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*next level solutions*



**INVENIO**

Media Asset Management Solutions



## ***What is Rich-Media Asset Management (MAM)?***

Media Asset Management has been broadly identified as the technologies involved with creating, acquiring, managing, storing and retrieving digital assets. *Rich-Media Asset Management* is an advanced tool-set that enables Media and Entertainment companies the ability to manage time-based content, such as audio and video, in addition to items of value such as photographs, documents, text, etc., regardless of the media they are delivered, or stored on. However, the value of these assets can only be realized, or maximized if they can be efficiently identified, stored, and retrieved. Because "if you can't find it in time, or at all, the asset doesn't exist."

## ***What are the issues MAM addresses?***

Until now, MAM has been an application, or concept, cobbled together by a variety of technology providers requiring a high degree of customization and support. Even though this may be a difficult process with multiple technologies, improvements may be experienced over manual systems.

However, the value proposition of MAM resides in the ability to maximize, not just improve, efficiencies associated with acquiring, defining, storing, and retrieving of your digital assets. This provides faster time to air, or use, which enables increased quality, and getting ahead of the competition – the right media, for the right use, at the right time.

## ***The possible solution - HARRIS INVENIO™ Media Asset Management***

INVENIO is a single source MAM solution crafted to optimize the efficient acquisition, definition, editing, storage, and retrieval of media – *any media, any content, anywhere.*

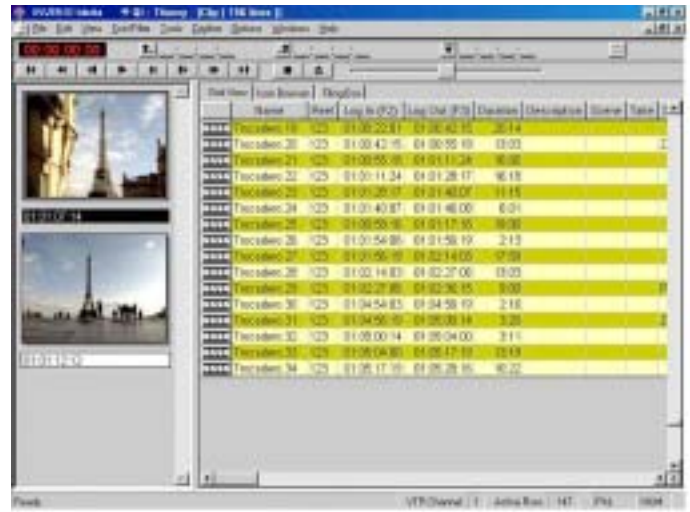
Although protecting your media assets through digital storage or archiving is important, the value is maximized by quickly defining and retrieving the specific information you need. Harris is providing this solution for the television and broadcast industry in a complete application, capable of working within your operation immediately, with the full support of the industry's leading automation provider.

INVENIO provides the capability to ...

- Ingest, log, auto-catalogue and archive your media
- Effectively search, locate, browse, and index
- Distribute media or browse-edit and import frame accurate EDLs to third party systems, from any desktop in your facility, and
- Transfer material where and when it's needed in multiple formats.



# PRODUCT OVERVIEW



## INVENIO™ Media Workstation

Manages media ingest, shallow metadata definition, and quality check for video, audio, web multimedia, scripts, documents, photographs, clippings.

In other words, it enables you to effectively manage:

- Any Content,
- Any Media,
- Anywhere.



