Gig.U

What is the Project?

The University Community Next Generation Innovation Project ("the Project") is a group of leading research universities, in partnership with their local communities, which are working toward accelerating the offering of ultra high-speed network services to their communities.

Why does the Project want to accelerate the offering of such services?

While many universities enjoy advanced network capability to institutional settings on their campus, many universities and their communities need upgrades to similar capabilities to the rest of their campus, to institutions and businesses near their campus, and to residential areas surrounding their campus. As our society increasingly depends on high-speed broadband networks for education, healthcare, business and day-to-day tasks, it is no longer sufficient for high-speed networks to reach the heart of campus. To enhance and apply the research performed on campus our surrounding communities must also have access to next-generation networks. In addition, having a critical mass of university communities with such networks would enable sharing advanced applications between the university communities which increases the potential impact of such networks. Having such networks would advance university research, innovations in existing and new markets, economic growth, and community priorities, such as improvements in health care, education and public safety. Having unlimited bandwidth creates unlimited possibilities.

Won't the market provide such services?

The current service providers in the United States do not have any plans to offer ultra high-speed services; nor is the market organized to meet the specific needs of research communities. In some areas, legacy regulations make providing such services difficult. By organizing demand through the Project, university communities can improve the business case for suppliers to meet the needs of university communities and help overcome legacy requirements that erect barriers to such services.

Why are universities interested in obtaining such services for their surrounding communities?

Universities see the availability of such services on campus and in their communities as essential for retaining their world leading position in research and teaching, as well as for remaining on the cutting edge of new techniques in collaborative research, which is now being done over such communications networks. Universities view these networks as part of a package for attracting professors, students, and support for adjacent institutions, such as medical centers and businesses, which wish to be near university communities.

Why will suppliers be interested providing such services to university communities?

The business case for ultra high-speed networks improves where a community enjoys high density, strong institutional and residential demand, favorable demographics, significant network assets and a stable economic base. Research university communities, which meet all these criteria, are the most attractive markets for ultra-high speed networks.

Who will provide the capital for the necessary upgrades?

The fundamental economic problem is that the cost of deploying ultra-high speed networks does not currently meet the revenues that the demand side is willing to provide. However large that gap is in communities generally, that gap is ***smallest*** in university communities because the cost of deployment is less (due to such factors as higher density, existing assets, stable employment base) and the demand is greater (as university and knowledge based enterprises around universities, as well as students and faculty want higher bandwidth) than the demand by the public at large.

While there has been a great deal of concern raised by both government officials and business leaders that our advanced wired broadband networks are slower than in other countries, and that in the long-run, such a disparity can stunt our economic growth, the daunting gap between the cost of such networks and the demand in American communities generally has lead to little action. This effort will focus the attention of the business side and policy makers on a critical – but often overlooked – point; from both an economic perspective and a policy perspective, a relatively small amount of financial capital and political capital focused on an upgrade to university communities can yield major gains. To do so, we need a focused conversation between the demand side (universities and their communities) and the supply side (service providers and other enterprises interested in an upgrade) to determine if there are ways to bridge the gap sufficiently to induce private risk capital to invest in whatever network assets and service functions are necessary to bring an upgrade to university communities. Through this process, the Project can chart a path for an accelerated upgrade for its members while also providing valuable lessons for others who wish to create a more favorable climate for network upgrades for their communities.

Why is the Project forming now?

The Google Community Fiber initiative demonstrated that university communities believe they can benefit from such networks and are willing to organize and act in other ways that improve the business case for providing such services. The ongoing initiative creates a new dynamic in the market that will be helpful in attracting interest from other potential suppliers. Universities also need to upgrade their networks to both interact with and compete with the networks that universities in other countries are going to have and to take advantage of the presence of new middle-mile networks, financed through federal government grants. Further, the universities need to respond to the Federal Government's view that we as a country need to invest more in innovation related infrastructure and high-speed applications. The Project will build on all these dynamics to drive new approaches to bringing ultra high-speed connectivity to university communities.

How will the Project proceed?

The Project will issue a Request for Information (RFI) from service providers and others as to how we can best approach the mission of bringing high-speed networks to our research institutions and their communities. That dialogue will provide all parties with a better understanding of, as well as spark creative ideas about, how to accelerate the deployment of ultra high-speed networks in university communities. Based on that process, we expect that the universities and their communities will follow up with targeted Requests for Proposals (RFP) to enter into agreements necessary to achieve the vision of ultra high-speed communities.

REQUEST FOR PROPOSAL - GIG.U BROADBAND INNOVATION

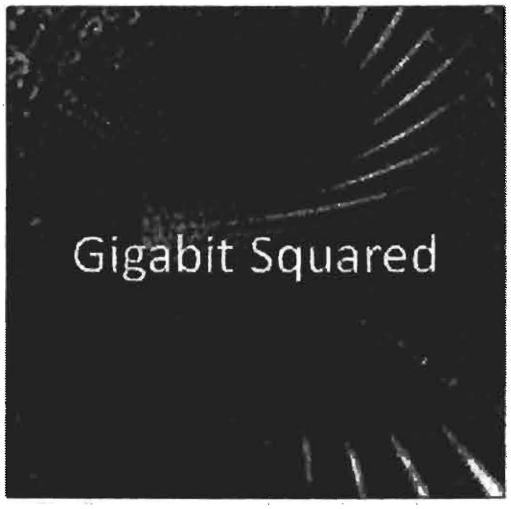
Gigabit Neighborhood Gateway Program (GNGP)

GIGABIT NEIGHBORHOOD

FIBER-TO-THE-HOME/BUSINESS (FTTH/B)
Deployment Engineering & Operational Services

Competitiveness

Connectivity



Creativity

Community

GNGP RFP# 2012-5

Expected RFP Schedule:	Wave ONE	Wave TWO
Date Posted	23-May-12	
Webinar/Conference Call	May 29, 2012 - 2:00 PM EST	
Webinar/Conference Call	May 31, 2012 - 2:00 PM EST	
Gigabit Squared Question Responses (Website):	Responses will be posted on the GNGP website as they are received. It is the responsibility of the respondent to review the website.	
Proposals Due	31-Jul-12	15-Oct-12
Evaluations and Interviews	September 2012	January 2013

PLEASE BE ADVISED THAT ALL NOTIFICATIONS, RELEASES AND AMENDMENTS WILL BE POSTED AT http://www.gigabitsquared.com/GNGP

THE REQUESTING PARTY, GIGABIT SQUARED, WILL MAKE NO ATTEMPT TO CONTACT RESPONDENTS WITH UPDATED INFORMATION. IT WILL BE THE RESPONSIBILITY OF EACH GIG.U COMMUNITY TO PERIODICALLY CHECK THE WEBSITE FOR THE LATEST DETAILS.

THIS RFP IS FOR THE PURPOSE OF SELECTING ONE OR MORE GIG.U COMMUNITIES FOR FURTHER INVESTMENT IN THE DEVELOPMENT OF INNOVATIVE COMMUNITY BROADBAND INFRASTRUCTURE AND SERVICES. SEE SECTION TITLED "LEGAL STATEMENTS" FOR CONFIDENTIALITY DETAILS.

GIGABIT SQUARED RESERVES THE RIGHT TO SELECT ONE OR MORE MULTIPLE AWARDEES FOR THE INVESTMENT AND WORK TO BE PERFORMED. RESPONDENTS TO THIS PROPOSAL SHOULD CLEARLY STATE THE GEOGRAPHY, DEMOGRAPHICS AND COMMUNITY CONTRIBUTION TO THE PROJECT.

Proposers' Webinar/Conference Call Details: May 29, 2:00 PM EST
Proposers' Webinar/Conference Call Details: May 31, 2:00 PM EST

Webinar/call-in information To Be Provided Through Gig.U Channels

Company Name:	Gigabit Squared
Address:	2014 P Street, NW, Suite 200
	Washington DC 20036
Main Number:	(888)594-5520
WDC Phone Number:	(202)833-3301
e-mail:	RFP@gngp.net

POINT OF CONTACT E-MAIL ONLY: RFP@gngp.net

Exhibits available on the website:

- Exhibit A: GNGP *Consent for Disclosure*
- Exhibit B: GNGP *Confidentiality Agreement (NDA)*
- Exhibit C: GNGP *Integrated Info and Readiness Form*
- Exhibit D: GNGP *Example Investment Profiles*

Table of Contents

Introduction

What does the Gigabit Neighborhood Gateway Program seek to achieve?

With the world moving to light speed, the most successful nations in the 21st Century will be those that lead the way in providing their businesses, institutions, and residents with affordable access to high-speed gigabit broadband networks. As Blair Levin, Executive Director of the Gig.U initiative has observed, rapid deployment of gigabit networks would give America a "strategic bandwidth advantage" that would enable it to retain its leadership in the emerging global economy. The goal of the Gig.U initiative is to enlist the best minds in America's college and University Communities in meeting that challenge and to assemble and put at their disposal the resources necessary to do so.

In conjunction with Gig.U and its communities, Gigabit Squared has created the Gigabit Neighborhood Gateway Program to help select Gig.U communities build and test high-speed gigabit broadband networks with speeds from 100 to 1000 times faster than what Americans have today. Gigabit Squared intends to make available $200 million in broadband funding for up to six demonstration projects. Gigabit Squared may consider investment in larger projects that merit consideration. In addition, select team members* have indicated their willingness to provide certain additional assets to the GNGP. The GNGP demonstration projects will offer Communities services at a competitive price for innovative projects that range from small neighborhoods of 5,000 to 10,000 and up to 100,000 people. Gigabit Squared has also assembled an extraordinary team of experts in all aspects of developing gigabit networks to provide support for these projects.

Based on many discussions with Gig.U and its Communities and stakeholders, Gigabit Squared and its team members concluded that a catalyst was necessary to move the Gig.U initiative from theory to action. The Gigabit Neighborhood Gateway Program is intended to provide that catalyst. Through the release of this request for proposal, we intend to give the Gig.U Communities a platform to structure their own level of interest and commitment in meeting the challenges of the Gigabit future.

The Gigabit Neighborhood Gateway Program is intended to:

- Facilitate the development of Fiber-to-the-Premise/Home (FTTP/H) networks with synchronous speeds of at least a gigabit per second to end-users. Offer lower speed/pricing combinations that are a better value than prevailing market rates for people that currently do not have service.
- Create openness and choice through an open access architecture providing Gig.U Communities with the choice of multiple service providers.
- Create hyper-local access and Community service applications that promote better health, education, Community and public safety services.

- Develop a platform for innovation, next generation application development, workforce development and job creation.

Key Events & Projected Dates:

Gigabit Squared reserves the right to modify any of the dates. Any Changes or Responses to Questions will be published on the website www.gigabitsquared/gngp

Expected RFP Schedule:	Wave ONE	Wave TWO
Date Posted	23-May-12	
Webinar/Conference Call	May 29, 2012 - 2:00 PM EST	
Webinar/Conference Call	May 31, 2012 - 2:00 PM EST	
Gigabit Squared Question Responses (Website):	Responses will be posted on website as they are received. It is the responsibility of the respondent to review the website.	
Proposals Due	31-Jul-12	15-Oct-12
Evaluations and Interviews	September 2012	January 2013

Legal Statements

Disclaimers

Legal Status

Gigabit Squared is not a public entity. As a result, this RFP is not subject to public procurement requirements. While Gigabit Squared has adopted some procedures that are common to public RFPs, it is not required to do so, and it may modify or discontinue them at any time.

This RFP does not constitute, and should not be interpreted as, a contract between Gigabit Squared and any entity or person for the performance of any obligations. Instead this RFP seeks to obtain information from the Gig.U members and their Communities that will enable Gigabit Squared to identify, evaluate, and compare the investment opportunities in the Communities that respond to the RFP.

The submission to the RFP, and subsequent evaluation of that response by Gigabit Squared, also does not constitute a contract or any type of agreement between Gigabit Squared and any respondent for the performance of any obligation. Only a written contract will obligate the signatories to the terms and conditions contained in any such contract.

All responses to the RFP will become the property of Gigabit Squared. If you believe that any portion of your proposal includes proprietary or other confidential information, please clearly mark it as such and state the basis for your claim to confidential treatment. Gigabit Squared will treat the information as confidential and will use it only for the purposes of the Gigabit Network Gateway Program. Unless otherwise required by law, Gigabit Squared will not disclose such confidential information to any third party without your permission.

*Gigabit Squared and the other team members identified in this RFP are independent contractors and not partners or agents of each other. Nor shall any team member have the authority to enter into any agreement purporting to bind any other team member without the other's written authorization.

After receiving written proposals, Gigabit Squared may require that a bidder make oral presentations or respond to further inquiries by Gigabit Squared.

Gigabit Squared reserves the right to reject any or all proposals, or any portion of a proposal. Gigabit Squared contemplates entering into agreements to invest in five or six Gig.U Communities. Gigabit Squared also reserves the right to negotiate changes to any proposal.

Cost of RFP

This RFP does not commit Gigabit Squared to pay any expense incurred by you in the preparation of your response to the GNGP Challenge.

Instruction to Respondents

All responses to this RFP should be submitted directly or mailed through yousendit.com or similar large file sharing service to RFP@gngp.net. This will enable files of any size to be delivered. It is our preference to receive all the files electronically in editable format where possible for our evaluation and planning. Word, Excel, GIS and PDF formats are acceptable. In order to respond to this RFP, you must select one of the following categories for your proposal:

- Gig.U institutional response for neighborhood innovation applications as a staged sustainable neighborhood deployment.
- Gig.U institutional response with local stakeholders (e.g., Developers, non-Governmental Institutions), explaining why the demonstration project should be staged in their neighborhood.
- Full Community response by Gig.U institutional member in partnership with a local government interested in having its Community serve as one of the staged neighborhood deployments.

If any item in the RFP is unclear, a written request for clarification may be sent to Gigabit Squared. Such requests must be sent only through the email address RFP@gngp.net and will be posted at www.gigabitsquared.com/GNGP.

It is the responsibility of the respondent to periodically review the site for responses to the questions.

A FAQ can be found at: http://www.gigabitsquared.com/gngp/faq

All responses must be submitted no later that 5:00 pm (EST) on the Response Deadline date. Any submission submitted after the deadline will not be accepted. However, Gigabit Squared may make exceptions at its sole discretion.

Responses will be evaluated and ranked by a selection team designated by Gigabit Squared for that purpose. Gigabit Squared may make a decision on how to proceed with respect to the responses at any time without further notice. Upon completion of Gigabit Squared evaluation, Gigabit Squared will provide information about the responses and next steps on the website above. As one possible outcome of the RFP, a short list of responding Gig.U Communities may be asked to provide further information, though this will only occur at Gigabit Squared's sole discretion.

Gigabit Neighborhood Gateway Program Overview

Who we are:

Gigabit Squared is a privately held U.S. based company working in partnership with Universities, state and local Communities, federal and national governments as well as public and private business entities to establish and nurture digital ecosystems vital to growth and competition in the 21st Century.

Gigabit Squared is creating a new way to look at partnerships and growth that we term "digital economic development", which is:

- The intersection of infrastructure development, Community building and job creation.
- The use of technology in creating sustainable Communities and regions, providing a technology enabled workforce and opening up better ways for government to connect to Communities and citizens through more robust networks.
- Powered by the use of better wire-line and wireless networks.... enabling the potential for new applications and services.

We believe that creating a next generation workforce will require a next generation digital infrastructure. This is the way to create "digital apprenticeships" in Communities that work to create a sustainable workforce and build future value though the creation of "digital capital".

Gigabit Squared utilizes experience, technical know-how and a passion for business to align a wide range of priorities, resources and knowledge to enable the potential of Gig.U and its Communities. At our core the Gigabit Squared team are developers of networks (both physical and human). We provide both infrastructure and services to develop and deploy broadband networks that have become essential to our lives. Our work starts, as it does in any development project, with the planning, strategy and human interaction needed to create a

successful project. Our work ends with a network solution that is tailored to the needs of the particular Gig.U participant and their Community.

Sometimes we are developing networks that we will own and operate, and sometimes clients will own others. Some networks will be structured as a public-private partnership (P3) that combines both public and private resources and expertise and have a hybrid ownership structure.

We have the ability to develop and deploy networks though a streamlined process of design/build with the further ability to design/build/finance/operate/maintain such networks.

We provide all manner of deal structures, depending on the nature of the project, the ultimate client, and the needs of the key stakeholders. We are capable developers of networks precisely because we are capable of scoping, building, and owning such infrastructure projects. Gigabit Squared is both a thought leader and an implementer. We provide the integration of the various disparate pieces to create a network that can be developed, deployed and become financially sustainable. In sum, we are developing better broadband, with better Community connectivity in the Gig U. Communities to implement a bold vision of a sustainable digital economic development future.

To implement that bold vision requires capital as well as expertise. We have developed with our investment banking firm and capital team a plan of finance with initial terms (confidential) that include debt and equity. Financing in excess of $200,000,000 will be made available to a select group of Gig.U Communities to fund broadband network initiatives that we believe can scale. The final commitment of funds to particular projects will depend on the partnership developed, the committed local resources (both hard and soft assets) that the Gig.U Community brings to the project, the size and capacity for growth, and finally the aggregation of revenues the Gig.U Communities are able to bring to the project.

We develop infrastructure with the ultimate goal of delivery of next generation services and applications as well as driving revenue through our development activities. Gigabit Squared blends digital development experience, technical know-how and a passion for business to enable, facilitate and sustain the digital potential of Gig.U Communities and their constituents. We champion both the digital now and the digital future. We foster growth and innovation by helping Communities create and sustain a healthy, thriving digital ecology.

Our Ecosystem of Team Members:

Gigabit Squared is not in this alone. To create a sustainable digital ecosystem we need a team. So we have assembled some of the best in the industry with a vast array of technology, services, solutions and experience, leading the way into the digital 21st Century. Our team members are chosen as "best in class" at what they bring to our Gig.U Communities and the GNGP. Each one has the tools we can deploy to help the Gig.U Communities accelerate the creation of our gigabit future. By Bringing together these independent contractors into a tightly integrated team, Gigabit Squared provide a comprehensive suite of services and the flexibility to create your digital future *now.*

We are proposing to package and offer solutions unique to the Gig.U Communities. We intend to work with your Communities to create a portfolio of service solutions. As the proposed Community service provider, we are electing to fund the development of the fiber network, and thereby provide a more robust suite of services. We will help facilitate any or all of the available options offered under our service portfolio.

What we are looking to accomplish with this RFP:

GBPS2 is looking to empower select Gig.U members by providing them and their Communities with the fastest route to having a sustainable, high-speed gigabit, open architecture broadband network. We are looking to create projects and potentially a public-private partnership that enables you to achieve the Gig.U vision, and enables Gigabit Squared and its team members to become the provider of choice in developing and scaling a world-class network.

We are creating a new paradigm, and shifting the focus of job creation and economic development impact to creating digital capital -- that grows exponentially with gigabit high-speed networks. In other words, we are looking to use that digital capital to grow new applications and unlock entrepreneurs, empower healthcare institutions and providers, educate a technology-based workforce, create smarter energy solutions and enable economic development opportunities through a new Community focus.

We are looking to create a demonstration project in each of the 5 to 6 selected Gig.U Communities that clearly shows open architecture networks in the right teaming arrangement, with forward leaning Universities and their bold Community partners, creating long-term value and growth.

We are looking to:

- Use underutilized assets and capacity at the University or within the municipality or local stakeholders, and thereby bring private capital to unlock the long term value of

that capacity, increasing demands for services and committed resources to bring gigabit speed, open architecture into use.

- Aggregate demand and utilize a new framework through open architecture to create new capacity, spur new applications and Community portals and open up channels of innovation.
- Create a new way to bridge the middle mile and last mile with a new digital framework.
- Create a new kind of provider...a Carrier 3.0, if you will, for a fiber-forward future in conjunction with you and your Community as partners for a new Community model.
- Move your Community from data caps to increased bandwidth and significantly upgraded Community capabilities.
- Drive digital economic development by aggregating and leveraging University and Community revenues to lower the overall costs of building gigabit broadband to scale.

We believe the demand for bigger broadband is a growing wave that we can help you ride to success, with a recognition of the power of local Community assets to create digital capital and capacity building. This process is what enables digital ecosystems to be nurtured, and to grow. At Gigabit Squared we want to unlock the demand for embracing those digital ecosystems for the selected Gig.U Communities. Thus we raise the bar nationally, and in your Community demonstrate that the future network is capable of being deployed *now* with the right program, partners and set of circumstances.

Gigabit Squared looks to bring together in select Communities all the elements for a successful deal that already is effectively "on the table", by aggregating the existing demand and utilizing more effectively the underutilized assets (your digital capital) and *unrecognized* assets, both hard and soft. Together we are changing the lexicon to create "hyper-local Community"-based strategies that drive select demonstration projects that go far beyond "pilots" and "prototypes" to University led, fiber-forward leaders.

We are looking to drive innovation through gigabit speed broadband projects. The Gig.U Communities most likely to succeed in our program are those that are self-organized, focused and collaborative--- with the right mix of capital, capability and cooperation between University and Community.

Our Gig.U Partner Communities

What does an engaged University and Community teaming arrangement look like, and how can this grow?

- University faculty, staff and students are also members of a civic Community. The wider civic Community benefits from the continued vitality of the University. So an engaged University - Community partnership is an interdependent, mutually beneficial relationship focused on common goals for the broader Community. There is full buy-in and commitment by both the University and Community's leaders, and they recognize both the tangible and intangible benefits that will accrue to them. As a result, they are committed to making the financial and resource investment to bring their shared vision to fruition.
- The best partnerships recognize that investing in the University's digital infrastructure

creates an opportunity to transform the surrounding Community by creating jobs, accelerating opportunities for STEM education, improving health care access and outcomes, and improving the safety and security of residents. This investment extends the University's circle of influence beyond its physical borders and makes it an even more desirable destination for educators, students, innovators, leaders and the broader Community.

- The University and Community partnerships that embrace the path to digital economic growth will experience renewed vibrancy and energy. This engaged and educated Community will continue to exploit this digital capability by developing more impactful and far-reaching solutions that improve quality of life for current and future residents. This strong sense of ownership and accountability creates a sustainable academic and Community competitive advantage.
- These partnerships will continue to grow and deepen as more projects are successfully completed and the vision of what's possible evolves to cover nearly every aspect of the Community.

Our Selection Process

How will we determine which Universities and Communities are viable candidates for the Gigabit Neighborhood Gateway Program?

We will look to candidate partners with an organized, well thought out offer to reduce costs, share resources, aggregate demand, drive early adoption, reduce the risk of the private investment and bring to the table heretofore underutilized or "unrecognized" assets. By lowering the costs of developing the network, it will also, as a corollary proposition, increase the speed of our build. Even though we will bring private capital to the table, we encourage local investment in our Gig.U Community projects. Our goal is to create a Community driven program.

The contributions by the various Gig.U members and their Community partners should include a mix of contributions, such as the following:

- Ability to use underutilized resources
- Contribution of existing and proposed capital projects that are anticipated for fiber, wireless or facilities based services that contribute to the overall project goals
- Multi-Year long-term (3 to 10 years or more) "Institutional Service" revenue commitments for fiber, network services (e.g., Internet, Voice, Video, Cloud Computing/Storage)
- Aggregated one year commitments from Community households and/or small businesses prior to our network implementation
- Access to Community resources; (there may or may not be direct costs associated with these resources) facilitating the use of existing infrastructure (e.g., conduit, fiber, vertical assets, rights-of-way in the selected demonstration area
- Discounts or waived fees for these resources
- Existing grants, funds and contracts that can be redirected to this program
- Projects, funds and responsibilities that are scattered across multiple departments, that can be consolidated in one place and yield not only stronger support for your candidacy

with GNGP, but increased efficiencies internally.
- Low rate development loans, economic development grants or loans as well as local investments.

Gig.U member proposals will be evaluated by their vision and ability to organize the Community and local investment. Gigabit Squared is looking for good partners and all proposals will receive equal consideration.

Considerations our Gig.U Communities can use to bring the right level of Community commitment to the project:

- Multi Dwelling Units (MDUs): (Voice-Video-Data) Services to Student housing
- University Services: Internet, Voice, Video, Campus/Community Security (Surveillance), Cloud Applications
- Municipal Network Services: Fiber, Internet, Voice Video, Security (Surveillance), Cloud Applications
- Institutional/Commercial Community partners: Commercial Service Agreements
- Small Business partners: Aggregate demand for SMB Services
- Neighborhood Subscribers: Aggregate demand within designated neighborhoods

We are looking for projects that bring from $250 thousand to $5 million or more in annual service revenue. Our financing resources and capabilities can adapt and be applied to various combinations of Community assets and contributions, thereby enhancing the project's viability through efficient use of existing assets and by providing additional investment by Gigabit Squared.

Gigabit Squared will utilize a variety of resources that may be available to a specific project, including in-kind contributions, demand aggregation, governmental grants, local tax-incentives or financial support, and innovative financing. Combining resources in this manner can produce meaningful returns to the Community. We estimate that:

- $250 Thousand annual service commitment over 10 years may generate as much as $5 million investment from Gigabit Squared over the first four-year period of the agreement. This would produce a 5:1 match in investment on an annual basis.
- $1 Million annual service commitment over 10 years may generate as much as $20 million investment from Gigabit Squared over the first four-year period of the agreement. This would produce a 5:1 match in investment on an annual basis.
- $5 Million annual service commitment over 10 years may generate as much as $100 million investment from Gigabit Squared over the first four-year period of the agreement. This would produce a 5:1 match in investment on an annual basis.

Why are we confident that the University, its staff and students, and the surrounding Community members will pay for the services we will offer? Because we have practical experience delivering these services, to Universities and their Communities, at speeds that are as described above, and at rates that are much more than competitive. Because of that experience, we know how to project "take rates", or what percentage of a population is likely to sign on year one, two, three and etc.

Gig.U Community Value Proposition

The Gig.U Communities have a number of different tangible and intangible value propositions that can contribute to the GNGP Network. Gigabit Squared would like the Gig.U Communities to identify these in the form of a value (Estimated or Real Dollars) that can be evaluated within **Exhibit C – Integrated Info and Readiness Form** (available at the GNGP website). These tangible and intangible contributions to the NGNP Network can be provided in the form of:

- Funds through Investment/Services
- Assets Currently Deployed or Planned
- Access through Permissions, Rights of Way
- Use of Facilities & Infrastructure
- Human Capital through Liaisons, Civic Engagement and Community Organization

What Gigabit Squared needs from the Gig.U Community

As part of completing **Exhibit C – Integrated Info and Readiness Form**, the University should outline the details, maps, supporting documents and justifications for the notes they made in **Exhibit C – Integrated Info and Readiness Form.** In this section of the proposal, the respondent will describe services and assets that may be made available to the Gigabit Squared team for use in the deployment of a broadband network in their Community. These services and assets will aid Gigabit Squared in lowering the overall cost of the network, and shortening the design and construction schedule. **Exhibit C – Integrated Info and Readiness Form,** provides a framework for capturing your responses and referencing additional information items you wish to provide. Exhibits A, B, C and D can be found at the www.gigabitsquared.com/gngp website.

Prior to beginning work within your Community, Gigabit Squared will hold a Partnering Meeting. At this Partnering Meeting all stakeholders within the Community will be invited to discuss how the project will be implemented. Partnering Meetings are instrumental in understanding and the expectations of each entity in the partnership. At this meeting we establish an organizational structure, develop clear lines of communication and build productive relationships among all stakeholders. Partnering Meetings provide each stakeholder an opportunity to discuss the keys to success of the project, as well as risks, potential roadblocks, and solutions to handle them.

Single Point of Contact (POC)

Gigabit Squared requests that the Community appoint a single Master POC for all matters relating to the project, as well as other POCs by institutional group as appropriate. This Master POC should have access to and knowledge of all stakeholders within the Community's efforts to enable broadband. If possible, the POC should have the authority to make decisions quickly and effectively. Gigabit Squared will provide a Project Manager as a peer to the Master POC for the design and the construction of the project.

Please provide a resume for the proposed individual(s).

Accesses to Rights of Way (ROW)

Please describe the public ROW assets that the Community directly controls and administers.

- What is the process that Gigabit Squared must follow to access the public ROW?
- What are the costs the Community generally charges for accessing the public ROW? Please include and itemize any application, inspection or usage fees.
- Will the Community waive any or all of these fees if selected by Gigabit Squared? Please be specific on costs and fees.
- Provide street maps, maps of terrain, and GPS coordinates, with the desired outline of the proposed service areas indicated thereon.

Permitting of Rights of Way

Please describe the permitting process that Gigabit Squared must follow within the Community.

- Please provide an estimate of the number of days to complete all steps from beginning to approval of a permit.
- Would the Community do a master permit for access to all ROW within its jurisdiction?

Community Assets

Please describe assets (other than public ROW) that are owned by the Community.
Does the Community own or have access to existing conduit? If so, please provide the location of the conduit.

- Please describe the process for accessing this conduit.
- Would the Community waive the cost and provide access to existing conduit under an Indefeasible Right to Use Agreement to Gigabit Squared? If not, what would the Community charge Gigabit Squared for the use of conduit on a linear foot basis?
- Does the Community own Water Towers or buildings that Gigabit Squared would be allowed to use as a part of the project? Please describe these assets and their location within the Community. Please describe any rooms/facilities within these assets where Gigabit Squared could locate electronic equipment.
- Will the Community waive any costs of the use of these assets for Gigabit Squared?
- Provide street maps, maps of terrain, and GPS coordinates, with the desired outline of the proposed service areas indicated thereon.

Aerial Assets

One method of deploying a broadband network is by the use of existing poles. This requires attachment to poles either in the communications zone or in the power zone. Some Communities own the electric utility (municipal electric utility) as a part of the local government, and public power companies serve others.

- Does your Community have a municipal electric utility as a part of the local government? If so, please provide a contact name and number for this entity.
- What is annual cost per pole to attach?
- Is there an inspection fee and, if so, what is that cost per pole?
- What is the average cost Gigabit Squared should assume if there would be make ready required on the pole?
- Would the Community waive inspection, pole attachment and make ready fees for Gigabit Squared for this project?
- If the Community does not have a municipal utility, who is the Electric Utility that serves your Community? Please describe the relationship between the Electric Utility and the Community and provide a contact name and number for this entity.
- Provide street maps, maps of terrain, and GPS coordinates, with the desired outline of the proposed service areas indicated thereon.

Construction Methodologies

Gigabit Squared will work with the selected Community to quickly, efficiently and safely install the required infrastructure to deploy the broadband network. We have significant experience with all methods of construction of fiber to the home networks.

- In this Section please describe any requirements the Community has for the placement of underground facilities.
- Are there historical districts within the Community? Please describe their location and any special requirements for that area.
- Please describe any other ordinances or legal requirements that would impact underground construction activities.
- Please describe any public works projects that are planned and their location within the Community. Would the Community allow Gigabit Squared to place a conduit in a public works project?

Community Demographics/Planned Development

Gigabit Squared will evaluate the Community demographics for the proposed geography of the Gig.U GNGP Network. As part of the demographic analysis Gigabit Squared would like for the Gig.U institution and Community partners to describe the neighborhood make-up and any development plans that may change the neighborhood landscape. Respondents should include income, age, race, gender, education levels, housing stock, multiple dwelling units, institutional make-up and business climate. We are looking for our Gig.U member Communities to help prioritize areas of development and impact from implementing the GNGP Network in their Community.

Please provide street maps, maps of terrain, and GPS coordinates, with the demographics / planned developments indicated thereon.

Description of the Community's Vision

One of the important benefits of the Google Fiber for Communities initiative stemmed from its request that Communities state why they would be a good candidate for a Google fiber network. This request prompted Communities across America to take a hard look at them, identify their assets, needs, and aspirations, and describe in narrative form what they would do with a gigabit network and how they would contribute to its success.

We also believe it is critical to have a vision of what can be achieved with the Gigabit Neighborhood Gateway Program and to have an actionable plan for how this vision will be realized. To this end, Gigabit Squared asks each bidder to provide a narrative in its proposal that describes:

1. Your short- and long-term vision for leveraging the Gigabit Neighborhood Gateway Program, and

2. Your proposed plans, timelines and any unique activities circumstances, programs, capabilities and resources that will be leveraged to ensure you can successfully achieve the vision.

Legal Issues

Gigabit Squared recognizes that a bidder may be subject to a number of legal requirements that could affect its proposal. These may include state barriers to public communications initiatives, state or local procurement of other procedural requirements, franchise or other contractual obligations to incumbent communication providers, bond restrictions, easements, etc. Bidders should include with its proposal a written opinion from its legal counsel that the bidder has legal authority to fulfill the commitments set forth in its proposal and that it has obtained, or can obtain with a reasonable period, all necessary authorizations.

GNGP Digital Infrastructure Engagement Strategy

The GNGP approach will be much more than the replication of triple-play services. We intend to develop a Community based offering that will include a suite of tailored products, services and applications for institutional, business and residential customers:

- Gigabit Squared and its infrastructure partners will work to provide the following to the selected Gig.U Communities (those that meet Gigabit Squared's GNGP Requirements).

    - Fiber-to-the-home Active E, GPON and WDM/PON gigabit *accelerator* projects serving 5,000 to 100,000 households and businesses covering 5 to 10 square miles

- Wireless fiber 4G/WiFi PT-T-PT/Multi-Point-Mesh Umbrella over 5 to 10 square mile area connected to FTTH Gigabit Demonstration project, national bandwidth and local technology gateway
- National bandwidth and technology gateway with deep edge catching for global access to cloud based triple play and OTT services

- Available to all Gig.U Communities that meet Gigabit Squared's and GNGP application service delivery requirements:

  - Hyper-local open technology gateway for local access to cloud based Community application and OTT services
  - Cloud Based Application Services Core (QoS)
  - Cloud Based Community Innovation Research and Development Core (Best Effort)

As each Community we operate in is vastly different than the next, our broadband service offerings will be uniquely designed to meet the needs of each respective Community. Although we will not be able to disclose specific broadband service offerings in this RFP, we will state that our broadband service offering speed / price relationship will be far more attractive than what is available today for broadband networks, and therefore much more reasonably available. Gigabit Squared plans on working with individual Gig.U Communities to develop customized services offerings. Gigabit Squared provides an open framework that enables/supports wholesale and retail service delivery and competition. We encourage network participation and sharing the value of the infrastructure that is part of the Community digital ecosystem. As such we recognize the need to provide vertical service offerings that compete on their own merit and encourage competition that shares the cost of the infrastructure. To this end we will establish billing and settlement services that promote the use of the network.

Core - Community Broadband Services

- **Data Services**
  - 1 to 10 Gigabit Intranet Service Access (On-Net)
  - 1 Gigabit Internet Services (Consumer Best Effort)
  - 1 Gigabit Internet Services (Business Class)
  - Customized Internet Service Plans for Business/Institutions
  - Customized Cost Effective Digital Divide Service Access

- **Voice Over IP**
  - SIP Trunking for IP enable enterprises, institutions
  - Hosted VoIP Solutions for small business and residential customers

- **Video**
  - Full Channel Line-Up (On-Net)
  - Customized Service Plans (Self Service Opt-In/Out)
  - On-Demand Content Delivery (Self Service Access)
  - Customized Local Content Delivery (Institutional Program Plans)

- **Customize Over-The-Top Application Gateway**

- Community of Interest Connection Profiles
- Cloud Based Disabilities Profile
- Public Service Channels
- On-Demand Secure Video Conferencing
- Personalized Virtual Application Environment
- Customized Community Gaming

Customized – Community Specific Services

- **Wholesale Network Access**
  - Physical and logical layer network service access
  - Dedicated Wave/VLAN services
  - Secure IP Intranet Service Access

- **Consumer/Commercial Fiber/WiFi Access**
  - Dedicated Public Safety Service Network
  - Secure Public Safety Access (Surveillance/First Responders)
  - Secure Commercial Service (Small Business Services)
  - Community Public Service Access (Best Effort)

- **Community Health Services**
  - Dedicated Community Health Services Network
  - Health Information Exchange with Secure Media Access
  - Patient Center Managed Telemedicine Services
    - Secure Portal
    - EMR Data Extraction From EMR Systems (e.g., EPIC, Cerner, etc.)
    - Institutional/Physician Clinic/Home Based Access
    - Community Health Kiosks
    - Managed Home Health Service Portfolio
    - Physician-Patient Secure Video Network Access

- **Community Innovation Platform**
  - Support for a Community Developer Community
  - Support for Community Application Service Creation, Provisioning, Management and Operations
  - Access to Cloud Based Development Environment
  - Access to CDN Development & Distribution Channels

GB2 GIGABIT SQUARED

Gig.U
The University Community Next Generation Innovation Project

GIGABIT NEIGHBORHOOD

Gigabit Squared and Gig.U to Make Available $200 Million in Broadband Development Funding Through the Gigabit Neighborhood Gateway Program

Digital Economic Development Initiatives is Nation's First Multi-Community Gigabit Deployment

(May 23, 2012) Washington, DC – In a joint announcement today, The University Community Next Generation Innovation Project (Gig.U) and Gigabit Squared announced the nation's first multi-community broadband gigabit deployment with the availability of $200 million in funding. Under the Gigabit Neighborhood Gateway Program, capital is available to support up to six select Gig.U member-sponsored projects. At the center of the Gigabit Neighborhood Gateway Program is the idea that communities and their local stakeholders can drive economic opportunities through private investments that leverage public capital that will accelerate the deployment and utilization of gigabit speed networks.

Gigabit Squared created the Gigabit Neighborhood Gateway Program to help select Gig.U communities build and test gigabit speed broadband networks with speeds from 100 to 1000 times faster than what Americans have today. The Gigabit Neighborhood Gateway Program will offer communities services at a competitive price for innovative projects that range from small neighborhoods of 5,000 to 10,000 and up to 100,000 people. Selections will be announced between November 2012 and March 2013.

We have brought together a team that has had a hand in transforming broadband in dozens of communities, Including Cleveland-Ohio, Chattanooga-Tennessee, Lafayette-Louisiana, Jackson-Mississippi, Topeka-Kansas, and the Virgin Islands. Including companies such as Corning, G4S, Juniper Networks, Alcatel Lucent, Calix, Ericson, Level 3, Genexis, OnDemand, Baller Herbst and others.

Aaron Gadouas, Senior Vice President of the investment firm Stern Brothers & Co., commented on the unique model Gigabit Squared has created, "Gigabit Neighborhood Gateway Program is a compelling

"As a founding member of Gig.U, Case Western Reserve University is proud to be piloting the next generation of broadband networks to neighborhoods around universities, and providing high bandwidth service to support the national priorities of health and wellness, home energy management, public safety, and STEM education at the high school level," said Dr. Lev Gonick, Case Western Reserve's Vice President, Information Technology Services & Chief Information Officer. "Working with Gigabit Squared, Cleveland's Judson Manor and leading technology companies, we'll be creating a second gigabit fiber to the premise research project that will serve as a model for other Gig.U communities."

About Gigabit Squared

Gigabit Squared is a digital economic development corporation specializing in the planning, implementation and roll-out of IT-enabled infrastructure. We help communities and network providers across the globe develop, capitalize, implement and leverage sustainable infrastructure investments for civic and economic transformation. Public-private partnerships (P3), collaboration and co-investment in large-scale infrastructure programs drive remarkable results and financial returns. The Gigabit Squared team has been responsible for developing and acquiring billions of dollars in infrastructure funding through government, quasi-government, private, and non-profit sources. Visit us online to learn more at www.gigabitsquared.com.

