

Connectus[™]

Graphics Workflow



Introduction

As broadcast graphics become increasingly complex, it is critical that all resources required for those graphics elements be easily managed throughout a broadcast facility — or even across an entire network or station group. Managing graphic assets can be an overwhelming task that involves getting the content to creation stations, edit suites and playback devices while ensuring that only the suitable graphics make it on air. To help manage this task, Harris has developed a suite of tools that take the guesswork out of graphics management.

Inscriber[®] Connectus[™] acts as a central graphics server and communication hub to help store and manage media content throughout a production facility and around the world. Support for Connectus has been integrated into almost all Inscriber graphics products, allowing direct communication with the graphics server and content storage. Several standalone tools are also available to allow any system on the network to communicate with Connectus to streamline the workflow.

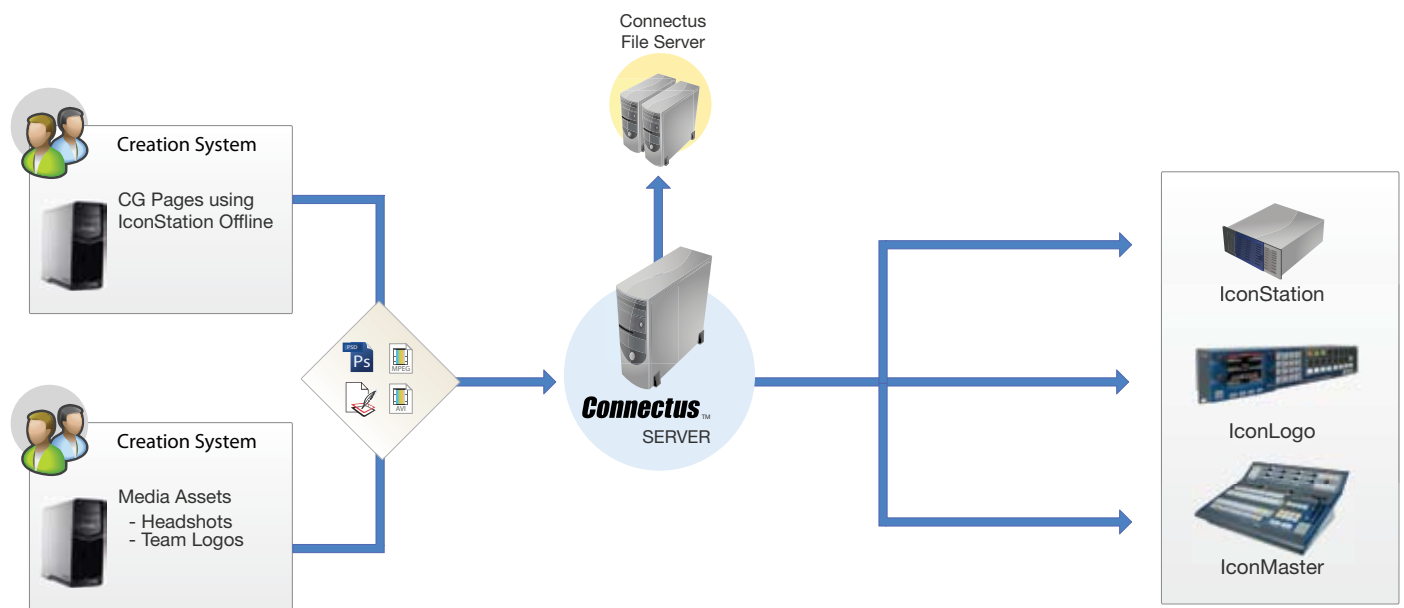


Figure 1 – Content Distribution

Connectus Overview

Connectus manages digital media content among graphic devices. Content management is streamlined across a LAN, WAN and the Internet using standard communication protocols. This allows content to be managed across multiple systems, in multiple facilities — around the world if required. Connectus takes the guesswork out of getting content from the various creation systems to the required output devices.

Connectus manages graphic resources across the entire Inscribe graphics product family and Icon Series™ channel branding system — and enables those resources to be automatically distributed to specific locations throughout the network. Content stored on the Connectus server can be archived to the Harris® Invenio® media asset management system. Content can also be packaged for use in third-party asset management systems.

The Connectus application defines a storage server that will serve as the central storage location for all of the graphics that are published to the system. The storage location can reside on the same system as Connectus, a shared network or the Internet. The system stores a copy of all of the content that has been published to Connectus. Depending on the station's individual requirements, multiple storage servers can be configured, such as mirror servers and approved content servers. Once content has been stored on the central server, asset management tools such as Harris Invenio can be configured to archive the data packages from the server.

Connectus Supported Devices

Harris Products	Publisher Support	Receiver Support
G-Scribe*	✓	✓
G-Store*	✓	✓
TitleOne*	✓	✓
Automation Interface		✓
Content Receiver**		✓
Inscribe Shell Extension**	✓	
Channel ONE	✓	✓
IconStation	✓	✓
LogoCreator	✓	
IconLogo		✓
IconMaster		✓
InfoCaster Creator***	✓	✓
InfoCaster Player***		✓
InfoCaster LE Player***		✓
InfoCaster SE Player***		✓

* Receiver support when used in conjunction with Content Receiver

** Content Receiver and Inscribe Shell Extension integrate with the Windows® Explorer

*** InfoCaster™ systems can also be managed with InfoCaster Manager™

Connectus Console

The Connectus Console allows a graphics administrator to manage the settings and contents of Connectus from any location on the network. Features provided by the console include the ability to view the contents currently stored on the server, set system permissions, configure storage servers and send content to receivers. Any number of Connectus consoles can be used to manage the Connectus server.

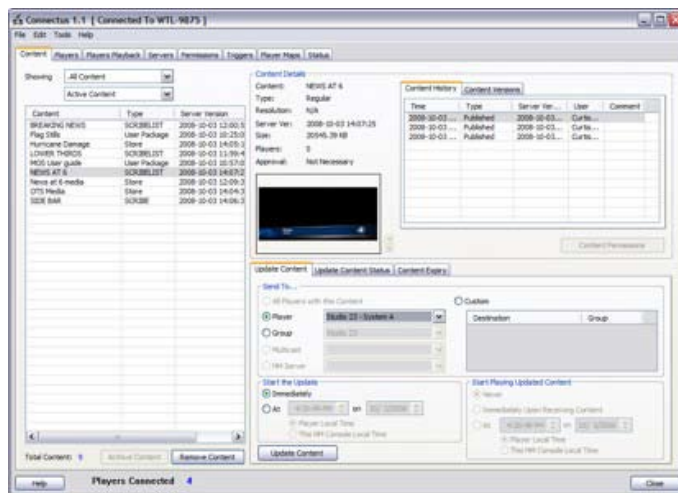


Figure 2 – Connectus Console

Publishers and Receivers

Systems that interact with Connectus are divided into two distinct groups — publishers and receivers. These groups determine whether the system has the ability to publish content to the server or receive content from the server.

A typical publisher system could be a G-Scribe™ Offline system that is used to create graphic content for distribution to a series of playback devices.

A typical receiver system could be a playback device such as Automation Interface™ or IconLogo™ — these can be used to retrieve content from Connectus for playback. Depending on the receiver type, a user can manually retrieve content from the server, or content can be sent directly to the receiver from the Connectus console. When content is published to a receiver system, a message is sent to the receiver application instructing that system to retrieve content from a specific file server. This method provides network security to the receiver systems by allowing receivers to reach out to retrieve content.

Some applications, such as IconStation™, can act as both a receiver and a publisher, allowing content to be published to and retrieved from the Connectus server.

Publishing and Retrieving Content from G-Scribe

A typical character-generated page consists of many different graphic elements such as backgrounds, textures, headshots and video clips. When character generator (CG) pages are created, a copy of the graphic elements that make up the page is not stored; instead, the page stores

a reference to the file location on the hard drive. Therefore, in order to move a CG page to a new system, both the CG page and all the required resources must be moved to the new system. If one media object is missing, that CG page will not play properly on output.

In many locations, low-cost offline versions of CG software, such as G-Scribe Offline, are used to create show content so that the online system is not tied up with graphic creation. The content created on the offline system and all of the required assets must be moved to the online system for playback.

