Forward T Software

FDTitle Designer

Title Project Editor

User's Guide

Notice

The information in this document is subject to change without prior notice in order to improve reliability, design, or function and does not represent a commitment on the part of this company.

In no event will we be liable for direct, indirect, special, incidental, or consequential damages arising out of the use or the inability to use the product or documentation, even if advised of the possibility of such damages.

Throughout this manual, we make reference to product names that are trademarks of other companies. We are using these names for identification purposes only, with no intention of infringement of the trademarks.

FCC Information

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.

Limited Warranty

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.

Table of Contents

Introduction

The FDOnAir program uses title projects to control displaying titles.

The FDTitle Designer application is designed to create, edit, and preview title projects.

FDTitle Designer has a complete set of tools to select a type and content of titles, configure their layout on the screen, displaying duration, and other properties.

Using the program, you can configure displaying titles of various types such as clock and timers, captions and dynamic captions, static images, animated and video images, crawl lines, video clips, pictures, SMS messages.

It is possible to extend the available toolkit by developing your own title elements using the SDK.

Getting Started

1. General Information

The FDTitle Designer program allows you to create a design layout of the screen titles (title project) and preview titles with the specified properties and specific content.

A title project is created in the main program window: add title elements (1) to the project field (2) and configure their properties (3).
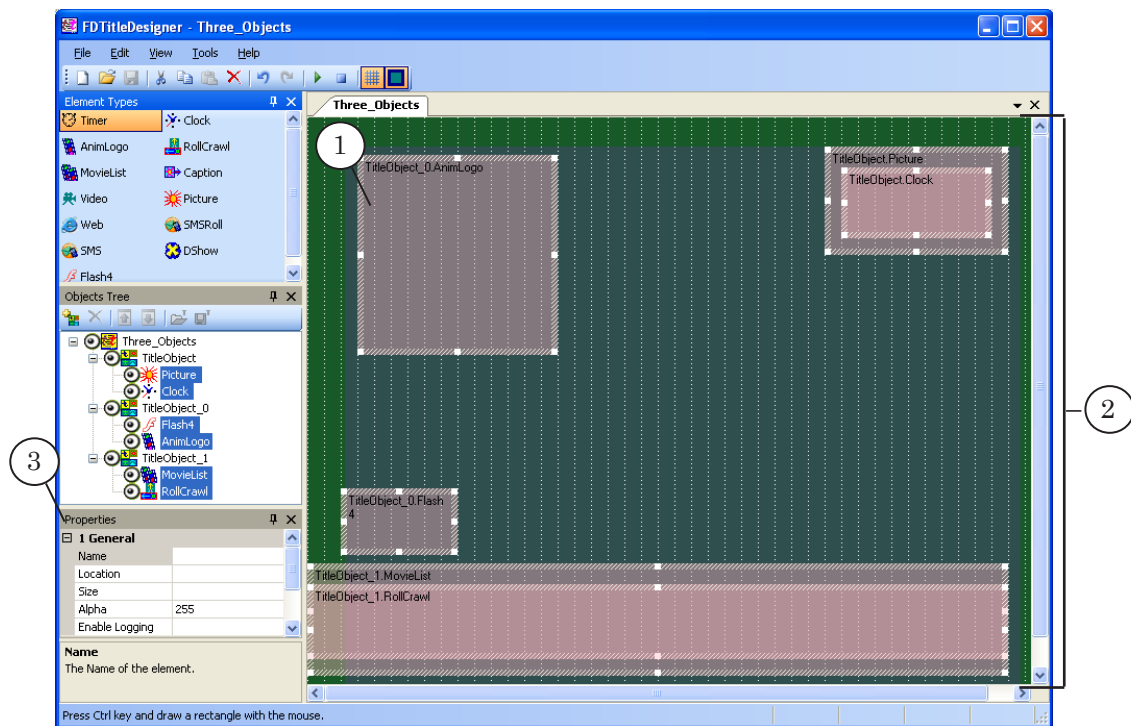
The project field is a virtual screen. Its size depends on the TV standard selected (matches the frame size).

2. Creating a Project

1. Launch FDTitle Designer (1) using the desktop shortcut or the Start menu: Programs > ForwardT Software > Titles > Title Designer.

2. Specify the project frame size: select a required item, e.g. PAL720x576 from the TV Standard drop-down list in the Properties panel (2).

3. Add a title element to the project. To do so:

   1. Select a type of the title element: click the required button in the Element types panel (3). For example, Picture.

   2. Move the mouse pointer to the position on the project field where you want to place the element. Left-click and drag the pointer diagonally (4) with the left button pressed. Release the button.
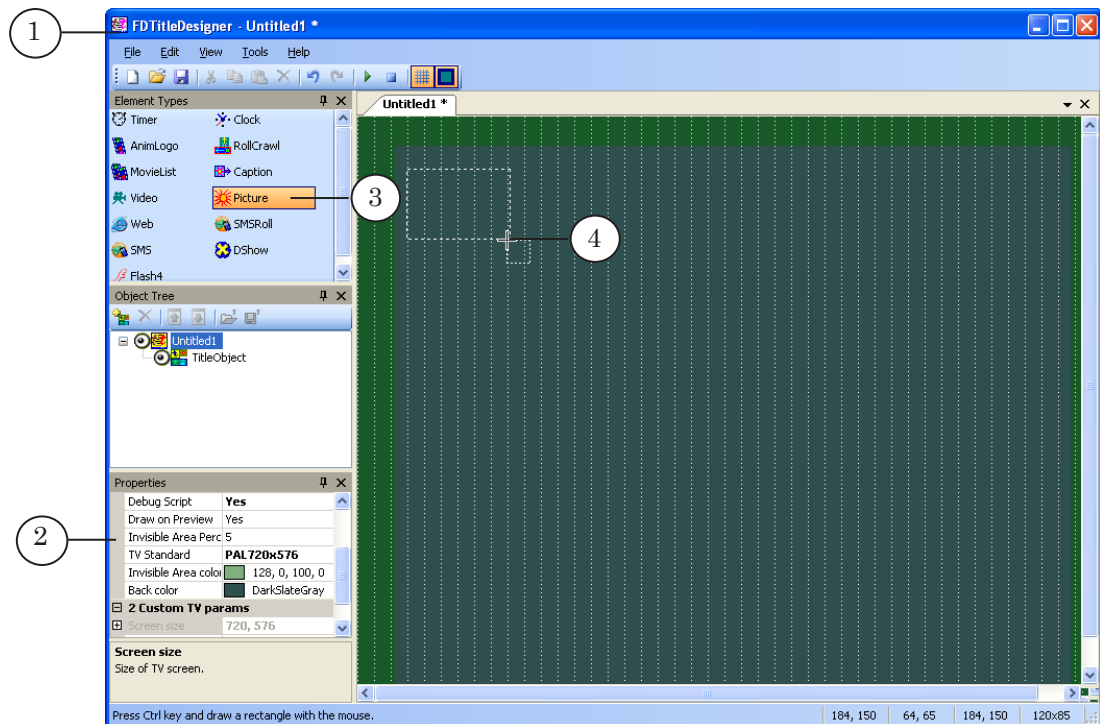
3. As a result, a bounding rectangle that denotes the area allocated to the title element (5) appears.

4. The upper-left corner of the rectangle displays the title element name (6).
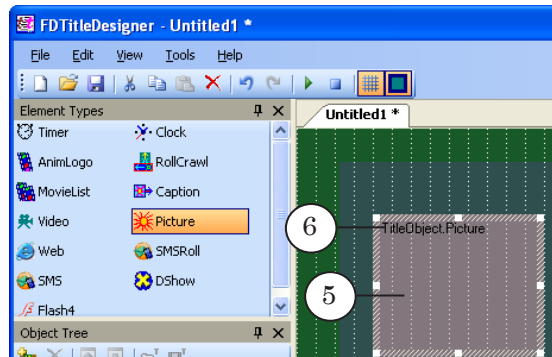
4. Configure the title element parameters. To do so:

1. Click on the title element to select it (7).

2. Enter the full path to the file with the title content in the FileName field (8) in the Properties panel. In our case – to the file with the picture. You can use the [...] button to open the standard file open dialog box.

3. From the Stretch drop-down list, select a type of the image scaling relative to the title element, e.g. Keep AspectRatio (9) so that the image from the file is scaled to the title element size.

10
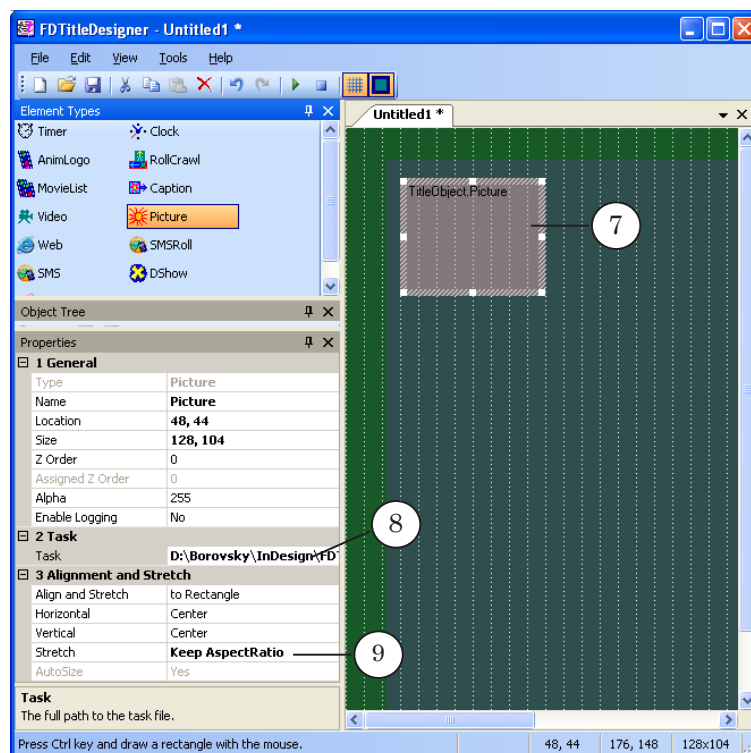
5. Click the Start Preview button (10) to preview how titles are displayed on the screen.

6. To stop the preview, click the Stop Preview button (11).

7. Save the project to a file: select the File > Save command of the menu (12). The dialog box opens. Select a directory, enter a file name.
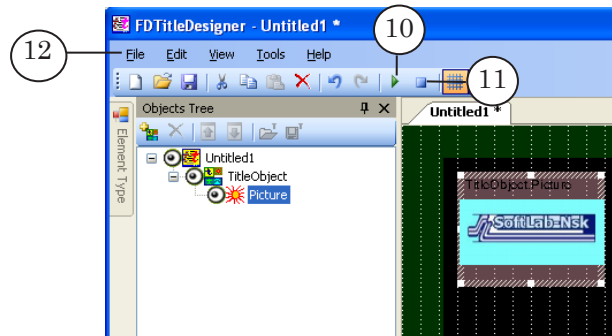
8. To show titles on air, complete the required settings in the FDOnAir program:

   1. Load the created project in the FDOnAir program. To do so, use the Settings > Title objects tab.

   2. Enable displaying titles.

For more details about working in FDOnAir, see the «FDOnAir: Broadcast Automation» user's guide.
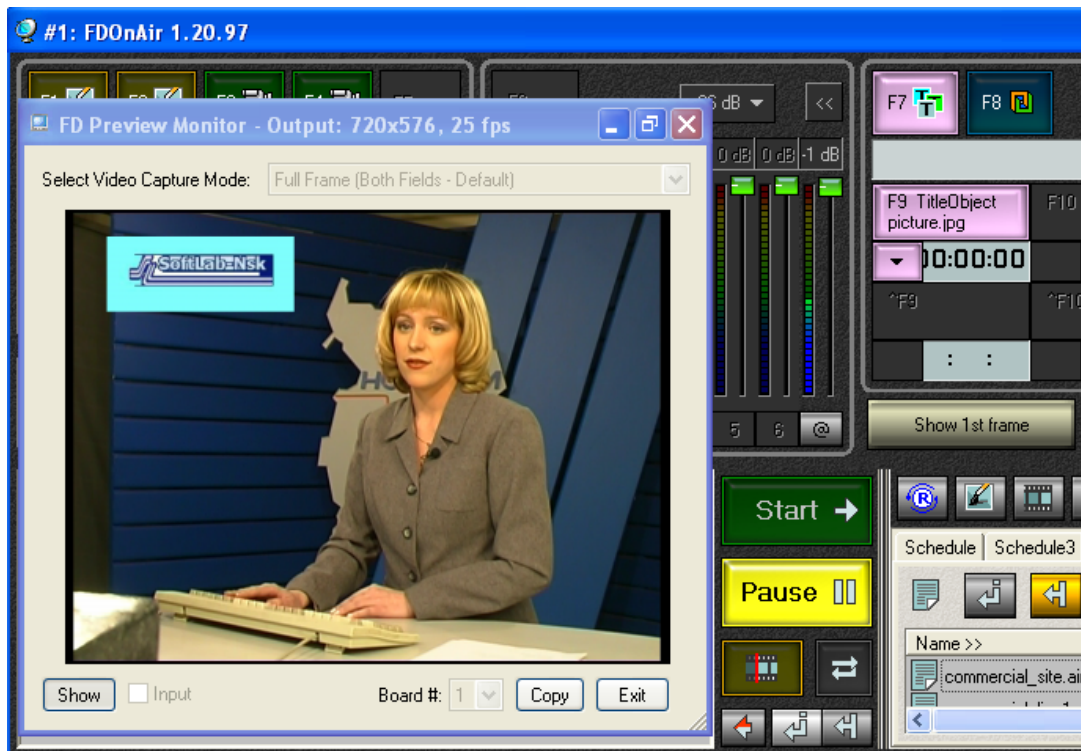
General Information on Working With Titles

This section describes main terms used when working with titles in products from the Forward T Software set:

- Title Element;
- Title Object;
- Title Project;
- Z Coordinate;
- Design of Text in Titles;
- Using title projects.

Title Element

1. Title Element

Title project is based on title elements used for configuring of titles displaying. The project may include any number of of title elements to display titles with different content.

Title element specifies a bounding rectangle area on screen where some information is displayed, for example, it can be a rolling crawl with advertisment (1), logotype (2), clock (3), etc.
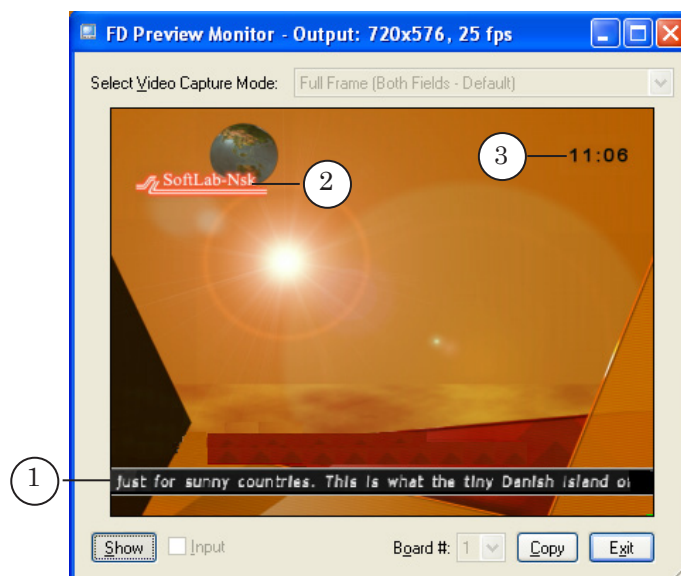
Each title element has a unique name in project and is charactarized by content, location and size.

2. Types of Title Elements

There are differenet types of title elements that are used to display titles with different content.

When adding title element to project you should specify its type first. It is impossible to change element type in the project, you can add another title to the project.

The table below presents different title elements offered by the FDTitleDesigner application. You can broaden supplied set of elements yourself by creating your own elements using SDK (for working with titles).

Table 1.   Types of title elements

Type	Content
Clock	Image of a clock that displays time and date. The source of time can be: the system time, a time server. Countdown is available. Designed by user via the TVClockDesigner application (ForwardT Software).
Clock 2	Image of a clock that displays time and date. Clock displays time, day of the week, month, year. Clock can be accompanied with audio. Countdown is available. Designed by user via the SLClockDesigner application (ForwardT Software).
Clock 3	Clock without graphic design. The source of time can be: the system time, a time server. Can be used to display time: direct or countdown from start with specified accuracy.
Picture	Static image.
Color	Rectangular area filled in with one color with transparency.
Caption	Pop-up caption – text or graphics image.
AnimLogo	Video file from file of different formats (AVI, MPEG2, Quick Time, Windows Media). Possible with audio and transparency adjusted at creating of clip.
Flash4	Animated image – Adobe Flash clip. Possible use of scripts and trancperency adjusted at creating of clip.
Video	Video with audio or without from the FD300 board input or output.
Video2	Video with audio or without from the FD322/FD422/FD842 board input or output.
QML	Animated objects (text and pictures), the animation scripts for which are written in QML.
DShow	Video clip (AVI, MPEG, WMF, ASF, etc.), audio clip (WAV, MP3, etc.), static image, flash clip. Different file formats are supported when corresponding DirectShow componentes are present in the system.
Web	Updatable information from an HTML page.
RollCrawl	Sequence of ads (text and graphic) that run at a specified speed and direction.

Type	Content
MovieList	Sequence of video clips and still images.
SMS	Sequence of SMS messages. Only one message is displayed on the screen at a time.
SMSRoll	Sequence of SMS messages as a crawl line. The number of messages that can be held within the specified title element are displayed on the screen at a time.
SMS2	Sequence of SMS messages. Only one message is displayed on the screen at a time. Possible to adjust way of appearing/dissapearing. of messages.
SportTimer	Sport timer. The timer can work as a countdown as well as timer.

3. Title Element Task

Task for title element is titles content. As a rule this is a file or a set of files of corresponding type (depends on element type). For example, task for rolling crawl is a text file with advertisement.

Title element task can be specified both when developing a project and at its further use in FDOnAir. When the project is executing you may consequently change task (content) of title elements.

The ForwardT Software set includes applications for creating tasks for title elements of different types. In addition to this tasks can be created via some other graphic applications or text editors without ForwardT Software use.

4. Title Element Properties

The title element settings are configured when creating a project in the FDTitle Designer program. Title elements have the following settings:

- name – a unique identificator of the element in the project;
- type – a type of title element content;
- size and placement on screen;
- Z order;
- task – a source of titles content;
- visibility indicator – whether or not the element is displayed during editing and playthrough;
- settings that define the behavior and appearance of the title element contents (the contents depend on the element type) including:

- transparency;
- display duration;
- scaling and alignment parameters;
- "specific" – a set of settings unique to the title element type;
- text formatting – parameters of designing of text in titles.

Title Object

1. Title Object

All title elements in a project are classified into title objects (named groups). Title object may contain one, several or no title elements at all.

Each title object has a unique name in the limits of one project.

Example: Picture below presents example of a project that includes 2 title objects. The first object has 2 title elements, the second – the only element.
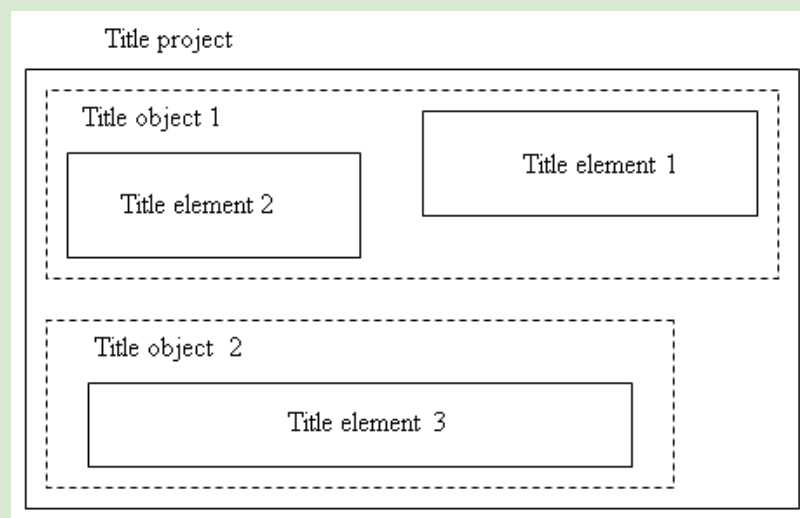
Title objects are used to control titles in FDOnAir: switching them on/off, launching time, duration of demonstration, task changing. FDOnAir commands to control title objects are intending for executing of these operations (see the «FDOnAir Commands. Broadcast Automation» user's guide). There are no any commands to control separate title elements.

2. Title Object Task

When playing titles in the FDOnAir application tasks are changed in the whole group (on title objects level) but not separately.

A title object task is an XML file containing a list of tasks for all of the title elements that are within the object. The task file name needs to have the following form:

Name.TObj-name.SLTitleTsk

where:
- Name – arbitrary part of the name;
- .TObj-name – a period (mandatory separator) and the name of the title object;

- .SLTitleTsk – a period (mandatory separator) and the task file extension.

The contents of the tasks are formed automatically in the FD-Title Designer program, based on the current property settings. When saving a title project, the current tasks of all of its objects are saved automatically into files with default names:

ProjectName.TObj-name.SLTitleTsk

where ProjectName is the project name.

To save an object task manually, select the object and use the Save Task As command.

Tip: To view the structure of the title object task file, we recommend setting up an object (for example, a group of two elements), saving the task into a file and then opening it in any text editor.

3. Main Element in Object

One of title elements included into title object can be assigned as the main one.

The following rules are active in the FDOnAir application when controlling over titles:

- total duration of title object playback equals to duration of the main element playback;
- task of the main element can be changed without modifying tasks of other elements.

4. Properties of Title Object

Title object has the following properties:

- name is a unique identifier of the object in the limits of project. Is used to appeal to object when controlling titles in FDOnAir;
- name of the main title element;
- base z coordinate is used at automatic distribution of z coordinates of title elements;
- indicator of visibility that enables/disables displaying of object elements when editing and playing them.

5. Object Templates

You can save a description of the configured object in the FDTitle Designer – the object settings, a list of elements contained within the object and their settings – into a template.

The use of templates allows the transfer of title element groups with all of their settings from one title project to another. Templates are also used to store and load script-objects (see below).

Templates are saved into XML files with the SLTitleTmpl extension.

To save a template, select an object and use the Export Object as Template command. To create a new object based on an existing template, use the Import Object Template command.

6. Title object with script

A title object with script, or script-object, is an object that, besides title elements, also contains a script that controls them – a JScript.Net program code.

The use of scripts allows the realization of complex title control, for example, the automatization of titling music clips, the display of ads by headings, display of announcements or content warnings for programs.

The user can create a script-object or use a prepared template. At this time there are two libraries for script-objects:

- TSF – contains open source script-objects, free to use (see the «Open source scripted objects» user's guide);
- TS1 – contains non open source scripts, pay to use (see the «Closed source scripted title objects» user's guide).

Outside of the project, script-objects are saved separately, in single files, as templates (*.SLTitleTmpl). To add a script-object to a project, use the Import Object Template command.

If adding an object from the TSF library, an additional tab will open in the FDTitle Designer program window containing the script code.

Title Project

1. Title Project

Title project is a layout for decorating air by titles. The project specifies a set of title elements and its location on the screen.

Title project is used in the FDOnAir application to control titles displaying.

2. Project Structure and Object Tree

Title project consists of title elements that are groupped into title objects.

Structure of title project is presented as an object tree (hierarchical list), where:

- root node (1) – project level;
- nodes of the second level (2) – title objects level;
- nodes of the third level (3) – title elements level.
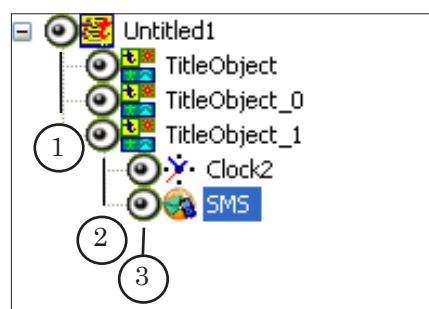
3. Project Properties

Properties of a project are adjusted in the FDTitleDesigner application when creating a project. You may not modify project properties when working with it in the FDOnAir application.

General properties of a project are parameters of titles playback:

- configuration of video playback parameters:
  - screen size;
  - frame rate;
  - interlacing;
- name of used audio device
- basic Z coordinate of the project and the z-step. These values are used when distributing z-coordinates of the title objects and elements.

The video playback parameters can be set as:

- arbitrarily – arbitrary configuration;
- standardly – according to specific TV standard.

4. Project File

Title project is stored as the SLTitleProj file in the XML format. The application provides a possibility of saving project file with the xml extension.

Project file contains data on:

- parameters of titles playback;
- used title elements and its configurations;
- order of title elements grouping into title objects and objects properties.

Tip: We recommend you to create a simple title project, save it into file, open it and view it in any text editor to examine a structure of XML file.

Example: Let's take a look at the contents of the project file using an example. The images below show the same project, opened in the FDTitleDesigner program (A) and in the Notepad text editor (B).

The example project contains two title objects. The first contains a single title element (Picture), the second contains two elements (Color and RollCrawl).

