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- Digital Media Management and Player
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Digital Signage Overview
What’s New—Cisco Digital Signage

A Comprehensive Solution for management, publishing and playback of digital media on networked digital displays

- Easy to use—simple, intuitive Web interface
- Flexible—provides customers with multiple media formats, customizable screen options, and high-quality content
- Integrated/Scalable—Leverages the IP network to manage scalable digital signage networks
Digital Signage Category—Defined

- Compelling digital media content delivered to networked digital signage displays for targeted communications
- Purposes include on-premise marketing/advertising to customers or internal communications and training to employees
- Content typically includes video, graphics, animations, streaming web or TV content, and text
- Applications include retail, branch banking, healthcare, transportation, education, hospitality, sports, and entertainment
Digital Signage Technology Evolution

Phase 1: Standalone PC-Based

Yesterday: High Operational Costs, Low Flexibility

Phase 2: Networked PC-Based

Today: High Reliability and Flexibility, Easy Deployment and Operations

Phase 3: Networked Media Player-Based

Phase 4: “Smart” Signage

Tomorrow: Integration with Video Surveillance, RFID, Telepresence, etc.

Digital Signage Market
## Digital Signage Customer Requirements

- **Comprehensive:** system that includes management and publishing and display of content
- **Simple:** Ease of use: simple interface, little training, standards-based
- **Flexible:** easily update signage content, control content uniquely on-screen, in location or time of day,
- **Reliable:** robust equipment and network reliability
- **Scalable:** ability to deploy thousands of signs across a distributed network
- **Content Authoring and Capture:** high-quality content development, ability to repurpose existing content
- **Cost:** Low cost and affordable TCO: clear up-front costs and low operational costs
Cisco Enterprise Video Strategy
Delivering an Intelligent, Converged Environment for Video

- Desktop Video Streaming
  - 12 Billion streams in 2005

- Digital Signage
  - Market size estimated at $2B+ 2010

- Digital Media
  - 31.8m MP3 players and Video iPods

- Video Surveillance
  - $1282m market size 2009

- TelePresence
  - Next-Gen Collaboration
  - $4 to $5 in network upgrades for every $1 spent on TelePresence

Cisco Enterprise Video
- Entered four new emerging markets
- Markets include
  - IP Video Surveillance
  - Desktop Video
  - TelePresence
  - Digital Signage
- Leverage IP network as a platform
Cisco Digital Media System
Desktop Video and Digital Signage

Media Creation
Digital Media Encoder 1000
Digital Media Encoder 2000

Media Management
Digital Media Manager
Video Portal Module
Digital Signage Module

Media Access
Cisco Video Portal
Cisco Digital Media Player

Solution that Spans Across the Digital Media Value Chain
Cisco Digital Media Management
Cisco Digital Media Manager for Digital Signage

- Remote web-based media management (Ingest/Add/Archive media and assign metadata)
- Media player discovery, grouping, management, and monitoring/reporting
- Manage and schedule play lists, screen zones and customizable templates
- Integrates with Cisco ACNS/WAE for intelligent media delivery for WAN optimization
- Role-based access control (RBAC)
- Publish content to any content server for local streaming for efficient content distribution
## Digital Media Manager 4.0 (DMM) Server Appliance

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<th>Add-on Software</th>
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<th>Stand-Alone Digital Signage Appliance</th>
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Cisco Digital Media System—Product Portfolio Overview

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<td>Cisco WAE’s</td>
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Cisco Digital Media System—Digital Signage Application

Extension to DMM software for signage content management

Digital Media Player for display of content on digital signs

WAN
Cisco Digital Media Player (DMP)

- MPEG 1/2/4 in SD and HD, graphics, web content, text (tickers)
- Full screen video or screen zoning
- Customizable on-screen templates
- Remote management of display (on/off, volume, contrast, brightness)
- IP-network addressable and upgradeable
- Security: Hardened device
- Local storage, high availability and automatic failover
- Small form factor: 7.5” x 5” x 1.5” at 1lb.
- Low power consumption
- Highest reliability in industry: 223,921 hours (25 years)
Applications
Ingesting Content – Digital Signage
Digital Signage Scheduling and Publishing
Failover mechanisms
FAILOVER

Network goes down

DMP launches failover URL

URL failover content launched.

