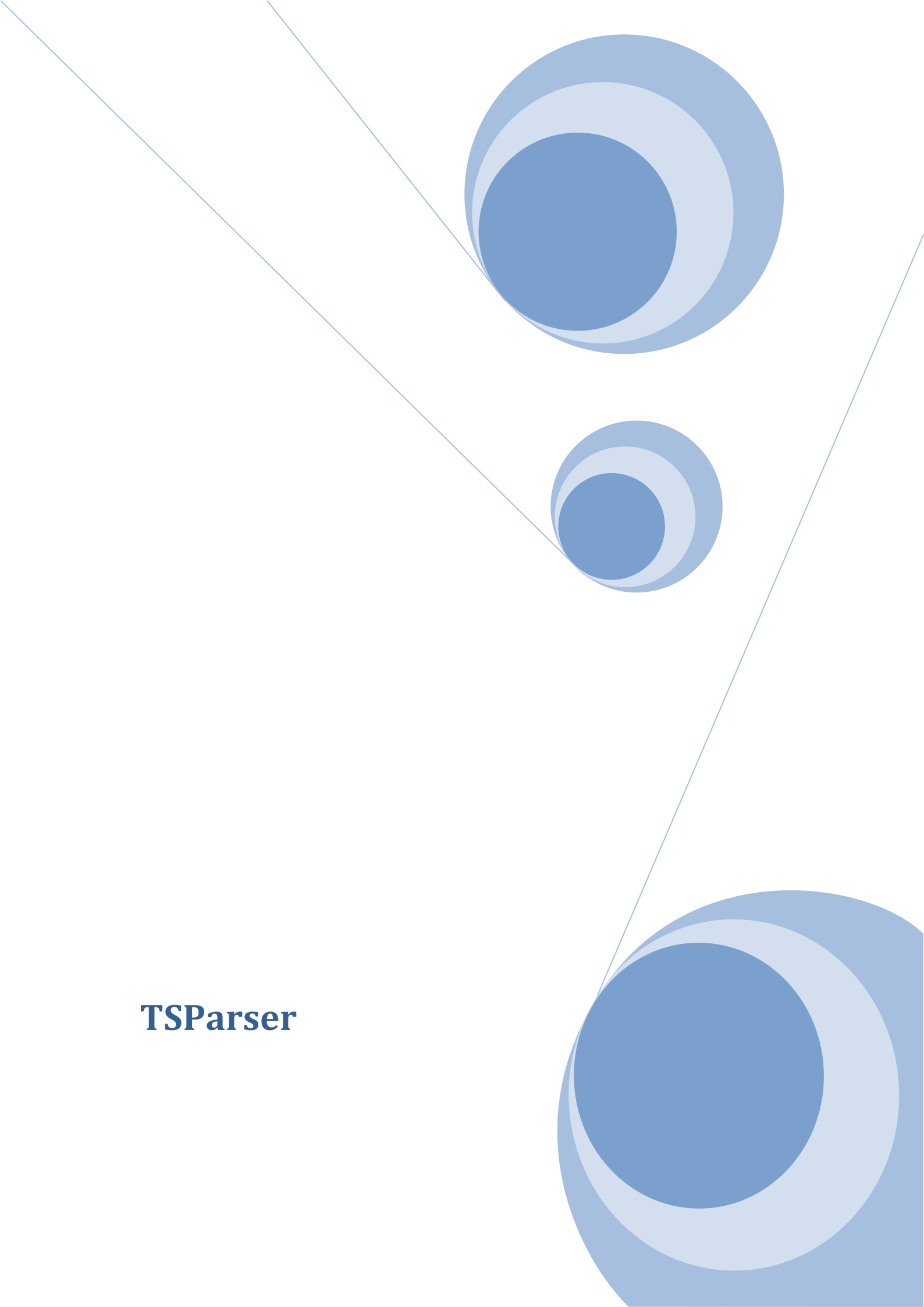


TSParser

TSParser
(MPEG2 Analyzer)
Version 1.0.1

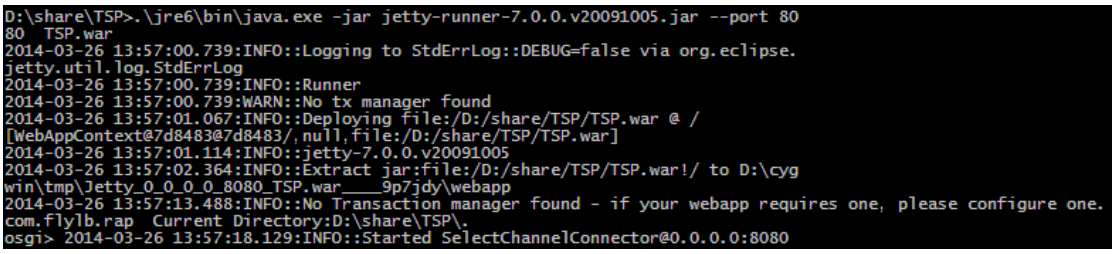
Manual

1. Introduction

First of all, we would like to thank you for choosing the TSP (MPEG2 Analyzer). This manual contains an introduction to most of the features supported by the analyzer.

1.1. Run

TSP is a web base application use jetty container.
%INSTALL_DIR%/startup.bat
Supported explore: Chrome IE Firefox
Chrome is recommended.
Href: http://xxx.xxx.xxx.xxx:8080/TSP
The default port is 8080.

