

Avid/Sundance MCR & PCR Migration



Introduction

Under the same ownership and management for 22 years, Aveco has kept its focus solely on master control automation, production automation and broadcast media asset management - jointly developing numerous innovations with the 275 broadcast organizations served. Aveco customers have experienced the company continually adding new drivers, new functionality and new workflows, year after year. Industry-leading capabilities include:

- Combining high-end master control and high-end production automation in the same system.
- Multi-studio production automation in the same system, to better handle major events (e.g. elections.)
- The industry's first integrated news production system in a box, Redwood Studio.
- Integrated playout with an unprecedented branding quality, scalable to many channels with one operator.
- A social media gateway as part of MCR automation.
- Remote stream-splicing control for localized insertion of news and ads.

Aveco's the only automation company using a real time operating system (QNX.) It's a mission-critical OS common in aircraft, satellites, and Cisco CRS routers. It's impervious to viruses and worms that plague other platforms. Aveco software clients run on Windows, Linux or Apple OS X.

Aveco's been accomplishing multiple-site IT networked systems for over 20 years. We were doing cloud deployments long before there was a "cloud."

Aveco has led the industry with combining MCR and PCR automation in the same system for 10 of our 22 years.

Migrating from Avid/Sundance to Aveco

Avid/Sundance customers have end-of-life-support notices across all Sundance products as well as Avid ControlAir.

Aveco has developed procedures and utilities to easily migrate Sundance and Avid ControlAir users. We also have substantial experience in integrating with Avid's NewsCutter and Media Composer, in integrating with iNEWS, with Interplay and with Media Asset Manager.

Discreet Devices, Studio-in-a-Box, Integrated Playout

Aveco provides a range of capabilities in production automation and master control. A direct replacement for both Sundance products and Avid ControlAir is the ASTRA family of products. We also offer integrated production and integrated playout in our Redwood product family.

For Fastbreak and Titan users, Aveco's ASTRA master control automation includes the industry's largest library of interfaces and API implementations, including all master control switchers, video servers, graphics systems, routing switchers and traffic systems. By contrast, Aveco's Redwood Play integrated playout channel-in-a-box includes six DVEs, 32 layers of graphics, four channel HD video player and a separate four channel audio player.

For Avid ControlAir users and Sundance NewsLink users, Aveco's ASTRA production automation provides a vast range of additional capabilities. ASTRA Studio 2, for example, allows major events to utilize multiple studios under one user interface via Aveco's facility management system. Control is provided for most every production switcher, video server, graphics system, virtual set, camera robotic system, many audio mixers, lighting controllers etc.

By contrast, for integrated production automation, Aveco's Redwood Studio is the industry's first News Studio In a Box. It includes a 12 channel DVE, four HD video players, 32 layers of real time graphics, four channel audio server, audio mixer, and pan-tilt-zoom camera robotics control.

Aveco integrates with iNEWS, ENPS, and five other newsroom computer systems.

Switching to Aveco

Avid/Sundance users will find many additional features and strong on-going software development with Aveco.

Hardware Benefits

- Aveco requires less system hardware and has a simpler and more robust networking infrastructure
- Works with existing infrastructure & equipment
- Keep your existing broadcast equipment or upgrade specific areas as required
- Huge device library – new and legacy products
- Discreet device and software sub-system control, or, integrated studio-in-a-box and integrated playout
- Vendor agnostic – support for all brands of devices
- Hardware Change-over in one frame of video time

Software/Applications Benefits

- Aveco's servers are based on QNX, a real-time OS impervious to worms and viruses
- Software clients run on PCs under Windows, Linux or Apple OS X
- Ingest enables users to QA content, view & edit a clip's metadata, sub-clip – all with robust security
- Aveco's MAM is open with a published API allowing interfacing to other MAM systems
- Aveco's MAM is based on Sybase, known for high-end performance, resiliency and massive scalability.
- Aveco's multi-screen, user-configurable UI enables operators to be more efficient and less error prone
- Robust security with user & group rights
- Exceptional workflow automation tools

