



OPENCAPe

Creating Regional Broadband Opportunities

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May 15, 2009

The OpenCape Corporation is seeking to secure partnerships with qualified network service providers, right-of-way contributors, and other relevant providers to assist in our efforts to obtain funding from the National Telecommunications and Information Administration (NTIA) for the construction of a next-generation broadband infrastructure for Cape Cod and Southeastern Massachusetts.

Application will be made to the NTIA under its authority to grant funds under the “Broadband Technology Opportunities Program” of the American Recovery and Reinvestment Act of 2009. The grant application will be in the amount of \$22 million. The grant will fund the installation of approximately 225 miles of fiber optic cabling throughout the region, microwave links, and a collocation center on Cape Cod. Extensive analysis and network topology design have been completed with respect to this project.

We view this venture as an opportunity for commercial partner(s) to secure an opportunity to build and/or operate the network to its best advantage in the region. As well, potential partners may find interest in only a specific portion of the project and indicate their interest and potential role in their response. Through this RFI, we hope to identify commercial partners that offer creative solutions for participation with the project, highlighting the developmental and financial benefits for all parties involved.

Project Timeline – *all dates are subject to change at OpenCape’s discretion*

- **May 15, 2009** – RFI released
- **May 29, 2009** – Closing date for RFI inquiries
- **May 29, 2009** – Submit Intention to Respond to info@opencape.com
- **June 5, 2009** – RFI inquiry responses provided by OpenCape
- **June 19, 2009** – All RFI submissions due
- **May - June, 2009** – Vendor meetings scheduled

This letter contains:

- A Request for Information (RFI) that will help us as we develop the grant proposal
- Background on the ARRA project,
- Specifics on this project proposal.

RFI Response:

One (1) electronic copy of the reply must be emailed to info@opencape.com **on or before 3:00pm on June 19, 2009.**

Sincerely,

Daniel J. Gallagher
President and Chairman



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REQUEST FOR INFORMATION

Network Service Provider Information and Input on Participation in a
Public-Private Partnership Supporting OpenCape Corporation's ARRA Application

1. Overview

In order for Cape Cod and Southeastern Massachusetts to participate fully in the 21st Century economy, and its citizens to have equal access to government and education services, a new carrier agnostic regional network must be built. Additionally, Southeastern Massachusetts is the most vulnerable region to natural disaster in New England and is home to the only nuclear power plant in Massachusetts. The region does not have the robust and redundant system of communications it will need in the event of a natural or man-made disaster.

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 \$22 million. The grant will fund the installation of approximately 225 miles of fiber optic cabling, microwave links, and a collocation center on Cape Cod. Extensive analysis and network topology design have been completed with respect to this project.

The OpenCape Corporation is soliciting responses from qualified network service providers to help us fashion the cost-effective, highly functioning public-private partnership we will need to implement and operationally sustain a regional middle mile backhaul network. This is a Request For Information (RFI), and based on the responses received, OpenCape Corporation may enter into agreements with one or more of the vendor-partners who best meet the requirements. At a high-level, the choice of partners will be based on the level of partnership, network extension, sustainable service revenues, innovation, and implementation speed.

1.2. The Process for Evaluating RFI Responses

The time available for submitting ARRA grant applications is short, requiring rapid RFI responses, clarification, and evaluation. As a result, the deadline for submitting responses to this RFI is **June 19, 2009** (*Please refer to Section 4 for additional detail*). OpenCape Corporation will engage potential partners in subsequent discussions to clarify responses as is necessary for the development of its grant application, which will likely be filed in July, 2009.

1.3 The Broadband Stimulus Program - ARRA Background

The American Recovery and Reinvestment Act of 2009 (ARRA), which became law in February, contains an array of investment programs whose near-term objective is to stimulate the American economy and create jobs, while also achieving a longer-term objective to improve our national infrastructure. The Act provides \$7.2 billion for grants and loans to stimulate the development of broadband infrastructure and services, administered by two federal agencies: The National Telecommunications and Information Administration (NTIA) was appropriated \$4.7 billion, and the USDA’s Rural Utilities Service (RUS) received \$2.5 billion. Most of these funds will be made available in the form of competitive grants to qualifying government, nonprofit, and private-sector entities across the nation.

The ARRA funding is presumably the first step in a long term program of Federal support for broadband development because the final bill also calls for the FCC to produce a report on a national broadband plan within the next year.