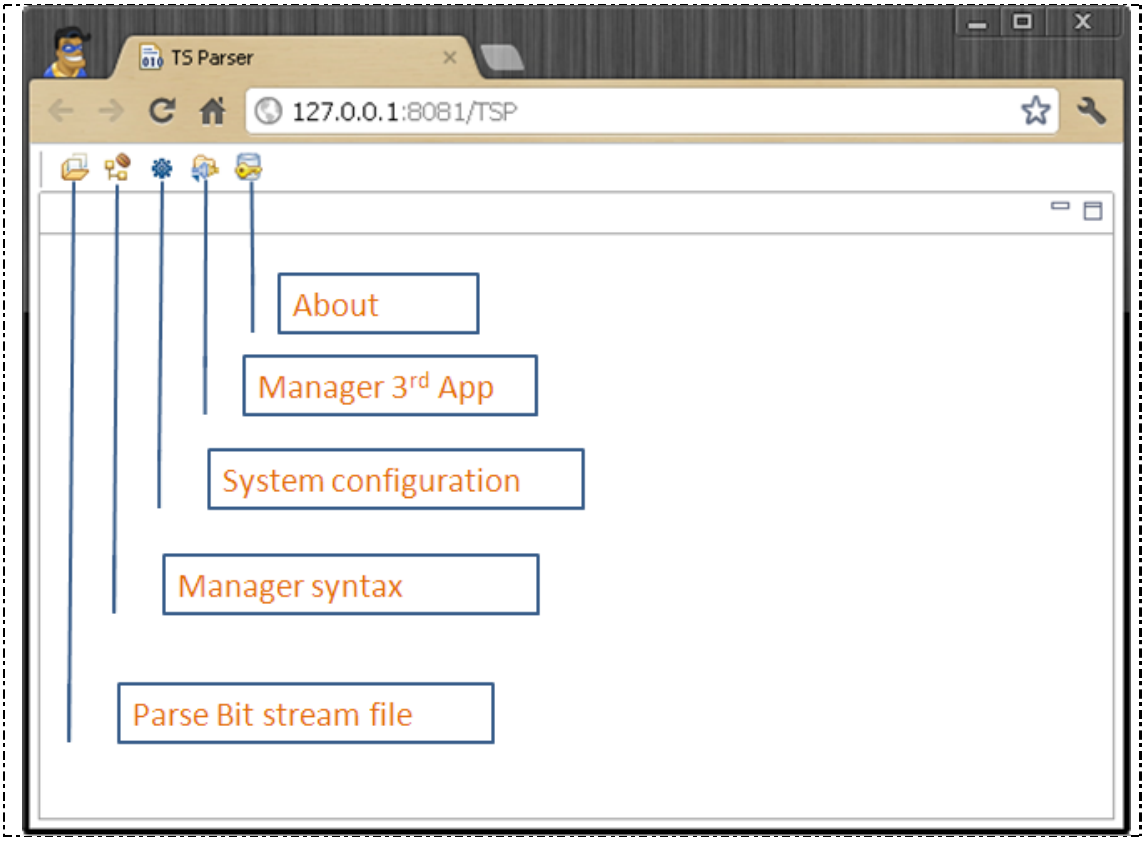


1.2. Transport stream files

The analyzer allows you to read and decode files which are stored on the file system of your computer. To read a file, you can enter a valid filename with full path.

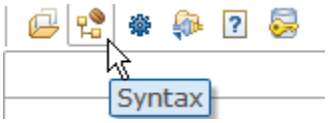
1.3. Main Window

Using Browser access http://IP:8080/TSP.

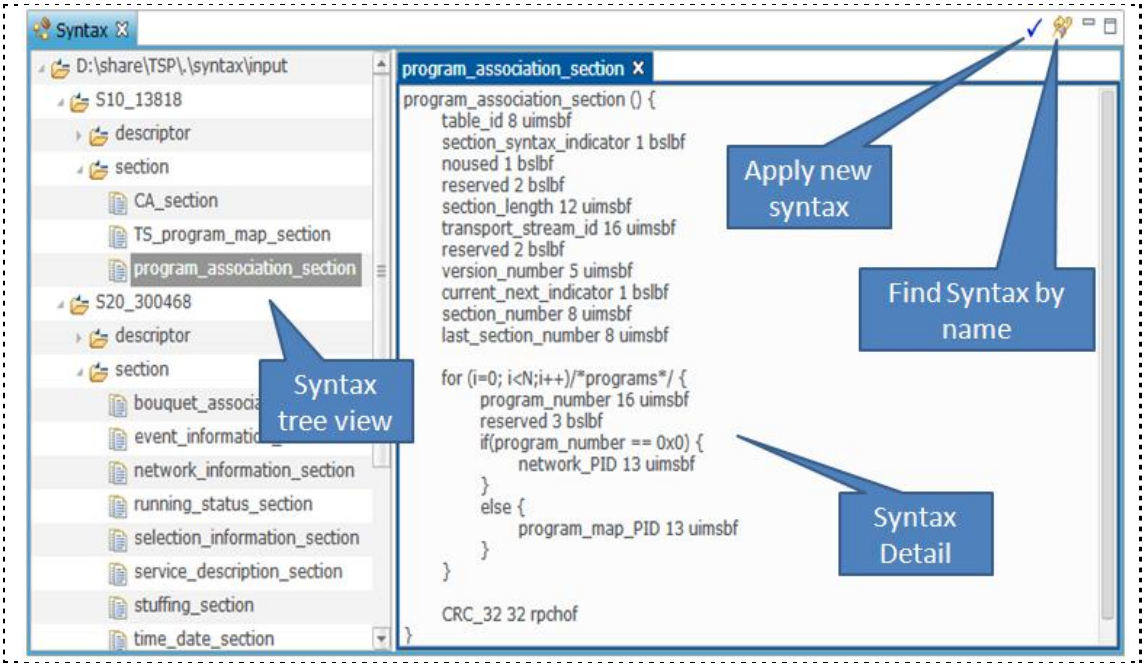


2. Core features

2.1. Syntax management



Open syntax manager window



TSP use Section/Descriptor syntax to parse Section/Descriptor.

