



## **BROADCASTING AND TELECOMMUNICATIONS**

### ***Metro Denver and Northern Colorado Industry Cluster Profile***

The broadcasting and telecommunications cluster includes companies that help deliver voice, data, and video to end users. This cluster includes landline and wireless telephone communications companies, radio and television communications services, and cable and Internet service providers.

The expansion of broadband services and telephone communications has made telecommuting a viable option for many employers and businesses. The combination of sophisticated hardware and broader service areas has also fueled a trend in teleworking, or working from any place at any time. In 2009, *Forbes* magazine recognized Denver as the eighth-most “wired” city in the U.S. and ranked Denver fifth for the number of companies offering high-speed Internet services. Also in 2009, AT&T completed an upgrade of its 3G mobile broadband network in Metro Denver and along the Front Range. The upgrade included a switch to the 850 MHz spectrum, which allows customers to receive improved wireless connectivity and coverage. AT&T also added 25 additional cell sites to boost network capacity in Denver, Aurora, Highlands Ranch, and a number of other surrounding cities.

The nine-county Metro Denver and Northern Colorado region<sup>1</sup> has a broad mix of broadcasting and telecommunications businesses. In 2009, Douglas County-based tw telecom won a \$1 million, five-year U.S. Air Force contract to provide Internet, voice, and data services at Lackland Air Force Base in San Antonio. The company also announced a second \$1.4 million U.S. Air Force contract for similar services at Peterson Air Force Base. Also in 2009, Englewood-based DISH Network announced plans to add a significant number of sales and service positions at Metro Denver call centers.

Businesses specializing in fiber optic technology also thrive in the nine-county region. In 2009, Broomfield-based Level 3 Communications announced plans to establish a wavelength network across North America for Telefonica International Wholesale Services. Under the agreement, Level 3 will serve more than 250 million customers in its largest-ever capacity commitment. Louisville-based Zayo Group – a provider of bandwidth, voice, and managed services – is preparing for more network acquisitions as a result of an infusion of new venture capital. The company has built much of its network in 23 states and 129 cities through acquisition of other fiber-optic network companies.

The nine-county region is a key location for telecommunications growth. Douglas County ranked fifth in the 250,000-499,999 population category in the *2009 Digital Counties Survey*, while the city of Aurora ranked third in the over 250,000 population category in the *2009 Digital Cities Survey*. Both surveys – compiled by e.Republic’s Center for Digital Government and Digital Communities – recognized counties and cities that provide exemplary digital service to their residents and highlighted the areas’ best practices. The Milken Institute’s *North America’s High-Tech Economy: The Geography of Knowledge-Based Industries* ranked Denver fourth among the nation’s top ten “tech poles” in the telecommunications industry. The 2009 report defines tech poles as metro areas with concentrated tech activity and employment.

Growing household demand for broadband services continues to drive network expansion and planning efforts in Colorado. According to Connect Colorado, more than 97 percent of households in the state have access to high-speed Internet service, although some of Colorado’s rural communities have more limited access. In 2009, Connect Colorado assessed 56 of the

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<sup>1</sup> The nine-county Metro Denver and Northern Colorado region consists of Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, Jefferson, Larimer, and Weld Counties.

state's 82 broadband service providers and collected data from over 2,100 survey responses by state residents. Information on broadband dispersion will be helpful as policymakers allocate funds for network expansion efforts. In 2009, the Colorado Governor's Office of Information Technology received \$2.1 million under the American Recovery and Reinvestment Act. Of the total award, \$1.6 million will be used for broadband mapping and data collection, and the remaining funds will go towards broadband planning and community outreach in Colorado.

