



Gorilla and EMC Digital Media Asset Management Solution for the Broadcast Industry

Content repurposing, a value-enhancement action, is a “must-do” mission for any content provider in the broadcast industry due to technology evolution, increasing customer demand, and regulatory requirements. To become a key player in the broadcast industry, especially in this ever-developing digital age, businesses must recognize the absolute need to adopt a state-of-the-art tiered archive storage infrastructure for production of high-quality programs that are timely, captivating, and cost effective.

Broadcasters face a number of challenges today, including the necessity to:

- Locate a performance- and quality-driven Media Asset Management (MAM) & Archive solution to target behavior-specific contents, including news, drama, documentary, and sports
- Search for the most effective automated production line to digitally process and archive thousands of hours of unmanageable historical tapes
- Deploy an efficient solution to integrate with multiple vendors and avoid proprietary systems
- Explore an approach to workflow in a hybrid environment that can produce daily content while archiving historical content
- Find a way to put a stop to storing digital post-produced video files on older, non-efficient analog tapes
- Create a strategy to fuel new business opportunities

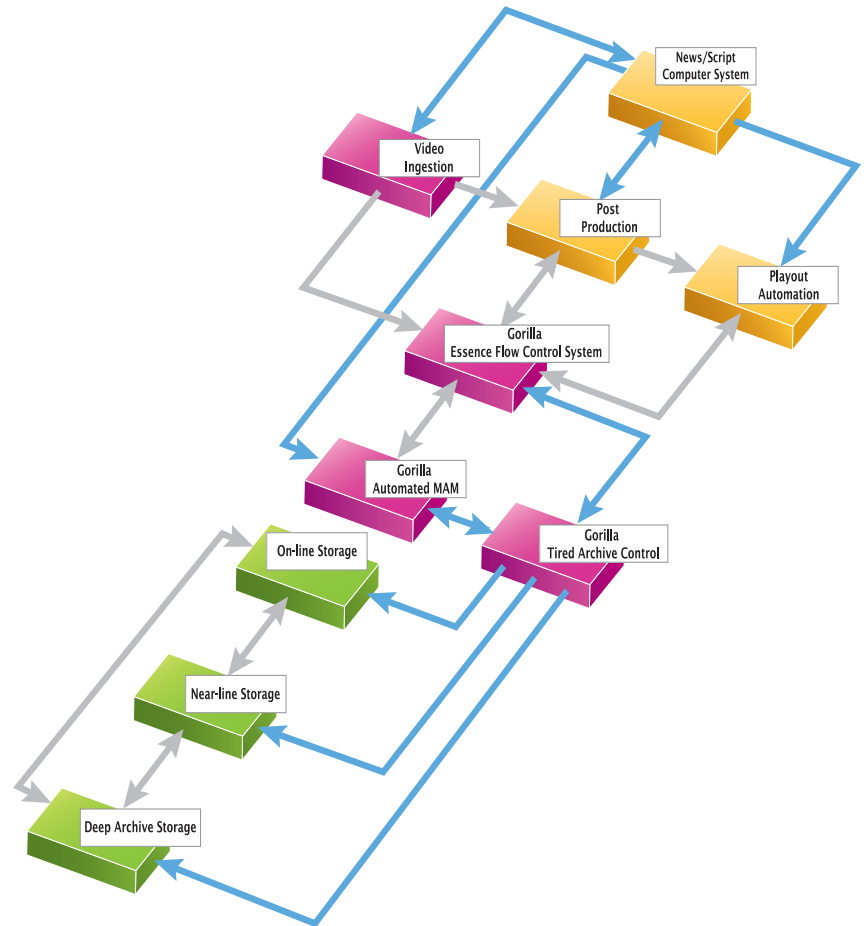
The content production challenge requires an open architecture solution designed to support multiple production and play-out vendors, protocols, formats, and content types.

The content infrastructure challenge requires:

- The conversion of content files into digital assets with value-added metadata and visualized essences for reuse and repurposing
 - A seamlessly integrated platform to handle daily production and historical content to increase program productivity and quality
 - Rapid ingest speeds to handle massive amounts of historical tapes in order to build a tape-less environment
 - “Ingest once, use many” architecture to allow creation of a new business model for today’s digital environment
 - Realtime multi-access sharing environment for rapid retrieval of media assets
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The content storage challenge requires:

- A tiered archive storage infrastructure designed specifically for broadcasting content and user behavior
- Security for assets in different archive tiers with business policies created for cost efficiency
- Intelligent mechanisms to automatically move content to the appropriate storage platform, such as online, near-line, or deep-archive for storage optimization and user productivity



Gorilla's Automated MAM and Tiered Archiving System for news broadcasters

The Gorilla Automated MAM and Tiered Archive System improves a broadcaster's workflow through simplified, automated process flow and complete lifecycle management for media assets.