TSP has the ability to modify the Section & Descriptor syntax at runtime. Change the syntax makes analysis results at the same time change. Syntax file locate: %INSTALL_DIR%\syntax, User can modify these syntax files outside system.

2.1.1. Section syntax sample

For EIT

```
event_information_section(){
        table_id 8 uimsbf
        section_syntax_indicator 1 bslbf
        reserved_future_use 1 bslbf
        reserved 2 bslbf
        section_length 12 uimsbf
        service_id 16 uimsbf
        reserved 2 bslbf
        version_number 5 uimsbf
        current_next_indicator 1 bslbf
        section_number 8 uimsbf
        last_section_number 8 uimsbf
        transport_stream_id 16 uimsbf
        original_network_id 16 uimsbf
        segment_last_section_number 8 uimsbf
        last_table_id 8 uimsbf
        for(i=0;i<N;i++)/*events*/{
```

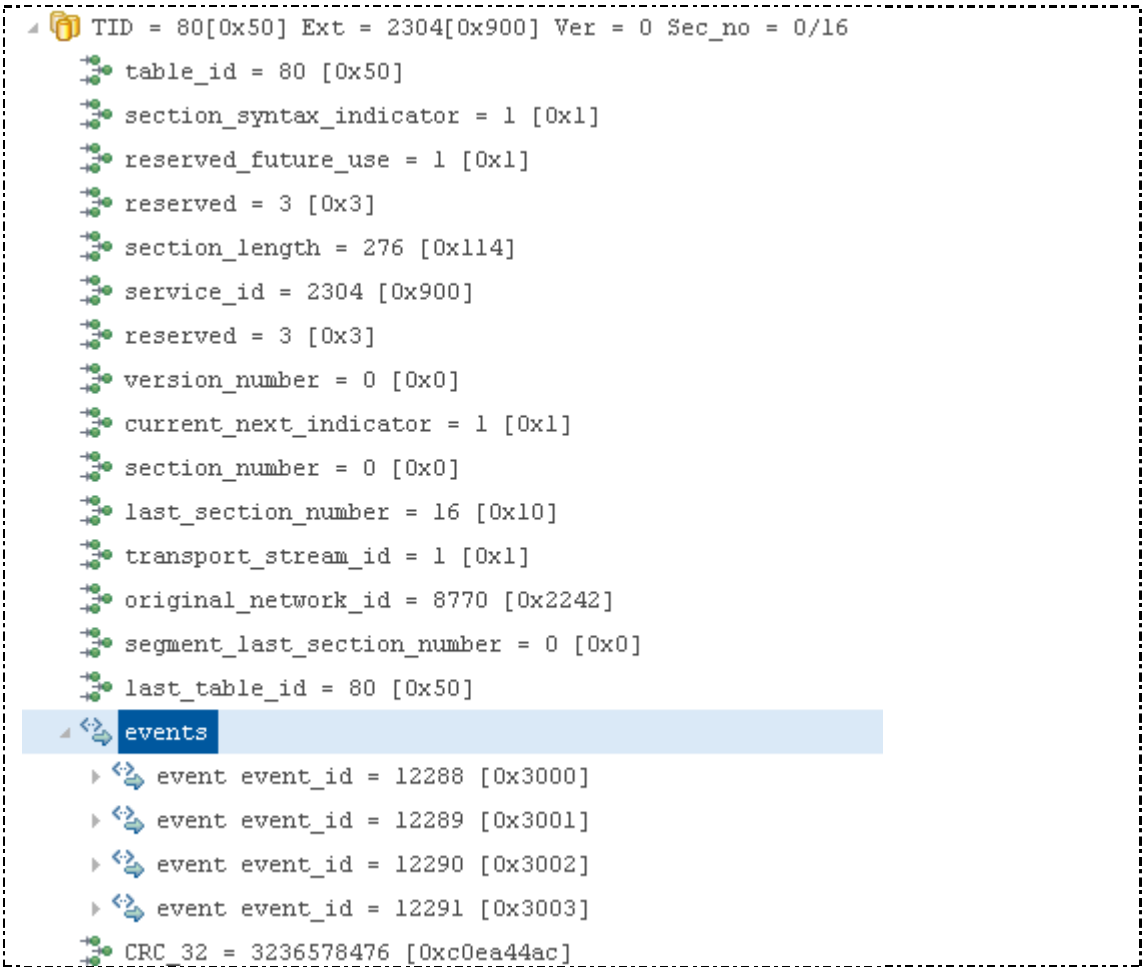
```
                event_id 16 uimsbf
                start_time 40 bslbf
                duration 24 uimsbf
                running_status 3 uimsbf
                free_CA_mode 1 bslbf
                descriptors_loop_length 12 uimsbf
                for(i=0;i<N;i++){
                        descriptor()
                }
        }
        CRC_32 32 rpchof
}
```

Text marked in red is for “For Loop”, the result tree use this text to create a tree node. The format is /*xxxxs*/

Some syntax cannot be changed.
e.g.

```
program_association_section () {
        …
        for (i=0; i<N;i++)/*programs*/ {
                program_number 16 uimsbf
                reserved 3 bslbf
                if(program_number == 0x0) {
                        network_PID 13 uimsbf
                }
                else {
                        program_map_PID 13 uimsbf
                }
        }
        …
System using programs->program_map_PID to find PMT
System using programs->network_PID to find NIT.
Please do not change these syntax.
```

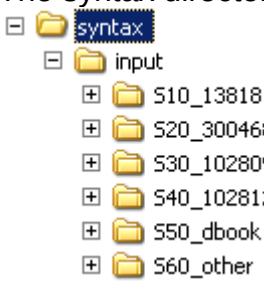
2.1.2. Section result sample



2.1.3. Add new Section/Descriptor

User can add new Section/Descriptor syntax to system.

The syntax directory:

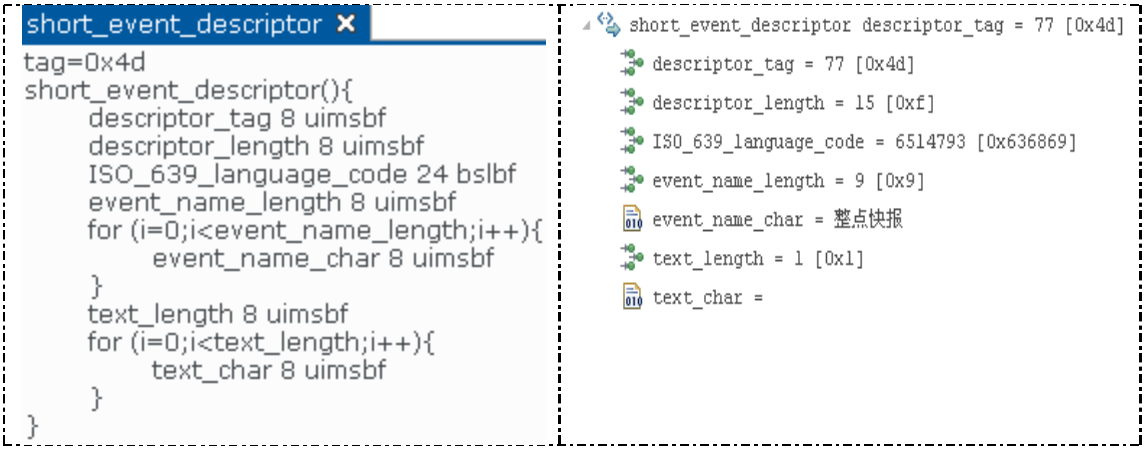


The prefix Sx0_ is for sort used.

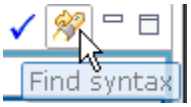
The new Section syntax should be registered, see 2.2.2 Configure Table ID

The new Descriptor syntax should assign a tag **at first line**,

Sample for short_event_descriptor:

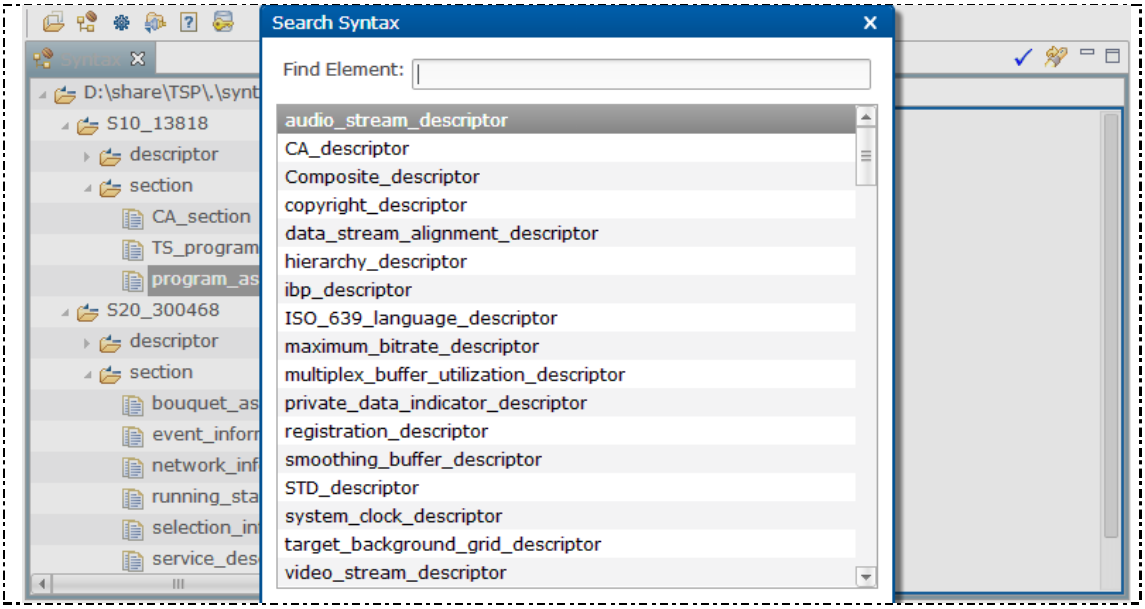


2.1.4. Search syntax



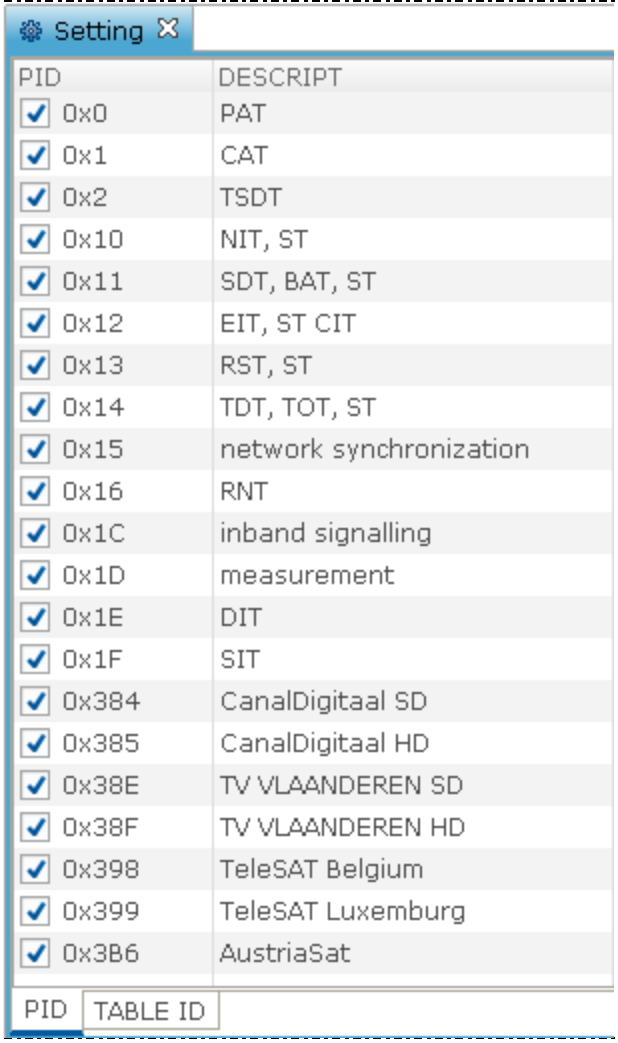
Click button “find syntax” will pop dialog “search Syntax”

Enter key word for match syntax, double click to open it.



2.2. System setting

2.2.1. Configure PID filter



User cans custom PID filter for runtime used.
PMT filter will be disabled if PAT is disabled.
Decrease filter will cause parser faster.

2.2.2. Configure Table ID

ID_FROM: The start table id of Section.
ID_TO: The end table id of Section, for fixed table id marks this value with 0.
(E.g. For example: EIT table id: 0x4E 0x4F 0x50-0x5F 0x60-0x6F)

SHORT_NAME will be shown as a tree root node.

FULL_CLASS_NAME:
Connect syntax to a special Table ID.
Like java package. class name.
(E.g. PAT S10_13818.section.program_association_section)

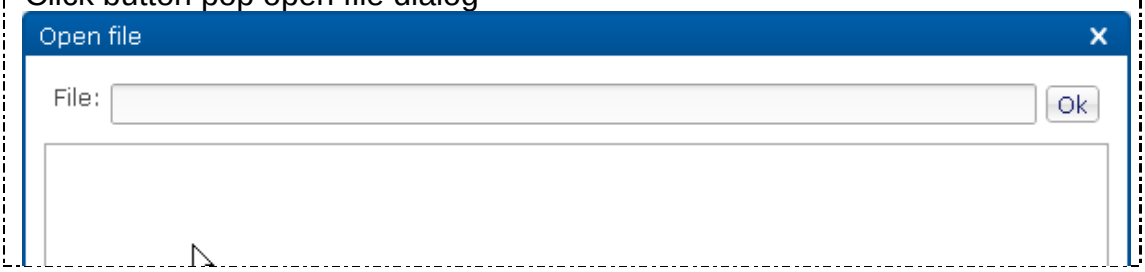
User can enabled/disable a special Table for parser used.
Click this button apply setting.

2.3. Parse bit stream file

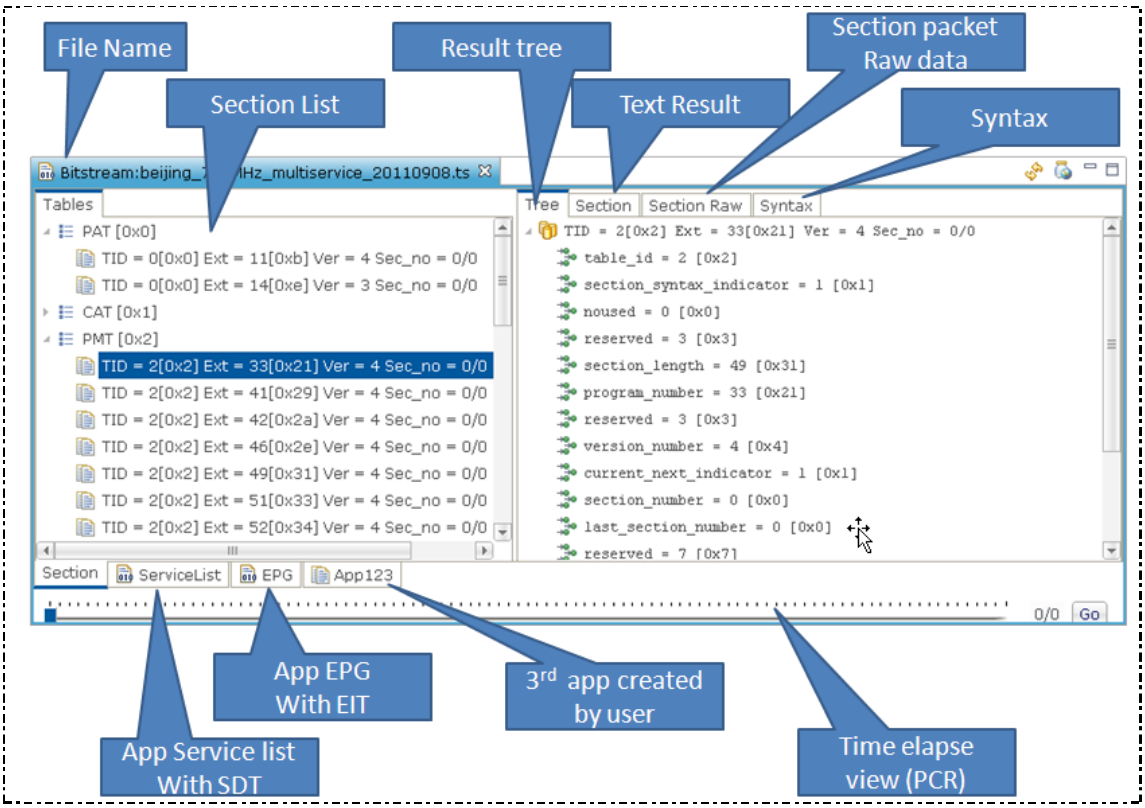
TSP can analyze multiple files.

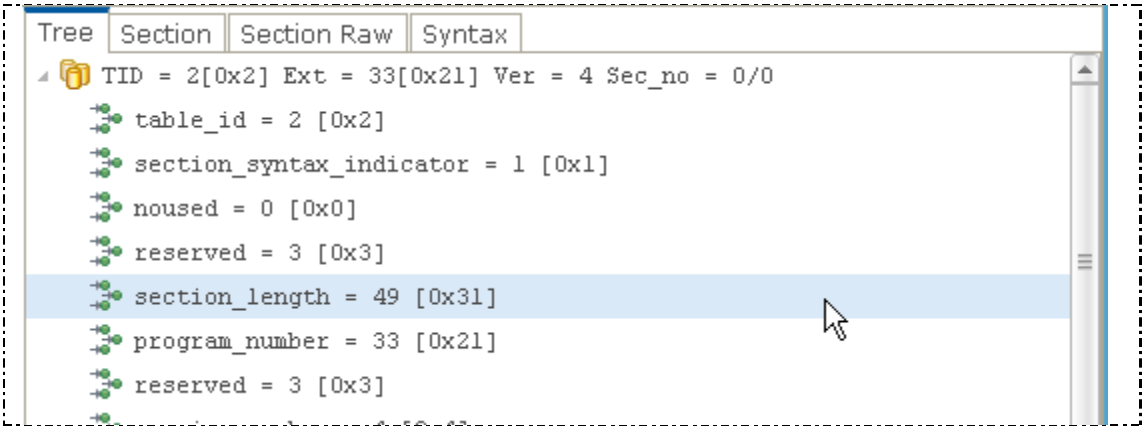
2.3.1. Open and parse file

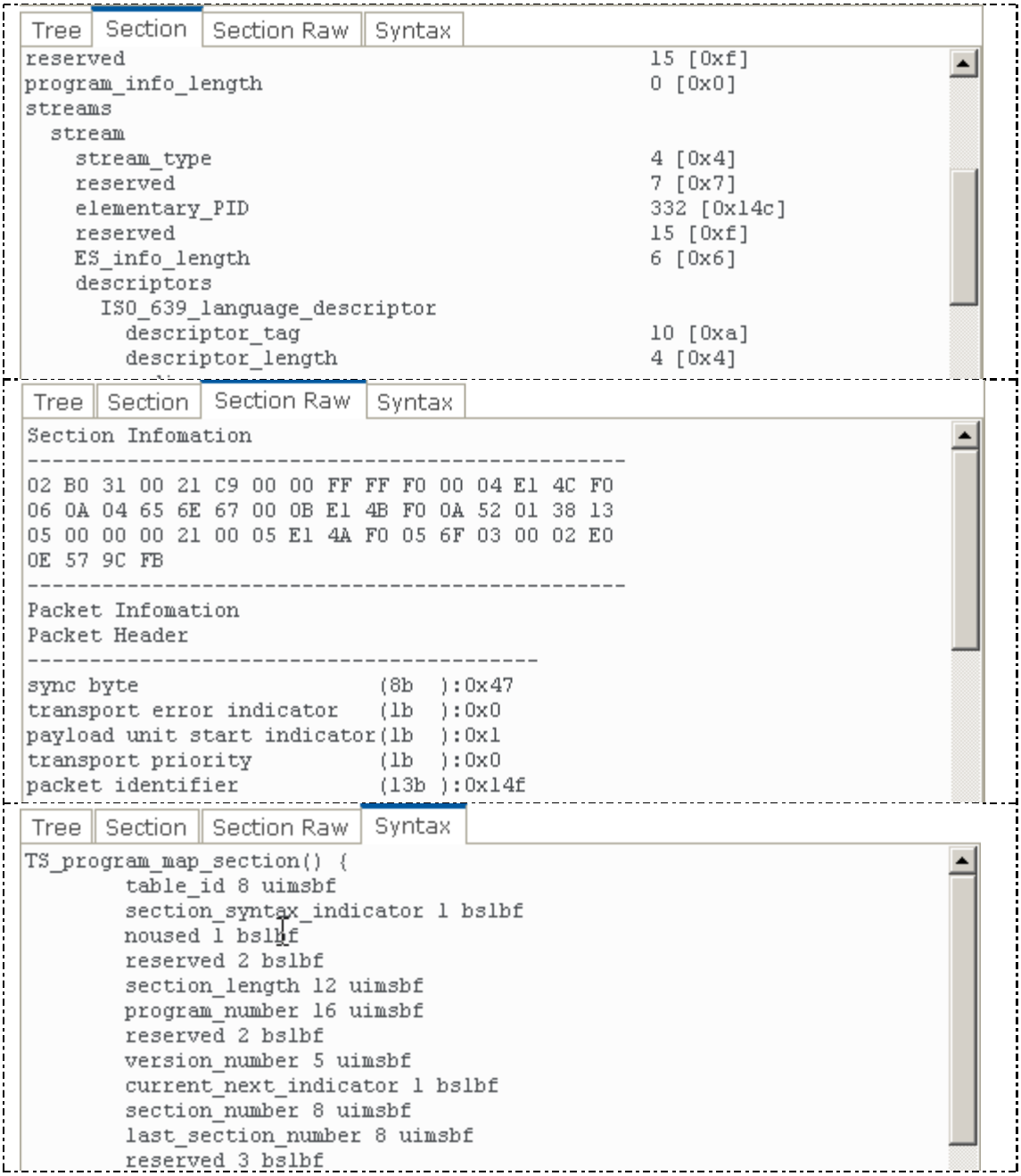
Click button pop open file dialog



Input full file name in edit box click OK.


