# **ASTRA Multi-site Operations**

#### **ASTRA Architecture**

ASTRA's distributed architecture is designed to operate over a network and is not constrained by physical locality of equipment or content. The only physical constraint when considering a multi-site workflow is the speed and reliability of the link.

### Multi-site Workflow Designs

There are a variety of multi-site models that can be used with ASTRA. Three popular models are:

**Remote Control Model** – This is a typical Hub & Spoke design in which programming is mostly controlled by the Hub. Optionally, the region could have the capability for local playout, but ingest, QA, and content management is generally done at the Hub.

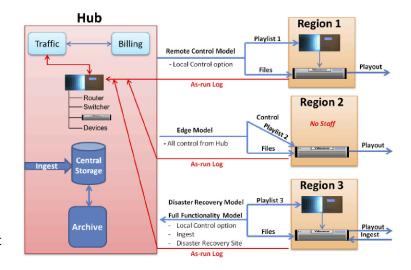
Here the region has an ASTRA server in which the playlist and content are downloaded from the Hub to the region ahead of time for playout. This makes the speed of the link less critical and potentially lower cost.

The region is synchronized with the Hub so programs start frame accurately at all locations. This model easily enables local ad insertion to optimize revenue in each region.

**Edge Model** – This is a low cost method for regional playout and local ad insertion with minimal staff and equipment. As in the Remote Control Model, the Hub controls all playout but without a local ASTRA server, just a videoserver. This requires a reliable high-speed link as the region is totally dependent on the link for control and timing of playout.

Disaster Recovery Model (Full Functionality) – This is a large scale version of the Remote Control Model in which the region is a fully functional station with similar capability as the Hub but possibly at a smaller scale. Here the Hub downloads multiple days worth of content and playlists—so should the Hub go down, the region can continue broadcasting. It can also provide the capability for local news and/or program bulletins. When the Hub comes back online, local files can then be synchronized back with the Hub.

All these models can be controlled by one Hub at the same time. This consolidated approach enables each region to be controlled based on the functionality required.



## **Regional Ad Insertion**

All models support regional ad insertion to optimize revenues. The playlist, generated by traffic, is customized for each region with local ads. Generally, they will include a combination of network ads and local/regional ads. The benefit of this central approach is that all program breaks will be frame accurate so that programs all start at the same time at all locations.

#### **Traffic Interface**

With a centralized traffic and billing system at the Hub, regional management of ads is simplified. The Hub's traffic system can be used for local programming if desired (but not required).

## **Dynamic Ad Insertion for Additional Revenues**

These models are fully compatible with the ASTRA Regional Ad Insertion solution with Prime Image's Time Tailor. This enables new ads to be inserted at local stations by frame-accurately time reducing a program's running time to accommodate additional ads.

With the ASTRA Regional Ad Insertion solution based on Prime Image's Time Tailor, significant new revenue can be recognized without impacting the viewer's experience. See ASTRA Time Tailor Datasheet DS-1010 for more details.

Information: