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and
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National Telecommunications and Information Administration
U.S. Department of Commerce, HCHB Room 4887
1401 Constitution Avenue
NW, Washington, DC 20230

TO: RUS Administrator and Staff – NTIA Assistant Secretary and Staff:
RE: RFI - Docket Number: 0907141137–91375–05;
RUS RIN: 0572–ZA01; NTIA RIN: 0660–ZA28

TABLE OF CONTENTS

Introduction

I am the consulting attorney for the Dixie Technology Funding Agency ("DTFA") an economic development agency located in La Verkin, Utah.

Mayor Karl Wilson of La Verkin has asked me to respond to your JOINT REQUEST FOR INFORMATION released November 16, 2009, discussing the DTFA's vision and the first-of-its-kind Real-Time Community Mobile IP network as it pertains to your areas of inquiry in technology as well as business models and job growth perspectives.

Prior to all of this economic downturn, American Recovery and Reinvestment Act, and the RUS/NTIA Broadband programs – in La Verkin, we had already realized that communications technology is the new key to economic development in rural communities. The City of La Verkin created the DTFA just a little over two years ago and we have had great success in understanding, researching, and developing wireless ("fiberless") Community Mobile Technologies as a means to economic development.

Not just sitting around waiting for technology to evolve, we have set up and can demonstrate a first of its kind anywhere -- fast roaming 300 Mbps bidirectional ("fiberless") fully IP Core wireless network with seamless **convergence** to GSM, CDMA, etc. Do NOT confuse this with the old "muni-wifi" systems that merely promised bridged "hot spots" through a city wide area. These new Ubiquitous networks will offer true "Community Mobile" capable systems with even better quality and bit rate capabilities right around the corner. These technology innovations are not just going to be available sometime in the near future; the technologies are available here right now and ready. Our job is just to figure out how we can best leverage these new technologies to bridge rural communications to the entire world.

This is extremely important for several reasons:

1. "Last-mile" deployment of "triple play" capable network without laying cable (fiber);
2. Mobile smart phones, Wi-fi capable, with onboard VOIP and/or SIP telephony
3. Mobile calls to anywhere in the world essentially for free *
4. Seamless **convergence** (over to your Sprint, T-Mobile, ATT, etc.) means the call is not dropped when passing out of the cloud;
5. millisecond hand-off between nodes ensures the call is not dropped, when traveling in a car for example, and making a call on the VOIP/SIP capable handset;
6. Noticeably "clearer" voice calling; and
7. Deployment at a fraction of the cost (no spectrum licensing fees).

Working on the front lines, so to speak, the DTFA feels uniquely qualified to answer your JOINT REQUEST FOR INFORMATION and perhaps supply some well thought out steering for your programs. By now, the RUS/NTIA policy makers should also realize that **"convergence"** is the key that most industry users groups are turning to and that this movement is also leading to new and sustainable jobs with economic growth potential through telecommunications.

I. The Application and Review Process

A. Streamlining the Applications

The Dixie Technology Funding Agency – through consulting attorney James L. Driessen is seeking three separate first-round grants for about $1.7 million, $1.2 million and $8.8 million, to support its proposed "Community Mobile" project.

Apparently, other than some of the shortened submission times, the application process was very similar to past RUS broadband applications, which is a good thing; a lot of the policies and procedures were already in place to make the application process run smoothly.

While the first round was more about searching out those truly innovative applicants, perhaps the second and or third rounds could be more directed to a particular strategy – for example, focusing only on Local Access Community Mobile networks like ours. We are not shy in saying that we believe **"convergence"** is the truly elegant solution and the NTIA/RUS ARRA policy-makers should not be shy about focusing on this exclusively in the future rounds.

The Internet will always be the important connection vehicle for transaction authorizations, but as to the actual delivery vehicle, it is only one possible service. Once we realize that emerging "head-end" technologies of the local access networks will streamline the large file data "off-load" capabilities needed for the new high definition media, those convergent off-load data capabilities become the essential ingredient to new job creation – not to mention the real national security advantages of having a local communications system that can activate public information and support in the event of a real national emergency. With local access networks, instead of finding a hotspot connection, you find a whole new "local access" network complete with high definition local access TV, community information, and a wide variety of premium service offerings from high speed Internet, to cable TV channels, to e-commerce portals.

With Community mobile projects if the consumer likes just the local access services, you continue to have them for free and unlimited. If you need connection, however, to the world-wide-Web you might consider subscribing to a premium Internet connection service package through the local "fiberless" connection – or maybe even a TV channel package or two – all on a completely open competition model. There are numbers of other media or service packages you can choose from. This Community Mobile business architecture actually creates the sandbox in which many new industries can play and develop and grow – and at fiber like speeds without lacking the mobility, the consumer has a real quality of service experience without limitations. (Well 300 Mbps on an access point, but even that is getting faster every day.)

What the Community Mobile business architecture allows for is that both the technologically sophisticated and unsophisticated consumers have each just as much to gain as the other from adopting onto the Community Mobile "cloud" computing. Home residential users or Small Office/Home Office users alike need not have to buy any other services. With Community Mobile end-users already have a connection to their home of office, which in turn means they already have a connection to the Internet. Again, the multiple carrier approach to ubiquitous converged local access allows for people to choose only the services they need – if and when they need them. But ubiquitous connectivity also allows for service providers to market even more services to those same consumers without limitations.