B — Exmpl.SLTitleProj — Блокнот
Файл Правка Формат Вид Справка

```xml
<?xml version="1.0" encoding="utf-16" standalone="yes"?>
<TitleProject count="2" size="1920, 1080" framerate="23.976023976023978" interlaced="False" name="Exmpl">
  <Regions count="1" ZOrderBase="0" visible="true" chief="0" name="Logo_TitleObject">
    <!--Picture With Transparency-->
    <region CLSID="d373f79b-8e1c-4c3c-bb5c-742bd8b36797" visible="true" name="Picture">
      <!--The Name of the element.-->
      <Name value="Picture" />
      <!--The position of the top-left corner of the element with respect to TV Screen.-->
      <Location value="112, 128" />
      <!--The size of the element rectangle.-->
      <Size value="336, 180" />
    </region>
  </Regions>
  <Regions count="2" ZOrderBase="0" visible="true" chief="0" name="RollCr_TitleObject">
    <!--Color With Transparency-->
    <region CLSID="ee91e70c-16a4-49df-8e2e-4316c51cce3e" visible="true" name="Color">
      <!--The Name of the element.-->
      <Name value="Color" />
      <!--The position of the top-left corner of the element with respect to TV Screen.-->
      <Location value="16, 636" />
      <!--The size of the element rectangle.-->
      <Size value="688, 48" />
      <!--The color specified in the following formats:
1. 'aaa,rrr,ggg,bbb' or 'rrr,ggg,bbb' - where aaa, rrr, ggg, bbb decimal numbers of 0-255
2. #AARRGGBB or #RRGGBB - web format, where AA, RR, GG, BB hexadecimal number of 00-FF
3. The English name of the color was adopted on the web (red, cyan, PowderBlue, DeepPink etc.)-->
      <FileName value="128, 0, 128" />
    </region>
    <!--RollCrawl-->
    <region CLSID="6e350868-ab30-47a7-819e-1352e958dd83" visible="true" name="RollCrawl">
      <!--The Name of the element.-->
      <Name value="RollCrawl" />
      <!--The position of the top-left corner of the element with respect to TV Screen.-->
      <Location value="32, 648" />
      <!--The size of the element rectangle.-->
      <Size value="656, 28" />
    </region>
  </Regions>
</TitleProject>
```

In image B:

1 – the opening tag of the root TitleProject element that describes the general settings of the project;

2 – a description of the title object Logo_TitleObject, where:

3 – the opening tag that describes the general settings of the object;

4 – tags with descriptions of the settings of the title element from this title object;

5 – tags with descriptions of the settings of the second title object RollCr_TitleObject.

Z Coordinate

1. Z Coordinate of Title Element

A title project can be described as a stack of layers, where each layer contains a single title element. The layers are ordered vertically (along the z axis) according to an order number – their z-coordinate. The bigger the z-coordinate, the higher up the layer and, accordingly, the title element, is.

If the title elements are placed in the same area of the screen (overlap), then the element on the higher layer will be the one fully seen.
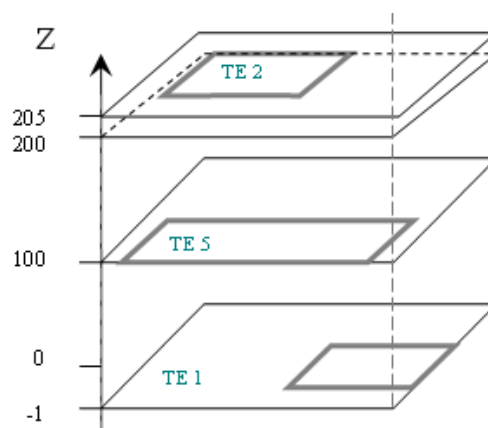
Example: For example, a timer needs to be displayed on a background. The project has the following title elements added: Clock3 and Picture. In the settings the z-coordinates are set: for the Picture element z=0; for the Clock3 element z=25.
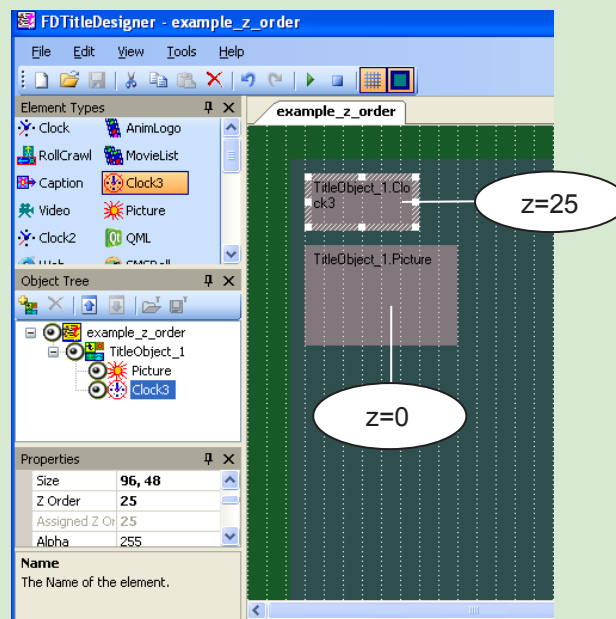
The title elements overlap (1).
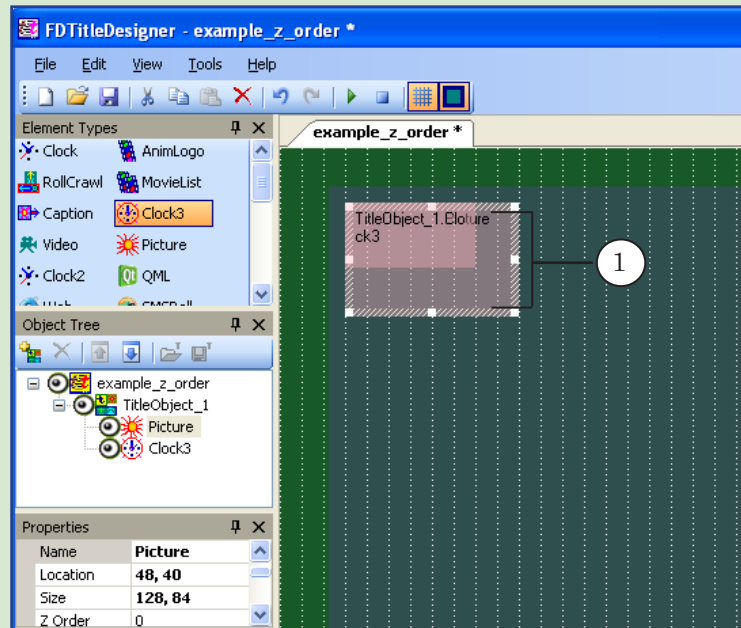
In the preview we can see that the clock is in the foreground, and the image is under it (2), as was necessary, because the z-coordinate of the Clock3 element was bigger than the z-coordinate of the Picture element
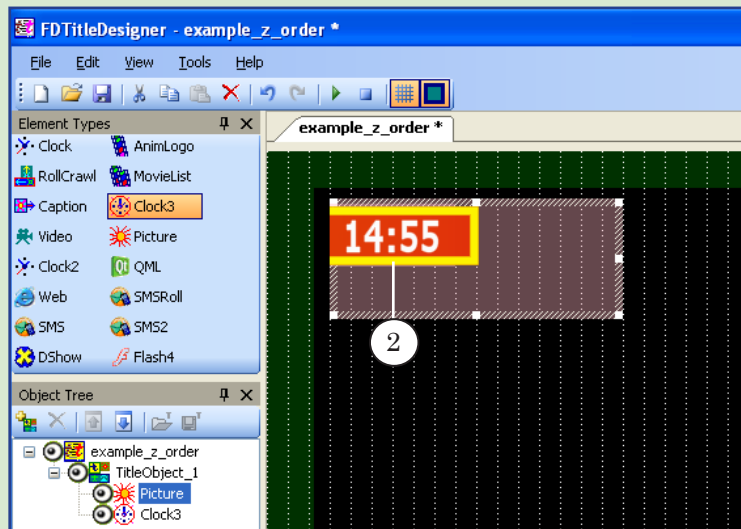
2. Value of Z Coordinate of Title Element

The value of the z-coordinate of a title element can be zero or any integer positive or negative number.

The initial and actual (assigned) values of the z-coordinate are distinguished:

- the initial value is used when editing the project. By default 0. Can be changed by the user (not recommended);
- the actual (assigned) value is used when the project is in effect:when previewing in FDTitle Designer or when displaying titles in FDOnAir. The actual value of the z-coordinate needs to be unique to each project element. It's assigned automatically according to the coordinate distribution rules:
  - if the initial value is 0, the actual value will be calculated according to the position of the element in the object tree (1) and other factors (see below);
  - if the initial value is set by the user and is not 0, the actual value will be identical to the initial value.

✔ **Important:** In order for the titles to display properly, all of the title elements of the projects in effect need to have unique z-coordinates.

In the FDTitle Designer program the initial z-coordinate value of the element is managed in the Z Order field (2) in the General table on the Properties panel (select an element to see its settings), the actual value is displayed in the Assigned Z Order field (3).
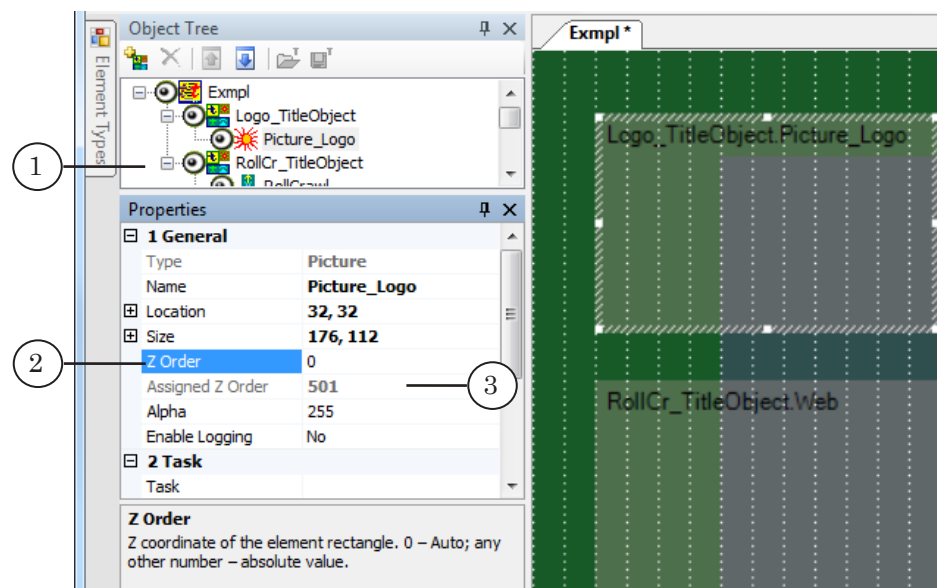
3. Title project and objects z-coordinates, z-step

When automatically distributing the z-coordinates of the title elements, the base z-coordinate of the project and objects are used, as well as the step of changing the z-coordinate.

3.1. Project z-coordinate, z-step

The value of the title project z-coordinate can be 0 (by default) or any integer, positive number. It is recommended to set the z-coordinates of projects manually if it is necessary to use several title projects simultaneously (see recommendations below).

In the FDTitle Designer window the z-coordinate value of the project is configured in the Base Z order field (1) in the Project Config table on the Properties panel (to view the project settings, click on the work field). The ZOrderIncrement (2) field in the same table can be used to view and change the z-step for the project.
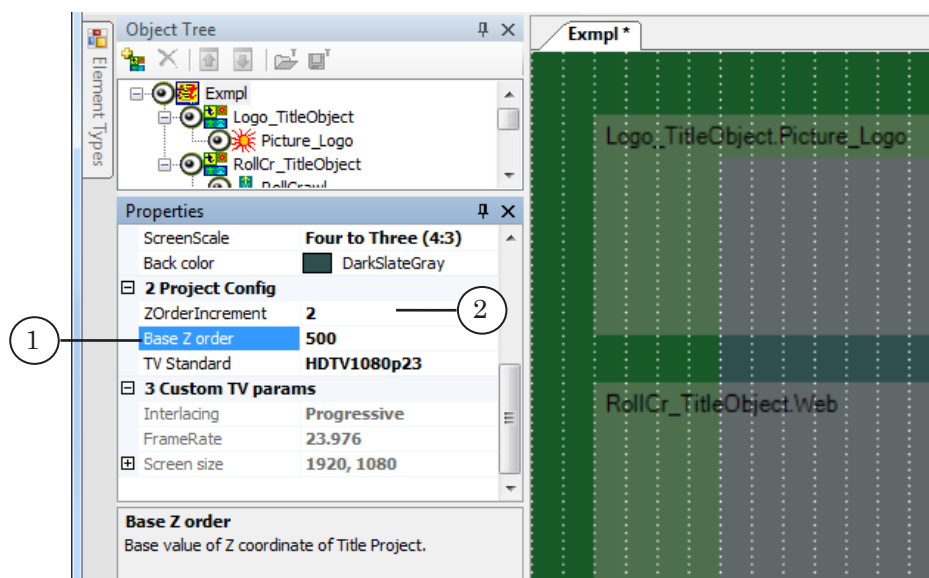
3.2. Object z-coordinate

The z-coordinate of a title object can be 0 or any integer positive or negative number. Object z-coordinates are also differentiated into initial and actual (assigned) values. The initial z-coordinates of objects (by default – 0) can be set by the user (see recommendations below).

In the FDTitle Designer window the initial z-coordinate of the object is displayed in the Base Z order field (1) in the General table on the Properties panel (to view the object settings, select it in the object tree), the actual value is displayed in the Real Z order field (2).
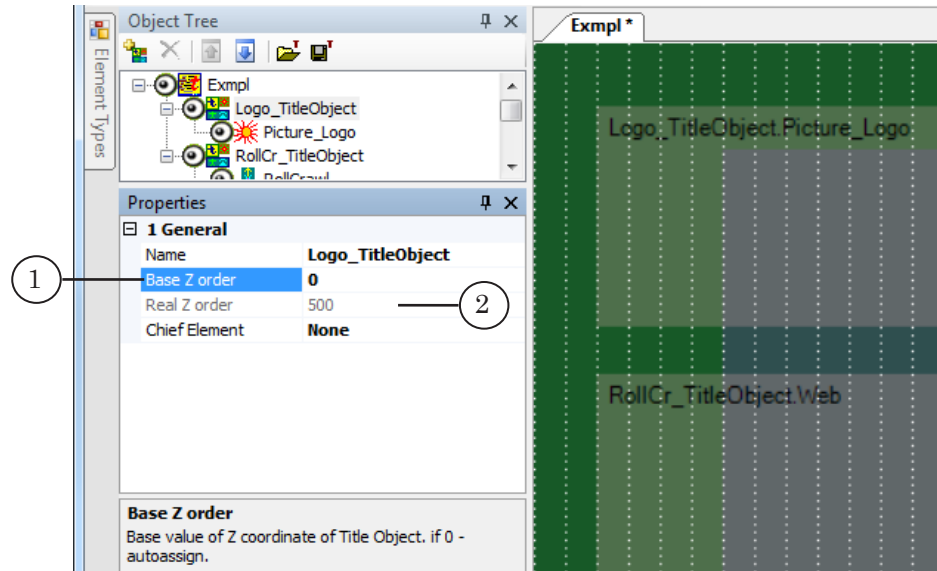
4. Recommendations

1. Do not manually set any initial z-coordinates for objects or elements without due reason. A fully automatic distribution of the coordinates guarantees that the z-coordinates of all title elements will be unique.

2. If several title projects are in effect simultaneously (several FDOnAir program instances are in title server mode and are controlling the display of titles) then set the Base Z order values for them with a huge interval between (for example, 1000 units). This will make sure that the values of the z-coordinates of the different projects won't intersect (the z-coordinates of all elements will be unique).

3. Remember, that during automatic distribution the following rule is in effect: the lower the object/element is in the object tree, the higher its z-coordinate value. By moving an object higher/lower in the object tree you will be transferring it to a lower/higher layer.

4. In some cases (for example, when using IPCamera elements) it's necessary for the distance between two elements to be at least 2 units. To make sure that this occurs, set the parameter ZOrderIncrement equal to 2 or more.

5. Distribution of actual z-coordinates

When starting a project, each of its objects and elements is assigned an actual z-coordinate. This is done automatically, in the following order:

1. The coordinates of title objects are distributed:

    1. If $Zob\_initial \neq 0$: $Zob\_actual = Zproject + Zob\_initial$.

    2. If $Zob\_initial = 0$: $Zob\_actual = Zproject + X$.

2. Then the coordinates of each title object's elements are distributed:

    1. If $Zel\_initial \neq 0$: $Zel\_actual = Zel\_initial$.

    2. If $Zel\_initial = 0$: $Zel\_actual = Zob\_actual + 1 + (K-1) \cdot Zstep$

The formulas use the following terms:

- $Zproject$ – the value set in the Base Z order field in the Project Config table;
- $Zob\_initial$ and Zob_actual – values set in the General table in the Base Z order (2) and Real Z order (3) fields, correspondingly;
- X – some value, chosen by an inner algorithm. In a standard situation $X = (N-1) \cdot 100$ where N is the index number of the object in the object tree (counting from top to bottom) for those for which $Zob\_initial = 0$ ($N = 1, 2,$ etc.);
- $Zel\_initial$ and Zel_actual – values set in the General settings table of the element in the Z Order (4) and Assigned Z Order (5) fields, correspondingly.
- K – index number of the element in the object (counting from the top down on the object tree) for those for which $Zel\_initial = 0$ ($K = 1, 2,$ etc.);
- $Zstep$ – the value, set in the ZOrderIncrement field (6) in the Project Config table of the project.
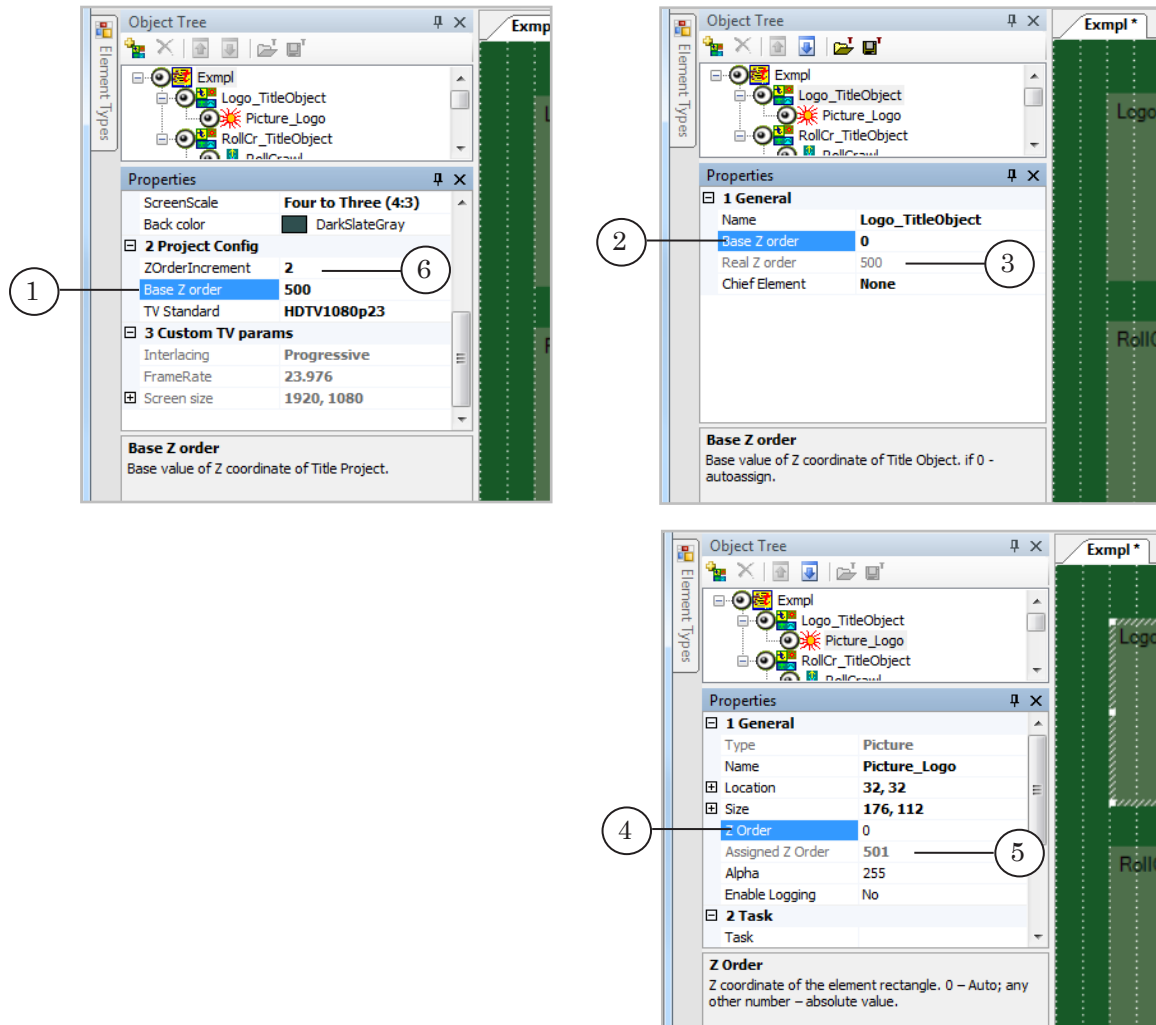
If in the settings of the FDOnAir program the z-coordinate shifting option is turned on (Settings > Title objects: Z-order offset), the set value will be added to the base coordinate of the project when calculating the actual z-coordinates when opening a project in FDOnAir.

Design of Text in Titles

1. Collection of Styles

Various fonts from collection of styles (EFC file) are used to design text in titles.

Styles collection is a set of fonts of different size, type and design that is previously developed by user.

✔ **Important:** Dealing with the SMS title element pay attention to the presence of fonts with various size in the style collection. The absence of fonts with a small size can cause the text of a message not to fit into the bounding rectangle.

Collections are created via Forward Titling (included into the Forward T Software set). For more information on creating of styles files see the «ForwardTitling: Graphic Editor» user's guide.

2. Selection of Style

Styles in collection are ordered. Each style has a name and an index (from 0 to N-1, where N is a number of styles in collection). Styles are automatically indexed according to their sequence order. The order depends on specified mode of sorting. For more information on this issue see the «ForwardTitling: Graphic Editor» user's guide.

✔ **Important:** Style Index number 0 corresponds to the first style in the style collection list.

Order of style and its index can be correspondingly varied when changing a mode of sorting.

Style is selected according to its name or index. Default style is active if no other style is specified.

Some title elements have the Style Index parameter.

Style index is an integer from 0 to 100. A correspondence between the index and style sequence number is calculated by the formula:

n=remainder from (I/N), (remainder from the division of I by N),

where:

- n – style number. Varied from 0 to (N-1);
- I – index specified;
- N – number of styles in the collection.

Using title projects

1. Applications for Working With Titles

Title projects created in the FDTitleDesigner application are used further in FDOnAir to work with titles. All operations related to displaying, combining and broadcasting of titles on air are implemented via FDOnAir.

Load title project to control titles in FDOnAir. Title object is the main control unit in this case.

A scheme of application use when working with title project is presented below:

FDTitleDesigner
Developing and prevewing of a title project

FDOnAir
Control over titles playback and overlaying of titles and video
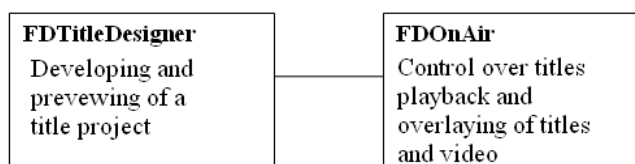
2. Opening a Project in FDOnAir

Loading of a title project into FDOnAir is implemented on the Settings > Title objects (1) page, where the full path to the file of the title project is set (2). This page is also where the buttons for the project's title objects are set (3). If necessary, a shift of the z-coordinate (4) can be set for the entire project – the set value will be added to the base z-coordinate of the project.

30
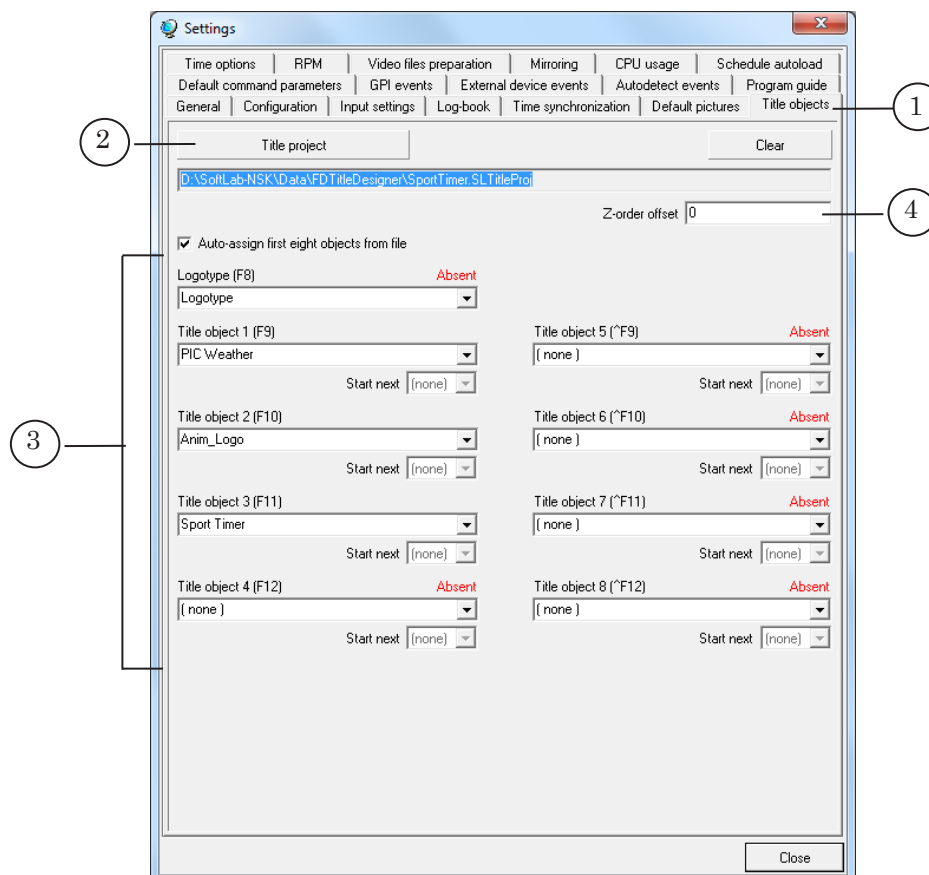
3. Commands for Titles Control

There are special commands to work with titles. These are commands to control displaying of title objects and titles. You may: turn on/off title object, specify another task for title object, enable/disable displaying of titles.

For more information on these commands, see the «FDOnAir Commands – Broadcast Automation» user's guide.

Application Description

This Section covers the application interface:

- Program Startup;
- Main Program Window;
- Editing the Project;
- Property Sheets;
- Application Commands.

Program Startup

To launch the FDTitle Designer program, use the file:
C:\Program Files\ForwardT Software\ FDTitle\FDTitleDesigner.exe.

You can launch the program using the desktop shortcut or the Start menu: Programs > ForwardT Software > Titles > Title Designer.

To run the program from the command line, use a command in the following format:
["full path to FDTitleDesigner.exe"] ["full path to the project file"]
where:

- file path names must be specified in quotes;
- the project file is a file with the SLTitleProj extension.

If you want to open a specific project, you can simply specify on the command line the full path to the project file.

Example: 1. To launch the program and create a new project, execute the following command:
"C:\Program Files\ForwardT Software\FDTitle\ FDTitleDesigner.exe"

2. The following command launches the program and opens an existing title project file:
"D:\User\Test.SLTitleProj"

Main Program Window

1. Main Window Overview

The main window is designed to create, edit, and preview title projects.
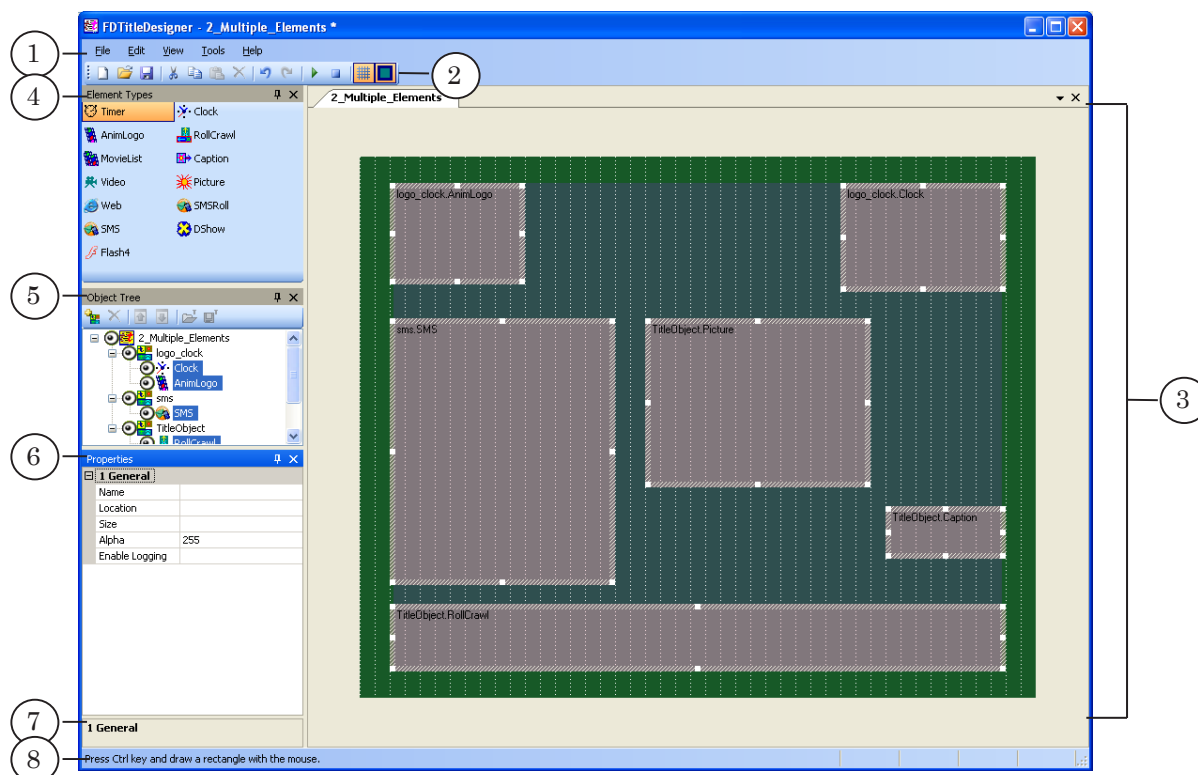
Main Window: Assignment of control elements

1 – main program menu; 2 – toolbar; 3 – project field; 4 – selecting types of title elements; 5 – browsing and configuring the project structure; 6 – viewing and configuring properties of the selected object; 7 – supplemental information; 8 – status line.

The main program window contains the following controls:

- main menu (1) – the totality of the application commands;
- toolbar (2) – shortcut buttons for frequently used commands;
- project field (3) – area used to create a title project – positioning title elements;
- subpanels:
  - Element types (4) – buttons for selecting types of title elements;
  - Object tree (5) – to display and edit the object tree (project structure);
  - Properties (6) – to configure properties of the selected object. The information field (7) displays supplimental information about the selected property;

- status line (8) – to display supplemental information about the coordinates and size of the selected element, pointer position on the project field, process of preview.

To exit the program, use the File > Exit command or the Close button in the program window title bar.

To call some commands, use the context menus.

2. Main Menu

The main menu contains a set of submenus with commands:
- File – commands for controlling project files and title element task files;
- Edit – editing commands;
- View – commands for adjusting the view of the project field and layout of the panels;
- Tools – preview control commands;
- Help – commands for selecting the interface language and opening the About... window.

3. Toolbar

The toolbar contains shortcut buttons for frequently used commands.

Table 1.   Toolbar Buttons

Icon	Function
	Create a new project.
	Load a project from the file.
	Save the project.
	Cut the selected elements to the clipboard.
	Copy the selected elements to the clipboard.
	Paste elements from the clipboard.
	Delete selected elements.
	Undo the last action.
	Redo the last undone action.
	Start preview.
	Stop the preview.

Icon	Function
	Show/hide the grid lines on the project field.
	Highlight "invisible area" of the television screen (outside of the "safe area" on the television screen).

4. Element Types Panel

The Element Types panel contains buttons for selecting a type of title elements. Each button displays an icon and short name of the corresponding element type.

Note: Object tree panel can be singled out of the main application window. To do this double-click heading of the panel and drag it to necessary place.
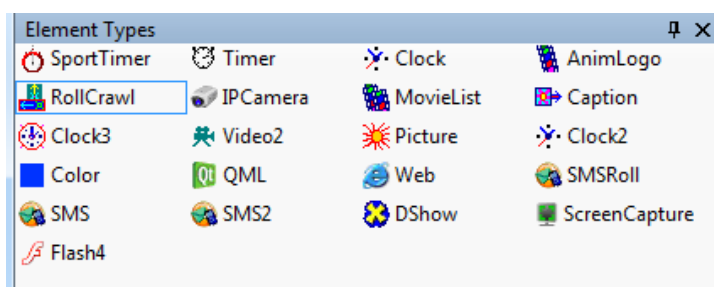
When creating a title element, in the first place select its type – click the appropriate button on the panel. In the second place mark the screen area where the titles of the selected type will be displayed.

Table 2. Element Type Buttons

Button Name	The element type. Content
Clock	The element Clock is not used in the latest versions of the software (see Clock 2). Clock – image of a clock that displays time and date. The source of time can be: the system time, a time server. Countdown is available. Designed by user via the TVClockDesigner application (ForwardT Software).
Clock2	Clock 2 – clock with graphic design, displays time, day of the week, month, year. It can be accompanied with audio. Countdown is available. Designed by user via the SLClockDesigner application (ForwardT Software).
Clock3	Clock 3 – clock without graphic design. The source of time can be: the system time, a time server. Can be used to display time: direct or countdown from start with specified accuracy.
Picture	Picture – static image.

Button Name	The element type. Content
Color	Color – rectangular area filled in with one color with transparency.
Caption	Caption – pop-up caption: text or graphics image.
AnimLogo	AnimLogo – video file with transparency or without, with audio or without (AVI, MPEG, WMF, ASF, etc).
Flash4	Flash4 – animated image created using Adobe Flash technique.
Video	Video – video with audio or without from the FD300 input or output.
Video2	Video2 – video with audio or without from the FD322/FD422/FD842 board input or output.
QML	QML – animated objects (text and pictures), the scenarios of which are written in QML.
Web	Web – updatable information from an HTML page.
DShow	DShow – video clip (AVI, MPEG, WMF, ASF, etc.), audio clip (WAV, MP3, etc.), static image, flash clip. Different file formats are supported when corresponding DirectShow componentes are present in the system.
RollCrawl	RollCrawl – sequence of ads that run at a specified speed and direction.
MovieList	MovieList – sequence of video clips and static images.
SMS	SMS – sequence of SMS messages. Only one message is displayed on the screen at a time.
SMSRoll	SMSRoll – sequence of SMS messages as a crawl line. The number of messages that can be held within the specified title element are displayed on the screen at a time.
SMS2	SMS2 – sequence of SMS messages. Only one message is displayed on the screen at a time. You may adjust a mode of the way messages appear/dissapear.
SportTimer	SportTimer – time counter: direct or countdown.

5. Object Tree Panel

5.1. Function

The Object Tree panel is designed to browse and change the title project structure – grouping elements by title objects.

This panel has the following functions:

- editing the object tree:
  - adding and deleting title objects;
  - grouping title elements by title objects – navigating from one group to another;
  - editing names of title objects and elements;
  - changing the sequence of certain elements and groups in the list (affects the Z order values);
- controlling tasks of title objects;
- import/export object templates;
- quick selection of elements for editing;
- adjusting the layout of objects and elements.

The panel contains:

- the object tree (1) – expandable list of the project objects and elements;
- toolbar with command shortcut buttons (2).
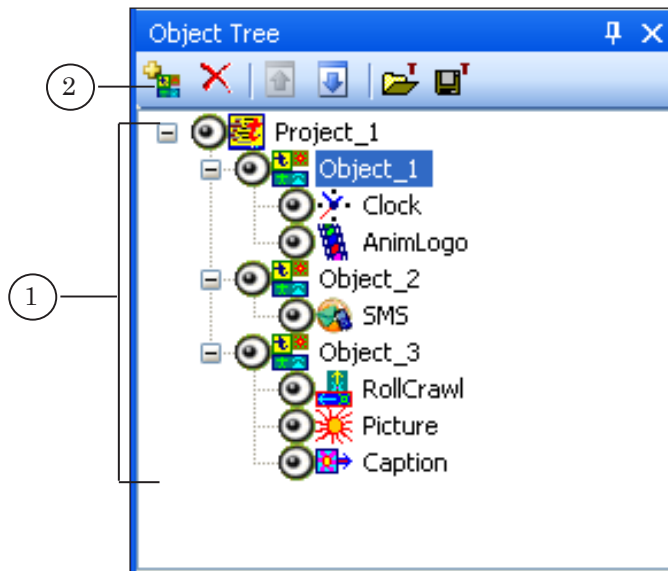
Right-click on the Object Tree panel to open the context menu.

Note: Object tree panel can be singled out of the main application window. To do this double-click heading of the panel and drag it to necessary place.

5.2. Object Tree View

The object tree is a three-level expandable list: project – objects – elements.

Each tree node can be expanded or collapsed by clicking on the plus (+) or minus (–) box, respectively (1). You can also use arrow keys: left arrow – collapse, right arrow – expand.

There is an icon (2) before each element of the list that denotes the current display mode when editing and playing:

- displayed – ⊚ ;
- hidden – ⊖ .

By clicking on the icon, you can switch the title object or element from one state to the other.
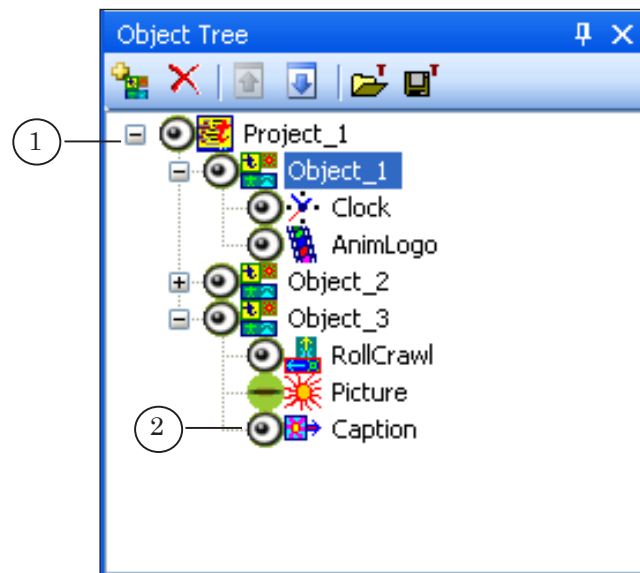
5.3. Toolbar Buttons

Table 3.   Toolbar Buttons for Editing the Object Tree

Icon	Function
	Create a new title object.
	Delete the selected title object.
	Move the selected element/object one position up.
	Move the selected element/object one position down.

Table 4.　　　Control Buttons for Title Object Tasks

Icon	Function
	Load a task for the selected title object.
	Save the task for the selected title object.

6. Properties Panel

The Properties panel is designed to configure properties of the selected object: title element, project, or project field.

The panel contains collapsible subpanels – tables with certain property sets (for more details, see the «Property Sheets» chapter). A set of tables in the panel depends on which object is currently selected. Each table consists of two columns. The left column displays the property names (1). The right column is used to edit the property values (2).

The lower part of the panel contains an information field (3), which displays supplemental information about the selected property.
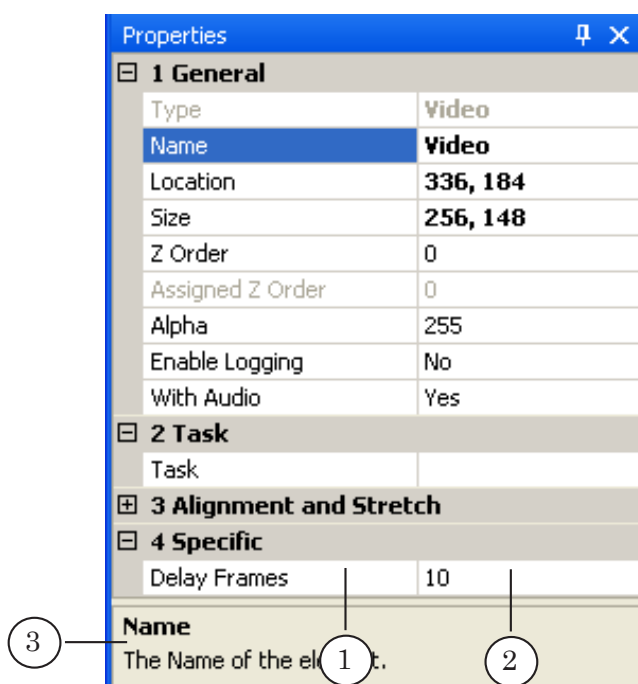
7. Project Work Field

The area of the main program window in which the layout of the title project is located and in which the title elements are placed is called the work field of the project.

The project field is a virtual screen. Its size is proportional to the frame size, set in the project settings.

Note: The FDTitle Designer program allows changing the size of the project field (increasing/decreasing) while saving the ratio of the sides – the Zoom function. It is useful, for example, when configuring HDTV projects in order to fully see the layout.

The coordinates of the elements located on the project field are indicated in pixels. The origin of coordinates (0,0 coordinate) is the upper-left corner of the project field (1).

For more usability, the project field can display the grid (2), the invisible area can be highlighted (3), the required background color can be selected. The horizontal and vertical grid pitch can be specified. Observe the following requirements: the horizontal pitch must be a multiple of 2, the vertical pitch must be also a multiple of 2.
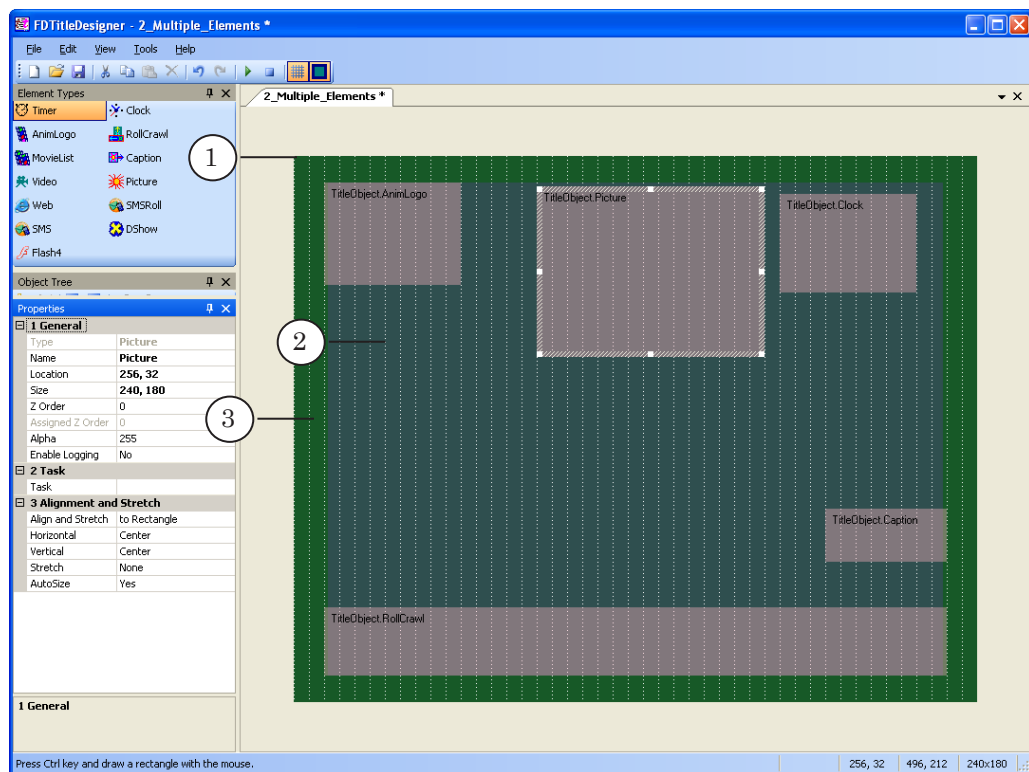
8. Status Line

The status line displays supplemental information about the position of the mouse pointer and title elements on the project field and about the process of preview.

The Figure shows the status line fields, which display:

- the current coordinates of the mouse pointer (1);
- the current coordinates of the selected title element:
  - the upper-left corner (2);
  - the lower-right corner (3);
- the size of the selected title element (4): width x height.

Note: The origin of coordinates (zero point) is the upper-left corner of the project field (5). Coordinates and sizes are indicated in pixels.
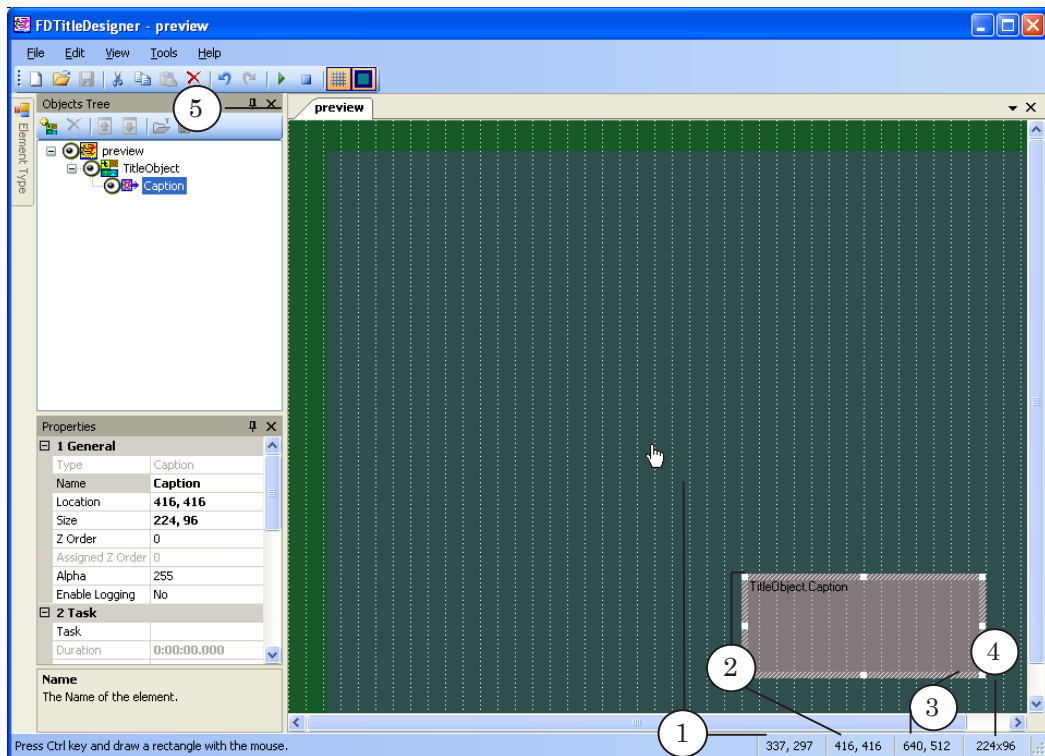
During preview, the status line displays information about the current frame and skipped frames (1).
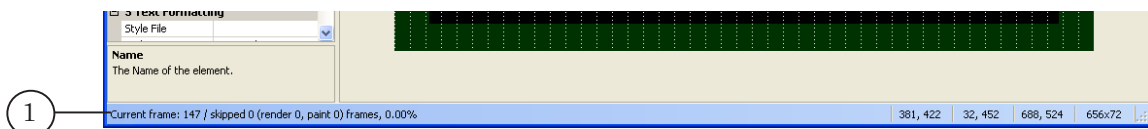
Editing the Project

1. Working with a Project

Only one project can be opened in the main program window at a time.

To work with project files, use the File menu commands (to quickly use commands you can use the toolbar buttons or hot keys, for more information see the «Application commands» section below).

To create a new title project, use the New command. To open an existing project – Open. To save a project, use the following commands:

- Save – saves the project into the file with the current name;
- Save As – saves the project into a file with a new name.

The creation of a title project includes the following steps (for more information see the next subsections):

1. Configuration of the general project settings and the work field (Properties panel).

2. Adding title elements to the project using the buttons of the Element Types panel and configuring the settings of the elements using the Properties panel table.

Note: Using templates, element groups with configured settings or scripts can also be added (see «9. Working with object templates» paragraph).

3. Grouping title elements by title object (Object tree panel) and configuring the object settings (Properties panel).

4. Preparing tasks for the title elements and objects.

2. Title Project Properties and Project Field View

To start configuring the title project's settings and work field, left click on any empty part of the work field or on the project name on the Object Tree panel. The following tables will appear on the Properties panel:

- General – the service properties, work field settings in FDTitle Designer;
- Project Config – z-coordinate of the project and step on an axis z; the TV standard supported in the project. The TV standard needs to be set in full accordance to the parameters of actual translation;
- Custom TV params – used if none of the standards listed suffice.

Properties	
1 General	
Grid Size	**16, 4**
Invisible Area color	128, 0, 100, 0
Draw Grid	Yes
Draw on Preview	Yes
DirectSound device	**Первичный звуковой драйв**
Debug Script	Yes
Highlight Invisible Area	Yes
Invisible Area Percent	5
Preview	Progressive
ScreenScale	**Two thirds (2:3)**
Back color	DarkSlateGray
2 Project Config	
ZOrderIncrement	1
Base Z order	0
TV Standard	**HDTV1080p23**
3 Custom TV params	
Interlacing	**Progressive**
FrameRate	23.976
Screen size	**1920, 1080**

Act cautiously if changing the TV standard of a project already containing title elements. The decreasing of a frame size can lead to the cut off of title elements added previously. The program will issue a notification of the impossibility of changing the screen size.

