



Avid/Sundance MCR & PCR Migration

White Paper

WHY MIGRATE?

The Avid Sundance automation has reached its end of life. There is no development and no support available anymore. It is a quality product that keeps working, but sooner or later new workflows, new features and new integrations will force the Sundance users to change the platform.

WHY AVECO?

We have expertise. Automation has been our business since the company launched in 1992.

We have the products. Our playout solutions, news production automation and media asset management are driving some of the world's largest broadcasters.

We are good. In 2019, with the project ETV Bharat, we won the IBC Innovation Award.

We have experience. We have successfully migrated a number of Sundance users to Aveco automation.

We have customers around the world. We learn from them and utilize the global knowledge for your benefit.

We build long term relationships with our customers. Some of them stay with us for more than twenty years. Because they know we are here whenever they need us.

We stay at the cutting edge of technologies, with workflows that span on-premises, remote and cloud-based appliances.

We do things right. Under the same ownership, without investors and corporations, we stay on our own feet.

AVECO PRODUCTS

Playout automation, ASTRA MCR, manages all playout related functions, live dynamic playlists with last second changes, as well as large multichannel facilities, on-premises, remote and in the cloud.

News production automation, ASTRA Studio, integrates all systems and devices in the studio and allows a single person to produce complex live news bulletins.

Integrated playout devices, Redwood, include MCR switching, graphics and clip playout into a compact device.

All of them can be integrated together into a single, redundant solution.

MIGRATING FROM AVID/SUNDANCE TO AVECO

Aveco has migrated many customers already, providing them a smooth way from current or legacy appliances and workflow to all their future ideas. Users face only an easy learning curve with most of the operations fully automated.

Aveco has developed procedures and utilities for the migration process. Our systems adopt the legacy equipment existing already in the facility, as well as allow to integrate the latest appliances of the customer's choice.

We maintain the well established workflows wherever it makes sense, and recommend improvements to better utilize the automation features, to make the workflows efficient.

We also have substantial experience in integrating with Avid's graphics, videosevers, in integrating with iNEWS and Avid MAM.

FROM DISCREET DEVICES TO INTEGRATED TO CLOUD

Aveco automation can be installed into any existing environment with any mix of legacy equipment controlled by serial lines and GPI, of current devices integrated by API, as well as the cloud based systems that our automation talks to via REST.

From that point onward, the Aveco solution offers a gradual path for adoption of the latest technologies, without disrupting the existing, fully functional technical setup.

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

For Fastbreak and Titan users, Aveco's ASTRA MCR 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. Our Redwood integrated playout device can simplify the technical stack as it includes clip playout, 8 layers of graphics, live switching and DVE effects for each of the four playout channels in one box.

For studio operations, Aveco's ASTRA Studio production automation provides a vast range of additional capabilities. ASTRA Studio, 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.

Aveco integrates with iNEWS, ENPS, and 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

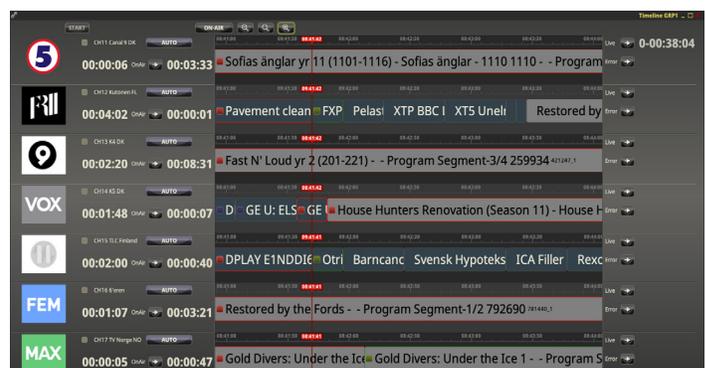
- Aveco requires less system hardware and has a simpler and more robust networking infrastructure
- Works with existing infrastructure & equipment
- Keep your existing broadcast equipment or upgrade specific areas as required
- Huge device library – new and legacy products
- Discreet device and software subsystem control, integrated playout devices and cloud channel origination
- 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 viruses
- Software clients run on PC's under Windows, Linux or Apple OS X
- Ingest enables users to QA content, view & edit a clip's metadata, subclip – all with robust security
- Aveco's MAM is open, 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 for next level of production efficiency
- Combine discreet devices, integrated devices, edge splicers and cloud based playout in the same system, with unified GUI and unified workflows
- 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 bidirectional via MOS with all popular NRCS including iNEWS and ENPS
- Aveco's modern network 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



One view of Aveco's multichannel MCR automation GUI

AVID/SUNDANCE AND AVECO PRODUCT 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 Scheduler
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

