Compliance Component

DEFINITION	
Name	IP Telephony
Description	Defines the specifications for transmitting voice communications over a network using an open standards-based Internet Protocol (IP). In general, this means sending voice information in digital form in discrete packets rather than in the traditional circuit-committed protocols of the public switched telephone network. An IP Telephony solution leverages a single network infrastructure using quality of service for the transmission of data, voice, and video traffic. IP telephony is a growing technological field that allows voice collaboration with data and video transmissions through existing LANs, WANs and the Internet. Using open IETF, ITU and IEEE standards gives users more choices in transmission media. Use of IP telephony can be done through in-house expertise or by a service provider. Additional aspects of the service level agreement with either solution are beyond the scope of this document.
Rationale	Potentially reduce telecommunications costs by enabling State employees to increase business flexibility by using existing data networks as a voice transport media.
Benefits	• Allows voice and video communications over an established IP based data network. • Eliminates some toll charges by ordinary telephone service providers. • Simplification – physical moves/adds/changes of telephony equipment requires little technical support. • Advanced Applications - The long term benefits of VoIP include support for multimedia and multi-service applications. • Flexibility - allows convergence and custom modifications of telephony applications.

ASSOCIATED ARCHITECTURE LEVELS	
Specify the Domain Name	Infrastructure
Specify the Discipline Name	Network
Specify the Technology Area Name	Voice and Video
Specify the Product Component Name	NA

COMPLIANCE COMPONENT TYPE	
Document the Compliance Component Type	Guideline
Component Sub-type	Configuration

COMPLIANCE DETAIL	
State the Guideline, Standard or Legislation	An IP Telephony solution provides a layer of functionality above the existing network Infrastructure. Standardized IP Telephony solutions are blends of hardware with software capabilities and tools that allow an enterprise to migrate from a private branch exchange (PBX), centrex services or business line service and the public switched telephone network to a standards-based, distributed IP network. The foundation architecture of the IP Telephony solution consists of four primary components: • Network Infrastructure The infrastructure includes PSTN gateways, analog phone support, and digital signal processors (DSPs). The infrastructure can support multiple client types such as hardware phones, software phones, and video devices. The infrastructure also includes the interfaces and features necessary to integrate legacy PBX, voice-mail, and directory systems. Typical products used to build the infrastructure include voice gateways (non-routing, routing, and integrated), switches, and routers. **Infrastructure must include adequate bandwidth, with quality of service (QOS) and hardware standards to reduce latency and phase jitter when using VoIP or Video over IP applications.** • Communication endpoints A communication endpoint is a user instrument such as a desk phone or a software phone application that runs on a PC. In the IP environment, each phone has an Ethernet connection. IP phones have all the functions you expect from a telephone as well as more advanced features such as the ability to access Web sites. Typical user instruments include the IP Phone and the IP SoftPhone; software used on PC based systems that allow the computer to function as a telephone. • Call processing agent At the core of the IP Telephony system is the call processing agent. The call processing agent software extends enterprise telephony features and capabilities to packet telephony network devices such as IP phones, media processing devices, voice-over-IP (VoIP) gateways, and multimedia applications. • Applications Applications are physically independent from the call processing and voice processing infrastructure, and they may reside anywhere within the network. Applications improve the end-to-end capabilities of the IP Telephony solution by adding sophisticated telephony and converged network features such as the following: • IP Soft Phone • Extension mobility • Unified messaging • Web services for IP Phones • IP Integrated Contact Distribution (IP ICD)

	• IP Interactive Voice Response (IP IVR) These components can be implemented through in-house services or outsourced to an IP Telephony Service Provider.		
Document Source Reference #	NA		
Compliance Sources			
Name	Internet Engineering Task Force (IETF)	*Website*	http://www.ietf.org
Contact Information	(See web site)		
Name	International Telecommunications Union (ITU)	*Website*	http://www.itu.int
Contact Information	(See web site)		
Name	Federal Communications Commission (FCC)	*Website*	http://www.fcc.gov
Contact Information	(See web site)		
Name	Voice and Fax over IP News and Market Research	*Website*	http://www.iptelephony.org
Contact Information	(See web site)		
KEYWORDS			
List Keywords	VoIP, Video over IP, IP Telephony, Quality of service, QOS, Multimedia, Convergence		
COMPONENT CLASSIFICATION			
Provide the Classification	☐ *Emerging* ☒ *Current* ☐ *Twilight* ☐ *Sunset*		
Sunset Date			

COMPONENT SUB-CLASSIFICATION

Sub-Classification	Date	Additional Sub-Classification Information
☐ *Technology Watch*		
☐ *Variance*		
☒ *Conditional Use*	10/11/05	Coordinate w/CIO's Office

Rationale for Component Classification	
Document the Rationale for Component Classification	
Migration Strategy	
Document the Migration Strategy	
Impact Position Statement	
Document the Position Statement on Impact	
CURRENT STATUS	
Provide the Current Status	☐ *In Development* ☐ *Under Review* ☒ *Approved* ☐ *Rejected*

AUDIT TRAIL			
Creation Date	5/03/05	*Date Approved / Rejected*	10/11/05
Reason for Rejection			
Last Date Reviewed		*Last Date Updated*	10/6/05
Reason for Update			