## INVENIO™ Content Workstation

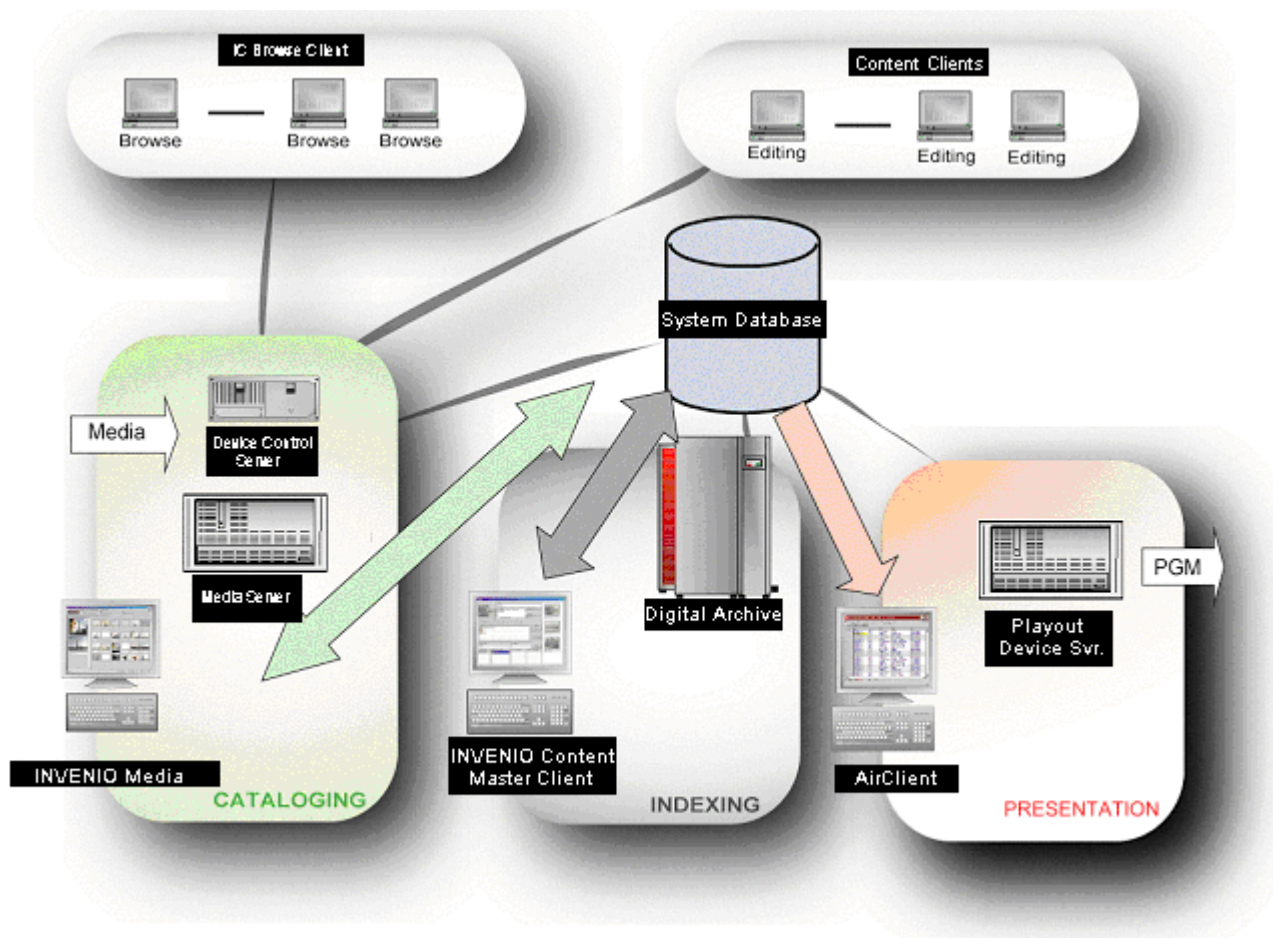
Enables...

- Indexing
- archival and deep asset management
- storage/retrieval
- searching
- extensive metadata definition, and
- library storage... in either local or distributed environments.

