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iTV Test & Measurement

iTV Stream Station– ITG300

iTV Stream Analyzer

– DVi700(MHP), ATi700(ATSC), OPi700(Opencable)

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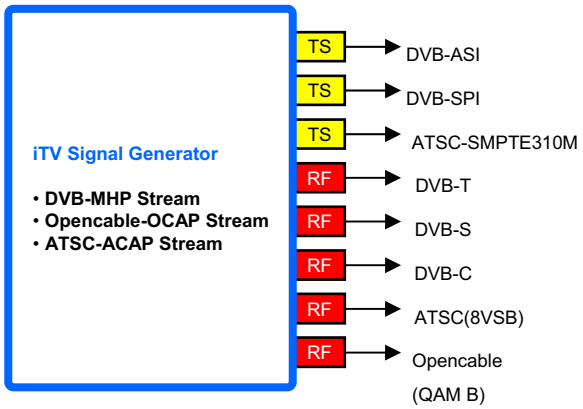
iTV Stream Station (MHP/OCAP/ACAP)
- ITG300

Overview

iTV Stream Station – MHP/ACAP/OCAP is a portable test head-end for Data Broadcasting. With iTV Stream Station, System Operators can design their system and service and Set-top box manufacturers can verify their product. For those iTV application developers, it is a perfect development platform and application verifier.

iTV Stream Station is the world's first iTV test streamer with built-in modulator (DVB-S,DVB-C, DVB-T or VSB). With iTV Stream Station, you can test iTV Application directly on the set-top box any time and anywhere. And iTV Stream Station itself is a very cost-effective modulator supporting internal and external input altogether. iTV Stream Station is the most suitable system for on-spot sales, demonstration and field-test of iTV set-top Box with its portable frame.

- Model : iTV Stream Station
- Code: iTS-MHP, iTS-OCAP, iTS-ACAP
- DVB-MHP Streamer
- Opencable-OCAP Streamer
- ATSC- ACAP Streamer
- TS OUT : ASI, SPI, SMPTE310
- RF OUT : DVB-T, DVB-S, DVB-C
  ATSC(8VSB)
  Opencable(QAM B)



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Overview

- iTV Application & Contents Verifier
- iTV Application Development
- iTV Set-top Box Development
- iTV Middleware Testing
- iTV Middleware Development
- iTV Lab.
- Data Broadcasting
- Interactive Television

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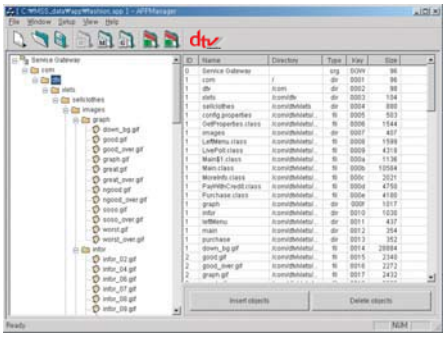
Highlight

Object Carousel Editor

Object carousel is a widely used protocol of data broadcasting in digital satellite and digital cable broadcasting. Object carousel Editor is very useful tool for iTV developers to edit object carousel of iTV contents. With object carousel Editor, you can set the optimal profile for textual contents, graphical contents, game contents and even TV Portals. Especially, dynamic contents e.g. stock, news, weather and traffic information are supported by dynamic object carousel. Also, stream event for synchronizing A/V and Contents is supported.

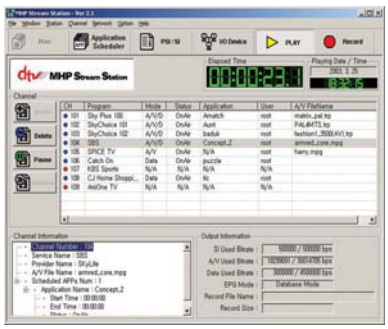


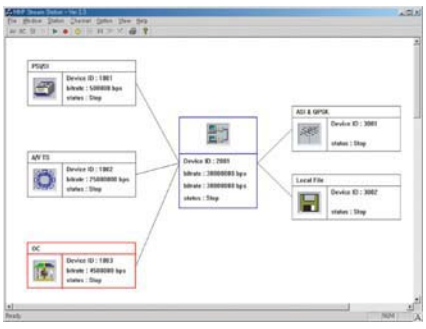
Features & Benefits

- Easy registration of iTV Application
- Application management and editing Object Carousel by APP (Application Property Profile) Metafile.
- Deleting, replacing and modifying each Object Carousel module
- Automatic module-grouping mode and manual mode for professionals
- Setting repetition rate of each Object Carousel module (Bandwidth)
- Supporting selective compression of each module and a whole application.
- Supporting Multi-PID application (e.g. iTV Portal)
- Supporting Dynamic Object Carousel
- Supporting Stream Event for synchronizing A/V and Contents

Features

- Object Carousel Encoding (Java Xlet, HTML, MHEG5 Application)
- Injecting Object Carousel to A/V MPEG2 Transport Stream
- Generating PSI/SI, AIT(XAIT) Tables (User defined PSI/SI & EPG DB)
- Real-time TS Generating and DVB-ASI Output
- Real-time QPSK, QAM, COFDM or 8VSB Modulating and RF Out-put
- Recording of Input-Output Transport stream files
- Supporting Stream Event (Stream Event Sync Tool is optional)
- Automatic Detection of PID Collision / Resetting PID
- Monitoring Encoding and Transmission Status
- Application management and Transmission Control by APP (Application Property Profile) Manager
- Displaying and Modifying Each Object Carousel Module Properties
- Defining Data Transmission Bandwidth
- Setting Repetition Rate of each PID & each Object Carousel Module
- Multi-PID application (e.g. iTV Portal)
- Grouping Modules and Resetting Grouped Module Properties
- PCR Re-stamping





Multiplex and Schedule Manager

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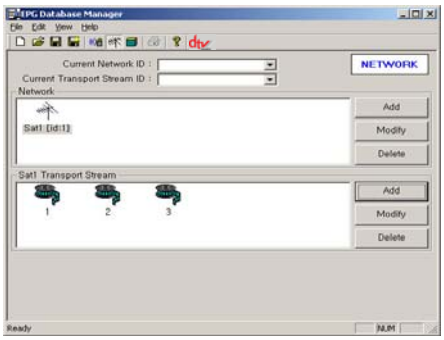
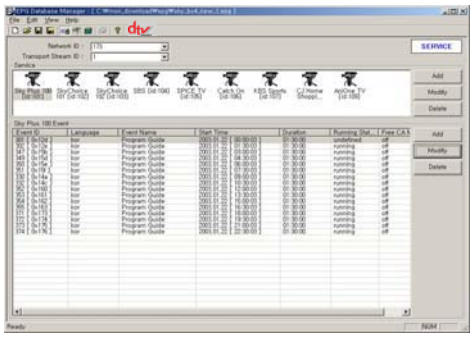
Options

● Option1. PSI/SI/PSIP Editor - SIE100 & PSE100

PSI/SI/PSIP Editor enables you to create EPG information for developing and testing embedded EPG application and downloadable iTV EPG application also.
With PSI/SI/PSIP Editor, you can generate the same EPG Database as specific broadcaster's ID value of DVB-SI User Defined table. To make EPG database more easier, PSI/SI/PSIP Editor supports scripting PSI/SI/PSIP and EPG DB from existing transport stream(Analyzer Package). Also, you can multiplex EPG information to MPEG2 transport stream and test EPG application directly on set-top box using iTV Stream Station.



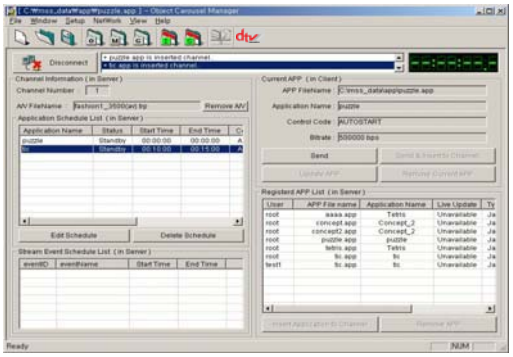


Features & Benefits

- Easy creation of EPG DB
- Support DVB and user defined tables of specific broadcasting systems
- Support scripting PSI/SI/PSIP and EPG DB from existing Transport Stream (Analyzer Package)
- Edit Event information
- Work together with iTV Stream Station for Set-top Box Testing
- Easy management of EPG DB by EPG Meta File
- Create new XML file and then open & save it
- Channel and program view

● Option2. Client PC Program

Client PC Program supports multi-user environment to test iTV Application. On their authoring PC, tens of developers or designers can transmit and test their application via their own reserved service channel of iTV Stream Station simultaneously. Also, Client PC Program gives you a simple means to transmit A/V stream and application with remote control function. Client PC Program supports more comfortable and cost-effective environment for development.