NTIA: Broadband Technology Opportunities Program” (BTO) -- \$4.2B

- \$3.75B for competitive grants, focusing on community-oriented networking needs, primarily to provide access to broadband service to consumers residing in unserved and underserved (terms as yet to be defined) areas. In addition, the BTOP identifies a number of high-value targets: provide access to broadband education, awareness, training, access, equipment, and support to --- schools, libraries, medical and healthcare providers, community colleges and other institutions of higher education, and other community support organizations and entities to facilitate greater use of broadband service by or through these organizations. Finally, the program aims to improve access to, and use of, broadband service by public safety agencies.
- The remaining funds are targeted at grants for expanding public computer center capacity (including those at community colleges and libraries), innovative programs to encourage sustainable adoption of broadband service, program administration, and broadband mapping.

Eligible entities:

- Virtually any entity may apply for BTO grants, including states, county and municipal governments, nonprofits, and purely private entities. Private-sector entities may receive grants only upon a determination by NTIA that the grant award would be in the public interest. Public-sector and nonprofit entities are clearly among the primary targeted recipients of grant funds under the BTOP.
- States have been encouraged to play an active role in coalescing stakeholders and partners. While the state will have a role in advising the NTIA, all BTO grant funds will come directly from the federal government and will not be awarded by the states themselves.
- For these reasons, broad public-private partnerships, which include governmental, non-profit, and commercial entities and leverage BTO funding across the widest public spectrum are expected to be the most successful applicants.

Eligible services:

- Awards are to be made on a “technologically neutral” basis. The program makes no distinction as to wireline, wireless, satellite, etc.
- Eligible services are not limited to end-user broadband services. Backhaul, middle-mile, wholesale transit, tower services, etc. are apparently all eligible.
- Funds may be used for hardware, equipment, software, and other capital expenditures.
- Operating expenditures are NOT eligible for funding.
- BTO grant recipients must comply with FCC policy statement concerning network nondiscrimination.

Federal grant share – 80% limit:

- Generally, the program will limit grant funds to 80 percent of a project’s cost. However, the NTIA is authorized to waive the cost-sharing requirement, and may do so for particularly worthy public-sector projects. Private companies participating in OpenCape’s public-private partnership will benefit substantially from the BTOP’s public funding, and as such, will be expected to contribute to the 20% matching funds requirement.

Rapid commencement and completion:

- A preference is to be given for projects that can be started and completed expeditiously. For this reason, OpenCape Corporation intends to request funding by September, 2009, and to complete project implementation within twenty-four months, by September, 2011. All grant awards must be made before Sept. 30, 2010, to projects that can be completed within two years. BTO grants reportedly will be made on a “use it or lose it” basis: if a project is not completed within two years, ongoing funds will not be available. The NTIA is currently developing guidelines for BTO grant application and awards, to be implemented in a rulemaking process.

1.4 The Purpose and Objectives of OpenCape’s BTO Project

Cape Cod and the southeastern Massachusetts region have inadequate communications infrastructure. OpenCape intends to develop this infrastructure and support the deployment of regional applications across it.

This infrastructure will adhere to an open access policy, which means it is available for use by any and all entities that pay the rates, meet the technical requirements, and are using the network for legal activities. An open access policy encourages and supports competition and the development of multiple network access options for both business and residential end users.

Investment in infrastructure is important for multiple reasons.

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.

