

Ondems SI-Manager – Release 1.3

Real-Time Management of DVB-SI Tables

1. Overview:

One of the digital television's many advantages is that additional information can be provided about the media, programs or events. This data is used by the receiver Set-Top Box (STB) to provide information to the viewers through the Electronic Program Guide (EPG). This additional data used by the Set-Top Boxes is transmitted in the DVB SI (Service Information) tables.

Digital television companies that broadcast and/or redistribute the MPEG-2 digital content are often confronted with the problem of managing DVB SI tables in order to maintain a DVB SI compliant data stream. These problems occur in digital broadcast in order to create the specific information associated with the digital content or in redistribution of the digital television when trying to multiplex/de-multiplex different transponders.

The *Ondems SI Manager* is a scalable and fully customizable solution designed to help professional broadcast companies as well as small digital television operators to create and manage the DVB SI content.

The SI-Manager was developed in co-operation with Sofia Digital. (www.sofiadigital.com)

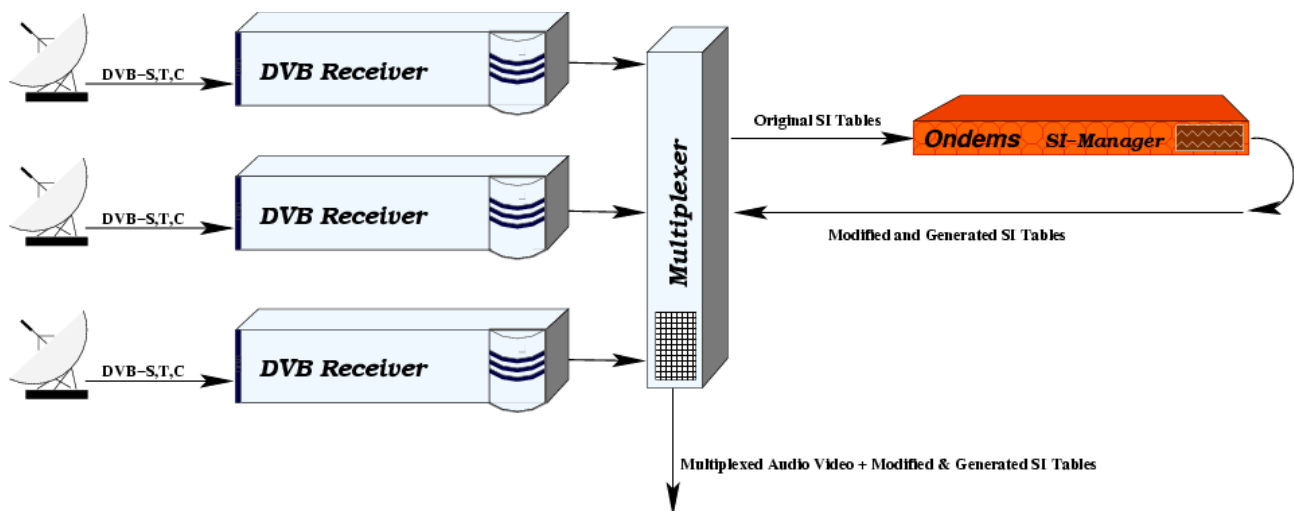


Figure 1: Connecting the SI-Manager in TV redistribution head-ends

The Ondems SI-Manager receives MPEG-2 TS packets containing SI tables. The received SI tables are processed according to the configuration and sent back into the system (multiplexer in Fig. 1).

2. Usage scenarios:

2.1. Creation of EPG (Electronic Program Guide)

The SI-Manager can be used to create EIT tables to send EPG information for several TV Channels (Fig. 2). The EPG information is read from a configuration file. This configuration file can be generated using the Web-based graphical user interface. Generation from different databases and other formats is available on request.

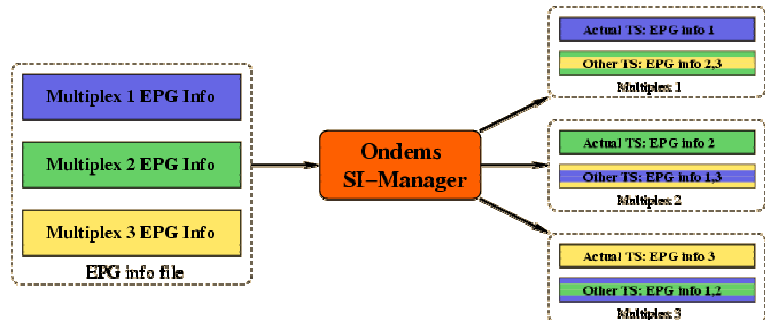


Figure 2: Creation of EIT tables (EPG)

2.2. Re-Multiplexing of EIT Tables:

- Multiplexing EIT information from different transponders into several multiplexes;
- Forwarding EIT information from other transponders into the current multiplex.