1. New Entities

The local or tribal government business model is both the legally and strategically correct entity for the Department of Commerce working through the RUS/NTIA programs to create open telecommunications policy while at the same time allowing for the States to maintain physical oversight. Any streamlining application activities carried out by the RUS/NTIA in the application process should be directed towards helping and mandating that all applicants must establish a separate local government or tribal entity in their coordination effort and that each local entity must work towards mobility and convergence in broadband as newly defined.

2. Consortiums and Public-Private Partnerships

If true **convergence** in telecommunications is going to be sought, then the awardees must be given a forum in which to communicate with each other. It will be senseless for hundreds of grant awardees to be working in different directions rather than working towards a truly coordinated National Broadband effort.

For example, in Washington County, Utah, our State Governor has recommended more than one broadband infrastructure proposal in the same county and in some instances, some of the same service areas. The DTFA has not and will not ever consider any additional applicant in the same territory as a competitor. The beauty of **convergence** is that all technologies add to – and do not deter from – consumer choice and availability within the converged "cloud" computing structure. From the beginning the DTFA has worked together and communicated with fellow applicants to ensure that we cannot and will not step on each others toes.

3. Specification of Service Areas.

The primary cause of confusion in defining service areas as an "internet" only approach is that we no longer define "broadband" as internet access only. There are literally thousands of different types of communication services between consumers, local governments, and anchor institutions in and around communities that do not necessarily have to involve the internet. Yet, to the end-user, where the Ubiquitous Converged Community Mobile access is instituted, it behaves just like the internet – only better.

We already know of the voice "off load" capabilities that converged wireless networks can bring to the cellular industries, but now with the high band-width local network, we can also look to how "data off load" in the rural unserved and underserved areas can also create even more local "subnet" communications within our communities.

For example, with the advent of local "wireless" broadband and the new segmented capacities, we see real opportunities and capability for local "wireless" digital-tv access to operate either independently or along side of the local digital "signal" based tv stations. Local "wireless" digital-tv will provide a much higher level of consumer interaction than was possible with only "signal" based tv stations. An end-user or traveler can simply open their laptop while driving through the Community Mobile cloud and find tons of rich local access services all on one SSID.

These new communication pathways will in-turn spawn new markets and new growth which we have not seen before. Our State, local and tribal governments must take the lead in getting us out of the internet cloud and into the new pervasive computing cloud. The DTFA cannot stress enough the importance of understanding that the bandwidth hogs of high definition (HD) media must be handled on the local access level with all the "segmented capacity" gates on the local access side with all the caching capabilities and other optimizations that will ensure quality of service (QOS). We can then define the grant "eligibility" specification of service areas based on the new "segmented capacity" model rather than the old "internet only" model – where connection speed is a locally generated number and not merely an "internet" connection speed number.

Hotspot technology offers only one thing: convenient internet connection within the specific coverage areas. However, with the broader term "Community Mobile" (meaning the innovative uses of local access mobile wireless services) the consumer has the benefit of a place where service providers can compete. The consumer cannot be expected to go out and just build her own uses, like for example, virtual private networking to home media or mobile connectivity to businesses and anchor institutions. Yet Community Mobile with its new "subnetting" paradigm allows for a new "sandbox" where innovative services can be born – which in turn would truly drive consumer adoption.

Community Mobile projects offer something different then muni-wifi – and something more than just internet. Community Mobile offers an entirely new and free "local access" connection service for all. Those who live within the community mobile coverage and need the internet can do so through their own residential gateway (which can also be connected to the Community Mobile with a simple VPN or what we like to call a Home Digital Agent or "HDA"). Or, the local consumer may choose to pay for a Community Mobile system provided connection to the internet. Either way, the internet is certainly not the end-all to the community mobile connection services.

The key to this innovation has nothing to do with the wireless technology, but everything to do with the business architecture. They business key in this is Multiple Carrier Mesh Block Convergence or "MBC" for short is to allow more consumers more choices and more opportunities for innovative businesses to supply more services. Local access level services as opposed to only world-wide-web services will drive newer internet media and data "segmented" capacity. But the local businesses need help in finding these new pathways; they are not just going to do it all by themselves just because you build a network. The Community Mobile open competition business model is the answer.

This business building process is the job of the special purpose local government entity. The local entity must be mandated to follow the RUS/NTIA prescribed designs for business architecture. This community mobile architecture in turn creates entirely new industries around the local access that did not exist before. What this segmented capacity means is that the internet need only be the agent (or authorization package carrier) whereas, the local wireless network becomes the actual segmented capacity carrier needed to deliver the large file and high bandwidth hogs for high definition digital media and data.

4. Relationship between BIP and BTOP

As a clarification, the DTFA would interpret the prohibition of overlap between infrastructure projects to mean that the rules did allow for multiple applications in the same service area – so long as those applications were for Public Computer Centers (BTOP PCC) or Sustainable Broadband Adoption (BTOP SBA) along side any infrastructure projects. These separations between infrastructure, PCC, and SBA applications should continue to be respected in future rounds. However, multiple applications in infrastructure, PCC and SBA should be encouraged within the same service areas with coordination of any overlap directed at the State and local government level.