## **Broadcasting and Telecommunications Economic Profile**

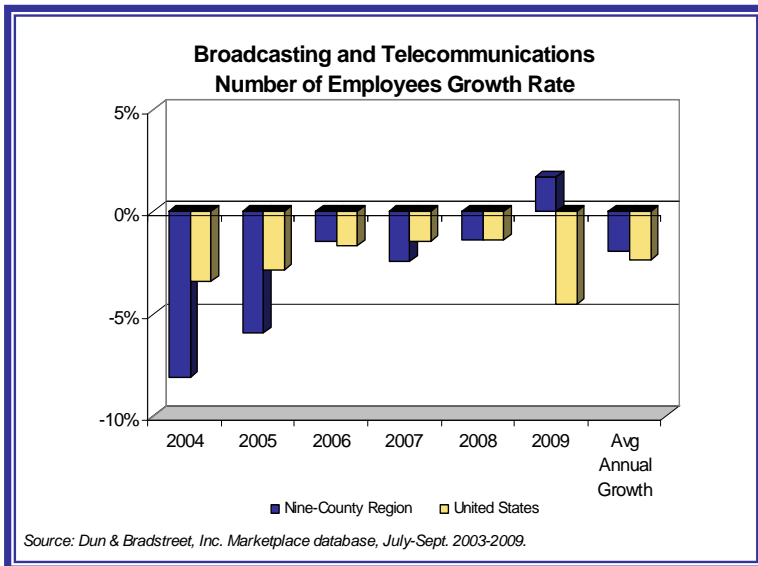
The broadcasting and telecommunications industry cluster is defined by 16, six-digit North American Industry Classification System (NAICS) codes including radio and television communications equipment, telephone communications, and cable television services.

**The nine-county region ranked fourth out of the 50 largest metro areas for broadcasting and telecommunications employment concentration in 2009.** With direct employment of about 41,390 broadcasting and telecommunications employees, the region ranked ninth out of the 50 largest metro areas in absolute employment. As of 2009, about 85 percent of Colorado's broadcasting and telecommunications employment was located in the nine-county region.

	<u>Nine-County Region</u>	<u>U.S.</u>
Direct Employment, 2009	41,390	1,354,410
Number of Direct Companies, 2009	1,790	113,130
One-Year Direct Employment Growth, 2008-2009	1.7%	-4.5%
Five-Year Direct Employment Growth, 2004-2009	-9.3%	-11.3%
Avg. Annual Direct Employment Growth, 2004-2009	-1.9%	-2.4%
Direct Employment Concentration	2.8%	1.1%

*Sources: Dun & Bradstreet, Inc. Marketplace database, July-Sept. 2003-2009; Development Research Partners.*

### **Employment**



- The broadcasting and telecommunications cluster directly employed about 41,390 people in the nine-county region in 2009.
- The telecommunications industry was hard-hit by the 2001 national recession, but the broadcasting and telecommunications cluster is beginning to recover in the nine-county region. The cluster's nine-county employment declined 9.3 percent between 2004 and 2009, compared with an 11.3 percent decline nationally.
- Broadcasting and telecommunications companies employed about 2.8 percent of the nine-county region's total employment base, compared with a 1.1 percent employment concentration nationally.

- About 77 percent of the employment in the broadcasting and telecommunications industry cluster was located in the City and County of Denver (34 percent) and in Arapahoe (28 percent) and Douglas (15 percent) Counties.

## Wages

The 2008 average annual salary for broadcasting and telecommunications employees in the nine-county region was about \$83,150, compared with \$74,200 nationwide. Given this average salary, nine-county broadcasting and telecommunications payroll totaled almost \$3.4 billion in 2008.

### Denver-Aurora-Broomfield MSA Occupational Salaries, 2008 Annual Average

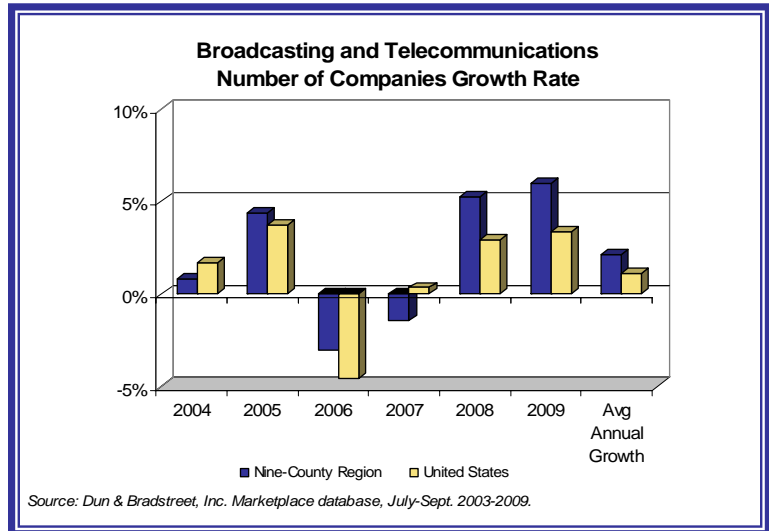
Electronics Engineers, Except Computer	\$89,650
Telecommunications Equipment Installers & Repairers	\$59,270
Telecommunications Line Installers & Repairers	\$48,550

Note: Mean annual salary data is for the ten-county Denver-Aurora-Broomfield Metropolitan Statistical Area (MSA) consisting of Adams, Arapahoe, Broomfield, Clear Creek, Denver, Douglas, Elbert, Gilpin, Jefferson, and Park Counties.

