

**Customer:**

AMC Networks International
Chello Latin America Channels

Country:

USA & LATAM

AMC Networks Case Study

Company Profile

AMC Networks International (AMCNI), the global division of AMC Networks, delivers entertaining and acclaimed programming that reaches subscribers in more than 140 countries and territories, including Africa, Asia, Europe, Latin America, and the Middle East. AMCNI consists of global brands, Sundance Channel and AMC, as well as popular, locally recognized channels in various programming genres.

The Challenge:

Design and Build A “Next Gen”
Payout Cluster

- “State-of-the-art” payout cluster
- Support for 16+ channels of payout
- Integrated CMS/MAM capabilities
- Future proof and scalable
- Low operational costs
- Completely IP Based
- Operator “friendly and familiar”

The Challenge

AMC’s main goal for this project was to design and implement a state-of-the-art payout cluster for the Chello-Latin America group of channels. To begin with, the system design needed to accommodate sixteen channels of payout and all associated file based content prep workflows. It also had to be extremely scalable in order to support future growth, as well as operationally efficient and deployable within an aggressive schedule. Physical space and power constraints further complicated the design approach.

From the outset, it was clear that a fresh perspective was required to achieve the project’s specific goals. These included new technologies for Content Management (CMS/MAM), Automation, IP routing/distribution and integrated payout servers. Operationally, the system needed to “look and feel” like a traditional master control no matter what technologies were adopted.

Technology Solution:

**Evertz Software Defined Video
Networking Solution:**

- Mediator CMS/MAM
- Playtime Automation
- VistaLINK Network Monitoring System
- VUE based manual control surfaces
- OvertureRT-LIVE payout servers
- EXE IP switch fabric
- MAGNUM SDVN orchestration
- 3067/VIPIOC based monitoring
- 570IPG IP Gateways
- Evertz Fiber/Terminal Gear

The Solution

The solution was to build the world's first 10GbE playout facility using multiple elements from Evertz extensive product portfolio which includes Mediator CMS/MAM and Playtime automation in addition to the OvertureRT-LIVE integrated IP Playout server. This revolutionary multi-channel playout facility utilizes Evertz Software Defined Video Networking (SDVN) technologies for IP based routing/distribution. The system also includes two 23Tb/s EXE-VSR IP routing cores, 570IPG Media Gateways and 3067VIP10G 10GbE Multi-Image Display Processors, amongst many other 10G enabled Evertz products.

The Technology

Four key technologies were at the core of the AMC Chello Latin America playout system design. These technologies include:

- 1) Mediator CMS/MAM and Playtime automation
- 2) OvertureRT-LIVE integrated playout engines
- 3) The renowned Evertz "Three Screen" approach to MCR operations including Mediator / VUE / VistaLINK PRO
- 4) EXE and MAGNUM SDVN for IP routing / distribution



The Evertz Mediator Content Management and Playtime automation systems orchestrate all file-based work flows and linear automation functions. These include work-flows for file & VTR based ingests, automatic low res proxy generation, content QC and metadata based content mark-up/ review. File flows across all system elements are automatically handled by Mediator including management of a Nexsan central store and a DIVA/Spectra Logic LTO archive.



Mediator Playtime running on blade servers

The Playtime automation system is installed at two operator stations to provide an intuitive, web-based GUI for operations staff. By automating previously manual tasks, operational costs were significantly reduced. Playout in the system is achieved by using the OvertureRT-LIVE server. The OvertureRT-LIVE supports native 10G interfaces for Uncompressed video and audio I/O facilitating an exceptionally tiny equipment footprint within an already small equipment hub. Many functions previously handled by using down-stream equipment are integrated into the OvertureRT-LIVE product.



Overture 10G Playout Servers

These include functions such as complex secondary events, logo/graphics insertion, SCTE message insertion, cue tone insertion and many more. The system includes 1:1 redundancy to deliver main/protect playout feeds. Sixteen OvertureRT-LIVE units are utilized for main playout. The dual channel capability of the OvertureRT-LIVE was utilized to deliver backup signals from only eight OvertureRT-LIVE servers. Significant space, power and cost saving were achieved by adopting the dual channel capabilities of the OvertureRT-LIVE system.

Mediator and Playtime drive the main and backup playout servers from a single list. Any and all changes made to that list are immediately rippled across these main and backup playout servers. Automatic IP based fail-over from the main to back-up playout server is achieved by using advanced a 570IPG and internal ACO function.

“Three Screen” Configuration

Operational efficiency in the system was driven by incorporating two work stations which utilized Evertz “Three Screen” approach to MCR. The “Three Screen” configuration consists of VistaLINK PRO NMS (Network Monitoring System), Mediator with Playtime and Evertz graphical user interface called VUE. One workstation monitors and alarms for channels 1-8 while the other workstation monitors and alarms for channels 9-16, however both stations have access to control all channels. Evertz’s “Three Screen” approach is a unique workspace that allows operators to simultaneously monitor and control multiple channels and truly embrace the concept of monitoring by exception.

By utilizing VistaLINK’s real-time monitoring solution, errors are reduced to a root-cause and presented to a web service layer for the affected service. VUE then reacts by placing the affected service into the “Penalty Box” to alert operators and Mediator of the error.



“Three Screen” Operational Surface

“ On the surface the system looks like a traditional multi-channel playout facility but underneath it is running on a powerful and highly integrated IP based infrastructure. Our solution enables simplified system designs with operationally familiar control surfaces that enable our customers to take full advantage of these new technologies. ”

- said Dan Turow, VP of File Based Solutions at Evertz.

Depending on the error type and the system configuration, Mediator may automatically correct for the error condition. If not possible, operations staff can quickly and easily react to the error by utilizing the near field VUE touch screen. VUE is an important part of Evertz “Three Screen” approach as it is used to visually unify system control and orchestration in a user-friendly touch screen interface. VUE provides flexible control across all areas of broadcast operations including routers, multi-viewers, branding engines, master control and terminal equipment. In addition, surface “widgets” are laid on the near field touch screen to meet AMC’s specific operational needs.

The new IP based playout cluster was a ground up build based on Evertz 10GE technology including multiple EXE IP switch fabrics and MAGNUM SDVN for overall control and orchestration. The EXE IP switch fabric easily handled all required signal routing and distribution with significant room for future growth. Using Evertz’ SDVN technology, all the elements of the system are tied together to form a highly optimized and dynamic IP based delivery engine.



EXE IP Switch Fabric - Front



EXE IP Switch Fabric - Inside



EXE IP Switch Fabric - Back

The Value

AMCNI’s decision to move to a 10GbE network core with fiber provided significantly reduced integration costs and timelines. Further savings will be seen as the system grows in the future.

“ Adopting the latest IP technology to further increase efficiencies, reduce operational costs and provide future scalability was a key consideration for us. Evertz has an extremely powerful and tightly coupled MAM and playout solution along with leading edge 10GbE technologies. They were a natural choice for us. ”

- said John Barbieri, SVP and GM of AMC Networks Broadcasting and Technology.