

BROADBAND INVESTMENT GAINS CONTINUED IN 2014

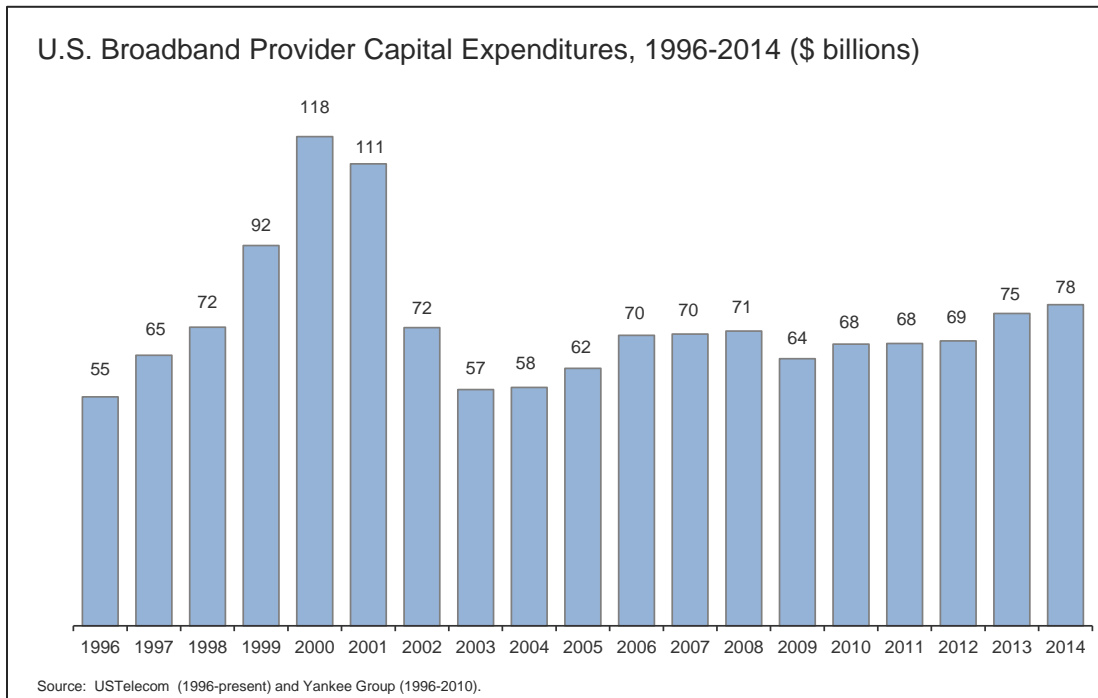
By Patrick Brogan, Vice President of Industry Analysis

U.S. broadband providers invested \$78 billion in network infrastructure in 2014, according to a new USTelecom analysis of company capital expenditures data showing spending has continued its pattern of growth since falling to \$64 billion per year in 2009 during the financial crisis. Broadband provider investment was up by \$14 billion in 2014 compared to 2009, or 22 percent. Last year alone, annual investment grew by \$3 billion, or 4 percent, after surging to \$75 billion in 2013. Furthermore, broadband providers have made \$1.4 trillion in capital investments from 1996 through 2014 (see Chart 1, U.S. Broadband Provider Capital Expenditures, 1996-2014). This release updates the data series USTelecom published [last year](#).

Through 2014 the industry continued to make significant investments in expanded broadband capability to the benefit of American consumers. Today, nearly all Americans have a choice of multiple broadband providers. According to the data from the [National Broadband Map](#), more than 96 percent of Americans now have [access](#) to fixed broadband and 88 percent of households can [choose](#) from two or more fixed providers. More than 99 percent of Americans can get mobile broadband and 97 percent can choose among three or more mobile providers. Additionally, broadband investment has resulted in ongoing upgrades and allowed providers to offer consumers ever-increasing speeds. As of mid of 2014, 99 percent of Americans could get broadband at 10 Megabits per second (Mbps) download or greater, up from 84 in mid-2010. Mobile broadband at 10 Mbps or greater was available to 98 percent of Americans, up from only 1 percent in 2010. Meanwhile fixed broadband at 50 Mbps download or greater was available to 83 percent of Americans, up from 46 percent in 2010, and 100 mbps download or greater was available to 65 percent of Americans, up from only 11 percent in 2010.

