

White Paper

Introduction to Harris Playout Automation

Are You Considering Playout Automation?

EXECUTIVE SUMMARY

For people entrenched in the business of broadcasting, the term “playout automation” is an essential part of everyday operations. For others, it’s something yet to come. Trade magazines devote special sections to it, trade shows devote floor space to it, and dozens upon dozens of suppliers exist to automate various elements of the broadcast and programming playout business. While a multiplicity of suppliers provide components that automate portions of the broadcast operation, few provide playout automation solutions for the full range of broadcast operations.

Because of the fury of activity around playout automation, we thought it might make sense to step back for a moment. To come up for air, look around, and outline the various operations that depend on playout automation, day in and day out. Which type of operation do you run, and what services do you deliver? What should you consider when evaluating and selecting a playout automation system?



Harris Corporation playout automation solutions are used in local, regional and global operations that automate the playout of over 4,000 channels. Harris enjoys the leading market position, with more channels automated than any other vendor. Harris leadership does not end there. Our applications and systems manage playout automation for more of the smallest, single-channel stations and most of the largest multichannel aggregators on the planet. We continue investing in our playout automation products and ensuring necessary functionality and performance required in today’s operations. We do this to keep your operations running smoothly and efficiently, and to keep your equipment integrated, automated and future proof.

What type of operation do you run?

Picking an automation system depends on a wide variety of factors, illustrated in question form, below:

- What manual processes in your day-to-day business could be performed using automation?
- How many channels do you manage?
- Are there a large number of systems that must coordinate with playout?
- What type of content are you receiving and delivering?
- What services will you be providing in the future?
- Do you maintain an archive?
- Do you have a disaster recovery plan?

How automation plays a role in your operation depends on how these questions are answered in combination with other key factors.

Let's look at four types of typical operations:

- Major Platforms, like direct-to-home satellite operators and emerging IPTV operations
- Major Networks and Content Originators, like national networks or cable network program providers
- Content Distributors, which provide playout and distribution services for large numbers of movie and thematic channels
- Traditional Broadcasters, like local call letter stations and public broadcasters

Major Platforms

Typically these operations regularly deal with a large number of channels, each of which require a range of processing, storage, ad breaks and other elements. You're aggregating a multichannel universe, with potentially hundreds of incoming channels, and even more outgoing channels.

In this case, automation systems can apply to every link in the chain—from the moment the content or feed for a particular channel comes in, to the time when it goes back out. So let's start at the beginning, when the content first arrives. Content can come in over the air, from satellite, from storage systems and on-line video servers, or by secure file transfer over IP networks and web services.

In that first leg of the journey to playout, an automation system serves to process the content as it comes in. That could mean holding it in a storage system to play out later, or routing it to the appropriate, real-time path for immediate redistribution. An automation system also organizes the metadata about the content. Metadata is "data that describes other data," meaning descriptive items like the channel ID, the title of the program, its duration, and potentially rights or access information.

The second leg of the playout journey usually involves monitoring all channels for consistency and picture quality. After video is received, it is "passed through" the master control portion of the facility. A good automation system will provide management for monitoring multiple channels simultaneously—meaning that the people responsible for ensuring a continuous flow of the correct programming are alerted to any potential problems by the automation system—before they become problems. The automation system provides a real-time summary of all channels and can immediately alert an operator to potential problems. Often, the automation system will automatically resolve the problem and the operator can address recovery as playout continues via backup or alternate means.

Yet managing pass-through services isn't as simple as just... well, passing them through. It involves knowledge of the schedules for all incoming feeds, to manipulate which feeds to process, and where to route them. In this sense, the automation system provides the ability to manage incoming feeds for hundreds of schedules, and deal with the routing and switching of all the original program feeds to the appropriate outgoing feed, inserting additional content and other elements as required.

To protect and maximize revenue, it's important that the automation system links to the Conditional Access (CA) system, which controls subscriber access to encrypted premium or pay per view content. This same interface will also ensure that the Electronic Program Guide (EPG) stays synchronized with what is actually going out—crucial for viewer satisfaction and retention.

Through all of this, playout automation systems need to be reliable, redundant in case of failure, and nimble. Switching to back-up feeds needs to happen in a manner that eliminates any dead air. This can be a challenge when dealing with hundreds of channels, which points out the need for scale in playout automation. Similarly, you should be able to upgrade your automation system without bringing the primary system down.

As a major platform operator, here's a short list of questions to ask, when selecting a playout automation system:

- Does it support current advances in devices and equipment?
- Can it grow as your operations expand? Can it scale without significant changes to current operations and equipment?
- Does it provide the ability to integrate with conditional access systems?
- Does it provide the ability to route very large numbers of signals?
- Is it reliable? Does it have a demonstrated capability in the field?
- Does it offer complete flexibility in operator access and resource utilization?

Major Networks and Content Originators

Most big networks and content originators today, as well as the cable content originators, provide a majority of the channel content that is viewed around the world.

In a world of multichannel television, in which consumers have literally hundreds of choices for every television viewing minute, brand management is an important priority—especially for major networks and content originators. Brand management requires developing and airing logos and promotional material, to overlay and insert into upcoming shows within one linear channel. Or, the coordination of promotional material across groups of channels.

Consider the various flavors of, say, a nature-oriented content originator. Its channel dedicated to animals may want to alert its viewers to the next episode of a popular show. At the same time, it may want to make itself known to a sister channel, which airs material targeted at children.

In a pre-automation world, inserting a cross-promotional ad involves scrutinizing the lineup for each channel, per day, finding the right splice points, creating the script for the promo, and scheduling it for insertion. Ditto for each cross-promotional ad, on every channel.

