



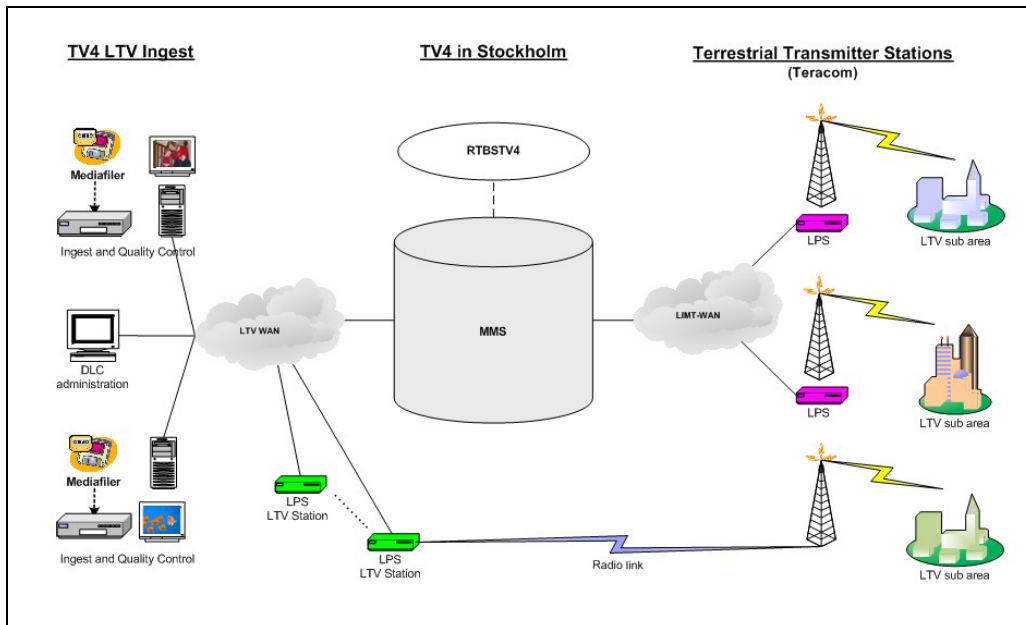
TV4 Sweden – regional advert management system (DLC)

TV4 is one of Sweden's largest TV channels in competition with both public service channels and other commercial broadcasters. TV4 is the largest commercial TV station and has 16 local TV stations (LTV) in locations all over Sweden, which is unique amongst its commercial competitors in the Swedish TV arena.

The design of the analogue terrestrial network makes it possible to broadcast local content produced by the local TV stations. This content mainly consists of news, sports and local/regional commercials. The terrestrial network also provides the possibility to broadcast DLC of which TV4 is the only provider in the Swedish commercial TV marketplace - and therefore DLC generates substantial revenue.

TV4 selected Starfish Technologies Ltd. as the main supplier of the new DLC System that replaced the old local ad-insertion system in 2004.

The diagram below shows a general system overview of the DLC System. The purpose of the DLC System is to enable the LTV areas to be divided into smaller sub-areas in order to provide a product that is slightly different from the ordinary TV4 local commercial advertisement product. The overview presents a comprehensive and systematically simplified map of the system and shows how the different system components are connected.





There are three key components to the system. A brief overview of these key components is presented below.

The Media Management System – (MMS)

This is the central database for the entire system. It will store and manage all information regarding configuration, playlists, media files and so on. The MMS also includes the interface software for ingesting playlists and metadata generated by the advertising sales system.

The Local Playout System – (LPS)

These are the 34 transmission units which are located throughout the country. They are fully automated playout units including the ability to receive and act on the VBI triggers. They receive playlists from the MMS and collect the media they need from the central media store.

The Ingest System

This comprises the Starfish Immedia encoding application. It allows users to select from the clips in the databases and encode the relevant media. Updated metadata is collected/pulled from the ad sales system by the Ingest System prior to encoding of a specific media.

Basic Workflow

The workflow is easily broken down into several key tasks as listed below.

Key tasks

- Ingesting of playlists and metadata from ad sales
- Media encoding and QC
- Delivery of playlists and media to LPS sites
- Cueing and Transmission
- Retrieval of as-run logs from LPS sites for billing
- Ongoing management of video server disk space at central and LPS sites
- Ongoing collection and presentation of status information