Source: U.S. Bureau of Labor Statistics, Metropolitan Area Occupational Employment and Wage Estimates, May 2008, [www.bls.gov](http://www.bls.gov).

## Companies

- Approximately 1,790 broadcasting and telecommunications companies operated in the nine-county region in 2009.
- About 77 percent of the region's broadcasting and telecommunications companies employed fewer than 10 people, while 1.3 percent employed 250 or more.
- The number of broadcasting and telecommunications companies in the nine-county region grew 11.3 percent from 2004 to 2009, compared with a 5.8 percent increase nationwide.



- A majority of the nine-county region's broadcasting and telecommunications companies were involved in either wired or wireless telecommunications or other communications services.

### Major Broadcasting and Telecommunications Companies

- Alcatel-Lucent  
[www.alcatel-lucent.com](http://www.alcatel-lucent.com)
- Avaya Inc.  
[www.avaya.com](http://www.avaya.com)
- BT Conferencing  
[www.btconferencing.com](http://www.btconferencing.com)
- Clear Channel Communications, Inc.  
[www.clearchannel.com](http://www.clearchannel.com)
- Comcast Corp.  
[www.comcast.com](http://www.comcast.com)
- DIRECTV, Inc.  
[www.directv.com](http://www.directv.com)
- EchoStar Corp.  
[www.echostar.com](http://www.echostar.com)
- Level 3 Communications, Inc.  
[www.level3.com](http://www.level3.com)
- Liberty Media Corp.  
[www.libertymedia.com](http://www.libertymedia.com)
- Qwest Communications  
[www.qwest.com](http://www.qwest.com)
- Sprint Nextel  
[www.sprint.com](http://www.sprint.com)
- T-Mobile  
[www.t-mobile.com](http://www.t-mobile.com)
- tw telecom  
[www.twtelecom.com](http://www.twtelecom.com)
- Verio  
[www.verio.com](http://www.verio.com)
- Verizon Wireless  
[www.verizonwireless.com](http://www.verizonwireless.com)
- Zayo Group  
[www.zayo.com](http://www.zayo.com)

## ***Key Reasons for Broadcasting and Telecommunications Companies to Locate in the Nine-County Region***

The region is a top 10 broadcasting and telecommunications location offering:

### **1. A central location and easy global access**

- The nine-county region's unique geographic location in the Mountain time zone makes it the largest area in the U.S. to offer one-bounce satellite uplinks. This provides companies with real-time connections to six of seven continents. (Development Research Partners)
- Denver International Airport was the fifth-busiest airport in the nation and 10th-busiest in the world in 2008. The airport is home to about 17 commercial airlines that provide scheduled nonstop service to more than 160 domestic and international destinations. (U.S. Bureau of Transportation Statistics, 2009; Airports Council International, 2009; and Denver International Airport, 2009)
- The nine-county region's central U.S. location allows convenient access as air travelers can easily reach two-thirds of the nation within two hours. Further, the region is within four hours flying time of every North American city with a population of one million or more. (Metro Denver Economic Development Corporation)
- The risk of natural disasters (hurricanes, tornados, and earthquakes) in Metro Denver is minimal, compared with locations on the east, west, and southern coasts. (National Disaster Coalition)

### **2. A large concentration of high-quality technology workers**

- Almost 36 percent of Colorado's adult population has completed a bachelor's or higher-level degree. That makes Colorado the second-most educated state in the country behind Massachusetts. (U.S. Census Bureau, 2008 American Community Survey)
- In 2009, Colorado ranked third in tech worker concentration with approximately 83 of every 1,000 private sector workers employed in technology firms. Colorado tech workers earn 97 percent more than the average private sector worker. (TechAmerica, *Cyberstates: A Complete Overview of the High-Technology Industry*, 2009)
- Colorado ranked third in the nation for funds raised per worker from the Small Business Innovation Research (SBIR) program in 2008. More SBIR funding indicates a higher level of technological sophistication. (U.S. Small Business Administration, 2009; U.S. Bureau of Labor Statistics, 2009)

