

## Benefits for Playboy Enterprises

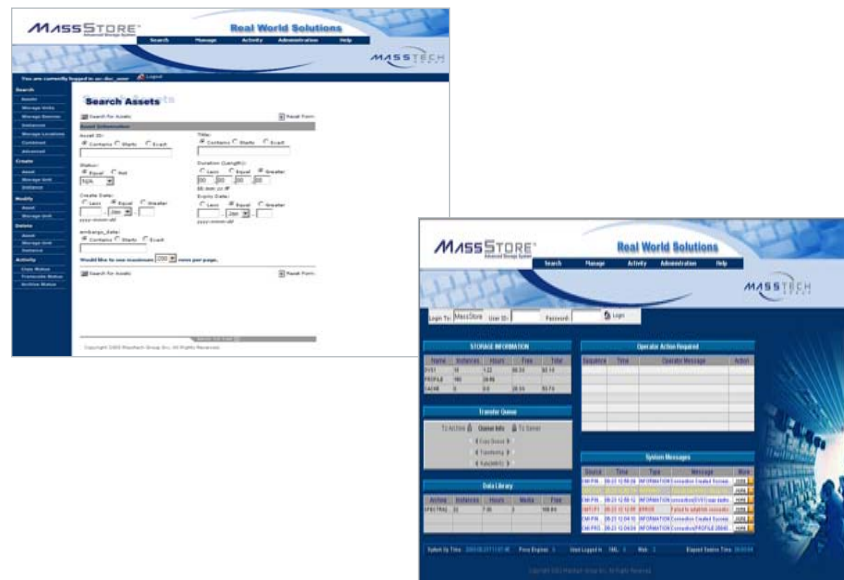
Playboy saw immediate benefits with the implementation of the MassStore system. They achieved their goal of creating an on-air tapeless environment, created efficiencies in their ingest process, and allowed them to keep better track of media assets. Playboy expects to realize savings in tape costs.

Prior to the installation of MassStore, Playboy needed to ingest material each time they needed it for air, since the video servers had at most about two months' worth of storage. Now they need only ingest once, and the content is always available for future use.

MassStore also provided shared storage, storage shared among different users, like on-air master control and post production, with a high degree of isolation between them.

In addition, Playboy appreciated Masstech's commitment to ensuring seamless integration of MassStore with Playboy's traffic, automation, and editing systems and networks.

As proof of acceptance, Playboy installed another MassStore system in the UK for its launch of 10 new channels. Advanced content management knows no boundaries with Masstech.



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## Broadcast Workflow Solutions



## Playboy TV Customer Case Study



Playboy TV and the company's Spice-branded portfolio of movie channels are available in more than 113 million U.S. cable and direct-to-home satellite household units.

## Overview

### The Challenge

- Supplement existing media storage capability by providing near-line and archive storage for on-air video servers and editing systems.
- Create a tapeless on-air environment by integrating with existing automation, traffic and video server systems.
- Improve workflow efficiencies through shared storage and integration with on-air, editing and video-on-demand environments.
- Manage content and metadata in a simple and straightforward manner.

### The Solution

- Masstech's MassStore integrated end-to-end nearline, archive, content and workflow management system.

### The Benefits

- Enhanced workflow efficiencies-media only needs to be ingested once.
- All material within the facility's video servers and shared storage bins are constantly tracked by MassStore and automatically and quickly made available for playout or editing as needed.
- Automatic media movement from production into on-air through a policy based environment
- Easy tracking of media assets and metadata through MassStore web-based user application.
- Expected reduction in tape costs of well over six figures.

## System Requirements

From its Los Angeles network origination center, Playboy Entertainment Group uplinks 16 subscription-based channels of programming. Programs and interstitial material are ingested into and played out from Pinnacle MediaStream 900 SAN and 1600 systems under control of a Harris Automation system.

Missing however, was a means for long-term storage of content, not only from the video servers, but from Playboy's Final Cut Pro editing system, and also a way to more easily track and manage all of the networks' various media assets.

To fill that gap, Playboy selected Masstech's MassStore™ to supply an end-to-end nearline, archive and asset management system that integrated with Playboy's existing video servers, automation and editing systems.

Playboy required that MassStore be able to interface with on-air operations, promotions and post production all at the same time. A system based on open architecture, like MassStore, was important to Playboy, and key to the successful integration with its existing systems.

## Masstech MassStore at Playboy Enterprises

MassStore, as installed at Playboy, consists of a one Terabyte (TB) Adaptec array for nearline cache storage and a new Spectra Logic SAIT-1 based Python data tape library system.

The archive system includes two SAIT-1 data tape drives with 100 slot capacity (50TB), and initially populated with 20 TB of media. The Python library itself can expand to 500 TB of capacity by adding bins and additional media and can support up to 24 SAIT-1 data tape drives.

This library is automatically managed by the MassStore application and all content

migration to and from the library is automatically controlled by the application and can be governed by policies that determine where content resides. In this way the MassStore system acts as the central knowledge point for locating and directing assets.