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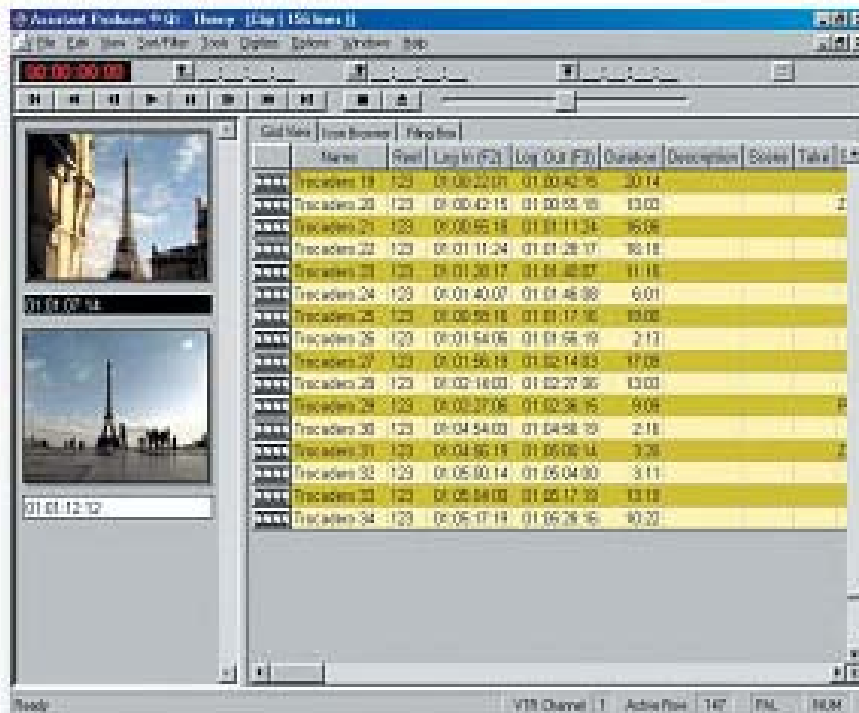
From the ingestion of the media to program transmission, Harris' media asset management products rely on "universal" network connectivity and the use of industry proven standard communication protocols.



Open Database Connectivity (ODBC) compliance together with the ability to scan content and control a wide range of broadcast devices or systems is the foundation of the Harris' MAM solution.

The fusion of advanced, object oriented database design, XML-based internal communication technology and hybrid Thesaurus and full text-based cataloging tools allow Harris' solution to efficiently operate today with built in extensibility for technological advances tomorrow.

## INVENIO Media: Defining your assets for maximum effectiveness



Controlling both VTRs, scanners and multiple resolution video servers, INVENIO (I-Media) is the heart of the content ingestion process. Some of the tasks I-Media can perform are:

**Media Ingest:** Connectivity to high-resolution storage devices and concurrent browse resolution content definition.

**Batch Digitizing:** I-Media offers self-contained multitask control of up to four VTRs/Video Servers to ingest all incoming material with frame accuracy.

**Feed Recording:** I-Media can be set for timed recording of satellite or network feeds, or simple "crash" recordings onto video server or videotape devices.

**Cataloging:** While recording, I-Media allows the operator to define the media being ingested with a full array of indexing modes, including:

**Automatic:** Captures automatic thumbnail and low resolution browse proxy images automatically, and

**Standard:** With an unlimited number of thumbnail images in each shot.

**Mark:** Identifies events in live programming, sports, or news to prepare highlights and sub clips (video server dependent).

**Continuous:** Records live feeds for news interviews or programming with on-board, low resolution browse capability in MPEG1 or MPEG4 for later review.

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I-Media can also integrate third party plug-ins to populate the central metadata base fields. The indexing process, for example, speech to text or closed-captioning sources can be added to the features of the INVENIO Media Management System.

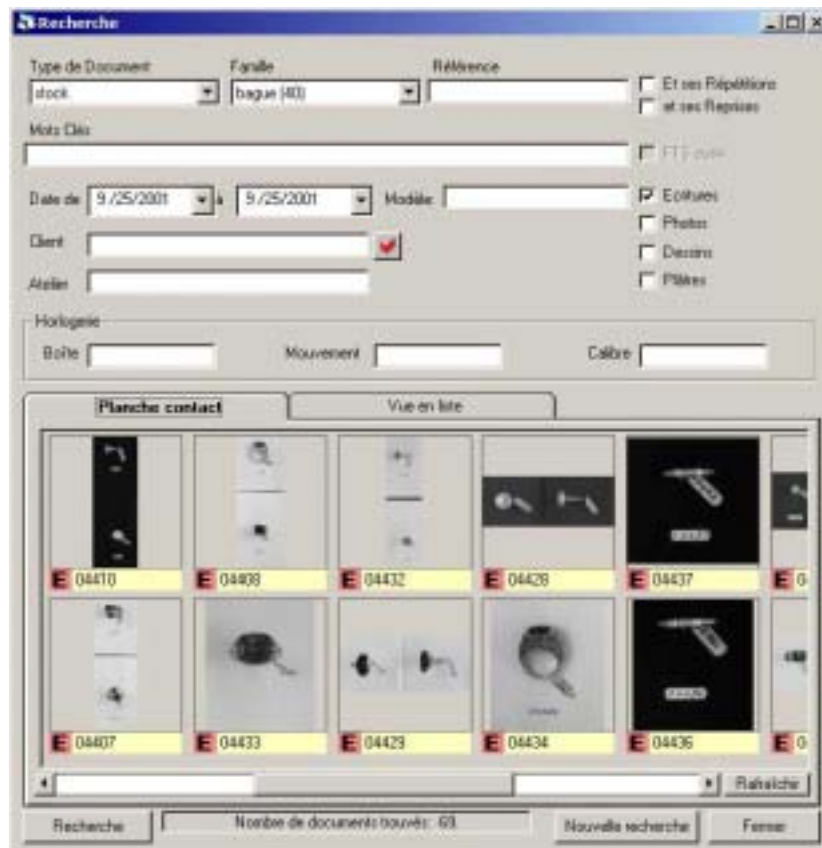
INVENIO Media is compatible with any ODBC compliant database.

