

MEMORANDUM

Department of Information Services



To: Honorable Mayor and City Council
Through: Thomas Williams, City Manager
From: Bill Marion, Information Services Director
Subject: WiFi Network Update
Date: August 8th, 2008

Background: In March of this year, the Council directed staff to begin negotiations with EarthLink, Inc, to draft an agreement in which the City would assume the assets of the EarthLink Milpitas WiFi network in exchange for an early termination of their 2006 agreement. This agreement was approved by Council and the asset transfer was completed on May 19th, 2008. Public Safety use has been continued and free public WiFi access provided at the Community Center, Sports Center, Senior Center and Council Chambers. To date approximately \$25,000 in excess equipment has been identified and sold by the Purchasing Agent.

A search was initiated for an operator of the network who would continue the services listed above and provide residential service. Six potential providers were contacted and two proposals were received. As this would be a selection for a provider of services, Standard Operating Procedure 08-03 Selection of Professional Consultant was followed. The two proposals are summarized below:

Veraloft LLC

Veraloft current operates WiFi networks in the Cities of Half-Moon Bay and Pacifica. They proposed to offer both municipal and public access. Free service would be continued at the 4 City locations and a paid subscription service would be offered to the remainder of the City. The proposal includes provisions for title to the network equipment to be transferred to the operator after a period of time. Additionally, after reaching an agreed upon milestone, the City would receive a 5% share of gross revenues.

Silicon Valley Unwired (SVU)

Under this proposal, a private non-profit corporation sponsored by Google would operate the network. I-Net Solutions would provide technical support to SVU and the City would contract with SVU to provide internet service. Municipal service would be provided for government use and city-wide WiFi would be provided to the residents at no charge. This is similar to the service currently provided by Google in the City of Mountain View. SVU would be responsible for equipment upgrades and replacements. In addition to Google, other local technology firms would be invited to support SUV.

In reviewing the proposals, both are experienced in operating municipal WiFi networks. Recent experience in the WiFi industry indicates that the non-profit business model has less risk; however a commercial venture would have the possibility of revenue generation. The two proposals include technical support for subscribers however the paid subscription service offers a higher level of service. There has been strong public support for free city-wide service to help close the “Digital-Divide”.

Based on the above factors, staff is recommending that the City pursue the Silicon Valley Unwired/Google/I-Net Solutions proposal. This type of operating model leverages the network assets owned by the City and provides WiFi service to its residents at no charge. This approach would present the least risk to the City and would provide a mechanism for technology updates in the future. The selection process was targeted towards selecting a qualified operator. Once the selection is complete, negotiation of an agreement can begin. The proposals and this analysis were presented to the Telecommunications Commission and the recommendations were approved for presentation to the Council.

Recommendations:

1. Note receipt and file staff report
2. Direct staff to negotiate and draft an agreement with Silicon Valley Unwired for the operation of the Milpitas WiFi network.

City of Milpitas Wireless RFP

I-Net Solutions proposes a collaboration between the City of Milpitas, Google, I-Net Solutions Inc., and wireless equipment manufacturers to form a 501c3 Non Profit organization, named “Silicon Valley Unwired” or the like. I-Net Solutions agrees to provide the engineering and maintenance labor, office Space in Building 19 @ NASA Ames, and NOC services to monitor and maintain the Milpitas network. This will include 30hrs of bucket truck and engineering work to be utilized for upgrades and general maintenance of the network. Silicon Valley Unwired will work with Google to develop a web presence much like <http://wifi.google.com> to provide information and a feedback mechanism to the users of the network. The City of Milpitas will be expected to provide free access to light poles, power, various city owned mounting assets, and potentially equipment for servicing the network. The equipment manufacturers will be asked to donate software and technical support to upgrade the network at specified intervals. Silicon Valley Unwired will operate the network on a full time basis and will maintain the website from a NOC at NASA Ames provided by I-Net.

- **Name of proposer and a brief background on your experience in operating WiFi networks in a municipal environment.**

Silicon Valley Unwired consists of a collaboration between the City of Milpitas, Google, I-Net Solutions Inc., and equipment manufacturers, all of which have significant experience operating Municipal networks. Specifically, Google has operated the free Mountain View WiFi network for approximately 2 years.

- **List of installed networks with approximate number of subscribers**

Google - City of Mountain View WiFi Network, 15,000 unique users per month.

- **Proposed operating model (paid subscription, ad supported, free or other)**

Free open access (not ad supported), user authenticated, 1Mb Upload/Download (throughput rate limited)

- **Planned customer support (e-mail, telephone)**

Web based user group with email to a distribution list.