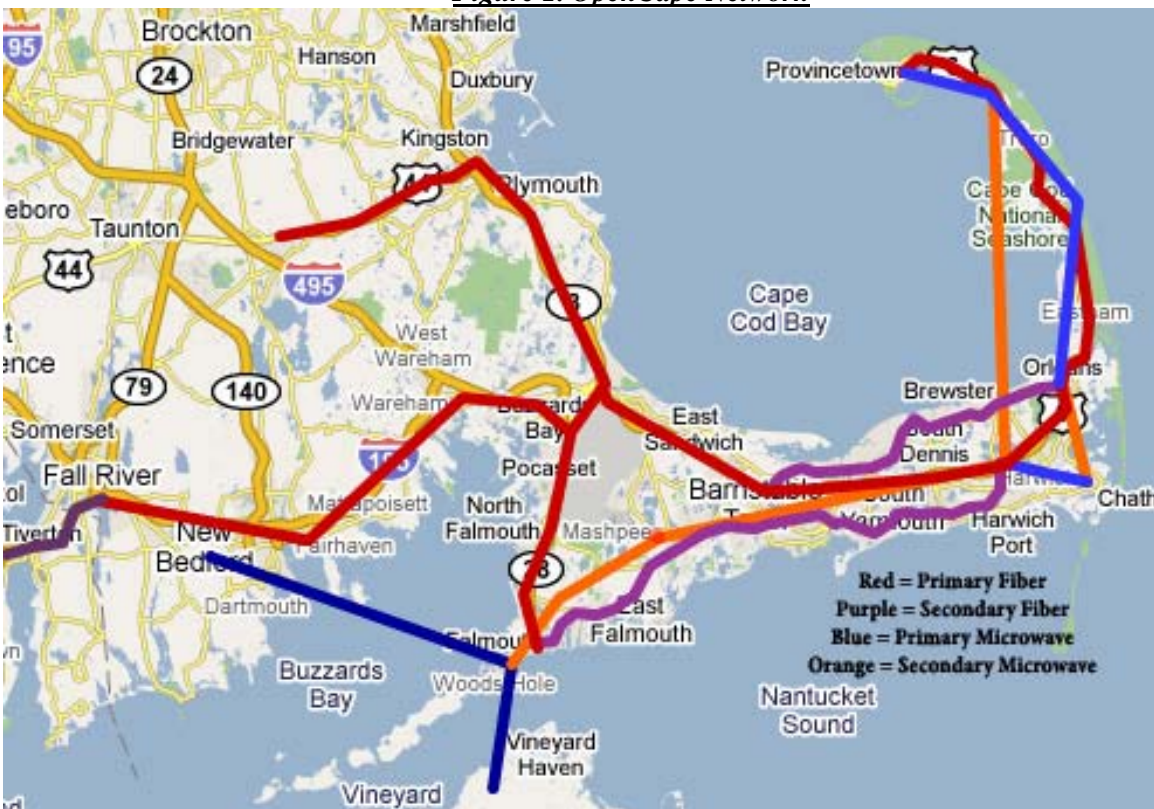
OpenCape is a specific application of this mandate, serving the Cape Cod region.

The benefits of this project include:

1. Provides the infrastructure to support rapid government and business recovery following a hurricane.
2. Fiber optic geographic diversity between Providence and Boston.
3. Support s economic development and regionalized government and education umbrella service models.
4. Reduces barriers to market entry for alternative last-mile providers.
5. Creates the opportunity for a regional healthcare network.
6. Underpins complimentary network development along the South Coast, particularly in Fall River and New Bedford.
7. Creates the opportunity to build a wide area network of public Colleges in the region.
8. Supports the SMART Highways program in SE Massachusetts.
9. Creates pathways to the Internet for the delivery of data from the Woods Hole Oceanographic Institution to the broader scientific community.
10. Connects the Homeland Security organizations on the former Otis Air Force Base with the broader national security world.

See Figure 1 for a high-level view of the OpenCape’s intended network.

Figure 1. OpenCape Network



1.5 OpenCape’s Successful Track-Record and Capabilities Indicate BTO Success

The NTIA indicates that an applicant’s proven ability to quickly and successfully implement its project, and then sustain it long term, will be key factors in selecting successful BTO applications. The OpenCape project is well suited, positioned, and prepared based on the ARRA intended purpose and the direction of NTIA rule making based on public comment.

The purpose of the ARRA is to stimulate jobs, both immediate construction jobs and long term jobs. OpenCape is ideally suited to this objective. In addition to the construction and permanent positions created directly as a result of the project, there is significant expectation that the creation of greater broadband opportunity will improve the economic outlook for the region in many areas. Existing businesses will be able to expand and new businesses will be created.

Quantifying the precise number of jobs that might be created through greater opportunity and lower barriers to innovation is impossible; however, in “Measuring the Economic Impact of Broadband Deployment,” author Sharon Gillett, of the Massachusetts Institute of Technology found that communities with broadband available “experienced more rapid growth in employment, the number of businesses overall, and businesses in IT-intensive sectors.”

Expected Temporary and Permanent Jobs Created
Construction: Engineering 3 Man Year; Project Management 3 Man Year; Administrative 2 Man Year; Network Physical Layer Construction 8 Man Years; Node Construction 2 Man Year; Microwave Construction 1 Man Year; Network Switching and Routing 1 Man Year. Total 18 Man Years
Permanent: Network Operations 3 Man Year; Network Management 1 Man Year; Network Administration 1 Man Year; Network Repair 1 Man Year.