System Level Benefits

- MCR & News production automation can run on the same system offering a powerful, economical system
- Combine discreet device control in the primary channel(s) and use integrated playlist for secondary channels, in the same system, with the same user GUI
- Combine discreet device control in the largest studios with integrated production in smaller studios/bureaus
- Aveco supports multi-site systems for central casting, regional ad insertion, disaster recovery etc.
- Aveco is Cloud-enabled offering many options of how and where content is stored and managed
- Aveco's production automation is bi-directional via MOS with all popular NRCS including iNEWS and ENPS
- Aveco's modern networked-based architecture is easily expanded, locally and in multiple-city designs
- System can grow to 100s of channels using the same hardware and architecture, and utilizing Aveco's multi-channel control interface



Mirrored ASTRA servers with Serial Changeover Unit

Avid/Sundance and Aveco Correlation

Below is a table of Avid/Sundance applications and the Aveco application with similar functionality.

| Sundance Application and Hardware | Aveco Application & Hardware |
|-----------------------------------|--|
| ATDT | Aveco MAM |
| Archive Manager | Aveco Archive Interface |
| Air Control | ASTRA News, ASTRA Studio, Redwood Studio |
| BXF Gateway | Aveco Traffic Interface |
| CART Interface | ASTRA Cart Driver |
| Control Air | ASTRA News |
| DataMover | Aveco MAM |
| DDMS | Aveco MAM, Workflow Mgr |
| FastBreak 800/2000/8000 | ASTRA MCR, Redwood Play |
| FileSel | Aveco Traffic Interface |
| FlexEvent Editor | Aveco Playlist Manager |
| GPI Control | Aveco Server |
| Intelli-Sat Record Manager | ASTRA Record Manager |
| Launch Box | Aveco MCR HW Control Panel |
| List Processor & Titan Sync | Aveco Playlist Manager |
| Media Prep | ASTRA Ingest |
| MirrorMover | Aveco Video Serve Sync driver |
| NewsRecorder | ASTRA Record Scheduler |
| NewsLink | ASTRA News, Redwood Studio |
| Program/Sales View | Aveco Content Manager |
| Schema Suite | Aveco MAM |
| Segmenter | Aveco Ingest |
| Segment Share | Aveco MAM |
| Server Mapping Tool | Aveco Ingest/MCR |
| SIDON Computer | Aveco Server |
| SNMP | Aveco SNMP Gateway |
| Titan Air Control | ASTRA MCR, ASTRA News, Redwood Studio and Play |
| Titan Append Utility | Aveco Playlist Manager |
| Web Inventory | Aveco Content Manager |

Aveco's Avid/Sundance Database Migration Utility

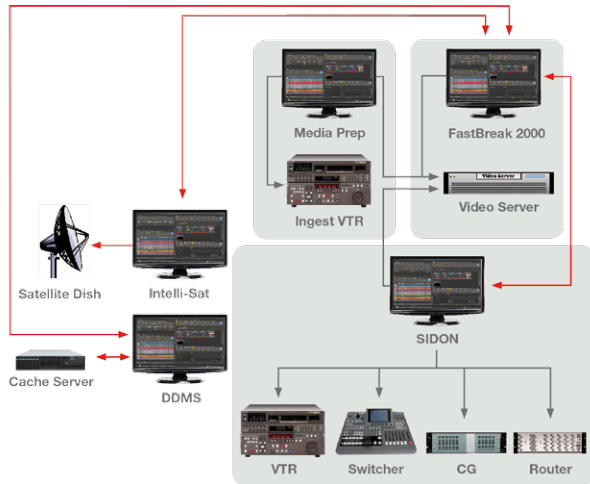
Preservation of the Sundance database and metadata is accomplished with a combination of the Sundance Media Prep's Export Inventory function and Aveco's Sundance DB Migration Utility.