The database is completely user configurable, with unlimited thumbnail image capture capability and hierarchical key word lists.

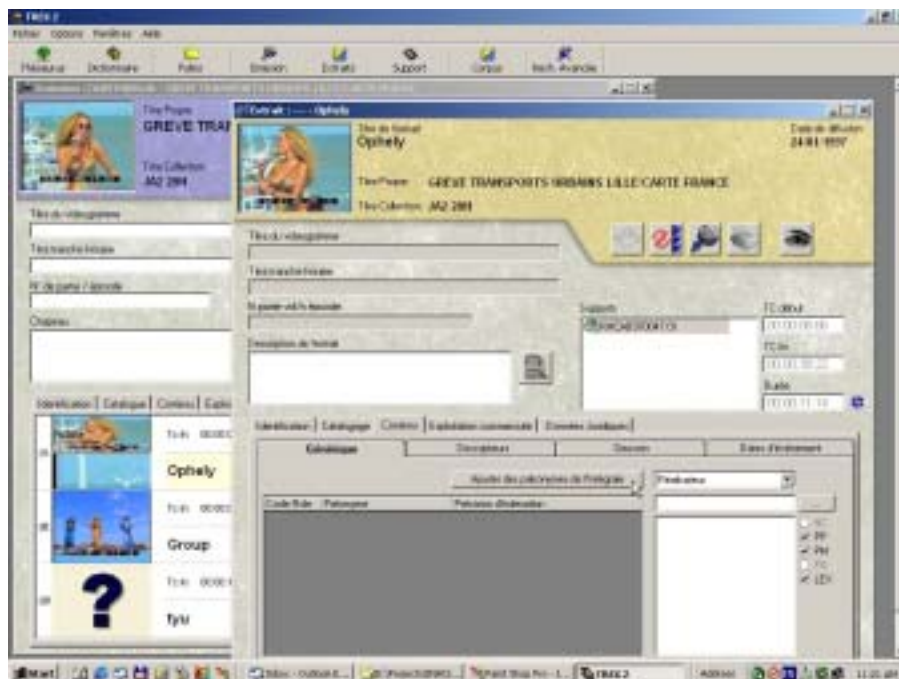
**Flexible and Expandable:** Any INVENIO workstation can search and view media connected to the central meta-database in either low or high resolution from any place with network connectivity.

You can perform media management of material and exchange QC logs, EDLs or material bins with non-linear editing systems using industry standard file conventions.

**Object Search and Definition module:**



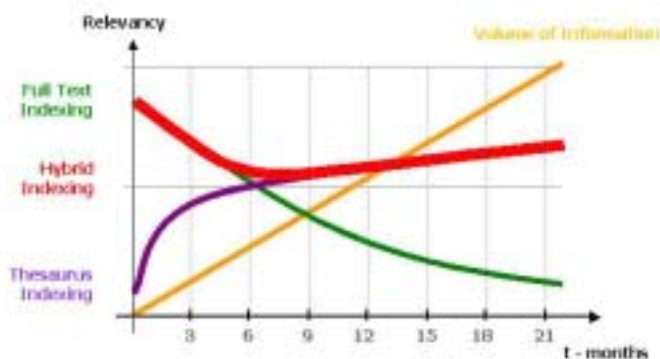
## INVENIO Content: Media management for mass archiving



While INVENIO Media prepares the media for shallow archiving – the metadata creation and rough cataloging process – INVENIO Content is the key to your facility's successful asset management strategy. I-Content provides a long-term, research and archive system for material storage.