File Name
Result tree
Section packet Raw data
Section List
Text Result
Syntax
Bitstream:beijing_
lHz_multiservice_20110908.ts
Tables
PAT [0x0]
TID = 0[0x0] Ext = 11[0xb] Ver = 4 Sec_no = 0/0
TID = 0[0x0] Ext = 14[0xe] Ver = 3 Sec_no = 0/0
CAT [0x1]
PMT [0x2]
TID = 2[0x2] Ext = 33[0x21] Ver = 4 Sec_no = 0/0
TID = 2[0x2] Ext = 41[0x29] Ver = 4 Sec_no = 0/0
TID = 2[0x2] Ext = 42[0x2a] Ver = 4 Sec_no = 0/0
TID = 2[0x2] Ext = 46[0x2e] Ver = 4 Sec_no = 0/0
TID = 2[0x2] Ext = 49[0x31] Ver = 4 Sec_no = 0/0
TID = 2[0x2] Ext = 51[0x33] Ver = 4 Sec_no = 0/0
TID = 2[0x2] Ext = 52[0x34] Ver = 4 Sec_no = 0/0
Tree
Section
Section Raw
Syntax
TID = 2[0x2] Ext = 33[0x21] Ver = 4 Sec_no = 0/0
table_id = 2 [0x2]
section_syntax_indicator = 1 [0x1]
noused = 0 [0x0]
reserved = 3 [0x3]
section_length = 49 [0x31]
program_number = 33 [0x21]
reserved = 3 [0x3]
version_number = 4 [0x4]
current_next_indicator = 1 [0x1]
section_number = 0 [0x0]
last_section_number = 0 [0x0]
reserved = 7 [0x7]
Section
ServiceList
EPG
App123
0/0
Go
App EPG With EIT
3rd app created by user
App Service list With SDT
Time elapse view (PCR)


Tree
Section
Section Raw
Syntax
TID = 2[0x2] Ext = 33[0x21] Ver = 4 Sec_no = 0/0
table_id = 2 [0x2]
section_syntax_indicator = 1 [0x1]
noused = 0 [0x0]
reserved = 3 [0x3]
section_length = 49 [0x31]
program_number = 33 [0x21]
reserved = 3 [0x3]



2.3.2. Applications

User can write 3rd application in java, please using Java1.5 style

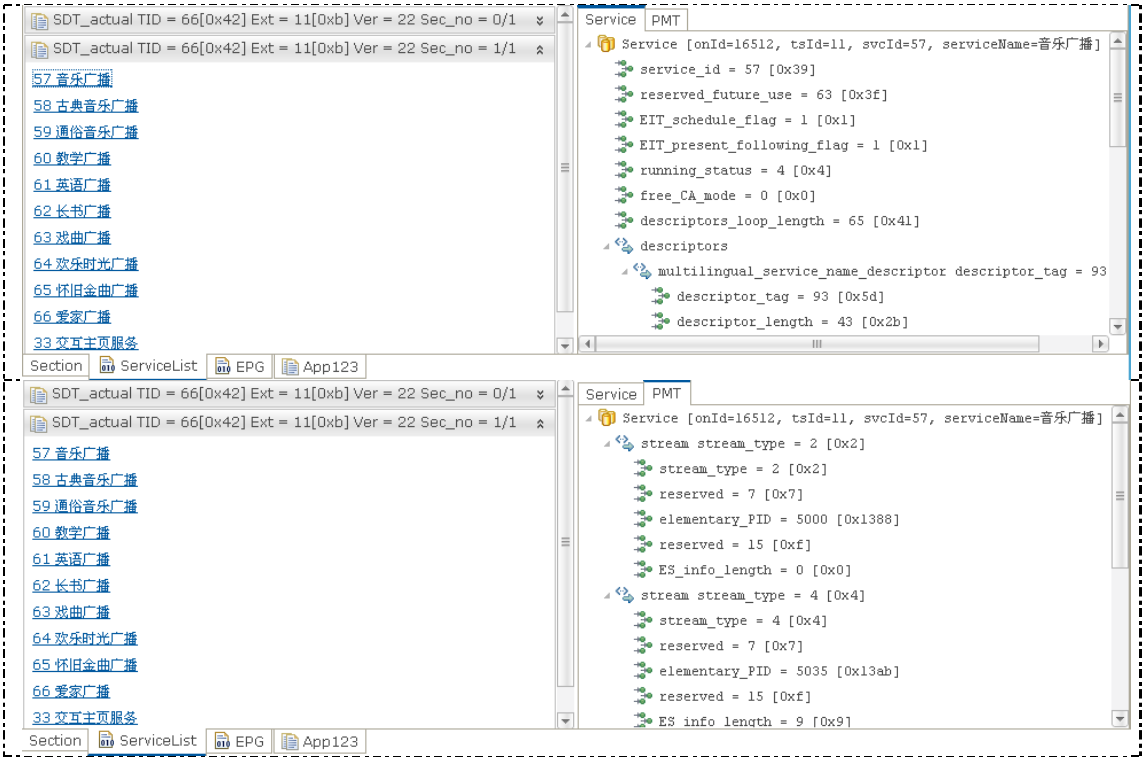
Application Locate: %INSTALL_DIR%/3rd/src

When system startup, these application will be auto registered into system

There are 3 build in applications in system

2.3.2.1. Service List application

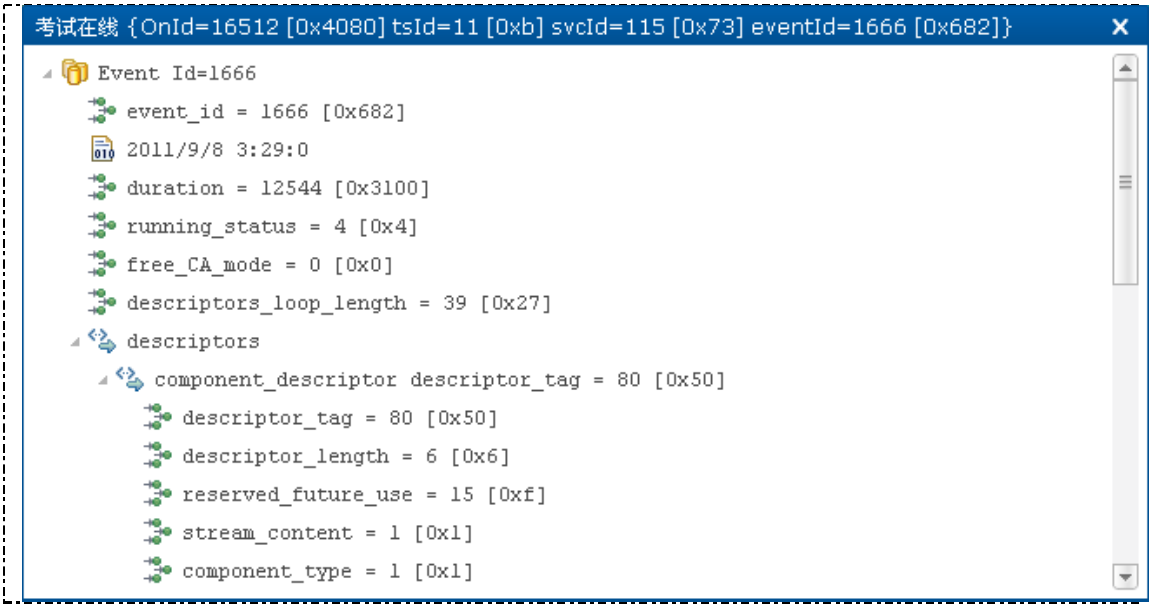
Service List application, base on SDT



2.3.2.2. EPG application

EPG Application base on EIT.

Double click each event to show event detail information.



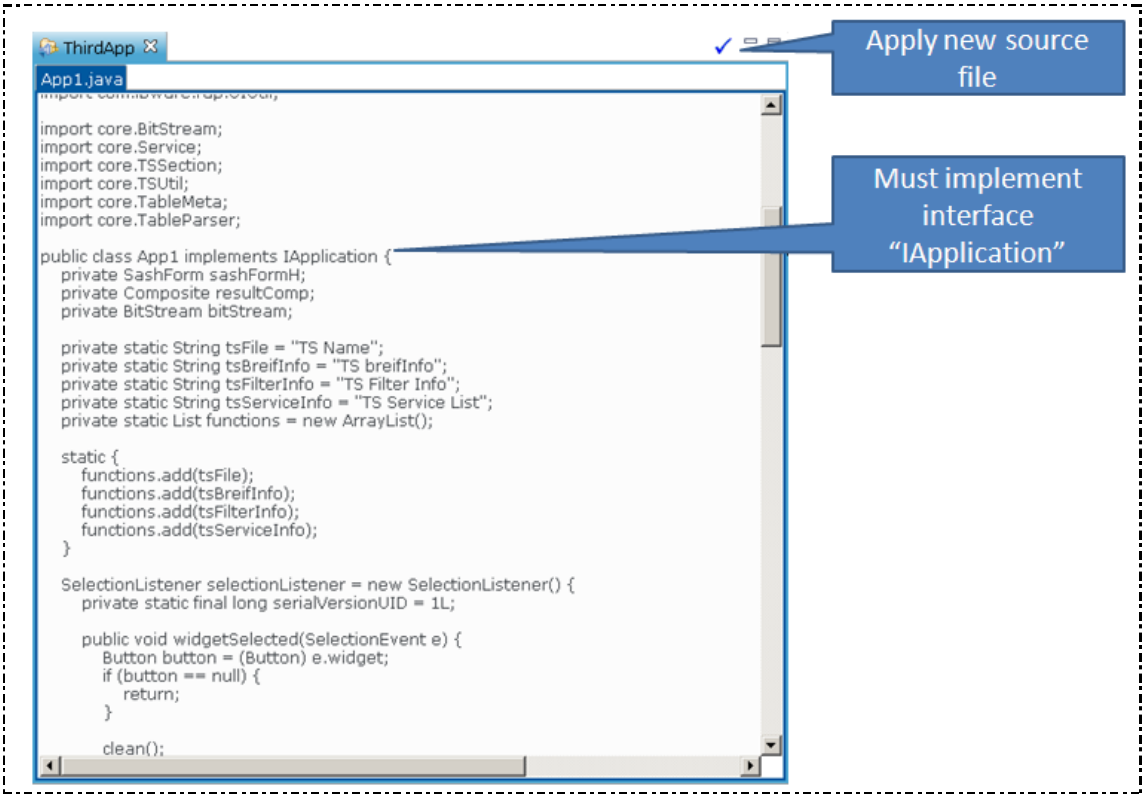
2.3.2.3. Demo Application

The Demo App shows some system information.

2.4. Third part application management.

3rd application locates in %INSTALL_DIR%/3rd/src.

Application wrote by java language with 1.5 styles.



3. Contact & Support

For support, please contact us at flylb1@gmail.com

https://sites.google.com/site/tsparser/