This utility moves a clip's metadata into a corresponding field in the Aveco database.

Aveco's database is configurable so all Avid/Sundance fields will fit, and there is ample room for new customer requirements.

Avid/Sundance in contrast with Aveco's Architecture

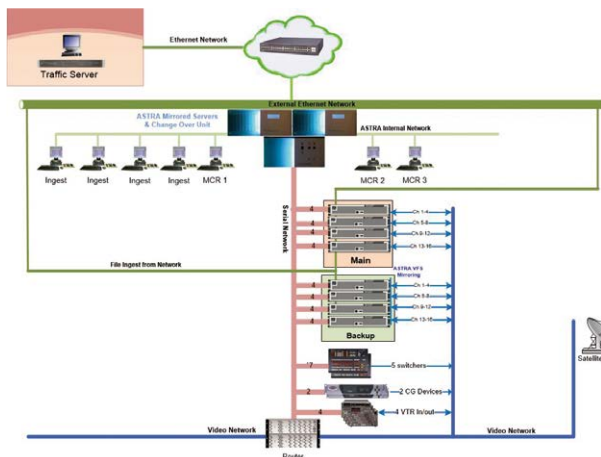
One big advantage gained with Aveco's architecture is the reduction in hardware when maintaining discreet device control. Specialized devices commonly have superior branding capability. While Sundance systems use a separate PC for most software applications, each Aveco server controls 8-10 channels. Part of this is due to the efficiencies of QNX, a RTOS vs. a Windows OS, but also because of the tight integration of Aveco applications.



FastBreak 2000 Mid-size system typical configuration

Aveco Hardware Architecture

Aveco's hardware architecture is much simpler with just one server, which can be mirrored, and a serial changeover unit for failover. The diagram below shows a seven channel playout system with three ingest stations using just one main ASTRA server and offering full redundancy with a mirrored server and serial changeover unit. Aveco controls devices via serial, by native API's and by standard IP protocols (REST, SOAP etc.)



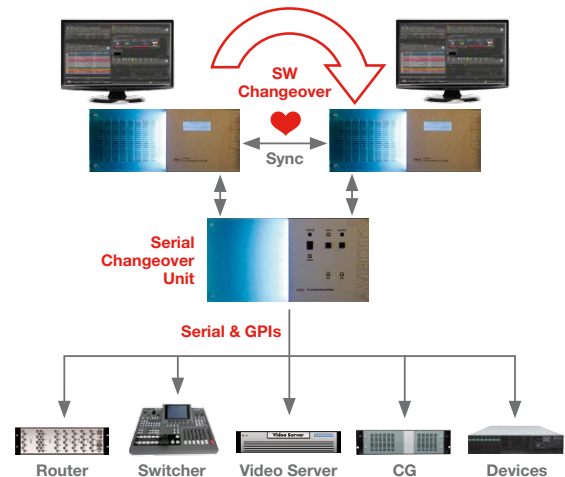
ASTRA MCR: seven playout and three ingest channels

Device Drivers

Controlling devices is one of Aveco's fundamental strengths resulting in a huge library of device drivers. An updated list of supported devices is available on-line at: http://www.aveco.com/sites/default/files/Compatibility_list.pdf

