

Automating Graphics & Audio Branding in Multichannel Broadcast Facilities

Broadcast and cable facilities generate an enormous number of graphics and audio branding elements during a typical month. Many of these graphics and audio elements do the job of promoting the facility, the channels, the various programs it broadcasts, special events or its related entities like its website.

The goals of these graphics and sound bites are to identify the program or channel the viewer is currently watching, entice them to stay tuned for an upcoming program or promote an upcoming event.

Typically, these digital graphic and audio assets are created in a graphics department using standard tools for graphics creation and audio recording. They are generally stored on a server or mapped drive as they are created for later use on air.

In a single channel facility the process of creating these digital assets, storing them, and ultimately transferring them to the edge branding devices for playback is a relatively simple manual process.

In addition, as the assets are dedicated to the single channel, they can be transferred as soon as they are created so that automation can trigger the edge device for playback as required. They can also be manually deleted when they are no longer required, so that edge device storage space is maintained.

When the facility adds more channels, the complexity of these cataloging and transferring tasks increase significantly.

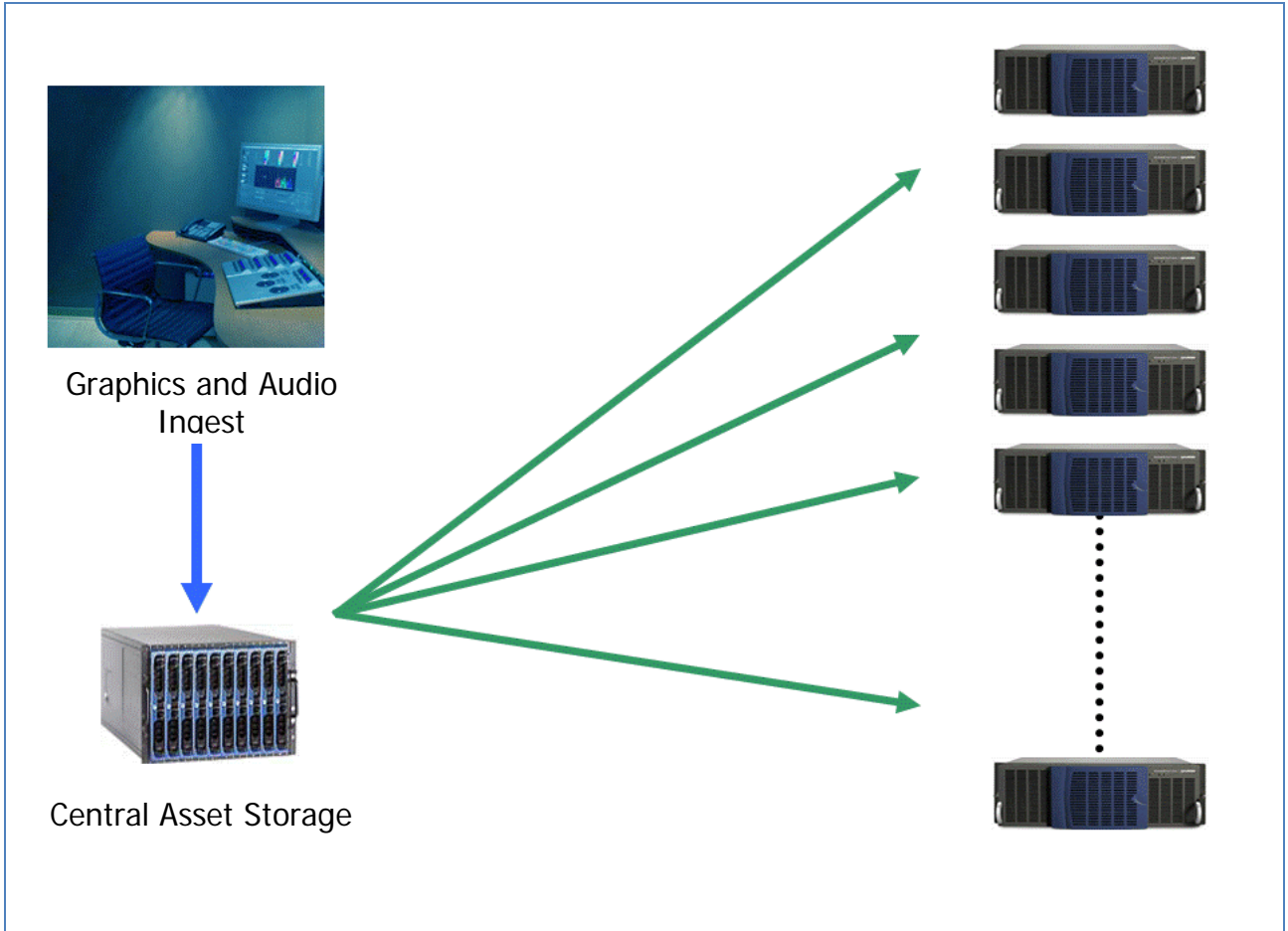


Figure 1 - Facility needs to move assets to edge branding devices

If the facility is a multichannel operation, these tasks can be overwhelming; transferring the right graphics and audio files to the correct channel branding devices in time for automation to play them would require a full time manual operation with significant chances for operator error.

This process would require a continuous manual review of the automation playlist searching for events that require graphics or audio files, checking the required files with the assets that have been prepared, determining which assets need to be on which devices at what times, and manually transferring these assets. In addition, the available storage space for new assets on the edge devices would need to be maintained manually, which also increases the complexity of the process.

Technical Challenges:

Logically, it would seem that it should be possible to fully automate such a process given today's computer technology and control and monitoring interfaces available from many broadcast hardware manufacturers.

The key technical issues center around the number of channels and the increasing number of graphics to be managed per time slot. In addition, as the channels all run in parallel, there can be very many graphics and audio events per minute across an entire facility.

The system would need to analyze each of the channel playlists ahead of time and in real-time, for any changes, up to the rate at which the automation system can serve out that data.

