

Title Script Objects

General Information



*Revision as
of February 12, 2019*

User's Guide



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FCC ID:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver.

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

Shielded cables and I/O cards must be used for this equipment to comply with the relevant FCC regulations. Changes or modifications not expressly approved in writing by SoftLab-NSK, Ltd. may void the user's authority to operate this equipment.

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Our company warrants this product against defects in materials and workmanship for a period of one year from the date of purchase. During the warranty period, products determined by us to be defective in form or function will be repaired or replaced at our option, at no charge. This warranty does not apply if the product has been damaged by accident, abuse, misuse, or as a result of service or modification other than by us.

This warranty is in lieu of any other warranty expressed or implied. In no event shall we be held liable for incidental or consequential damages, such as lost revenue or lost business opportunities arising from the purchase of this product.

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Introduction

Title script objects can be used with SoftLab-NSK products in order to automate different aspects of broadcasting.

A title object with a script, or a script object, is an object that contains a script along with title elements – a JScript.Net program code – that controls the title elements.

Note: SoftLab-NSK products use title projects that consist of title objects to control the display of titles. Title objects are groups of title elements that are used to configure the titles' screen position, settings, and content. For more information on working with title projects, see the «[FDTitle Designer. Title Project Editor](#)» user's guide.

Using scripts allows titles to be used in more complex ways, for example to automate the labeling of music clips (1), display announcement headers, display announcements or program age restrictions. One title project can contain several working title script objects.



The client can develop script objects independently or use premade script objects from libraries, provided by Forward T Software developers.

This guide contains: the general procedure of working with title script objects, a list of script objects commonly distributed in libraries, with their purpose listed. For a description and the general procedure on setting up specific script objects, please see the corresponding user's guides for their libraries.

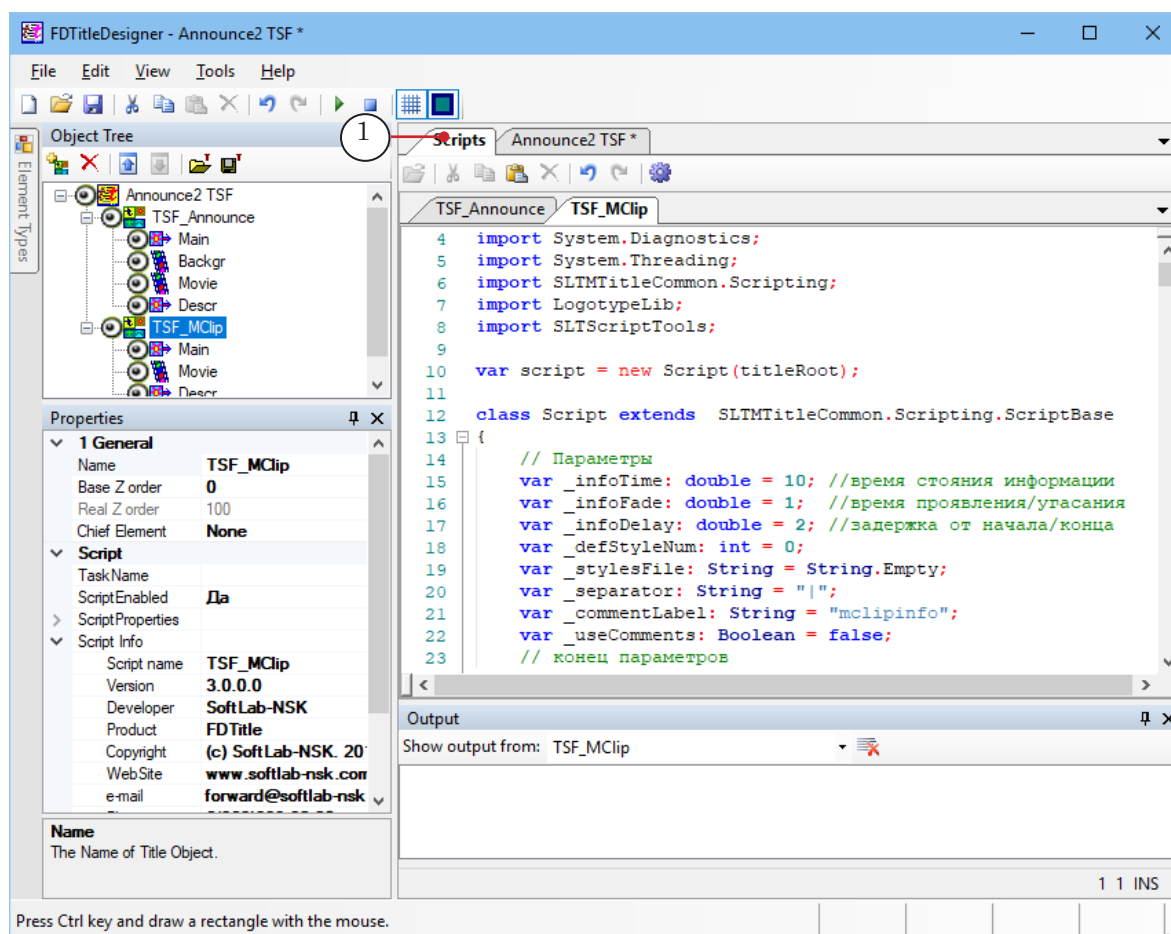


Script Object Types

Title script objects are divided into two groups: open and closed source codes.

1. Open Source Script Objects

Title script objects with an open source code have their script code available to be viewed and edited. After loading an open source script object into a title project, the FDTitle Designer program window will display the new Scripts (1) tab that will display the corresponding code.



2. Closed Source Script Objects

Title script objects with a closed source code do not have their script code available to be viewed and edited.



Script Object Distribution

1. Template Files

A description of each script object is stored in a separate template file – and XML file. The template file name corresponds to the script object name, the template file extension is SLTitleTmpl. For example, the TS2_AdvMixPro script object is stored in the TS2_AdvMixPro.SLTitleTmpl file.

To add a script object to a tile project the objects needs to be imported from the corresponding template file. After the objects has been imported into the project, the template file can be deleted or moved to a different folder.









2. Libraries

Files with script objects are distributed using script libraries:

- TSF – an open source script object library. Free to distribute;
- TS1 and TS2 – closed source script object libraries. The corresponding product needs to be purchased to use script objects from these libraries when broadcasting.