From G-Scribe and G-Scribe Offline, pages can be published directly to the Connectus server. New templates published to Connectus will appear as individual entries within the Connectus server. If the template being published already exists on the server, then a new

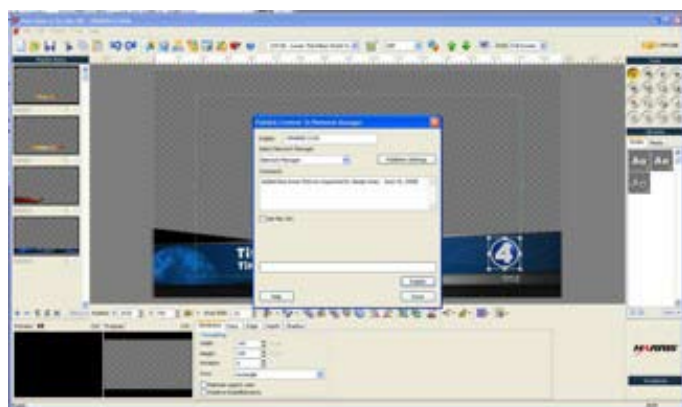


Figure 3 – Content can be published to Connectus directly from the application

revision will be created (the original version of the content will also be maintained). G-Scribe also enables the downloading of templates from the Connectus server if a local copy is not available. When content is downloaded from the server, all of the required graphic assets are downloaded as well.

The media store module included with G-Scribe and G-Store™ has the ability to publish individual or packaged graphic assets, such as collections of over-the-shoulder (OTS) images. All associated metadata will also travel with the files when they are published to Connectus. This feature is useful when moving “store” data to other media store databases or into a MOS environment, as all of the keywords and

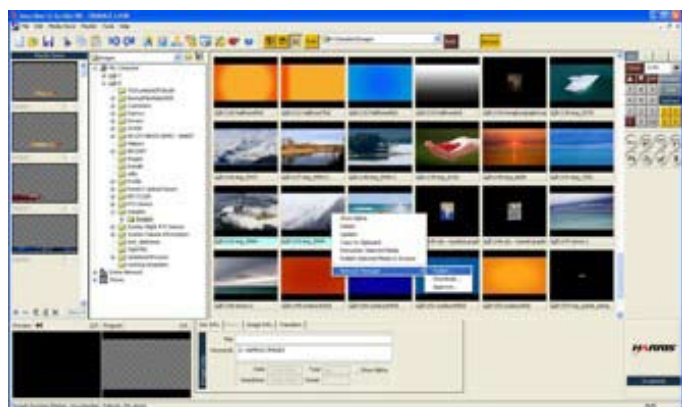


Figure 4 – Media assets can be published directly to Connectus from the Media Store

other information will travel with the pages and can then be used for searching.

When content is published to Connectus, any extra content required for the package is also automatically published (depending on the type of package being sent). For example, when a new set of CG pages is published to Connectus from G-Scribe, the CG pages — as well as all of the external graphics and ODBC data connections used within those pages — are packaged and sent to the server.

As new revisions of the same graphic content are published to the network, only the new versions and any added media will be sent to the server. By only sending the changes to the server, network traffic is reduced, thereby improving speed when copying new content. Users also have the ability to retrieve previous versions of their media content should they need to roll back for any reason.

Content Receiver

Content Receiver is a standalone application that allows any folder on any Windows®-based system to be defined as a Connectus receiver. This application is a useful tool for moving content around your network. Content can be moved to any system — or more specifically, any folder — on a network. The Content Receiver allows multiple folders to be defined on the same system that acts as a receiver. Each

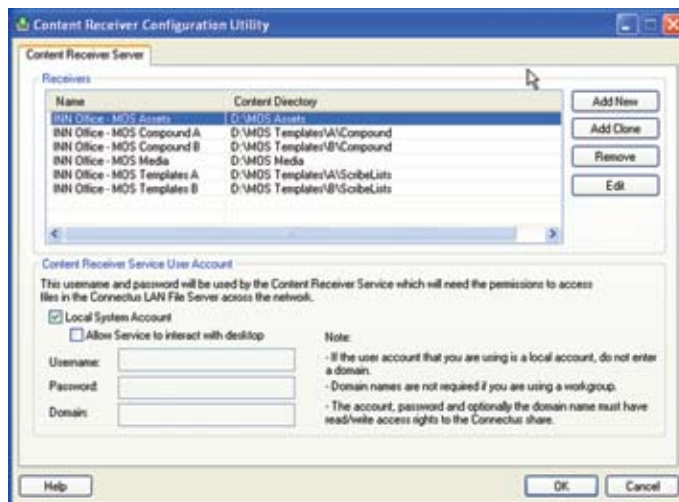


Figure 5 – Content Receiver

folder will appear to Connectus as an individual receiver system and allow content to be published to that folder.