Note: Recommendations for previewing projects with a big frame size (HDTV standard):
1. To fully view the layout, use the function Screen size (a table of General properties of the project), which allows decrease/increase the size of the project field, saving a given aspect ratio.
2. It can be useful to use the SLTitlePreview program included in ForwardT Software. For a detailed description of working with SLTitlePreview, see the «FDOnAir: Additional Sections» user's guide.

3. Adding Title Elements

A title element is added to the current title object group as last in the list. To add a title element to the project, complete the following:

1. Select the title object you wish to add an element to in the object tree (Object Tree panel).

2. Select the element type by left clicking on the corresponding button on the Element Types panel.

3. Set the area of the screen where the element will be located. In order to do this: click and drag the left mouse button in order to select a rectangular area on the work field.

Tip: If it is necessary to create several elements of the same type, press the corresponding button on the Element Types panel and press and hold down Ctrl when adding elements to the work field.

4. Configuring Properties of the Title Elements

To proceed to configuring properties of a title element, select the element in the object tree or on the project field by clicking on it.

It is possible to configure several selected elements simultaneously, e.g. change the position of a group of elements on the project field or some properties of elements of the same type.

Tip: Shift-click or Ctrl-click to select multiple elements on the project field or in the object tree.

Most properties are configured using the tables in the Properties panel. The position and size of the elements can be configured by directly moving the bounding rectangles on the project field. Double-click on an element rectangle to open a task file selection window.

5. Changing the Position and Size of Title Elements

To change the position of a selected title element (or a group of elements), place the mouse pointer over it (the mouse pointer changes to), drag the bounding rectangle to the position on the project field where you want to place it.

To change the size of a selected element, place the mouse pointer over a sizing handle on the element rectangle (the mouse pointer changes to , or , or), click and drag the rec-tangle to the size you want.

Tip: Supplemental information about the element coordinates, width and height is displayed in the status line of the main window.

6. Editing Title Objects

When creating a new title project, it has one title object by default. To select objects to be edited, to create, rename, and delete objects, use the Object Tree panel. To adjust properties of the selected object, use the Properties panel.

To create a new title object, use the command Create New Title Object. To call the command, use:

- the Edit menu;
- the button (1) or context menu (2) in the Object Tree panel.
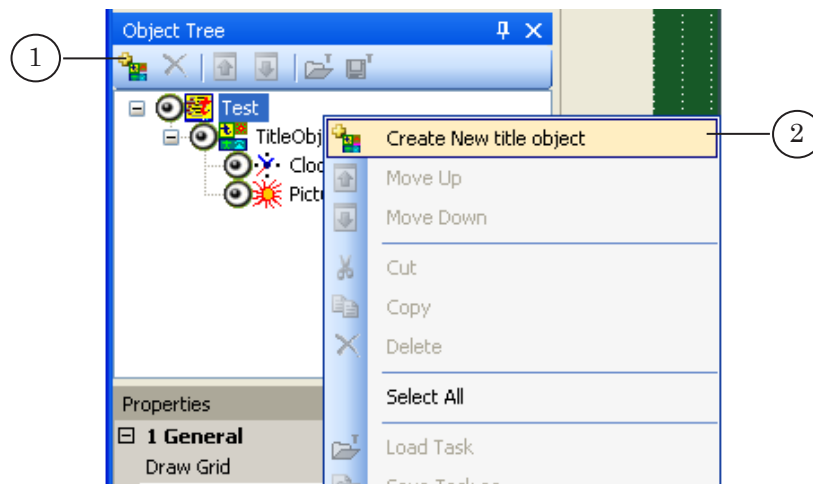
To rename a title object, click the existing name in the object tree to select the object, click it again to select the name field, and type the new name.
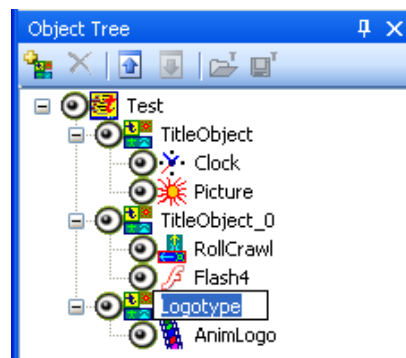
To delete a title object, click it to select and click the ✕ button on the toolbar or press the Delete key.

7. Moving Title Elements and Objects in the Object Tree

Title elements and objects can be moved in the object tree, and title elements can be moved from one object to another.

To move an object or element, select it and use the Move Up or Move Down command. To call the commands, use:

- the Edit menu;
- the buttons (1) or context menu (2) of the Object Tree panel.

Also, you can drag objects and elements with the left mouse button pressed directly in the object tree.
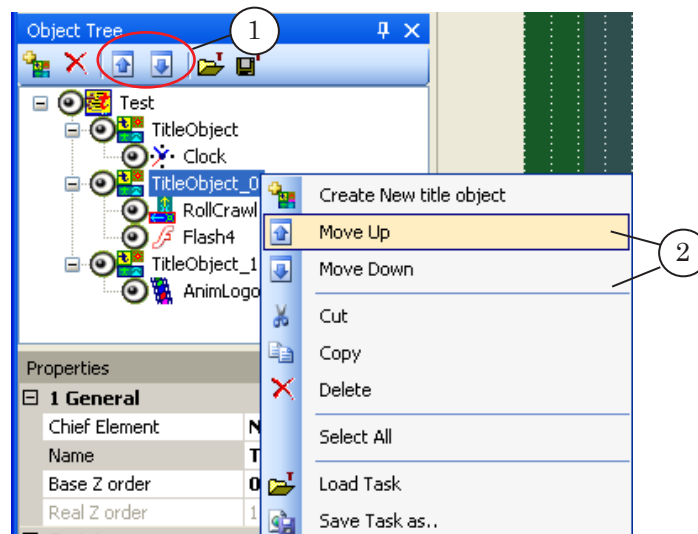
Note: The sequence order of objects and elements in the object tree affects their actual Z order.

8. Controlling Tasks of Title Objects

To control tasks of title objects, use the following commands:

- Save Task As... – save the task to a file;
- Load Task... – load the task from the file to the project.

Note: In attempt to load the task prepared for other object (for example, with other name or with the same name, but other composition of elements), tasks of elements of the selected object will be dropped in values by default.

To control the tasks of a specific title object, select the object node in the object tree.

If a title object contains only one title element or none, operations with the object tasks are unavailable, corresponding commands are blocked.

To call the control commands for object tasks, use:

- the File menu;
- the context menu of the selected object – right-click to open it;
- the toolbar buttons on the Object Tree panel.
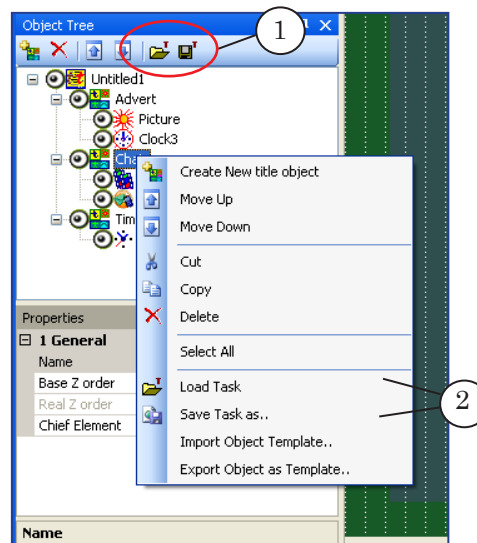
9. Work with object templates

In order to save an object as a template, select it in the object tree, open the context menu and click Export Object as Template (1). The object description will be saved into a *.SLTitleTmpl file.

To create an object based on a template, use the Import Object Template command (2).

The commands can be found in:

- the File menu in the program's main window;
- the context menu that opens when you right-click the object tree.
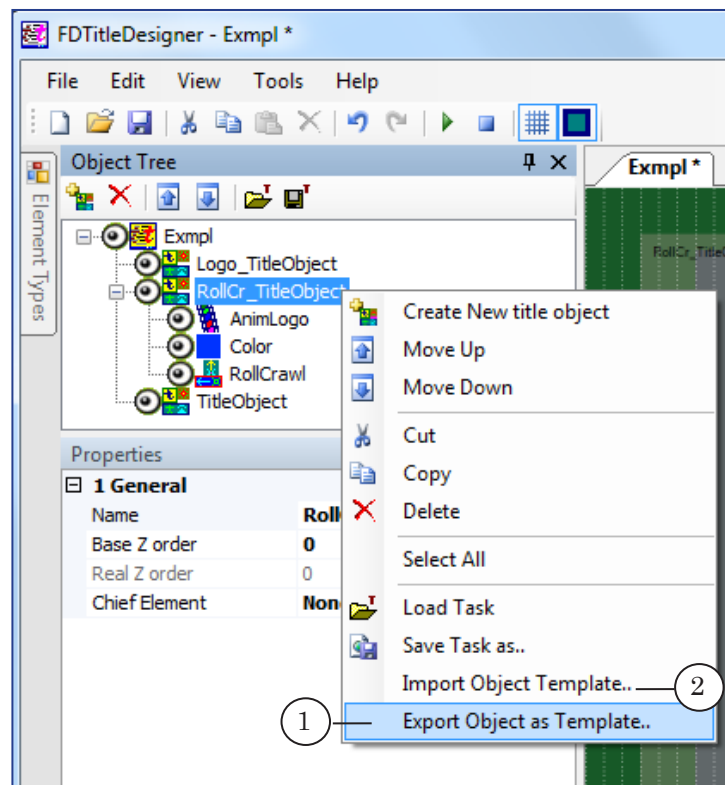
Property Sheets

To configure the title project parameters and the project field view, properties of title objects and elements, use the Properties panel.

1. Title Project Properties and Project Field View

To proceed to configuring properties of the title project and the project field view, click on an empty space of the project field or on the project name in the object tree (the Object Tree panel).

The subpanels General and Custom TV Params are opened on the Properties panel.

Table 5.   The Title Project and Project Field Properties

Name	Description	Possible Values/Restrictions	Default Value
Subpanel General			
Grid Size	Step of the alignment grid.	Two integers separated by a comma: horizontal step, vertical step The values of the horizontal and vertical steps are divisible by 2.	16, 4
Invisible Area color	Color signifying the invisible area.	Color sample and name (or numerical representation). Can be chosen from the standard System or Web sets or using the Custom palette.	128;0;100;0
Draw Grid	Display the alignment grid on the project field.	Yes – display; No – hide.	Yes
Draw on Preview	The project field view during preview: display of the alignment grid; element contours; invisible area borders.	Yes – display; No – hide.	Yes
DirectSound Device	The name of the audio device used to play audio in titles.	Values are selected from the list of audio devices installed in the system. Besides, the list includes the following options: Primary Sound Driver – audio device used in the system by default; NoSound – playback without audio.	Primary Sound Driver
Debug Script	Allow the debugging of scripts.	Yes; No.	Yes
Highlight Invisible Area	Highlight the invisible area of the screen.	Yes – highlight; No – do not highlight.	Yes

Name	Description	Possible Values/Restrictions	Default Value
Invisible Area Percent	The size of the area on the project field that is considered invisible (not displayed on the TV screen). Set in percent of the project field plottage.	Integer from 0 to 20.	5%
Preview	Preview mode. Modes differentiate by the way fields are displayed.	Progressive – progressive scanning – the display of frames fully with the set frame rate; Interlaced by frames – interlaced scanning, version 1. The fields (upper/lower) are displayed separately, successively, doubled frame rate; Interlaced by fields – interlaced scanning, version 2. Both fields are displayed simultaneously, doubled frame rate.	Progressive
ScreenScale	Changing the project field size while saving the proportions of the frame. The new size is set according to the full size of the frame.	Actual Size – original size (1:1), full video frame size; Two thirds (2:3) – decrease, 2/3 of the full size; Half Size (1:2) – same with 1/2; Four to Three (4:3) – increase, 4/3 of the full size; Three to Two (3:2) – same with 3/2; Double Size (2:1) – same with 2/1.	Two thirds (2:3)
Back Color	Project field background color.	A color sample and name (or a numerical value). Can be selected from the standard System or Web sets or using the Custom palette.	Dark SlateGray
Subpanel Project Config			
ZOrderIncrement	The step on the Z axis, using which the actual z-coordinates of title elements in objects are distributed.	Integer positive number.	1
Base Z order	Value of the base project z-coordinate. Starting point for calculating the z-coordinate of objects and elements when automatically distributing.	Zero or an integer positive number.	0

Property Sheets

Name	Description	Possible Values/Restrictions	Default Value
TV Standard	TV standard and frame size.	Values are chosen from a list of TV standards including the following standards: PAL, NTSC, HDTV, VGA, XGA, SXGA. The list also contains the Custom item for an arbitrary configuration. In that case the Custom TV Params table is used for configurations.	PAL720x576
Subpanel Custom TV Params			
Interlacing	Scan type. Interlace of TV frames.	Interlaced; Progressive.	Interlaced
FrameRate	Frame rate.		Frame rate of the last selected configuration
Screen Size	Frame width and height.	Two integers separated by a comma: width, height The values must be multiples of the set step of the alignment grid.	Frame size of the last selected configuration

✔ **Important:** Be careful! When changing the step of the alignment grid the coordinates of the title elements contained in the project will automatically be changed according to the new values.

2. Properties of Title Objects

To proceed to configuring properties of a title object, select the object in the object tree. The Properties panel displays a General subpanel with fields for editing the title object properties.

Table 6.   Title Object Properties

Name	Description	Possible Values/Restrictions	Default Value
Subpanel General			
Base Z order	Initial value of the z-coordinate of the title object.	Any integer, positive or negative.	0
Chief Element	The name of the chief title element.		None
Real Z order	Actual value of the z-coordinate. Read-only.		0
Name	A unique identifier of the title object.	A unique symbol string within the project.	TitleObject_N where N – the title object sequence number

3. Properties of Title Elements

To proceed to configuring properties of a title element, click on the title element in the object tree or on the project field to select it. The Properties panel displays subpanels that list all parameters of the selected title element.

A set of subpanels and properties depends on the selected element type. The property subpanels of the title elements has the following functions:

- General – to adjust general properties of the element. Exists for all element types;
- Task – to adjust parameters of the title element task. Exists for all element types;
- Alignment and Stretch – to adjust alignment and scaling parameters of the title element content. Exists for most types ecxept for Web;
- Specific – to adjust the set of properties that depend on the element type. Exists for most types except for AnimLogo, Picture, Web;
- Text Style – to adjust parameters of the title element text design. Exists for all element types that are used to display text information.

The section covers a description of the General and Alignment and Stretch subpanels. The rest of the property groups are covered in

Sections that discuss the features of specific element types.

Table 7.   Properties of Title Elements

Name	Description	Possible Values/Restrictions	Default Value
Subpanel General			
Type	Title element type. Read-only.	Title element type name.	None
Name	Title element identifier.	A unique symbol string within the project.	Type_ name_N where N – the element sequence number
Location	Coordinates (x, y) of the upper-left corner of the title element (in pixels).	Two integers separated by a comma: x, y Horizontal coordinate value must be a multiple of 2. Vertical coordinate value must be a multiple of 2.	None
Size	The title element width and height in pixels.	Two integers separated by a comma: width, height Horizontal size must be a multiple of 16; min – 64 pixels. Vertical size must be a multiple of 2; min – 20 pixels.	None
Z Order	Initial value of the z-coordinate.	Any integer, positive or negative.	None
Assigned Z Order	Actual z-coordinate. Read-only.	Assigned when starting preview.	None
Alpha	Image transparency.	Integer from 0 to 255: 0 – completely transparent; 255 – completely opaque.	255
Enable Logging	Enable logging control operations that are performed in FDOnAir over the title element.	Yes; No.	No
WithAudio	Play audio in the title element.	Yes; No.	Yes
Audio Volume (dB)	Audio volume in dB.	Integer from -96 to 12.	0

Name	Description	Possible Values/Restrictions	Default Value
Mute	Mute audio in the title element.	Yes; No.	No
Subpanel Alignment_Stretch			
Align and Stretch	Align and scale the element content to what.	To Rectangle – relative to the bounding rectangle; To Screen – relative to the screen (when editing – relative to the project field).	To Rectangle
Horizontal	Horizontal alignment of the content within the element rectangle or screen.	Center; Left; Right.	Center
Vertical	Vertical alignment of the content within the element rectangle or screen.	Center; Top; Bottom.	Center
Stretch	Scale the content – resize to the element rectangle or screen size.	None – do not resize the image; Entire Image – resize the image to fit the element rectangle or screen without keeping aspect ratio; Keep AspectRatio – resize the image to fit the element rectangle or screen keeping aspect ratio; Entire Image by fields – resize the image to fit the element rectangle or screen by half-frames, without keeping aspect ratio; Keep AspectRatio by fields – resize the image to fit the element rectangle or screen by half-frames, keeping aspect ratio.	None
AutoSize	Scale the element rectangle – resize the specified rectangle size to the content. Resizing is performed uniformly in all directions.	Yes – resize the element rectangle to the image size; No – do not resize the element rectangle to the image size.	Yes

Application Commands

The main menu contains a set of submenus with commands:

- File – commands for controlling project files and title element task files;
- Edit – editing commands;
- View – commands for adjusting the view of the project field;
- Tools – preview control commands;
- Help – commands for selecting the interface language and opening the About... window.

The table gives a complete list of the application commands.

Table 8.   Application Commands

Name	Icon	Function	Hotkeys
File Menu			
New		Create a new (empty) project.	Ctrl+N
Open		Load a project from the file.	Ctrl+O
Save		Save the current project to a file.	Ctrl+S
Save As...		Save the current project to a new file.	
Load Task		Load a task from the file for the selected title element.	
Save Task As...		Save the task for the selected title element to a file.	
Import Object Template		Add a title object to the project by selecting a template – a full description of the object (* .SLTitleTmpl).	
Export Object as Template		Save a description of the chosen object as a template into a *.SLTitleTmpl file.	
Recent Files		Show a list of the last 10 open project files.	
Exit		Exit the application.	Alt+F4
Edit Menu			
Undo		Undo the last action.	Ctrl+Z
Redo		Redo the last undone action.	Ctrl+Y
Cut		Cut the selected elements to the clipboard.	Ctrl+X
Copy		Copy the selected elements to the clipboard.	Ctrl+C

Name	Icon	Function	Hotkeys
Paste		Paste elements from the clipboard.	Ctrl+V
Delete		Delete selected elements.	Del
Select All		Select all title elements of the project.	Ctrl+A
Create New Title Object		Create a new title object.	
Move Up		Move element (object) one step up.	Ctrl+Up
Move Down		Move element (object) one step down.	Ctrl+Down
View Menu			
Grid		Enable/disable the grid lines on the project field.	
Invisible Area		Display or hide the borders of the invisible area of the screen. If the display is turned on, then the part of the project field that intersects with the invisible part of the screen will be filled in with the color set in the work field settings.	
Element Types		Show/hide the Element Types panel.	
Object Tree		Show/hide the Object Tree panel.	
Properties		Show/hide the Properties panel.	
Script IDE		Show/hide the Script IDE window.	
Reset Layout		Return to the default panel and window placement.	
Tools Menu			
Start Preview		Start the project preview.	
Stop Preview		Stop the project preview.	Ctrl+T
Help Menu			
Language > English (Russian)		Switch to the English (Russian) interface.	
About...		Display a window with information about the program.	

Types of Title Elements

The section describes the existing types of title elements, their functions, and how to work with them.

Clock

1. Function

The Clock title element is designed to display clock and date information in the specified area of the screen (1).
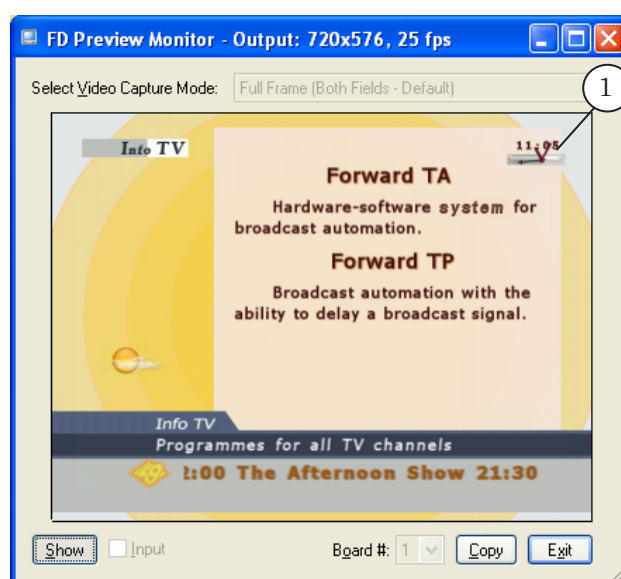
It is possible to use different image types of the clock. The clock can be displayed as:

- a dial with hands, so-called analog clock (1);
- digits with separators, so-called electronic clock or digital clock (2);
- a combination of analog and digital displays (3).

It is possible to set the direction of timing: count-up or count-down mode. As a time source, may be used:

- the computer internal clock;
- the time server – SLTimeServer. For details about the time server see the «SLTimeServer» user's guide.

The start of timing can be arbitrarily set by the user.

2. Task
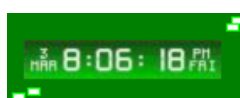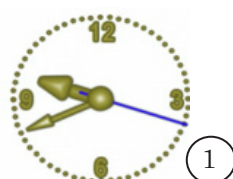
The task for the Clock title element is a file in the CLC format. The file specifies the type and design of the clock.

The task is prepared in the TVClockDesigner program included in the ForwardT Software. For more details, see the «TV Clock Designer» user's guide.

3. Adjustment Features

Properties of the Clock title element are used to specify the timing parameters: to select the time source, mode of timing, etc.

Table 1.   Clock Title Element Properties

Name	Description	Possible Values/Restrictions	Default Value
Subpanel Task			
Task	Full path to the task file.	File format: CLC.	None
Subpanel Specific			
Mode of Timing	Mode of timing: direction, source, offset.	Current time – count-up according to the source selected; Count up from specified time – count-up from the value specified in the Start time line; Current time with offset – timing according to the selected source with an offset. The offset is specified in the Start time line; Count down and stop – countdown from the value specified in the Start time line to zero; Count down and hide – countdown from the value specified in the Start time line to zero, whereupon the clock image is hidden; Count down always – countdown from the value specified in the Start time line until the stop command is issued.	Current time
Start Time	Depending on the mode of timing, denotes either the start of timing or the offset value.	String in the format hh:mm:ss, where: hh – hours; mm – minutes; ss – seconds.	00:00:00
Clock State	Clock state.	Running; Stopped.	Running
Time Source	Time source.	System time – the computer system clock; SLTime Server – the time server. When using the time server, some additional settings are required. To get them, use the SLTimeManager program. For more details about the time server, see the «SLTimeServer» user's guide.	System time

Clock

Clock 2

1. Function

The Clock2 title element is used to display clock with graphic and audio design (1). The element can display time, date, day of the week, year etc.
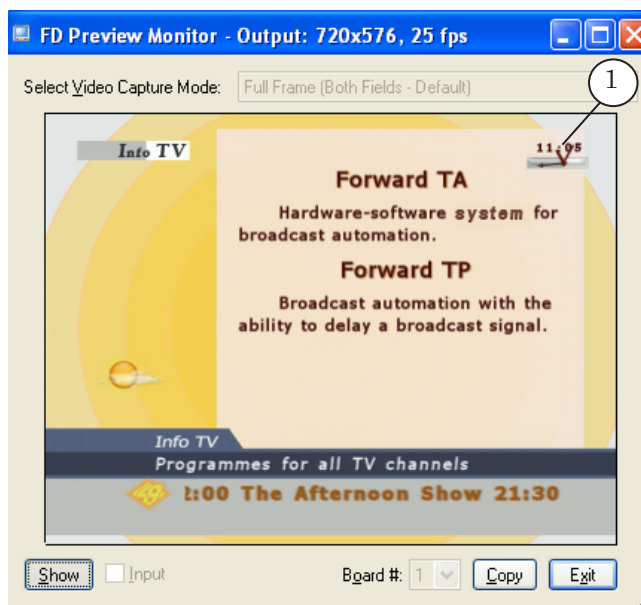
The clock can be displayed as:

- a dial with hands, so-called analog clock (1);
- digits with separators, so-called electronic clock or digital clock (2);
- a combination of analog and digital displays (3).

It is possible to set the direction of timing: count-up or count-down mode. As a time source, may be used:

- the computer internal clock;
- the time server – SLTimeServer. For details about the time server see the «SLTimeServer» user's guide.

The start of timing can be arbitrarily set by the user.

2. Task

The task for the Clock2 title element is a file in the SLClockProj format. The file is prepared via the SLClockDesigner program included in the ForwardT Software set.

The file specifies the type of displayed data and design of the clock.

3. Adjustment Features

The Properties panel of the Clock2 title element has the following subpanels: General, Task, Alignment and Stretch and Specific.

Note: For detailed description of the General and Alignment and Stretch subpanels see the «Properties of title elements» section of the «Property Sheets» chapter above.
Specific properties of title elements of this type are for configuring of timing parameters.