3. Importing Libraries

To import a script object library, find the Downloads > TSF and TS1 title script libraries section on the SoftLab-NSK site.

Resource for downloading	Comments	Download
 Video codecs set	Separate installer of all SoftLab-NSK video codecs VFW for 32-bit and 64-bit OS	 FTP, 2,9M
TSF and TS1 title script libraries	Separate installer of TSF, TS1 and TS2 script template libraries (free and commercial)	 FTP, 2,4M
Examples (ZIP format)	Examples for the "Clock" and "Clock2" title objects in the FDTileDesigner program and other examples	 16M
Full documentation archive (ZIP format)	All documentation in PDF format in one ZIP archive	 FTP, 171M
SDK (ZIP archive)	SDK set (from the developer) to design your own applications in one ZIP archive (documentation, included files, examples)	 11M
HASP-key drivers for Forward TS products	Driver installer for HASP USB-key for Forward TS. Usage in command line: "full path to driver installer" /i Example: "F:\HASP\haspdinst.exe" /i	 FTP, 15M
CodeMeter software	Base software for "APTO stream processing (Linear Acoustic)" plugin	 35M



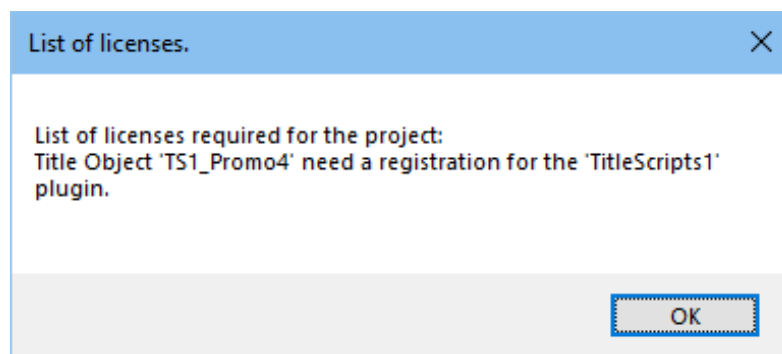
4. License to Use

The corresponding product needs to be purchased to use script objects from the TS1 and TS2 libraries when broadcasting. Licenses are obtained when the library is purchased.

✓ **Important:** The licenses are necessary to use script objects from the TS1 and TS2 libraries. If the broadcasting server does not have the corresponding license it will not be possible to broadcast the titles that are using paid scripts.

A license is not necessary to configure and preview title objects containing script objects from any libraries (both free and paid). Any computer can configure and preview in «Free» mode.

When opening a title project containing closed source script object in FDTitle Designer a warning will always appear, listing the licenses necessary to broadcast the titles. This warning also appears when importing closed source script objects into a title project.





List of Script Objects

1. TSF Library

Title script objects contained in the TSF library.

Name	Purpose
TSF_Age	Displaying the age restrictions of the current program (video). The information is displayed once during the duration of the video. The display begins a set amount of time after the start of the video, set by the user.
TSF_MClip	Automating the labeling of music clips – when the music clip is played, titles with the corresponding information are displayed. The titles are displayed twice during the clip – at the beginning and end.
TSF_AdvMix, TSF_AdvMixPS, TSF_AdvMixPS2	Displaying different types of ads in the set area of the screen: videoclips, images, crawl lines with pausing text. The script objects differ in the way the crawl line is displayed.
TSF_Announce	Displaying an announcement about the upcoming program (video). The announcement is displayed once during the video.
TSF_IU	Displaying images with data received from different sources. Works the same way as the FDImageUpdater program.
TSF_MovieList	Gives more options for Ad block type title elements. Allows the display of a sequence of video and static images using a set area of the screen as a background. If there is not enough time, the last announcement is displayed partially.
TSF_CaptionPro	Gives more options for Caption type title elements. Allows the display of a sequence of text captions and images with a fade in/out effect using a set area of the screen as a background.
TSF_AdCountDown	Displaying a countdown until the end of the ad block.
TSF_RollCrawl	Gives more options for Crawl line type title elements. Allows the display of a crawl line using a set area of the screen as a background. If there is not enough time, the last announcement is displayed partially.
TSF_Ticker	Displaying ads in a set area of the screen in the form of a continuous, cycled crawl line with no pause between the last and first advertisement, with the option of adding new advertisements to the crawl line in real time.



2. TS1 Library

Title script objects contained in the TS1 library.

Name	Purpose
TS1_MuzClip	Automating the subtitling of music clips – during the playthrough of the video clip the corresponding information for the clip is displayed using titles. The titles are displayed at the beginning and end of the playthrough.
TS1_Header	Displaying announcement headers: a group of announcements displayed as a crawl line with a separate line containing the header.
TS1_TVGuide	Sequential display of the upcoming programs for different channels.
TS1_Horo	Displaying horoscopes for different zodiac signs.
TS1_DB2Text	Displaying announcements whose text is read from a database.
TS1_SMSCrawl	Displaying text messages as a crawl line.
TS1_SubTitles	Automating the display of subtitles.
TS1_AdvBoard	Displaying multi-line announcements.
TS1_AdvBoard2	Displaying multi-line announcements with the option to have a separate audio accompaniment for each announcement.
TS1_FastMovieTitles	Fast forwarding through a movie's final credits.



3. TS2 Library

Title script objects contained in the TS2 library.

Name	Purpose
TS2_Promo	Displaying titles for the current program (videoclip), for example containing text with information on the current program. The text display begins and ends at one set time after the start of the video and before the end of the playthrough. The indent is set by the user.
TS2_Promo2 TS2_Promo3 TS2_Promo4	Displaying an announcement – information on the upcoming program (videoclip). The announcement can contain text and images, as well as a video clip. An announcement is displayed once during the previous program. The script objects differ in the source of the announcement text: <ul style="list-style-type: none">• TS2_Promo2 – from comments in the FDO nAir schedule;• TS2_Promo3 – a SLIni file;• TS2_Promo4 – from comments in the schedule/a text file/ a SLIni file.
TS2_RollCrawlPro	Displaying advertisements the text of which is split into three parts: a main part and two additional ones. Each part is displayed in different areas of the screen set by the user.
TS2_RollCrawlPro2	Displaying advertisements that consist of a crawl line with pausing text and two additional lines that are displayed in different areas of the screen set by the user.
TS2_RollCrawlPro3	The automatic start of a crawl line at a set time.
TS2_AdvMixPro	Displaying advertisements of different types (images, videoclips, crawl line) with the option of displaying additional text in two individual fields.
TS2_InfoBar	Displaying an infobar consisting of one-line announcements.
TS2_InfoBar2	Displaying an infobar. For each announcement the following is displayed: the title (header); text, consisting of two line, each of which can have individual formatting. Information on the current time and air temperature can be displayed additionally.
TS2_InfoBar3	Displaying an infobar. For each announcement the title (header) and the announcement text is displayed. A simplified version of the TS2_InfoBar2 script object.