The NTIA will likely include a requirement of grant applicants to demonstrate the long term sustainability of the project. Grants should represent a capital investment in infrastructure that will be sustained over time by operating revenue. OpenCape has prepared market analysis, expected revenues, operating costs, and projected income statements that demonstrate the capital investment to be made will be exploited and sustained over time. Its intention to partner with a profit making private sector provider is key to long term sustainability.

Community investment in the project is another indicator of long term feasibility. The applicant should provide information about local, regional, and state grants, material contributions, and volunteer time invested in the project in the past and present. OpenCape has established a strong base of support among the key constituency groups. It has received written letters of support from 100% of the towns and school districts across the Cape.

Collaboration is another indicator of the long-term feasibility of the investment. The applicant should cite its collaboration with both public and private organizations in the area to be impacted by the grant, as well as the extent of collaboration with local, regional, state, and national organizations. The OpenCape Corporation was created from a grassroots effort to address the lack of regional digital communications capabilities and capacity. Regional organizations such as the Woods Hole Oceanographic Institution (WHOI), Cape Cod Community College (CCCC), UMass/Dartmouth, and the Cape Cod Technology Council (CCTC), along with education, municipal, and business leaders helped shape the original concept. OpenCape incorporated in March 2007 as a nonprofit corporation and received its 501(c)(3) status in December 2008.

The Corporation’s goal is to fill the need for a regional communications network to enhance education, research, and economic development on a daily basis, and to provide a redundant

emergency communications network in times of crisis. It also intends to play a role in ensuring regional use of the network for regional benefit.

To date, OpenCape Corporation has been funded by a \$50,000 grant from the Barnstable County EDC, a \$150,000 grant from the Massachusetts Technology Collaborative's John Adams Innovation Institute, and in-kind donations from WHOI, CCCC, and UMass/Dartmouth. These resources have enabled the completion of engineering, marketing, and policy studies, as well as the funding of legal and accounting services, and the development of basic branding and identification materials. The Corporation has also installed a proof-of-concept microwave link across Buzzards Bay between WHOI and UMass/Dartmouth.

OpenCape is currently led by an all-volunteer Board of Directors, which represents a cross section of constituency base and regional geography.

The definition of "unserved" and "underserved" will play a role in NTIA grant awards. The definitions are contentious and unclear at this time, however, it is expected that when the final definition is published that the Cape Cod region will fit underserved, if not unserved. The definition should include the following elements: Capacity, Availability, and Affordability, further defined below:

Capacity. Capacity must recognize the need for symmetry of data rates (i.e., download and upload speeds). We suggest it is more appropriate to define broadband in the context of supported applications. Within that framework, broadband is a connection that is sufficient in speed and capacity such that it does not limit a user's desired application. Supporting telework and other initiatives for residential and small businesses customers requires today a connection of at least 10 Mbps download and 10 Mbps upload and has capabilities to migrate without infrastructure upgrades to 100 Mbps in either direction. For enterprise and other power users a 1 Gbps service is required.

Availability. The FCC definition of availability is inadequate. The FCC will define an area as being served by broadband if at least one location in a given ZIP code receives a data service that meets the FCC broadband definition. This definition was likely created as an easy way to measure availability but it greatly overstates true availability. There are significant portions of Cape Cod, particularly on the Outer Cape, that have no broadband access. Availability should be defined as all residential and business locations have access to at least two broadband providers.

Affordability. Affordability is quite subjective; it can be defined from various points of view. From a digital-inclusion perspective, for example, affordable broadband is a service that all households can afford regardless of income. From a competitive perspective, affordable broadband is a service that is priced equivalently to other areas of the state or country, or other nations. From a universal-access perspective, affordable broadband is a service that is priced equivalently between urban and rural areas. We feel that using a definition based on a competitive perspective is the most appropriate.

2. Evaluation Process and Criteria

2.1. Evaluation criteria

Responses will be evaluated on the degree to which they help OpenCape Corporation and the BTO meet their objectives. We will look at the following dimensions of each response:

- Partnership – The proposed level of investment (monetary and in-kind) in the construction, implementation, and operation of the proposed network, with proportionate (to the investment) sharing of the revenues and benefits generated.
- Network extension – The ability to extend network reach to include the widest spectrum of institutions, businesses, and consuming public.
- Sustainable services – The introduction of services which will generate additional value and sustainable revenues for the network.
- Innovation – The degree to which the partner helps users leverage the network in new and innovative ways.
- Implementation speed – The ability to commit to being a partner within 30 days, and to then help OpenCape Corporation accelerate implementation and speedy completion of the project.

