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 nine-county Metro Denver and Northern Colorado region is a key distribution hub, making fast Internet connections a necessity in the region. Denver ranked fifth on CNBC’s list of “America’s Most Wired Cities” with an average download speed of 10.2-megabits per second (Mbps). Further, a number of telecommunication carriers in the nine-county region are expanding their fourth-generation mobile broadband, long-term evolution network, or 4G LTE. AT&T plans to invest at least $100 million to upgrade its nine-county region wireless network. The company is adding new fiber-optic connections, cell sites, and specialized antenna systems for improved Internet connectivity and call quality. Verizon Wireless expanded its 4G LTE network in the region in 2010 to include two cities in the Denver South region – Highlands Ranch and Parker – in addition to Broomfield, Golden, Fort Collins, and Colorado Springs. The Verizon Wireless network has download speeds of up to 10 times faster than the 3G network.

The Denver South region's telecommunications industry is rapidly evolving and is one of the region’s largest clusters, with more than 15,600 employees working in nearly 420 companies. Notably, employment in the Denver South region's telecommunication cluster accounted for roughly 39 percent of all telecommunications employment in the nine-county region.

- Arapahoe County-based EchoStar Technologies deployed three new, high-definition, set-top boxes that support cloud-based TV applications for cable operators. The boxes are pre-loaded with Internet protocol-based content management features and are optimized to support the company’s new Aria™ ‘ecosystem of hosted TV services.

- Satellite Internet provider WildBlue Communications Inc. moved its Greenwood Village headquarters to Parkside Office Plaza in Douglas County. The company plans to launch its ViaSat1 satellite to support its satellite broadband service. The 12 Mbps service will be faster than the traditional 1.5 Mbps offered to WildBlue's current customers and will be available to customers nationwide in 2012.

- California-based RingCentral Inc. opened an office in the Denver Tech Center. The company provides cloud-based business phone systems and cited the region’s high quality of life, talented labor force, and easy access to the West Coast as key factors in its location decision.

- Video rental chain Blockbuster – purchased last year by Douglas County-based DISH Network – relocated from Texas to the DISH campus during the summer of 2012. The move will create 150 management jobs, some of which may be filled by relocating Blockbuster employees, and will allow DISH and Blockbuster to better leverage their resources.

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

2 The Denver South region consists of zip codes 80111, 80112, 80124, 80126, 80129, 80130, 80134, and 80237.
Greenwood Village-based WideOpenWest (WOW) secured $3 billion in financing commitments from Morgan Stanley, Credit Suisse, and other investment companies to purchase Georgia-based Knology. The $1.5 billion deal would expand WOW’s market to 13 states and could reach more than 800,000 customers with its digital video and high-speed Internet services.

Denver-based Alpine Access Inc. expanded its Denver Tech Center facility. The company’s headquarters is located in downtown Denver and uses home-based agents to provide customer service and tech support.

Comcast Corp. moved its expanded occasional satellite operations into a new operations center that could house a significant number of workers in the Inverness Business Park in Douglas County. The new center will open as Comcast consolidates three centers in the company’s western region, which includes Colorado and 10 other states.

BROADCASTING AND TELECOMMUNICATIONS ECONOMIC PROFILE
The broadcasting and telecommunications industry cluster consists of 16, six-digit North American Industry Classification System (NAICS) codes including radio and television communications equipment, telephone communications, and cable television services.

<table>
<thead>
<tr>
<th></th>
<th>Denver South</th>
<th>Nine-County Region</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Employment, 2011</td>
<td>15,620</td>
<td>40,500</td>
<td>1,221,680</td>
</tr>
<tr>
<td>Number of Direct Companies, 2011</td>
<td>420</td>
<td>2,640</td>
<td>171,860</td>
</tr>
<tr>
<td>One-Year Direct Employment Growth, 2010-2011</td>
<td>-6.4%</td>
<td>-0.5%</td>
<td>-3.6%</td>
</tr>
<tr>
<td>Five-Year Direct Employment Growth, 2006-2011</td>
<td>6.8%</td>
<td>-4.5%</td>
<td>-16.3%</td>
</tr>
<tr>
<td>Avg. Annual Direct Employment Growth, 2006-2011</td>
<td>1.3%</td>
<td>-0.9%</td>
<td>-3.5%</td>
</tr>
<tr>
<td>Direct Employment Concentration</td>
<td>7.5%</td>
<td>2.3%</td>
<td>0.8%</td>
</tr>
</tbody>
</table>


Broadcasting and Telecommunications Employment
• The broadcasting and telecommunications cluster directly employed approximately 15,620 people in the Denver South region in 2011.

• Broadcasting and telecommunications companies employed 7.5 percent of the Denver South region’s total employment base, compared with 2.3 percent and 0.8 percent employment concentrations in the nine-county region and nationwide, respectively.

• More than 78 percent of the Denver South region’s broadcasting and telecommunications cluster employees provided telephone communication and cable and other subscription services.

Wages
The 2010 average annual salary for broadcasting and telecommunications employees in the nine-county region was $89,660, compared with $72,970 nationwide. Total payroll for the broadcasting and telecommunications cluster in the nine-county region exceeded $3.6 billion in 2010.
Denver-Aurora-Broomfield MSA Occupational Salaries, 2010 Annual Average

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Salary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electronics Engineers, Except Computer</td>
<td>$90,180</td>
</tr>
<tr>
<td>Telecommunications Equipment Installers &amp; Repairers</td>
<td>$60,660</td>
</tr>
<tr>
<td>Telecommunications Line Installers &amp; Repairers</td>
<td>$50,400</td>
</tr>
<tr>
<td>Broadcast Technicians</td>
<td>$45,910</td>
</tr>
</tbody>
</table>


Broadcasting and Telecommunications Companies
- Approximately 420 broadcasting and telecommunications companies operated in the Denver South region in 2011.
- Nearly 65 percent of the Denver South region’s broadcasting and telecommunication companies employed fewer than 10 people, while 3.6 percent employed 250 or more.
- The majority of the Denver South region’s broadcasting and telecommunications companies were located in Arapahoe (53 percent) and Douglas (36 percent) Counties.

**Major Broadcasting and Telecommunications Companies**

- Alcatel-Lucent
  www.alcatel-lucent.com

- AT&T Inc.
  www.att.com

- Avaya Inc.
  www.avaya.com

- Clear Channel Communications, Inc.
  www.clearchannel.com

- Comcast Corp.
  www.comcast.com

- DISH Network
  www.dishnetwork.com

- DIRECTV, Inc.
  www.directv.com

- EchoStar Corp.
  www.echostar.com

- Jones International
  www.jones.com

- Liberty Media Corp.
  www.libertymedia.com

- Sprint Nextel
  www.sprint.com

- tw telecom
  www.twtelecom.com

- Verizon Wireless
  www.verizonwireless.com

- WildBlue Communications, Inc.
  www.wildblue.com

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