Ad-insertion and other regionalisation functionality

Starfish products can deliver regionalisation at various points in the delivery chain by utilising our encoder and splicer products operating in the SDI domain, the TS domain and at any encoding/transcoding point. Often, it is regionalisation at the encoding point which is most efficient as a single Starfish device will combine the functions of encoding and regionalisation. The second most efficient is operating in the TS domain, where a Starfish GOP-boundary splicer can process a large number of channels on a single generic IT server (for example 15 x 25Mbps mezzanine streams).

In general, we support two regionalisation architectures:

- **Centralised** - where all regional variants are generated at a central point and delivered to the relevant territories/distributors. This allows for a hardware-efficient design with N+M redundancy, but requires a high-bandwidth delivery medium to deliver all the multiple variants (good for fibre, but not ideal for satellite distribution).
- **Distributed** – where local content is added in each territory. This is the traditional satellite distribution model where a single international feed is down-linked and modified before re-distribution in each territory.

These two approaches can also be combined to offer multi-region hubs and single region end-points. They can be chained to allow a single wide-area regional feed with further regionalisation for specific sub areas if required.

Regionalisation functions

Regionalisation covers a variety of functions:

- Inserting local commercials
- Inserting alternative content (specific local content or alternative general content to avoid region-specific rights issues)
- Re-ordering language tracks or burning in region-specific subtitle data
- Adding region-specific logo/graphics

Regional content – schedules and as-runs

Each encoder/splicer will collect its playlists and media from a configured list of locations. In a larger scale solution with a central management system, each encoder/splicer will be sent a configuration as part of its start command. This will include all data necessary to run – including the location(s) and format(s) for local content as well as all the encoding and multicast parameters.

The local content service for each encoder/splicer will collect playlists, media, graphics files and +N recordings as required. It will also return receipt files showing whether media is present or missing. Finally, it will return as-runs after each local content insertion.

Starfish Regional System Overview