Table 2.   Clock2 Title Element Properties

Name	Description	Possible Values/Restrictions	Default Value
Subpanel Task			
Task	Full path to the task file.	File format: SLClockProj	None
Subpanel Specific			
Mode of Timing	Mode of timing: direction, source, offset.	Current time – count-up according to the source selected; Count up from specified time – count-up from the value specified in the Start time line; Current time with offset – timing according to the selected source with an offset. The offset is specified in the Start time line; Count down and stop – countdown from the value specified in the Start time line to zero; Count down and hide – countdown from the value specified in the Start time line to zero, whereupon the clock image is hidden; Count down always – countdown from the value specified in the Start time line until the stop command is issued.	Current time
Start Time	Depending on the mode of timing, denotes either the start of timing or the offset value.	String in the format hh:mm:ss, where: hh – hours; mm – minutes; ss – seconds.	00:00:00

Name	Description	Possible Values/Restrictions	Default Value
Time Source	Time source.	System time – the computer system clock; SLTime Server – the time server. When using the time server, some additional settings are required. To get them, use the SLTimeManager program. For more details about the time server, see the «SLTimeServer» user's guide.	System time

Clock3

1. Function

The Clock3 title element is designed to display a timer. It is possible to set the direction of timing both count-up/countdown mode and display time with different accuracy.
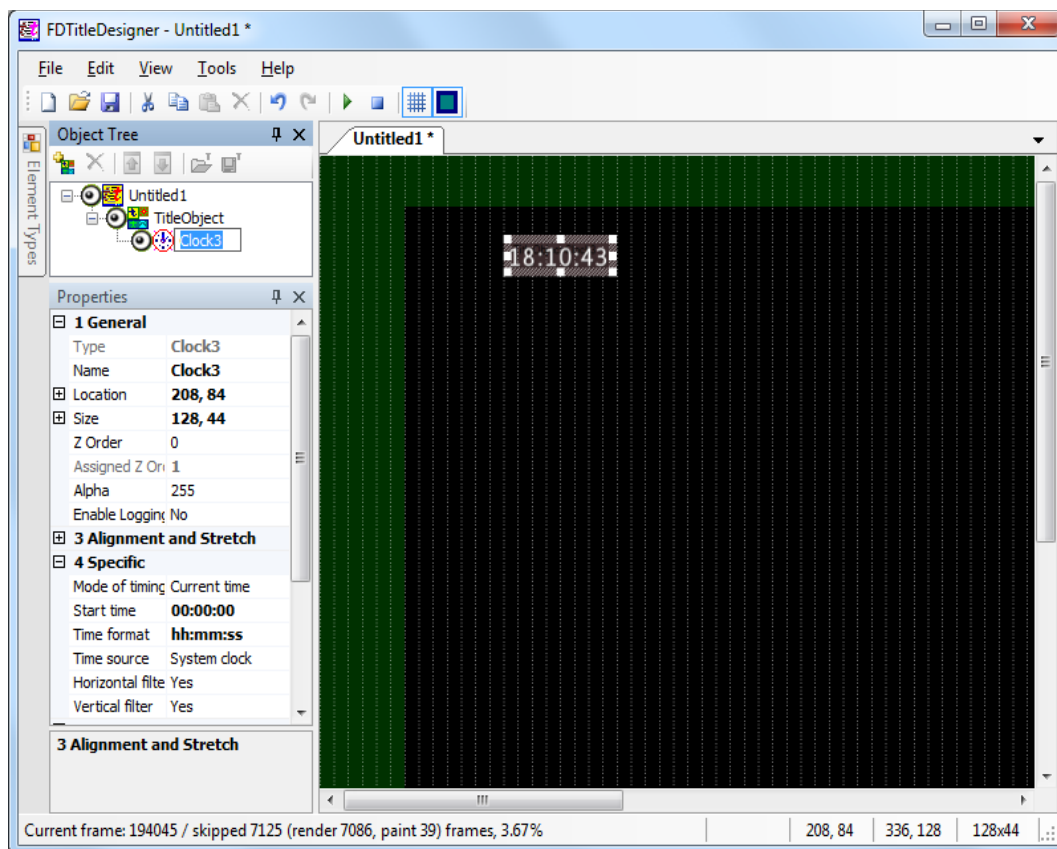
2. Adjustment Features

The Properties panel of the Clock3 title element has the following subpanels: General, Alignment and Stretch, Specific and Text Formatting.

Note: For more information on the General and Alignment and Stretch properties see in the «Properties of Title Objects» section of the «Property Sheets» chapter.

Specific properties of this element are used for adjusting of timing: time source, timing direction, start time and time format.

To design the timing, font styles from the specified style collection are used. If no style collection is specified, the default style is used.

Table 3. Clock3 Title Element Properties

Name	Description	Possible Values/Restrictions	Default Value
Subpanel Specific			
Mode of Timing	Mode of timing: direction, source, offset.	Current time – count-up according to the source selected;	Current time
		Count up from specified time – count-up from the value specified in the Start time line;	
		Current time with offset – timing according to the selected source with an offset. The offset is specified in the Start time line;	
		Count down and stop – countdown from the value specified in the Start time line to zero;	
		Count down and hide – countdown from the value specified in the Start time line to zero, whereupon the clock image is hidden;	
		Count down always – countdown from the value specified in the Start time line until the stop command is issued.	
Start Time	Depending on the mode of timing, denotes either the start of timing or the offset value.	String in the format hh:mm:ss, where: hh – hours; mm – minutes; ss – seconds.	00:00:00
Time Format	Format of timing.	hh:mm:ss; hh:mm; h:mm; h:mm:ss; mm; mm:ss; m:ss. where: hh – hours with leading zero (for example, 04); h – hours without leading zero (for example, 4); mm – minutes with leading zero; m – minutes without leading zero; ss – seconds.	hh:mm

Name	Description	Possible Values/Restrictions	Default Value
Time Source	Time source.	System time – the computer system clock; SLTime Server – the time server. When using the time server, some additional settings are required. To get them, use the SLTimeManager program. For more details about the time server, see the «SLTimeServer» user's guide.	System time
Horizontal filter	Horizontal filter function to anti-alias the image. For more information see below in the «Additional sections», «Image filters» section.	Yes – turn on. No – turn off.	Yes
Vertical filter	Vertical filter function to anti-alias the image. For more information see below in the «Additional sections», «Image filters» section.	Yes – turn on. No – turn off.	Yes
Subpanel Text Formatting			
Style File	Full path to the style collection file.	File format: EFC.	None
Style Index	Style index used for the timer elements. If the style file is already available when configuring and the index number of the needed style is known, simply set the index number.	Integer from 0 to 100. The index number of the style is automatically calculated based on the index using the formula: $n=remainder(I/N)$, (remainder from dividing I by N), where: n – the style number. Vary from 0 to (N-1); I – the index specified; N – the number of styles in the collection.	0
Hour style	Style index of the numbers used to show the hour value.	-1 – style, set in the Style Index field.	-1
Minute style	Style index of the numbers used to show the minute value.	See above.	-1
Second style	Style index of the numbers used to show the second value.	See above.	-1
Separator 1 style	Style index of the separator between hours and minutes.	See above.	-1

Name	Description	Possible Values/Restrictions	Default Value
Separator 2 style	Style index of the separator between minutes and seconds.	See above.	-1

✔ **Important:** Style Index number 0 corresponds to the first style in the style collection list.

Picture

1. Function

The Picture title element is designed to display a static image in the specified area of the screen.

The Picture title element is used, e.g. to display a static logo in a corner of the screen (1). Also, it can be used to display automatically updated information about the current temperature, humidity, barometric pressure, etc (2).
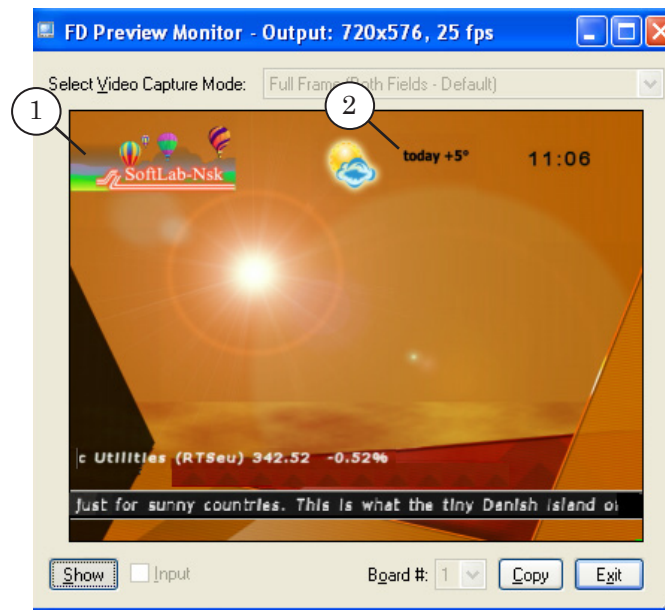
2. Task

The task for the Picture title element is a graphics file in one of the formats: TGA, BMP, DIB, PNG, JPG. To create a graphics task file, you can use a graphics editor ForwardTitling included in ForwardT Software.

During the operation, the content of the Picture title element is automatically updated periodically – the image from the task file is read anew and loaded to the title element.

Hereby, changing the image in the task file almost immediately changes the title image.

This behaviour is used to display dynamic information.

Note: ForwardT Software set includes the FDImageUpdater program. The FDImageUpdater program is designed to update a graphics file automatically. The program with the Picture title element is used to display dynamically updated information (on weather, for example) in titles in a real time. The program is described in detail in the «FDImageUpdateManager» user's guide.

3. Adjustment Features

The Picture title element has general parameters, alignment and scaling parameters, and task parameters as well.

The picture display duration is controlled by the title object control commands in the FDOnAir program.

Note: For more information on the General and Alignment and Stretch properties see the «Properties of Title Elements» section of the «Property Sheets» chapter.

Control over displaying of picture is implemented via the commands of the FDOnAir application.

Table 4.   Picture Title Element Properties

Name	Description	Possible Values/Restrictions	Default Value
Subpanel Task			
Task	Full path to the task file.	File formats: TGA, BMP, DIB, PNG, JPG.	None

Color

1. Function

The Color title element is designed to show a rectangular area filled in with one color. This can be used, for example, to create a background (1) for a crawl line.
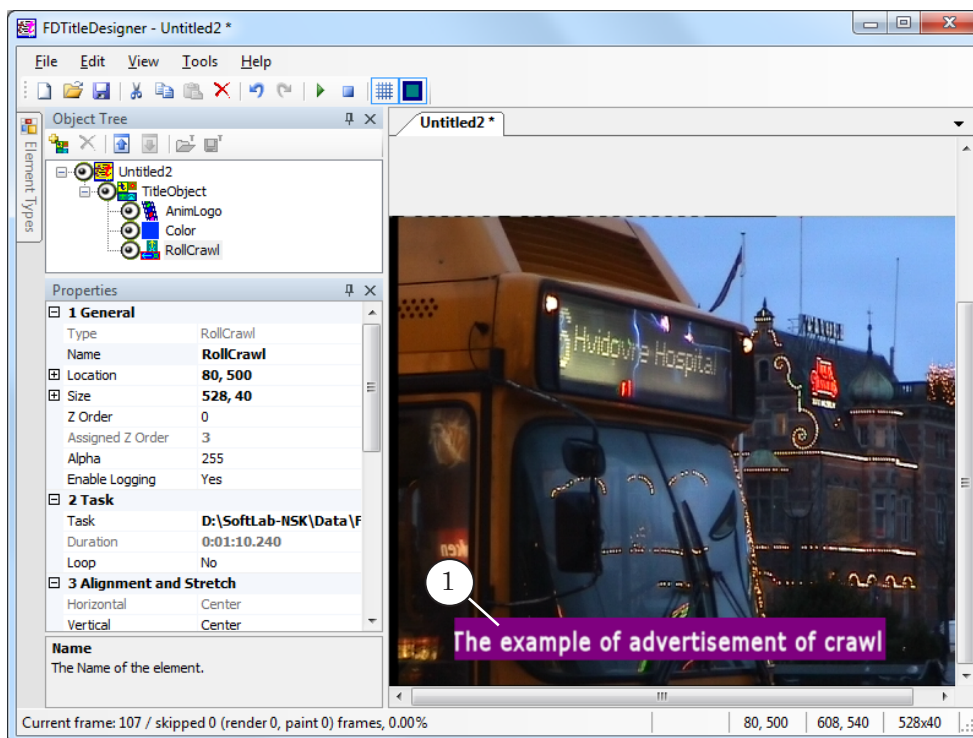
2. Task

The task for the Color title element is a color designation: a color code in a decimal or hexadecimal format or name. The color code can set the color transparency.

3. Adjustment Features

The Settings panel for Color elements contains the following tables: General; Task.

Note: For a description of the General table, see the above the «Title element Settings» section in the «Settings Table» chapter.

The duration of the display of the element is controlled using title object commands in the FDOnAir program.

Table 5.   Color Title Element Properties

Name	Description	Possible Values/Restrictions	Default Value
Task	Color designation. The color is set in a decimal or hexadecimal format. The code contains the values of 4 components: transparency, red, green, and blue color components.	Color code. Possible variations: 1. Using a decimal format: aaa,rrr,ggg,bbb or rrr,ggg,bbb where the letters symbolise integer numbers 0–255: ● a – transparency; ● r – red; ● g – green; ● b – blue. 2. Using a hexadecimal format: #AARRGGBB or #RRGGBB where the letters symbolise hexadecimal numbers from 0 to FF: ● AA – transparency; ● RR – red; ● GG – green; ● BB – blue. 3. The color can be selected from the standard Web and System sets or using the Custom palette.	0,0,0,0

Note: The transparency of the color can be adjusted in two ways: 1. The transparency value (aaa) is set in the Task property (recommended); 2. The Alpha (general element transparency) setting in the General table. In the first version the transparency information is saved into the title object assignment file (*.SLTitleTsk) along with the color code, which is important if the object assignments will be loaded into FDOnAir. In the second version the information is not saved.

Caption

1. Function

The Caption title element is designed to display a text line or picture that appears/disappears in the specified area of the screen. Most often, it is used as a pop-up comment (1).

It is possible to adjust the pop-up mode: select the direction of running, speed, fade-overs.
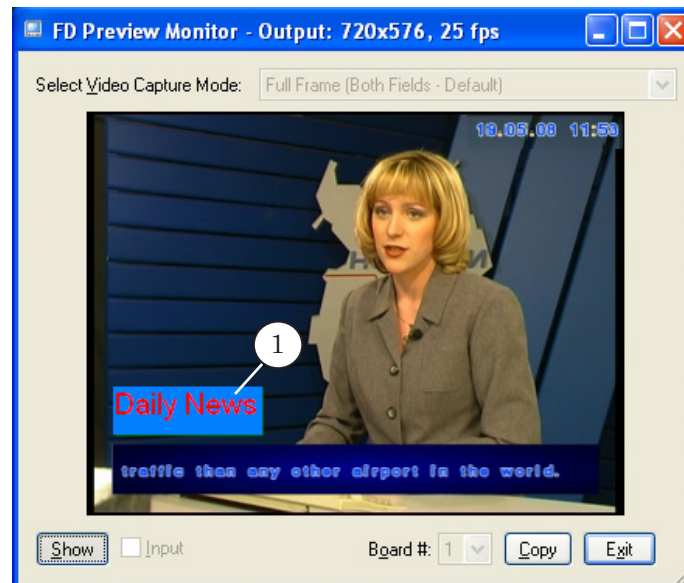
2. Task

The task for the Caption title element may be:

- a graphics file in one of the following formats: TGA, BMP, DIB, PNG, JPG;
- a text file in the TXT format. The entirety of the text contained in one file is considered a single message, and the entirety of the contents of the task file will be displayed in a single block of text. The amount of repetitions and the appearance of the message depends on the element settings.

Note: If enter a text string instead of the task file name in the Task field (Properties panel), the specified area of the screen displays the text entered.

3. Adjustment Features

The Caption title element has the following Properties: General, Task, Alignment and Stretch, Specific, Text Formatting.

Note: More information on the General and Alignment and Stretch properties you may find in the «Properties of title elements» of the «Property Sheets» chapter.

The Alignment and Stretch subpanel of the Caption title element has 2 parameters: Horizontal (to configure content horizontal alignment) and Vertical (to configure content vertical alignment).

The Specific properties are used to adjust the pop-up parameters: speed, direction, fade-ins and fade-outs.

If a text file is used as the task, you can adjust the text design by selecting a style from the style collection. Besides, it is possible to adjust the text alignment by specifying the left and right margins.

In addition to this you may use tags of formatting used for designing of text. For more information on this issue, see the «Tags of formatting» section.

Table 6.   Caption Title Element Properties

Name	Description	Possible Values/Restrictions	Default Value
Subpanel Task			
Task	A task string or the path name of the file that represents the element task.	File formats: TGA, BMP, DIB, PNG, JPG, TXT.	None
Duration	Total duration of one task loop. Read-only. Automatically calculated as a sum total of the run, fade-in, fade-out, rest, pause time (on the basis of the values specified in the Specific subpanel).	String in the format hh:mm:ss.ms, where: hh – hours; mm – minutes; ss – seconds; ms – milliseconds.	None
Loop	Whether or not to loop the playback.	Yes – loop the playback until the stop command is issued; No – play back the title element content (according to the task) once; Pseudo Yes – loop the playback until playing a title element with the largest duration within the object is over (about using the Pseudo Yes value, see the «Examples of Usage» section).	No

Name	Description	Possible Values/Restrictions	Default Value
Subpanel Specific			
In Direction	Direction of running when the caption comes.	Left; Right; Up; Down; None – appears right in the specified place (no running implied).	Left
Out Direction	Direction of running when the caption goes out.	Left; Right; Up; Down; None – disappears without running.	Right
Speed	Speed of the content running in pixels per frame.	Integer from 0 to 100.	5
FadeIn	Fade-in duration in seconds. Available only if No is selected in the In Direction field.	Real number from 0 to 100.	1
FadeOut	Fade-out duration in seconds. Available only if No is selected in the Out Direction field.	Real number from 0 to 100.	1
Rest Time	Time in seconds when the content rests between the appearance and disappearance.	Real number from -1 to 100. If -1 is selected, the content appears and rests until the stop command is issued.	5
Pause	Pause between loops in seconds.	Real number from 0 to 100.	1
Horizontal filter	Horizontal filter function to anti-alias the image. For more information see below in the «Additional sections», «Image filters» section.	Yes – turn on. No – turn off.	Yes
Vertical filter	Vertical filter function to anti-alias the image.	Yes – turn on. No – turn off.	Yes
Subpanel Text Style			
Style File	Full path to the style collection file.	File format: EFC.	None

Name	Description	Possible Values/Restrictions	Default Value
Style Index	Index of the style used to design the text.	Integer from 0 to 100. A correspondence between the index and style sequence number is calculated by the formula: n=remainder from(I/N), (remainder from the division of I by N), where: n – the style number. Vary from 0 to (N-1); I – the index specified; N – the number of styles in the collection.	0
Left Margin	Left margin in pixels. Only if a text file is used as the task.	Integer from 0 to 100.	20
Right Margin	Right margin in pixels. Only if a text file is used as the task.	Integer from 0 to 100.	20
Paragraph	Managing the distribution of the text inside the borders of the title element. Useful if the message is long (has a lot of words, several paragraphs). In any case the following rule applies: if the entirety of the text does not fit into the height of the element, then only a part of the text will be visible: the beginning, middle, or end, depending on the value of the Vertical setting in the Alignment and Stretch table.	Do not format – the entire text consists of one line, no word wrap applies. If the line doesn't fit the element width, then only part of the text will be visible: the beginning, middle, or end of the line, depending on the value of the Horizontal setting in the Alignment and Stretch table; Center – word wrap is enabled (but words aren't broken up), the text is centered horizontally, i.e. if the entire text does not fit in one line, it will be broken up into several lines; Align to left – same as Center, but the text is aligned left; Align to right – same as Center, but the text is aligned right; Justify – same, but the text is aligned using the page width; Justify with hyphenation – same as Justify but with word break up by syllables.	Do not format
Subpanel Substitution (for more information see the «Substitution file» section)			
Substitutions file	Full path to the substitution file.	File format: TXT.	Absent

Name	Description	Possible Values/Restrictions	Default Value
Separators	The separator symbols used in substitution file.	One or more characters without spaces.	|

AnimLogo

1. Function

The AnimLogo title element is designed to display a video clip in the specified area of the screen. Usually, it is used to display a dynamic logo in a corner of the screen (1).

It is possible to play back video files with audio and to display embedded transparency.

2. Task

The task for the AnimLogo title element is an video file (AVI, MPEG, etc.). The full list of video formats, supported by your software version is displayed when configuring elements in the Load Task window. You can also consult the corresponding paragraph in the FAQ section on the SoftLab-NSK site.

Note: To save the computer resources, use not full-screen clips, but clips with the frame width and height that match the logo size required.

If full-screen clips with transparency as a task are used, specify the element rectangle so that is bounds not the whole screen, but the area occupied by the opaque image (for more details about the adjustment of displaying full-screen clips, see the «Examples of Usage» section).

One of the tools for creating dynamic logos is the TGA2AVI program included in ForwardT Software. The program allows you to convert a sequence of TGA files to an AVI file with transpa-rency. For more details about using the TGA2AVI program, see the «TGA2AVI: Converting Image Sequences to AVI Files» user's guide.

3. Adjustment Features

Properties of elements of the AnimLogo type have the following subpanels: General; Task; Alignment and Stretch.

Note: More information on the General and Alignment and Stretch tables you may find in the «Properties of Title Elements» section of the «Property Sheets» chapter.

It is possible to specify the display duration for this title element in such a way that it matches the display duration of the most long-displayed title element in the title object. To do this, select the Pseudo Yes value of the Loop property.

Table 7.   AnimLogo Title Element Properties

Name	Description	Possible Values/Restrictions	Default Value
Subpanel General (additionally to the main settings)			
Use SLIni file	Use the SLIni file. For more information see the «FDOnAir. Additional Sections» user's guide.	Yes – use; No – do not use.	No
Consider the Aspect Ratio	Turn on/off the "smart" scaling mode of displaying the video in the borders of the title element. It is recommended to use when the original aspect ratio differs from the one set for the project (in the Project Config table, TV standard setting) that is the pixel ratios do not match.	Yes – turn on; No – turn off.	No
Subpanel Task			
Task	Full path to the task file.	File type: AVI, MPEG, Windows Media, Apple QuickTime, MKV, FLV, etc.	None
Duration	Total duration of one task loop, which is equal to the duration of the video clip selected as the task. Read-only. The value is updated when starting the project preview.	String in the format hh:mm:ss.ms, where: hh – hours; mm – minutes; ss – seconds; ms – milliseconds.	0:00:00.000

AnimLogo

Name	Description	Possible Values/Restrictions	Default Value
Loop	Whether or not to loop the playback.	Yes – loop the playback until the stop command is issued; No – play back the title element content (according to the task) once; Pseudo Yes – loop the playback until playing a title element with the largest duration within the object is over (about using the Pseudo Yes value, see the «Examples of Usage» section).	No

AnimLogo

Flash4

1. Function

The Flash4 title element is designed to display animated images created using Adobe Flash technology (1).

Playing Flash clips according to the ActionScript scenarios, displaying native transparency and mask transparency specified at clip creating are supported.
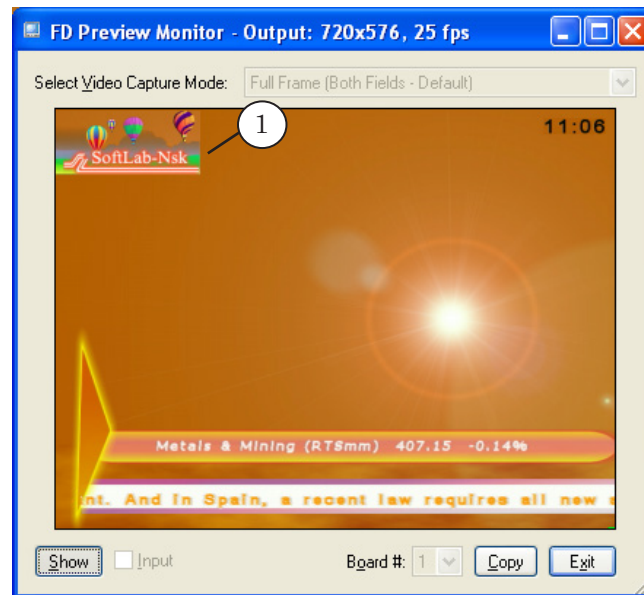
2. Task

The task for the Flash4 title element is a file in the Shockwave Flash (SWF) format.

✔ **Important:** We insistently recommend you to use flash clips created considering used TV standard – 25 frame rate (PAL) and 30 frame rate (NTSC).

Using ActionScript scenarios provides a wide range of possibilities for displaying various information on air. For example, information on time, weather, polls etc. that is updated in real-time mode.

Example: The Flash clip in our example displays the current time (1) and temperature (2). Source of the current time is system time from the broadcast server. Temperature is loaded from specified website. ActionScript scenarios are used to periodically update the information.

Select By system time value (3) in the Playback Mode field (Specific settings of the Flash4 title element) to display the clip correctly.
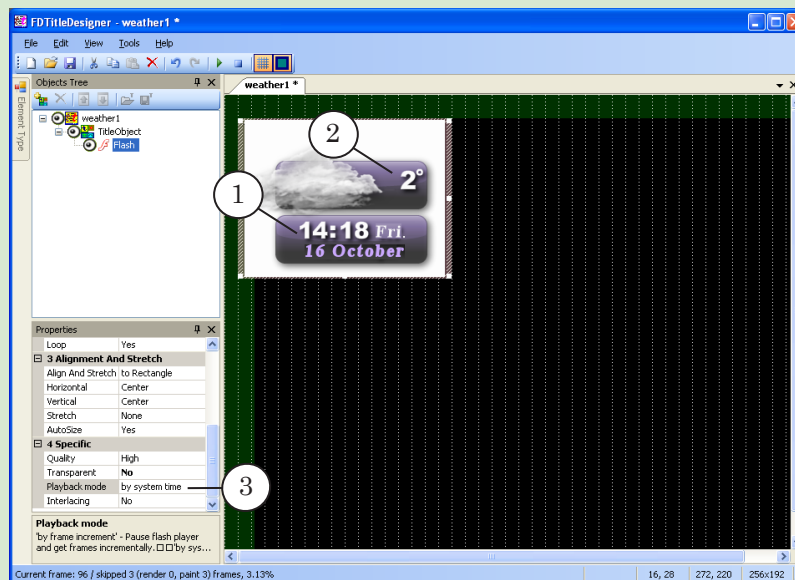
3. Adjustment Features

The Properties panel of the Flash4 title element has the following subpanels: General, Task, Alignment and Stretch and Specific.

Note: Description of the General and Alignment and Stretch subpanels see above in the «Properties of Title Elements» section of the «Property Sheets» chapter.

Table 8. Flash4 Title Element Properties

Name	Description	Possible Values/Restrictions	Default Value
Subpanel Task			
Task	Full path to the task file.	File format: SWF.	None
Duration	Total duration of one task loop. Supplemental information, not edited.	String in the format hh:mm:ss.ms, where: hh – hours; mm – minutes; ss – seconds; ms – milliseconds.	None

Flash4

| Name	Description	Possible Values/Restrictions	Default Value
Loop	Whether or not to loop the playback.	Yes – loop the playback until the stop command is issued; No – play back the title element content (according to the task) once.	Yes
Subpanel Specific			
Quality	Playback quality: correspondence between the image smoothing and frame rate.	High – always perform smoothing, even if it is impossible to keep the frame rate specified; Low – do not perform smoothing, keep the frame rate specified; AutoHigh – start playback with smoothing enabled. If the frame rate drops lower than specified, smoothing is desabled to raise the playback speed; AutoLow – start playback with smoothing disabled. If the CPU resources are sufficient to perform smoothing, it is enabled automatically.	High
Transparent	Native transparency mode specified at creating clips for bounds and filling of objects or mask transparency mode.	No – do not display transparency; Yes – display the native transparency; Mask at bottom; Mask at top; Mask at right; Mask at left.	No
Interlacing	Enable interlacing. For correct playback in this mode, the clip must be prepared in a special way (the frame rate must be twice as much as the target frame rate).	Yes; No.	No

Name	Description	Possible Values/Restrictions	Default Value
Playback mode	Mode of flash clip play-back. It is necessary to select one frame from flash clip to broadcast in TV signal (1/25 seconds for PAL or 1/30 seconds for NTSC). It can be implemented in different ways. Current mode defines algorithm of selecting frame for playback.	By frame increment – frames are sequentially selected considering used frame rate. Recommended for ordinary flash clips of a specified duration. By system time – recommended for majority of flash clips with scripts (for example, polls). The clip is played via flash player according to its specified frame rate. Every 1/25 (1/30) second last of the frames is selected for playing via player in specified perioded. By frame number – used for flash clips with scripts. Frames are numerated according to settings specified in flash clip. The next frame according to its index is selected for broadcasting. By callback – used for flash clips with scripts in specific cases.	By system time
Dimension	The method of choosing the original size of the frame (frame width and height). Can impact the resolution of the end video displayed, but will not impact its size. The size of the end video depend on the size of the title element and the scaling mode (Alignment and Stretch table). The original image – an image formed in the RAM using a flashplayer and the basis the end result image.	From file – the height and width of the original image match with the size set when creating the flash video; From region – the height and width of the original image are selected using the height and width of the title element. Recommended when the size of the frame in the file are bigger than the title element in which the video will be displayed. If this option is selected, the Stretch and AutoSize functions will not work.	From file
Load player	Which Flash Player is used.	From Resource – Flash Player provided with the Flash4 title element library; From System – Flash Player installed on the PC.	From Resource

Note: Using the mask transparency mode is possible only for Flash clips created in a special way.
When preparing a clip, the frame is split into two equal parts horizontally or vertically. One of the parts has an image which is to be used as the mask, and the other is the content image.

Flash4

The resulting image is a superposition of the two parts. Depending on which part of the frame contains the mask, select the corresponding value when adjusting the Playback mode property:

- Mask at bottom (1);
- Mask at top (2);
- Mask at right (3);
- Mask at left (4).
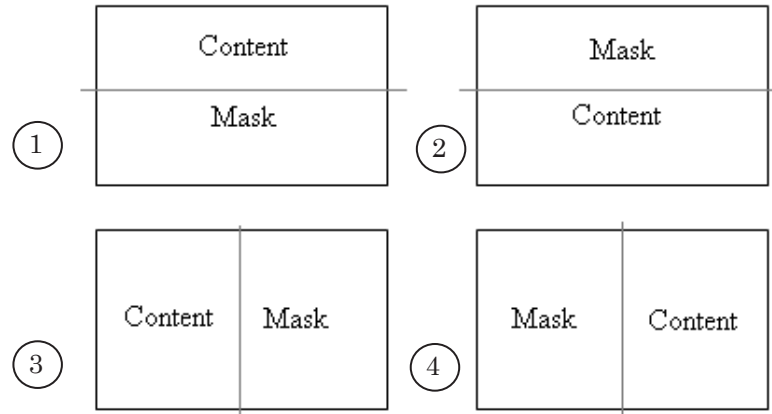
The Figure shows a Flash clip frame: the image at the left is the mask, at the right – the content.
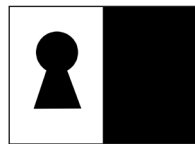
For the correct playback of the clip, select Mask at left from the Transparent drop-down list (1).

83
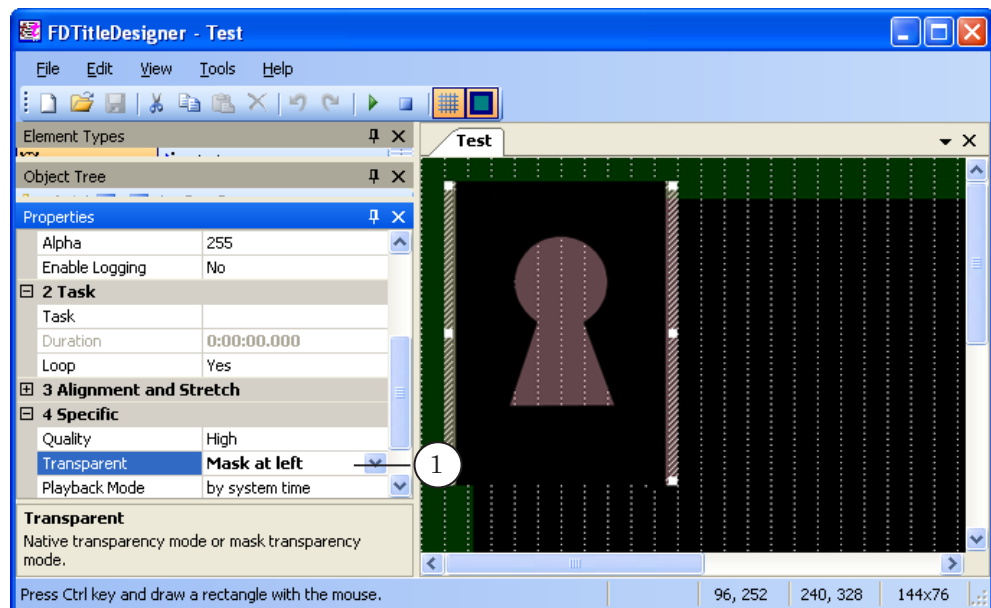
QML

1. Function

The QML title element is designed to display animated object in a set area of the screen, for example text ads with images or a clock, the scenarios of which are written in QML.

2. Task

The task for the QML title element consists of two files:

- a text file (*.txt) – contains the text of the ads and the paths to the graphical files with the images;
- a scenario file (*.qml) – contains a QML script for managing the animation.

3. Adjustment Features

The Settings panel for QML elements contains the following tables: General; Task; Alignment and stretching.

Note: For a description of the General and Alignment and stretching tables, see the above «Properties of Title Elements» section in the «Property Sheets» chapter.

QML

Table 9.   QML title element properties. Subpanel Task

Name	Description	Possible Values/Restrictions	Default Value
Task	Full path to the file containing textual information – the ad text, file paths.	File types: TXT.	None
Animation	Full path to the file containing the QML script.	.qml file extension.	None
Duration	Duration of one loop in hh:mm:ss.ms.		0:00:00.000
Playing mode	Selecting the mode of frame preparation.	File – animation frames are prepared ahead of time (recommended with a complex animation); Real time – animation frames are generated in real time (recommended for real time animation, for example a clock).	File

Video, Video2

1. Function

The Video/Video2 title elements are designed to display in the specified area of the screen live video (1) from the board: FD300 (Video); FD322, FD422, FD842, FDVrt (Video2).
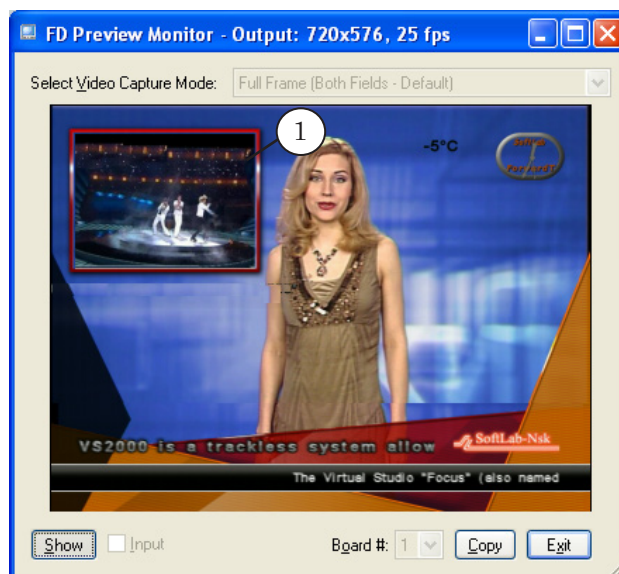
2. Task

The task for the Video/Video2 title element is a text file with the video playback settings. The filename extension is LiveSettings.

It is recommended to create/edit the file using a special editor – the SLLiveSettingsEditor program (see its user's guide for more information). To open the program, when configuring the Video/Video2 element left click in the Task field on the Properties panel and in the opened drop-down menu select Edit task file. You can also use the Start menu: Programs > ForwardT Software > Titles > LiveSettingsEditor.

The settings file contains a sequence of lines. Each line specifies the value of one parameter (see table below). The lines have the following format:
Parameter name = Value

Table 10.   Parameters Used in *.LiveSettings Files

Description	Name	Possible values
Parameters for selecting the data source		
Board type	BoardType	Video – FD300; Video2 – FD422, FD842, FD322, FDVrt.
Board number	BoardNumber	1; 2; 3; 4. If the parameter is absent, the last selected board is used.

Description	Name	Possible values
Board input or output	IsOutput	0 – board input; 1 – board output. If the parameter is absent, the input is used by default.
Video channel	InputLine	For FD300: 1 – Line A; 2 – Line B, 0 – last selected line. For FDExt: 0 – Input 1/Output 1; 1 – Input 2/Output 2. If the parameter is absent, the last selected line is used.
Audio channel (stereo only)	AudioLine	1; 2; 3.

Smooth transition parameters – the changing of the borders and contents of the region with the video from the original to the end size:
1. Offsets (in pixels) – distance from the title element borders (original region) to the borders of the end region size (see example 1 below);
2. Transition time (in frames) from the original size to the end size, counted from loading the task or from the start of the video if the preview was stopped;
3. Transition Start – the transition start mode: from the full region or from the current position.

Description	Name	Possible values
Left offset	LeftOffset	minimum – 0; maximum – width of the title element.
Right offset	RightOffset	same
Top offset	TopOffset	minimum – 0; maximum – height of the title element.
Bottom offset	BottomOffset	same
Transition time (in frames).	TransitionTime	from 0 to 100.
Transition start mode	FromCurrentPosition	0 – from the full region; 1 – from the current position.

Parameters for specifying crops for image cropping (in pixels). Maximum possible values depend on the video frame size (see example 2 below).

| Description	Name	Possible values
Left crop	LeftCrop	from 0 to 720.
Right crop	RightCrop	same
Top crop	TopCrop	from 0 to 576.
Bottom crop	BottomCrop	same

✔ **Important:** Selecting the input line by which the data source is connected is performed in the FDConfig2/FDConfiguration program window.

Note: Now we consider examples that illustrate using some parameters.

1. Using offsets from the element rectangle bounds and the Transition Time parameter.

Let the task file contains the following lines:

...

LeftOffset = 50

RightOffset = 50

TopOffset = 45

BottomOffset = 45

Transition Time = 25

...

Figure a) shows the image right after loading to the title element: the offsets from the element rectangle bounds to the image are equal to zero. Figure b) shows the situation in a time interval equal to the Transition Time value, in our case 25 frames: the image has changed according to the parameters specified in the task file.
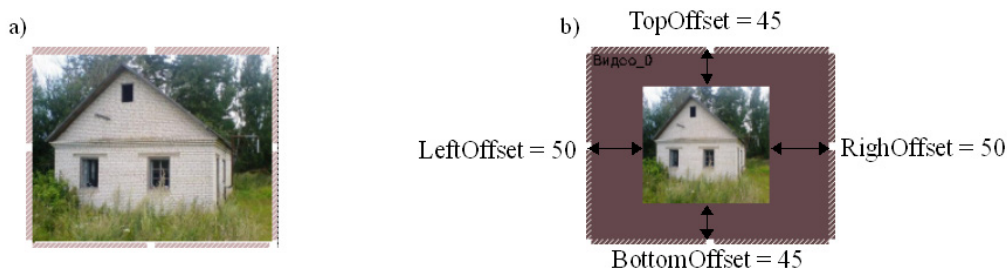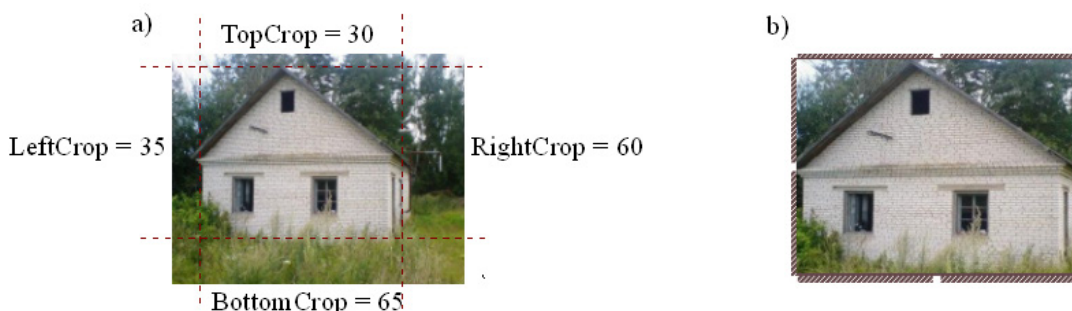

2. Using crops for image cropping.

Let the task file contains the following lines:

...

LeftCrop = 35

RightCrop = 60

TopCrop = 30

BottomCrop = 65

...

Figure a) shows the initial image, the crops are being specified. Figure b) shows the image loaded to the title element according to the settings specified.

3. Adjustment Features

The data source, offsets and crops are specified in the task file.

The Video/Video2 title element has the following Properties: General, Task, Alignment and Stretch and Specific.

Note: For more information on the General and Alignment and Stretch properties see the «Properties of title elements» section of the «Property Sheets» chapter.

Table 11.   Video/Video2 Title Element Properties

Name	Description	Possible Values/Restrictions	Default Value
Subpanel Task			
Task	Full path to the task file.	Filename extension: LiveSettings.	None
Subpanel Specific			
Delay Frames	Delay of the passthrough video.	Integer from 3 to 100.	10

4. Examples

Example 1. Configuring of passthrough video in titles broadcasting from a specified source.

1. Let the signal source is connected to the FD300 board by line CVBS2(2D), and this line is selected in line A settings as input (the FDConfiguration application window, Line A tab, the Input (1) drop-down list).
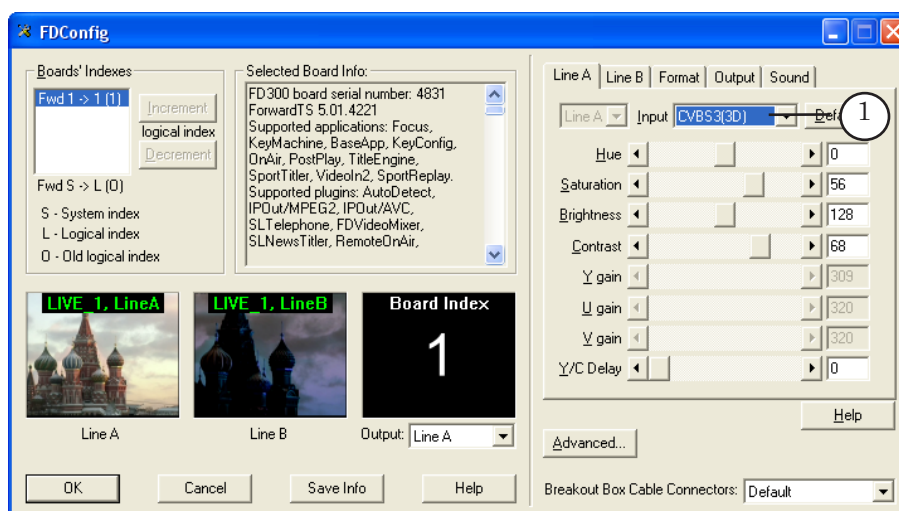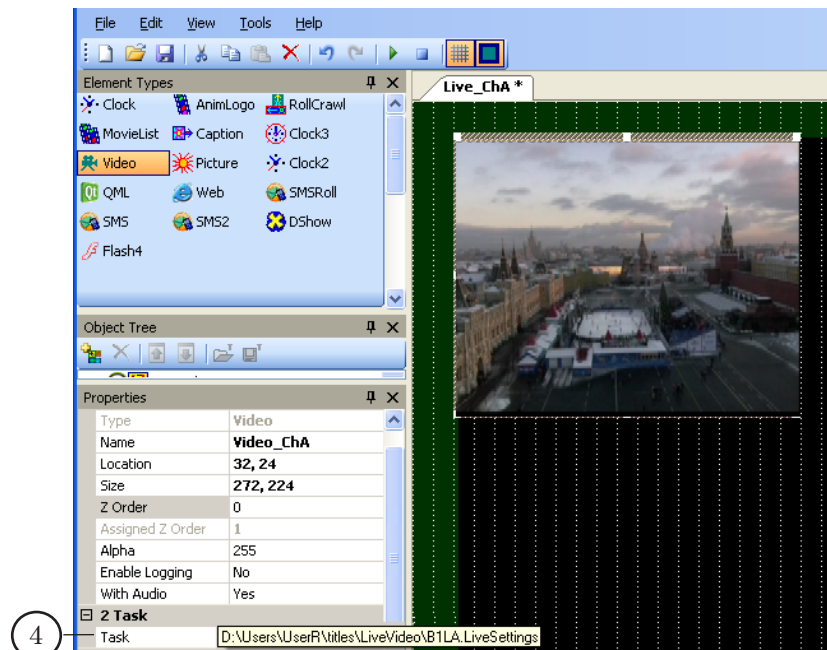

2. Picture below presents task for the Video title element opened in Notepad. The task is created in the following way: selected is an input of board #1 (2), received data from its input, line A (3).

3. The FDTitleDesigner application includes title project with the Video title element. Task (4) for the element is a file with properties described above in point 2.

4. Be sure that before loading of title project with the Video title element into FDOnAir all check marks (Input 1 – Input 6) (5) on the Input Settings tab are absent.
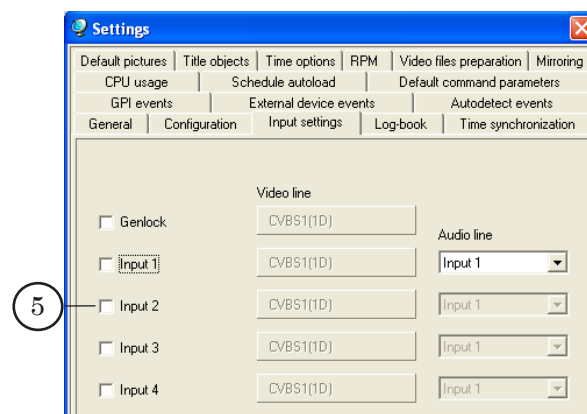
5. Title project with the Video element (6) is loaded into FDOnAir in the Settings window, the Title objects tab.

6. Finally when broadcasting in FDOnAir starts and titles are on data received from the source connected by line CVBS3(3D) (7).

Example 2. Configuring of passthrough video in titles broadcasting from a specified source without binding to the specific line. In this case data can be transmitted from different lines by turn via the Video title element.

