CHAPTER 1

Introduction

This chapter is an overview of the different components of the Cisco Digital Media System (DMS).

Basic DMS Concepts and Vocabulary

DMS helps organizations of any size to create, manage and deliver video content (whether live or on-demand) and digital signage content over an IP network to any general or targeted audience. With DMS, you can:

- Communicate with targeted customers, investors, press, and analysts.
- Deliver live and on-demand events to audiences in any location.
- Deliver critical information and training to employees, suppliers, and partners.
- Deliver educational content to students.

Table 1-1 lists and defines some of the most commonly used DMS terms, abbreviations, and initialisms.

Table 1-1 Concepts and Vocabulary

Term	Definition
AAI	*Appliance Administration Interface*. Text user interface and command shell on every DMS appliance. System administrators use AAI when they set up, configure, or maintain a DMS appliance. (Text user interfaces use ANSI-style escape sequences to control the presentation of text and other shapes on a screen; they differ from command-line interfaces and graphical user interfaces.)
ACNS	*Cisco Application and Content Networking System.* ACNS software runs on the WAE platform for content distribution and interoperates with DMM to greatly reduce redundant digital media traffic over satellite and terrestrial networks. The streaming media features of ACNS deliver high-quality and long-playing digital videos live and simultaneously to thousands of users and DMPs, or on demand at a later time.
appliance	In the DMS family of products, an appliance is an MCS on which either DMM or Video Portal software is preinstalled. To administer the appliance chassis and configure its low-level behaviors, you use AAI.
application	In DMM-DSM, an application is a named tool that you can use to perform an administrative task, such as sending a particular command (or a particular sequence of commands) to one DMP or to all the DMPs in a DMP group.
bpp	*bits per pixel*, also known as color depth. Indicates both the number of bits that are required to represent the color of one pixel on a display and the total number of distinct colors that the display is configured to represent. When you use DMPDM, every pixel on the DMP display is 32 bpp and the display can represent a total of 16.7 million distinct colors.

Table 1-1 Concepts and Vocabulary

Term	Definition
codec	*encoder-decoder.* Any specific, named method to encode, decode, or transcode digital video files or digital audio files. The quality of an encoded file is determined in part by whether its codec is *lossy* or *lossless*, meaning whether it deletes potentially important data to reduce filesize.
container	The *container* for a video content offering is the "wrapper" that combines metadata, syncronization data, and video data to which a codec has been applied.
digital signage	*Digital signage* consists of any combination of messages or other kinds of information that people can see or hear, and that a DMP delivers to people. The content might pertain to commerce, popular entertainment, staff training, emergency awareness, combinations of these things, or nearly anything. The people who manage a DMP (or who manage multiple DMPs in a digital signage network) decide what to show or say, and when, and to whom.
DMM	*Cisco Digital Media Manager* is the collective name to describe the Web-based graphical user interfaces that are preinstalled on DMM appliances: • DMM-Admin—*Digital Media Manager – Administration Module*. Any DMS operator can use DMM-Admin to install or upgrade the software licenses to activate DMM-DSM or DMM-VPM. • DMM-DSM—*Digital Media Manager – Digital Signage Module*. Digital signage content managers use DMM-DSM to centrally manage a network of DMP devices, organize and bind together the elements for signage, and deliver content to any number of DMP displays. • DMM-VPM—*Digital Media Manager – Desktop Video Module*. Video content authors use DMM-VPM to add, organize, manage, publish, and archive content on Video Portal appliances or other end devices; assign metadata and keywords; schedule immediate and future deployments to Video Portal appliances or other end devices; preview content; manage approval workflow and configure interoperation with ACNS; create and manage playlists, tickers, messages, and interstitials; and customize the Video Portal "look and feel."
DMP	*Cisco Digital Media Player 4300G*. Compact "set-top box" device hardware that delivers digital signage content to the one DMP display that is directly attached. DMPDM is preinstalled on every DMP.
DMP display	Any television screen or other kind of monitor that is attached directly to a DMP and that shows digital signage content to an audience.
DMP group	In DMM-DSM, a DMP group is an organizational and administrative convenience that helps you to manage any number of DMP devices as quickly and easily as you would manage one DMP. No physical, logical, or topological relationship among the DMPs in a group is assumed unless you organize your DMPs consistently. By registering your DMPs in DMM-DSM and organizing them into groups (by location, display type, or on any other basis), you can act quickly to activate new settings for, or deliver updated content to, multiple devices simultaneously.
DMPDM	*Digital Media Player Device Manager.* Web-based graphical user interface, served from a DMP, that you use to configure the DMP device during its initial setup or to manage the DMP device in isolation, as an alternative to using the centralized management features in DMM-DSM.
DMS	*Cisco Digital Media System* is the name of the product family that consists of DMM appliances, Video Portal appliances, DMPs, and all of their associated software components.
encoder	*Cisco Digital Media Encoder* 1000 or 2000.
MCS	*Cisco Media Convergence Server* 7825-H2 or 7835-H1 chassis on which DMS software is preinstalled.
metadata	*Metadata* is a formalized, hierarchical, and logical grammar to describe particular attributes of information, such as its context or purpose. In DMS, you can enter metadata attributes for the video and digital signage content offerings that you create. For example, you might use metadata to track when and where you recorded a particular video stream, who speaks in the video, and to what topics it pertains. When you use metadata, your information becomes searchable and retrievable in new ways.