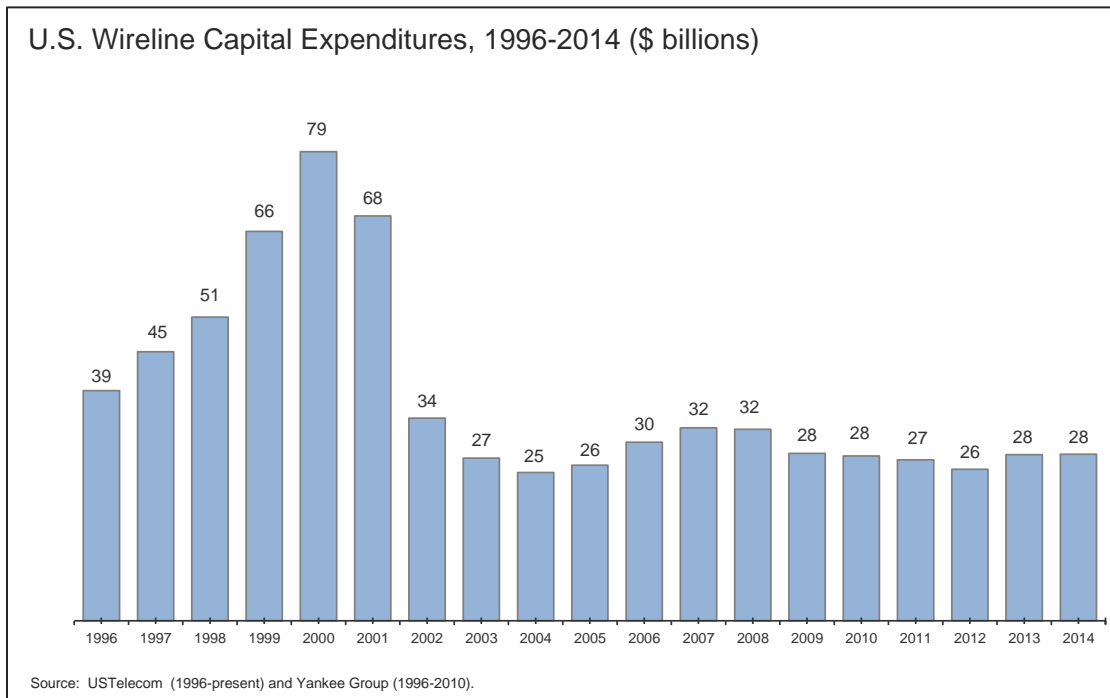
Ongoing investment in expanded broadband capacity is essential to building the communications [infrastructure of the future](#), characterized by an accelerated transition to fiber-based networks and Internet Protocol (IP), user mobility, and greater reliance on cloud-based service delivery. It enables rapid growth in [Internet usage](#) and the development of innovative network technologies and services. The new modes of communication, entertainment, information retrieval, and online commerce that we have seen are just the beginning. Innovative services based on the emerging Internet of Things and data analytics are gaining traction across the economy, and they will be utilized to their benefit in ways both foreseen and unpredictable. Thus, broadband investment can bolster U.S. international leadership in information technology, which in turn can enhance consumer welfare, productivity, and standards of living. Policies that divert resources to legacy networks, and the recent policy shift to regulate broadband providers as utilities under Title II of the Communications Act, put pressure on broadband investment via economic constraints and policy uncertainty. While the impact is hard to measure, since we do not know what investment would be absent the policy shift, it puts at risk the magnitude of and pace at which we realize these benefits over time.