### **3. Low to moderate costs of doing business**

- Colorado ranked second in the 2009 *ALEC-Laffer State Economic Competitiveness Index*, which evaluates the link between states' policies and economic performance. States that perform well on the index tend to have low regulatory and tax burdens and a sustainable approach to public spending. (American Legislative Exchange Council, 2009)
- Metro Denver office occupancy costs averaged \$26 per square foot in the third quarter of 2009, making the region's office market highly competitive with other major markets in the U.S. and Canada. (CB Richard Ellis, *Global Office Rents*, December 2009)

### **4. A pro-business environment and competitive tax structure**

- Colorado's simple corporate income tax structure is based on single-factor apportionment, which allows companies to pay taxes based solely on their sales in the state. Colorado's corporate income tax rate of 4.63 percent is one of the lowest in the nation. (State of Colorado; The Tax Foundation)
- Colorado has one of the nation's most favorable business tax climates. The state ranked among the top 15 in the nation on the Tax Foundation's *2010 State Business Tax Climate Index*, which measures how corporate and individual income taxes, property and sales taxes, and unemployment insurance tax affect economic activity. (The Tax Foundation, 2009)

## 5. An overall better quality of life

- Denver ranked first among the nation's most desirable places to live in a 2008 poll by the Pew Research Center. Denver was a consistent favorite when survey results were cross-tabulated by gender, income and education, and political preference. (Pew Research Center, 2009)
- Colorado residents enjoy an active, outdoor lifestyle. Two Colorado cities won top-five honors in the 2009 "Fittest Cities" ranking by *Men's Fitness* magazine. Colorado Springs ranked second and Denver ranked fourth. Denver's park acreage, air quality, outdoor environment, and other factors contributed to the city's high ranking. (*Men's Fitness*, 2009)
- Metro Denver ranked 13th in the 2009 "Best Cities for Singles" ranking by *Forbes* magazine. Criteria included the cost of living alone, nightlife, and culture. Denver received particularly high scores for cost of living and job growth prospects. (*Forbes*, 2009)
- Colorado has the nation's lowest rate of adult obesity (18.9 percent) and is the only state with an obesity rate below 20 percent. (Trust for America's Health, 2009)
- Metro Denver voters approved the funding of FasTracks in November 2004. FasTracks is a \$6.5 billion comprehensive plan for the design and construction of high-quality, metro-wide transit service and facilities. FasTracks will vastly improve mobility throughout the region.

