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Massachusetts Broadband Institute
Massachusetts Technology Collaborative
75 North Drive
Westborough, MA 01581

Re: AT&T Response to "Call for Solutions"

To Whom It May Concern:

AT&T appreciates the opportunity respond to the Massachusetts Broadband Institute's Call for Solutions, and we applaud the MBI for undertaking such a project.

AT&T is committed to helping find solutions to increase broadband access for all Massachusetts residents because increased access to broadband is good for the Massachusetts economy and for AT&T. A recent Brookings Institute study found that each percentage point of broadband adoption adds about 300,000 private sector jobs each year to the U.S. economy.¹ The study also found that broadband adoption drives employment higher in both manufacturing and services, especially in finance, education and health care, which are all key sectors of the Massachusetts economy².

We offer the following general comments and suggestions to enhance the MBI's ability to achieve its goal of increasing broadband deployment in un-served areas.

AT&T recognizes that, in some instances, an exclusive market-based approach to broadband deployment may not provide adequate coverage in certain areas due to factors such as population density, geography and corresponding capital and operational costs. Therefore, a public-private enterprise envisioned by organizations like ConnectedNation³

¹ Brookings Institute, "The Effects of Broadband Deployment on Output & Employment: A Cross-sectional Analysis of U.S. Data," June 2007, page 2.

² Brookings Institute, "The Effects of Broadband Deployment on Output & Employment: A Cross-sectional Analysis of U.S. Data," June 2007, page 2

³ Connected Nation is a national non-profit 501(c)(3) organization that expands access to and use of broadband Internet and the related technologies that are enabled when individuals and communities have the opportunity and desire to connect. Connected Nation works in multiple states to engage community stakeholders, state leaders and technology providers to develop and implement technology expansion programs with core competencies centered around our mission to improve digital inclusion for people and places previously underserved or overlooked. See www.connectednation.org

and the MBI may be warranted. However, AT&T respectfully suggests that the MBI should, as part of its recommendations, adopt a model that also encourages continued stand-alone private investment in broadband infrastructure. In order to maximize the MBI's capital investment and leverage private partnership participation, the MBI should also adopt a model that is consistent with existing Federal and state laws, rules and regulations in order not to raise the cost of MBI capital or create uncertainty about the effect on capital investment, factors which could act as a disincentive to deploying broadband in hard-to-reach areas. As such, AT&T supports an MBI broadband solution that bridges the current gap that is holding back deployment of next-generation broadband networks, but maintains as an objective the eventual as well as concurrent private sector ownership of these next generation broadband networks.

AT&T leads the industry in expanding consumer wireless high-speed connectivity and has invested millions of dollars in its wireless network in Massachusetts. This network investment includes expansion of AT&T's 3G footprint and bringing better and faster service to our customers, including many in Western Massachusetts. We continue to move aggressively to deploy the latest 3G technology in Massachusetts, and offer the nation's fastest 3G network.

Deployment of a wireless broadband network is not without its challenges. Factors such as terrain and vegetation have significant impact on the propagation of wireless signals, particularly since the frequencies used by wireless providers are generally line-of-sight. Mountains, hills and thick forests (like those found in many of the un-served areas in Massachusetts) can impede or mask transmission to given locations, necessitating a greater number of cell sites to provide sufficient coverage. For example, a single tower on a flat, open plain may be able to provide adequate service in an area within a several kilometer radius of a cell tower, while more difficult topography could require multiple towers to provide the same level of service in an area of equal geographic size.

Capital and operational costs, including tower construction, backhaul facilities, real estate/leases and electricity costs, are also key factors in private sector decisions to deploy additional cell sites. Because construction costs are often higher when accessing hard to reach sites or when the new site is far from existing facilities, a cell site in a particularly remote location usually has higher than average costs to establish utilities and cell site backhaul connections. In addition, most property owners require lease agreements with a ten-year period, which is long for sites with such an uncertain return on investment. As a result, decisions to build new facilities are not only determined by up front capital costs, but also by the on-going expenses associated with the term of those facilities.

Moreover, many of the areas identified as un-served in Massachusetts have relatively low population densities and expected usage. Areas with low population densities and expected usage consequently have disproportionately higher operating expenses per user (or usage) because a higher minimum operating cost would have to be borne by a small


number of users. In this situation, demand aggregation strategies such as those utilized in ConnectKentucky⁴ would be critical to deploying broadband services.

Another area that the MBI should focus on when making its recommendations is whether the underlying power and backhaul infrastructure is in place. Without the underlying power and backhaul infrastructure in place, wireless tower costs do not even come into play. Additionally, to the extent the state readily makes available state-owned lands and facilities for siting, it would further help private investment in broadband infrastructure and coverage. The federal government and some states have already attempted to facilitate wireless coverage this way.

One additional challenge that the MBI should consider is the impact of the requirement that the Commonwealth own title to the infrastructure and assets. Although a well-meaning protective measure presumably designed to guarantee the state's significant contribution, the requirement could act as a disincentive for providers to make the additional investment necessary to provide the service. Ownership by an entity other than the provider affects a provider's ability to control quality of service for customers, and providing high quality service to consumers is critical to maintaining customer satisfaction and increasing customer demand. While there may be gaps in the private sector cost-benefit analysis that have impeded wireless broadband infrastructure buildout—gaps that may be bridged by MBI—the state should view its current efforts as an interim measure. For this reason, as part of an “exit strategy” and to overcome the title challenge, the state should consider ways to eventually allow the providers to fully assume ownership of these broadband networks.

AT&T appreciates the opportunity to participate in this important project. Please do not hesitate to contact me if you have any questions.

Sincerely,



Michelle Consalvo
Vice President External Affairs - New England

⁴ The Economic Impact of Stimulating Broadband Nationally, A Report from Connected Nation, Inc.
February 21, 2008

Solution Cover Sheet

Name of Respondent Organization AT+T			
Mailing Address 99 Bedford St. Ste 420	City/Town Boston	State MA	Zip Code 02111
Telephone 617-574-3148	Fax 617-574-3120	Respondent Web Address www.att.com	
Name of Primary Contact (Individual) Michelle Consalvo			
Primary Contact Title VP External Affairs - New England		Contact e-mail address mconsalvo@att.com	Direct Telephone # 617-574-3148
Which of the following best describes the respondent: (You must select at least one)			
<input checked="" type="checkbox"/> Broadband Service Provider <input type="checkbox"/> Government Organization <input type="checkbox"/> Equipment Manufacturer <input type="checkbox"/> Non-profit Organization <input type="checkbox"/> Equipment Vendor <input type="checkbox"/> Owner of Physical Assets (please specify Asset: _____ _____)		<input type="checkbox"/> Network or Systems Integrator <input type="checkbox"/> Interested Individual <input type="checkbox"/> Investor/Venture Capital <input type="checkbox"/> Consultant <input type="checkbox"/> Advocacy Group <input type="checkbox"/> Other (please specify Other: _____ _____)	
Brief Description of Organization (please outline previous experience with broadband deployment and/or provision of broadband services)			
List of anticipated partner organizations			