

Comments submitted by L. Robert Kimball & Associates, Inc.

RE: Docket 090309298-9299-01 “Joint Broadband Technology Opportunities Program Request for Information

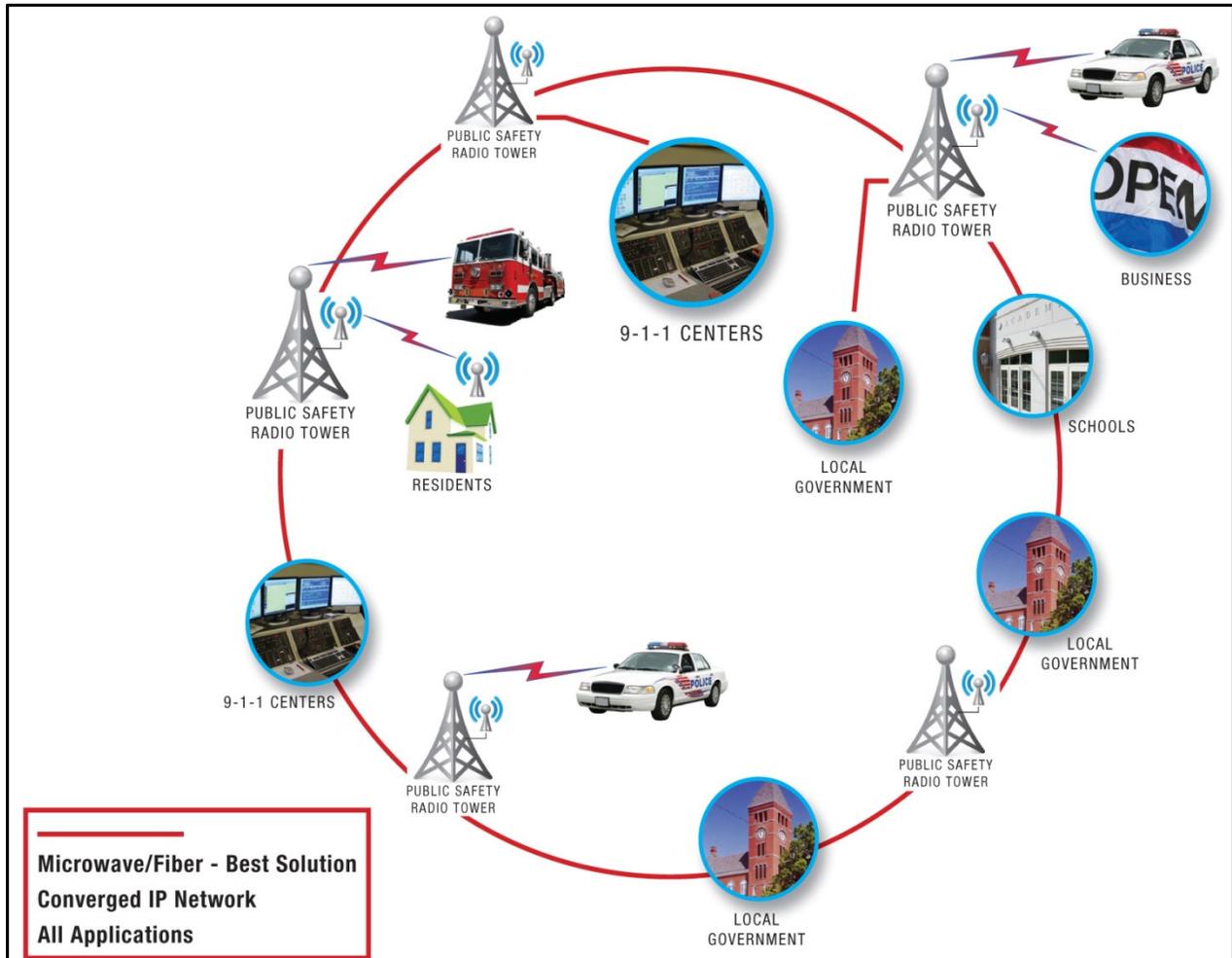
L. Robert Kimball & Associates, Inc. (Kimball) is one of the nation’s largest engineering / architecture / consulting firms, annually ranked among the top 200 A/E firms and top 25 telecommunications firms by *Engineering News Record*. Kimball’s Telecommunications & Technology Division has offered public safety and mission critical consulting services for more than 15 years. Our telecommunications and technology practice is focused on all facets of the public safety call process, supporting operations and technologies, 9-1-1 network and call delivery, 9-1-1 call answering / tracking and call dispatch communications.

