



TV automation

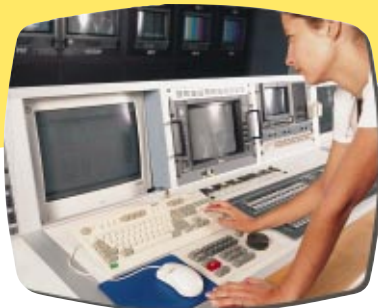
ASTRA



ASTRA *automation for TV stations*

ASTRA is

an automation system that gives you control over all processes and equipment of a TV station - managing, frame by frame, every piece of video material from intake to broadcasting to archiving and billing. A modular, easily expandable design makes ASTRA suitable for both large nation-wide stations with non-stop airing of multiple channels as well as for small local stations that have a limited on-air time on one channel. Last minute program changes are possible: ASTRA ensures complete freedom to deal with unexpected situations and offers a whole range of playlist control functions including our unique alternative sequences. Built-in media management ensures that proper videomaterial is at the right place when you need it, moving clips between devices via Fibre Channel, signal paths or networks. Archiving features control back-ups and retrievals made on robotic as well as manually operated archive systems. The system robustness is ensured on various levels from dual mounted hard disks up to mirrored control servers, from creating backup assemblies on tape up to mirrored videosever playout. Built-in diagnostics checks the control system as well as attached devices. ASTRA provides a high level of reliable services with frame-by-frame accuracy.



Acquisition

Sophisticated record scheduler guarantees that all the feeds you look for are properly recorded and that metadata is stored.

ASTRA checks playlists for missing videomaterial and operators use recording requests for a quick and easy acquisition of that material.

Tools are available that allow for manual recording where operators appreciate the intuitive interface and frame accuracy.



Broadcasting

Broadcast control processes are based on a daily event schedule. This is downloaded into the continuity room from the station information network. This schedule can be edited and updated by continuity operators according to events as they arise. The system enables a broad variety of editing options, including deleting and inserting of events or even creating and filling in a brand new schedule. Blocks of events can be prepared beforehand, previewed and stored in the database for later use or easily selected and inserted in the daily event schedule. During editing all key data is double-checked. In case of an error the system leads the operator by various prompts or alternatively the system can make corrections automatically.

When in automatic mode, the events are triggered by ASTRA in accordance with the planned on-air times. In the manual mode the operator must trigger events manually. ASTRA recognizes live events where the duration is an estimate and switches itself into the manual mode waiting for operator's trigger.

There is an acoustic and visual notification of the remaining time the event has left to run.



Media management

Searching for a clip? ASTRA delivers it to you. If videomaterial is stored on a remotely controllable device ASTRA controls the transfer automatically. ASTRA also provides the operators with tools for manual control of recording or logging process that are familiar to the user and the recording is frame accurate. Built-in clip searching tools help to find and deliver a particular clip to the correct place. Fibre Channel transfers, SDI transfers, archiving/restoring, videosever mirroring and caching, all this is supported. If the requested clip is unknown to the system or missing in the resources controlled by ASTRA, the user is prompted to load the correct tape into a VTR, transfer the clip into the video server or copy the clip from a Fibre Channel device. When several ASTRA systems are installed in various remote locations they still can communicate, exchange data, search for videomaterial and control clip transfers.

Data management

Central backed-up data repository uses industry standard SQL database. This gives the system open connectivity to provide or receive data. Automated import, transcoding and verification of playlists are the core of the playlist operations and are followed by retrieval of missing videomaterial. Playlist import combines data from various sources (program department, commercial dept., selfpromotion dept., ...) to create a single playlist. The playlist still allows for changes from the authorized departments even when on-air while granting the access only to those parts of playlist where the department takes the responsibility. As-run logs are generated and automatically exported for evaluation and billing.

Access control

Only authorized users can affect the processes controlled. Every user is given individual priority and access rights to each physical device and data record. User access rights may be granted even within a single playlist, event by event (e.g. only sales dept. can edit the commercial breaks in the aired playlist, but cannot edit any other event). Conflicts are resolved according to user priority. Users with higher priority can take over the control from users with lower priority. Of course, both parties are warned by the system.

Design

The system is designed as a complex of physically and functionally detachable parts, which are connected via a local area network. The application servers form a technical "heart" of the system, where the main processing takes place and all the controlled devices are interconnected. In addition, terminals distributed amongst the operational areas form the 'hands on' control part of the system. These terminals have all the necessary equipment for easy and comfortable work, including user keyboards with dedicated buttons and a jog-wheel. The system core design allows for creating whole range of control systems, from complex multi-channel installations down to simple semi-automated video server management systems, from enterprise-wide multi-user environment down to single user unit. Whole range of customized products can be built on this platform. Two major products, ASTRA and PROCON, differ in the way broadcast control is handled: ASTRA controls the broadcasting automatically according to the playlist and on-air times. It is responsible for controlling the master switcher and triggering transitions. PROCON uses the same hardware and software modules. Operator opens playlist of videosever clips and cues the first clip. Then he just manually controls the master switcher. PROCON checks the switcher status. When videosever channel gets on-air, PROCON starts the playout of the clip sequence in the playlist. When getting off-air, PROCON stops the playout and cues the next clip in the sequence.



Features:

Open system design
Multi-channel, 24 hours a day operation
Supports parallel and alternative events
Live broadcasting support
Does not miss a frame
Multiple layers of reliability

Technical description:

Server:

PC computer
VRP 5 - video reference card + GPI
ILC 5 - intelligent line controller card (contains 4xRS422 each)
serial board - line controller card

Terminal:

PC computer, diskless
user keyboard with jog wheel, system and VTR control buttons

Operating system:

QNX real-time operating system (POSIX Std 1003 compliant)
QNX Photon
Sybase SQL
TCP/IP support



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