Features and Benefits

- Supporting whole function of Object Carousel Editor S/W with Network support.
- Editing APP(Application Property Profile) XML Meta file.
- Selecting channel & sending application
- Fast loading of application by editing and grouping module
- Supporting multi-user environment (in case of 500KB virtual channel type application, 80 developers can connect iTV Stream Station simultaneously)
- Remote iTV Stream Station Control function. iTV Stream Station provides remote module to process A/V Stream and Application.

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Ordering Information

Base Model	Description	Notes
ITG300	i-TV Stream Station + Portable Frame	* User should select min. 1 module from Option D.

Options		Description	Notes
Option D	D-101	MHP Module	
	D-102	ACAP Module	
	D-103	OCAP Module	
Option IA	IA-101	MHP Stream Analyzer Module	
	IA-102	ACAP Stream Analyzer Module	
	IA-103	OCAP Stream Analyzer Module	
Option B	B-101	ASI Out Module	* B-101 and 102 can't be combined with Base Model without Option D * B-100 options after purchasing, it'll cost additional charges and delivery terms will be within 4 weeks.
	B-102	SPI Out Module	
	B-100	Option Upgrade Service	

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iTV Stream Analyzer
- DVi700(MHP), ATi700(ATSC), OPi700(Opencable)

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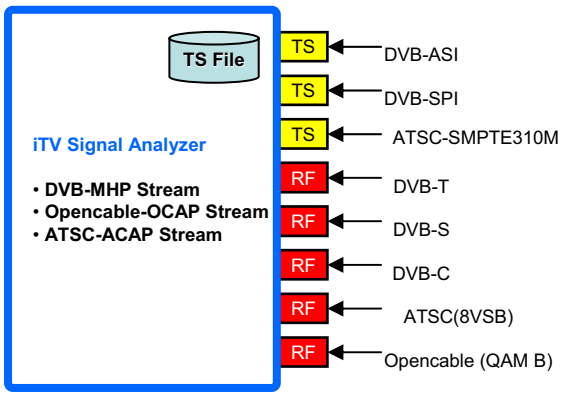
Overview

iTV Stream Analyzer – MHP/ACAP/OCAP is the enhanced industry leading Carousel & iTV Application analyzer supporting MPEG5. iTV Stream Analyzer enables users to look through DSMCC data broadcasting protocol including Object Carousel and Data Carousel. In addition, it fully supports to analyze iTV Application and to verify the design and performance of iTV products, iTV applications and iTV systems. iTV Stream Analyzer offers Real-Time TS analysis from DVB-ASI/SPI, DVB-S, QAM ,DVB-T or 8VSB input and recording function of In/Output MPEG2 transport stream. It also provides carousel stream play-out function through DVB-ASI/SPI and DVB-S, QAM, DVB-T or 8VSB Modulator (Optional).
As following our experience of MPEG Test & Measurement solutions, iTV Stream Analyzer is the powerful tool for users who want to learn about how often broadcast specific data structure. iTV Stream Analyzer is the tool that meets today's data broadcasting market requirements.

- **Code: MHP (DVi700)**
  ACAP(ATI700), OCAP(OPi700)
- **iTV TS Analysis**
- **DSMCC Carousel Analysis**
- **iTV Contents Analysis**
- **TS In : ASI, SPI, SMPTE310**
- **RF In : DVB-T, DVB-S, DVB-C**
  ATSC (8VSB)
  Opencable (QAM B)



Intended Application

- **iTV Test & Measurement**
- **Data Broadcasting Verification**
- **iTV Application Development**
- **iTV Set-top Box Development**
- **iTV Middleware Testing**
- **iTV Middleware Development**
- **iTV Lab.**
- **Interactive Television**

