

**DEPARTMENT OF
ADMINISTRATIVE SERVICES**

SALLY W. NAGY
CHIEF INFORMATION OFFICER

**CITY OF SACRAMENTO
CALIFORNIA**

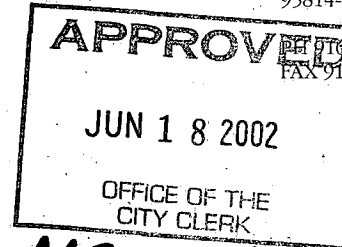
June 4, 2002

1000 I STREET
SUITE 120
SACRAMENTO, CA
95814-2601

PHONE 264-8600
FAX 916-264-5087

City Council
Sacramento, CA

Honorable Members in Session:



A62002-113

SUBJECT: NEW TELEPHONE SYSTEM FOR INTERIM CITY HALL

LOCATION AND COUNCIL DISTRICT: Citywide

RECOMMENDATION:

This report recommends that the City Council approve the attached resolution authorizing the execution of an agreement with SBC – Pacific Bell for the purchase of a “turnkey” telephone system for the Interim City Hall location in an amount not-to-exceed \$430,000.

CONTACT PERSON: Sally W. Nagy, Chief Information Officer, 264-8600

FOR COUNCIL MEETING OF: June-18, 2002

SUMMARY:

This report provides an overview of the Information Technology’s multi-year proposal to replace the City’s Centrex telephone system. It also recommends, as part of Phase 1 of the plan, that the City Council approve the attached resolution authorizing the City Manager and City Clerk to execute an agreement with SBC – Pacific Bell for a “turnkey” telephone system for the Interim City Hall, in a total amount not-to-exceed \$430,000.

COMMITTEE/COMMISSION ACTION: None

BACKGROUND:

As of December 31, 2001, the City had nearly five thousand Centrex phone lines (excluding data lines). Three thousand of these are covered under a pre-paid contract with Pacific Bell that will expire in September 2004. The remaining lines are subject to monthly service charges per line.

City Council Report
New Telephone System for Interim City Hall
June 4, 2002

The City spends approximately \$1,100,000 annually for Centrex services. Moves, adds and changes cost the City an additional \$150,000 each year.

The need for a new telephone system at this point in time is driven by the move to the Interim City Hall location at 900 – 8th Street. It is anticipated that this new telephone system for the Interim City Hall will serve as the prototype for a future citywide telephone system. While Centrex is a solid, proven technology it does not provide the functionality the City anticipates needing in the future.

Technology Discussion

After considerable review, City Information Technology staff determined that any new phone systems installed for City offices (other than 911) should use Voice Over Internet Protocol (VoIP) technology. It is widely accepted and acknowledged by the communications industry and IT industry analysts as a whole, that Internet Protocol (IP) will become the universal transport of the future. The rapid adoption and migration of vendors to the use of IP as the transport for data, voice and video applications further endorses this transition to a converged networking paradigm.

The City has over the last several years, invested significantly in its major data infrastructure. We upgraded our local/wide area network (LAN/WAN) so that it now allows citywide data sharing more effectively. We improved network security and reliability, and increased its overall capacity with the implementation of a gigabit ethernet backbone. This new infrastructure enables the City to:

- Implement high bandwidth applications (such as GIS) throughout the City's major facilities
- Break-up the single large broadcast domain into several smaller ones, efficiently keeping network traffic isolated to its own area
- Prioritize network traffic based on functional areas/applications needs
- Prepare for evolving technologies (i.e., voice/video over IP, voice/video over Internet, video streaming, unified messaging, enterprise call centers, etc.)

Basically, the City's network now has the capacity to carry both data and voice traffic. After several visits to successful VoIP implementations, and extensive evaluation of several voice-over-data solutions, City staff chose Cisco's AVVID solution because of its flexibility and building block/modular design. The City's data network has been built with an end-to-end Cisco solution. Standardizing on Cisco allows for ease of support and configuration and avoids the potential pitfall of trying to make one vendor's product work with another, which is not always easy to do.

A pilot integrated voice/data network structure was tested for sixty days last year. The test was a complete success and the Cisco AVVID system was rolled out to the Information Technology Department. It has since been implemented at the North Permits Center and the Natomas Community Center. This has allowed the technical staff to identify and address issues and

concerns prior to extending this technology to the rest of the City. Currently, about 230 City staff use this new technology.

Benefits

By converging existing voice and data networks onto a single IP-based network, the City can lower its total cost of network ownership by reducing expenditures associated with equipment and maintenance, network administration, and network carrier charges. For example, this will allow us to add voice and video services to our current data network thereby getting more value for network expenditures. A converged network also facilitates employee mobility and provides a solid foundation for the deployment of advanced, feature-rich services and solutions such as IP telephony, unified messaging, and multi-channel contact center applications.

