

Massachusetts Network Communications Council

Public Policy Platform 2005

Executive Summary

MassAdvantage – The Network Communications Industry in Massachusetts

is comprised of a healthy mix of emerging and established businesses employing over 102,000 workers in the state. In addition to major carriers and suppliers that provide the wireline, cable, and wireless infrastructure, there are a multitude of companies in the Commonwealth who manufacture the switches that make the network thrive, and create the applications that meet and drive consumer demand.

Innovation and entrepreneurship are the engines of growth for any region, and the Commonwealth enjoys a 30+ year record of entrepreneurs establishing new network communications businesses, positioning Massachusetts as an international center for network communications. There are many vibrant Massachusetts companies poised to capitalize on market opportunities driven by consumer, business, and mobile demand. (see sample company list).

The state's well-known resources including, highly talented and innovative professionals, renowned education institutions, well-funded research and development labs and an active and well-regarded venture capital community, provide Massachusetts with the foundation to become a world class business center.

But, the Commonwealth is in competition, and the states, and countries, that create the most energized business environment will reap the rewards of new jobs and a better economy. As a community we need to leverage resources and help existing Massachusetts' companies and entrepreneurs find success, and attract more seasoned companies to the state.

How policy makers can help Massachusetts remain competitive:

Pro Growth Tax Policies

- Oppose new taxes, fees or assessments on telecommunication services, equipment and infrastructure at federal, state and municipal levels.
- Support investment tax credits for companies investing in the expansion of broadband services and infrastructure and facilities based communications technology.
- Work with the governor and legislature on economic development policies that improve the cost of doing business in Massachusetts, attract new businesses to the state and encourage existing businesses to invest.

Infrastructure/ Broadband

- Competitive market forces should be the principal means of increasing infrastructure deployment, including expanded broadband access.
- New technologies and services (e.g., VoIP) should develop with little or no regulation, so the development and deployment of next generation networks are not stifled.

- Eliminate harmful state and municipal laws, rules, and regulations that inhibit high-speed deployment at the local level.
- Include broadband investment and deployment in local economic development plans.

Technology Transfer

- On a federal level, continue to fund the key federal research programs: National Science Foundation (NSF) and the Defense Advanced Research Projects Agency (DARPA), and ensure that federally funded research draws on Massachusetts companies for their expertise.
- On the state level, create R&D funding stimuli, such as matching funds for identified federal grants sought by local universities and consortia.
- Support university and industry consortia (like the Massachusetts Technology Development Corporation, MTDC), to encourage collaborative activities that may result in new technologies.

International Trade & Partnerships

- Raise the visibility of Massachusetts network communications companies among buyers from key international markets. Dedicate resources to help companies facilitate and continue to leverage relationships with international buyers and examine trade agreements.
- Network communications companies operate in a global marketplace, and require absolute flexibility to source all aspects of their operations worldwide, including workforce, without restrictions.

Workforce

- Support entrepreneurial programs that drive innovation, and IT preparedness initiatives for all students, specifically the BATEC and CITI program.
- Identify, streamline and create a template of federal and state funds directed toward training workforce preparedness K- adult.

FAST FACTS

- More than 102,000 people work in the network communications industry in the Commonwealth of Massachusetts, which represents about 3.1 percent of the nation's network communications jobs.
 - Employment increased in 2004 in four of the seven network communications segments: communications software, wholesale trade, retail trade, and construction.
 - ♣ Communications services is the largest segment of the industry in Massachusetts, with 32,015 people employed today
 - Small and mid-sized companies dominate the state's employment
 - ♣ Mid-sized firms with 50 to 249 employees account for 34 percent of all those employed in the industry.
 - ♣ Firms with 1-49 employees account for another 31 percent of all Massachusetts network communications jobs.

The following Network Communications companies are headquartered in Massachusetts and/ or are major employers:

Acopia Networks: founded in 2002 and headquartered in Lowell, MA, Acopia makes switches that enable businesses to manage geographically separated storage systems as if they were located in one building. Acopia's switches "virtualize" the storage systems, which pools storage resources to boost capacity.