Content Receiver is extremely helpful in a MOS-enabled newsroom, enabling replication of media content to locations on multiple playback devices simultaneously. For example, users may wish to push OTS images to a folder on multiple playback devices so that all devices have access to the content. To achieve this, the Content Receiver application can be installed on each of the playback devices. From there, the folder where the OTS images are to reside can be configured as a receiver.

Connectus can then configure the various receivers as a receiver group. A receiver group is a group of receiver devices to which content can be sent simultaneously. This simplifies the process of getting content out to multiple devices.

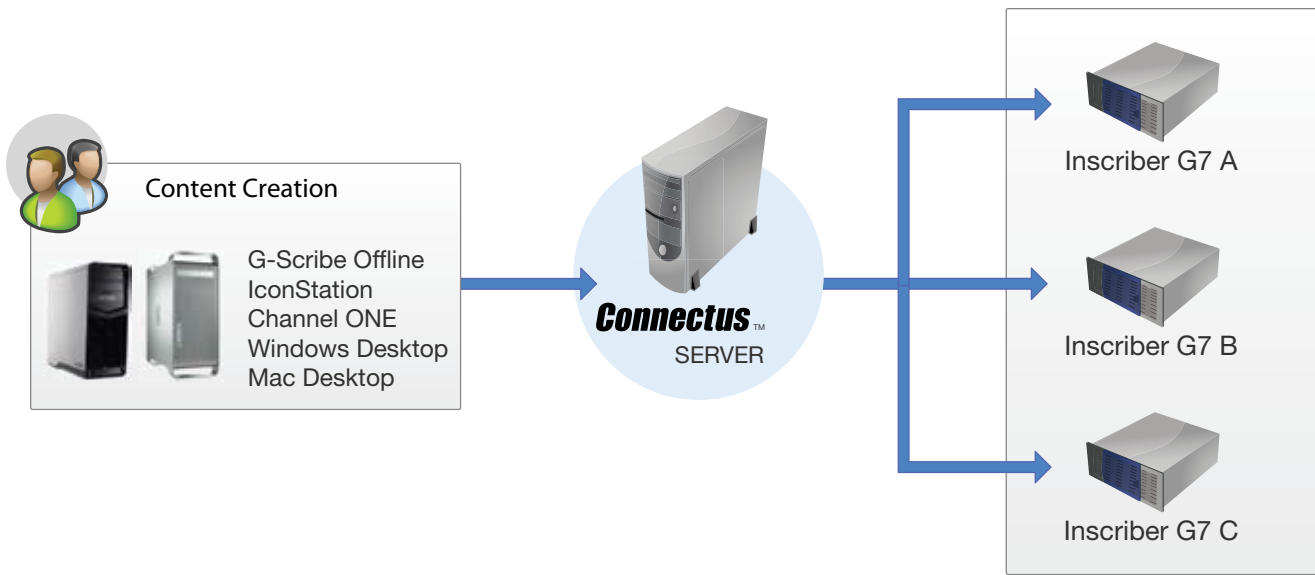


Figure 6 – Distributing content using Receiver Groups

Inscriber Shell Extension

The Inscriber Shell Extension is a standalone tool that plugs directly into Windows XP. One of the features included with the shell extension is the ability to publish any file or folder within Windows XP to the Connectus server. This allows any system to publish content to Connectus, enabling third-party applications to interact with Connectus. For example, if a graphic designer is working on an Adobe® Photoshop workstation and has content they need to get to the playback device, they can publish the content directly to the server. From there, the content can instantly be sent out to one or more playback devices.

By simply right-clicking on a file or folder in Windows Explorer, individual files and folders can be sent to Connectus. Within Connectus, the system will need to be enabled by the graphics administrator before publishing, for security purposes.

Once the content has been published, it can then be sent to any supported receiver directly from Connectus.