Working with Title Script Objects

1. General Procedure

1. Make sure that the required script object library is downloaded and that the computer has the appropriate license.
2. Read through the instructions on setting up the desired script object, found in the section with its description in the user's guide for the corresponding library:
 - TSF – «[TSF – free library of the open source scripted objects](#)»;
 - TS1 – «[TS1 – paid library of the closed source scripted title objects](#)»;
 - TS2 – «[TS2 – paid library of the closed source scripted title objects](#)».
3. Prepare the files needed for the script object to work: the task file, the style collection file (*.efc), etc.
4. In the FDTitle Designer program:
 1. Load the script object into the title project from the template file.
 2. Configure the script object settings and its title elements by following the instructions provided in its description.
 3. Save the title project.
 4. The script can be previewed if it does not contain any information from the FDO nAir schedule.
If the script does contain information from the FDO nAir schedule (for example if it subtitles music clips) it can only be previewed after the next step is completed.
5. In the FDO nAir program:
 1. Load the prepare title project.
 2. Configure the title commands/buttons.
 3. Create a broadcast schedule.
If the script does contain information from the FDO nAir schedule (for example if it subtitles music clips) it can only be previewed after the next step is completed.

✓ **Important:** Make sure that the FDO nAir schedule is created according to the requirements listed in the description of the script object used.

4. Start the schedule (to preview or to broadcast).

✓ **Important:** Script objects from the TS1 and TS2 libraries can only be used if the corresponding licenses are obtained.



6. To preview the output signal with the titles overlaid one of the following programs can be used:
 - SLTitlePreview – to preview audio-video data from output of FDO nAir when working in «no board» mode (in this case licenses are not required for the scripts). Can be used for test previews on any computer. For instructions see the [«FDO nAir. Additional Sections»](#) user’s guide, section «Previewing data on a computer without using a board. SLTitlePreview Program»;
 - FDPreview – to preview audio-video data of the board input/output. For instructions see the [«FDPreview. Program for Previewing of Audio and Video on Boards Inputs/Outputs»](#).

2. Script Data Sources

When working the script manages the assignment of tasks to the script object title elements. The task data is received from a data source prepared by the user.

Scripts can use different kinds of sources:

- task file. Usually a text file (*.txt);
- FDO nAir schedule comments;
- SLIni files.

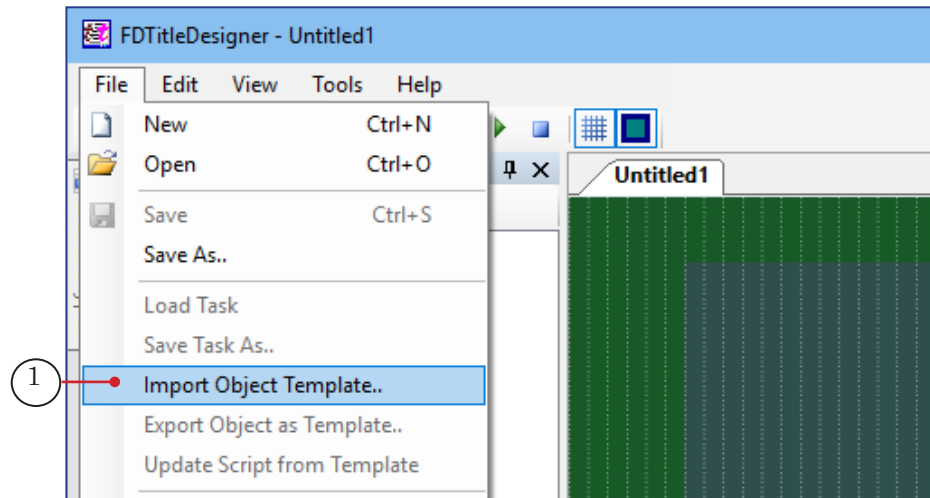
As a rule the type of source is determined by the user when configuring the script object in FDTitle Designer (more information on the possible sources for each script object is listed in their descriptions).

3. FDTitle Designer. Loading a script object into a title project

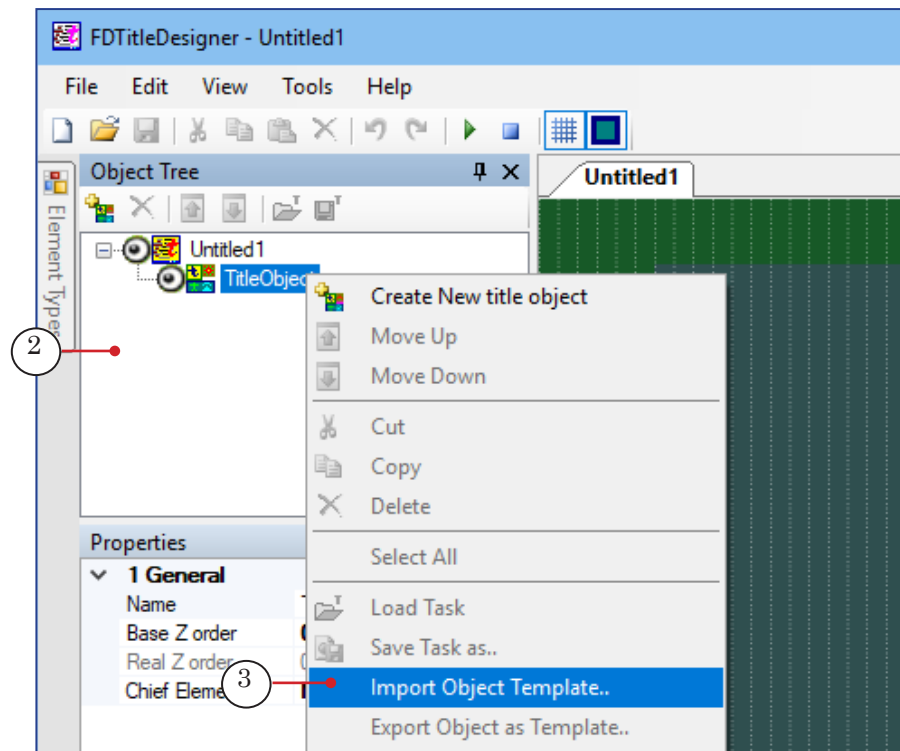
For detailed information on creating and configuring title projects see the «[FDTitle Designer. Title Project Editor](#)» user's guide.