It would also need to analyze in parallel, as many graphics devices as there are installed, which could be hundreds, checking for specific graphic or audio files called for by the automation playlists.

In addition, if a graphics file has sub-dependencies, such as associated font or avi files, the system would need to first download the primary template file, parse it to determine what dependent files it needs, and transfer those files to the correct edge branding device as well as required.

As the number of channels and graphics devices increase, robust scalability becomes paramount. A single modest automation playlist might have as many as five hundred graphics and audio events scheduled for triggering during a broadcast day. Efficient operations require that the system checks the asset file, retrieves the file and parses it for dependencies, push the file from central storage if it is not on the edge device along with any dependencies, check the edge device for local storage space and finally manage local storage space thru deletions, if necessary.

With thirty channels, this becomes fifteen thousand events which all need to be parsed and acted upon by the system in as close to real time as possible. At these operational speeds, the manner in which the system manages memory and interacts with the components becomes critical. Efficient and fast communication with the SQL database, the graphics devices the automation system and any other components of the system is essential.

Given the operational and performance considerations for the system, the user interface for setting parameters, viewing operations and reviewing any error conditions needs to be just as robust. In addition, as multichannel facilities are inherently large operations, a distributed user interface, one that can be viewed on any computer on the system network is ideal. This eliminates the need for installation of hard Windows applications on each computer that might be needed to view system operations.

Summary:

The architecture and performance of the VDS DiReCT provides multichannel facilities with a tremendous increase in efficiency of utilization for graphics and audio elements used in conjunction with daily programs.

DiReCT completely eliminates the need for manual transfers to the edge branding devices, a process that would not be possible with any degree of effectiveness in a multichannel facility. In addition, the storage space on branding devices is managed according to user defined settings so that assets can always be transferred and used when called for.

Broadcast or cable facilities with DiReCT realize a significant increase in the number of graphics and audio tags they can generate per channel, thereby increasing the effectiveness of their promos and branding.

DiReCT operates seamlessly in a fully automated mode with manual operations only for systems settings and review. If the schedule and automation playlist changes, the system reacts those changes and distributes assets accordingly.