Automated Media Asset Processing

Automated Media Asset Processing provides advanced tools for broadcasters to automatically ingest raw materials, analyze video signature, extract script index, and batch upload files to the search portal. Moreover, it provides an interface to seamlessly integrate with existing NCS (News Computer System), post-production, and automation systems.

Automatic metadata extraction and essence digitization for daily production and historical media asset tapes

Open Environment	<ul style="list-style-type: none">• Automatic playback break recognition and EDL generation• Automatic multi-format synchronous encoding with correspondent low-resolution proxy• Automatic video signature analyzing and keyframe extraction• Automatic metadata extraction from news script for re-embedding in MAM database• Available for most standard broadcasting formats: MPEG-2 I-frame, MPEG-2 IBP, DV25, DVCPRO• Automates metadata and essence processing saving manpower in pre-production• Scalable from single workstation to load-balancing server farm
Avid Environment	<ul style="list-style-type: none">• Automatic EDL transition from SMPTE to Avid ALE (Avid Log Exchange)• Automatic low proxy transcoding from Avid OMF DV25 sequence• Automatic synchronous proxy encoding with Avid NewsCutter

Comprehensive media asset searching and representation for efficient everyday usability

Open Environment	<ul style="list-style-type: none">• Multi-lingual searching and presentation• One portal for all users: journalist, producer, non-linear editor, librarian, and system administrator• User on-demand archive/restore management features accessible from Web browser• Flexible and customized metadata scheme with control vocabulary management• Different visual displays for editorial and video staffs• At-a-glance presentation interface for metadata, script, keyframe, and video
Avid Environment	<ul style="list-style-type: none">• Completely succeed metadata from Avid Media Manager to Gorilla MAM• Search and browse media proxy on Gorilla MAM while receiving high-resolution OMF from Avid Media Manager and drag files to Avid NLE

Interoperability with newsroom computer system and play-out automation for mission-critical daily broadcasting

Open Environment	<ul style="list-style-type: none">• Interoperability with NCS via MOS protocol communication, tightly integrated with ENPS• Ability to edit script with NCS while browsing source media assets on Gorilla MAM interface• Interoperability with play-out automation system using MOS communication• Automatic re-encode on-air media sequence to low-resolution proxy and check-in to MAM• Automatic archive and delete after-on-air media counterpart from online storage• Automatically pre-restore historical news program and commercial media from near-line cache according to daily rundown
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Tiered Media Asset Archiving

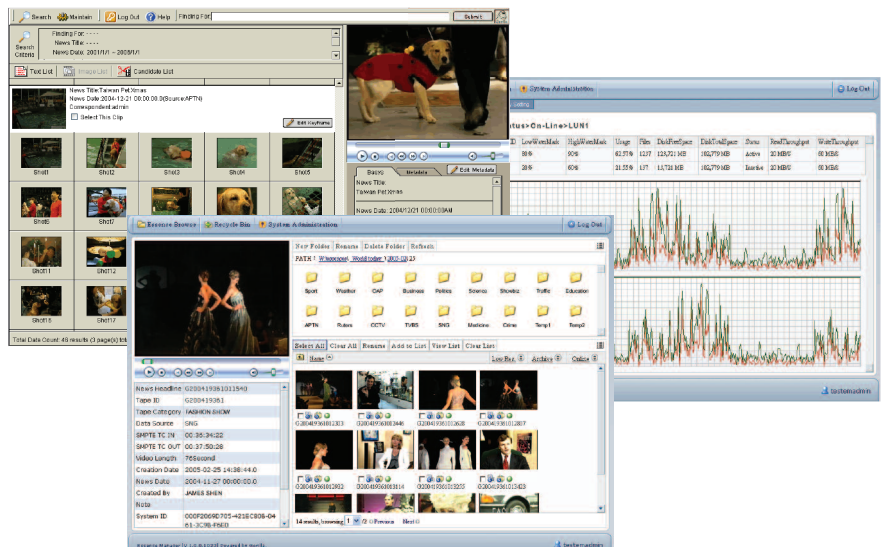
Tiered Media Asset Archiving provides advanced tools for broadcasters to automatically check-in media assets, monitor media assets status, and control media asset migration timing as well as movement to tiered storage archives based on specific lifecycle policies for different contents.

Complete media lifecycle management for quality and productivity during creation and repurposing

<p>Open Environment</p>	<ul style="list-style-type: none"> • Object-oriented media content database for diverse media objects such as clip, sub clip, audio, video, and edit sequences • Automatic media essence check-in from ingestion, NLE, and play-out re-ingestion • Automatic media essence lifecycle control with different content classifications, category, and copyright durations • Media essence lifecycle management for all media objects in all storage tiers • Automatic pre-archiving for selected essence before media lifetime expiration • Automatic pre-restoration based on tremendous search hint on MAM • Keep content associated with information on all media objects to allow complex re-purposing • On-demand restoration for master playout and editor retrieval of content • Storage distribution control provides the best content deployment scheme • Fully integrated with the Gorilla Tiered Archive Control System
<p>Avid Environment</p>	<ul style="list-style-type: none"> • Acquire archive list from Avid Media Manager • Tightly integrated with Avid Transfer Manager for archive backup and restoration

Tiered archiving visualization for storage optimization and cost-efficiency

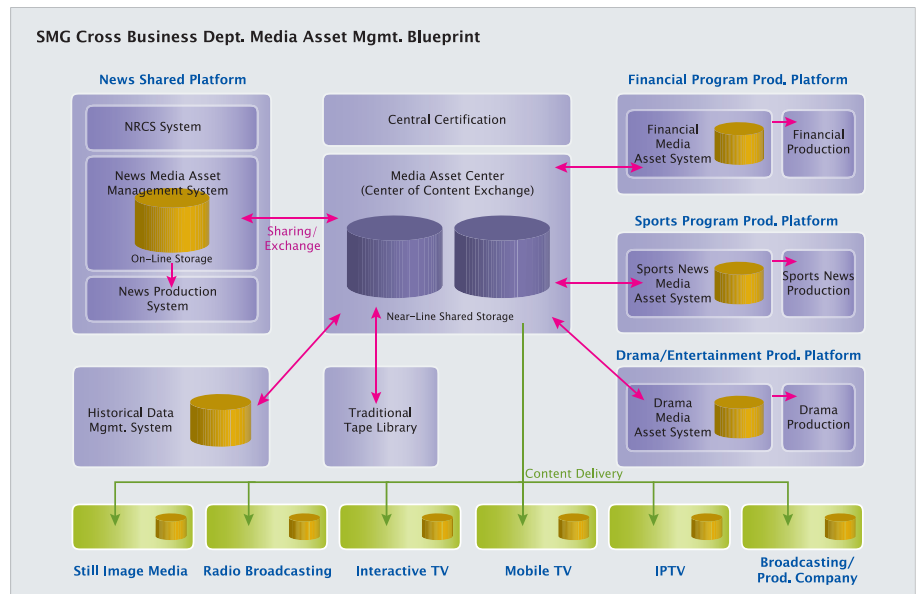
<p>Open Environment</p>	<ul style="list-style-type: none"> • Storage virtualization for production user with tiered storage hierarchies in background • Storage visualization with media essence transparency for different media formats and diverse objects in any storage tier • Scalable file sharing for multiple hosts and clients with different operating systems and applications • High-speed near-line deployment enabling pre-production cache and archive preparation • Tested performance for EMC SAN and NAS platforms
<p>Avid Environment</p>	<ul style="list-style-type: none"> • Tiered storage deployment : Avid Unity for on-line, EMC CLARiiON for near-line, ADIC tape library and other leading vender tape libraries for deep archive



The solution for the Avid environment

Integration with Avid news production environment

- Gorilla Transcode Controller only for daily solution
- Tape management database integration, only for historical solution



Daily news MAM & Archive solution for Avid environment

- Ingest daily news feed from Avid NLE and AirSpeed, search and browse media asset from Gorilla MAM, then retrieve for editing through Avid Media Manager
- Synchronous low-resolution proxy generated by Gorilla Ingestion Manager when Avid captures the high-resolution OMF
- Ingest the daily script from the newsroom computer while extracting metadata from Avid Media Manager, then re-embed metadata to the Gorilla MAM database
- Large capacity near-line and deep-archive storage for daily backup and restoration reduces growth requirements for Avid Unity
- Select and mark archive candidates on Avid Media Manager, then execute daily OMF backup with Gorilla Tiered Archive Control System
- Automated restore of associated OMF original to Unity according to the user's selection from Gorilla MAM