The MassStore solution resides on two Intel chassis, one for maintaining the data moving technology and the other for managing the assets and maintaining the Oracle 9i advanced content management and asset tracking database application with web-enabled metadata access and control.

## Workflow

The disk based nearline cache facilitates effective content movement between archive storage and the on-air video servers. The MassStore system automatically maintains the nearline storage so no user intervention is ever required.

Two Pinnacle Connect+ gateway systems are employed, both on the MediaStream SAN for redundancy and increased video data transmission bandwidth, which allows the MassStore system to copy content from and to the video server.

The MassStore Cache acts as a buffering area, to either catch material coming from the data tapes or as a buffer to store content temporarily while waiting to be written to tape. The Cache is also used to stage content. If the next day's material is already on the cache then it moves much faster into the Pinnacle servers and can restore the servers quickly if there are issues. Also the Cache can hold material ready to be played in case of a change of that day's schedule.

Media is ingested into the Pinnacle servers under control of the Harris Automation, and rich metadata is entered into MassStore via Masstech's web browser-based user interface. An authorized operator simply search for an asset populate its metadata fields with the desired data. Group entry is also

permitted through the web interface to simplify multiple asset updates.

Masstech provided easy to use tools that allowed Playboy Enterprises to create their own metadata fields and to grow them in the future.

Material copy requests can also be manually triggered via the MassStore web interface. Since MassStore at Playboy operates in Active Mode, any new material ingested into the servers is automatically detected by MassStore and pushed to the cache and archive based upon the rules set for the system.

An operator can monitor the progress of media transfers to and from the archives via the web interface.

For playout content movement from the MassStore system, Playboy uses the Harris GMT system. This system examines all currently loaded playlists and identifies all content by House Number that is not found on the on-air video servers. The Harris GMT then requests for material copies (via VACP an industry standard protocol) from the MassStore system to the Pinnacle SAN video servers. The MassStore system manages the nearline and archive storage obviating the need for the Harris system to carry the overhead of managing multiple storage locations.

With MassStore, retrieval from the archive is very fast, with a half hour program transferred in a matter of minutes or seconds depending on the internal interconnection speeds.

## Look Ahead Report Integration

The Harris GMT requests for material copies from the MassStore system are based on the currently loaded playlists which are available only 24 hours in advance of air. However, Playboy required that at least five days of material be loaded into the video servers as a security measure.

To satisfy this condition, Masstech developed the Metadata Processing Application (MPA) which accepts flat file formatted Look Ahead Reports (LAR) produced by Playboy's IBMS (Pilat) traffic system. Leveraging the MassStore XML API for command interface, the MPA runs on a Microsoft Windows platform and processes additional metadata contained in the LAR files and pushes the metadata into the MassStore Content Management database as appropriate.

This tool allows content to carry richer metadata information that MassStore can then manage more accurately. This process closely ties the two key applications of a broadcast environment, traffic and content management, in a way that has never been done before.

Using the LARs, which are supplied each day, the MPA controls the pushing of content into the video servers days in advance of air time. If a required item is not found in the MassStore system, the MPA application flags that item as "Not Found" and an operator will have to ingest that item into the on-air video servers.


## Final Cut Pro Editing Interface

Playboy creates much of its long-form programming and interstitial material in-house using the Final Cut Pro editing application running on Macintosh computers.

So in addition to increasing its storage

capability for on-air content, Playboy desired to extend the storage available to their Final Cut Pro (FCP) editing environment with the MassStore system.

The process that was developed for native FCP file exchange involved the creation of several workflow "bins" or directories on a shared network infrastructure available to all FCP systems, via Mac networking, to Telestream Flip Factory transcode engines and to the MassStore system. Standard



*“The advantages of our MassStore system-it's made our on-air operations tapeless. We now ingest things once and they stay in the archive, instead of being purged at the end of each play cycle. We expect to see savings in tape costs that could be well over six figures.”*

Glenn R. McJennett  
Vice President of Engineering  
Playboy Entertainment Group, Inc.

FTP (file transfer protocol) is used. Flip Factory is used to transcode between FCP DV25 and Pinnacle MPEG-2 file formats.

The bins include "To Archive", "From Archive", "On-Air Transcode", "For Review", "To Edit Encode", "To VOD

Transcode", and "VOD Contribution".

The MassStore system monitors the shared storage locations and acts on content there in a manner defined by assigned policies. Depending on the rules, the FCP file could be moved to archive, the transcode application, or to an on-air server.

MassStore keeps track of which files are Pinnacle and which are FCP by the metadata associated with the file.

## Video On Demand

In addition to the bins created for editing, two more were set up for file transfer to Playboy's video on demand (VOD) system. These bins are named "To VOD Transcode", and "VOD Contribution". Based on a VOD LAR file supplied by the Pilat traffic system, MassStore enacts file transfers of Pinnacle files to VOD encoders.

## Consultation

During the system definition phase of the project, Masstech provided two main areas of consultation to Playboy Enterprises. The first was technical, on how Masstech technology would interconnect into their existing environment. The other meetings focused on workflow and on how their internal processes-traffic, network operations, production, and post-would change and become more efficient.