Using Connectus in a Centralized Graphics Creation Environment

Many networks and stations are moving toward a centralized graphics center for creating and storing graphics. For example, graphic creation for a station in Denver might be done in New York at the network head office. This allows stations or affiliates to centralize graphic creation, improve workflow and reduce costs by maintaining only one design team, rather than teams in every location. It also allows networks to enforce a standardized look and feel across each location by having greater control of the content going to air. Stations invest a lot of time and effort when creating a graphic identity for a network, so it is very important to protect that distinctiveness by centralizing graphic creation.

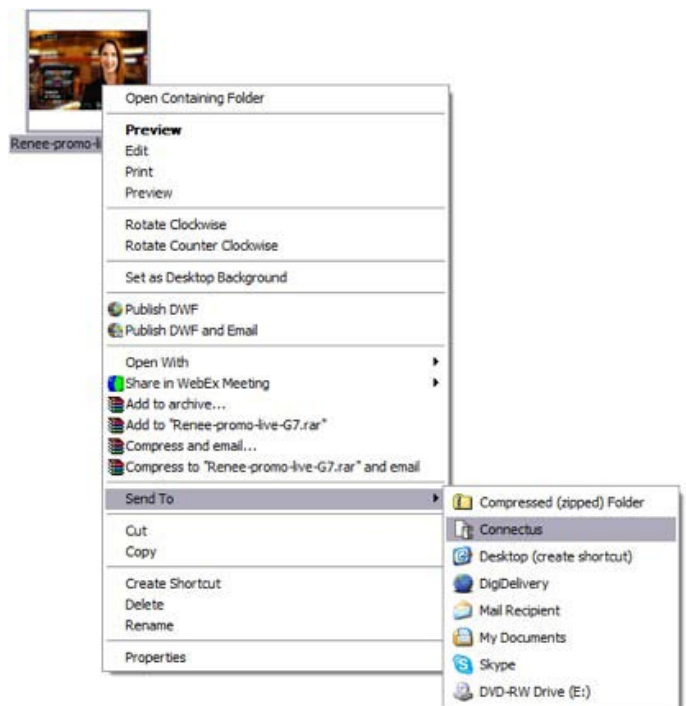


Figure 7 – Sending content to Connectus from the Windows shell

As more organizations move to centralized graphics creation, the need to manage and distribute this content quickly and easily to each location becomes critical.

The distributed workflow model could even be expanded to a global scale. Figure 8 demonstrates how Connectus can be used to help facilitate the flow of graphic content from a central location. In this model, a single location is used for all graphic creative services. Any content sent to an affiliate station is first published to Connectus, where it is stored on a media file server located in Europe.