Table 1-1 Concepts and Vocabulary

Term	Definition
planes	When you use DMPDM, the attached DMP display represenents video content and HTML content on two separate, virtual *planes*, each of which has a potential on-screen size of up to 4096 x 4096 pixels. The video content plane is always opaque and behind the HTML content plane, for which you can change amount of transparency. The two planes can overlap and you will see the video content plane *through* the HTML content pane if both of the following are true: • You show video content and HTML content simultaneously. • The HTML content plane touches any of the same *x*-axis and *y*-axis coordinates that the video content plane touches.
playlist	In DMM-DSM, a playlist is an ordered sequence of files that you deliver to all the DMPs in a DMP group or that you show throughout your digital signage network. The workflow that you follow varies according to your requirements. 1. To create a playlist: a. Under the Content Manager tab, add files as content items, then associate them with content categories in your media library. b. Under the Applications tab, use the Playlists feature to select which content items to include, how long each item should play, and the sequence for playback. 2. To deploy a playlist, click the **Publisher** tab and choose whether you prefer an immediate or a scheduled deployment. Based on your preference, do one of the following: • Click **Immediate**, select a DMP group, select particular DMPs in that group, select the playlist to deploy, then click **Go**. • Click **Scheduler**, select the playlist to deploy, select a DMP group, specify the interval between repeated showings, select the date and time to start and stop the playback, click **Save**, then click **Publish**.
program	In DMM-VPM, a *program* is a virtual container for one or more videos. For example, a program that you name "Sales Commissions" might contain videos that you name "Know Your Customers" and "Know Your Products."
screen zone	*See* zone.
video	• In DMM-VPM, a *video* is a virtual container for one or more video parts and is one component in a program. For example, a video might contain parts One, Two, and Three, and be contained in a program that you named "Annual Shareholders Meeting." • In a generic sense, a *video* is any DMS content offering that includes video content, audio content, or both.
video part	In DMM-VPM, a *video part* is one component file in a video.

Table 1-1 Concepts and Vocabulary

Term	Definition
Video Portal	*Cisco Video Portal*—Web-based graphical user interface that audiences use to browse, search, and view video content, whether live or on-demand. Video Portal fits easily into your existing IT infrastructure and supports established video formats including Windows Media, Real Player, and Flash. Video Portal features include: • Program guide and keyword search—Find content by category, title, or keyword. • Customizable playlists—Create or make selections from dynamic list of videos programmed by content publishers or bookmarked by individual users. • Supplemental content—View supplemental information with each video, such as tickers, further reading, related videos, Web sites, and downloadable materials. • Advanced player controls and full screen—Optimize the viewing experience with enhanced control of video playback. • Simultaneous playback and thumbnail preview—Preview other videos during main video playback.
Video Portal Reports	*Cisco Video Portal Reports*—Web-based graphical user interface that video content developers use to capture, view, and export Video Portal activity reports.
Video Portal template	A Video Portal template uses a particular codec (such as *Sorenson*) to encode a video stream, then saves the output in a particular kind of container file (such as a Real Player file). There are four Video Portal templates: • Flash Only—Uses the Sorenson codec to encode video for audiences who have the Flash browser plugin. • Flash/Windows Media—Uses the Windows Media codec to encode video content for audiences who have browser plugins for *both* Flash and Windows Media. • Flash/Real—Uses the Real Player codec to encode video for audiences who have browser plugins for *both* Flash and Real Player. • Flash/QuickTime—Uses the MPEG4 codec to encode video for audiences who have browser plugins for both Flash and QuickTime.
WAE	*Cisco Wide Area Application Engine*. The hardware platform from which ACNS software provides application and content services.
zone	A zone in digital signage is a rectangular area on a DMP display where you show any kind of content. For example, a ticker, a banner, an advertisement, and a video might simultaneously occupy four zones on one DMP display. You configure zones in DMM-DSM; DMPDM does not have any features for zone management.
zone template	A zone template is a “skin” that your organization creates and designs to control how different zones look on a DMP display. Cisco provides two zone templates in DMM-DSM, but you can create as many other zone templates as you want.