**Indexing:** Connected to the same meta-database as INVENIO Media and able to view the media through low bandwidth proxies, INVENIO Content adds intelligent associations between keywords and your media. Belonging to the multilingual thesaurus, I-Content offers the most robust indexing application in the industry.

A full text search of thousand of hours of media inevitably returns thousands of “matching hits.” Therefore, the INVENIO Content indexing process improves the accuracy and relevancy of the query results by applying “hybrid” based indexing with both Thesaurus and/or Full Text searching operations, using synonyms and linked concepts, even across multiple languages.



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**Scene detection module:**



INVENIO Media Scene detection module displaying its storyboarding capability

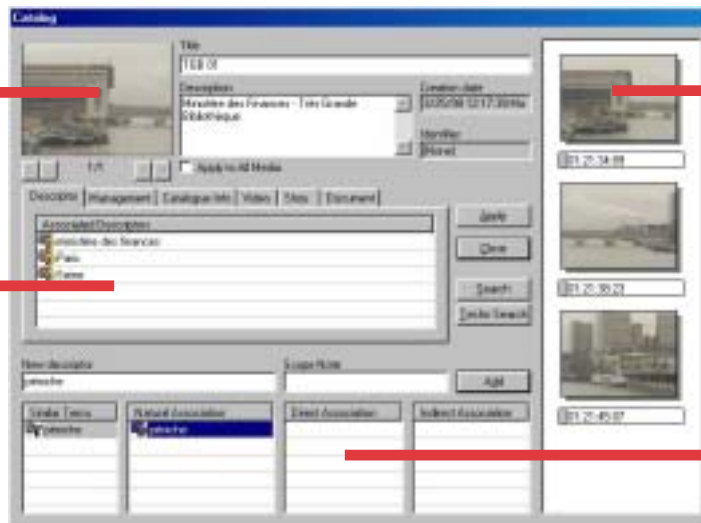
Scene Detection sensitivity threshold is fully configurable

**Scene Change Detection:** INVENIO Content utilizes built in detection for scene changes. This enables an operator to create a storyboard-like description of the content for indexing. Subclips or extracts can be made from the parent clip that are always directly referenced back to the parent, so the original content is easy to find.

**Indexing and Cataloging window:**

Browseable media

Associated descriptors attached to the media



Thumbnails from ingest scene detection modules

INVENIO Content's descriptor "tree"

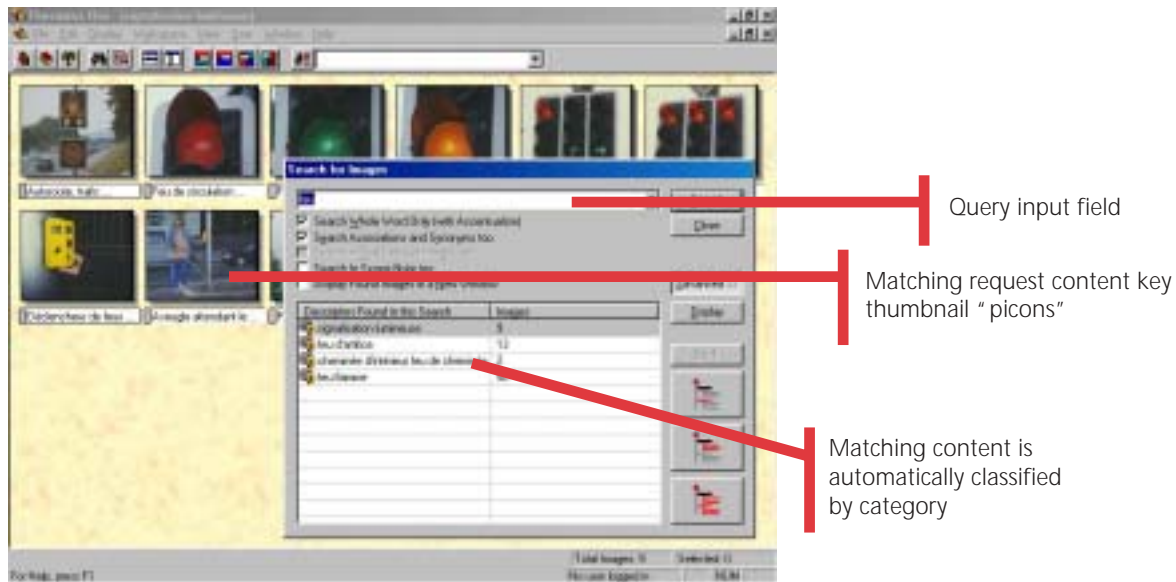
**Archive Management:** INVENIO Content gathers media descriptors and technical data such as creation or media location for high and low resolution files. From these metadata fields, INVENIO Content generates lists of media to be sent to deep archives and off-line storage devices. Of course, these can quickly be restored to on-line storage, or modified/packaged for other uses.