In the FDTitleDesigner program window:

1. Create (or open) a title project in which the script object will be used.
2. Select File > Import Object Template (1).

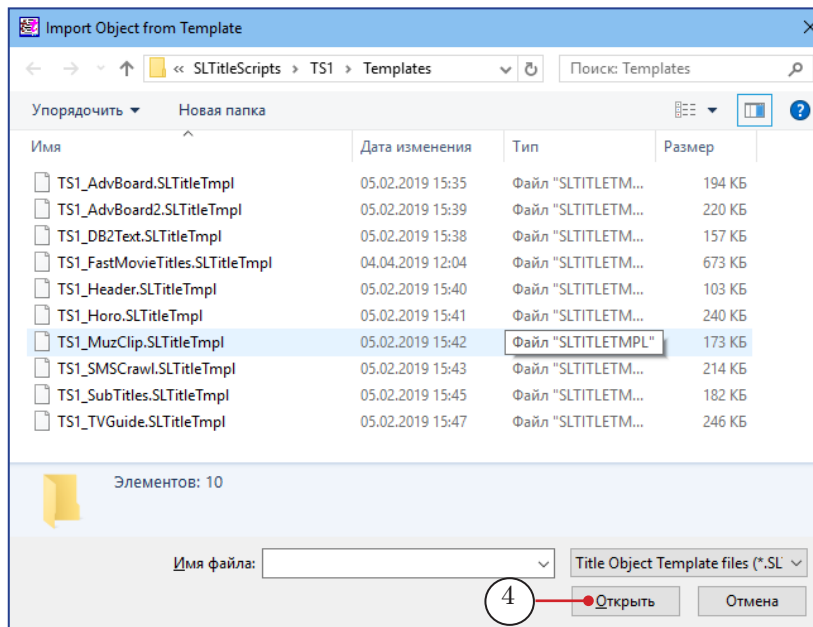


Note: The Object Tree context menu (2, 3) can also be used to find this command.

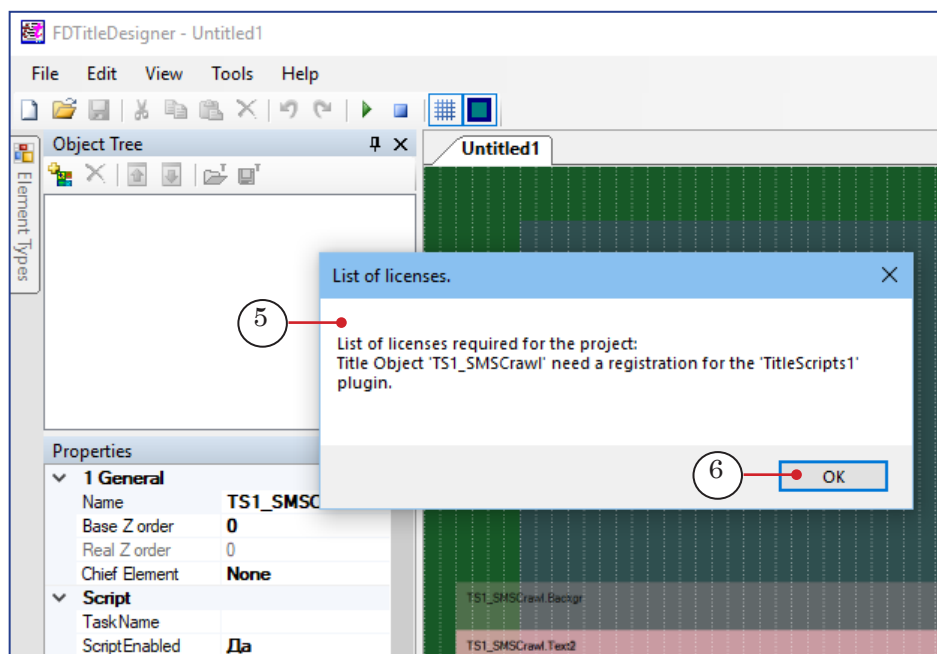




- In the opened Import Object from Template window open the folder in which the script object templates are contained. Select the required file and press Open (4) – the window will close and the script object will be loaded into the title project.



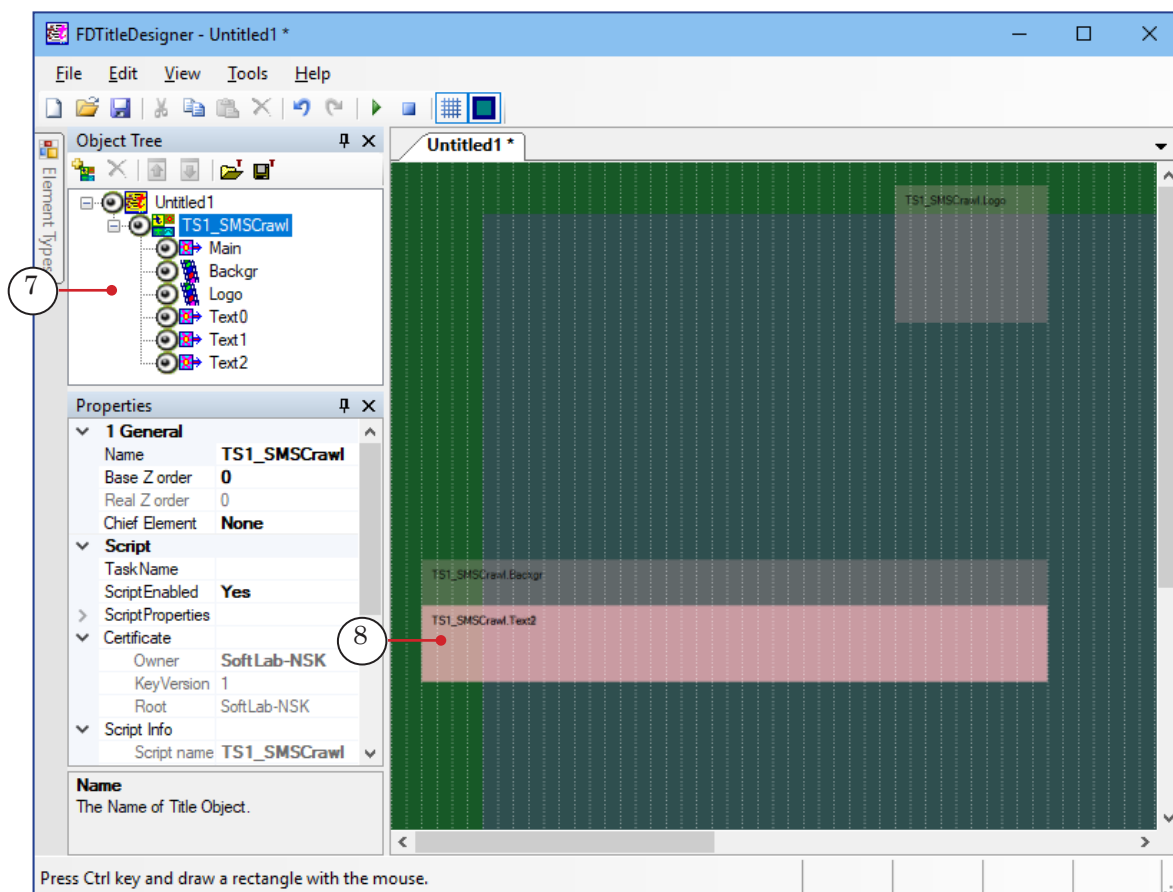
- If the object is contained within the paid libraries TS1/TS2 during the loading process a warning will pop up notifying that a license needs to be present to use the script object (5). Press OK (6) to close the window.
If the object is contained within the TSF library the warning will not appear.