1. Picture below presents task for the Video title element opened in Notepad. The task is created in the following way: selected is an input of board #1 (1), receive data from board input (2).
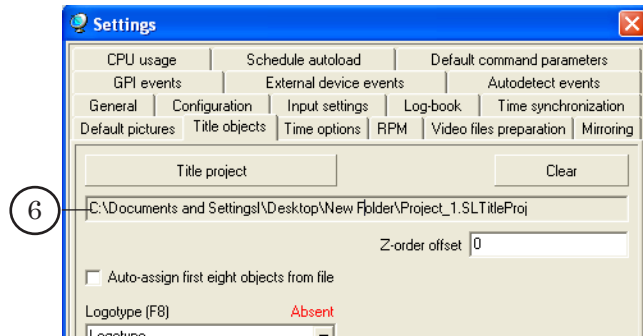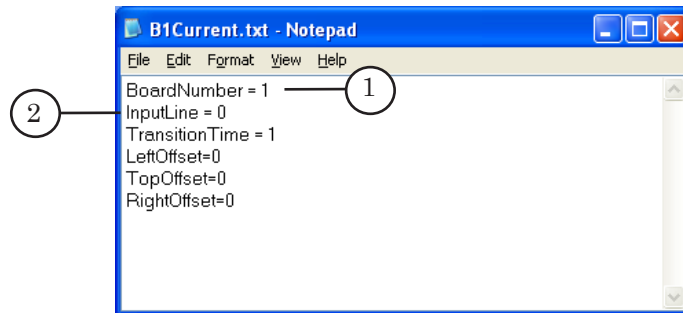

2. The FDTitleDesigner application includes title project with the Video title element. Task (3) for the element is a file with properties described above in point 1.
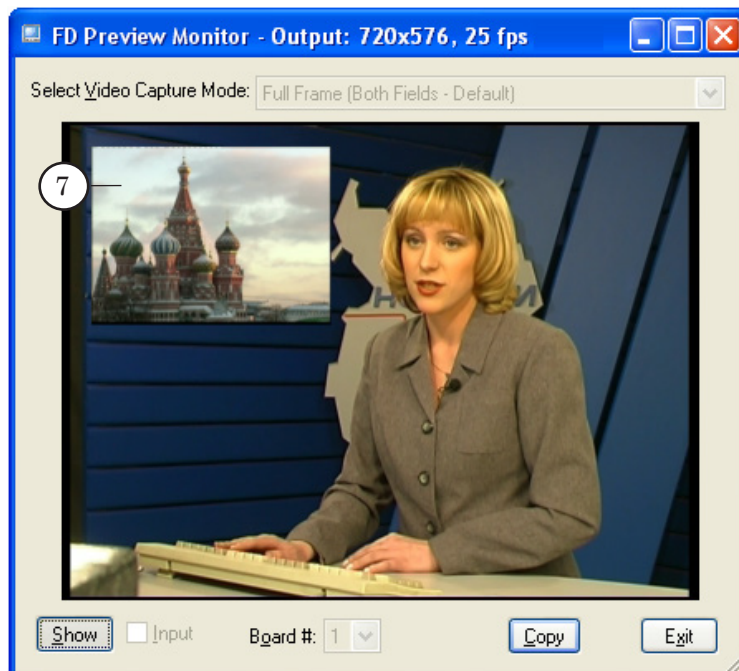
   Title project also includes the RollCrawl title element. To control independently over these elements in FDOnAir both are included into different title objects (4).
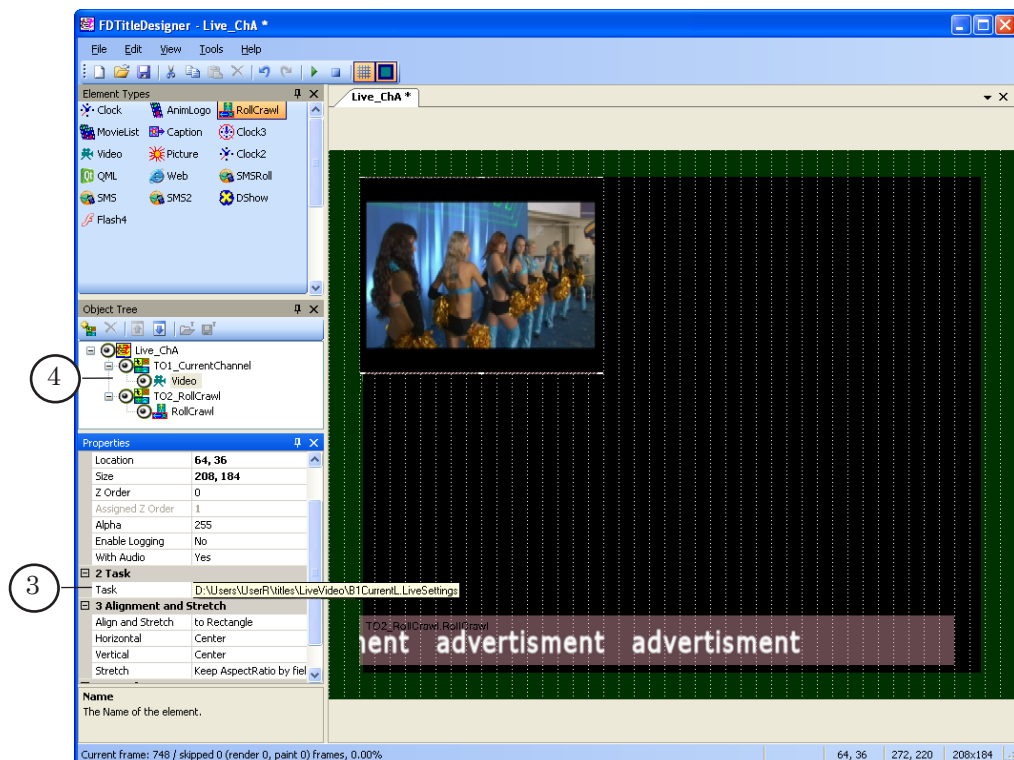
3. Put the Input 1 and Input 2 (4) check marks on the Settings tab in FDOnAir and select for each input signal source before

loading of a title project with the Video element.
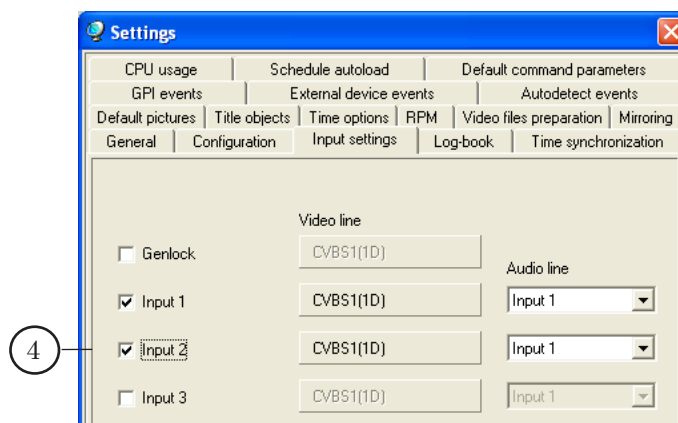
4. Title project prepared on step 2 (5) is loaded into FDOnAir in the Settings window, the Title objects tab.
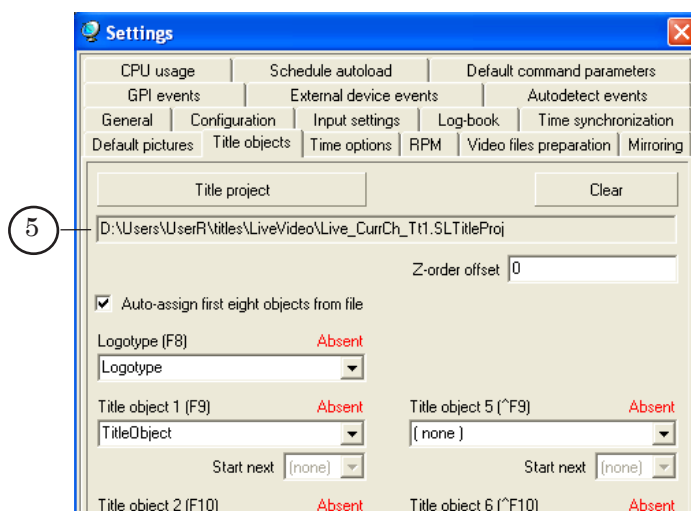
5. Picture below presents fragment of a schedule broadcasted in FDOnAir. It will work as follows:

At broadcasting of passthrough video from the Input №1 title object with the RollCrawl element is on and with the Video element – off (6). The Video title element becomes on (7) being broadcasting after after a passthrough video. As provided by task video from the current board input is displayed, Input№1 is at the moment.

After this broadcasting of passthrough video from Input№2 is on. In this case current source will be a source selected for the Input№2. The Video title element is again off (8).

At start of the following clip title element is on (9) and passthrough video from the current board input, Input№2 is at the moment.

RollCrawl

1. Function

The RollCrawl title element is designed to display a sequence of advertisements running at a specified speed and direction in the specified area of the screen.

Depending on the direction of running, there are two types of RollCrawl:

- horizontal (1);
- vertical (2).

RollCrawl can be looped. In this case, the sequence of advertisements is repeated over and over again.

2. Task Types

The task for RollCrawl is a sequence of advertisements. The advertisements can be displayed as text strings, images, or a combination of the two.

Depending on the ad type, the task for RollCrawl can be:

- file with .txt extension – a text file with ad texts;
- file with .spt extension – a text file with commands for displaying ads (which are text strings and image files);
- graphics file in one of the formats: TGA, BMP, DIB, PNG, JPG – a file with text strings and images.

3. Task: Text File with Ads Text

A .txt file with ad texts can be used as the task for RollCrawl, each ad text starting in a new line.

✔ **Important:** Each advertisement in the text file must be written in a separate line.

The file can be prepared in any text editor, e.g. Notepad.
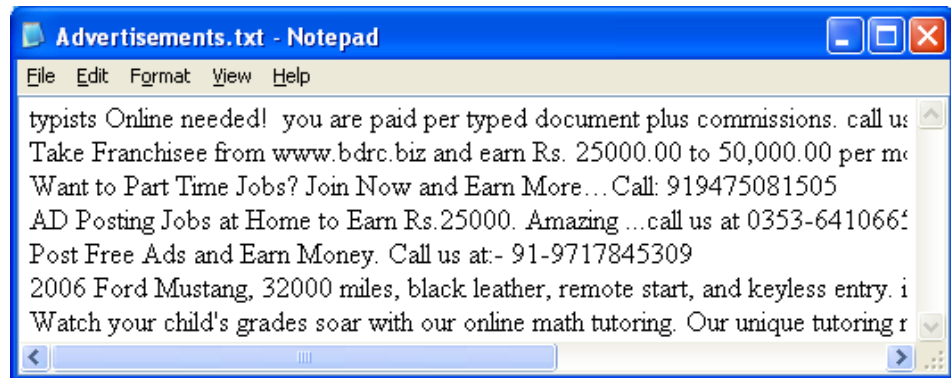
The text design parameters are specified when adjusting the title element properties: a file with a style collection and a way to select styles from the collection.

There are two ways to select styles from the collection:

- use one design style for all ads – number one in the collection;
- design the ads with different styles – select styles from the collection incrementally.

You can also use tags of formatting to design a text. For more details see the "Formatting Tags" chapter.

4. Task: Text File with Commands for Displaying Ads

An .spt file containing a sequence of commands for displaying ads can be used as the task for RollCrawl. Each command is written in a new line.

There are two types of commands: for images and for text strings. One file can contain both command types at the same time.

Commands of the first type are used to display an image ad and have the following format:

    targa path_to_file

where:

- targa – reserved word – denotes displaying a graphics file;
- path_to_file – full or relative path to the file with an image ad.

Commands of the second type are used to display a text string ad. Such commands have the following format:

text#N text_string

where:

- text# – reserved word – denotes displaying a text ad;
- N – style sequence number in the collection, which is to be used for the text design;
- text_string – text of one advertisement.

The command indicates the style number only, the style collection file is being specified when configuring the title element properties.

Example: The Figure shows a RollCrawl task file. The task contains commands for displaying advertisements from graphics files (1) and advertisements specified as text strings (2).
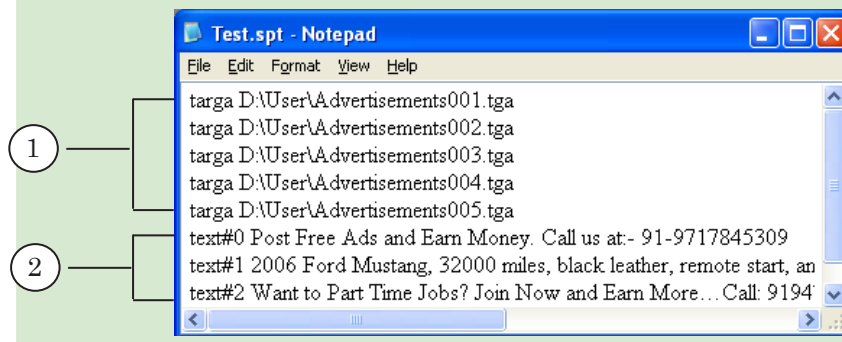
An .spt file can be created in any text editor, e.g. Notepad.

To prepare the task (.spt file) as a sequence of commands for displaying images, you can use special programs, which allow you to automate the work: SPTEditor or TXT2TGA. The programs are included in ForwardT Software.

For a detailed description of working with the programs, see the «SPTEditor: RollCrawl Task Editor» user's guide and the «TXT2TGA: RollCrawl Automation» user's guide.

5. Adjustment Features

Title elements of the RollCrawl type have the following Properties: General, Task, Alignment and Stretch, Specific and Text Formatting.

Note: For more information on the General and Alignment and Stretch properties see the «Properties of Title Elements» section of the «Property Sheets» chapter.

Properties of the RollCrawl title element are used to specify the running direction of the ads, whether or not to loop, text design.

RollCrawl is always aligned within the bounding rectangle of the title element. Scaling is not implied.

✔ **Important:** When creating a schedule for playing RollCrawl titles in FDOnAir, consider the duration of the ads. If the time for displaying titles (interval between the commands Title objects On/Off) is insufficient, the advertisements will break before they come to the end.

Table 12. RollCrawl Title Element Properties

Name	Description	Possible Values/Restrictions	Default Value
Subpanel Task			
Task	A task string or the path name of the file that represents the element task.	File types: SPT, TXT, TGA, BMP, DIB, PNG, JPG.	None
Duration	Total duration of one task loop. Read-only. Automatically calculated on the basis of the title element size, data amount, and values specified in the Specific subpanel.	String in the format hh:mm:ss.ms, where: hh – hours; mm – minutes; ss – seconds; ms – milliseconds.	None
Loop	Whether or not to loop the playback.	Yes – loop the playback until the stop command is issued; No – play back the title element content (according to the task) once.	No
Subpanel Specific			
Speed	Speed of the content run in pixels per frame.	Real number from 0.1 to 20.	5
Direction	Running direction of the element content.	Up; Down; Left; Right.	Left
Spacing	Distance in pixels between ads in the RollCrawl (horizontal/vertical).	Integer from 0 to 10000.	100
Horizontal filter	Horizontal filter function to anti-alias the image. For more information see below in the "Additional sections", "Image filters" section.	Yes – turn on. No – turn off.	Yes
Vertical filter	Vertical filter function to anti-alias the image.	Yes – turn on. No – turn off.	Yes

Name	Description	Possible Values/Restrictions	Default Value
Subpanel Text Formatting			
Style File	Full path to the style collection file.	File format: EFC.	None
Style Type	Way to select styles from the collection.	First style – use one design style for all ads – number one in the collection specified; Increment – use different styles to design different ads. Styles are selected from the collection incrementally.	First style
First Line	Indentation of the text first line in pixels. Used for the vertical RollCrawl.	Integer from -200 to 200. from -200 to -1 – outdent at the number of pixels specified; 0 – none; from 1 to 200 – indent at the number of pixels specified.	0
Interval	Line spacing (in percent). Used for the vertical RollCrawl.	Integer from 100 to 500.	100
Paragraph	Managing the distribution of the text inside the borders of the title element. Available if the Direction setting (Specific table) has the Up/Down value.	Default – word wrap is enabled (words are not broken up), the alignment of the text depends on the Horizontal settings in the Alignment and Stretch table; Center – word wrap is enabled, text is centered horizontally; Align to Left – same, but the text is aligned left; Align to Right – same, but the text is aligned right; Justify – same, but the text is aligned by the element's width; Justify with hyphenation – same as Justify, but breaking up words into syllables is allowed.	Default
Subpanel Substitutes (for more information on this issue see the «Substitution File» section)			
Substitution file	Full path to the substitution file.	File format: TXT.	None
Separators	The separator symbols used in substitution file.	One or more characters without spaces.		

MovieList

1. Function

The MovieList title element is designed to display a sequence of video clips and static images in the specified area of the screen (1). Video files and image files can be played one after another continuously or alternate with pauses. Files with transparency can be used as well.
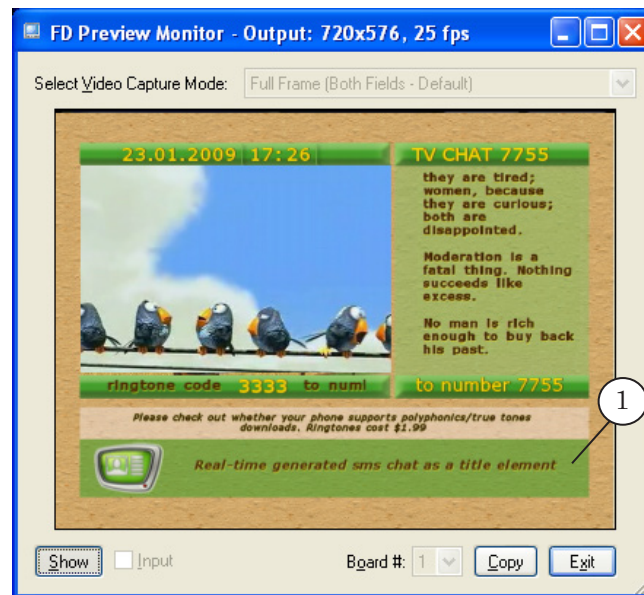
2. Task

The task for the MovieList title element is an XML file with SLMovieList extension. The file contains a sequence of lines with commands of different types: for playing a video clip, for displaying an image, or pause commands.

Note: For a full list of video formats supported by your software version, see the corresponding paragraph in the FAQ section on the SoftLab-NSK site.

It is possible to automate the preparation of the MovieList task using special macros or tools that generate XML files.

To create tasks, we recommend you to use the FDMovieListEditor program included in ForwardT Software. For a detailed description of the program, see the «FDMovieListEditor: Task Editor for the MovieList Title Element» user's guide. The document also describes XML tags used when writing tasks for MovieList.

For instructions on creating and using macros for preparing tasks, see the «Creating Task File for MovieList Title Element Using Macro in Microsoft Excel» user's guide.

3. Adjustment Features

The Properties of the MovieList title element are used to specify the image alignment and scaling, whether or not to loop the playback, fade-ins, fade-outs, etc.

Table 13. MovieList Title Element Properties

Name	Description	Possible Values/Restrictions	Default Value
Subpanel General (additionally to the main settings)			
Use SLIni file	Use the SLIni mode. For more information see the «FDOnAir. Additional Sections» user's guide.	Yes – use; No – do not use.	No
Consider the Aspect Ratio	Turn on/off the "smart" scaling mode of display-ing the video in the borders of the title ele-ment. It is recommended to use when the original aspect ratio differs from the one set for the project (in the Project Config table, TV standard setting) that is the pixel ratios do not match.	Yes – turn on; No – turn off.	No
Subpanel Task			
Task	Full path to the task file.	File type: SLMovieList.	None
Duration	Total duration of one task loop (the specified sequence of clips and images). Read-only.	String in the format hh:mm:ss.ms, where: hh – hours; mm – minutes; ss – seconds; ms – milliseconds.	None
Loop	Whether or not to loop the playback.	Yes – loop the playback until the stop command is issued; No – play back the title element content (according to the task) once.	No
Subpanel Specific			
DefDuration	Duration of display-ing the advertisements whose display duration is not specified in the task file (in frames).	Integer from 1 to 20000.	100

MovieList

Name	Description	Possible Values/Restrictions	Default Value
DefFadeIn	Fade-in for the advertisements whose fade-in duration is not specified in the task file (in frames).	Integer from 0 to 1000.	5
DefFadeOut	Fade-out for the advertisements whose fade-out duration is not specified in the task file (in frames).	Integer from 0 to 1000.	5

Title Elements for SMS Output

1. General Flowchart at Working with SMS Messages

A General flowchart when working with SMS messages, e.g. when creating a TV chat is shown below.
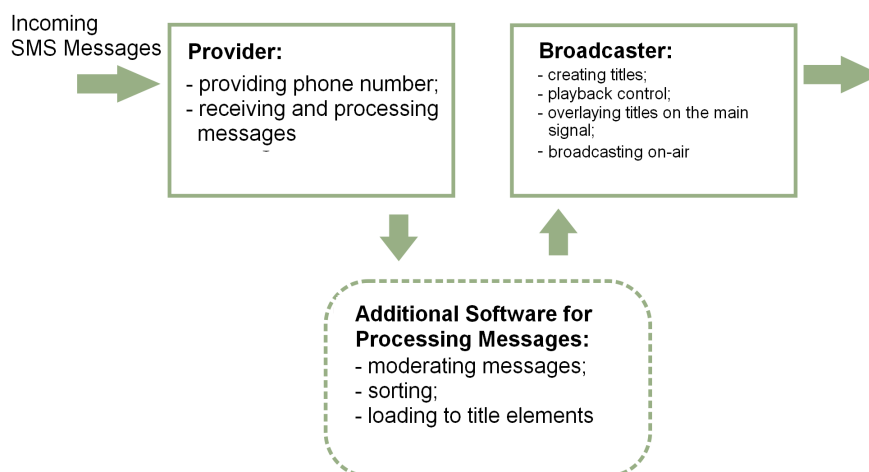
To create a TV chat show, the broadcasting company uses services of an SMS provider. The service provider receives messages. The messages are processed (moderated, sorted, etc.) and passed to the broadcasting company.

Using tools from the Forward T product line, the broadcasting company form the appropriate title elements, overlay them on the main signal, and broadcast.

To preprocess the SMS messages, deliver and load them to the title element, some additional software is required.

Such software is not universal, as it depends on the specific way of the interaction between the provider and broadcasting company. The ForwardT Software developers offer an open SDK for integration with different content providers.

> **Tip:** 1. To get COM components required to create a control application, contact the ForwardT Software developers.
>
> 2. Also offered is an SMS SDK included in the ForwardT Software SDK. The package is designed to integrate the applications of SMS providers with the SMS, SMS2 and SMSRoll title elements.

2. SMS, SMS2 & SMSRoll

The following title elements are designed to display SMS in the specified area of the screen:

- SMS (1) – to display a sequence of SMS messages one by one. Only one message is displayed on the screen at a time;
- SMS2 – to display a sequence of SMS messages one by one. You may adjust a mode of the way messages appear/dissapear;
- SMSRoll (2) – to display a sequence of SMS messages in a crawl line that runs bottom-upwards. Several message texts can be displayed simultaneously – as many as the specified bounding rectangle can hold.
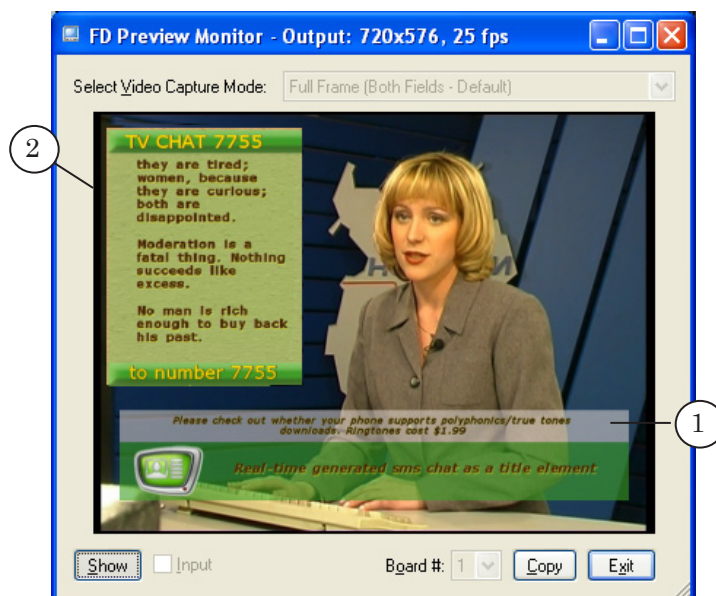
Note: The Flash4 title element can also be used to display SMS messages (see the «Flash4» section).

Graphic smileys can be used in text of messages displayed via the SMS, SMS2 and SMSRoll title elements. Use of graphic smileys requires additional adjusting. For more information on this issue see the «Displaying of Smileys» section.

You may also configure design of SMS text using properties of the SMS, SMS2, SMSRoll title elements. In addition to this tags of formatting (used for formatting and designing of the text) can be used. For more information on this issue see the «Formatting Tags» section.

A distinctive feature of the SMS, SMS2 and SMSRoll title elements is the absence of an explicit reference to the task files. The way of receiving SMS messages by the title element depends on the way of interaction between the broadcasting company and specific content provider.

✔ **Important:** Work with SMS, SMS2 and SMSRoll title elements requires an additional control application for loading SMS to the title element. It is possible to create such an application using the SDK supplied by the ForwardT Software developers.

Note: There is a program SMS Manager included in ForwardT Software. The program is designed to load messages to SMS, SMS2 and SMSRoll title elements. The messages are stored in text files on the computer's hard drive. For more information on this issue see the «SMSManager. Output of SMS into Titles» user's guide.

This program is an example of a control application for working with SMS, SMS2 and SMSRoll title elements.

3. SMS: Adjustment Features

Title elements of the SMS type have the following Properties: General, Task, Specific and Text Formatting.

Note: For more detail on the General properties see the «Properties of Title Elements» section in the «Property Sheets» chapter.

To design the texts of SMS messages, font styles from the specified style collection are used.

Selection of styles depends on settings of a control application that loads SMS into title element. If the style is not specified it will be automatically selected depending on the Autoselection property (the Text Formatting table). For more detail see the «Selection of Text Style, Insertion of Symbols and Pictures» section.

✔ **Important:** Pay attention to the presence of fonts with various size in the style collection. The absence of fonts with a small size can cause the text of a message not to fit into the bounding rectangle.

Table 14.   SMS Title Element Properties

Name	Description	Possible Values/ Restrictions	Default Value
Subpanel Task			
Duration	Duration (in frames) of displaying one message.	Integer from 20 to 90000.	125
Subpanel Specific			
Fade Duration	Fade-in/out duration (in frames) when displaying a message. Value depends on the Duration value. Maximal value of this parameter can be not higher than 1/2 of the specified Duration value.	Integer from 1 to 250.	10

105

Name	Description	Possible Values/ Restrictions	Default Value
Wait Next	Control over mode of messages output in case when there are no new SMS. If the mode is off the latest message will not dissapear until a new one comes.	Yes – switch on; No – switch off.	No
Subpanel Text Formatting (for more information on this issue see the «Formatting Tags» section)			
Styles File	Full path to the style collection file.	File format: EFC.	None
Style Autose- lection	Control over mode of style selection from style collection. If the mode in on for every message the font with the largest size from those which allow fitting of the message into the bounding rec-tangle will be automatically selected. If the mode is off the first font in the collection will be used.	Yes – switch on; No – switch off.	No
Smileys File	A full path to smileys file. The file is used to replace automatically specified combinations of symbols in SMS by smileys. The file contains the information on possible symbols combinations and corresponding graphic files.	File format: TXT. For more information, see the «Displaying of Smileys» section.	None
Text Alignment	Aligning the message text according to the borders of the title element.	Left; Center; Right; Justify.	Left
Hyphenation	Turn breaking up words by syllables in the message text.	Yes – turn on; No – turn off.	No
First Line	First-line indentation (in pixels).	Integer from -200 to 200. from -200 to -1 – outdent at the number of pixels specified; 0 – none; from 1 to 200 – indent at the number of pixels specified.	
Line Spacing	Line spacing (in pixels).	Integer from 25 to 300.	0

4. SMS2: Adjustment Features

The properties panel of the SMS2 title element has the following subpanels: General; Specific and Text formatting.

Note: For more detail on the General properties see the «Properties of Title Elements» section in the «Property Sheets» chapter .

SMS2 differs from SMS by additional properties that allow adjusting an effect of appearing/dissapearing of messages on the screen.

To design the texts of SMS messages, font styles from the specified style collection are used.

Selection of styles depends on settings of a control application that loads SMS into title element. If the style is not specified it will be automatically selected depending on the Autoselection property (the Text Formatting table). For more detail see the «Selection of a Text Style, Insertion of Symbols and Pictures» section.