Cisco Video Portal

The Cisco Video Portal utilizes standard Web technologies to allow you to deliver a compelling live and on-demand video experience to your audiences. Platform-agnostic, the Video Portal fits easily into your organization's existing IT infrastructure and supports established video standards including Windows Media, Real, and Flash.

The interface allows you to conveniently and quickly browse, search, and view content interactively. The product’s features provide the following benefits:

- **Program Guide Listing and Keyword Search**—Easily locate media by content category, title, or keyword
- **Customizable Playlists**—A dynamic list of videos programmed by content authors or bookmarked by individual users
- **Supplemental Content**—View supplemental information with each video such as tickers, further reading, related videos, Web sites, and downloadable materials.
- **Advanced Player Controls and Full Screen**—Optimize the viewing experience with enhanced control of video playback
- **Simultaneous Playback and Thumbnail Preview**—Preview other videos during main video playback.
- **Tracking and Reporting**—Capture, report, and export content usage.

The Video Portal is accessible to end users via a Web browser and is available in three templates:

1. **Flash only**—Runs within a Flash browser plugin and supports a video content encoded in the Flash Sorenson codec.
2. **Flash/Windows Media**—Runs in a Flash browser plugin in conjunction with a Windows Media browser plugin and supports a video content encoded in the Windows Media codec.
3. **Flash/Real**—Runs in a Flashbrowser plugin in conjunction with a Real Player browser plugin and supports video content encoded in the Real Player codec.
4. **Flash/QuickTime**— Runs in a Flash browser plugin in conjunction with a QuickTime browser plugin and supports video content encoded in the QuickTime/H.264 codec.

Table 1-1 on page 1-2 illustrates the different OS/browser/plugin/codec combinations supported by each Video Portal template. You will need this information in order to publish digital media to the Cisco Video Portal in the appropriate digital formats. Refer to the *Cisco Video Portal 3.5 User Guide* for more information.

The Video Portal is activated by a web browser and is available in four templates:

1. **Flash only**—Runs within a Flash 8 (or greater) browser plug-in and supports video content encoded in the Flash 8 (or greater) codec (Sorenson).
2. **Flash/Windows Media**—Runs in a Flash 8 (or greater) browser plug-in in conjunction with a Windows Media 9 (or greater) browser plug-in and supports video content encoded in the Windows Media 9 (or greater) codec.
3. **Flash/Real**—Runs in a Flash 8 (or greater) browser plug-in in conjunction with a RealOne (or greater) browser plug-in and supports video content encoded in the Real Player 8 (or greater) codec.
4. **Flash/QuickTime**—Runs in a Flash 8 (or greater) browser plug-in in conjunction with a QuickTime 7.0 (or greater) browser plug-in and supports video content encoded in the QuickTime/H.264 codec.

Table 1-2 Supported OS/Browser/Plugin and Codec Combinations

Video Portal Template	Recommended Browser Plugin(s)	Supported Browser	Supported Codec
Flash Only	Flash 8 Flash 9	Windows: -Internet Explorer 6.0 Linux/Unix: -Firefox 1.4. 3 Macintosh: -Safari 2.0 -Firefox 1.5	Flash 8+ Sorenson
Flash/Windows Media	Flash 8 with Windows Media 9 Flash 9 with Windows Media 10	Windows: -Internet Explorer 6.0 -Firefox 1.5.0.6	Windows Media 9 & 10
Flash/Real Player	Flash 8 or Flash 9 with RealOne+	Windows: -Internet Explorer 6.0 or greater, Mozilla 1.8 or greater, or firefox 1.5 or greater is recommended. Linux/Unix: -Mozilla 1.0 minimum or Firefox 1.0 minimum -Mozilla 1.8 or greater, or Firefox 1.5 or greater recommended Macintosh: -Safari 2.0 minimum -Safari 2.0 or Firefox 1.5 or greater recommended	Real Player 8+
Flash/QuickTime	Flash 8 or later with QuickTime 7.0 or later	Windows: -Internet Explorer 6.0 or Firefox 1.5.0.6 Macintosh: -Safari 2.0, Firefox 1.5.0.6	QuickTime 7.0

Cisco Digital Media Manager

The Cisco Digital Media Manager is a Web-based, easy-to-use content-management application for organizing and publishing digital media. This tool is designed to help content authors upload, catalog, edit package, and publish all video content to the Cisco Video Portal or other end devices.

The Cisco Digital Media Manager features allow content authors to:

- Easily customize the Cisco Video Portal look-and-feel.
- Add and archive content and assign meta-data and keywords.
- Create and manage playlists, ticker alerts, messages, and promotional interstitials.
- Preview content and manage approval workflow.
- Schedule instant and future deployments.
- Take advantage of compatibility with Cisco ACNS and Cisco Wide Area Engines.
- Manage administrator accounts and permissions.