With Harris Automation Solutions' device control protocols (NDCP and VACP), INVENIO Content interfaces with hierarchical storage management devices on the market that support these open source protocols.

**Media Retrieval:** INVENIO Content offers three search modes full text search in all the describer fields, comparative search in the fields containing numerical values (“dates” in particular) and an indexed document search.

Once you have collected elements in an album, a simple click is all you need to load the original document with its associated software application.

**Query result window:**



For example, in a news application, journalists use the INVENIO Content application to make shot selections. Producers can validate material for broadcast. Archived clips can be effectively found and repurposed, no matter where they are in storage. Rating control or competition monitoring can be managed, researched and cataloged.

The Microsoft SQL 2000 relational database functions with speed and efficiency and is optimized for multiple concurrent users. It also natively supports intranet and Internet connectivity over standard protocols, with assignable user privilege levels.

The object-oriented interface makes the dictionary and thesaurus intuitive and easy to use. Multiple windows allow each user to configure the workspace to personal preferences. These settings can be saved and referenced to their individual system login profiles, presenting a consistent, personalized user interface, no matter where the user logs in.

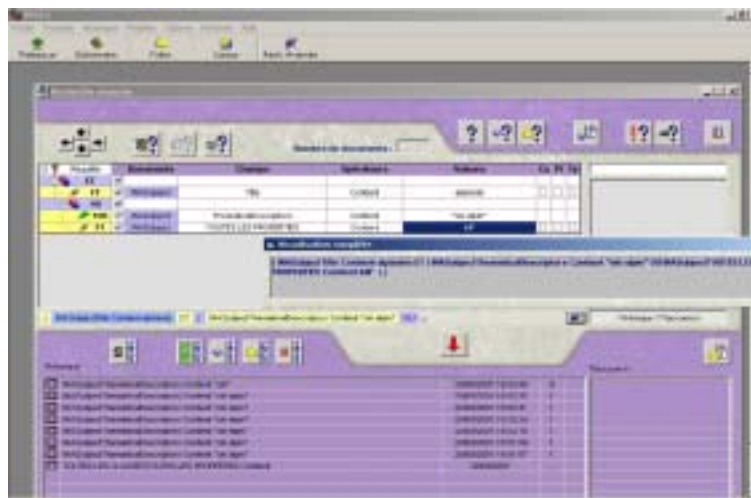
**System and Access Rights Administration:** Your valuable content deserves maximum protection and management flexibility. Harris' media management products provide strong rights administration and management through standard Microsoft User Policy conventions. Comprehensive control of user groups, attributes and operational feature access is possible. Rights management is available on standard Windows 2000 based file-by-file and user-by-user granularity.

Third party digital rights management applications such as those from consulting firms like MSA Systems and Jaguar can be integrated into Invenio by using standards-based, message queuing and distributed transaction services built into the application suite.

Backup copies and database maintenance operations are fully configurable and take place in the background, without interrupting normal operation.

The system is able to store media queries or request results using XML. INVENIO Content can export its request or resulting information to third party applications or production devices over OLE/ODBC connections.

**Query Management window:**



INVENIO Media and INVENIO Content by Harris Automation Solutions give you and your facility the ability to manage the location, application and revenue producing potential of your valuable media assets.

Designed for ease of operation and efficient workflow, Harris Automation Solutions' media management portfolio form the foundation of your facility's evolution from manual media management to the new media asset foundation paradigm.

Backed by the 80-year tradition of excellence of Harris Corporation... Taking your media management capabilities to the Next Level.



Find it Fast... Find the Right Thing... Find it by Association!

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