Our involvement in these three critical components of the public safety communications and response network, combined with our experience in hundreds of public safety-related communications projects, gives us a unique perspective on the current needs and trends in this arena. Our comments and recommendations for developing the priorities and considerations for the funds allocated in the American Recovery and Reinvestment Act (ARRA) Broadband Technology Opportunities Program are based on this extensive experience and knowledge of the public safety and government communications marketplace.

Kimball has shared the following comments with our clients and potential clients, seeking to confirm their support and agreement. Those clients who have provided Kimball with a formal indication of concurrence are indicated at the end of this document. In addition, some clients provided further comment relative to the needs or consideration for public safety; and these inputs are included as well.

Within many communities, public safety and other government agencies are often not working in the most efficient manner to get the most from the dollars they’re investing in broadband networks. Local governments are building their own enterprise networks at the same time that public safety units are building out new IP infrastructure connecting tower sites; cable and telephone companies are laying fiber optic cables, and schools are setting up their own broadband capabilities. In many areas, we are literally crossing over each other with fiber optic, microwave and wireless networks. At the same time, other communities have limited or no access to broadband.

The funding allocated in the ARRA for development and construction of broadband networks in rural and underserved areas, as well as funding for broadband systems for public safety / government, educational and medical institutions, presents a truly unique opportunity. Kimball—and a number of our clients—believe that the maximum benefit for all interested parties can be achieved by weighting the grant award criteria to reward community-owned or controlled projects that invest in **converged, open access** broadband systems capable of supporting multiple applications and users from residential / business to education / healthcare, and government enterprise and public safety.



An open access, converged high-capacity broadband backbone could maximize the impact of Broadband Stimulus funds by making it practical to bring access and services to all potential broadband users in the community—residential, enterprise, government and public safety.

The billions of dollars available from the stimulus program could take us a very long way toward constructing these converged, open access backbone networks on a local, regional or even state level across the country. Any entity in the community, from commercial providers to government, could jointly tap into this converged, open access backbone network running through their community, with additional investment needed only for the last-mile connections. This will overcome the high costs that often prohibit these types of systems from being constructed and will help create greater ROI from the funds in the stimulus plan. Furthermore, combining funding from the broadband stimulus with investments and infrastructure already made or planned by state / local governments, healthcare and educational institutions can provide network presence throughout areas that were previously not practical.

A high-capacity, open access community-owned or controlled backbone network would provide a super-core that carries enough capacity and speed to serve all the needs that would otherwise be served by multiple separate, standalone networks. Whether it's public safety radio communications, Next Generation (NG) 9-1-1, or residential / enterprise broadband and Internet

access, a single key enabling element is required to deliver these critical services: a high-speed, high-capacity IP connectivity backbone.

Ownership and control of these converged, open access backbone networks could be held by organizations such as Council of Governments (COGs), non-profit corporations formed to own and manage the backbone, authorities or various public-private partnership organizations. The definition of “open access” with respect to these converged networks means that the transport capacity they provide is available for use by any interested organization—government / public safety, commercial provider, education, utility, etc.

IP networks are already an integral part of the mission critical communications process. Many public safety users rely on countywide radio networks to establish seamless communications across agencies and jurisdictions. These networks are intended to meet federal adopted Project 25 (P25) TIA mandates already in place and help public safety reach the highest level of interoperability on the Department of Homeland Security SAFECOM Interoperability Continuum.

In addition to radio communications, new, IP-based 9-1-1 networks are replacing legacy telephone networks across the country to support new communications devices that consumers are using, such as smart phones, video communications, laptop telecommunications and text messaging. Many of these IP networks are being deployed in the form of Emergency Services IP-enabled Networks (ESInet). ESInets are wide area IP networks that can meet these overarching goals and help us migrate to the next generation of 9-1-1.