B. Transparency and Confidentiality

The DTFA has posted its own RFI (http://www.dtfa-utah.com/RFI00109.pdf) wherein a link to its full and complete NTIA BTOP and RUS BIP applications can be downloaded by the general public. The DTFA feels strongly that if true "convergence" in telecommunication is ever going to become possible, openness must be required of all future applicants and a forum for communication between applicants must also be established to ensure that we do not go around stepping on each others toes.

Like the DTFA, the NTIA and RUS policy makers should be more concerned with true operability and functionality in the field -- than with "claims" of performance on paper which have been clouded within some "non-disclosure" arrangement as if a "secret sauce" in telecommunications is somehow going to be achieved.

If vendor applicants wish to include "secret" or otherwise proprietary information in their proposals, those vendors should be encouraged not to disclose, but instead be offered an opportunity for live demonstrations of operability and functionality "on-site". All of these "in-person" visits from the NTIA or RUS engineers should be at the expense of the applicant matching funds with the possible exception of only transportation and per diem for the NTIA RUS engineers to be paid by the taxpayer. Actual "live" demonstrations prior to funding are the "put up or shut up" (so to speak) verification so that the public has a means to know their tax money is not being wasted on unproven "smoke and mirror" technology.

C. Outreach and Support

The question of outreach and support in the application process is not nearly as important as Outreach and Support through a truly coordinated National Broadband plan. The RUS/NTIA must settle on a coordinated broadband plan. Converged Community Mobile is that plan; it is the best legally and logically developed plan to adopt. Future Outreach and Support can be based on policy initiatives to ensure that local and tribal governments will have the necessary template from which to implement the National plan, but the decision to move to convergence needs to start here – and the local government organization is the source.

D. NTIA Expert Review Process.

(see "in-person" live demonstrations of operability and functionality visits from the NTIA or RUS engineers as proposed in section I-B above)

II. Policy Issues Addressed in the NOFA

A. Funding Priorities and Objectives.

We can sum it up with a few short words: "Ubiquitous Converged Local Access" – meaning, that in order to reach the President's five statutory purposes, we must work towards enabling a single consumer wireless device to interact seamlessly over multiple communications networks whether wired, wireless, satellite, or fiber. When passing from one network to the other, not only should the consumer call not be dropped, but any data transfers should also be "off-loaded" to the local broadband network to take up the large file "bandwidth" hogs that have prevented consumer adoption in the passed.

Imagine, for example, a traveler with children in the back seat watching movies on an automotive flip down view screen. That same vehicle – as of this year and the new Raysat AT&T "partnership" to provide "Cruise-Cast" services – also allows the family to show satellite TV while traveling. If in the future the AT&Ts of the world wish to also offer on-demand or "ala-carte" high definition movies or TV show seasons on the go, then a segmented high capacity "off-load" service will be essential. When the family passes into the Community Mobile cloud, the lower satellite bandwidth can then be augmented by the Community Mobile cloud and large files can be delivered to the automobile hard-drive DVR/Digital Collection system using all the digital rights management and serial copy management protections that the industry has grown to accept – satellite and internet are converged in Community Mobile.

Now more than ever within the telecommunications industry we must begin to understand that "local access broadband" in conjunction with "Internet based" broadband creates that perfect vehicle to close the gap on convergence. A local access services wireless network can actually stimulate many more "new jobs" as compared with Internet based jobs alone.

The "Local access" services we are promoting could create as many as 2,000 entirely new jobs in each and every County which installs a Community Mobile network – for example, like wireless based DTV (as opposed to signal based), media, distance learning, security and surveillance, mobile health monitoring, public safety, public information, commerce, mobile maintenance, finance, banking, and literally hundreds of other industries. With over 3,000 Counties in the US that could mean up to 6 million new and sustainable jobs!

Initial capital injections like those from federal grants and other resources can serve as the springboard. With subscribers on board, however, all future revenue securities instruments with inter-city and inter-State agreements can follow with oversight resting at the community level, but policy making at the federal level.

What the DTFA presents here should be of extreme importance to Federal Government because if you are not analyzing government collaboration in telecommunications with private companies with the same vigor as the potential plaintiffs in an antitrust lawsuit, the affect of legal battles could nullify any progress that might be had in developing technologies. Legal battles will destroy wireless projects and no amount of spectrum control can possibly turn around years of litigation over telecommunications and government backed monopolies.

Government Collaboration in Telecommunications has been perhaps the most frequently litigated topic since the Bell System Divestiture of 1982. The Dixie Technology Funding Agency is an example of a Local Government Agency that should be duplicated in other States and cities across the country. In Utah, the entity was formed under Utah (U.C.A. 1953 § 17C-3-1 et seq.) and since its inception has been dedicated to understanding and solving this very legal issue of government collaboration in telecommunications infrastructure. A 600 page thesis on this topic would only begin to scratch the surface of the history and legal precedence in this determination, but under this limited response to your questions, we simply introduce the DTFA capabilities and persuade the reviewers to truly consider whether the FCC and FTC under their umbrella Department of Commerce organization has thoroughly thought through these legal matters.

Walking headlong into litigation is something that the Federal Government must avoid at all costs. Ironically, Federal preemption is a main topic of the legal debate since 1982; any public/private strategic alliances in telecommunications would by definition be bound by any constitutionally correct State telecommunications laws which have been consistently free from Federal Preemption – for example, *Nixon v. Missouri Municipal League*, 541 U.S.125 (2004).