- **Proposed financial model (pole rental, percentage of gross revenue, free service, ad supported, other)**

Free internet access provided to citizens and all users within Milpitas. Financial support through donations by members to Silicon Valley Unwired.

- **Expense to the City if any**

Access to Lightpoles, Power for radio units, Use of City owned mounting Assets and Fiber connect, Use of City owned equipment (e.g. bucket-truck) for a specified number of hours per month.

City of Milpitas Wireless RFP

- **Deployment of additional routers to backfill known coverage hole areas**

Silicon Valley Unwired will identify coverage area voids and overlaps through site surveys and drive testing. They will then reposition nodes to maximize the efficiency of the network, and add nodes as needed and as resources permit.

- **Proposed disposition of network assets (Operator owned, City owned, leased, lease purchase)**

Network Assets to be owned by Silicon Valley Unwired.

- **Performance Goals/Standards**

Identical performance goals expected to existing Google owned Mountain View Network: primarily an outdoor network with a goal of >90% coverage of homes within the coverage area. The data throughput rate will initially be capped at 1Mbps uplink/downlink, but depending on network capacity, this could be raised while maintaining network connectivity standards.

- **Technology upgrade plans**

As resources become available, Silicon Valley Unwired will upgrade the network equipment on a capacity-driven basis. Those areas which have the greatest use and are throttled by network capacity will be upgraded first.

- **Ability to support City public safety and municipal WiFi needs**

It is a primary goal of Silicon Valley Unwired to provide an exceptional level of service for public safety and municipal WiFi needs by creating a separate network access based on hidden SSID, VLAN mapping, and bandwidth prioritization / reservation that would ensure the City the needed services for mission critical wireless access.

- **Additional information or issues of concern that you believe the City should be advised of?**

It is important that the City actively participates in this collaborative project as a member of the organization.

Proposal to the City of Milpitas for the Assumption of Wireless Network Operations
Veraloft, LLC
June 11, 2008

In response to the request for proposal from the City of Milpitas dated May 27, 2008, Veraloft, LLC is pleased to offer the following:

1. Name of proposer and a brief background on your experience in operating Wi-Fi networks in a municipal environment.

Veraloft, LLC was founded in May of 2004 and capitalized to deploy and operate citywide wireless networks.

ROBERT HAYES -- PRESIDENT

Robert has an extensive background in development and operations of high-tech companies. As Vice President of Development and Manufacturing at CellNet Data Systems he was responsible for the development of the network operating system which is currently handling over five million radios in electric and gas meters in six cities. As a vice-president at Everex Systems, he ran manufacturing, customer service, tech support and the network engineering group. He also served as the CTO of the Chroma Group, a pattern recognition company which has developed and patented a variety of leading applications in both the biomedical and energy fields. For the past two years he has directly managed the design, deployment and operations of the city-wide Pacifica, California network.

DREW DUNLEVIE -- VICE PRESIDENT

Drew has a successful track record of contributing to a number of companies during high-growth periods and possesses a wealth of deal-making and consumer service marketing experience. Drew has served in a variety of Business Development and Marketing roles at companies such as Rocket Science Games, Sega, Toysrus.com, MVP.com and most recently Yahoo!, where he worked in the Search and Marketplace group, launched the Tickets property and co-managed the Autos media and classifieds business lines. Drew has led the Sales and Marketing effort in Pacifica in addition to handling Customer Service.

2. List of installed networks with approximate number of subscribers.

PACIFICA NET - CITY OF PACIFICA, CALIFORNIA

In May of 2007 Veraloft began operating a citywide Wi-Fi network in Pacifica, California to provide broadband wireless service to residents, businesses and visitors. The service, which is branded Pacifica Net, also provides service for use by public safety officials and city employees. We currently have 700 recurring residential and business customers and add 50-75 new customers each month. The Hot Spot also serves between 300 and 400 customers each month.

COASTSIDE NET (COASTWAVE WIRELESS BROADBAND)

Coastside Net is an ISP/WISP located in Half Moon Bay, California and has provided a full suite of telecommunications services to the Coastside and other parts of Northern California for the last 10 years. Coastside Net was an early beta partner of Tropos Networks and Coastside Net's CoastWave Wireless Broadband service was one of the first Metro-Mesh Hot Zones in the entire country. Veraloft made an equity investment in 2004 and continues to provide hands-on technical and marketing expertise to assist with the high-growth of the wireless broadband business. Coastside Net has over 1,000 customers using their DSL, Wi-Fi Hot Spot, residential/business wireless, T1, Dial Up, and Web Hosting services.