ARRA broadband funding can be used to leverage investments in existing public safety IP networks—whether they are 9-1-1 or radio communications-oriented—and act as a springboard for additional elements such as scalable, wired or wireless broadband networks for the community, schools and private business. Transport mediums, such as fiber optic cable, can expand networks to support additional capabilities. The result is more advanced and consumer-driven public safety services for both 9-1-1 and radio communications, new means of communications for our communities, greater access to wireless in our nation’s hospitals and schools and increased opportunities for commerce. The true intent of the economic stimulus plan is achieved by driving new opportunities for economic growth and providing a balanced benefit to government, our nation’s citizens and businesses.

Using stimulus plan funds to build an open access converged high-speed backbone can overcome the previously prohibitive cost and ROI issues facing commercial IP providers in many areas. Combining funding from the broadband stimulus with investments and infrastructure already made or planned by state and local governments can provide network presence throughout areas that were previously not practical for providers.

Kimball is working on just such a project with Greater Harris County, Texas. When completed, this system will serve a number of different mission critical applications and provide public safety first responders with a seamless countywide communications system. Additionally, the IP backbone we’re developing for them supports the goals of NG 9-1-1, the legacy telephone network, various enterprise applications, as well as creating a platform for interoperability that will support public safety radio networks. In addition, there is potential for providing a scalable wireless broadband network for Greater Harris County residents, schools and business.

Kimball, on behalf of our many government and public safety clients and the communities they serve, strongly encourages the NTIA and RUS to encourage proposals built upon this approach to bring widespread broadband capabilities to all of the user communities highlighted in the ARRA, from underserved communities to public safety agencies of all sizes.

In addition to promoting the construction of open access converged broadband backbones capable of serving multiple interests, Kimball also strongly encourages the NTIA and RUS to insure that the interests of public safety are fully considered in establishing the eligibility and evaluation criteria for the BTOP program. Other specific comments and recommendations consistent with the preceding concept are as follows.

Applicants should be encouraged to submit innovative solutions that address the broadest possible set of criteria specified in the statute, including public safety needs. NTIA should allow for any entity to qualify for ARRA public safety funding under Section 6001(b)(4). Not only should state, local and Tribal governments be able to apply directly, but private and public-private partnerships should be encouraged under the BTOP program to apply for funding to address public safety needs. All applicants for BTOP funding should also be encouraged to include public safety needs in their BTOP grant applications. Applicants who address public safety needs should benefit by receiving scoring points for such an effort.

The NTIA, RUS and FCC should not limit the concept of unserved and underserved to geographic or residential parameters. Not only are there geographic areas that are unserved or underserved, there are communities of interest which are unserved or underserved. A community, for example, could have outstanding residential broadband access, but PSAPs, police stations and firehouses may lack broadband connectivity.

The availability and adoption of broadband services—fixed landline, as well as mobile and nomadic wireless broadband—for public safety must be considered in determining the definitions of “unserved areas” and “underserved areas.” The definitions of “unserved” and “underserved” should include consideration of demonstrated unmet needs by one of the constituencies related to Section 6001(b)(3), (4), and (5) priorities. For example, an unserved area should not only be a particular area that does not have access to the minimal transmission speeds established by NTIA for the purposes of BTOP grants, but it should also include the unmet needs of the public safety community. Thus, an application seeking to provide new, previously not available broadband service to public safety in an area should be considered unserved or underserved.

Applications seeking to serve institutions with bandwidth, hardware, software or specialized applications should be eligible as improving access to those institutions under Section 6001(b)(3), (4) and (5), regardless of whether residents and businesses in a community are unserved, underserved, or served. The statutory authority is independent of Sections (b)(1) and (2).

When the agency considers competitive applications for broadband infrastructure, those that address public safety needs should receive bonus scoring points. This will encourage applications that coordinate for programs that improve public safety and emergency communications. Applicants seeking solely to upgrade public safety’s access to broadband should also be considered eligible and should be encouraged regardless of the level of broadband service available to residential consumers. In addition, deference to states, municipalities and Tribal governments that identify public safety-related projects or support public safety-related applications should be provided.

In addition to eligibility to construct and deploy facilities that improve public safety broadband communications services, educational efforts specifically targeted at encouraging public safety to adopt and expand its use of existing and new broadband networks should be a clear eligible purpose of the NTIA demand stimulation program. These efforts can help public safety, health care, public and private emergency responders to identify, use and develop tools that can harness the power of expanded bandwidth to share data in real time, provide life-saving medical information to first responders and emergency rooms, identify the location of life-saving assets

such as nearby defibrillators, extraction devices and places of shelter and provide a networked sharing of useful real-time traffic and hazard information to traffic managers, drivers, dispatchers and the public to help each speed response and avert danger—and help first responders utilize, understand and analyze the growing area of sensor technologies and machine-to-machine and machine-to-infrastructure communications.

