



# OPENCAPe

Creating Regional Broadband Opportunities

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## OpenCape Backgrounder

### **Need & Vision**

**Economic.** In the 20th century, the rise of the interstate highway system became the key economic driver, facilitating the exchange of goods and services and connecting markets. In the 21st century, this role is played by broadband data infrastructure. A robust broadband data infrastructure is essential to the economic survival of towns, cities, and entire regions today and in the future.

**Public safety.** The Cape, Islands and South Coast are the most vulnerable region in Massachusetts to natural disaster, such as a hurricane. Additionally, the region's proximity to the Plymouth nuclear power plant adds to the region's overall disaster risk. One of the lessons from Katrina and other major disasters is that communication infrastructure is key to both response and recovery.

Cape Cod lacks the robust and redundant system of communications it will need to respond to and recover from a natural or man-made disaster. Not only will the OpenCape network perform a daily economic role, but it will also serve as the redundant communications backbone in times of emergency.

**Civic.** Congress recognized the importance of broadband in Section 706 of the 1996 Telecommunications Act which says the FCC is to "encourage the deployment on a reasonable and timely basis of advanced telecommunications capability to all Americans." In 2009 broadband became a priority of the new presidential administration. As the FCC writes:

*Broadband technology is a key driver of economic growth. The ability to share large amounts of information at ever-greater speeds increases productivity, facilitates commerce, and drives innovation. Broadband is changing how we communicate with each other, how and where we work, how we educate our children, and how we entertain ourselves. Broadband is particularly critical in rural areas, where advanced communications can shrink the distances that isolate remote communities.*

OpenCape is a specific application of this mandate, serving the Cape Cod region.

**Resources:** The commitment of public funds to telecommunications infrastructure reflects a growing consensus that there is a government role to be played in enabling all of its citizens to participate in the 21<sup>st</sup> century information economy. The Massachusetts Broadband Bill of 2008 that creates a \$40 million Incentive Fund, the \$7.2 billion for broadband programs in the American Recovery and Reinvestment Act of 2009, and the potential shift of the Universal Service Fund toward broadband reflect the shifting public policy.

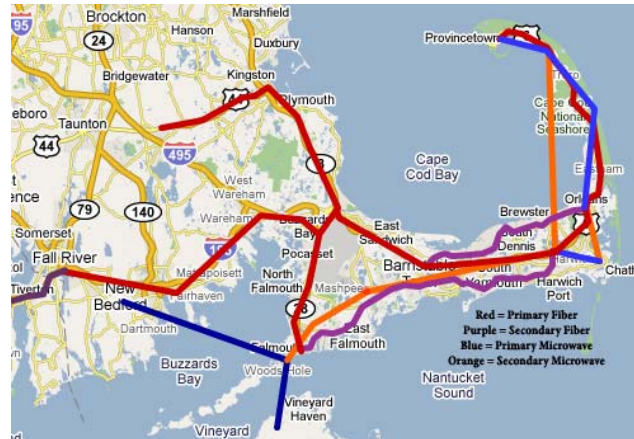
### **OpenCape Concept**

The OpenCape concept addresses the need for a regional communications network to enhance education, research, and economic development, AND provide for an emergency communications network in times of crisis. The non-profit OpenCape Corporation was formed to conduct analysis, develop plans, and engineer solutions. Approximately \$200,000 in seed funding was obtained to support the efforts of a regionally representative Board of Directors that committed a great deal of time and energy toward devising a solution for the region. The OpenCape Corporation is collaborating with regional, state, and federal entities to ensure a comprehensive and coherent solution is delivered, and is preparing formal requests for funding to build the OpenCape network.

## ***The OpenCape Network***

OpenCape Corporation will oversee the creation and operation of a regional wholesale digital backhaul communications network comprised of five elements:

1. A fiber backbone covering the length of the Cape;
2. A microwave wireless backbone that spans the Cape and connects to points off Cape;
3. A connecting fiber backhaul network across southeastern Massachusetts that connects the core OpenCape network to the Internet backbones in both Providence and Boston;
4. A regional data center with appropriate connectivity, power capacity, and network and physical security;
5. A structure that supports organizations as they leverage the network for regional benefit.



**Principles:** The OpenCape Corporation and its licensees will adhere to the following guiding principles:

- The network will support open access and promote competition in all telecommunications services.
- The network will provide reliable, redundant, and secure backhaul communications for public and commercial networks in the Cape Cod region.
- The network will provide priority access to designated regional emergency evacuation centers and community emergency operations centers during times of crisis.
- The network's data center will provide a power and connectivity redundant option currently not available to the region's nonprofit, education, business, and government organizations.
- The network's support structure will help the region's collaborative efforts to leverage the network and its potential for regional benefit.

**OpenCape Funding:** OpenCape Corporation will apply to the National Telecommunications and Information Administration (NTIA) under its authority to grant funds under the "Broadband Technology Opportunities Program" (BTO) of the American Recovery and Reinvestment Act (ARRA) of 2009. The grant application will be in the amount of \$30 million. Extensive analysis and network topology design have been completed with respect to this project. The system will be sustained through a public-private partnership that envisions a private entity operating the network for profit while providing services to public entities at low cost.

## ***Regional Commitment***

The OpenCape concept is widely supported throughout the region and the state. One hundred percent of the towns and school districts on Cape Cod and the Islands have submitted letters of support for the effort. The Cape Cod EDC and MTC John Adams Innovation Institute provided seed funding. The Cape legislative delegation successfully increased the Broadband Bill Incentive Fund to \$40 million within the legislature to create a resource for construction of the network. The federal legislative delegation is supportive of the effort and is providing essential liaison with federal agencies. Finally, the OpenCape Corporation Board of Directors is representative, both geographically and functionally, of the region:

Dan Gallagher, CIO, Cape Cod Community College  
Teresa Martin, Consultant  
Dr. Robert Green, Vice Chancellor, UMass Dartmouth  
Sean O'Brien, Coordinator, Barnstable County REPC  
Ellen Driscoll, Educational Technology Coordinator, Plymouth PS  
John Campbell, CIO, RHCI and Spaulding Hospital

Art Gaylord, Director of Computer Information Services, WHOI  
Gary Delius, MIS Director, Town of Truro  
Dan Dray, Administrator, Cape Cod EDC  
John Kennan, Vice Chair, Sandwich Board of Selectmen  
Craig Weigand, Superintendent, Harwich Water Department  
Charles Sumner, Town Administrator, Brewster