

TO: HONORABLE CITY COUNCIL

FROM: CITY MANAGER

**DEPARTMENT: ADMINISTRATIVE
SERVICES**

DATE: JULY 13, 2009

CMR: 307:09

REPORT TYPE: Study Session Informational Report

SUBJECT: Information on Citywide Ultra-High-Speed Broadband System Project

This is an informational report and no Council action is required. The purpose of this report is to provide the Council with an overview of the federal economic stimulus funding proposal that staff is developing for the Citywide Ultra-High-Speed Broadband System Project. This information will be discussed in more detail at a Study Session to be held on July 13, 2009.

BACKGROUND

On September 27, 2006, the City issued a Request for Proposals (RFP) for a company to build and operate a Citywide Ultra-High-Speed Broadband System in Palo Alto. On March 5, 2007, the Council directed staff to enter into negotiations with a consortium of firms that would partner with the City to develop the broadband network (the "Network"). The Council provided staff with the following general policy direction regarding the negotiations: 1) leverage existing City assets; 2) make no General Fund cash contributions pledges or guarantees; 3) minimize financial investment and risk to the City; and 4) provide for eventual City ownership of the system.

Staff negotiated at length with the consortium in an attempt to reach agreement on the terms of a public-private partnership. Unfortunately, the economic downturn restricted the consortium's ability to obtain financing for the Network. While Palo Alto was willing to leverage its existing dark fiber assets in a public-private partnership, it did not have the resources that the consortium needed to make the project economically viable and attractive to investors. As a result, on March 9, 2009, the consortium withdrew from its participation in the project.

On April 13, 2009, the Council directed staff to pursue economic stimulus funds for the Network (CMR:143:09). The American Recovery and Reinvestment Act of 2009 (ARRA) offers \$7.2 billion in grants for qualified broadband projects. The stimulus law includes two categories of broadband funding: (1) \$2.5 billion for rural grants, loans and loan guarantees, which will be administered by the Rural Utilities Service (RUS) of the Department of Agriculture; and (2) \$4.7 billion for grants to fund broadband projects throughout the country, including in suburban and urban areas, which will be awarded by the Commerce Department's National

Telecommunications and Information Administration (NTIA) through the Broadband Technology Opportunities Program (BTOP). Palo Alto's Network falls into the second funding category. This category requires 20 percent local matching funds.

For the past two months, staff has worked with Columbia Telecommunications Corporation (CTC) to design and develop cost estimates for the Network, such that the Network will meet the "key purposes" established by ARRA for BTOP grants and will be "substantially" completed within two years, per the BTOP time requirement. Based on this work, staff is preparing to submit a BTOP grant application for phase one of the Citywide Ultra-High-Speed Broadband System Project in the amount of \$8.8 million. This phase represents an important milestone in the City's effort to provide all Palo Altans with access to a world-class fiber network.

DISCUSSION

The proposed Network would be constructed in two phases. Phase one would involve building fiber-to-the-neighborhood infrastructure—the first step in an overall plan to provide fiber optic communications to all residents and businesses in the City of Palo Alto. (The fiber-to-the-neighborhood infrastructure would serve as an inducement for investment in further fiber-to-the-premises infrastructure by the private sector.) Phase one also involves increasing the number of fibers on the City's fiber backbone and constructing a citywide wireless network.

During the first phase, the City would lay an additional 25 miles of plant to expand the reach and volume of the City's dark fiber backbone deep into Palo Alto neighborhoods. The fiber would be extended from the City's existing fiber optic backbone ring to approximately 90 nodes (access/junction locations), with each node serving an area containing approximately 300 dwelling units. Ten (10) to twenty (20) open access points will be added along the existing fiber backbone ring to permit fiber optic telecommunications service providers to connect to the network for the purpose of expanding commercial licensing services. During this phase, the backbone fiber count will be increased where necessary to provide sufficient fiber at each node to support full deployment of the broadband network, direct dark fiber connections to bulk commercial users, wireless access nodes, and the City's future telecommunications needs. The cost for fiber-to-the-neighborhood infrastructure (constructing five backbone hubs, 10 to 20 backbone access points, and 90 nodes; and installing fiber to every node) totals \$5.5 million.

The existence of a robust fiber optic backbone throughout the City also provides a platform for the deployment of a high-quality wireless network during the first phase of the project. Although only fiber will deliver the capacity and speed necessary to meet the City's broadband needs into the future, a wireless network can serve an important complementary role to wired service. It can be quickly deployed and offers critical mobility benefits to the community, especially given that wireless PDAs, telephones, laptops and other devices are extremely popular and increasingly becoming a dominant conduit for using data and voice services. A wireless network also expands the availability and affordability of broadband connectivity options in Palo Alto.

Deployment of a citywide wireless network will involve installing 30 to 40 wireless access points per square mile. At each of the 90 nodes, the wireless access points will be connected by fiber to a central control center. The remaining wireless access points will be interconnected to the fiber wireless sites by radio, blanketing the City with wireless broadband access. The City

would partner with a wireless provider or providers for network hardware, system integration and operation of the network. The cost of the wireless network (construction of wireless access points and provision of electrical power and electronics) totals \$2.7 million.

The wireless network will support a wide range of wireless service bands, including: 1) a government public safety/public service band (4.9 GHz); 2) a public access band (2.4 and 5.8 GHz); and 3) a commercial band (“white space” spectrum freed up by the conversion to digital television and/or other sources of new spectrum).

The public safety wireless service band meets one of the five “key purposes” for grant funding set out by ARRA. It will equip first responders with secure, citywide broadband access for mobile and fixed portable communications. This will result in improved response times, improved apprehension rates, efficiency improvements and reductions in overtime. In addition, staff has initiated discussions with surrounding jurisdictions to explore regional opportunities related to the public safety band. This band will also enhance government functions and enable smart grid initiatives (residential energy management, automated meter reading, peak management and conservation management) that will result in rate and environmental benefits to the citizens of Palo Alto.

The public access wireless service band will provide citywide access to high-speed Internet for business, institutional and residential users, ensuring broader availability of competitively priced or free broadband access.

The commercial wireless service band could provide a new revenue stream to cover operating costs and phase two construction requirements.

ARRA is, first and foremost, a jobs-creation engine. Phase one will stimulate the creation of new jobs in the construction, engineering and technology fields to meet the capital and operating requirements of the Network. Jobs will also be created in downstream industries that make the components that go into fiber and the electronic equipment (switches, routers, servers) that will be needed for the life of the Network. In addition, companies and industries will emerge to take advantage of the digital technology infrastructure and offer new services. This will lead to long-term employment opportunities in Palo Alto and the greater Bay Area.

The capital cost for phase one, including an allowance for contingences and project oversight, totals \$8.2 million. In addition to the capital requirements, public safety user equipment will be needed to provide access to the wireless network from laptops. Fixed equipment must be installed in Police and Fire department vehicles to support reliable in-motion communications, and video surveillance and traffic flow monitoring equipment would need to be purchased. These equipment costs total \$0.6 million, bringing the total cost for phase one to \$8.8 million.

Phase two of the Citywide Ultra-High-Speed Broadband System project would involve partnering with a private provider to bridge the “last mile” to the home or business. The expanded fiber reach and count achieved in phase one would be a significant attraction to a private sector investor and operator. The capital cost for phase two amounts to \$25.6 million. This does not include the incremental cost to connect each subscriber to the system (approximately \$1,030 per subscriber).

If no private sector investor offers to fully finance the “last mile,” there is a possibility that financing of the “last mile” could be accomplished through debt or assessment district financing, or through phasing implementation of the project based on the availability of resources in the Fiber Optics Fund. Staff believes a two-phased approach to the Broadband Project is the best way to facilitate completion, while managing the risk inherent in this effort.

RESOURCE IMPACT

Fiber Optics Fund reserves (approximately \$7 million) will be used to meet the 20 percent local matching requirement. Staff expects the income stream in this Fund to improve during phase one. Commercial dark fiber revenues should grow as fiber is located closer to businesses. In addition, there is a revenue opportunity related to commercial wireless services. As a result, the net income in the Fiber Optics Fund will be sufficient to cover the ongoing operating requirements of phase one. Staff estimates that the cost to operate the wireless network would be approximately \$0.2 million annually and would be covered by the Fiber Optics Fund.

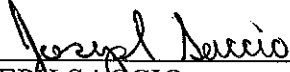
TIMELINE

NTIA has announced that it will offer three opportunities for submission of BTOP grant applications (summer 2009, fall 2009, and spring 2010). On July 1, 2009, the NTIA released a Notice of Funds Availability for the first round of grant applications under BTOP. The opportunities for broadband funding in the first round are more limited than many had anticipated. This round of funding targets projects in areas where there is nonexistent or limited basic DSL or cable modem service. It does not appear that the City will be eligible to apply in this round. The NTIA has stated that it will release revised rules for the second and third rounds of BTOP funding. Staff hopes that the subsequent rounds of funding will target a broader array of broadband projects. In any case, staff is finalizing the key documents that are likely to serve as essential components of the City’s grant application (design and engineering plan, detailed construction cost estimates, sustainability plan, etc.) so that the City will be prepared to submit a BTOP grant application at the appropriate time.

ENVIRONMENTAL REVIEW

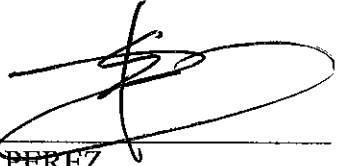
The actions requested in this report do not constitute a project for the purposes of the California Environmental Quality Act. Build out of the Network is subject to the requirements of the California Environmental Quality Act due to the installation, construction and maintenance of facilities in the public rights-of-way. Necessary environmental review will occur when appropriate.

PREPARED BY:



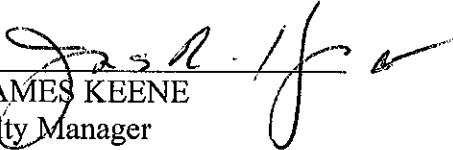
JOSEPH SACCIO
Deputy Director, Administrative Services

DEPARTMENT HEAD APPROVAL:



LALO PEREZ
Director, Administrative Services

CITY MANAGER APPROVAL:



JAMES KEENE
City Manager

ATTACHMENTS:

Attachment A: CMR:143:09

ATTACHMENT A

TO: HONORABLE CITY COUNCIL

FROM: CITY MANAGER

**DEPARTMENT: ADMINISTRATIVE
SERVICES**

DATE: APRIL 13, 2009

CMR: 143:09

REPORT TYPE: REPORTS OF OFFICIALS

SUBJECT: Recommendation to Terminate Ultra-High-Speed Broadband Request for Proposals Process Due to Lack of Financial Resources of the 180 Connect Network Services Inc./Packetfront Inc./Axia NetMedia Corporation Consortium's Proposal to Build a Citywide Ultra-High-Speed Broadband System and Approval of Actions for Proceeding with the Broadband Initiative

RECOMMENDATION

Staff recommends that the Council:

- 1) Terminate the Ultra-High-Speed Broadband Request for Proposals (the "RFP") process due to the lack of financial resources in the 180 Connect Network Services Inc./Packetfront Inc./Axia NetMedia Corporation consortium (the "Consortium") proposal for a Citywide Ultra-High-Speed Broadband System; and
- 2) Direct staff to continue to pursue federal economic stimulus and federal appropriations money to fund Network capital costs. Authorize the use of Fiber Optics Fund resources to pay for engineering, legal and other professional services needed to support the grant application process; and
- 3) Conduct a community interest survey to gauge citizen interest in the Citywide Ultra-High-Speed Broadband System and/or high-speed broadband wireless networks, including willingness to pay for broadband access to the Network (the access charge would be in addition to charges for content services to be rendered by third party retail service providers). Authorize the use of Fiber Optics Fund resources to pay for professional services needed to develop and conduct the survey; and

- 4) Develop a plan to proceed with a phased build-out of the existing backbone, independent of the Consortium.

BACKGROUND

At the Council's direction, a Citywide Ultra-High-Speed Broadband System RFP was issued on September 27, 2006. Two firms responded to the RFP and, on March 5, 2007, the Council directed staff to enter into negotiations with 180 Connect Network Services, Inc. ("180 Connect"). The Council provided staff with the following general policy direction: 1) leverage existing City assets; 2) make no General Fund cash contributions pledges or guarantees; 3) minimize financial investment and risk to the City; and 4) provide for eventual City ownership of the system.

The proposal of 180 Connect consisted of a consortium of firms that would partner with the City to develop the broadband network (the "Network"). The Consortium included 180 Connect, which would be responsible for design, engineering and construction of the system, and PacketFront, Inc., which would provide hardware, software and system operations. On May 12, 2008, Axia NetMedia Corporation ("Axia") joined the Consortium, to provide both additional expertise and financing.

On July 14, 2008, staff presented to the Council the Consortium's conceptual business plan for a fiber-to-the-premises Network in Palo Alto. Based on its business model, the Consortium concluded that there is a sound business case for building a Network in the City. The Council directed staff to enter into a Letter of Intent (the "LOI") with the Consortium by September 2008, covering key terms and conditions that would be included in appropriate bilateral contracts, and thereby enable the timely construction of the Ultra-High-Speed Broadband System envisioned in the City's RFP.

The Council directed staff to conduct contract negotiations with the Consortium in accordance with the following parameters:

- the City would provide 36-fibers on the City's dark fiber backbone at a new bulk fiber discount rate to be adopted by the Council;
- the City would use commercially reasonable efforts to purchase broadband service from retail service providers on the Network, provided that the purchase is effected in compliance with the competitive bidding requirements of the Palo Alto Municipal Code;
- the operator of the Network would provide management service for the City's dark fiber commercial license program and receive a management fee from the City for services rendered, after covering the Fiber Optics Fund's fixed costs;
- the City would contribute existing (but currently unused) fiber-to-the-home ("FTTH") trial assets;
- the City would provide access to spare conduit;
- assurances as practicable that the City's assets, integrated with and related to the Network, would revert to the City in the case of bankruptcy and that any transfer of these City assets would take place only with the explicit agreement of the City; and

- to the extent feasible, the Consortium would indemnify the City against third party legal action

On August 4, 2008, the Council approved funding in the amount of \$300,000 for legal and technical consultants to support contract negotiations. Staff subsequently hired several legal and technical consultants to support negotiations with the Consortium. In early 2009, Mayor Drekmeier re-appointed a three-member, ad-hoc Council subcommittee (consisting of Council Members Kishimoto, Klein, and Schmid) to provide staff with input on the Consortium's proposals along with the previously appointed community advisors.

DISCUSSION

For the past seven months, staff has negotiated at length with the Consortium in an attempt to reach agreement on the terms of the LOI. Unfortunately, the dramatic downturn in the economy restricted the Consortium's ability to obtain financing for the project. As a result, the Consortium planned to seek an equity investor, to provide approximately one-half of the project's capital requirements. In addition, the Consortium proposed that the City fully participate in a public-private partnership by contributing not only existing assets but a substantial fixed revenue stream of approximately \$3.4 million annually, or the equivalent of around 25 percent of projected Network revenues, to the project. As this annual amount is substantially in excess of Fiber Optics Fund resources, it could only be satisfied by the General Fund or from the imposition of a new fee or tax on residents and businesses. This change in direction was inconsistent with the general policy direction and specific negotiating parameters provided by the Council and would have required the City to assume much more of the financial and legal risks inherent in the project.

On February 25, 2009, staff held a Study Session with Council to provide information on the status of negotiations. Staff and the Consortium presented details on the Consortium's current proposal for the Network, including the additional contributions that the Consortium needed from the City to make the project economically viable and attractive to investors. Following the Study Session, on March 9, 2009, Axia informed the City that it wished to withdraw from its financial participation in the project (Attachment A). Given the constraints and time involved in identifying a funding source for this additional financial commitment needed from the City, and the competition faced from dominant incumbent providers (Comcast is currently rolling out 50/10 Mbps down/up service in the Bay Area.), Axia decided it could no longer consider this project. The letter from Axia (Attachment A) states, "Regretfully, in spite of genuine effort on both sides, we have not been able to agree to a model that works for both parties."

This development is unfortunate, because the provision of a robust fiber communications network will bring numerous economic, educational, environmental and social benefits to Palo Alto. However, it was not completely unexpected, as over the past several months it became clear that Axia and the other Consortium members required a substantial financial investment from the City that was contrary to Council's original direction and the scope of the original RFP.

In addition to Axia's withdrawal, staff has learned that the lead responder to the RFP, 180 Connect, is no longer an active participant in the proposal process. Having been absorbed by DirecTV, the engineering division of 180 Connect was dissolved. Between this development and Axia's withdrawal from the project as the financing partner, the Consortium's proposal fails to meet the financial resources criteria established by the Palo Alto Municipal Code, on which the City could award a contract to the Consortium. Staff therefore recommends that the Council formally terminate the RFP process and pursue other options for implementing a citywide next-generation broadband network.

Next Steps

After becoming aware of the financial implications of the commitment that the Consortium sought from the City, staff began to evaluate other options for proceeding with the project. Working in conjunction with the Broadband Council subcommittee and the community advisors, staff developed a preliminary proposal for federal economic stimulus funding and obtained letters of support from a number of local institutions. Staff is working with The Ferguson Group, the City's federal government lobbyist, to develop a plan for requesting federal economic stimulus and federal appropriations funding. Staff has initiated the preparation of a system-level design for the Network that will accompany the City's application for stimulus funds. The City recently sent letters to congressional representatives, and plans to meet with selected representatives and their aides, to ask for their support of the City's broadband initiative. Staff will also be contacting and working with the Governor's Office, as that office may be involved in submitting broadband grant proposals to federal agencies on behalf of California broadband-grant applicants.

In August 2008, Council approved funding in the amount of \$300,000 to support the Citywide Ultra-High-Speed Broadband System contract negotiations. To date, staff has spent \$102,000 and encumbered \$77,000 to pay for professional services in connection with the negotiation of contracts with the Consortium and for consultant assistance in applying for stimulus funds. This leaves a balance of \$121,000 from the original appropriation. Staff recommends that the Council authorize the use of the remaining funds to pay for engineering, legal and other professional services that may be needed to support staff in the application process for economic stimulus funds. Staff is currently working with a technical consultant to develop a project and design that can be submitted for stimulus funding and partially build out the network.

Staff also began to explore the utilization of Fiber Optics Fund resources to independently proceed with a phased build-out of the existing backbone to achieve the City's vision of a universally fiber-connected City. Phase one would include an expansion of the backbone to promote institutional linkages to business, educational institutions, and health and human services agencies. The objective of phase one would be to improve the current income stream in the Fiber Optics Fund, allowing it to support future phases of the project. The speed with which the Network could be rolled out would depend upon the outcome of the City's economic stimulus grant application and the income streams in the Fiber Optics Fund. Again, it is recommended that Council authorize use of the remaining authorized funds to pursue this goal. In the event initial applications for stimulus funds are unsuccessful, this effort would continue.

At the end of fiscal year 2007-08, the Fiber Optics Fund had reserves of approximately \$5.3 million. Based upon its performance for the first six months of Fiscal Year 2008-09, the Fiber Optics Fund is expected to end the year with reserves of around \$7.0 million. At current income levels, it is estimated that the Fiber Optics Fund could support a modest debt issuance (\$5 to \$6 million), which would provide for some of the initial capital requirements of the system. Staff would need to carefully consider the level of debt that could be supported by the Fiber Optics Fund, given the current status of the credit market, the fluid nature of the telecommunications industry, and the competition faced by incumbent providers. It should be noted that investors are likely to view debt supported by the income stream of a telecommunications network as more risky than an electric or water bond issue.

RESOURCE IMPACT

In July 2008, the Consortium requested that the City dedicate resources of about \$15 million to the project, which then was the equivalent of 30 to 40 percent of the proposed Network's projected capital cost of around \$44 million. The Consortium's last proposal requested that the City make an additional financial commitment to the project far in excess of \$15 million (a minimum commitment of \$65 million and a maximum commitment of \$102 million over the proposed 25-year term). This request did not comply with the Council's direction to "minimize financial investment and risk to the City" and "make no General Fund cash contributions, pledges or guarantees."

In July 2007, the Council authorized the use of Council Contingency funds in the amount of \$65,000 to support the City's negotiations with the Consortium. To date, staff has utilized \$19,000 of this amount to pay for consultant costs. In August 2008, the Council approved funding in the amount of \$300,000 for technical and legal consultants to support expedited LOI and contract negotiations. To date, staff has utilized \$179,000 of this amount to pay for professional services in connection with the negotiation of contracts and for stimulus application assistance.


POLICY IMPLICATIONS

This report is consistent with the Council's policy and program direction provided to staff.