Rural Utilities Service (RUS). Section 6107 of P.L. 110-246 authorizes loans for facilities and equipment in rural areas for 9-1-1 access; integrated, interoperable emergency communications, including multi-use networks that provide commercial and transportation information services in addition to emergency communications services; homeland security communications; transportation safety communications; or location technologies used outside of an urbanized area. The RUS should utilize some of the ARRA funds for this financing authority and should establish flexible rules for the program, encouraging creative and innovative solutions to address emergency communications needs in rural areas. Financing under this program should be available at the same time the agency makes funds available under other programs funded by the ARRA.

Respectfully Submitted,



J. Kevin McGeary
Sr. Telecommunications Specialist
L. Robert Kimball & Associates
328 Innovation Blvd. Ste 222
State College, PA 16803
Office: 814-867-4566
Mobile: 814-937-9094
kevin.mcgeary@kimballcorp.com
Web site: <http://www.kimballcorp.com/>

Following is a list of Kimball clients who have indicated their full support for the preceding, along with additional comments they may have requested we submit on their behalf.

Name/Title: Joann Brown, Communications Administrator
Organization: Coral Springs Police Department
Location: Coral Springs Florida
Email: jbrown@coralsprings.org

Additional Comments:

Name/Title: Thomas Ciampi, Communications Tech Coordinator
Organization: Coral Springs Police Department
Location: Coral Springs Florida
Email: PDTXC@CORALSPRINGS.ORG

Additional Comments:

Name/Title: Stephen O'Connor, 9-1-1 System Manager
Organization: Brevard County 9-1-1 Administration
Location: Melbourne, Florida
Email: steve.oconor@brevardcounty.us

Additional Comments: A significant focus of the economic stimulus legislation concerns investment in infrastructure and the promotion of broadband access for all Americans. There can be no more critical infrastructure than the 9-1-1 systems relied on by the public and the emergency communications systems used by those responding to emergencies. Similarly, while promotion of broadband access for the general public is an important investment, it is even more important for the future of 9-1-1 and emergency communications, which will increasingly depend on high bandwidth networks to effectively prepare for, and respond to, emergencies. Therefore, as NTIA and RUS establish their respective broadband initiatives, it is important that the agencies place a clear priority on the need for investment in infrastructure and access to broadband networks, both wired and wireless, and the services and applications for safety organizations enabled by such networks. Doing so is consistent with the purposes of the Recovery Act and offers an opportunity for job creation and economic stimulus, while simultaneously improving the safety of all Americans.

Name/Title: Donald Herb, CAD System Specialist, ENP
Organization: Chester County Emergency Services
Location: West Chester, PA
Email: dherb@chesco.org

Additional Comments:

Name/Title: Rich Matason, Director of Public Safety
Organization: Westmoreland County, PA
Location: Greensburg, PA
Email: rmatason@co.westmoreland.pa.us

Additional Comments:

Name/Title: Charles Earnest, Communications Director
Organization: Tazewell County Emergency Communications/9-1-1
Location: Tazewell, VA
Email: earnest@tazewellcounty.org

Additional Comments:

Name/Title: Philip Coolick, Manager, Application Development

Organization: Penn State University

Location: University Park, PA

Email: philc@psu.edu

Additional Comments: Resonance with your position paper includes my general observation there currently exists multiple state-wide networks each separately funded, administered, upgraded, etc. It is likely some of these networks - provided by Intermediate Units, State Universities, PSP and others, are converged within vendor domains. If my assertion is valid, then success with traffic segregation on a common, redundant network infrastructure has already been realized. Real challenges lie within common administration and related functions.

Name/Title: Joseph Saiia, Retired Communications Director

Organization: Burlington County Public Safety Department Communications

Location: Burlington County, NJ

Email: saiia.joseph@gmail.com

Additional Comments:

Name/Title: Tammy Lashinsky, GIS/Mapping

Organization: Bedford County, PA 9-1-1

Location: Bedford, Pennsylvania

Email: tlashinsky@bedfordcountypa.org

Additional Comments: