

Digital Media in Higher Education: Enrich Learning and Campus Communications

Introduction

By distributing live and on-demand video to PCs and digital signage, colleges and universities can accommodate students' different learning styles, improve campus communications and emergency notifications, and enroll more students without adding classrooms. This solution overview describes the ways that colleges and universities worldwide are using digital signage, desktop video, and Enterprise TV to enrich learning and campus communications. The Cisco® Digital Media System reduces total cost of ownership by letting you create, schedule, and manage digital content for all three systems using a central management system.

Challenge

Today's higher-education students have grown up with video, which plays an increasingly important role on campus. Full-motion live video, video on demand, and motion graphics can enrich lectures, provide emergency training, promote events, and effectively disseminate information to students, faculty, and staff:

- **Digital signage** replaces posters for communications about campus events and safety information. It reduces clutter, avoids out-of-date communications, and can immediately be updated to display up-to-the-minute emergency alerts.
- **Desktop video** enables anytime, anywhere learning by delivering live and prerecorded lectures directly to students' desktops. Authorized students can use their own or public PCs to access the video portal from anywhere in the world. And professors and instructors can go to the video portal to receive training, such as emergency response, from office or home, whenever they have time.
- **Enterprise TV** delivers campus-produced and commercial video on demand to large displays in dorm lounges and classrooms. Students select and control content with a remote control. With the addition of encoders, Enterprise TV can also replace campus cable TV systems.
- **Media Experience Engine 3000** extends the DMS deployment, enabling users to create content once, customize it as needed, and share it with all DMS applications and mobile devices.

The value of digital media is widely accepted. The challenge is how to simplify digital asset management and keep costs down. With most solutions, content for each type of application has to be separately stored and managed. If an Astronomy lecture will be distributed to desktop video portals and also excerpted for digital signage promoting a planetarium show, the same video must be stored and scheduled in both systems. This increases the costs of servers, storage, management software, and staff time. The challenge will only multiply as colleges and universities increase their use of digital media. IDC estimates that worldwide use of video and signage in education is expected to grow 410 percent from 2006 to 2011.

Benefits

Colleges and universities can increase the value of their digital assets and reduce costs by using the Cisco Digital Media System, a comprehensive suite of digital signage, Enterprise TV, and desktop video applications managed from a central management system. You can start by deploying one application, such as digital signage, and then add other applications whenever you are ready. Whether you use one, two, or all three applications, you manage them all from a single interface, saving software and management costs.

The benefits of the Cisco Digital Media System apply to the learning experience as well as campus operations.

Communicate Campus Events and Emergencies with Digital Signage

Traditionally, campuses have advertised events on posters tacked to bulletin boards around campus. The drawbacks of paper-based communications include clutter, out-of-date information, the time needed to constantly put up and take down posters, and paper waste.

Cisco Digital Signage provides more timely and eye-catching communications that can be scheduled to appear in different parts of the campus (Figure 1). Install the networked digital signs in high-traffic areas such as the entrances to buildings, student union, and faculty lounge areas. Then display information about campus events and up-to-date emergency alerts and instructions. Assign any staff person, not necessarily an IT staff member, to use the interface to schedule content. You can even deliver different content to different signs – for example, promoting plays in the Theater Department building and advertising specials in the book store.

Figure 1. Digital Signage Promotes Campus Events and Provides Emergency Updates

Popular uses of digital signage in colleges and universities include:



- Emergency notifications and instructions
- Event announcements, such as sports, guest speakers, registration/drop deadlines, and more
- Classroom changes
- Student and staff group training
- Advertising in bookstores and stadiums
- Way finding
- Information for major events such as graduation or donor recognition receptions
- Room scheduling (when used with software from Cisco partners that complies with the R25 scheduling standard)

College of Southern Nevada in the United States uses Cisco Digital Signage to distribute attention-getting multimedia announcements. The college planetarium uses a full-motion video to promote its ongoing shows. Disney has submitted video content to recruit students for summer work opportunities. The theater department advertises upcoming performances on three separate monitors placed throughout its building. Live video from college regents' meetings is sometimes played around all campuses. And when a shooting occurred in the community, the college avoided panic by immediately publishing text messages that explained the event and the actions taken.

Enable Anytime, Anywhere Learning with the Video Portal

Restricting instruction to the lecture hall only serves students with certain types of learning styles. Colleges need other approaches for students who need to hear the material more than once, concentrate better at a different time of day, or have physical limitations (Figure 2).

Figure 2. The Video Portal Makes Distance Learning Possible



Higher education institutions can be more inclusive, enhance the overall learning experience, and serve out-of-area students by offering a desktop video portal. Students visit the portal to search for videos by category or keyword and play them in full motion. They can even search for words or phrases within a particular video. Students who are deaf or hearing-impaired can click a button to see closed caption text embedded in the video. During live webcasts, students can click an Ask Question button to type a question for the presenter. Use the management interface to easily indicate which users are authorized to access a particular video. You can also associate other content with the video, such as presentation slides or websites. Professors and administrators can even generate reports showing who watched what video content, and when.

Some ways that colleges and universities can take advantage of desktop video for education excellence and administrative efficiency include:

- Lecture review
- Lectures from guest speakers anywhere in the world to augment regular classroom instruction
- Distance learning: The college can enroll students in any location without the expense of adding classrooms
- Recruitment: Colleges can produce videos to promote themselves to prospective students and faculty
- Professional development and safety instruction for faculty and staff
- Replay of school functions such as graduation or theater productions for friends and family who cannot attend in person

Bapatla Engineering College in India uses Cisco Desktop Video to deliver live and recorded lectures to students in any location. The college also streams live sessions conducted by visiting professors and subject-matter experts to the classroom and simultaneously records them for later viewing.

Facilitate Group Instruction with Cisco Enterprise TV

While desktop video is intended for individual viewers, Enterprise TV provides the large, high-definition displays needed for groups watching a video together, such as students in a study lounge or a classroom. Some colleges and universities have deployed cable TV systems, but producing video for these systems requires knowledge of arcane tools, not today's widely known digital video production tools.

The latest addition to the Cisco Digital Media suite of solutions, Cisco Enterprise TV lets colleges and universities distribute the same content to large displays that they publish on the desktop Cisco Video Portal. Faculty and students can even produce content using familiar digital media tools and deliver it over the campus IP network. Students use a remote control to access content through simple, intuitive on-screen menus and program guides. Enterprise TV uses the same management platform as Cisco Digital Signage and can even use the same displays, reducing operational costs and simplifying deployment.

Applications for Enterprise TV in higher education include:

- Delivery of live or recorded lectures and training to dorm common areas and classrooms.
- Emergency broadcasts.
- Delivery of external TV programming, such as a science channel, broadcast over the IP connection to classrooms as well as dorm rooms. This requires additional equipment.

Extend the Reach of Content with Cisco Media Experience Engine 3000

The Cisco Media Experience Engine 3000 (MXE 3000) is the first in a family of Media Processing devices that extend the reach of any content to any end-point device.

The feature-rich MXE 3000 provides:

- Media adaptation functionality enables users to view any media content on any end-point device. Media files can be shared easily between digital signage, desktop video, mobile devices and other applications.

- Editing and production capabilities allow users to customize content with company logo overlays, transitions, file clipping, and color and video quality enhancements.

Solution

The Cisco Digital Media System lets you use one interface to create, manage, and deliver digital content to digital signage, desktop video, or Enterprise TV. Start with one system, like Cisco Desktop Video or Cisco Digital Signage, and add others at any time.

Create: Digital Media Encoders convert audio and video sources to a digital format that you can transmit over the campus network. The destination can be digital signage, desktop video, or Enterprise TV.

Manage: Cisco Digital Media Manager makes it easy to schedule content, set up live webcasts, import videos, and organize and publish the content for digital signage, Enterprise TV, and desktop video access. The Cisco Digital Media Manager provides one intuitive interface for individual departments to manage and design digital content, control user access, and manage system components, as shown in Table 1.

Deliver: Cisco Digital Media Players handle digital media content display and playback across the high-definition displays used for digital signage and Enterprise TV.

Table 1. Management and Design Interface

Manage Content	Design Content	Manage User Access and System Components
<ul style="list-style-type: none"> • Manage content assets and create playlists for digital signage and desktop video • Schedule instant and future content deployments and playback schedules for digital signage, Enterprise TV, and desktop video • Report on playback schedules for digital signage and on video usage for desktop video • Manage Q&A for live desktop video broadcasts • Synchronize slides for both live and video-on-demand desktop video events 	<ul style="list-style-type: none"> • Customize screen layouts and zones for digital signage • Customize and brand Enterprise TV skins and menus • Customize and brand the Cisco Video Portal interface for desktop video 	<ul style="list-style-type: none"> • Control video viewing permission levels • Configure and manage Cisco Digital Media Encoders for desktop video • Remotely configure, manage, and monitor digital signage networks • Manage event-based alerts and server appliances

Why Cisco?

Cisco brings extensive experience working with higher-education institutions and leadership in video content delivery. The Cisco Digital Media System meets the needs of colleges and universities in the following ways:

- **Low total cost of ownership:** A single system can be used to manage and publish digital assets for digital signage, desktop video, and Enterprise TV. This reduces capital and operational costs compared to purchasing separate systems, even if the first system costs less than the Cisco Digital Media System.
- **Video expertise:** More than 600 organizations worldwide are already using the Cisco Digital Media System, and thousands of customers use Cisco IPTV solutions.
- **Corporate strength and stability:** Cisco is an established, financially sound company that will be around for the long term to support your solution as needs change.

- **Comprehensive services:** Cisco and our certified partners provide comprehensive service offerings to help design, deploy, and operate the solution, as well as consultation on your content strategy. We also offer the Cisco Academy of Digital Signage, a global qualification program that teaches media professionals to create and optimize content for digital signage.

Conclusion

Digital media has become an important and exciting part of higher-education instructional and communications strategies. The Cisco Digital Media System gives you the flexibility to deliver digital assets in different ways – desktop video, digital signage, and Enterprise TV – without having to purchase additional management software. You get more value from your digital assets, and with a lower total cost of ownership.

For More Information

To read more about the Cisco Digital Management System, visit: <http://www.cisco.com/go/dms>

To read more about Cisco Education solutions, visit: <http://www.cisco.com/go/education>

To read more about Cisco Services, visit: <http://www.cisco.com/go/services/digitalmedia>

To read more about the Cisco Academy of Digital Signage, visit: <http://www.cisco.com/go/dms/ads>



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