Airvana: founded in 2000 and headquartered in Chelmsford, MA, Airvana, Inc. is a global leader in developing All-IP 3G Radio Access Network infrastructure equipment for wireless carriers and global infrastructure suppliers such as Nortel Networks and Ericsson. Airvana currently employs over 200 highly experienced professionals.

AT&T: For more than 125 years, AT&T (NYSE "T") has been known for unparalleled quality and reliability in communications. Backed by the research and development capabilities of AT&T Labs, the company is a global leader in local, long distance, Internet and transaction-based voice and data services.

Avici Systems: headquartered in Billerica, MA, Avici is a leading provider of high-performance core routing solutions designed to deliver the scalability, reliability, and performance that carriers need to support a wide range of applications while lowering the total cost of building and operating data networks.

bcgi: founded in 1988 and headquartered in Bedford, MA, *bcgi* develops network management and billing services that enable wireless operators to rapidly deploy and manage innovative voice and data services for subscribers.

Broadbus Technologies: founded in 1999 and headquartered in Boxborough, MA, Broadbus creates innovative servers that support streaming video for cable operators deploying Video-On-Demand (VOD), Subscription VOD, and emerging Television-On-Demand services.

Brooktrout Technology: founded in 1984 and headquartered in Needham, MA Brooktrout Technology is a leading supplier of media processing, network interface, call control and signal processing products that enable the development of applications, systems and services for both the New Network™ (packet-based) and the traditional telephone (TDM) network.

Colubris Networks: headquartered in Waltham, MA, Colubris Networks manufactures and sells an award-winning wide-area networking product family to service providers and enterprises worldwide. Its WLAN System enables superior customer flexibility and control in the secure delivery of voice, data, and multimedia Wi-Fi applications and services to mobile workers, customers, partners, suppliers and guests.

Comcast: Comcast Cable is a division of Comcast Corporation, a developer, manager and operator of broadband cable networks and provider of programming content. With a presence in 22 of the top 25 United States markets, Comcast is one of the leading communications, media and entertainment companies in the world. The company serves more than 21 million customers and employs over 1000 people in Massachusetts

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Comverse: headquartered in Wakefield, MA, Comverse is the leading provider of software and systems that enable multimedia value added services in wireless and wireline networks. Comverse has nearly two decades of experience helping service providers achieve their business goals through the deployment of enhanced telecommunication services.

Concord Communications (now Computer Associates): headquartered in Marlboro, MA, Concord Communications provides an integrated solution that enables companies to map Information Technology services to business needs, measure their actual end-user experience, and manage their applications, systems, and networks. More than 3,000 companies worldwide rely on Concord's eHealth® Suite, and its components, to optimize IT services to drive business success.

Enterasys: headquartered in Andover, MA, Enterasys provides intelligent, best-in-class infrastructure solutions to enterprise customers. With one of the industry's broadest product portfolios— plus a full range of service and support offerings—Enterasys is uniquely qualified to meet the evolving needs of today's businesses.

iBasis: founded in 1996, and headquartered in Burlington, MA, iBasis is one of the ten largest carriers of international voice traffic in the world. They deliver toll-quality international call completion services and provide the global infrastructure that enables enhanced services such as conferencing and calling cards to expand to international markets quickly and efficiently.

Integral Access: founded in 1996 and headquartered in Chelmsford Massachusetts, is a privately held company that develops, manufactures and markets next generation access equipment for the delivery of integrated business and residential services by service providers.

Lucent: With support from over 1000 employees in Massachusetts, Lucent Technologies designs and delivers the systems, services and software that drive next-generation communications networks. Backed by Bell Labs research and development, Lucent uses its strengths in mobility, optical, software, data and voice networking technologies, as well as services, to create new revenue-generating opportunities for its customers, while enabling them to quickly deploy and better manage their networks.

NMS Communications: headquartered in Framingham, MA, NMS Communications is a leading provider of technologies and solutions for mobile applications and infrastructure. NMS products enable new mobile voice, data and video applications and improve the performance and quality of wireless networks

RSA Security: headquartered in Bedford, MA, RSA Security helps organizations protect private information and manage the identities of the people and applications accessing and exchanging that information. RSA Security's portfolio of solutions—including identity & access management, secure mobile & remote access, secure enterprise access, secure transactions and consumer identity protection —are all designed to provide the most seamless e-security experience in the market.