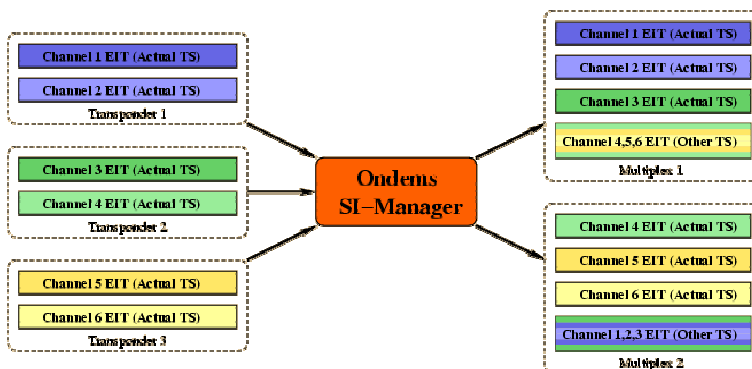


Figure 3: Re-multiplexing of EIT tables

The SI-Manager can be used to keep the EIT tables consistent when creating new multiplexes from TV Channels coming from different original Transponders (Fig. 3). Usually, Cable Operators like to provide all EPG information on all Transponders, in order to allow their customers to see the Program Guide for all broadcasted channels.

2.3. Broadcasting time and date (including timezone) information to Set-Top Boxes (STB) inside the network

Sending time and date information (as TOT and TDT SI tables) makes the customers' STB aware of the current date and time (Fig. 5).

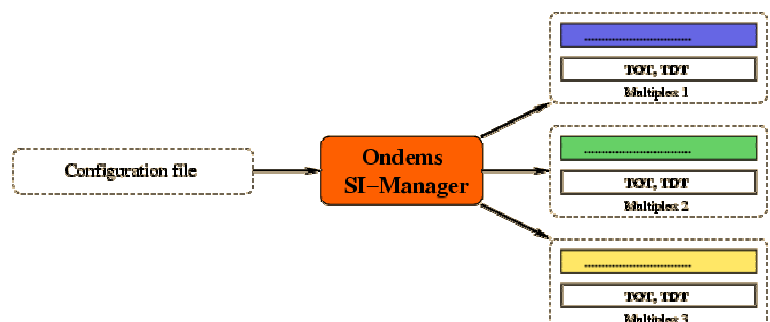


Figure 4: Broadcast of Time and date (TOT, TDT)

3.Features (Technical specifications):

Some of the options and features presented are customizable depending on the client requirements. The features marked with (*) are currently under development. Please contact us for further details.

<i>Ondems SI-Manager</i>	
Target	Digital Television Systems: Cable Operators, Content providers
Media Formats	DVB compliant MPEG-2 Transport Stream: <ul style="list-style-type: none"> • Multi-Program Transport Stream (MPTS) • Single-Program Transport Stream (SPTS)
Input/Output	<ul style="list-style-type: none"> • DVB ASI (DEKTEC DTA-120, DTA-140) • ATM AAL0/AAL5 electrical/optical • IP Ethernet 10/100/1000 Base-TX (*) <ul style="list-style-type: none"> • UDP (*) • Multicast (*) • XML interface using SOAP protocol (*)
Output rate control	<ul style="list-style-type: none"> • For modified SI tables: same as input • For created EIT tables: preconfigured at 100 tables/second • For created TOT and TDT tables: preconfigured at 1 table/second
SI Table creation	<ul style="list-style-type: none"> • EIT • TOT • TDT
SI Table modification	<ul style="list-style-type: none"> • EIT: <ul style="list-style-type: none"> • TSID (transport_stream_id) • ONID (original_network_id) • SID (service_id) • Table ID (table_id)
User Interface	<ul style="list-style-type: none"> • Web-based GUI (uses HTTP, PHP)
Supported Linux Distributions (tested)	<ul style="list-style-type: none"> • Mandrake 9.x, 8.2 (off the shelf) • SuSE 9.0, 8.x (off the shelf) • RedHat 9.0 (off the shelf) • Debian Stable (requires updating some libraries) • Other distributions should work as well. Please contact Ondems for details and support

4. Contact Information

For more information about Ondems SI-Manager and other Ondems or Sofia Digital products, please contact:

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