1. Middle Mile ‘‘Comprehensive Community’’ Projects

Convergence through Ubiquitous Local Access Community Mobile networks is by its very nature both a “Middle Mile” and “Last Mile” solution – every node is an access point – every access point is back-hauled – every back haul is connected to multiple communities – and every community has an inter-agency and inter-state agreement with other communities for open consumer availability and provider competition.

The problem: “better faster” and “bundle and save” are only a different angle on the same thing – the internet. The DTFA proposes that merely offering hotspot or faster better internet “connection speed” to the home is never going to foster consumer adoption. While these communities may have had the best of intentions, the true key to consumer adoption will not be found in the internet, but it will be in the introduction of innovative systems and services with a paradigm shift from the internet into the ubiquitous mobile computing cloud that will drive growth. The internet will always remain an important and vital part of these new services, but the internet alone cannot be the driver; it must be the services themselves.

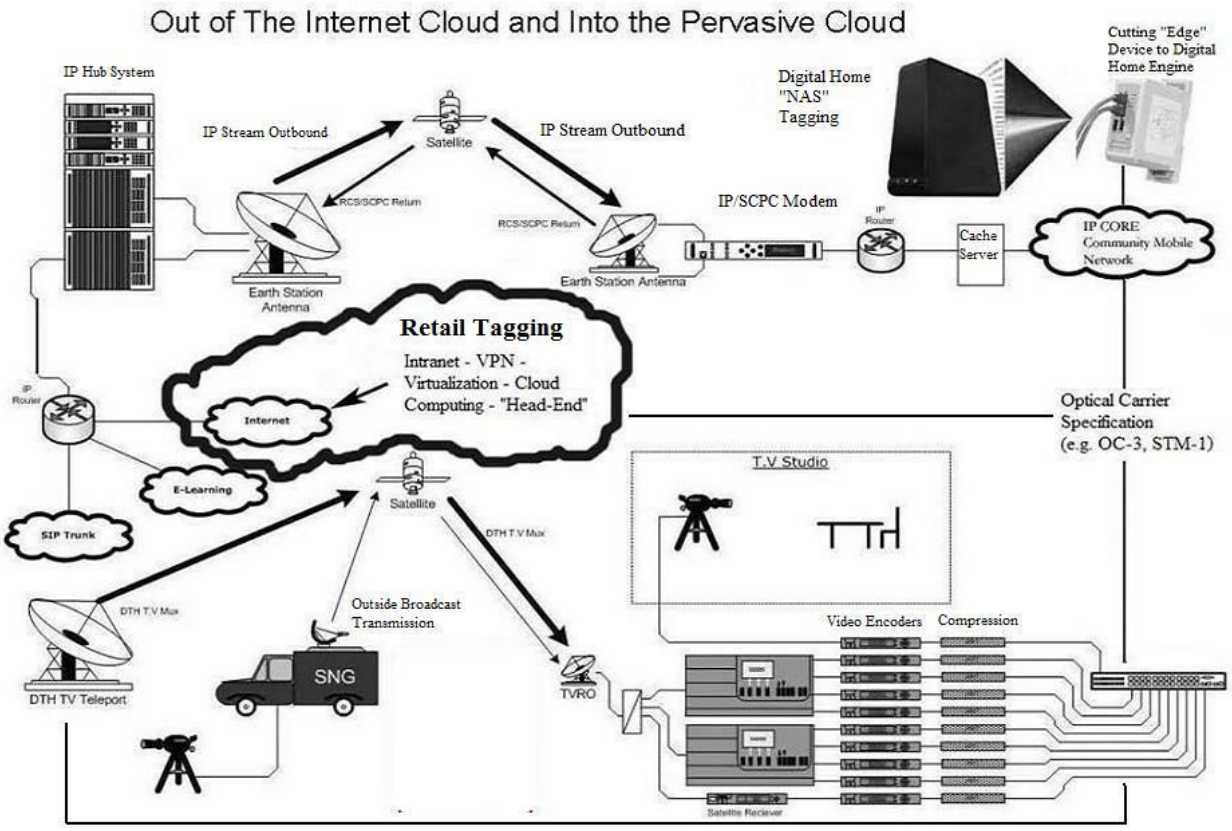


FIGURE 1 – IPCORE Community Mobile closing the “convergence” gap

2. Economic Development

It should be abundantly clear at this point that the DTFA’s recommendations to the NTIA/RUS are that the Business Models and Practices are far more important to successful development of broadband strategies than any other particular technology. This concept now stumbles upon the realization that the NTIA and RUS are going to have to work this from an “interagency” perspective and take into consideration that the Department of Commerce is the over-arching authority that should be encouraged to show leadership and provide direction in these matters.

A local Director of Contracts (DOC) Organizational Scheme is also the best means to ensure that interests of fair local competition along with uniformity of principles and guidelines are properly carried out. Because more competing resources can be made available to wireless infrastructure projects through outsourcing, a DOC organizational scheme is the best structure when it comes to fast-paced technology. The old adage of bigger is better simply does not apply. The Dixie Technology Funding Agency DOC has a track record which has demonstrated great accomplishment. The key to the success and sustainability in a complex project has been the DOC small organizational operating unit.