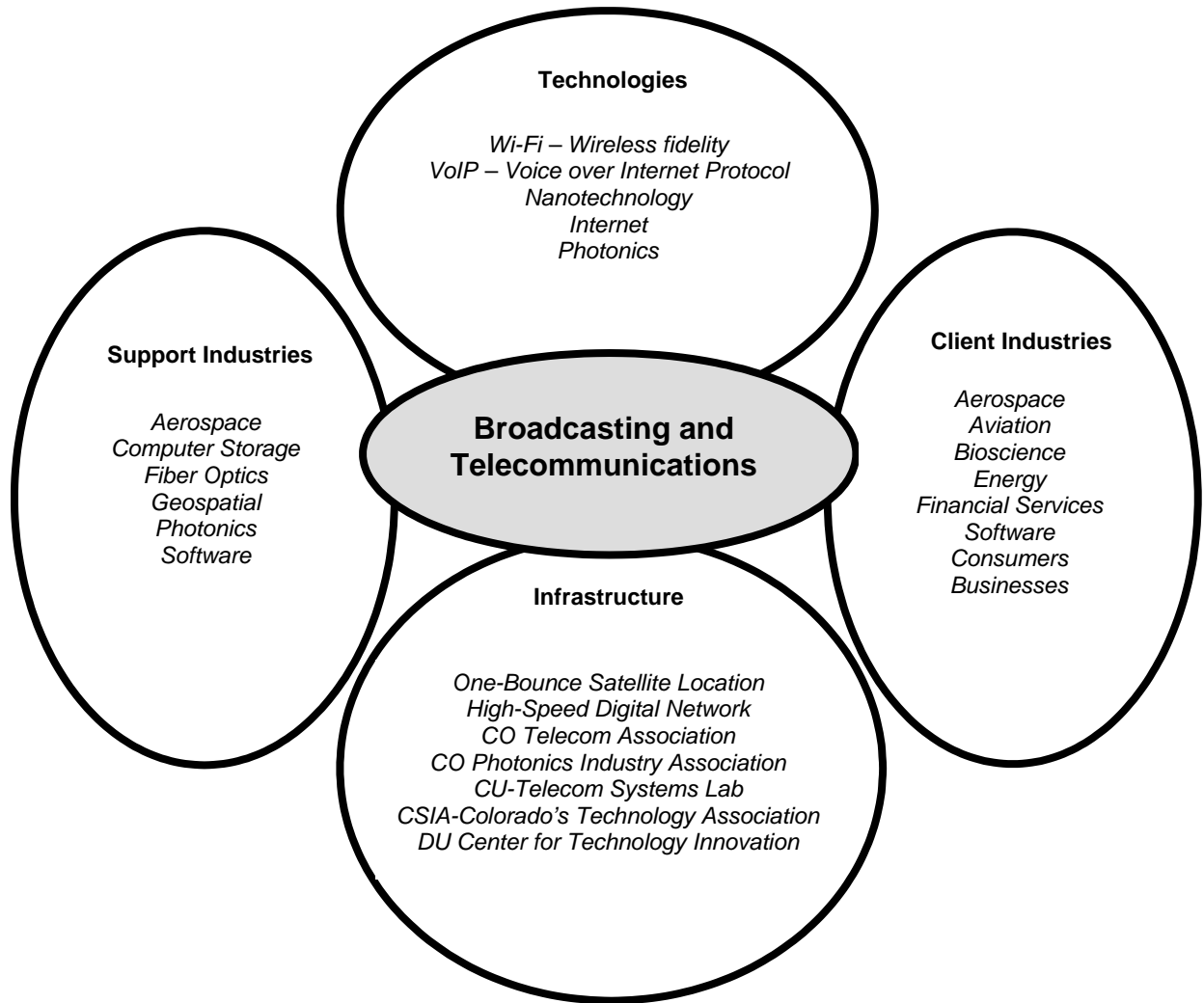
### ***Broadcasting and Telecommunications Industry Cluster Definition***

<b>NAICS Code*</b>	<b>NAICS Description</b>	<b>SIC Code</b>	<b>SIC Description</b>
334210	Telephone apparatus mfg.	3661	Telephone & telegraph apparatus
334220	(P) Radio & television broadcasting & wireless communications equip. mfg.	3663	Radio & tv communications equip.
334290	Other communications equip. mfg.	3669	Communications equip. NEC
335921	Fiber optic cable mfg.	3357	Drawing & insulating of nonferrous wire
335929	(P) Other communication & energy wire mfg.	3357	Drawing & insulating of nonferrous wire
515111	Radio networks	4832	Radio broadcasting stations
515112	Radio stations	4832	Radio broadcasting stations
515120	Television broadcasting	4833	Television broadcasting stations
515210	Cable networks & other subscription prog.	4841	Cable & other pay television services
517110	Wired telecommunications carriers	4813	Telephone communication except radio
517110	Wired telecommunications carriers	4822	Telegraph & other communications
517110	Wired telecommunications carriers	4841	Cable & other pay television services
517110	Wired telecommunications carriers	7375	Information retrieval services
517210	Wireless telecommunications carriers (except satellite)	4812	Radiotelephone communication
517210	Wireless telecommunications carriers (except satellite)	4899	Communication services NEC
517210	Wireless telecommunications carriers (except satellite)	7375	Information retrieval services
517410	Satellite telecommunications	4899	Communication services NEC
517911	Telecommunications resellers	4812	Radiotelephone communication
517911	Telecommunications resellers	4813	Telephone communication except radio
517919	(P) All other telecommunications	4899	Communication services NEC
517919	(P) All other telecommunications	7375	Information retrieval services
519130	(P) Internet publishing & broadcasting & web search portals	8999-0800	Communication services
561499	(P) All other business support services	7389-1004	Teleconferencing services

\*(P) indicates that only part of the NAICS industry category is represented in the industry cluster definition.

Note: NEC indicates "not elsewhere classified."

# Broadcasting and Telecommunications Industry Cluster Relationships



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