



## COUNTY OF LOS ANGELES

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The Honorable Board of Supervisors  
County of Los Angeles  
383 Kenneth Hahn Hall of Administration  
500 West Temple Street  
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Dear Supervisors:

**APPROVE THE USE OF VOICE OVER INTERNET PROTOCOL AS  
THE STANDARD TELEPHONE SYSTEM TECHNOLOGY  
(ALL DISTRICTS - 3 VOTES)**

**IT IS RECOMMENDED THAT YOUR BOARD:**

1. Approve Voice over Internet Protocol (VoIP) technology as the standard technology for new telephone systems in the County.
2. Approve Cisco Systems (Cisco) VoIP solution as the standard telephone system where a premise-based telephone system is required.
3. Authorize the Chief Information Officer to review and approve exemptions to the standards.

**PURPOSE OF RECOMMENDED ACTION/JUSTIFICATION**

On June 30, 2004 the Chief Information Office (CIO) and the Internal Services Department (ISD) sent a memorandum to your Board indicating that VoIP telephone systems would be implemented when new or upgraded telephone systems are needed in County facilities. The memorandum also indicated that, based on the recommendations of an interdepartmental committee and a formal Request for Information (RFI) process, Cisco would be the County standard for VoIP installations.

Adopting VoIP as a strategic direction and Cisco as a standard should have been submitted to your Board for approval. As such, and after a subsequent evaluation of the standard setting process by the CAO as well as an independent consultant, the recommended VoIP standards are being submitted for approval.

"To Enrich Lives Through Effective And Caring Service"

### **Standardizing on VoIP Technology**

Historically, telephone systems and data systems have used separate building networks and separate wide-area networks. The newest telephone systems make use of the Internet Protocol (IP) to transmit telephone calls over the same building network and wide-area network infrastructure that is currently used for our data systems. This approach is most commonly referred to as Voice over IP (VoIP). VoIP systems have several advantages over the limitations of traditional telephone systems. These include:

Elimination of costs associated with having to install and maintain duplicate wiring plans required to support data and voice services.

The integration of voice services with desk top and other portable computing devices.

Elimination of costs associated with adds, moves and changes when employees are moved within a facility or are reassigned to another physical location.

The ability to have assigned phone number portability when an employee is reassigned to another physical location.

The ability to access and use traditional computer-based data services from the VoIP hand set (telephone instrument).

Providing a feature rich telephone service eliminating the need to have multiple voice telephone solutions where multiple departments share a common facility.

VoIP has become a dominant technology for voice communications. The Gartner information technology advisory service has found that VoIP, or VoIP-enabled, business telephone system shipments from manufacturers represent the preponderance of all telephone systems being shipped and the number is increasing at a 27 percent compound annual growth rate. Major manufacturers have begun phasing out their traditional PBX products. The traditional PBX telephone systems the County has been purchasing will have significant support issues in the future as they come to end of life and manufacturer support diminishes. Therefore, it is important that the County adopt a VoIP strategy for its implementation and use within the County departments.

### **Standardizing on Cisco Systems**

Currently there are no industry interoperability standards for VoIP systems that support full feature compatibility of each manufacturer's solution. Each manufacturer has implemented their own proprietary VoIP system and therefore no two manufacturer's systems will directly interoperate (i.e., communicate seamlessly) with each other. Without industry-wide interoperability standards, the County needs to standardize on a single manufacturer's platform as we adopt and implement VoIP telephone systems. To do otherwise would result in multiple realms of voice communication and needless gateways and transition points, increasing the cost and complexity of voice communications in the County. Standardization on a single platform will also simplify maintenance, maximize support and ensure a sustainable and trained support staff.

In 2004, an interdepartmental committee developed a Request for Information (RFI), which was issued by ISD. The RFI was used to solicit information from the industry to determine which VoIP telephone solution would provide the County with the best functionality and integration with the existing voice and data networks. Responses were received from Alcatel, Avaya, Cisco, Mitel, MCI, NEC, and Nortel. An evaluation committee of representatives from ISD, CIO, Sheriff, DHS, ISAB, and DPSS formally evaluated and scored the responses. The response from Cisco received the highest score and was determined to be the best VoIP telephone solution for use in the County at that time.

When new premise-based telephone systems are required at County facilities, they will be acquired by ISD through the existing Telecommunications Equipment and Services Master Agreement (TESMA). Under this agreement, ISD issues solicitations for system integrators and distributors. Vendors are pre-qualified and awards are made on a competitive basis.

### **Use and Exemptions to the Standards**

The telephone system for each County facility needs to meet the business requirements and services being provided. Usually VoIP will meet the business requirements. However, there will be circumstances where an alternative to the Cisco solution may be considered. Similar to existing carrier service solutions such as Centrex which is used in lieu of traditional PBX telephone services in numerous County facilities, there are carrier based VoIP services that may also be used to provide the benefits of VoIP. The County's current agreement with AT&T provides for such services.

My office will work with ISD to establish a process for review and evaluation for exemptions to the standards. Therefore, each telephone solution requirement will be evaluated to ensure the best and most cost effective solution is adopted and implemented for a specific facility.

My office will also continually review the industry, market, and technology to ascertain if the standards require revision or replacement. If a change is recommended, I will recommend to your Board any revisions or replacements to the standards adopted.

### **Implementation of Strategic Plan Goals**

The recommendation supports the County's Strategic Plan Goals of Workforce Excellence and Organizational Effectiveness. The implementation of standard VoIP solution will provide for improved efficiency and responsiveness of County services through improved communications and messaging.

### **FISCAL IMPACT/FINANCING**

Existing budgeting and financing policies and procedures for telephone systems and services are not impacted by the adoption of the standards.

### **FACTS AND PROVISIONS/LEGAL REQUIREMENTS**

County Code Section 2.119.030(C) provides that the office of the CIO shall "Adopt standards for countywide information technology, which shall be subject to approval by the Board of Supervisors. County departments and County information technology bodies shall adhere to such standards."

### **IMPACT ON CURRENT SERVICES (OR PROJECTS)**

After review by an independent consultant, the Department of Health Services, with the concurrence of my office and ISD, has recommended the Cisco VoIP telephone system as the primary telephone system for the LAC/USC Replacement Facility. Upon approval of the recommended standards, the Cisco VoIP system will be procured and implemented to meet the in-service dates of the facility. If the standards are not adopted, a traditional PBX solution could be implemented in the new facility in order to meet the occupancy dates.

Lastly, there are no plans for the mass migration of existing County telephone systems to VoIP. VoIP telephone systems will be implemented only in new facilities or when obsolete telephone systems and/or call centers need to be replaced. Many of the County's existing traditional telephone systems (PBXs, Centrex, and key systems) will

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remain viable for some time and will not be replaced unless economic studies, lack of support or enhanced functionality dictate otherwise. The migration to VoIP will be measured to maximize the investment the County has made in its existing telephone systems.

Respectfully submitted,



JON W. FULLINWIDER  
Chief Information Officer

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c: Chief Administrative Officer  
County Counsel  
Executive Officer, Board of Supervisors  
Dave Lambertson, Director, ISD  
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