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Seachange: founded in 1993 and headquartered in Maynard, MA, SeaChange provides digital video systems that are changing television. Its powerful server and software systems enable television operators to provide new on-demand services and to gain greater efficiencies in advertising and content delivery.

Sonus Networks: founded in 1997 and headquartered in Westford, MA, Sonus Networks, Inc., is a leading provider of voice infrastructure products for the new public network. Its proven solutions enable service providers to quickly and effectively deploy an integrated network capable of carrying both voice and data traffic, and to deliver a range of innovative, new services.

Sun Microsystems Since its inception in 1982, a singular vision - The Network is The Computer - has propelled Sun Microsystems, Inc. (Nasdaq: SUNW) to its position as a leading provider of industrial-strength hardware, software, and services that make the Net work. Sun can be found in more than 100 countries and employs close to 1000 people in the Commonwealth.

Verizon A Fortune 20 company, Verizon Communications (NYSE:VZ) employs over 2000 people in Massachusetts and is one of the world's leading providers of communications services, with approximately \$68 billion in annual revenues. Verizon companies are the largest providers of wireline and wireless communications in the United States. Verizon is also the largest directory publisher in the world, as measured by directory titles and circulation. Verizon's international presence includes wireline and wireless communications operations and investments, primarily in the Americas and Europe.

MNCC Complete Policy Platform

MNCC ISSUES

Pro Growth Tax Policies

Any federal, state or municipal effort to bolster sagging tax revenues by taxing Internet use, communications services or infrastructure would have serious negative repercussions to the network communications industry. Ultimately, consumers and businesses will feel the burden of these taxes, as network communications manufacturers and providers must pass these assessments along to their customers.

In addition, such tax policies would stifle new investment in network communications infrastructure and technology thereby negatively impacting further growth and availability of all types of communications services. By increasing the cost of doing business, and thus costs to customers, such taxes would adversely impact the network communications sector and the state's economy as a whole.

Recommendations:

- Oppose new taxes, fees or assessments on communication services, equipment and infrastructure at federal, state and municipal levels.
- Taxation should be carrier-and technology-neutral.
- Support investment tax credits for companies investing in the expansion of broadband services and infrastructure and facilities based communications technology.
- Support employment tax credits for companies that increase Massachusetts employment by a measured percentage.
- Work with the governor and legislature on economic development policies that improve the cost of doing business in Massachusetts, attract new businesses to the state and encourage existing businesses to invest.
- Update and simplify tax code to encourage entrepreneurial ventures in the state.
- State economic development programs should encourage job growth in all industry sectors, rather than targeted to one.

Infrastructure/ Broadband

The network communications industry is an integral part of the state's economy. Thousands of Massachusetts companies supply the industry with hardware, software, products and services. With this broad impact, public policies that encourage expanded private investment in new communications infrastructure will have a direct and positive impact on the state's economic vitality, and help retain the state's status as an industry leader.

The MNCC supports public policies that encourage private infrastructure investments, encourage the creation and deployment of innovative technologies and applications, and promote the use of network communications products and services.

Recommendations:

- Competitive market forces should be the principal means of increasing infrastructure deployment, including expanded broadband access.
- Any regulation should reflect the dynamics of the marketplace and encourage technological innovation and consumer choice. Policy makers should amend or remove regulation that discourages industry growth.
- New technologies and services (e.g., VoIP) should develop with little or no regulation, so the development and deployment of next generation networks are not stifled.
- Governments should act where competitive market forces have not succeeded (for example encouraging expanded broadband deployment through investment tax credits), or where focused public sector spending on network communications products and services (particularly from companies with Massachusetts operations) can encourage further private sector investment in technology and deployment.
- Government should make available the necessary radio spectrum for the deployment of advanced communications services.
- State government should be a leader in terms of its own procurement and use of IT infrastructure
- Ensure nondiscriminatory access to buildings and clear rights-of-way for carriers to deploy broadband.
- Eliminate harmful state and municipal laws, rules, and regulations that inhibit high-speed deployment at the local level and include broadband investment and deployment in local economic development plans.

Technology Transfer

It is critical that Massachusetts and the federal government initiate and maintain policies that support the commercialization of innovative technologies through stronger linkages between Universities, access to capital, and entrepreneurial companies.