✓ **Important:** When loading a script object without a source code into a tile project or when loading a title project containing a script object without a source code into FDTile Designer the license warning will appear even if a license is present.

5. When the object has loaded:
 - the script object and its title elements will be displayed in the Object Tree panel list (7);
 - the project work field will display the title elements contained within the script object (8). Their size and placement are set automatically according to their template.

Note: After loading the script object into a title project it is no longer connected to the template file, and the template file can be deleted or moved according to the user.



6. The object settings should be configured and the title project saved. For instructions on settings configurations see the corresponding script object library.
If necessary, the size and placement of the script object elements can be edited. For more information see the instructions for the object in question.



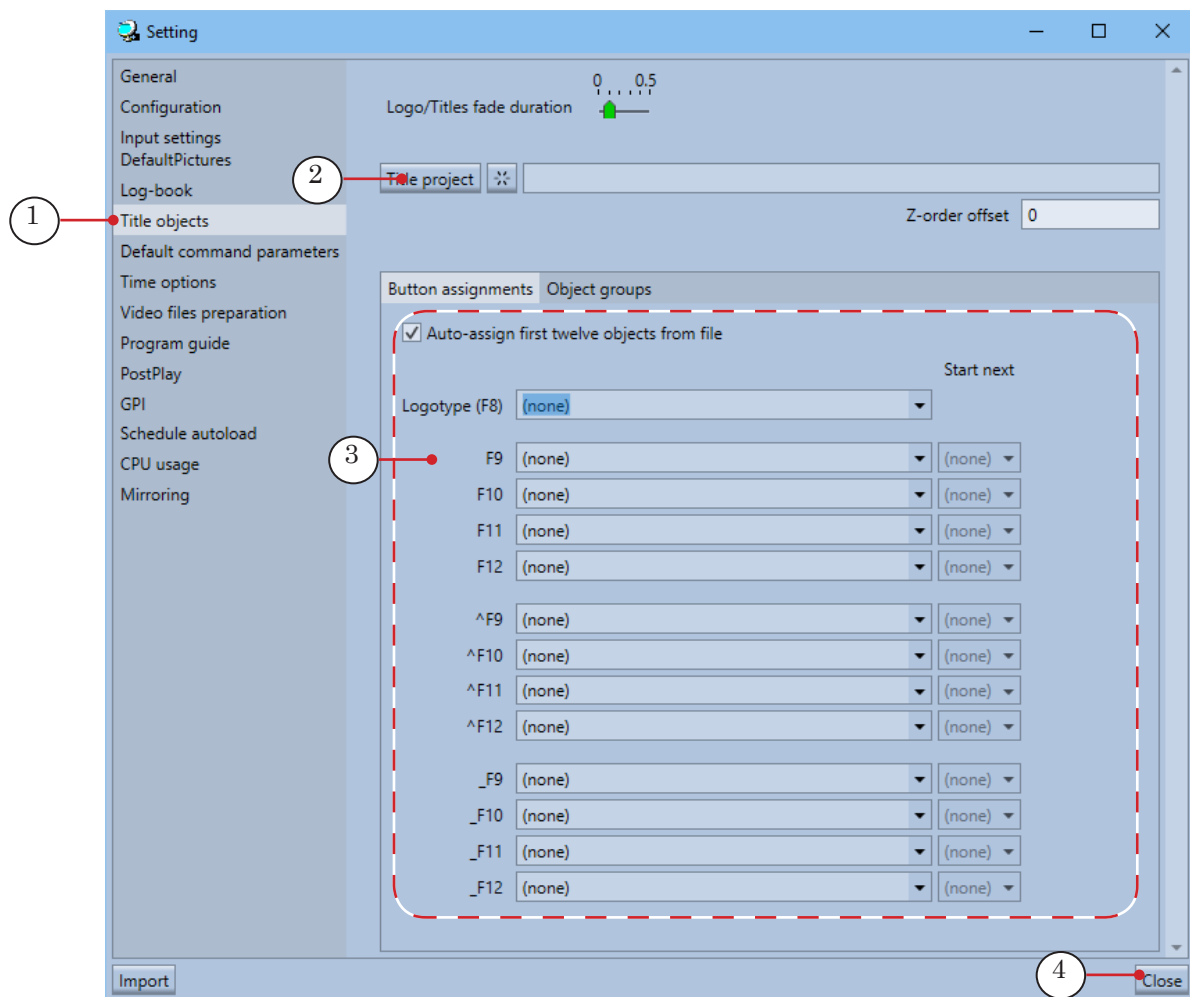
4. FDO nAir. Configuring and managing playthrough

Configuring title script objects in FDO nAir is identical to configuring regular title objects.

Note: Script objects have the same commands as regular title objects in FDO nAir: On, Off, Load Task, etc. Commands can be completed automatically according to the schedule or manually, using the commands of the main FDO nAir program window. For more information on working with title objects see the «[FDO nAir Commands. Broadcast Automation](#)» user's guide.

In the FDO nAir program:

1. Load the prepare title project:
 1. Select Settings in the main window.
 2. In the opened Setting window select the Title objects tab (1).
 3. Select Title project (2). In the opened window select the project file and press Open.
 4. Set the correlation between the command buttons in FDO nAir and the project title objects (3).

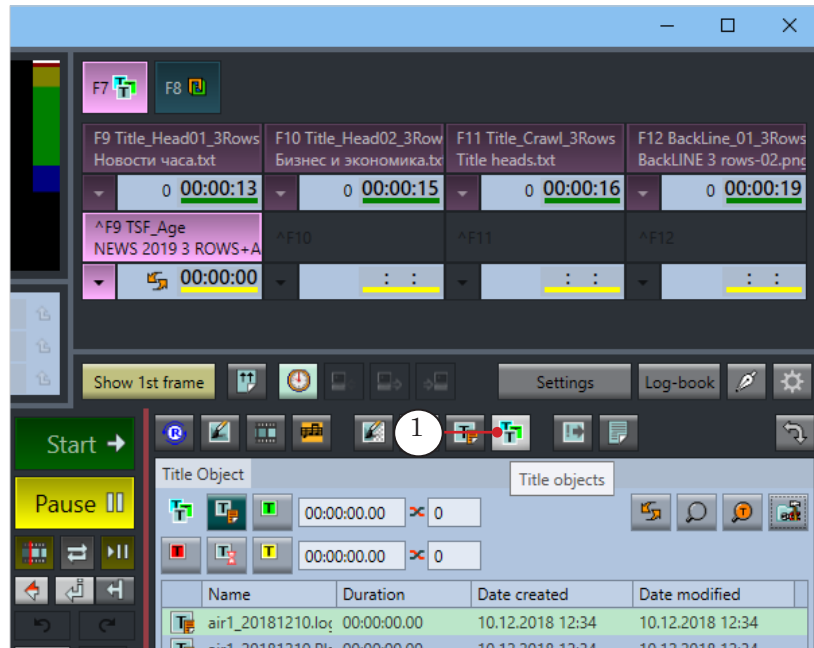


5. Close the Setting window by pressing Close (4).



2. Configure the file pages of the title objects (the buttons located on the file pages are used to add title commands to the schedule and for manual control):

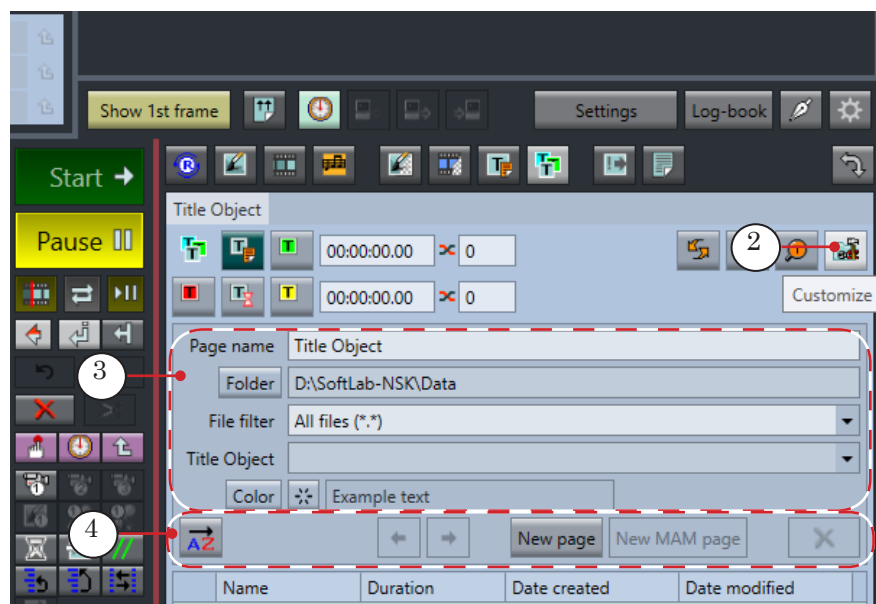
1. Switch to the Title objects file page group by pressing button (1).



Note: By default the group contains one page for one title objects. If necessary a separate page can be configured for each object within the title project.

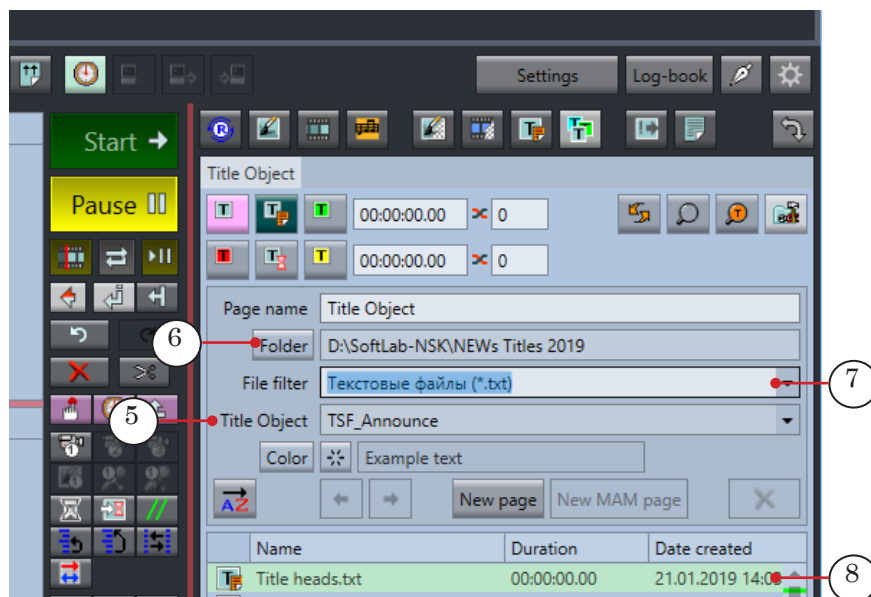
2. On the file page select Customize (2) to open (and after configuring to minimize) the settings panel, which contains:

- elements to configure the current page (3);
- buttons to manage pages (4): adding, deleting, sorting.