COMMUNITY WIRELESS

Community Wireless (Raven 21) is a not-for-profit project tasked with building a Wi-Fi network that will provide always-on, broadband Internet access to businesses and homes in East Palo Alto, California. Veraloft is assisted with the design and build-out of the network and currently manages operations of the network. Veraloft also teamed with Community Wireless to provide expertise in hardware selection/sourcing and marketing. Community Wireless provides monthly services to about 30 non-profit customers and has recently turned on a city-wide, free hotspot service.

3. Proposed operating model (paid subscription, ad supported, free or other).

PAID SUBSCRIPTION

We propose offering a paid, monthly subscription service with no long-term contract. We anticipate that two or more tiers of service will be offered, the exact nature of which will depend on the results of field trials to determine the capability of the network.

PAID HOTSPOT SERVICE

We propose offering a paid Hot Spot service. We anticipate daily, weekly, and monthly service offerings.

FREE HOTSPOT SERVICE

As discussed in Exhibit E to the sample Network Operator Agreement, we will provide free Hot Spot service at the Sports Center, the Community Center, the Senior Center, and the Library.

CITY SERVICES

We will provide the City of Milpitas with access to the networks for Public Safety and General government use, and work with the city to reach mutually agreeable technical solutions.

4. Planned customer support (e-mail, telephone).

TELEPHONE

Phone support will be offered from 9 am to 6 pm on weekdays and from 10 am to 3 pm on Saturdays. Outside of those hours, a toll-free number will be available to leave a message to receive a call back from a technical support representative.

E-MAIL

An e-mail address, e.g. support@milpitasnet.com, will be available for support. All requests for help are confirmed immediately and responded to in the order in which they're received, usually within the hour and 99% of the time the same day.

WEB

The web site for the Milpitas network will allow customers to send support requests directly to the technical support group.

5. Proposed financial model (pole rental, percentage of gross revenue, free service, ad supported, other).

POLE ATTACHMENT FEES

Veraloft shall provide the City of Milpitas access to the network for Public Safety and General Government use in lieu of pole attachment fees.

FRANCHISE FEE

Beginning four years after the commencement of the full and complete Wireless Network, VERALOFT agrees to pay to the City, on a monthly basis, five percent (5.0%) of VERALOFT's Gross Revenues as a franchise fee. Such payments shall be made to the City by VERALOFT within thirty days following the end of each month for Gross Revenues received in the previous month. Veraloft shall provide the City with a written statement showing the basis for the calculations for the Franchise Fee with form and content acceptable to the City.

FREE SERVICE

With the exception of the free Hot Spot service described in section 3 above, Veraloft has not plans to offer free service.

ELECTRCITY FEES

Veraloft shall be responsible for the payment of Pacific Gas & Electric charges for electrical usage, either directly to the utility or through reimbursement to the City of Milpitas.

FEES FOR USE OF CITY FACILITIES

Veraloft shall provide the City of Milpitas access to the network for Public Safety and General Government use in lieu of fees for the use of City facilities for installation of radios, antennae, and telecommunication equipment used for operation of the network.

FEES FOR USE OF CITY FIBER

TBD

6. Expense to the City if any.

We do not anticipate that the city will incur any expenses associated with operating the network.

7. Proposed disposition of network assets (Operator owned, City owned, leased, lease purchase).

Initially, the network assets will be owned by the city. Over time, the ownership of these assets would be transferred to Veraloft. For example, after one year of successful operation Veraloft would own 50% of the network assets. After two years, Veraloft would own 100%. The exact time frames are TBD.

8. Performance Goals/Standards

COVERAGE

Veraloft's goal will be to provide wireless coverage to 85% of residences and businesses with 1 Mbps or better download using a 200 mW PepWave device, or similar, located in an optimal position in the edifice.

UPTIME

Veraloft's goal will be to achieve better than 99% network uptime on a monthly basis for the network and better than 99% uptime on a monthly basis for 90% of the customers.

9. Technology upgrade plans

Since Veraloft does not currently plan to assume the lease at the Great Mall, we anticipate replacement of some of the Tropos routers in the south with the dual radio 5320 model. This will be done in combination with wireless point-to-multipoint backhaul of selected routers.

10. Ability to support City public safety and municipal Wi-Fi needs

Veraloft agrees to work with the City to provide Public Safety and Municipal Wi-Fi access.

11. Additional information or issues of concern that you believe the City should be advised of.

Veraloft has no additional issues at this time.