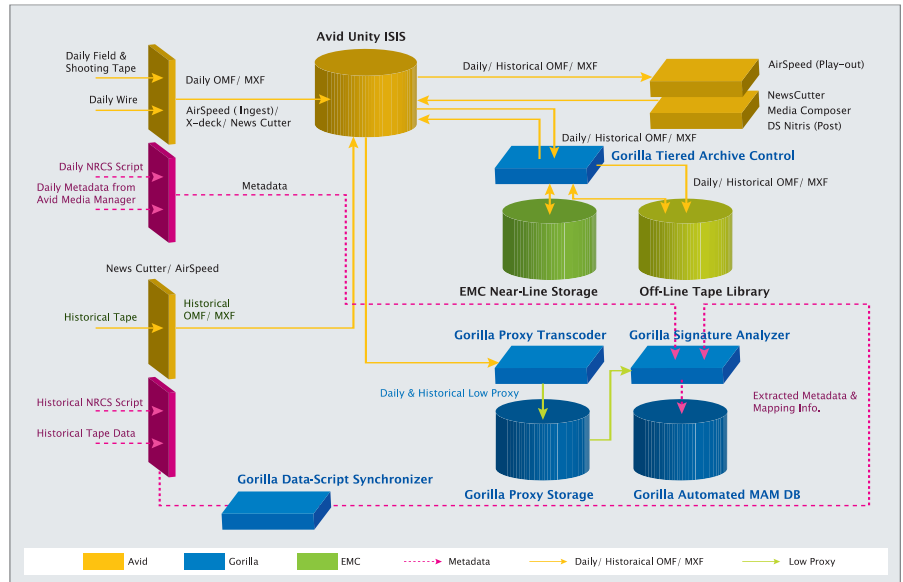
Historical news MAM & Archive solution for Avid environment

- Ingest historical news tapes from Avid NLE, search and browse the historical asset from Gorilla MAM, then retrieve for editing through Avid Media Manager
 - Synchronous low-proxy is generated by Gorilla Ingestion Manager when Avid NewsCutter captures the high-resolution OMF
 - Ingest metadata from the historical tape database and script from the newsroom computer system, then re-embed metadata to Gorilla MAM database
 - Large capacity near-line deployment to share Avid Unity loading, free Unity for production concentration
 - Automated archive backup by Gorilla Tiered Archive Control System
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The open architecture solution for all post-production systems

Complete solution for wire, daily feed, and historical tapes

- Tape management database integration only for historical solution
- Gorilla EDL Generator only for historical solution



Daily news MAM & Archive solution for open environment

- Ingest daily news feeds from the Gorilla Ingestion Manager, search and browse the media asset from Gorilla MAM, then retrieve for editing through Gorilla EFCS
- Synchronous high-resolution original and low proxy transcoding by Gorilla Ingestion Manager
- Ingest historical tape management data and NCS script and re-embed sorted metadata to Gorilla MAM database
- Large capacity near-line storage for daily backup/restore operation cache, reducing capacity requirements for online storage
- Media asset lifecycle control by Gorilla EFCS according to different production cycles for different content
- Automated data migration between storage tiers by Gorilla Tiered Archive Control System with optional direction from Gorilla IPS (Intelligent Policy Server)

Historical tape (news/drama/documentary/sports) MAM & Archive solution for open environment

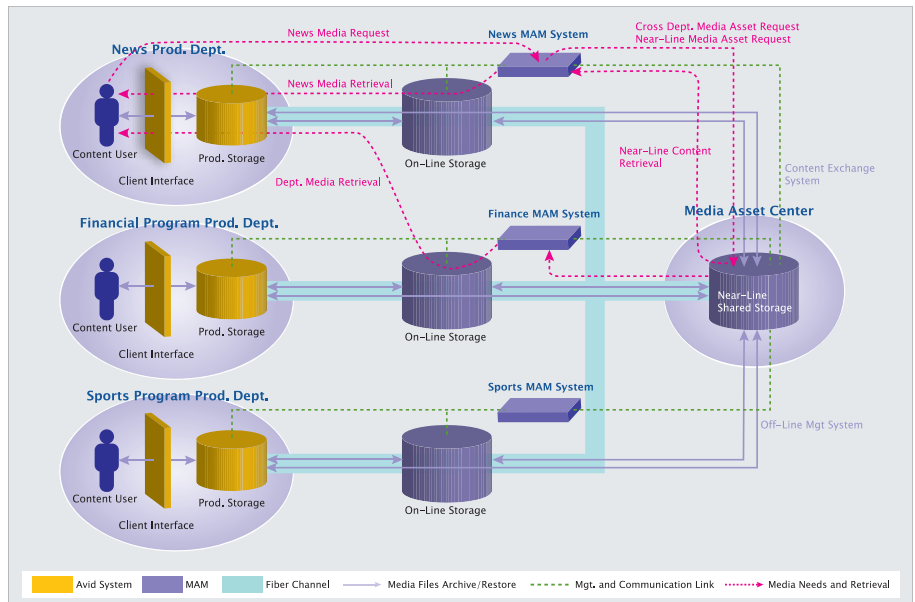
- Target different content types to have different management designs and policies
- Automated recognition of playback breaks in historical tapes and exporting of precise EDL for further ingestion
- Ingest historical news feeds from Gorilla Ingestion Manager, search and browse historical asset from Gorilla MAM, then retrieve for editing through Gorilla EFCS
- Synchronous high-resolution original and low proxy transcoding by Gorilla Ingestion Manager
- Ingest historical tape management data and NCS script and re-embed sorted metadata to Gorilla MAM database