Though small, a DOC allows for the greatest flexibility in keeping up with all the available technology resources. We know that technology is constantly changing at an alarming pace. The

likelihood of a specific technology becoming outdated even before its implementation is becoming common place. Regulatory implementations usually follow. A DOC is the most agile form of organization to be able to jump —on and not necessarily —ahead of the curve. The FCC controls only the airwaves, yet the NTIA-RUS, working through a local nurturing organization can obtain involvement in the business aspects during the entire development process without overstepping its boundaries to help create local wireless digital-tv stations to operate either along side the local digital signal based tv stations. In communities that have local tv, or on its own in communities that may not be large enough to bring in the signal based stations, with greater interaction and more business opportunities, local wireless digital-tv stations can thrive.

Given this exponential pace of change in technology, only the DTFA is properly formed and agile enough to legally leverage the Recovery Act or other federal or state developmental programs to bring about the evolving Community Mobile Cloud. In addition to grant funds, an exciting and proven securities instrument called the "asset participation contract" can leverage municipal securities including tax increment financing, revenue anticipation notes, industrial revenue bonding, royalty financing, private equity financing, loans, and public donations to provide nurturing and private funding for sustainable growth and technology upgrades.

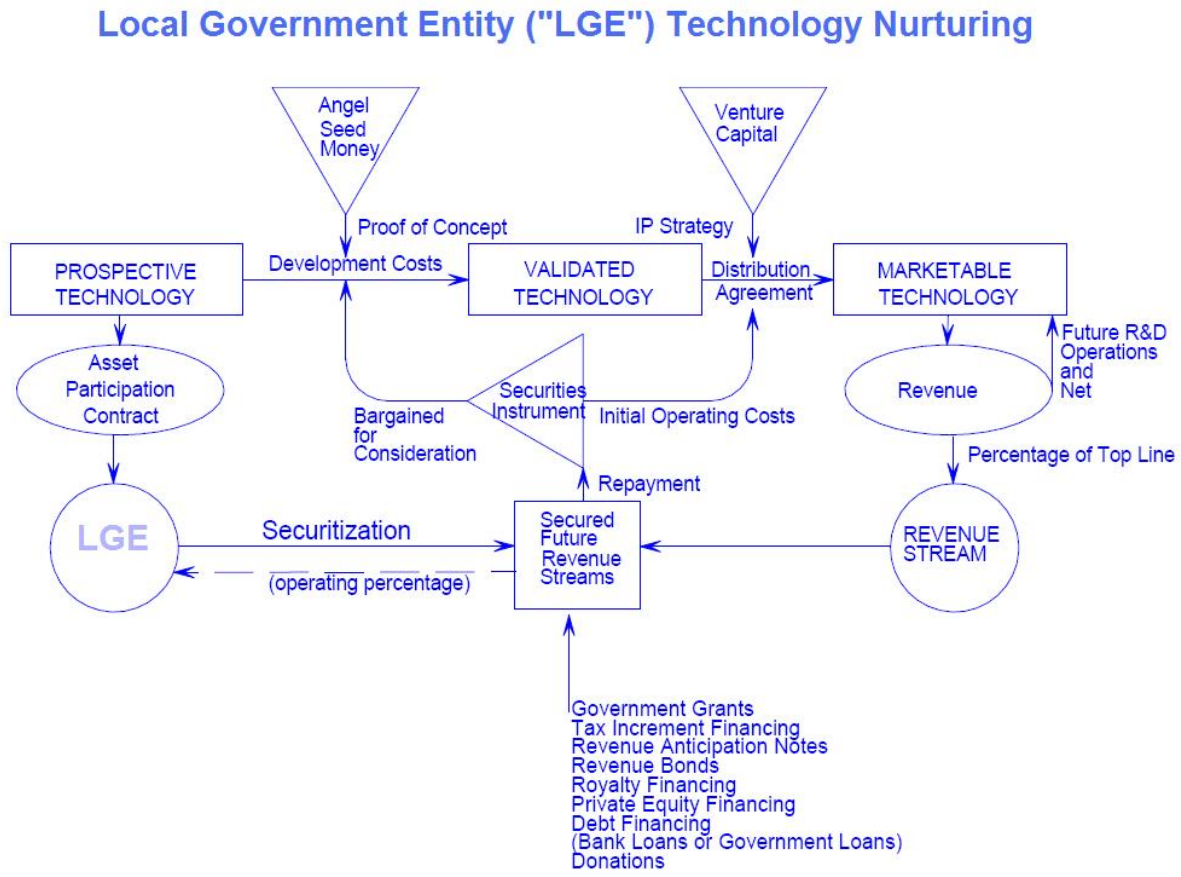


FIGURE 2 – Local Government Entity ("LGE")

3. Targeted Populations

The benefits of broadband in increasing communications are clear – the great freedom train cannot be stopped when people are informed, educated, and self sufficient. These benefits are empirically demonstrable in some developing foreign nations where freedom of information cannot be stopped by governments. Technology will raise student test scores and active involvement in the community and government will result.