Chart 1



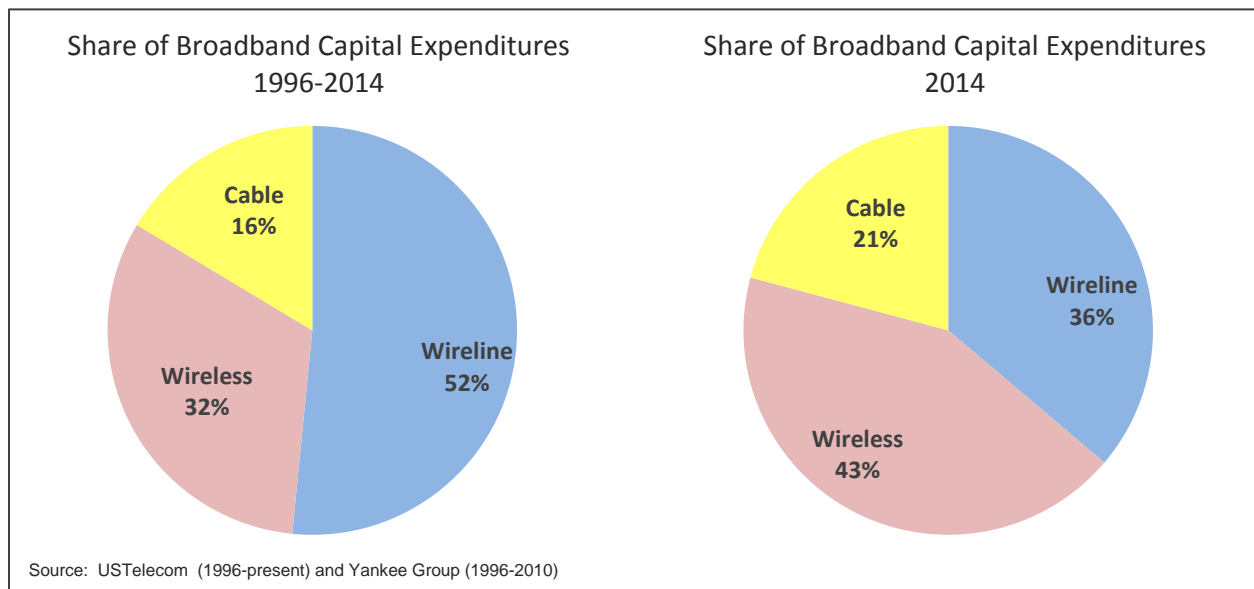
The wireline industry continued to make large capital investments last year. In 2014, the wireline industry invested \$28 billion, about the same as 2013. From 1996 through 2014, wireline providers invested more \$720 billion (see Chart 2, U.S. Wireline Broadband Provider Capital Expenditures, 1996-2014).

Chart 2



The wireline portion of the \$1.4 trillion broadband industry capital expenditures from 1996 through 2014 was 52 percent. The wireline segment continued to contribute a significant portion of industry capital in 2014: 36 percent, compared to 43 percent for wireless and 21 percent for cable (see Chart 3, Share of Broadband Capital Expenditures 1996-2014 and Share of Broadband Capital Expenditures 2014).