ENVIRONMENTAL REVIEW

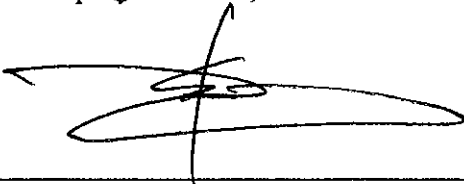
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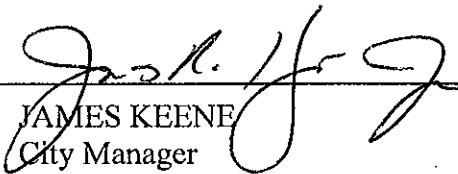
JOSEPH SACCIO
Deputy Director, Administrative Services

DEPARTMENT HEAD APPROVAL:



LALO PEREZ
Director, Administrative Services

CITY MANAGER APPROVAL:

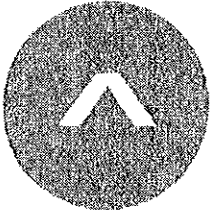


JAMES KEENE
City Manager

ATTACHMENTS:

Attachment A: March 9, 2009 Letter from Axia

ATTACHMENT A



March 9, 2009

Mr. Larry Klein	Council Member, City of Palo Alto
Ms. Yoriko Kishimoto	Council Member, City of Palo Alto
Mr. Greg Schmid	Council Member, City of Palo Alto
Mr. James Keene	City Manager, City of Palo Alto
Mr. Joe Saccio	City Staff, City of Palo Alto
Ms. Melissa Cavallo	City Staff, City of Palo Alto
Mr. Grant Kolling	Assistant Attorney, City of Palo Alto
Mr. Bob Harrington	Community Advisor, Resident of Palo Alto
Mr. Andy Poggio	Community Advisor, Resident of Palo Alto
Mr. Bern Beecham	Community Advisor, Resident of Palo Alto

(Delivered electronically)

Re: Palo Alto Open Access Fiber to Premise Discussions

Following the Palo Alto council meeting on Wednesday, February 25, 2009 there has been some dialogue as to how we might be able to move forward together with an acceptable plan to build and operate an open access fiber to the premise ("FTTP") network serving the Palo Alto community.

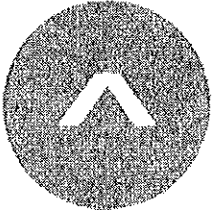
For background, this is our view of where we have come from, the process followed and the result of our discussions with the City of Palo Alto:

- The City of Palo Alto issued a Request for Proposal ("RFP") to select a partner(s) to build a FTTP network that would have minimal financial risk/commitment from the City.
- PacketFront and 180Connect responded to the original RFP and the City entered into discussions with them.
- In July 2008, after a series of discussions between the City, PacketFront and 180Connect and the withdrawal of the financing partner, Axia entered the discussions with the City, PacketFront and 180Connect with a view that together we could develop an alternative approach that would bring broader community benefits. This would involve a closer relationship with

AXIA

Axia NetMedia Corporation
3300 450 1st Street SW Calgary AB Canada T2P 5H1
ph 403 538 4000 fr 403 538 4100

www.axia.com



the City along with a commitment of capital and usage from the City; these elements are key components to the success of Axia's open access model.

- Staff, council and advisory group members have worked very hard to consider Axia's approach by exploring several options. These were valuable discussions but at this point no solution appears possible within the constraints of the City of Palo Alto's financial condition, bylaws and process.

Unfortunately, at this stage, we now recognize that the City of Palo Alto has effectively rejected Axia's proposal.

From the time we got involved, we were consistent with our view of what was required to accomplish the Palo Alto objectives and we understood that meant more participation by the City than it had originally planned. We endeavored to make that clear at all stages of discussions.

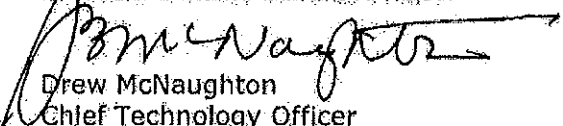
Regretfully, in spite of genuine effort on both sides, we have not been able to agree to a model that works for both parties.

As a result, please be advised that Axia is not able to further consider this opportunity.

Thank you for your efforts and we wish you success in your pursuit of a FTTP network.

Kind regards,

AXIA NETMEDIA CORPORATION


Drew McNaughton
Chief Technology Officer

Cc: Mr. Art Price, CEO, Axia NetMedia Corporation
Mr. Tim Scott, Vice President, Packetfront USA

AXIA

Axia NetMedia Corporation
3300 450 Jth Street SW Calgary AB Canada T2P 5H3
ph 403 536 4000 fax 403 536 4100

www.axia.com