Recommendations:

- On a federal level, continue to fund the key federal research programs: National Science Foundation (NSF) and the Defense Advanced Research Projects Agency (DARPA), and ensure that federally funded research draws on Massachusetts companies for their expertise.
- On the state level, create R&D funding stimuli, such as matching funds for identified federal grants sought by local Universities and consortia.
- Support university and industry consortia (like the Massachusetts Technology Development Corporation, MTDC), to encourage collaborative activities that may result in new technologies.

Unemployment Insurance

MNCC supports reforming the UI system in the Commonwealth to reflect a system that pays benefits to people who, through no fault of their own, are out of work, and at the same time, be more in line with the rest of the nation.

Recommendations:

- **Provide Benefits for 26 Weeks** – In all other 49 states, UI benefits for eligible workers last 26 weeks, in Massachusetts, benefits are paid for 30 weeks. The federal UI program currently continues benefits beyond the expiration of every state's benefits so that any eligible person can receive up to a total of 39 weeks coverage. It is time for Massachusetts to be in line with the rest of the nation, by providing 26 weeks of coverage.
- **Adjust Eligibility Requirements** – Massachusetts currently allows workers with limited attachment to the workforce to receive full benefits. An individual who has been working for 15 weeks is eligible for the same benefits as someone who has been in the workforce for 20 years. MNCC encourages policy leaders to be in line with other states and at minimum, extend the 15-week work requirement to 20 weeks.
- **Make System Fair** – The UI experience rating system must be restructured to prevent companies from benefiting if they engage in the practice of consistently hiring and letting workers go in a deliberate attempt to shift payroll costs to the UI trust fund. It is not fair to employers with positive employment histories.
- **Restructure Rate-Setting Mechanism** - Currently, in an effort to avoid massive rate hikes, the Legislature must manually override the existing statute and set the UI rate each year. This process is often completed late in the calendar year leaving employers to amend their already set business plans. A new rate-setting mechanism will make UI costs more stable and predictable without the need for annual legislative action.

International Trade & Partnerships

Recognizing that there are enormous opportunities in overseas markets, MNCC advocates government policies that encourage strong relations with other countries, and limit complicated or unclear customs procedures.

Recommendations:

- Raise the visibility of Massachusetts network communications companies among buyers from key international markets.
- Network communications companies operate in a global marketplace, and require absolute flexibility to source all aspects of their operations worldwide, including workforce, without restrictions.
- Promote the state's export services aggressively to assist Massachusetts companies in exporting products and services to global markets.
- Policy makers should focus on increasing jobs in Massachusetts, though added-value training (see Workforce), and development of foreign direct

investment. Programs must encourage international companies to place personnel in Massachusetts.

- Dedicate resources to help companies facilitate and continue to leverage relationships with international buyers and examine trade agreements.
- Clarify and streamline export regulatory process and customs procedures.
- Limit import and export duties on network communications and IT products.

Workforce

A technically savvy, literate workforce is essential in the fast-changing network communications industry. It is critical that the public and private sector work together to support a K-16 education system, and adult worker training programs, that provide the highly skilled workers necessary to sustain a knowledge-based economy.

The MNCC supports programs and groups that provide technical training and awareness for students and teachers in the K-12 system. Working with groups like BATEC, CITI, Tech Boston, and the Engineering in Mass Collaborative, the MNCC hopes to encourage students to pursue post secondary education degrees in a technical field.

Recommendations K-12:

- Encourage the integration of proven technology into curriculum development, training, or mentoring activities
- Provide broad-based predictable state funding so schools can make a true investment and commitment to technology in their schools
- Support collaboration and partnerships between the business world and schools to prepare students to be part of the 21st century workforce
- Support teacher professional development activities that encourage the infusion of technology into their classroom.

Recommendations for Post Secondary:

- Support initiatives that promote IT preparedness for all students, specifically the BATEC and CITI program.
- Support engineering and entrepreneurial programs that drive innovation.

Recommendations for Adult Worker training:

- Identify and streamline federal and state funds directed toward adult worker training.
- Create a template of the State's funding streams and programs designed to administer training.
- Work closely with industry on identifying training needs, and curriculum development.
- Aggressively promote the state's funding streams for worker training and support.