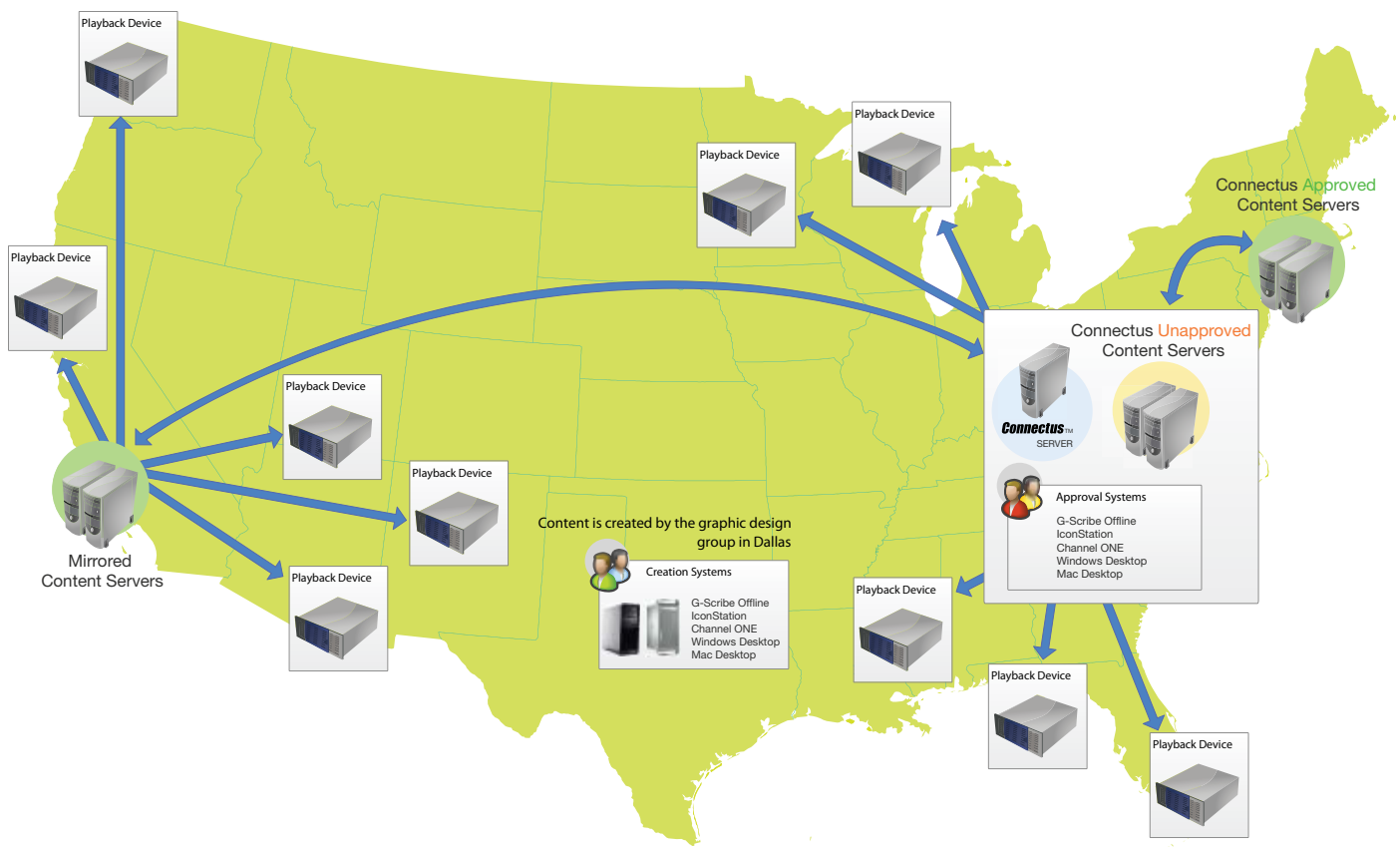


Figure 8 – Graphic Content Distribution Model

Using the content replication feature of Connectus, any content published to the main server is automatically replicated to a mirror server in North America. This function serves not only as redundant storage for the media content, but also reduces network bandwidth and increases speed by splitting the load across multiple locations. Content can be mirrored to as many systems as required by a particular workflow. It can be specified what type of content is replicated, when it is replicated, and whether existing content on the file servers can be overwritten.

Once the content has been published to Connectus, it can then be sent out to affiliate stations. Alternatively, the affiliates can browse the graphics server, and grab the content they require.

Approval System

An approval process can also be implemented, ensuring that only approved content is made available to affiliate stations. The approval system can be controlled through the Connectus Console, allowing the system to be configured with specific approval requirements for each receiver. Approved content is moved to its own dedicated server location, and each receiver can be configured so that only the approved content is visible and made available.

Content can be approved in a console or content creation system only by a user with permission. Connectus controls which publishers have sufficient rights to publish content to Connectus. As new content is published that requires approval, Connectus can automatically generate e-mail notifications to the appropriate approvers.