The great harm, on the other hand, in local government broadband solutions has been their tendency to franchise to only one provider and thereby lock out both competition and innovation. There are already many fair competitive advantages for limited monopoly existing for service providers within Federal and State law which innovative new industries can take advantage of, such as patents, trademarks, copyrights, and trade secrets, just to name a few. The local telecommunications franchise simply needs to be done away with. Our State, local and tribal governments need to instead be focused on nurturing competition rather than limiting it. Creating and enforcing new federally mandated policy in "open" broadband infrastructure is by far the best path to economic development through telecommunications.

City wide real-time wireless convergence for broadband is perhaps one of the most underutilized broadband solutions. City wide wireless has been technologically ready for some time, but it has only been the lack of innovative business models that has prevented success in these areas. Community Mobile offers that change we need.

4. Other Changes

Still in the wake of the 1984 break up of the Bell Systems, even today many of the monopolistic business models continue to create barriers to openness. For telecommunications systems like we are proposing, although new breakthroughs in wireless technology are important, the DTFA came into existence not to fill the technology gap, but to fill the open model business gaps.

The DTFA recognized that too many of the communities entering into "muni-wi-fi" agreements still do so upon negotiated "franchised" internet services. The DTFA wished to pioneer a new paradigm where local side access services could become self sustaining and the keys to development that were not found in the franchised internet services alone. We saw the internet, not as the starting point, but only just one possible service among many. Local access services means opportunity in media, distance learning, security and surveillance, mobile health monitoring, public safety, public information, commerce, mobile maintenance, finance, banking, and literally hundreds of other industries.

Rural areas in particular suffered from the old Bell Systems mentality of treating communications as a scarcity rather than abundance. In geographic areas where it was hard to lay cable or fiber, the initiatives by local and tribal governments never had the value proposition needed to present to the big telecommunications giants. With the advent of Gigabit microwave wireless backhaul and now mobile connectivity, those barriers are gone. We no longer need to lay cable – the new "fiberless" terminology takes on meaning. Communications to the sparsely populated areas of our country were consistently told – it was "merely a matter of time." Well the time for others to come to the rescue of the rural communities seems to have passed and it is now time for rural communities to begin to choose their own destinies.

Mobility then became the ice breaker. Mobility has brought an end to that problem of value. We see that the citizens of the large populated areas in our states and counties like to visit and vacation in the rural areas, thereby creating that demand for the large mobile and wireless companies to provide at least service coverage in these rural areas.

Now that the metaphorical convergence technology “cat” is out of the bag, where these 3G and 4G networks break the ice in the mobile broadband possibilities, the DTFA initiatives are not about creating the new technology, but merely showing how the technology makes for new local services with new economic possibilities.

Design strategy in a National Broadband plan must consider the true problem at hand, which is not that the technology still has to develop, but that this country has grown from an agricultural community, to an industrial based society, eventually to a services based economy. While we certainly do not advocate the Department of Commerce base its entire strategy on this notion, we would recommend this as a major communications theme for a new world resource-based communications strategy that replaces the need for the scarcity oriented communications business structure we have now.

While this vision is certainly much farther off than some have predicted, it none-the-less depicts a world that is rich in natural resources and energy and that — with modern technology and judicious efficiency — the communication needs of the global population can be met with abundance, while at the same time removing the current limitations of what is deemed possible due to notions of economic viability.

Jacque Fresco, a self-educated industrial designer, once said, "At the beginning of World War II the U.S. had a mere 600 or so first-class fighting aircraft. We rapidly overcame this short supply by turning out more than 90,000 planes a year. The question at the start of World War II was: Do we have enough funds to produce the required implements of war? The answer was No, we did not have enough money, nor did we have enough gold; but we did have more than enough resources. It was the available resources that enabled the US to achieve the high production and efficiency required to win the war.”

To employ this thinking into an IP-Core Community Mobile environment we had to look at the available wireless frequencies: in addition to the traditional 2.4Ghz wireless structure, in 1997, the FCC put into place its Unlicensed National Information Infrastructure (U-NII) radio band as part of the radio frequency spectrum used by IEEE-802.11a devices and by many wireless ISPs. It operates over three ranges: U-NII Low (U-NII-1): 5.15-5.25 GHz. Regulations require use of an integrated antenna. Power limited to 50mW; U-NII Mid (U-NII-2): 5.25-5.35 GHz. Regulations allow for a user-installable antenna, subject to Dynamic Frequency Selection (DFS, or radar avoidance). Power limited to 250mW; U-NII Worldwide: 5.47-5.725 GHz. both outdoor and indoor use, subject to Dynamic Frequency Selection (DFS, or radar avoidance). Power limited to 250mW. This U-NII spectrum was added by the FCC in 2003 to "align the frequency bands used by U-NII devices in the United States with bands in other parts of the world". U-NII Upper (U-NII-3): 5.725 to 5.825 GHz. Sometimes referred to as U-NII / ISM due to overlap with the ISM band, regulations allow for a user-installable antenna. Power limited to 1W, which in the new MIMO configurations creates the Gbit backhaul and long distance point to point capabilities.

Consider the times you may have entered into a community and began looking for potential wifi connections for your laptop and have seen as many as 30 SSIDs in one location, ranging from home residential gateways to hotel-motel guest systems. Now consider a commercial cloud (or canopy, e.g – TM Motorola). Thanks to the U-NII and now the new OFDM technologies, the amount of bandwidth in these spectrums is abundant. The FCC should consider opening up even more channels within these bandwidths to handle and control even more traffic. These Community Mobile last mile networks can tie into both fiber and satellite tier-1. The IPCore principled design opens up and creates a newer better organized and more useful paradigm for the spectrum. All business wireless and home residential gateways will be able to continue to operate just as they have with plenty of room for all. Again, the FCC need not create more unlicensed spectrum, but merely announce and advocate for better controls and uses of the spectrum. As soon as consumers realize that their home wireless gateways are not the means to the end in the newly created secure ubiquitous environment, there will be a greater willingness to share channel space with the larger community and "test bed" programs in the 70-80-90 GHz ranges can begin to move forward with the "auction chips" falling where they may. It is the unlicensed spectrum that affects the end-user because that is the frequency of receiving and transmitting end-user device.

B. Program Definitions

Understanding innovation means that we must instill in our telecommunications policy makers a desire lose the old and limited definition for term "broadband" meaning simply "high speed Internet" and instead adopt the more accurate and innovative definition meaning "providing large bit-rate two-way data transmissions." The Department of Commerce through the NTIA RUS programs must reach out to the applicants where it can to create and mandate forums in which all applicants within a State must contact and coordinate with each other. Wherever overlap occurs, there must be a mandatory process for resolving any such conflicts. Fortunately convergence by its nature has all the room for many players and win-win situations will occur. The local government and tribal entities must have the final say.

A key example of broadband development that does not involve the Internet directly, but can affect government or community life is something we call "local access" digital television or DTV. Previously digital TV stations have all been either "signal" based TV such as your local ABC, NBC, CBS, and Fox affiliates – or they have been using the Internet for "IPTV (News - Alert)" to deliver only limited and low quality access. But with the advent of local "fiberless" broadband and the new segmented capacities, we see real opportunities and capability for local wireless digital-TV access to operate either independently or along side of the local digital "signal" based TV stations. Local "wireless" digital-TV will provide a much higher level of consumer interaction than what was possible with only "signal" based TV stations.

C. Public Notice of Service Areas

The DTFA advocates consistent with the existing program that upon the initial announcement of awardees, a public notice is entered upon the Federal Register with a public comment period. No existing service provider is contacted directly, but each service provider claiming to be operating within the announced service area is free to comment if they wish. The public comment should be considered non-binding on the grant program, but can be issued as a challenge back to an applicant concerning the veracity of their "unserved or underserved" determinations made in

their application. If the BIP/BTOP administrators feel that the public comment disclosure (if substantiated) would warrant a recall of the grant award, they should give the applicant 30-days to respond. Again, none of this is binding on the NTIA/RUS administrators who have the absolute and final discretion in carrying out the statutory purposes of the ARRA. Especially where new technology and innovative business models can create an entirely new paradigm for local access or community broadband services that have never been considered or existed before, public service provider's claims of providing such services can be overcome.

D. Interconnection and Nondiscrimination Requirements

A Carrier Agnostic Community Mobile Cloud network is the epitome of consumer choice. The DTFA seeks network ownership through asset participation contracts to prevent disruption of the vision and policies outlined below.

1. The DTFA supports activities described in this Response.
2. The DTFA maintains a lean Director of Contracts (DOC) outsourcing organization; this means the building and installing of the cloud technology (nodes), network operating center (NOC)/Training Center, provided training, and other services will be on a Request for Proposal (RFP) and competitive bid basis;
3. The DTFA has a strict ―no-franchise policy. All services, including but not limited to TV channels, voice, and data utilizing Community Mobile, shall remain open to free competition.;
4. The DTFA will encourage and nurture the development of these services, but will not prevent anyone or entity from competing for or providing any such services over Community Mobile;
5. All consumers (end-users) of the Community Mobile shall have access to the lawful Internet content of their choice;
6. All consumers (end-users) of the Community Mobile shall be able to run applications and use services of their choice, subject to the needs of law enforcement;
7. All consumers (end-users) of the Community Mobile shall be entitled to connect their choice of legal devices that do not harm the network;
8. All consumers (end-users) of the Community Mobile shall have competition among network providers, application and service providers, and content providers;
9. Community Mobile will not show favoritism to any lawful Internet applications and content over others;
10. The DTFA and anyone utilizing Community Mobile shall display any network management policies in a prominent location on the service provider's web page and providing notice to customers on any changes to these policies;
11. The Community Mobile subnet of any network under the DTFA shall remain a public system;
12. Users of the system, whether connecting to the public Internet directly or indirectly, are promised that the project associated with Community Mobile will not produce a network that is an entirely private closed network;
13. DTFA shall offer premium interconnection services, where technically feasible without exceeding current or reasonably anticipated capacity limitations, on reasonable rates and terms to be negotiated with requesting parties, however, due to the open nature of Community Mobile, the DTFA shall not limit the means by which the Community Mobile is used to obtain interconnection, e.g. even existing residential gateways may become the end-user's mode of interconnection while roaming on the network. No one using Community Mobile can be forced

by the DTFA to obtain interconnectivity or any other service through any one particular provider;
14. Community Mobile is a network architecture and remains technology neutral as to provider. To the best of DTFAs knowledge at the time of this Reponse, currently MIMO 802.11a/b/g/n protocols provide the best performance and consumer device availability. As MIMO technology expands to LTE, WiMax and others, technology may change and the DTFA is open to further suggestion; and
15. Finally, the DTFA understands and agrees to comply with the nondiscrimination and interconnection obligations outlined in the NOFA including compliance with all Federal statutes relating to nondiscrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§1681 1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. §794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C. §§6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. §§290 dd-3 and 290 ee 3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §§3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) underwhich application for Federal assistance is being made; and, (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.