Attachment 1 is a preliminary 10-year projection of potential costs and savings for the new phone systems based upon current pricing. This attachment identifies that the projected break-even point will be reached in FY06.

Risks

The move to new technology and a new service model is not without risk. With Centrex services, we have relied on Pacific Bell to resolve phone problems. With VoIP, we will, in effect, become our own phone company – phone problems will be our problems. Becoming an independent phone services entity is a major undertaking. As a result,

- Additional staff is planned (in the FY03 Budget request) to increase support to round-the-clock
- Network Services/Operations staff will require more training
- Existing procedures/processes will be changed
- New processes/procedures will be added

Also, although VoIP is the emerging standard for telephone systems, it is still a fairly new technology. For the present, we do not recommend using it for emergency services (911) and, we plan to keep a number of Centrex lines in service in each location for emergencies.

Multi-year Implementation Plan

Currently, the City has more than 4,754 Centrex phone lines in over 200 facilities, ranging from a single phone set to a 700-phone set building. It would be economically difficult and operationally disruptive to make a complete change-over of the City's phone lines all at once. In addition, the City pre-paid for 3,089 phone lines through September 2004. Moving quickly to the new technology would be resource-intensive and would not avoid the pre-paid monthly charge until past September 2004. Our plan allows us to roll-out the new system in such a way as to reduce non-prepaid costs while we train users in the new system. Furthermore, an extended roll-out allows us to upgrade several small, remote sites that require upgrades to their network prior to moving to the new technology. Attachment 2 shows a possible roll-out scenario. The actual plan will be based upon annual funding and departmental needs.

City Council Report
New Telephone System for Interim City Hall
June 4, 2002

For new installations and small remote locations, Cisco AVVID can be implemented immediately as a single event. For larger facilities and those with a large installed base of legacy telephone, the process will require an evolutionary approach where the new system integrates with, expands, and encompasses the old, slowly removing the obsolete equipment.

The Interim City Hall will be one such evolutionary deployment, where users are migrated slowly to the new system as a technology trial similar to the implementation last year in the Information Technology department. During this period, end-users will have the new phone sitting next to their current phone in the historic City Hall. In this way, they can spend time becoming familiar with the new phone system and equipment while having the comfort level of having their Centrex phones intact. When the Interim City Hall is ready for occupancy, the new phones will be moved to the new location and most Centrex phones will be removed. However, due to the absence of a backup power generator in the interim building, we plan to keep approximately 24 analog phone lines for 911 calls and emergency use in the event of power outages.

New Telephone Numbers

Part of the move to the new system includes changing telephone numbers. We have an opportunity to eventually have all City numbers use the same prefix – 808. Currently, we have seven different prefixes in use. While we can use 4-digit dialing internally from the City system, once outside the system, all seven digits must be dialed. Having one prefix eliminates the need to remember which of the seven prefixes belongs with the 4-digits one dials from inside the system. It will also be easier for the public once we have just one prefix. The plan is to move to the new 808 prefix as the new phones are implemented which means a transition of several years. Information Technology staff will be scheduling meetings with each department to discuss the new numbering plans and any concerns departments have about changing to a new number. In most cases, only the prefix will change. The last four digits will remain constant.

Vendor Selection Process

On November 20, 2001, the City Council authorized the City Manager to informally competitively bid and/or negotiate contracts for the purchase of citywide integrated voice-mail and telephone systems (Resolution No. 2001-760). This was done because both updated voice-mail and telephone systems are needed, because they must be fully compatible in order to integrate properly, and due to the many complexities of integrating the two types of systems.

The use of this informal competitive process allowed staff to work with interested vendors to determine the telephone system(s) that offered the greatest value to the City and would integrate with both the current and new voice-mail system, and to negotiate the best possible and most cost-effective contract. Because of the phased implementation of the new system, it is critical that it is able to work well with our current telephone systems (currently three different telephone system technologies are in use), the new voice mail system, and our new badge mail system.

Staff evaluated four proposed telephone systems. They found the system proposed by two of the vendors, SBC-Pacific Bell and NEC-Business Network Solutions, Inc., to be the best fit for the

City's requirements of integrating with the current Centrex and Cisco Voice over Internet Protocol systems and the new voice mail system. These two vendors proposed basically the same technical solution. However, SBC-Pacific Bell can provide the extra value of integrating with our existing inter-departmental telephone billing system. Therefore, it is recommended that the City Council adopt the attached resolution that authorizes the City Manager and City Clerk to execute an agreement with SBC-Pacific Bell for a "turnkey" telephone system for the Interim City Hall, in a total amount not-to-exceed \$430,000.