Graphic and audio promos are assured to be on the proper channel and branding devices with sufficient time for the automation system to play them out.

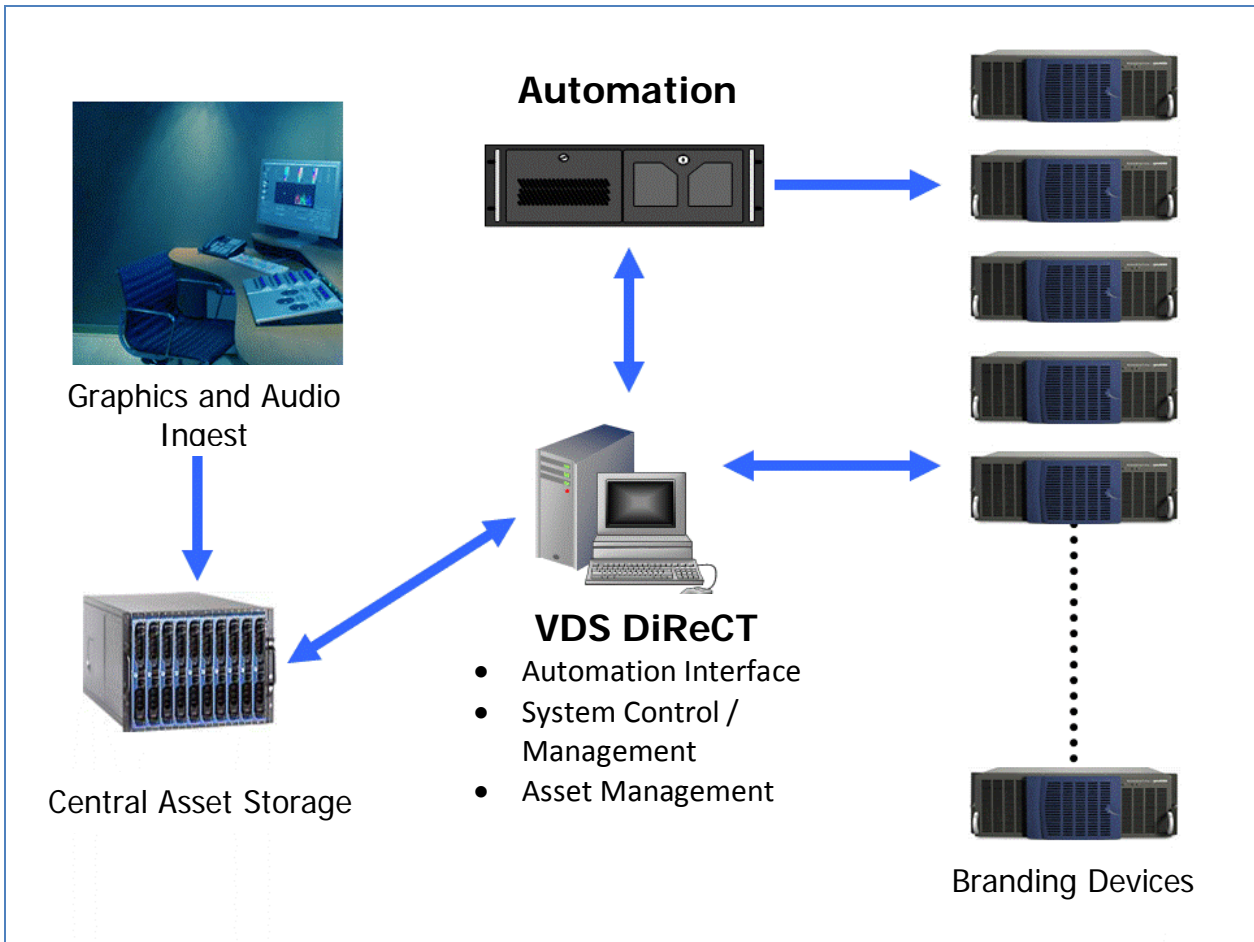


Figure 2: DiReCT System Configuration