

# IPTV Service System



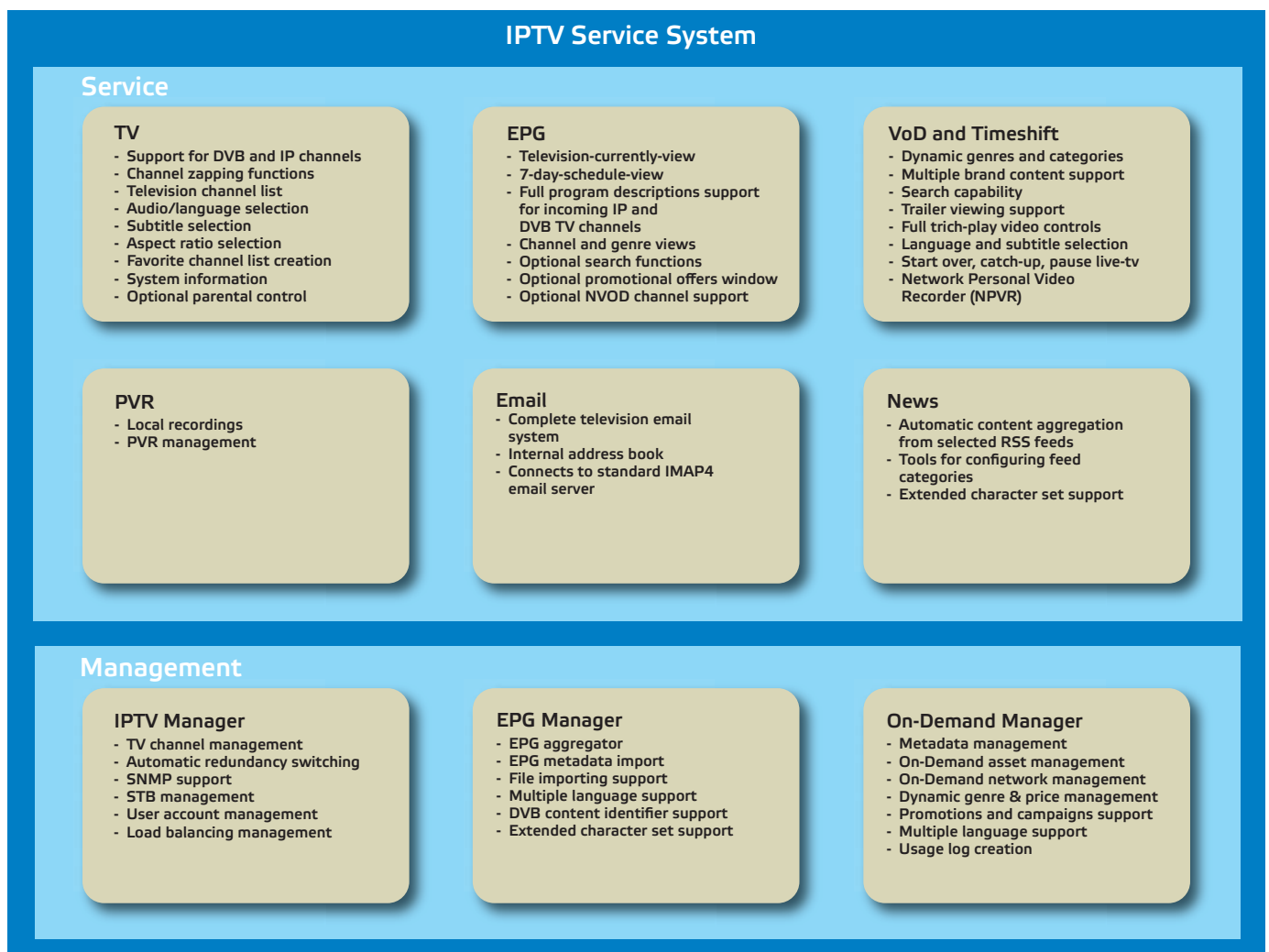
# IPTV Service System

Teleste My Cast is a solution for managing and distributing TV channels and services in broadband networks. It is an end-to-end solution for creating new IPTV services from the scratch or for enhancing existing ones. It enables fast time-to-market, integration with existing solutions, turn-key services that improve customer loyalty and flexible content creation with standard web authoring tools.

Teleste MyCast supports DVB and IPTV solutions as well as hybrid DVB + IPTV, where TV channels can be broadcasted via DVB, while VOD and interactive content are provided via IP connection. The solution is designed to work seamlessly with almost any hardware system configuration. This makes it ideal for operators who are expanding to IPTV services. It enables the creation of wide variety of on-demand, enhanced TV, entertainment, information and communication services. Teleste MyCast has intuitive user interface and it integrates services with head-end equipment, subscriber management, billing and any other systems through open and well documented API's.

Teleste MyCast can be divided to end-user services and management tools. The solution has modular architecture and more services can be added later on as the system grows by utilizing advanced API's. Service applications consist of end-user services provided to subscribers and management applications for operators with full control over the services management.

Block diagram of the IPTV Service System. The solution has modular architecture and more services can be added later on.



## Television

TV application provides regular advanced TV features. The application presents channel name together with program information and lists all available channels, from which the desired TV channel can be selected quickly. TV channels can be distributed to set-top-boxes via IP or DVB connection or by using hybrid DVB + IP solution.

The Main Menu lists all the available services in a intuitive list which is easy to navigate. The services, menu structure and its look-and-feel can be modified with the Menu Manager tool. Settings enable users to select audio tracks and subtitles in the programs, change aspect ratios, menu language, favorite channel lists and parental control configurations.

## Electronic Program Guide

The Electronic Program Guide provides information of television programs weeks ahead. The programs can be listed by channel and genre with support for seven days or longer EPG information. The service works automatically as the program information is based on EIT tables from incoming DVB networks. Program information can also optionally be imported from Excel, XML or text files.

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. 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.

## Video-on-Demand and PVR

Video-on-Demand enables operators to offer premium content to their subscribers with pay-per-view, monthly subscriptions or other business models. The VoD content and metadata is inserted to the management interface while the application creates and presents the VoD portal to the user, connects to subscriber management and billing systems for the payment and controls the video servers for the video delivery. All leading video servers can be integrated to the service. The service has an open API to subscriber management systems or it can be integrated to existing systems.

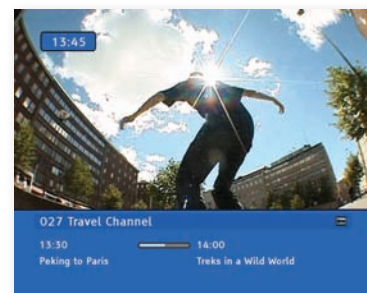
PVR brings full local recording functions and PVR management interface to end-user with IPTV set-top-box having a local hard drive.

## E-mail and News

E-mail application is a complete e-mail system in television, which allows end-user to easily send and receive e-mail messages. The user interface is specially designed for television screen and is an ideal solution for people with no prior e-mail account or experience in e-mail services. The service can be connected to operator's IMAP4 mail server.

News application provides end-user with e.g. news, weather and other information automatically. It reads the RSS feeds from the Internet and display the content on TV screen.

The channel Info shows channel number and name, program title and duration time.



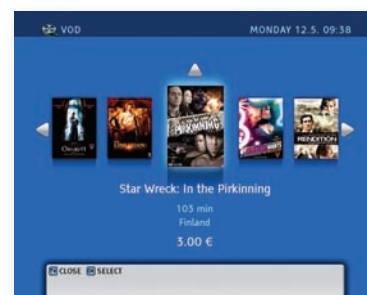
Channel Info view

The classic and advanced EPG shows program shedule from several channels.



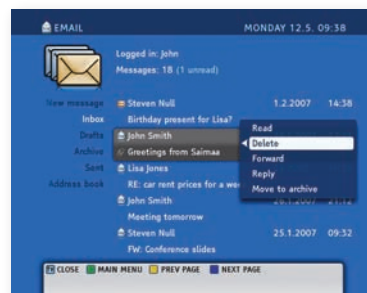
Electronic Program Guide

The VoD view shows description of the movie and lets the user to order it.



Video-on-Demand

The E-mail application include also a image viewer to view attached photos and images.



E-mail application

## Technical specifications

Parameter	Specification	Note	Parameter	Specification	Note
<b>Content</b>			<b>Electronic Program Guide</b>		
Markup Language	HTML 4.01, XHTML 1.0, XML 1.0		Incoming EIT handling capacity	200 multiplexes	1000 channels
Cascading Style Sheets	CSS1, CSS2, CSS3 (partly)		Program information source	PSI/SI, XML, XLS and text files	EIT p/f and schedule, BAT tables
Document Object Model	DOM1, DOM2, DOM3 (partly)		Video	no video, 1/4 screen and 1/16 screen	
Images	GIF, JPG, PNG and Animated GIF		Program search	date, genre, channel, search words	
Javascript	JavaScript 1.5, JavaScript extensions for enhanced TV		Channel change inside the guide	Supported	
Streaming video	MPEG-2, MPEG-4 (H.264) and VC-1		<b>Management and monitoring</b>		
Audio	MPEG (Layer 1,2,3), PCM, AC3		SNMP	v1/v2c, MIB-II, Host Resources MIB, traps	
Rich Media	Macromedia Flash	Optional	Statistics	users, channel viewing, service usage, server load	
TV formats	4:3 and 16:9 formats	PAL-B, NTSC-M	Remote access	telnet, ssh	
<b>Supported set-top boxes</b>			Self diagnostics	Automatic HW diagnostic when device is restarted	
Motorola / Kreatel	1500, 1700 and 1900 series		Alerting	Alert Standard Format 2.0	
Amino	AminET 1x0		<b>Network</b>		
Other manufacturers	Motorola, SA, Thomson, etc.	On request	Addressing	IPv4	IPv6 ready
<b>Subscriber authentication &amp; management</b>			Protocols	TCP, UDP, RTSP, IGMP, ICMP, HTTP	
Authentication	IP and MAC address, Unique serial number, CA card, pin-code, passwords		Connection implementation	SSL (ver. 3.0, 64 and 128 bits), VPN, Simulcrypt, PKI, Macrovision 7.01	
Subscriber management systems	Dataprism Vision or any other subscriber management system		<b>Servers</b>		
Supported protocols	XML-RPC, RADIUS, LDAP, SOAP		Form	Rack 1U or 2U / 28" deep	Up to 42 units per standard 19" rack
Conditional Access Systems	Conax or any other CAS system		Supply voltage	230 VAC / 50 Hz	
Digital Rights Management	Conax or any other DRM system				