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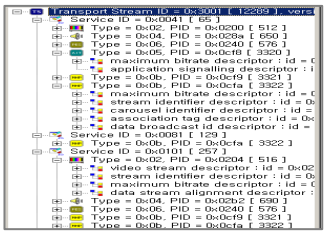
Highlight

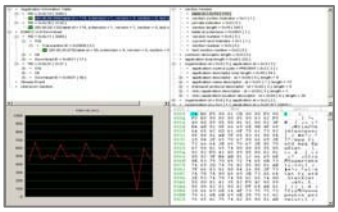
▪ Service Analysis

- Service detail information" at a glance"
- PID Display with intuitive Icons
- Easy Tree Structure
- PAT/PMT version change



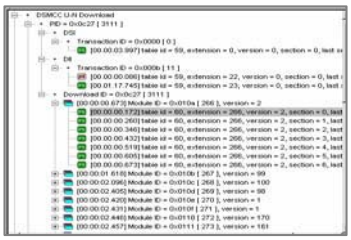
▪ Private Section Analysis

- Section Structure
- Section Header Analysis
- DSMCC Section Analysis
- Application Information table analysis
- Hex view
- Repetition rate view (graph and list)



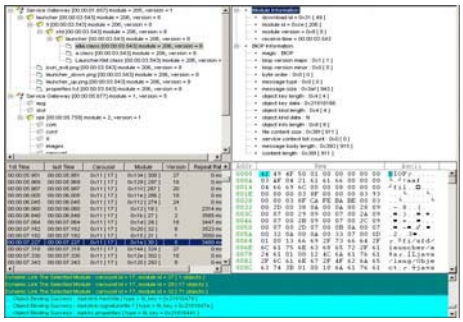
▪ DSMCC U-N Download Protocol Analysis

- DSI Analysis
- DII Analysis
- DDB Analysis
- Module Analysis
  - Detailed Module Information
  - Hex View
  - Repetition Rate
- DII/DSI version change
- Module version change



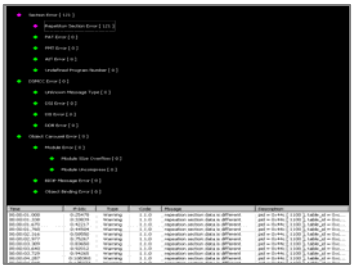
▪ Object Carousel & Contents Analysis

- Easy user interface using tree control
- Object detail information view
- Object hex view
- Dynamic object carousel analysis
- View for object binging (dynamic mode)
  - Initialize object binding
  - Progressing object binding step by step
  - Rollback object binding step by step
- View simple/full object information
- Save content from Transport Stream
- Save file from Transport Stream
- Run object using external program



▪ iTV Error Analysis

- Error Analysis Support
- Section error
  - repetition section error
  - PAT error
  - PMT error
  - AIT error
  - undefined program number
- DSMCC section error
  - unknown message type
  - DSI error
  - DII error
  - DDB error
- Object carousel error
  - unknown message type
  - module error
  - BIOP object error
  - object binding error



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Features

- Service Analysis (MPEG2 PMT, PAT, DVB SI, PSIP)
- Object Carousel Analysis (Dynamic Object Carousel)
- AIT(XAIT) Analysis
- Stream Event Analysis
- iTV Error Analysis
- MHEG5 Analysis
- Extracting Application (Java ,HTML) or object from Transport Stream
- BIOP, DSI, DII, DDB and DSM-CC section display and interpretation
- Bit rate and repetition rate display of DSMCC blocks, modules, objects, UN messages and SI tables
- Automatic Version Tracing
- Tables : PAT, PMT,TSDT, CAT, SDT(actual, other), NIT (actual, other), BAT, AIT (XAIT), DSMCC(Object Carousel), BIOP, EIT (actual P/F, actual schedule, other P/F, other schedule)

Option

- Carousel stream play-out via DVB-ASI/SPI and DVB-S, QAM, DVB-T or 8VSB Modulator

Ordering Information

Base Model	Description
DVi700	DVi700 S/W + Portable Frame + ASI Input module
Base Model	**Description**
ATi700	ATi700 S/W + Portable Frame + ASI Input module
Base Model	**Description**
OPi700	OPi700 S/W + Portable Frame + ASI Input module

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