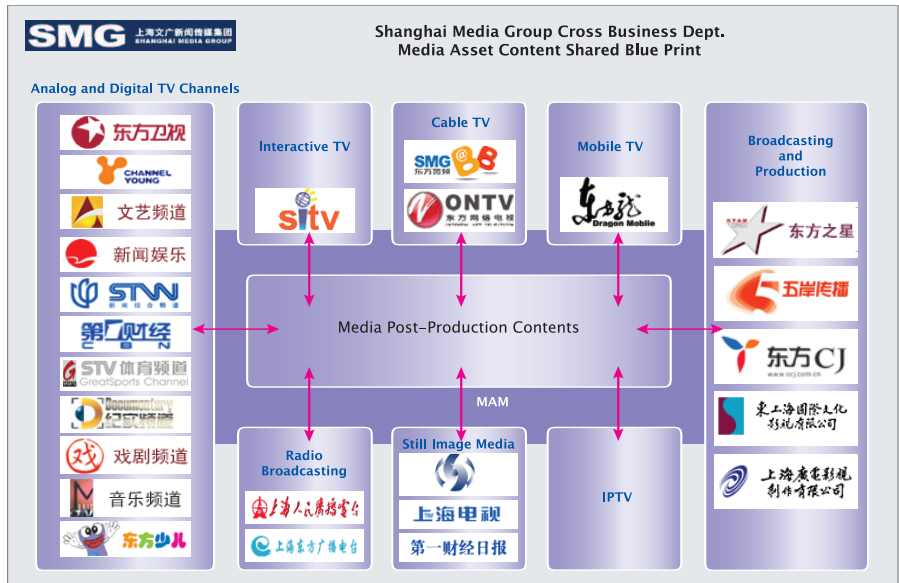
- Ingest historical data to near-line disk array directly, sharing access loading for online storage
- Media asset lifecycle control by Gorilla EFCS according to production cycles for different content
- Automated data migration between storage tiers by Gorilla Tiered Archive Control System with optional direction from Gorilla IPS (Intelligent Policy Server)

The solution for the integration of daily and historical environments

There are a number of benefits that result from incorporation with the Gorilla automated/tiered design, including tape-less environment building; better program quality and productivity through repurposing; and the creation of new business opportunities.

- Near-line storage deployment to share online storage loading, free online storage throughput for daily production access
- Near-line storage deployment significantly reduces online capacity requirements and investment
- Automated transcode final sequences from high resolution to low proxy for media management
- Available for major broadcast formats such as MPEG-2, DV, DVCPRO, and Avid OMF
- Automated ingest daily NCS script, historical script, and tape management data to Gorilla MAM and re-embed sorted metadata to MAM database
- Automated data migration between tiered storage in the background by Gorilla EFCS with different lifecycle policies for different content
- One portal for daily and historical asset search and browsing, a different customized interface for journalists and librarians





About EMC

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About Gorilla

Gorilla Science & Technology is a front-runner and provider of the most-advanced technologies and solutions for broadcasters and the leader of the few companies that have domain-specific content-management kernels. With Gorilla's vertical-specific product solutions of Automated MAM & Tiered Archiving, broadcasters and all professional content providers can better manage, archive, and convert audio-visual contents into media assets for massive creation and repurposing. Gorilla has well-established partnerships and a wealth of experience in helping broadcasters increase profits, especially at a time when the digital explosion is most actively encouraging them to provide more channels, content, and services. For more information, visit www.gorilla.com.tw.



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Solution Overview
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