Today, the playout automation exists to automatically locate and insert the correct cross-promotional information, at the correct time, across the multiple channels.

Or, as another example, consider the content originator required to transmit different feeds, for different time zones. Automation can also assist in managing regional scheduling.

As a major network or content originator, here's a short list of questions to ask, when selecting a playout automation system:

- Does it provide a wide range of ingest functionality—tape-based ingest as well as file-based ingest?
- Can it automatically manage graphics and branding devices? Can it leverage the capabilities of today's complex branding systems?
- Can it manage complex schedules with a wide variety of interstitials and varied timing?
- Can it automatically manage your on-air server storage capacity?
- Can it co-exist with news operations?

Content Distributors

If you broadcast a large number of channels from a central facility or run a playout center, your playout automation needs are somewhat similar to that of content originators and the major platform operators—with a few additional twists.

Consider the content distributor which also serves as a source for many of the channels it is delivering. These operations often have multiple control rooms each responsible for particular channels or channel groups. Within these master control rooms, one person is generally responsible for managing all of the channels associated with that room. That one person manages the master output feed, for multiple channels.

That means making sure the media is available for playout, and that all devices are on-line: master control switches, branding and graphics devices, video file servers, and subtitling systems, to name a few.



In addition, standards such as MXF hold out the hope for a universal metadata format that would ease the movement of content within the system and between other systems. The media ingest portion of the automation system may also need to manage processing of the acquired content to convert formats and standards, segment the program, add audio tracks and subtitle data.

Here's a short list of questions to ask, as a content distributor, when selecting a playout automation system:

- Does the system support distributed operations and control?
- Does it support remote operations or disaster recovery management?
- Can it automatically manage your on-air server storage capacity?
- Does it require proprietary hardware? If so, how much?
- Can it control a wide variety of broadcast hardware?
- Does it provide an efficient means to interface with multiple external data and scheduling systems?
- Can the system configuration be modified easily?

Traditional Broadcasters

The smaller operator, such as the local call letter station or affiliate, is “small” only in relative size to its parent network. In reality, independent TV stations face big challenges as they keep up with “the big guys.” In addition, as the business becomes more complex and demanding, they’re often asked to do more with fewer resources.

That’s why things like cost containment and operational efficiency is crucially important for local station owners. New gear necessarily needs to be easy to install and maintain. While small stations aren’t dealing with the volumes of content manipulated by the big networks and content originators, they face their own unique challenges.

More and more material—both advertisements and mainstream content—is delivered in a digital format. Yet, some material still comes in on tape. That duality means station operators need to straddle the manual, tape-based world, and the expanding world of digital content. An automation system that can ingest, process, route and play out the volume of incoming digital content will streamline operations, eliminate human error and increase the productivity across the station operators.

As stations go digital, they may use the extra bandwidth available in an existing broadcast transmission to send multiple, digitally compressed channels. During day parts when bandwidth-hungry HDTV signals are not being transmitted, for instance, a station can transmit multiple, standard-definition channels. Supporting a multicast environment, in a resource-challenged environment, is significantly easier and more efficient with the appropriate automation system.

Plus, many local stations use traffic and scheduling systems that are still trying to keep up with today's evolving playout capabilities. That means that automation systems need to be capable of linking into the existing traffic system and augmenting the often limited information provided by traffic in order to have a complete and accurate playout schedule. Traffic systems vary dramatically; and therefore, the automation system has to have the flexibility and capability to interface with a wide variety of traffic and scheduling systems. Harris supports the widest array of traffic and scheduling system interfaces in the industry.

As a smaller operator or station operator, here's a short list of questions to ask when selecting a playout automation system:

- Will it easily interface to your existing traffic system?
- How long will it take to install the system and get it on air?
- Does the system provide control of the legacy equipment in my facility?
- Is the system easy to use? How much training is required?
- Does the vendor provide 24-hour support?

No matter what type of facility you run ...

Playout automation systems need to be reliable and provide options for implementing redundancy in case of failure. Switching to back-up feeds or devices needs to happen in a manner that eliminates any potential of dead air. This can be a challenge for any size operation. Whether you run a small single channel or a large multi-channel operation, there's no equivalent to Harris. Harris provides secure, dependable automation solutions that have a proven track record. Harris playout automation solutions manage over 4,000 channels world-wide on a daily basis.

The Benefits of a Harris Playout Automation Solution

Whether you're a large platform operation, content originator, content distributor or traditional broadcast operation, Harris has a playout automation solution tailored to meet your needs.

- Our playout automation solutions help you to expand and change—with minimal or no impact to ongoing operations
- We integrate with more third-party providers than any other automation supplier, which minimizes risk and replacement costs
- We use an IT-based approach, which streamlines operations across the enterprise
- Our systems are easy to install and maintain
- Our user interfaces were designed to be intuitive, which minimizes training time and increases efficiency
- Our systems are multi-lingual, so if you're global, we can go with you
- We provide a full range of solutions and options for most budgets
- Our systems are backed by a large secure publicly traded company with support services worldwide and on-going development to address future needs

Harris playout automation solutions can help your operations run smoothly without errors or downtime; providing you the ability to deliver more revenue generating services; and maintaining a high level of productivity across your personnel and resources.

About Harris

Harris Corporation's automation systems are built on a foundation of proven leadership in the broadcast, cable and satellite industries. For over 40 years, Harris has been delivering results for customers in these industries, worldwide. Harris technology experts have a deep understanding of our customers' business needs. Harris currently automates more channels than any other playout automation vendor.

To Learn More

More information about Harris Playout Automation Solutions is available online at: www.broadcast.harris.com.

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