

The Broadband Properties 100

Our detailed look at the companies that are most likely to shape broadband deployments

The waiting is over. There's a race to bring more bandwidth to homes and small businesses. The headlong rush knows no national boundaries, and no technical boundaries, either. The "gold standard" is fiber to the home. In new construction, that's what we get. In overbuild situations, there is a mix, depending on geography and existing infrastructure. But without exception, the existing infrastructure is being tweaked for more bandwidth by replacing it with fiber that creeps ever closer to its final destination – your living room. The BP 100 companies make it happen. Without them, there would be no broadband revolution.

The BP 100 companies are a diverse group. Two are startups, just beginning to generate sales. The largest on the list is Verizon, which had revenue last year of \$71 billion and income of \$13 billion. The smallest had no revenue at all last year.

We sifted among more than 250 companies. Those that made the list share only one universal attribute: Courage. The industry, after all, has been attempting to bring massive broadband to the home for almost 20 years. Why is the effort succeeding now? Courage.

In this issue, we recognize the companies that drive the process, either by providing the technology, the implementation skills, the demand, or the vision. We do so in the hope that we can help the industry understand itself, and that we can help other interested parties – investors, public officials, and customers – climb aboard.

It starts with demand, and demand starts with content. You'll find many such companies among the BP 100. Some develop new programming. Some creatively package channel lineups. A few are exploring the gaming space and user-authored content. A few are pioneering ways that consumers can find content they crave, among all the offerings. What good is a soap opera in Portuguese, if you

can't find it and bring it to your terminal quickly, when you want to view it? Why should we settle for 2D screens displaying a 3D world? If you haven't heard about a service called Moxi, or a gaming environment called The Sphere, you'll want to check the BP 100 especially carefully!

Good content is enabled by good technology. We had our toughest moments choosing among technology providers. Our criteria included hardware innovation – ways to move bits faster and at less cost. It also included software innovation, especially software for network management, customer service and of course customer billing. Some products seem almost boring. What good is a mile of new fiber if the plastic box, where the fiber meets the home, leaks? How does the technician test a new installation in the field, cheaply, when the customer hasn't signed on yet? How do you dig the ditch? The BP 100 brings some of these enablers to the forefront.

We have a special section for some of the great distributors who make life easier by matching technology providers and users. All of the distributors on our list have taken risks stocking new fiber technologies. All offer strong tech support. They include AMT (www.goamt.com), DF Countryman (www.dfcco.com), Multicom (www.multicominc.com) and Toner Cable Equipment (www.toner-cable.com).

Good technology has to be implemented. The BP 100 includes construction and construction management firms

as well as system integrators who concentrate on broadband networks. The list has been growing of late.

Finally, somebody needs the vision – and courage – to put up the money. BP 100 highlights the top firms that do just that. Some, like SBC and Verizon, are of course household names. But what about home builders like Pulte (mainly building for ownership) and Roseland Property (rentals and ownership), who have successfully made broadband an integral part of their marketing proposition? And what about Zoomy, Ygnition, and Capitol Broadband (all on the list), who work with developers to bring broadband to customers? Missing from the BP 100 this year are many smaller telcos and cable operators, typically rural, who have recently started to offer triple play. We'll be watching them closely for inclusion next year.

Demand. Technology. Implementation. Vision. Courage. – Steven S. Ross, Editor-in-Chief

About the Authors

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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-