Chart 3

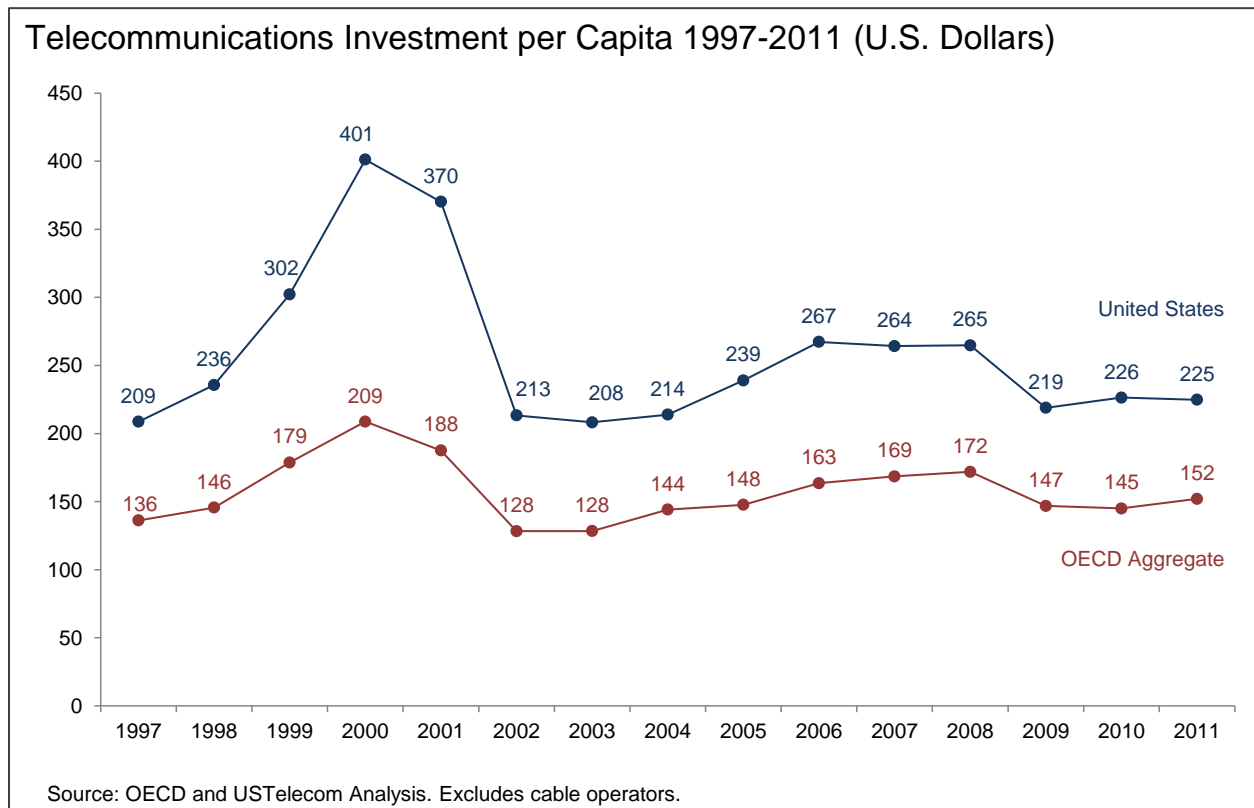


Investment by the wireline industry remains critical to modernizing our nation’s network infrastructure. Internet traffic has [grown](#) from the equivalent of 100 million DVDs per year in 2000 to more than 50 billion DVDs per year in 2014, and is expected to grow [two-and-a-half times](#) again over the next five years. Video over fixed networks constituted more than 80 percent of U.S. traffic in 2014, and it is rising. Enterprises and consumers are increasingly utilizing services such as cloud computing, tele-work, video and audio streaming, video calling and conferencing, data analytics, and other services based on the growing Internet of Things. These applications, and the data center infrastructure that delivers them, will require more wireline investment in capacity, speed, and reliability. Metro area fiber networks will have to increase capacity as more traffic moves to content distribution networks and web services, which store content and processing capability on servers closer to users for speedy delivery and minimal disruption. Long haul backbones will need more capacity to transport growing traffic across the nation and the world. Meanwhile, nearly all of U.S. mobile broadband traffic utilizes fixed network connections either through cell site backhaul or offload onto Wi-Fi enable fixed networks to alleviate cellular congestion.

The U.S. is among the world leaders in broadband investment. Data covering the last decade and a half indicate that U.S. providers invest more per capita in broadband than the average for industrialized nations comprising the Organization for Economic Cooperation and Development (OECD) (see Chart 4). In part this is a function of geography – the U.S. covers a wide geographic area and has lower population density than many OECD countries, and therefore

broadband is more costly to deploy than in many of these countries. Yet, the U.S. outperforms on several critical metrics. The U.S. has [greater facilities-based competition](#) than most of the rest of the world. According to the [European data](#), the U.S. has more widely deployed next-generation broadband service and greater availability of fourth generation wireless. According to the Cisco Visual Networking Index, the U.S. produces a disproportionate share of global Internet traffic. The U.S. also generates more Internet traffic per user or per capita compared to nearly all other countries and has [closed much of the gap](#) with world leader South Korea in recent years.

Chart 4



Conclusion

Broadband providers have invested tens of billions of dollars annually and almost a trillion and a half dollars in since 1996 in order to accommodate data traffic that has been growing continually with no signs of abating in the foreseeable future. Consumers, businesses, and the nation have benefited from broadband investment. Further investment will be essential to accommodate expected data traffic growth and enable the continued adoption of more powerful information and communications technologies. Wireline broadband providers are among the critical contributors to our nation’s innovative capacity. They will build the consumer, business, and data center networks of the future. Maximizing U.S. broadband investment in an economically efficient manner will pay off in the form of consumer welfare, business productivity, and global competitiveness.

Notes on Methodology

USTelecom analyzed capital expenditure data for wireline telecommunications, wireless telecommunications, and cable broadband providers in order to approximate industry aggregates. Other providers, such as satellite providers, telecommunications resellers, and electric utilities are excluded. Figures are rounded. Previous years may include minor revisions.

The majority of telecommunications data were taken from company financial statements, taking into account business segment reporting, mergers, and spin-offs. The analysis is subject to the reporting practices of individual companies. Capital expenditures may include investment in property, plant, and equipment; capitalized software; capitalized interest during construction; corporate, directory, and other capital expenditures; and intra-company eliminations. USTelecom made reasonable efforts to eliminate double-counting, non-U.S. investment, and non-capital spending. We made estimates for non-reporting companies.

Additional market research and government sources were consulted for comparison, including the United States Census Annual Capital Expenditures Survey, the Yankee Group Global Capex Forecast 2010, the Skyline Marketing Capex Report 2010, data from the Cellular Telecommunications & Internet Association (CTIA), New Paradigm Resources Group, and the Association for Local Telecommunications Services (ALTS). Cable data are from the National Cable & Telecommunications Association (NCTA), at www.ncta.com, citing SNL Kagan.