Aveco Device Control and Failover

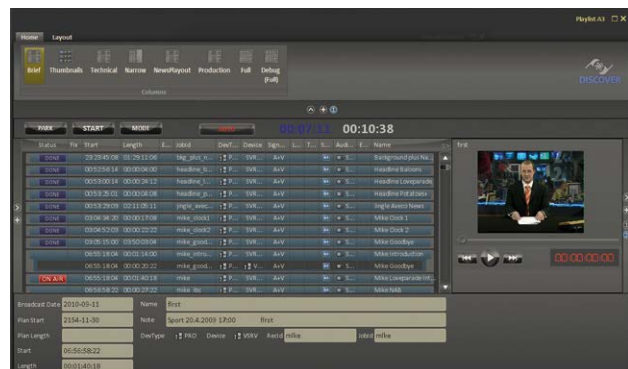
Sundance uses a dedicated device driver server for serial control called SIDON. This functionality is built into the ASTRA server that can be configured with up to 48 serial ports. In addition ASTRA offers a one frame transparent serial switch with the ASTRA Serial Changeover Unit. Failover to the mirrored server is almost always transparent to the user. Instantaneous switch-over also applies for devices controlled by API's.



Mirrored ASTRA Servers Failover

Aveco User Interface

An efficient and clean user interface is critical to operator efficiency and responsiveness. Aveco's user interfaces are configurable to only show what needs to be seen.



A Single-Channel Aveco MCR playlist screen

Aveco ASTRA Ingest

Similar to Sundance Media Prep, ASTRA Ingest offers manual ingest capability as well as automated ingest from a list generated by traffic or a newsroom system. A special configuration of ASTRA Ingest is available to automate the digitization of video tape archives using cart machines.

Clip QA/Editing – ASTRA Ingest also provides the capability to QA a clip during ingest or afterwards, and trim clips as needed. Clip segmenting is also available for tape ingest.

Metadata Generation/Editing – ASTRA ingest automatically generates clip metadata and provides the ability to edit and add additional metadata. Metadata fields can be filled in automatically if available or fields can be pre-defined so the operator can select from a dropdown list. Fields can be deemed mandatory ensuring they are filled out before a clip can be used.



ASTRA Ingest sample screen

Aveco MCR – Playlist Management

Aveco's ASTRA MCR is one of the most advanced automation systems on the market. It excels in support for secondary events and because it controls many devices using their native API, more of a device's functionality can be controlled within the playlist.

Playout Redundancy – Aveco offers multiple features for redundancy and seamless failover. Aveco keeps mirrored video servers' files synchronized and automatically or manually switches to the backup when needed. Support for backup routers, switchers and graphic devices are also available.

Device Control – With both serial and IP control capability, including native API control for many devices,

Aveco enables your channel(s) to maintain a cutting edge appearance.

As-Run Log – With interfaces to the majority of traffic systems, an as-run log enables easy reconciliation.

Aveco MAM

Each Aveco system comes with media asset management offering enhanced capability in upgrading Sundance and Avid systems. Aveco's flexible database makes it easy to add new metadata fields required by new workflows. MAM rules can be used by Aveco's workflow manager to automate simple and complex daily activities.

The MAM system is cloud enabled supporting off-site storage, multiple sites, and remote access to content. A built-in security system offers various levels of protection, for groups and content types, down to individual users.

Aveco Workflow Manager

Sundance has a variety of applications that Aveco considers workflow automation. Day to day activities that can be automated are performed in Aveco's system. Activities such as automatic transcoding, file movement, archiving, purging of content etc. are accomplished with the Aveco Workflow Manager.

Transition Process

A proven method for transitioning to a new automation system is to install Aveco and run it in parallel with the Sundance or Avid system until everyone is trained and comfortable with operation.

Operator Training – The most common cause for on-air mistakes is operator error. Every Aveco system includes on-site operator training as well as an option for factory training. While Aveco is easy to learn, it's still different from Sundance/Avid interfaces. The vast majority of functionality in the Sundance system is available in Aveco but user training and practice are required for operators to be efficient.

Ease of Use – A hallmark of Aveco systems has, since the company's inception, been a strong focus on making broadcast automation powerful but simple to use. Aveco GUI's are easy to understand and are designed with a vast body of experience. As master control and news production automation continue to enhance on-air appearance, the need to keep operation simple is a constant focus of Aveco's engineers. We ensure a smooth transition and a vast range of new capability in migrating Avid/Sundance systems to Aveco.

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