E. Sale of Project Assets.

The definition of project assets must be clarified to mean only those assets which are purchased directly from the grant funds awarded and not to include any equipment or services purchased in connection with the project through “matching” funds, if any. The ability for the local government entity to create business leverage and/or even debt leverage for its own committed funding should not be disrupted.

Furthermore, any “asset participation” in the form of private sources of funding must also be excluded from any asset sales restriction. The BIP/BTOP programs must encourage and not prohibit the local government agency or developer to maximize private investment ... including an analysis of whether the proposed development might reasonably be expected to occur in the foreseeable future solely through private investment.

Except for the exclusions above, the restriction on the sale of project assets must be strictly enforced to ensure that the policies for open competition will remain in force during the entire project term.

F. Cost Effectiveness

The Recovery Act establishes five statutory purposes: to preserve and create jobs and promote economic recovery; to assist those most impacted by the recession; to provide investments

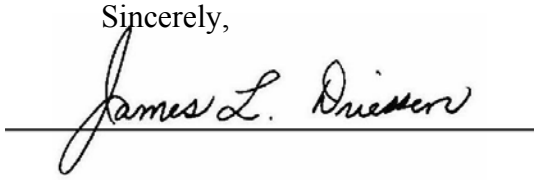
needed to increase economic efficiency by spurring technological advances in science and health; to invest in transportation, environmental protection, and other infrastructure that will provide long-term economic benefits; and to stabilize state and local government budgets.

The cost effectiveness must be computed as a per dollar spent for number in return of: 1) jobs created; 2) individuals assisted; 3) new technologies advanced 4) other industries affected; and 5) stabilization of local and state governments.

G. Other

The independent tribal or local government entity "template" must be created and given to all potential applicants mandating a local presence on each an every project. This will ensure the cohesiveness and strength to the National Broadband Plan.

Sincerely,



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Executive Summary

The Dixie Technology Funding Agency, hereafter, "DTFA" (a Utah 17C(3) Special Purpose Local Government Economic Development Agency) is uniquely qualified to answer your JOINT REQUEST FOR INFORMATION and perhaps supply some well thought out steering for your programs. By now, the RUS/NTIA policy makers should also realize that "**convergence**" is the key that most industry users groups are turning to and that this movement is also leading to new and sustainable jobs with economic growth potential through telecommunications.

We can sum it up with a few short words: "Ubiquitous Converged Local Access" – meaning, that in order to reach the President's five statutory purposes, we must work towards enabling a single consumer wireless device to interact seamlessly over multiple communications networks whether wired, wireless, satellite, or fiber. When passing from one network to the other, not only should the consumer call not be dropped, but any data transfers should also be "off-loaded" to the local broadband network to take up the large file "bandwidth" hogs that have prevented consumer adoption in the passed.

The BIP/BTOP programs and policies must promote the growing paradigm shift towards "cloud" computing that will perhaps create our best job growth potentials. By "cloud" computing we mean – the provision of dynamically scalable and often virtualized resources as a service. Traditionally, this cloud computing has only been done over the internet, but in today's modern broadband environments, we have seen new capabilities in two-way digital communications for cloud computing also in ubiquitous local and subnet systems which may further improve the deliverability and scalability of cloud services.

Interconnectivity (connection to the internet) remains the strongest tie into to the global communications platforms, but local networks can also offer new investment opportunities. We now know these technology innovations described in this Response are not just available sometime in the near future; the technologies are available here right now and ready. Convergence has proven to be extremely important for several reasons:

1. "Last-mile" deployment of "triple play" capable network without laying cable (fiber);
2. Mobile smart phones, Wi-fi capable, with onboard VOIP and/or SIP telephony;
3. Mobile calls to anywhere in the world essentially for free
4. Seamless convergence (over to your Sprint, T-Mobile, ATT, etc.) means the call is not dropped when passing out of the cloud;
5. millisecond hand-off between nodes ensures the call is not dropped, when traveling in a car for example, and making a call on the VOIP/SIP capable handset;
6. Noticeably "clearer" voice calling; and
7. Deployment at a fraction of the cost (little or no spectrum licensing fees)

Do NOT confuse this with the old "muni-wifi" business model that merely promised bridged "hot spots" through a city wide area. These new Ubiquitous networks will offer true "Community Mobile" capable systems with even better quality and bit rate capabilities right around the corner. Right now, in the USA, we have an opportunity to take a major step forward in the paradigm shift happening in telecommunications around the world, transitioning from the old "channeled" capacity models of cable and wired broadband internet into the "segmented" capacity wireless "cloud" computing models.

Today, the term "broadband" (or large capacity two-way data communications) must take on new meaning which includes more than just the "internet." The reason this has not happened before is because wireless technologies were not quite there yet in capacity, bandwidth, data rates, and consumer device availability. All that is changed now! Modify your programs accordingly to focus on these major technology shifts.