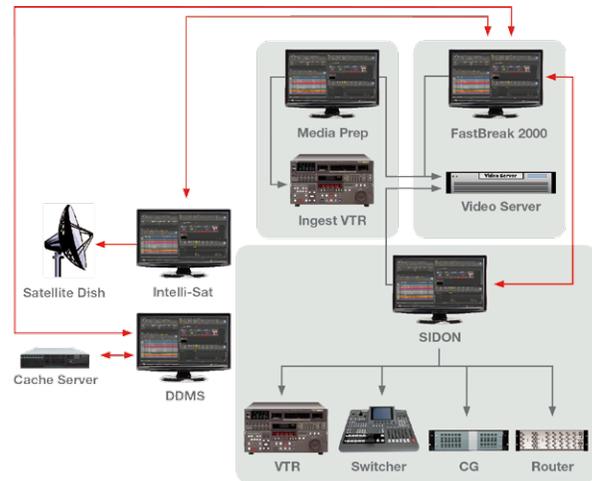
Preservation of the Sundance database and metadata is accomplished with a combination of the Sundance Media Prep's Export Inventory function and Aveco's Sundance DB Migration Utility.

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

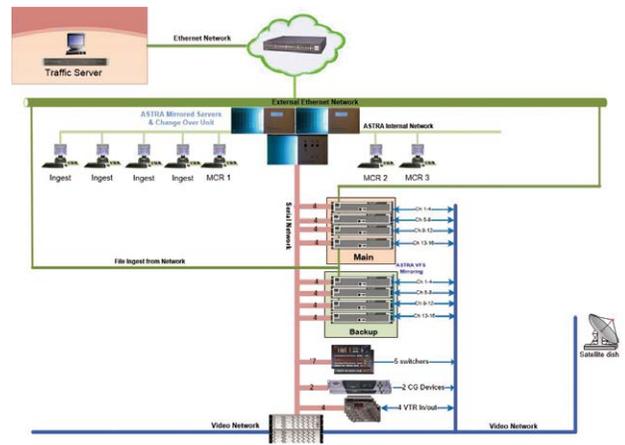
One big advantage gained with Aveco's architecture is the reduction in hardware when maintaining discreet device control. Specialized devices commonly have superior branding capability. Whereas Sundance systems use a separate PC for most software applications, each Aveco server controls 8-10 channels. The whole Aveco solution is scalable to hundreds of channels. Part of this is due to the efficiencies of QNX, a realtime POSIX compliant operating system, 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 7 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: 7 playout and 3 ingest channels

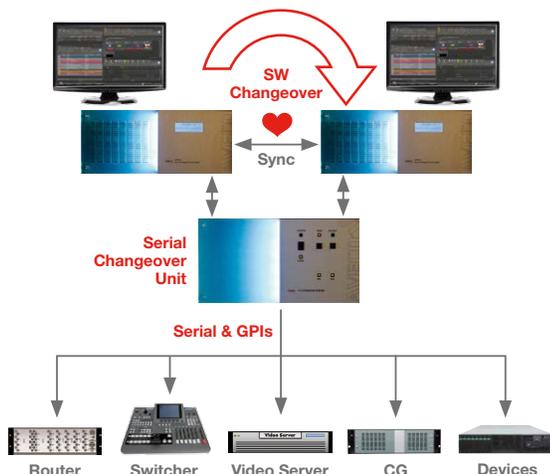
DEVICE DRIVERS

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:

https://www.aveco.com/download/Aveco_Automation_Compatibility_List.pdf

AVECO DEVICE CONTROL AND FAILOVER

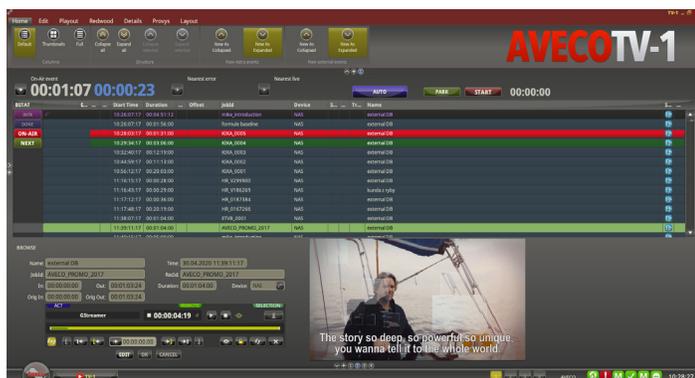
Sundance uses a dedicated device driver server for serial control called SIDON. This functionality is built into the ASTRA server which can be configured with up to 48 serial ports. In addition, ASTRA offers a one frame transparent serial switch with the ASTRA Serial Changeover Unit. Failover to the mirrored server is almost always transparent to the user. Instantaneous switchover 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.