2.2. Right of Evaluation

OpenCape Corporation will have the sole responsibility of evaluating the Responses based on the above criteria. At its discretion, OpenCape Corporation may elect not to pursue an Agreement for any of the services requested in this RFI, or to pursue an Agreement with one or more respondents for some or all of the requested services.

2.3. Response Requirements

All responses should be submitted electronically, using a standard file format (e.g., Adobe PDF, Microsoft Word) to the email address shown below. Unless a different email address is specified in the submittal, acknowledgement of receipt of proposals will be made via return email: info@opencape.com.

2.4. Questions Regarding RFI

Any questions regarding this RFI should be submitted no later than **May 29, 2009** (*Please refer to Section 4 for additional detail*) to the following e-mail address: info@opencape.com.

All questions received by the deadline, along with the corresponding responses, will be distributed via email to all respondents by the end of the business day on **June 5, 2009** (*Please refer to Section 4 for additional detail*). Please be sure to include the email address to which the summary of questions and responses should be sent.

2.5. Availability of Proposals

Any items that the vendor wishes to cover under a non-disclosure agreement should NOT be included in this response.

3. Scope

3.1. General description / requirements

OpenCape Corporation would like responses to creatively explore different ways your organization can partner with OpenCape to meet project objectives. In addition, we would like responses to address the following specific questions:

- How would your organization like to participate?
 - As a partner and investor or as a vendor
 - On the entire project, or on specific portions and segments
- What objectives would your organization have for your participation?
- At what stages in the project would your organization have the ability, and wish, to participate?
 - Pre-construction planning, design, and network path determination
 - Construction, installation, project management
 - On-going operation and maintenance
 - As a service provider on top of the network infrastructure
- If your participation would involve other companies beyond your own, list them and state your relationship with them. Responsibilities for all work you propose to perform must be clearly delineated between you and your collaborators.
- Into what types of bandwidth sourcing arrangements will your organization enter, and which is preferred?
 - Ownership
 - IRU
 - Long term lease, dark and/or lit fiber
 - Capacity exchange and/or in-kind payment consistent with ownership percentages
- What assets could your organization provide to benefit the OpenCape project?
 - Financial
 - Permits and pole rights (including implications for ownership)
 - Existing network infrastructure
 - Required network equipment and structures (space)
 - Manpower and skill-sets
- Should your organization enter into a network sharing relationship with OpenCape, what physical separation of assets would you require (i.e. tube, separate fiber within a sheath, splicing arrangements, etc.)?
- What services would your organization offer over the network, and how would they impact OpenCape/BTO objectives for economic stimulus, job creation, innovation, and sustainability?
 - High value targets: (healthcare, K-12 and higher education, public safety, etc.)
 - Commercial uses (end users, service providers, cell towers and wireless services)
 - Commercial and/or consumer services (VoIP, Unified Communications, Follow-me/Find-me, Offsite Back-up Storage, etc.)
- How quickly could your organization respond?
 - With a signed Letter of Intent to Participate within 30 days
 - Completing your organization's portion of the project within 2 years
- Is there any additional information you would like to provide OpenCape, or is there anything that you would recommend to make participation in the OpenCape project more attractive?

Please explain your responses to these questions as fully as possible, including any pre-requisites, exceptions, and decision-making criteria, variables, or priorities.

3.2. References / Experience

Respondents should provide information describing the organization's experience, expertise, and track-record relevant to support their participation in the OpenCape project. This should include references to previous work in similar projects over the past three years with contacts, especially work within the region. It is also very important to describe your company's experience and philosophy in collaborative endeavors. Several organizations potentially will contribute to or participate in bringing the project together and it will be essential that each work well within such an environment.

These include:

- OSHEAN (www.oshean.org)
- Internet2 (I2) [www.internet2.edu]
- North East Regional Educational Network (NEREN)[www.NEREN.org]
- Northern Crossroads (NoX) [www.NoX.org]
- Municipal Networks

4. Due Dates

- **May 15, 2009** – RFI released
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