3. In the Title Object (5) drop-down list select the name of the title objects for which the page is being configured.

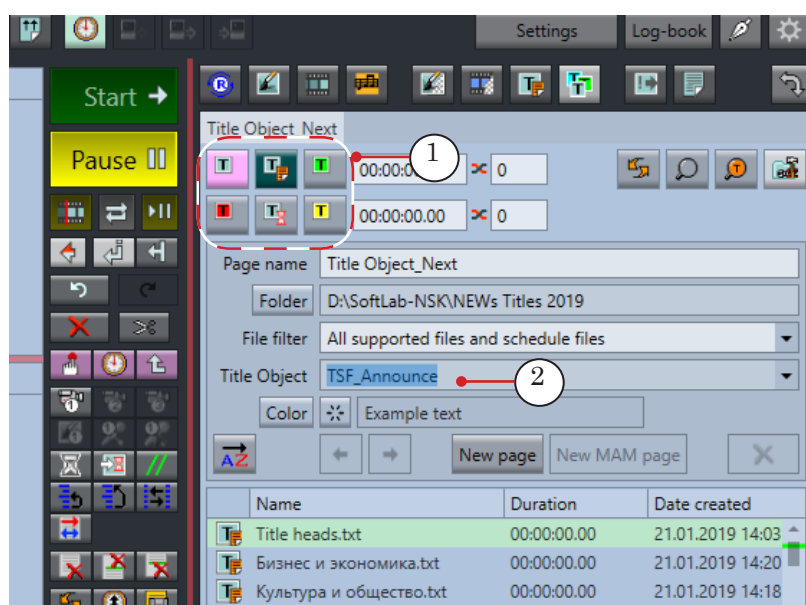


4. Press Folder (6) to set the folder in which the task files for the script object are located (this may be useful if the script uses text task files as its data source).

5. Make sure that the correct file filter is selected. For most script objects this is *.txt files (7).

6. The table (8) displays a list of files from the selected folder according to the set filter.

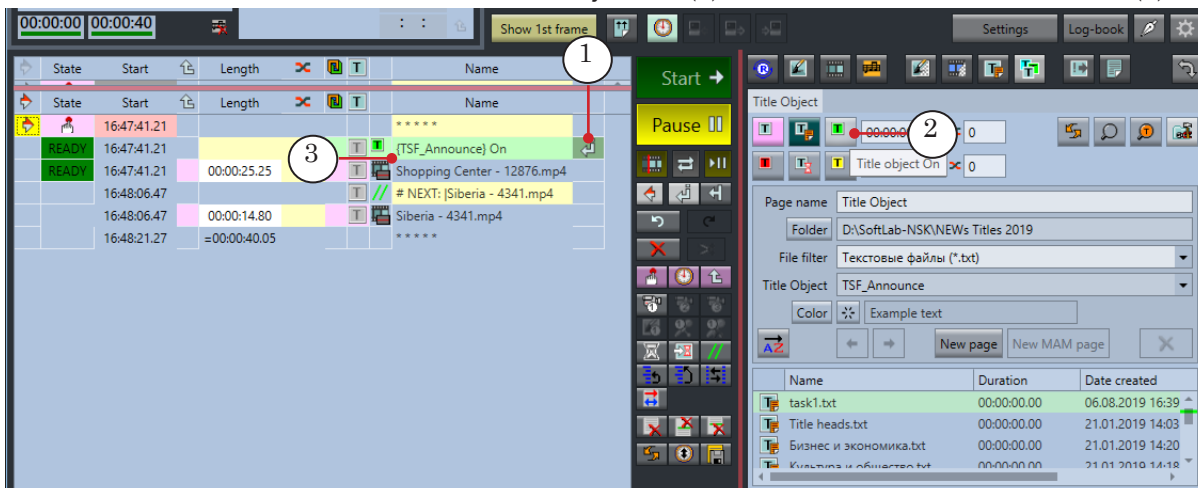
3. For the next steps (4–6) use the buttons (1) located on the file page to add title object commands to the schedule and for manual control. Make sure that the page opened is of the object in question (2).





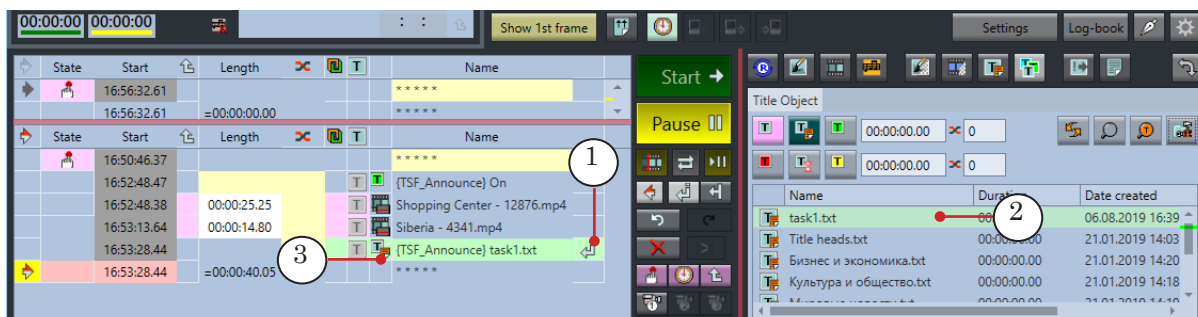
4. To add a command for turning a title object on to the schedule:

1. In the schedule select the position into which the command will be inserted (1).
2. Press Title object On (2) – the command will be added (3).



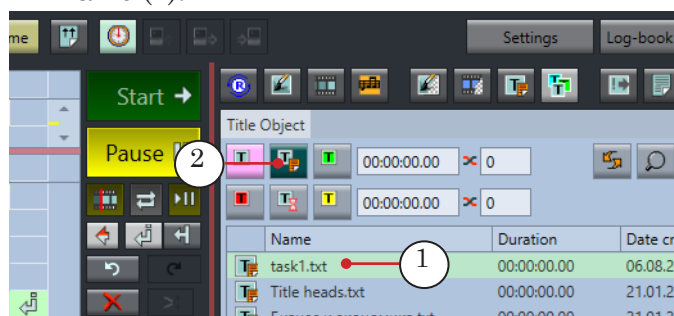
5. To add a command to load a new task into a title object:

1. In the schedule select the position into which the command will be inserted (1).
2. Double-click the name of the task file that needs to be loaded into an object (2). The command will be added (3).



6. To quickly load a task into a title object:

1. On the file page select the task file by clicking on its name (1).

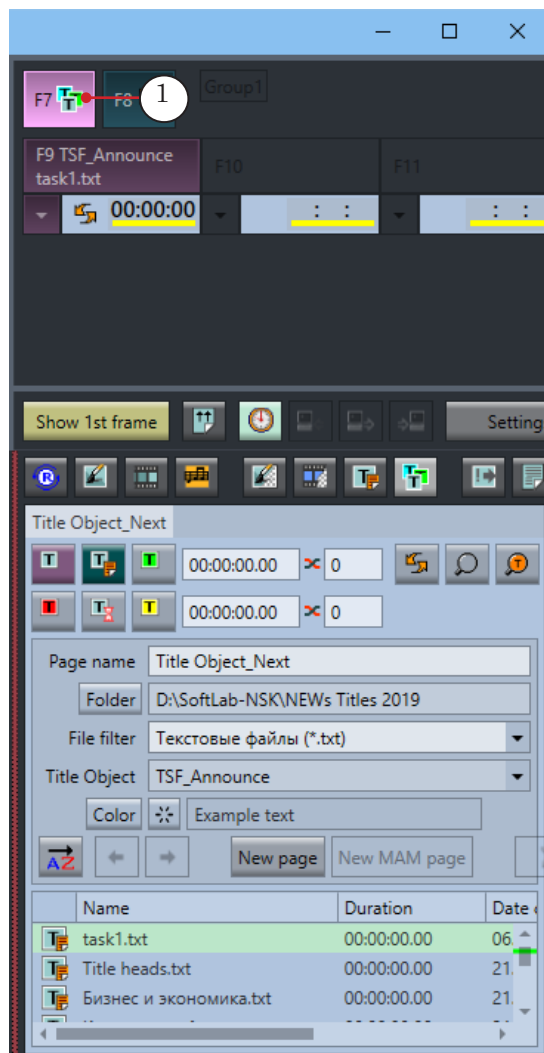


2. Press Load object task immediately (2) – the selected task will be immediately loaded into the script object.



Note: If no file is selected the Load object task immediately button will be inactive.

7. Make sure that the display of titles is allowed – the F7 button (1) is active (indicated by the button glowing bright pink).



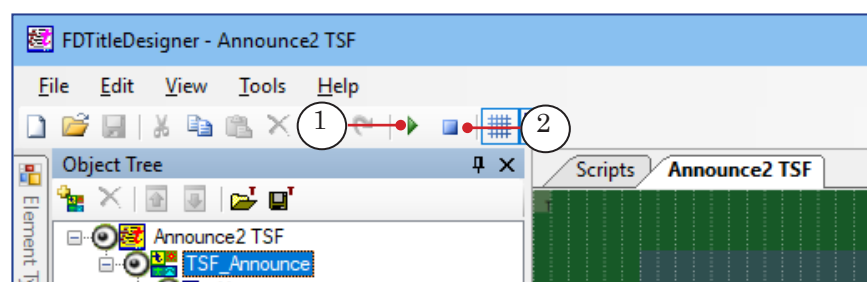


Preview

1. Preview in FDTitleDesigner

The FDTitleDesigner program can be used to preview those script objects that do not contain any information from the FDO nAir schedule.

1. To start the preview select Start Preview (1).
2. To end the preview select Stop Preview (2).



2. FDO nAir Output Preview

If the script contains information from the FDO nAir schedule (for example if it subtitles music clips) then the FDO nAir output with titles can only be previewed using one of the following programs:

- SLTitlePreview – to preview audio-video data from output of FDO nAir when working in «no board» mode (in this case licenses are not required for the scripts). Can be used for test previews on any computer. For instructions see the «[FDO nAir. Additional Sections](#)» user's guide, section «Previewing data on a computer without using a board. SLTitlePreview Program»;
- FDPReview – to preview audio-video data of the board input/output. For instructions see the «[FDPReview. Program for Previewing of Audio and Video on Boards Inputs/Outputs](#)».



Substitution File

Some title script objects can use a substitution file to automatically replace certain symbol combinations in the task text with others. The substitution file needs to be prepared beforehand. The path to the substitution file is set in the script settings (in the FDTtitleDesigner window).

A substitution file is a text file (*.txt) that contains a list of replacements. Each replacement starts on a new line. The replacement format:

Line1 Separator Line2

where:

- Line1 – the symbol sequence which will be replaced;
- Separator – a symbol set in the script settings, the Separator parameter;
- Line2 – the symbols that will be placed instead of the symbols in Line1.



Example: For example the script's task file uses the abbreviation Tel. When broadcasting the abbreviation needs to be replaced with an image of a phone that is stored in the tel.gif file:



```
task2.txt - Notepad2
File Edit View Settings ?
Buy a 4-room apartment in the city center |Tel. 123-45-67
Announcement text 1 |Tel. 123-45-67
Announcement text 2 |Tel. 223-45-67
Announcement text 3 |Tel. 323-45-67
Announcement text 4 |Tel. 423-45-67
Announcement text 5 |Tel. 523-45-67
```

The user can set up for this replacement to occur automatically by adding the following line to the substitution file:

Tel.|<PC 50 tel.gif>

where:

- Tel. – the symbol sequence which will be replaced;
- | – the separator symbol;
- <PC 50 tel.gif> – the replacement string. In this case it is a tag to display an image.

As a result the crawl line will display the image instead of the Tel. abbreviation:



Note: For more information on substitution files and tags see the «[FDTitle Designer. Title Project Editor](#)» user's guide, section «Additional Sections».



Useful Links

ForwardT Software set: description, download, documentation, solutions

<http://softlab.tv/forward/index.html>

Support

e-mail: forward@softlab.tv

forward@sl.iae.nsk.su

forward@softlab-nsk.com

Forum

<http://www.softlab-nsk.com/forum> (currently available in Russian only)

Documentation for more information::

1. [TSF – free library of the open source scripted objects](#)
2. [TS1 – paid library of the closed source scripted title objects](#)
3. [TS2 – paid library of the closed source scripted title objects](#)
4. [FDTitle Designer. Title Project Editor](#)
5. [FDPreview. Program for Previewing of Audio and Video on Boards Inputs/Outputs](#)
6. [FDOnAir. Additional Sections](#)
7. [FDOnAir Commands. Broadcast Automation](#)