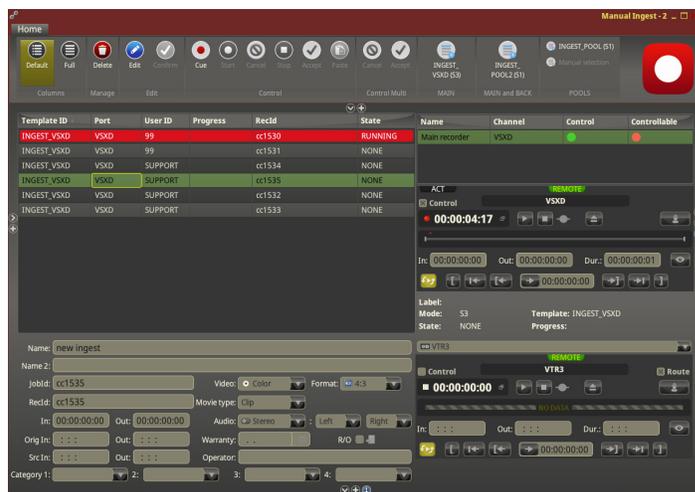
A Single-Channel ASTRA MCR playlist screen

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.

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.

Metadata management – ASTRA Ingest automatically manages metadata that includes import from external sources, automatic generation, as well as manual edit. 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

ASTRA MCR – PLAYLIST MANAGEMENT

Aveco's ASTRA MCR is one of the most advanced automation systems on the market. It excels in complex situations with many secondary events, regional splicing, secondary channels, as well as in breaking news and dynamic live environments. Because it controls 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 server's files synchronized and automatically 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 channels to have 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.

AVECO AUTOMATED WORKFLOWS

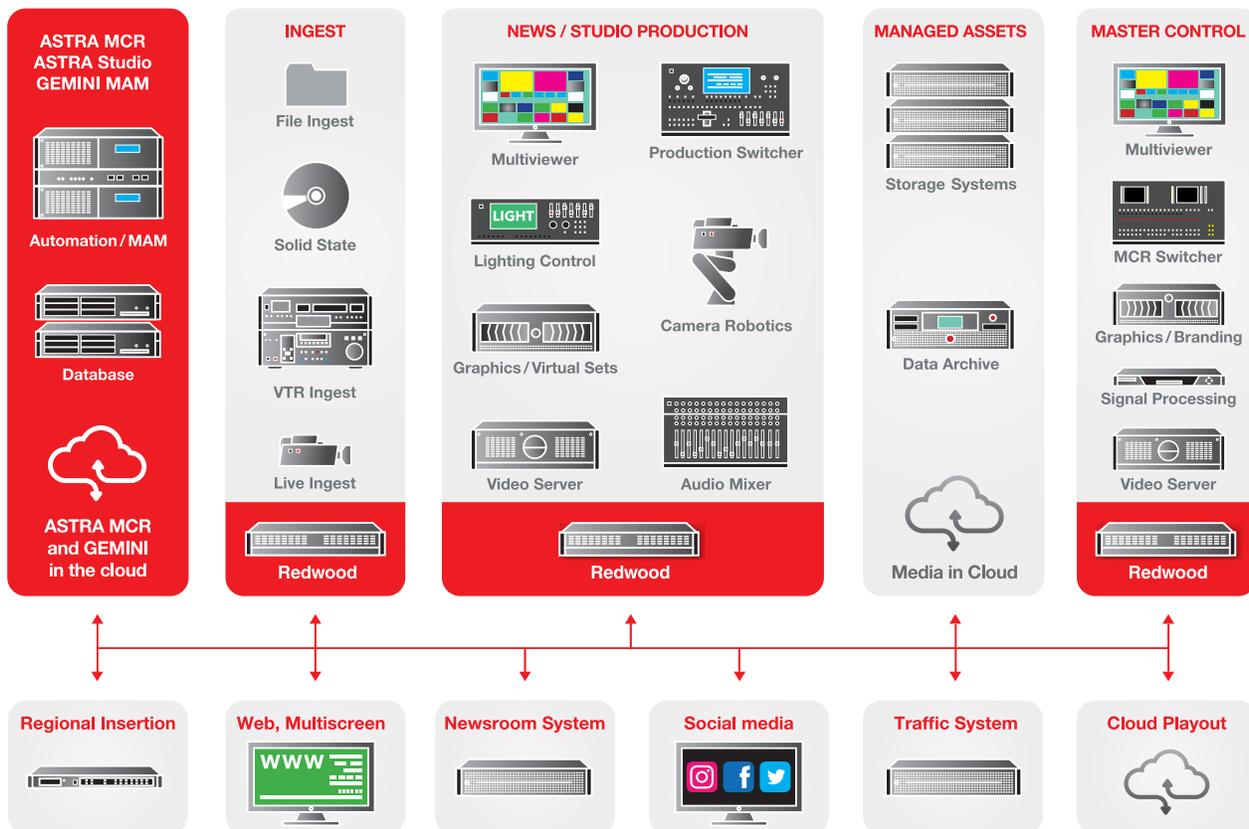
Sundance has a variety of applications that are considered a workflow automation. With Aveco solutions the whole lifecycle of assets, activities such as automatic transcoding, file movement, archiving, purging of content, etc. are fully automated.

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 system 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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