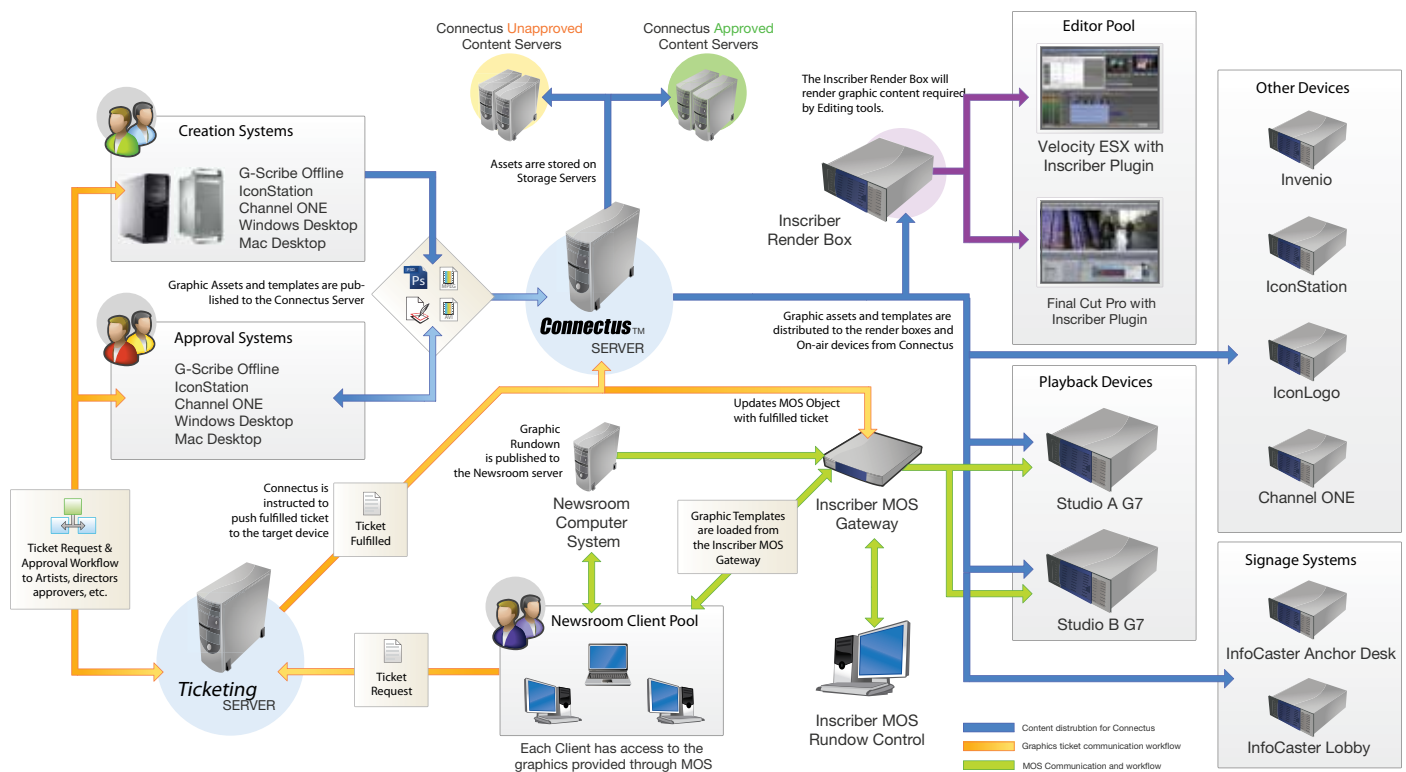


Figure 9 – Connectus integration in a MOS-Enabled Newsroom

Using Connectus in a MOS-Enabled Newsroom

Connectus is an ideal tool for managing graphic content in a MOS-enabled newsroom. In a busy newsroom environment, online graphics systems are rarely available for graphic creation. Therefore, most graphic creation is done on an offline system, and the graphics are then sent to a playback device. Connectus provides a streamlined workflow for transferring media content to the online devices.

Graphic content is generated by the graphic design team using a variety of design tools, including G-Scribe Offline. The Media Store component of G-Scribe can be used to “keyword” graphic assets to be used with MOS templates. As content is created or modified, it can then be published to the Connectus system directly from G-Scribe. Third-party authoring tools can also be used to create content, depending on the individual artist’s requirements. Artists using non-Harris systems can then use the Inscribe Shell Extension to publish their content to the graphics server.

Each playback device uses the Content Receiver application to define graphic specific locations (or folders) on the playback device where media content should be published. These folders can define the location of graphic templates that are being used as MOS graphics. They can also define locations for media content, such as OTS images, that will be updated on a daily basis. Once these folders have been defined by the Content Receiver application, the Connectus server can publish content to them.

A graphics administrator uses the Connectus Console application to review graphic content and then send it out to the individual receivers or receiver groups. This streamlined graphic workflow ensures that graphics can get from the design stage to the playback devices as quickly as possible, meeting the high demands of a newsroom environment. This process can occur concurrently with the everyday demands of the MOS-enabled newsroom environment.

For more information, please visit www.broadcast.harris.com/connectus.

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