If no failover content
Failover to ROM – a butterfly animation.

No bluescreen.
Content Distribution
Cisco Digital Signage—Scales

Single Location
Digital Media Manager
Digital Media Players

Second Location
Edge WAE
Digital Media Players

Third Location
Edge WAE
Digital Media Players

Root WAE
Content Distribution Manager (ACNS)

WAN

Ability to distribute content overnight and cache locally --Non-disruptive to mission-critical network operations
Cisco ACNS
Organizations Require Information Access for Everyone, Everywhere

- Corporate Communication
- eLearning
- Digital Signage
ACNS Central Management

- Comprehensive management
  - Central and secure configuration
  - Device grouping
  - Monitoring and statistics
  - Alerts and reporting

- Intuitive interfaces
  - Graphical user interface, wizards
  - Cisco® IOS® Software command line interface
  - Roles-based administration

- Proven scalability
  - Up to 3500 nodes
  - Redundancy and recovery
Cisco ACNS Platforms

Scalability/Performance

WAE-7326
Data Center

WAE-612
WAE-512
Remote Office

NM-CE
Live & On-Demand Video Streaming without ACNS

High quality streaming needs massive WAN bandwidth

All Requests
Video Streaming Services

Live Streaming with ACNS

ONE STREAM PER SITE
Content Engines allow high quality streaming without major BW investment

- Live Unicast Video
- Unicast Streams (One per User)
- Single Multicast Stream (replicated by network)

Multicast

Unicast Stream Splitting

WAN

Unicast or Multicast Distribution

CDM

Root WAE

Video Server
Scalable Content Distribution Solution

Origin Servers

Content Catalog
Cat.mpg
Dog.mpg

WAN

Acquisition

Location = Milan

Location = London

Leader

Location = Pargue
High-Level Flow Diagram

DMM instruct DMP to start a playlist
GET /set_param?mng.command=start+plylst+http://DMM:8080/xDMM-core/start_playlist_2_.htm

HTTP/1.0 200 OK

DMP ask the playlist
GET http://DMM:8080/xDMM-core/start_playlist_2_.htm HTTP/1.1

DMM give back the playlist
HTTP/1.1 200 OK
Content-Type: text/plain
loop
http http://DMM:80/content/Telepresence.mpg
http http://DMM:80/content/TP_Kids.mpg

DMP ask for playlist content
GET /content/Telepresence.mpg HTTP/1.0

WAE serve the content
HTTP/1.1 200 OK
Accept-Ranges: bytes
Content-Length: 48879620
Content-Type: video/mpeg
Top reasons customer’s use ACNS

- High capacity distributed architecture for unicast/VoD scaling
- All file types: streaming & static files
- Multi-format streaming protocols: Windows Media, Real Networks, Apple QuickTime
- Easy, central management of many edge devices
- Sophisticated content distribution capabilities
- Any LAN/WAN network topology, including satellite networks, multicast “islands”, unicast-only WANs, Internet users, VPN users, etc
- Stream splitting, caching & pre-positioning of content
Summary
Cisco Digital Signage—Summary

Comprehensive solution for management, publishing, and playback of digital media on networked digital displays

**Simple**
- Easy to manage content scheduling and deployment
- Easy to group signs for specific uses or time-of-day content

**Integrated**
- Part of Cisco Digital Media System for desktop video & signage
- Integrated with IP network for seamless, non-disruptive operation

**Flexible**
- Ability to tailor content delivery by screen, time of day or location
- Support for multiple formats, multiple uses (internal/external)

**Scalable**
- Ability to roll out single signs and grow to support thousands reliably
- Central and local control management of content