

CITY OF HAYWARD
AGENDA REPORT

AGENDA DATE 07/24/2007

AGENDA ITEM 7

WORK SESSION ITEM _____

TO: Mayor and City Council
FROM: City Manager
SUBJECT: Voice over Internet Protocol (VoIP) Communication System Implementation

RECOMMENDATION

That the City Council approve the attached resolutions authorizing the City Manager to execute the following agreements:

1. Award of contract to ExtraTeam IT Consulting Group to implement the new VoIP Communication System, in an amount not to exceed \$590,000 not including maintenance;
2. Award of contract to ExtraTeam IT Consulting Group to complete the network infrastructure upgrades and equipment purchases needed to support the VoIP system implementation and future network needs of the City, in an amount not to exceed \$410,000; and
3. Lease/Purchase Agreement, and related documents, to procure financing through Cisco Corporation for the new VoIP system and the network infrastructure upgrades and equipment.

BACKGROUND

On July 18, 2007, the Council Technology Application Committee (CTAC) concurred with the staff recommendation to implement Voice over Internet Protocol (VoIP) for its communication needs, essentially replacing landline service or "plain old telephone service" (POTS). The CTAC Committee had discussed and endorsed the VoIP technology at a previous meeting in January 2007.

The City of Hayward currently uses AT&T Centrex services for its telephony needs. The Centrex system has been considered one of the more stable systems for such services, but is also one of the most expensive solutions. VoIP is now challenging POTS on system stability, and certainly on cost. This technology has matured and is now a widely implemented communication system used by both public and private sectors. The justification for a transition to a VoIP system is based in improved technology, better support of business operations with greater flexibility, and long-term operating costs.

The implementation of VoIP generates the need for investment in new hardware and software, which is offset by the savings in long-term operations. Along with hard cost savings, there are also collateral savings that will be realized, such as:

- Mergence to a single heterogeneous network and reduced maintenance costs
- Direct inward dialing which eliminates use of an external network
- Easier choice of local and long distance carriers
- Rapid return on investment (36 months) with cost savings realized into the future
- Flexible architecture, and open standards compliant
- Scalable as system grows or reduces
- Feature management using a web application
- Centralized and flexible administration, including moves, adds, and drops.
- Use statistics that allow for system control and efficient management

Technology Services, with the assistance of a consultant and the City's Purchasing Division, developed a Request for Proposal (RFP) for a comprehensive VoIP system. After some initial delays to clarify specifications and infrastructure needs carefully, the RFP was issued on April 16, 2007. Twenty-five vendors were invited to propose on the project; of these, 15 attended a mandatory pre-bid conference for all bidders. On May 11, 2007, the City received proposals from six vendors: four that are Cisco solutions, one Avaya solution, and one Siemens solution.¹ Through a structured process, the vendors and their proposals were evaluated. After the initial evaluation, three Cisco-solution vendors were moved forward as finalists: AMS.Net, ExtraTeam, and NexusIS.

The final proposal evaluation team was composed of two separate committees, a technical/vendor capability committee and an end-user (handset) review committee. The technical/vendor capability committee was comprised of six City staff members and two outside technical experts. The handset committee consisted of a cross section of City staff from every Department. To ensure consistency, all committee members were required to attend all discussions as well as oral interviews and demonstrations. Through this structured process, the vendors and their proposals were reviewed and evaluated. After a thorough evaluation, ExtraTeam IT Consulting Group was selected as the vendor of choice for this project. This vendor also provided the best cost proposal. The contract will be in an amount not to exceed \$590,000, not including maintenance.

The Technology Services staff is also in the process of completing a network infrastructure upgrade along with the implementation of the VoIP telephony system. The purpose of the infrastructure upgrade is to enhance and strengthen our network capabilities to support both the incoming VoIP system and future network needs of the City. This includes both the updating of existing equipment and the addition of new components, thereby strengthening the network for handling voice, video, and data requirements over one heterogeneous (converged) network, also known as Next Generation Networks (NGN)², throughout the enterprise. The cost of the

¹ Cisco Solutions: **AMSNet, AT&T, ExtraTeam and NexusIS**
 Avaya Solution: **PacketBase**
 Siemens Solution: **Verizon**

² **Next Generation Networking (NGN)** is a broad term to describe some key data transport evolutions in telecommunication and data access networks that will be deployed over the next 5-10 years. The general idea behind NGN is that one network transports all information and services (voice, data, and all sorts of media such as video) by encapsulating these into packets, much like transmission is on the Internet.

upgrade is expected to be in an amount not to exceed \$410,000. However, the upgrade will provide a solid foundation for the VoIP system, among other evolving technologies, and enhance our existing systems and capabilities. This will bring together telephone services, data services, and the power of the Internet into a single high-speed network, serving as the foundation for future expansion of the City's technology systems.

Technology Services issued a bid request in early June for the network system upgrade. The engineering specifications for this request were developed by Technology Services staff with the assistance of Cisco Network engineers. The City received responses from five vendors: AT&T, AMSNet, ExtraTeam, FusionStorm, and NexusIS. After reviewing the bids, ExtraTeam IT Consulting Group was the lowest cost and was therefore selected as the vendor of choice for this portion of the project.

After approval by Council, following would be the overall project implementation schedule:

July/August – Contract Negotiations/Preparation

September – Begin project implementation

November – Complete full cutover to new system

FISCAL IMPACT:

The overall costs for all components of the infrastructure upgrade and VoIP will be dependent upon final vendor negotiations. Total cost is estimated to be between \$800,000 and \$1,000,000. The cost savings on telephony services is expected to equal about 80% of our current POTS Centrex expenditures³, and are estimated to be approximately \$400,000 annually after installation and lease payoff of the VoIP system.

The City now spends about \$485,000 yearly (over \$40,000 monthly) for our current Centrex Telephone service, which will be decommissioned upon implementation of the VoIP system. Staff has investigated leasing options through Cisco, and has asked proposing Cisco-based vendors to submit the terms of a possible leasing arrangement. Each vendor has proposed a 3-year or 5-year leasing option through Cisco Corporation at between 4% and 5%. Staff recommends pursuing a lease/purchase option through Cisco, and using the savings from the Centrex system to make payments and service the debt on a lease for the new converged network and VoIP systems. Assuming a 3-year lease, the City would be free of this expenditure no later than FY 2011.

³ In FY 2005-2006, the City paid \$485,000 for POTS Centrex service (i.e., exclusive of costs for T-1 data lines and other miscellaneous costs.)

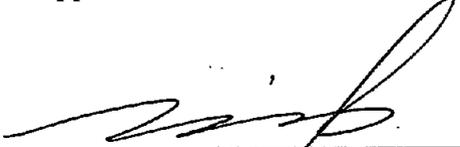
<u>ITEM</u>	<u>COST BASIS</u>	<u>CURRENT ANNUAL COSTS</u>	<u>FUTURE ANNUAL COSTS: 1st 3 Years</u>	<u>FUTURE ANNUAL COSTS: After 3 Years</u>
PRI Lines (10) ⁴	\$180/line/month	\$0	\$21,600	\$21,600
DID/Numbers (600)	.40/DID's/month	\$0	\$2,880	\$2,880
Centrex Costs	\$16/line/month +VM, features	\$482,840	\$11,520 60 lines (base)	\$11,520
VoIP Installation and Debt Service (Assuming cost of \$1M and 4% interest)	Contract plus lease interest	\$0	\$360,000	\$0
Maintenance Contract	Negotiated Annual	\$0	\$40,000	\$55,000
TOTALS		\$482,840	\$ 436,000	\$91,000

Prepared by:



Clancy Priest, Deputy City Manager/Technology Services Director

Approved and Recommended by:



Fran David, Acting City Manager

ATTACHMENTS

⁴ PRI = Primary Rate Interface, an ISDN service providing both B (bearer) and D (data) channels for messaging, and for signaling and control over an existing telephone line. These are necessary adjuncts to the VoIP system, which are not required in the current POTS system.

ABSTAIN: COUNCIL MEMBERS:

ABSENT: COUNCIL MEMBERS:

ATTEST: _____
City Clerk of the City of Hayward

APPROVED AS TO FORM:

City Attorney of the City of Hayward

