Technical Specification / Teleste Broadcast Manager

DVB Service Management System

For EPG, network and STB software management

Teleste Broadcast Manager

Teleste Broadcast Manager is a complete PSI/SI, Electronic Program Guide (EPG) and Bootload management server. It helps operators to manage all static and dynamic PSI/SI configurations and deliver EPG information and set-top box software updates.

Teleste Broadcast Manager eliminates routine monitoring and configuration work, raises the quality of the network output and makes sure that there will be no surprises with the services by automating the network configuration and updating processes. Teleste Broadcast Manager consists of EPG, Network and Bootload modules, which are used for separate PSI/SI management tasks. All the modules can be used with a single management server.

EPG Module

EPG Module enables operators to maintain and broadcast a complete Electronic Program Guide (EPG) in multiple languages. The program information can be aggregated to the system from various different sources. It can be imported from incoming satellite or terrestrial channels and possible barker channels. EPG Module allows to import Excel, XML and text files to the system or to fetch them automatically from e.g. broadcaster's website. Export of EPG data in different file formats is also possible.

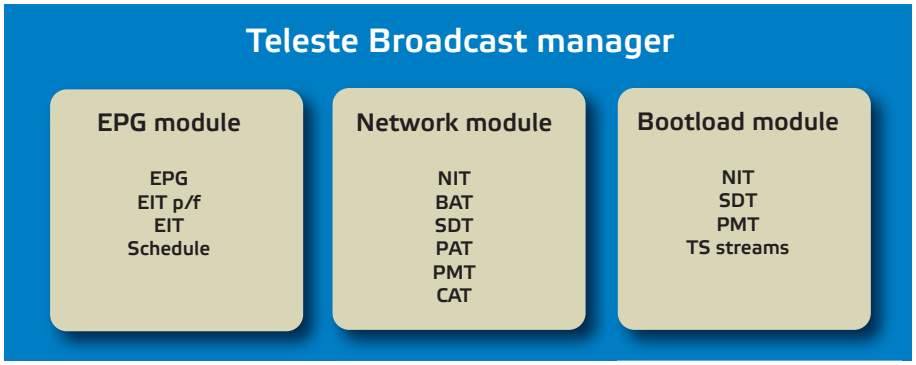
EPG Module gathers automatically all the information to a database, re-creates the tables to match the multiplexing settings and sends them to the multiplexers automatically. The system can send EPG information even if the real-time source is not working, enabling the subscribers to use their EPG's and PVR's at all times.

The database allows operator to change any information - Add or change genre and parental ratings, add descriptions and re-schedule the information in case of delays. It is also possible to save broadcasting bandwidth by removing irrelevant information (descriptors, languages), by shortening the schedule or by organizing the schedules to a barker channel.

Features

- EPG information from various sources
- Can be expanded module by module
- DVB-ASI, ATM and IP support
- DVB-C, DVB-T and DVB-S compliant
- Automatic dynamic service update
- Dynamic Conditional Access System control
- Easy-to-use web based user interface
- All in one server hardware

Block diagram



Network Module

Network Module helps operators to manage network, multiplex and service related PSI/SI configurations centrally from one user interface. Even a small network might require thousands of network associated PSI/SI tables and normally each table would need to be created and updated to the multiplexers separately.

Network Module allows making all the configurations in a logical manner with an easy-to-use wizard. Administrator needs to define only the muxes and services and the server handles all the routine work. It saves all the configurations to an internal database, checks that the network is consistent, creates common and local tables and sends them to the corresponding subhead-ends automatically.

The management is straightforward as the settings can be copied between head-ends, the configurations can be imported and exported and new configurations can be prepared in a virtual mode. Even re-configuration is simple. Normally change of one parameter would need updates to up to thousands of tables, but with Network wizard the change is made once, and the server updates the corresponding tables automatically.

Bootload module

Bootload Module enables operators to broadcast set-top box software updates (Bootloads) through their network. Set-top box manufacturers publish new software releases on regular basis and it can be crucial to have the software updated in order to guarantee high quality service.

Bootload Module let operators to give their subscribers better service by ensuring that all set-top boxes in the network always have the newest software while creating business from manufacturers' updating needs. Bootload module can update set-top boxes from all possible manufacturers with one server. It is capable of managing hundreds of simultaneous updates, which can all be timed individually and have different versions for different network segments.

Bootload module saves the updates to a server database, broadcasts the updates as TS streams and adds the right descriptors to NIT, SDT and PMT tables according to the network settings so that the set-top boxes can find the relevant updates.

Technical specifications

Parameter	Specification	Note
Network		
Elements	0-1000 multiplexes	22,000 PSI/SI tables (excluding EIT)
Sub-headends	0-20 sub-headends	10,000 PMT & SDT, 1,000 PAT & NIT
Table edit capabilities		
NIT	Network Information Table	ETS 300 468
PAT	Program Association Table	ETS 300 468
PMT	Program Management Table	ETS 300 468
CAT	Conditional Access Table	ETS 300 468
SDT	Service Description Table	ETS 300 468
EIT p/f, schedule	Event Information Table	ETS 300 468
Table editing capacity		
Storage GB	73 GB	Expandable to up to 300
Input	0-100 tables	Up to 50 EIT service Ids per PID
Output	0-100 tables	
EPG information		
Import/export formats	XMLTV, XML, XLS, text, proprietary	Via converter
EPG importing systems	PPV, NVOD systems	Optional

Parameter	Specification	Note
Bootloading capacity		
Supported Bootload types	TS Streams	
Simultaneous streams	0-100 different streams	
Localization	0-6 different versions	
Input/Output Interfaces		
ATM (optional)	1 interfaces, RJ 45 (CAT5)	100Mbps capacity
DVB-ASI (optional)	1-4 inputs / 1-16 outputs, BNC connector	26Mbps capacity
IP	2 ports	1000Base-T, Full Duplex
Management interface		
Web interface	HTTPS	HTML 4.01, Javascript 1.5
Management and monitoring		
SNMP	v1/v2c, MIB-II, Host Resources MIB, traps	
Remote access	ssh	
Self diagnostics	Automatic HW diagnostic software driven when device is restarted	
HTTP/DHCP based remote configuration	Any DHCP/HTTP server, e.g. Teleste Libretto	
Server		
Form	Rack 1U or 2U / 28" deep	Up to 42 units per standard 19" rack
Supply voltage	230 VAC / 50 Hz	

PIP109E v1.0 05/2008