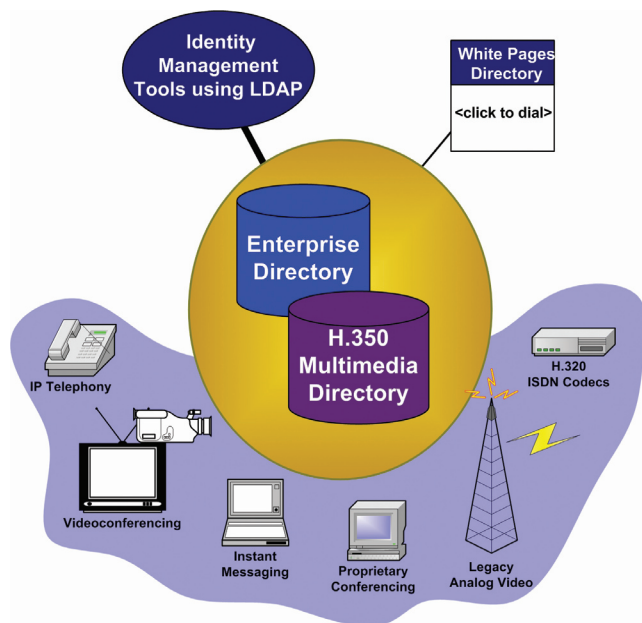


Deploying H.350 Directory Services for Multimedia



H.350 allows multiple applications, call servers and protocols to access the same master directory information source.

Overview of H.350

Videoconferencing with colleagues and collaborators via the Internet is now easier and less expensive using the new H.350 "Directory Services for Multimedia" standard ratified by the International Telecommunications Union (ITU) in September 2003. Resulting from an Internet2 Video Middleware working group, the new H.350 standard provides a uniform way to store and locate information related to video and voice over IP (VoIP) in directories that are linked seamlessly to enterprise directories.

H.350 uses LDAP (Lightweight Directory Access Protocol) to store users' voice, video, and collaborative multimedia information in a way that integrates with directory and identity management systems already in place at universities. The newly standardized technology enables campuses to scale up video and VoIP operations from a few hundred endpoints to full enterprise deployments without hiring additional systems administrators. Account configuration details, authentication and authorization are linked to the enterprise directory using LDAP.

H.350 improves security by providing standardized management and storage of authentication credentials. H.350 supports SIP, H.323, H.320 as well as proprietary or non-standardized collaborative and conferencing protocols.

Benefits of H.350

To Collaborations

By standardizing the LDAP schema used to represent the underlying data, different brands and systems can be deployed together to create an overall application environment that avoids vendor lock. Collaborators do not need to purchase identical systems in order to communicate. For example, a white pages search engine developed by one vendor could serve directory information to IP telephones supplied by a second vendor, with signaling managed by a call server provided by yet a third vendor.

To Desktop Support

H.350 provides each end user with the configuration information needed to start communicating. Providing simplified and even automated endpoint configuration solves a big user support issue and results in improved customer service.

To CIOs And Network Managers

H.350's user authentication is based on the institution's authoritative data sources. With authentication, it is possible to meaningfully track calls and develop billing applications. H.350 uses the LDAP protocol; most universities already have staff who are trained to manage LDAP services. H.350 organizes information about your voice and video equipment and users in a central location. H.350 integrates with enterprise directory services. This means fewer staff can support more users.

To Users

Easily find others anywhere in the world and contact them.
Publish your multimedia address so others can find you.
Clickable dialing.

H.350 Features

- Provides 'white pages' so that users can be 'looked up' and their addresses found
- Supports non-standard signaling protocols such as Access Grid, VRVS, and MPEG2
- Leverages institution's authoritative LDAP entries and avoids replication
- Supports 'clickable dialing' where appropriate.
- Provides endpoint configuration parameters that can be downloaded to end users
- Support for standards-based protocols SIP, H.323, H.320, H.235
- Supports standard H.323 and SIP security features (authentication)
- Supports authorization and billing

Usage Examples

When you look someone up in a directory you would see:

Name:	Jill Gemmill
Organization:	University of Alabama at Birmingham (UAB)
Department:	Academic Computing
E-mail:	jgemmill@uab.edu
Title:	Assistant Director
Phone:	205-975-2850
Street Address:	701 20th Street South
City:	Birmingham
State / Province:	Alabama
Country:	US
Postal Code:	35294
Endpoint:	My Desktop AB 7th Floor Room Unit

My Desktop	
H.323 DialedDigits Alias:	00120534890700
H.323. Id Alias:	Jill's Desktop
H.323 Emailed Alias:	JGemmill@UAB.EDU
H.323 Transport Id Alias:	138.26.187.80
Owner:	jgemmill

The left hand side shows the white pages entry for a person stored in the enterprise directory. The yellow arrow points to the multimedia information available for this person (commURI). The right hand side shows the various dialing addresses that can be used to contact the person at the "My Desktop" endpoint.

genericIdentity ProtocolIdentifier:	Access Grid
generic Identity Message:	See http://www.accessgrid.org/documentation/ for locations and connection instructions

Non-standard conferencing protocols such as Access Grid can also be listed in H.350 directories, providing useful contact information and instructions for end users.

Current Deployment

The H.350 architecture has been adopted in the ViDeNet test bed to demonstrate that the concept is viable and to identify problems in the architecture. Early adopters of this architecture include University of North Carolina at Chapel Hill, Northwestern University, and University of Alabama at Birmingham. The project is functional and can be viewed at <https://videnet.unc.edu>.

Products supporting H.350

RADVISION is committed to this standard and plans to implement it in its next release of its ECS (version 3.5) – expected in early Q4. A representative of HCL Technologies, developers of SIP-based products, describes H.350 as "not be just a desirable feature for VoIP products, but more of a 'must have' functionality".

Samir Chatterjee, Professor at CGU and lead SIP developer for the CGU User Agent, says, "H.350 greatly simplifies configuration of SIP clients and provisioning of services. Today, commercial SIP vendors all use proprietary databases to store and manage SIP user information that often leads to interoperability problems in a multi-vendor environment. H.350 avoids that and helps to store user's communication information in a standardized format on enterprise servers such as LDAP." The CGU user agent is the only SIP endpoint currently implementing H.350; the software can be downloaded from the URL below.

Getting Started with H.350

To help you get started with H.350 directory services at your campus, a ViDeNet Video Middleware Cookbook has been developed providing discussion of architecture decisions, detailed installation and configuration instructions, LDIFs, and more. The cookbook is available on-line at <http://lab.ac.uab.edu/vnet/>.

A global white pages service is also available to provide one location for finding any multimedia user anywhere in the world. To register your H.350 compliant directories so that your users appear in this global directory, contact Jason Lynn jlwlynn@uab.edu.



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