FINANCIAL CONSIDERATIONS:

No additional funding for FY 2001-2002 will be required. Funding for a new telephone system for the interim City Hall was included in the FY 2001-2002 Information Technology Department operating budget (\$200,000) and in the Public Works CIP budget CF31 (\$230,000). The total cost for the initial two-year contract, including installation and maintenance, will not exceed \$430,000.

ENVIRONMENTAL CONSIDERATIONS: None

The current project has been determined to be exempt from the California Environmental Quality Act (CEQA), under Section 15061 (b)(3), which states that CEQA applies only to projects that have the potential for causing a significant effect on the environment. The current proposal involves only the purchasing of telephone systems and services for the Information Technology Department/Interim City Hall Project. Therefore, it can be seen with certainty that there is no possibility that the activities may have a significant effect on the environment.

POLICY CONSIDERATIONS:

This recommendation is in conformance with the goals, objectives, initiatives and operating principles of the City's newly adopted Information Technology Strategic Plan. In particular, this recommendation is in accordance with the Technical Architecture Initiative, Goal #1b, "Create a Citywide technology architecture that is based on City business needs." One of the Key Milestones for this Goal is related to Networks and Telecommunications.

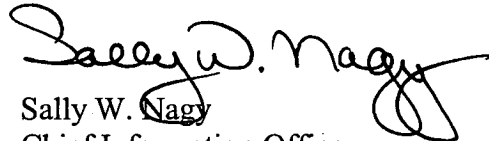
On November 20, 2001 the City Council approved the suspension of competitive bidding for the purchase of citywide integrated telephone and voice mail systems and authorized the informal competitive bid and/or negotiation for the purchase of citywide telephone and voice mail systems, subject to approval of the resulting contracts by the City Council, as allowed by City Code Section 3.56.230 C. and identified in Resolution No. 2001-760. In accordance with City Code Section 3.56.230 C., it is recommended that the City Council determine that it is in the best interests of the City to have suspended the competitive bidding for the telephone services for the Interim City Hall and now to authorize the execution of the contract with SBC - Pacific Bell upon a two-thirds vote of the City Council.

City Council Report
New Telephone System for Interim City Hall
June 4, 2002


ESBD CONSIDERATIONS:

SBC-Pacific Bell is not a City of Sacramento certified small business firm.

Respectfully submitted,


Sally W. Nagy
Chief Information Officer

Recommendation Approved:


Robert P. Thomas
City Manager

Attachment 1

Preliminary 10-Year Cost/Savings Projections

Fiscal Year	IP Phones To be Migrated	IP Phones Proj-to-date	Voicemail Savings	Annual MAC Maintenance Mat'l & Labor	PB Services	Phone Line Charges	Annual Cost Savings	On-going Costs *	One-time Investments	Annual Projected Savings
FY02	554	554	\$32,000.00	\$11,340.38	\$5,540.00	\$42,104.00	\$90,984.38	0	\$430,000.00	(\$339,015.62)
FY03	850	1404	\$96,000.00	\$28,739.88	\$14,040.00	\$223,212.00	\$361,991.88	\$250,000.00	\$512,000.00	(\$400,008.12)
FY04	860	2264	\$96,000.00	\$46,344.08	\$22,640.00	\$379,620.00	\$544,604.08	\$260,000.00	\$521,000.00	(\$236,395.92)
FY05	1050	3314	\$96,000.00	\$67,837.58	\$33,140.00	\$379,620.00	\$576,597.58	\$270,000.00	\$484,200.00	(\$177,602.42)
FY06	807	4121	\$96,000.00	\$84,356.87	\$41,210.00	\$939,588.00	\$1,161,154.87	\$280,000.00	\$611,300.00	\$269,854.87
FY07	634	4755	\$96,000.00	\$84,356.87	\$41,210.00	\$1,084,140.00	\$1,305,706.87	\$280,000.00	\$376,200.00	\$649,506.87
FY08		4755	\$96,000.00	\$84,356.87	\$41,210.00	\$1,084,140.00	\$1,305,706.87	\$280,000.00		\$1,025,706.87
FY09		4755	\$96,000.00	\$84,356.87	\$41,210.00	\$1,084,140.00	\$1,305,706.87	\$280,000.00		\$1,025,706.87
FY10		4755	\$96,000.00	\$84,356.87	\$41,210.00	\$1,084,140.00	\$1,305,706.87	\$280,000.00		\$1,025,706.87
FY11		4755	\$96,000.00	\$84,356.87	\$41,210.00	\$1,084,140.00	\$1,305,706.87	\$280,000.00		\$1,025,706.87
		4755							\$2,934,700.00	

Notes/Assumptions:

Total # Centrex phone lines as of 12/31/2001 = 4754

City prepaid centrex phone lines (to be expired in Sept. 2004) = 3089

Average annual materials and labor charges for MAC = \$20.47/line

Average annual service charges from PacBell for MAC = \$10/lin

Monthly charges for a non-prepaid Centrex line = \$19.00

* On-going costs include 3 FTEs and annual hardware maintenance costs

City of Sacramento

DRAFT VoIP Master Rollout Plan

7/01 1/02 7/02 1/03 7/03 1/04 7/04

Dial Plan (Dec. 03, 01)

N. Permit (130) (Dec. 17, 01)

808 Prefix (8000) (Apr 25, 02)

IT To 808 (60) (Jun 30, 02)

Natomas, Belle Coll, PW Dir (54) (Jul 31, 02)

Interim City Hall/B of A bldg (300) (Aug 31, 02)

FY02/03

**554
Phones**

Treasury Office (50) (Sep 30, 02)

Attorney' s Offices (74) (Oct 30, 02)

921 10th Street Bldg (161) (Dec 20, 02)

1030 15th Street Bldg (105) (Jan 31, 03)

1391 & 1395 35th Street Bldg (254) (Mar 30, 03)

927 10th Street Bldg (113) (May 31, 03)

Fire Dept @ Freeport Square (100) (Jun 30, 03)

FY03

**850
Phones**

13 & I Bldg (300 - Excluded 100 phones From FD) (Sep 30, 03)

Corp Yard (300) (Dec 20, 03)

1023 J Street Bldg (80) (Feb 15, 04)

Police Dept - Metro Public Center (65) (Mar 31, 04)

Police Dept - Internal Affairs & Professional Standards Unit (55) (May 15, 04)

Police Dept - Record Management Division (60) (Jun 30, 04)

FY04

**860
Phones**



City of Sacramento

DRAFT VoIP Master Rollout Plan

Attachment 2

7/04 9/04 1/05 7/05 1/06 7/06 1/07 7/07

Rooney (75) (Jul 31, 04)

Kinney (75) (Aug 31, 04)

Coloma (60) (Sep 30, 04)

New 9-1-1 Comm Ctr (30) (Oct 25, 04)

Water Treatment bldg (40) (Nov 15, 04)

P&R Human Resource (75) (Dec 20, 04)

Sierra II EOC (91) (Jan 31, 05)

Convention Ctr & Backup EOC (159) (Mar 31, 05)

PD Headquarters - Freeport Square (445) (Jun. 30, 05)

FY05

**1050
Phones**

3314 IP Phones To Be Converted

Museums (111) (Aug 31, 05)

Parking Admin (79) (Sep 30, 05)

Zoo & Fairy Tale (77) (Oct 30, 05)

Golf Courses (84) (Nov 31, 06)

Meadowview - Solid Waste (120) (Jan 31, 06)

Public Works Various Facilities (71) (Feb 28, 06)

PD's Sub-stations and Training Centers (180) (May 31, 06)

Fire Administration Offices (85) (Jun 30, 06)

FY06

**807
Phones**

4120 IP Phones To Be Converted

Park & Recreation and Neighborhood Community Centers (232) (Oct 30, 06)

Fire Stations (75) (Dec 20, 06)

Various Small Facilities (327)

FY07

**634
Phones**

APPROVED

JUN 18 2002

OFFICE OF THE
CITY CLERK

RESOLUTION NO. 2002-396

ADOPTED BY THE SACRAMENTO CITY COUNCIL

ON DATE OF _____

**RESOLUTION AUTHORIZING THE CITY MANAGER AND THE CITY CLERK
TO EXECUTE AN AGREEMENT WITH SBC – PACIFIC BELL
TO PROVIDE A TELEPHONE SYSTEM FOR THE INTERIM CITY HALL
IN AN AMOUNT NOT-TO-EXCEED \$430,000**

BE IT RESOLVED BY THE COUNCIL OF THE CITY OF SACRAMENTO THAT:

In accordance with the provisions of Chapter 3.56 of the City Code, including Section 3.56.230 C., the City Manager and City Clerk are authorized to execute an agreement with SBC – Pacific Bell to provide a “turnkey” Telephone System for the Interim City Hall in an amount not-to-exceed \$430,000.

MAYOR

ATTEST:

CITY CLERK

FOR CITY CLERK USE ONLY

RESOLUTION NO.: _____

DATE ADOPTED: _____