worldwireless.com</p> <p>Start date: 1995</p>	Wireless, Internet	<p>World Wireless Communications Inc. is a leading developer of wireless and Internet systems, technology and products. The company develops, manufactures and distributes components for the X-traWeb network, a convergence technology for the monitoring and control of remote systems through the Internet; and spread spectrum radios in the 900 MHz and 2.4 GHz Bands.</p>	<p>12/28/01 World Wireless Communications announced that it has commenced its first program in conjunction with its previously announced research contract with the Cooperative Research Network (CRN) of the National Rural Electric Cooperative Association (NRECA) to develop a webenabled interface to HVAC systems in quickservice restaurants (QSR). The initial program using the newly developed interface will be with a leading global supplier of HVAC systems.</p> <p>12/3/01 World Wireless Communications announced that an interview with David Singer, President and CEO, is now available online at www.ceocast.com. Conducted November 30, 2001, the interview highlights World Wireless Communications' focus on the real time Automatic Meter Reading industry and the marketing plans for 2002.</p>