About Gig.U

The University Community Next Generation Innovation Project, or Gig.U, is a broad-based group of over 30 leading research universities from across the United States. Drawing on America's rich history of community-led innovation in research and entrepreneurship, Gig.U seeks to accelerate the deployment of gigabit speed networks to leading U.S. universities and their surrounding communities. Improvements to these networks drive economic growth and stimulate a new generation of innovations addressing critical needs, such as health care and education. Visit Gig.U online at www.gig-u.org.

For More Information, Contact
Doug Adams
The Think Agency
m. 330.933.3374
doug@thethinkagency.com

public/private model because both sides are able to leverage the contributions of the other, enabling projects that would not have been completed otherwise. It is a well-conceived and innovative initiative."

"What makes the Gigabit Squared approach so exciting is that it goes far beyond normal industry business models in how to successfully and creatively improve broadband access speeds for university communities, which is exactly the premise upon which Gig.U was founded," said Blair Levin, Executive Director of Gig.U. "We intuitively knew this, but to see Gigabit Squared emerge so strongly today proves that yes, America needs an upgrade; and that yes, there are innovators and investors willing to step up to get it done."

The Gigabit Neighborhood Gateway Program will create demonstration projects in Gig.U communities that will serve as a model for maximizing the impacts of regional broadband networks. Each will feature "open" architecture networks to create long-term value and growth for the Gig.U University and community partners.

Each Gigabit Neighborhood Gateway Program project will feature:

- The use of underutilized network assets and capacity and local investment to drive services and unlock long-term value and sustainability,
- A framework to create new capacity and spur development, including community service applications that promote better health, education and community services,
- Previously unavailable speed and bandwidth,
- Digital economic development strategies to aggregate revenues and lower the overall costs of scaling gigabit-broadband, and
- A future-state network that will serve as a platform for innovation, next generation application development, workforce development and job creation.

"The Stimulus Funding was a great jumpstart to get broadband initiatives on track in the U.S. But it is just a starting point," explains Mark Ansboury, president of Gigabit Squared. "In order to realize true economic revitalization, we're urging our national and community leaders to think and act in more creative ways. And we're backing those efforts with significant investment of our own."

The New York Times

CANNES

May 22, 2012

Partnership to Bring Ultrahigh-Speed Internet to Six Communities

By JOHN MARKOFF

SAN FRANCISCO — A start-up company plans to announce Wednesday that it has raised $200 million to deliver ultrahigh-speed Internet service in six communities surrounding research universities around the country.

The company, Gigabit Squared, will work with Gig.U, an alliance of public and private universities that want to build islands of superfast networks to foster economic development and to promote services like education, health care and scientific research in the communities.

The six communities have not been named. Gigabit Squared, based in Cleveland Heights, Ohio, is in negotiations with its first university and says it will make announcements about timing and participation later this year.

Mark Ansboury, the company's president and co-founder, said the investment in high-speed wired networks was needed because American telephone and cable companies had shifted their focus to wireless systems, which are convenient but much slower.

"The big carriers built their fiber-to-the-home systems, but we have really seen them pull back in recent years," he said.

He noted that the United States was falling behind other nations that have moved aggressively to build high-speed Internet infrastructures. It ranked 13th in average connection speed in a survey last year by the network service provider Akamai; the world leader was South Korea, followed by Japan, Hong Kong, the Netherlands and Latvia.

The world's fastest city was Daegu, South Korea, at 21.8 megabits per second, followed by five other South Korean cities and eight cities in Japan.

Boston, with an average bandwidth of 8.4 megabits, was fastest in the United States but ranked just 51st on the Akamai list.

The United States has not always trailed in broadband speeds. In 1996, @Home, an Internet service provider started by a number of cable companies, charged $40 a month for download speeds up to 5 megabits.

"A decade and a half later we've basically doubled our download speeds and we charge roughly the same," said Milo Medin, the designer of the @Home network service. Today he is vice president of access services at Google, where he is leading an effort to demonstrate the value of ultrahigh-speed networking.

Last year Google selected Kansas City, Mo., to build a prototype for speeds of at least a gigabit — 1,000 megabits per second. The company originally said it would offer the service in the first half of this year, but the date has slipped and Mr. Medin said the details would be announced soon.

Google has already deployed a small demonstration network in homes next to the Stanford campus.

"When our first user was installed, the first thing they did was test the speed of the network and then they downloaded a movie from Apple's iTunes service," Mr. Medin said. The service said the movie would take about two and a half hours to download, but it took five minutes.

Gigabit Squared described the next generation of Internet service as two gigabits — about 2,000 megabits per second, roughly 71 times the speed of a standard cable modem.

Still, there is some debate about the value of ultrahigh-speed networking. Most Internet engineers agree that very few applications require such high speeds, except in specialized areas like scientific research and remote medical technology. But proponents argue that the same thing was true in the period between dial-up Internet service and today's higher-speed links.

"If you treat the communications space as entering into an era of abundance rather than scarcity," said Reed Hundt, a former chairman of the Federal Communications Commission, "you can imagine very different use cases."

Only by deploying next generation networks will it be possible to determine whether services like advanced online education systems and remote medical diagnosis and health care are really the wave of the future.

Gig.U is the brainchild of Blair Levin, former director of the government's 2010 National Broadband Plan, which originally called for high-speed network islands around military

bases. Mr. Levin later settled on university communities as a better starting base for future Internet services.

Even though major communications firms are not pushing toward higher speeds, there are pilot efforts at gigabit networking in several states, including Tennessee, Louisiana and California.

For example, Sonic.net, a regional Internet service provider based in Northern California, is offering gigabit networks to homes on several blocks in Sebastopol, north of San Francisco.

The service is $59.95 a month, said Dane Jasper, Sonic.net's chief executive, who added, "It's the fastest and cheapest broadband in America — although it's admittedly a small footprint."