✔ **Important:** Pay attention to the presence of fonts with various size in the style collection. The absence of fonts with a small size can cause the text of a message not to fit into the bounding rectangle.

Table 15.   SMS2 Title Element Properties

Name	Description	Possible values/ Restrictions	Default Value
Subpanel Specific			
In Direction	Direction of running of message when it comes.	Left; Right; Up; Down; None – appears right in the specified place (no running implied).	Left
Out Direction	Direction of running when message dissapears.	Left; Right; Up; Down; None – disappears right in the specified place (no running implied).	Left
Speed	Speed of the content run in pixels per frame.	Integer from 0,1 to 100.	5
FadeIn	Fade-in duration in seconds. Available only if No is selected in the In Direction field.	Real number from 0 to 5.	1
FadeOut	Fade-out duration in seconds. Available only if No is selected in the In Direction field.	Real number from 0 to 5.	1
Resting Time	Time in seconds when the content rests between the appearance and disappearance.	Real number from 0 to 100.	5
Pause	Pause between SMS in seconds.	Real number from 0 to 100.	1
Page Pause	Pause between pages in seconds.	Real number from 0 to 1000.	0
Wait Next	Control over mode of messages output in case if there are no new SMS. If the mode is off the latest message will not dissapear until a new one comes.	Yes – switch on; No – switch off.	No

Name	Description	Possible values/ Restrictions	Default Value
Subpanel Text Formatting (more information on this subpanel see the «Tags of Formatting» section)			
Styles File	Full path to the style collection file.	File format: EFC.	None
Style Autoselection	Control over selection of styles from specified styles collection. In this mode for every message the font with the largest size from those which allow fitting of the message into the bounding rectangle will be automatically selected. If the mode is on the first font in the collection will be used.	Yes – switch on; No – switch off.	No
Smileys File	A full path to the file with smileys. The file is used to replace automatically combination of symbols in message text by small picture. The file has possible combinations of symbols and corresponding to the graphic files.	File format: TXT. For more information see the «Displaying of smileys» section.	None
Left Margin	Left margin in pixels. Only if a text file is used as the task.	Integer from 0 to 100.	20
Right Margin	Right margin in pixels. Only if a text file is used as the task.	Integer from 0 to 100.	20
Text Alignment	Aligning the message text according to the borders of the title element.	Left; Center; Right; Justify.	Left
Hyphenation	Turn breaking up words by syllables in the message text. Will not work if the value of the Word Wrap setting is No.	No – turn off; Yes – turn on.	No
Line Spacing	Line spacing (in percent).	Integer from 25 to 300.	100
First Line	Indentation of the first line of every message (in pixels).	Integer from -200 to 200. from -200 to -1 – outdent at the number of pixels specified; 0 – none; from 1 to 200 – indent at the number of pixels specified.	0

Name	Description	Possible values/ Restrictions	Default Value
Word Wrap	Turn word wrapping and paragraph formatting on/off.	No – the entire text will be displayed as one line. If the entirety of the text does not fit into the width of the element, then only a part of the text will be visible; Use Text Alignment – word wrapping is turned on, i.e. if the entire text does not fit into one line, it will be divided into several lines. The horizontal alignment of the text depends on the value of the Text Alignment setting.	No

5. SMSRoll: Adjustment Features

The Properties panel of the SMS title element has the following subpanels: General, Task, Alignment and Stretch.

Note: Detailed information on the General subpanel you may find in the «Properties of title elements» section of the «Property sheet» chapter.

Properties of the SMSRoll title element are used to specify the scroll speed, spaces between messages and to adjust the text design.

To design the texts of SMS messages in SMSRoll font styles from the specified style collection are used. The procedure of selecting styles depends on the settings of the control application that load mes-sag-es to the title element (for example, the SMSManager application).

If the style is not selected in the application then the first style from the style collection will be automatically specified.

Table 16. SMSRoll Title Element Properties

Name	Description	Possible Values/ Restrictions	Default Value
Subpanel Task			
Rest	Duration of pause when line with SMS text is stopped before appearing of a new SMS.	Integer from 0 to 1500.	50

Name	Description	Possible Values/ Restrictions	Default Value
Line Rest	Duration of pause with SMS (in frames) before output of message queue.	Integer from 0 to 250.	0
Subpanel Specific			
Scroll Speed	Scroll speed of SMS (in pixels per half-frame).	Integer from 1 to 20.	1
Gap between Messages	Space between indentations with different SMS (in pixels).	Integer from 1 to 50.	10
Clear screen	Control over mode of messages output in case when there are no new SMS. If the mode is on the region gradually becomes transparent as scrolling latest received SMS. If the mode is off roll crawl is stopped and the latest messages are diaplayed on the screen they do not dissapear.	Yes – switch on; No – switch off.	No
Subpanel Text Formatting (for more information see the «Formatting of tags» section)			
Styles File	Full path to the style collection file.	File format: EFC.	None
Smileys File	A full path to the file with smileys. The file is used to replace automatically combination of symbols in message text by small picture. The file has possible combinations of symbols and corresponding to the graphic files.	File format: TXT. For more information see the «Displaying of smileys» section.	None
Text Alignment	Aligning the message text according to the borders of the title element.	Left; Center; Right; Justify.	Left
Hyphenation	Turn breaking up words by syllables in the message text.	No; Yes.	No
Line Spacing	Line spacing (in pixels).	Integer from 25 to 300.	100
First Line	Indentation of the first line of every message (in pixels).	Integer from -200 to 200. from -200 to -1 – outdent at the number of pixels specified; 0 – none; from 1 to 200 – indent at the number of pixels specified.	0

6. Rules for Selecting of Text Style

To design the texts of SMS messages in the SMS, SMS2, SMSRoll title elements font styles from the specified style collection are used. The collection is specified on the Text Formatting subpanel.

Note: Styles in the collection are ordered, i.e. each style has its name and index (from 0 to N-1, where N denotes number of styles in collection). Indices are assigned to the styles according to its sequence order. Sequence order in collection depends on specified way of sorting.

For more details on this issue, see the «Forward Titling: Graphic Editor» user's guide.

Follow these rules to select a style for the text:

1. Higher-priority is the indication of index or name of necessary style. For this you may use either formatitng tags (in the <ST n> format) or other means specified in control application used for SMS loading.

2. If the style is not selected in the application then it will be automatically specified from the style collection of control application that loads messages to the title element.

3. If the specification of the style is absent in control application then the style is specified automatically considering properties of title element specified in the FDTitleDesigner application:
   - for elements of the SMS and SMS2 type – depending on the Style Autoselection property (the Text Formatting subpanel):
     - Yes – in this mode for every message the font with the largest size from those which allow fitting of the message into the bounding rectangle will be automatically selected;
     - No – the first font in the collection will be used;
   - for elements of the SMSRoll – the first font in the collection will be used.

✔ **Important:** Pay attention to the presence of fonts with various size in the style collection. The absence of fonts with a small size can cause the text of a message not to fit into the bounding rectangle.

�v **Example:** Let consider the following instance. Note the following important details if the SMS, SMS2 or SMSRoll title elements are used for loading of messages:

1. If text of message contains formatting tag of the <ST n> format (n denotes index or name of style) text that follows it will be designed according to the specified style regardless other settings.

2. If the Parse nickname mode is on (the Parse nickname check mark is put) the following styles are used:

1. Style specified in text of the message. In this case the message looks like:

\Nick_Style Nick \Mess_Style Message

where:

- \Nick_Style – reversed slash and index (name) for nick. There should not be any spaces between slash and the beginning of line;
- Nick – space (obligatory!) and text with nick;
- \Mess_Style – reversed slash and index (name) of style of message. Do not put a space between slash and style index;
- Message – space (obligatory!) and message text.

2. Default style if other style is not specified in text. Default styles for nicknames are specified on the Parse nickname tab.

3. If the Parse nickname mode is off (the Parse nickname check mark is absent) text of message will be designed considering the Style Autoselection property of the title element.

For more information on the SMSManager application see the «SMSManager. Output of SMS into Titles» user's guide.

7. Displaying of Smileys

The SMS, SMS2, SMSRoll title elements provides with a pos-sibil-ity of automatic replacement of certain combinations of print units in messages text by pictures. It allows outputting on air SMS with graphic smileys (1).
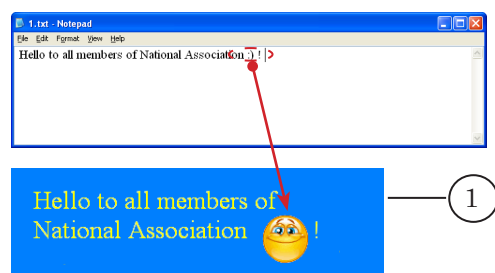
For working with smileys you should prepare in advance pic-tures with smileys and create file for susbstitution.

The pictures with smileys are stored on hard disk as graphic files of the following formats: TGA, PNG, BMP, JPG, JPEG, GIF.

When preparing smileys take into account size of font from styles collection used for displaying of messages. Also, consider title element dimensions, i.e. height and width of the picture must be comparable. The pictures are substituted to the text having initial height and width dimensions (without scaling).

Lower picture band is always aligned to lower band of the line. Text in the line is placed considering specified moving of text baseline from upper line bound (for more information, see description of format of susbstitution line).

Note: 1. This rule is effective if one picture is in the line. If there are more pictures another (more complecated) algorithm is used.
2. Usually smileys are the highest among other symbols in the text. So, practically moving of text baseline is made relatively upper bound of smiley.
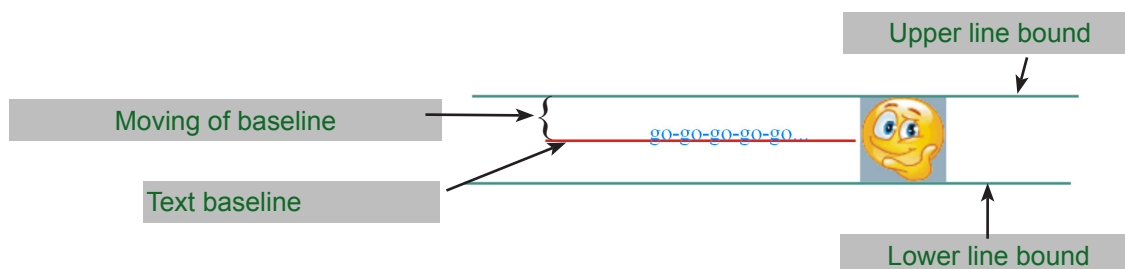
File for substitution is a text file with information on what combinations must be replaced (1) and by what symbols (2). The file is created in one of text editors, for example, Notepad.
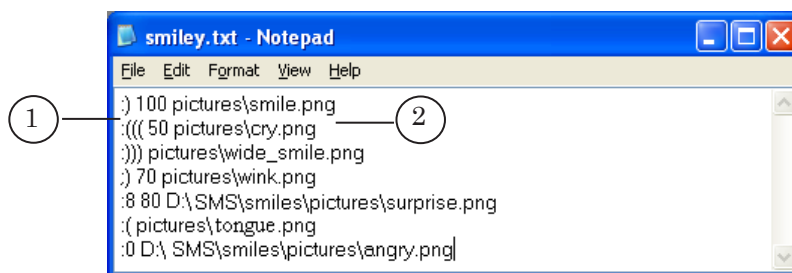
Each record in the file starts with a new line and has the following format:

SymbString BLShift FilePath

where:

- SymbolString denotes a combination of typing symbols that must be replaced, for example :);
- BLShift is a shifting of text baseline down relatively upper picture bound (in percent from picture height). The value is an integer number from 0 to 100. If the value is absent default value (66 %) is active. It is used for a vertical alignment of picture in the text (see the example below);
- FilePath is a path to graphic file with smiley. You may specify either a full path or a path relatively location of a substitution file.

Parameters must be necessarrily separated by spaces as in the example:

:)) 70 smiley\wink.png

Example: The picture below displays location of pictures in the text for different variants of text baseline shifting.
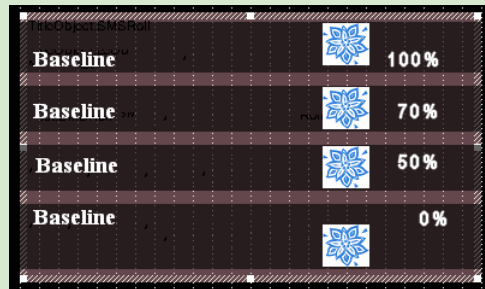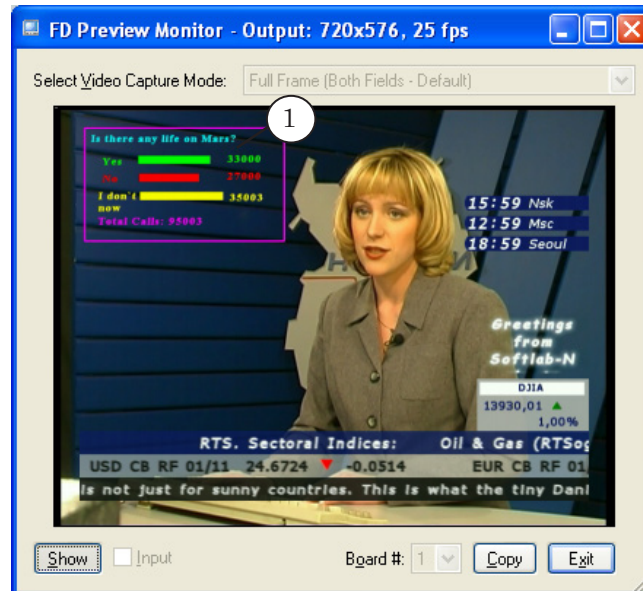

Tip: Remember that search and replacment of symbols by pictures are implemented automatically in the whole text. That is why you should specify unusual combinations of symbols that are absent in the body text.

Web

1. Function

The Web title element is designed to display information in HTML format in the specified area of the screen (1).

2. Task

The task for this title element is a file in HTML format.

3. Adjustment Features

Table 17.   Web Title Element Properties

Name	Description	Possible Values/Restrictions	Default Values
Subpanel Task			
Task	Full path to the task file.	File types: HTML, HTM.	None
Loop	Whether or not to loop the playback.	Yes – loop the playback until the stop command is issued; No – play back the title element content (according to the task) once.	No

DShow

1. Function

The DirectShow title element is designed to display audio/video data from files of different formats in the specified area of the screen (1) using the DirectShow technology.

Dealing with this element obligatory requires corresponding DirectShow components for data capturing and playback.

✔ **Important:** The used system must have installed DirectShow components that support formats of used files with tasks for the DirectShow title element.

2. Task

The task for the DirectShow title element different files are used:

- video clips (AVI, MPG, MPEG, WMF, WMA, ASF);
- still images (BMP, JPG, JPEG, GIF);
- audio files (WAV, MP3);
- flash clips (SWF, FLV).

✔ **Important:** Install Windows Media Player (version 11/newer) to play files in the ASF, WMA, WMF formats.

3. Adjustment Features

The Properties panel of the DShow title element has the following subpanels: General, Task and Alignment and Stretch.

Note: Description of the General and Alignment and Stretch subpanels see in the «Properties of title elements» section of the «Property sheets» chapter.

Table 18. DShow Title Element Properties

Name	Description	Possible Values/Restrictions	Default Values
Subpanel Task			
Task	Full path to the task file.	Formats that can be played via the DirectShow technology.	None
Duration	Total duration of one task loop. Supplemental information, not edited.	String in the format hh:mm:ss.ms, where: hh – hours; mm – minutes; ss – seconds; ms – milliseconds.	None
Loop	Whether or not to loop the playback.	Yes – loop the playback until the stop command is issued; No – play back the title element content (according to the task) once.	Yes

SportTimer

1. Function

The SportTimer title element is designed to show a sport timer during the broadcast of sporting events or other programs (1). The timer can work as a countdown as well as timer; can display the time in hours/minutes/seconds or game periods. The timer can be started/stopped using buttons in the SLSportClock program window (see the below "4. SLSportClock" section), hot keys, or GPI-signals from external devices or programs.

2. Principle of work

The SportTimer title element displays the time according to the SLSportClock program. It is therefore necessary to start and set up the SLSportClock program beforehand.

The program is included in the ForwardT Software (for more information see the «4. SLSportClock» section).

3. Adjustment Features

The Properties panel for the SportTimer element contains the following tables: General; Alignment and Stretch; Specific; Text Formatting.

The settings in the Text Formatting table manage the format of the timer in timer mode, countdown mode, and stopped mode. A text style from a selected style collection is used. If the style collection file is not specified, then the default style will be used.

Note: For a description of the General and Alignment and stretch tables, see the above «Properties of Title Elements» section in the «Property Sheets» chapter.

Table 19. SportTimer Title Element Properties

Name	Description	Possible Values/Restrictions	Default Value
Subpanel Specific			
Time Format	Format of the time display.	hh:mm:ss; mm:ss; hh:mm:ss; hh:mm; where: hh, mm, ss – hours, minutes, seconds, correspondingly (the time will be displayed with a leading zero, for example: 04); p – period number.	mm:ss
Horizontal filter	Horizontal filter function to anti-alias the image. For more information see below in the «Additional sections», «Image filters» section.	Yes – turn on. No – turn off.	Yes
Vertical filter	Vertical filter function to anti-alias the image. For more information see below in the «Additional sections», «Image filters» section.	Yes – turn on. No – turn off.	Yes
Subpanel Text Formatting			
Style File	Full path to the file containing the text style collection which will be used to display the time.	File format: EFC.	None
Stopped Style Index	Style index for the style that will be used when the timer is stopped. If the style file is already in place when setting up and the serial number of the style is known, just input the serial number.	Integer from 0 to 100. The serial number of the style is calculated automatically from the index number using the formula: $n=remainder(I/N)$, (the remainder of dividing I by N) where: n – serial number of the style. Can be from 0 to (N-1); I – set index number; N – amount of styles in the collection	0
Forward Style Index	Style index for the style that will be used when the timer is working.	Integer from 0 to 100.	0

Name	Description	Possible Values/Restrictions	Default Value
Backward Style Index	Style index for the style that will be used when the countdown is working.	Integer from 0 to 100.	0

✔ **Important:** The first style in the collection has the number 0.

4. SLSportClock

4.1. Purpose

The SLSportClock program is designed to set up and manage the timer for the SportTimer title element. It is included in the standard ForwardT Software (starting from version 5.7.0).

4.2. Configuration file

A configuration file (*.txt) is used to set up the timing of the timer in the SLSportClock program. The configuration file contains information on the duration of the game periods and the mode of the timer for each period: a timer or countdown.

The text file contains lines of the following format (see image below):

PeriodNumber=Duration

where:

- no spaces are permitted;
- PeriodNumber – the number indicating the period number;
- = – required symbol;
- Duration:
  - numbers (for example: 20) – the duration of the period in minutes for the timer;
  - a minus sign and numbers (for example: -5) – the duration of the period in minutes for the countdown.
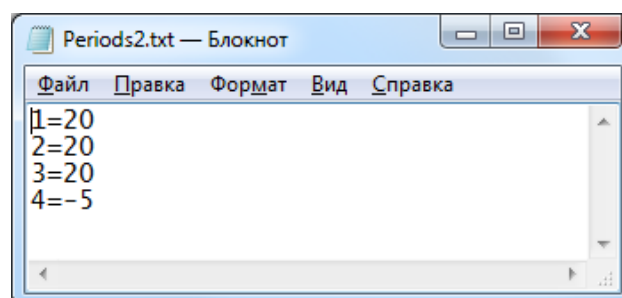
Note: You can also set the timer for pauses and breaks in the game in the configuration file; for example, you can set 3 20 minute periods and a 5 minute countdown. If necessary the user can start the corresponding timer.

4.3. First time opening the program

The first time the program opens, a notification will pop up stating that the SLSportTime service needs to be set up. The set up occurs automatically. Press Yes (1) to allow the set up.
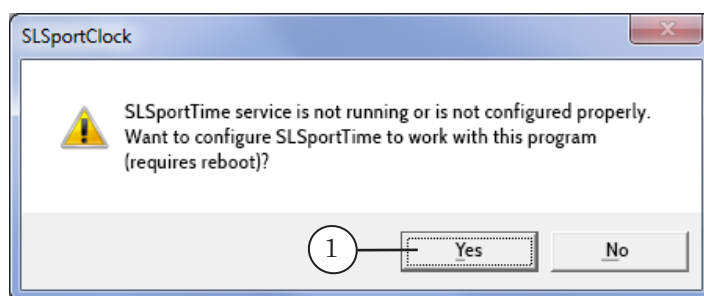
✔ **Important:** The set up will require a restart of the computer.

4.4. Opening and closing the program

The full path to the SLSportClock program file: ~\Tools\SL-SportClock\SLSportClock.exe, where ~ is the full path to the folder containing the ForwardT Software.

After starting the program, the main program window will open and the program icon will appear on the taskbar (1).

To close the program, use the Exit command. The command can be found in the system menu (1) which can be opened by right-clicking the main window head or in the context menu of the program icon (2).

SportTimer
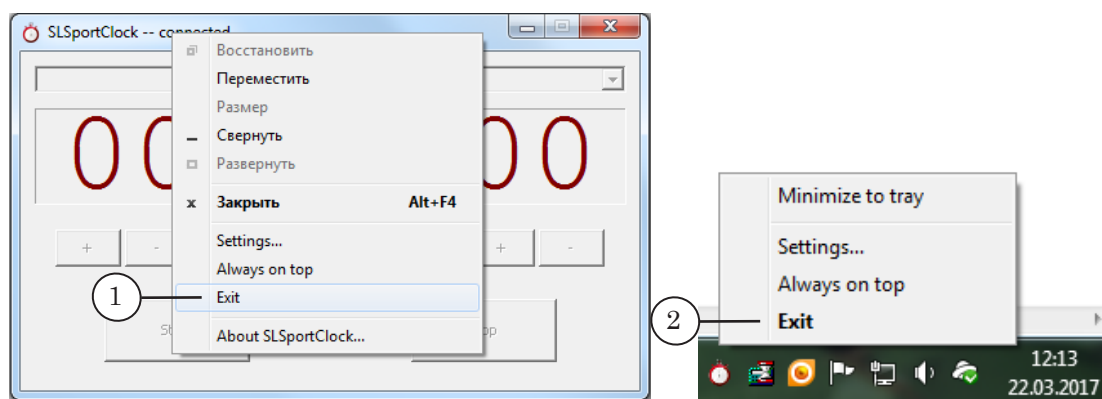
By pressing Close in the main window you will not close the program, simply minimize the window to the taskbar.

4.5. Main window
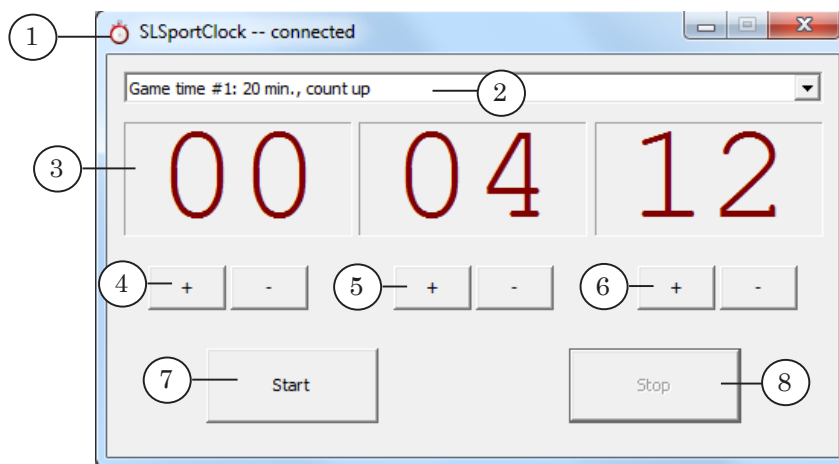
Main Window. Assignment of control elements:
1 – open the command settings menu; 2 – choose the current period; 3 – display of current time: hours, minutes, seconds; 4 – add/subtract one hour; 5 – add/subtract one minute; 6 – add/subtract one second; 7 – start timer; 8 – stop timer.

Working with the timer:

1. The timer and display parameters are set by the user in the Settings window (see next paragraph).

2. The timer works according to the current period settings (2).

3. The timer starts when Start (7) is pressed.

4. When the timer reaches a limit (maximum when a timer, minimum when a countdown) the timer automatically stops.

5. By pressing Stop (8) the timer enters the Pause mode. The current time count freezes. By pressing Start the timer continues from the frozen time.

6. The Add/Subtract (4–6) buttons work when the timer is counting and when it is paused. If because of the use of the buttons the timer reaches a limit (maximum when a timer, minimum when a countdown) the timer automatically stops.

SportTimer

123

4.6. Settings window

1. Opening the window and general overview.

   To open the Settings window, use the Settings command. The command can be found in the system menu (opened by right-clicking the head of the main window) or in the context menu of the program icon.

Settings Window. Assignment of control elements:
1 – timer set up; 2 – working parameters set up; 3 – close the window, saving all changes; 4 – close the window without saving changes.

2. Games Tab

The Games Tab contains the control elements for choosing the configuration file (1) and displays the settings (2): the amount and numbers of the periods, the duration and mode of the timer for each period (see above «4.2. Configuration file»).
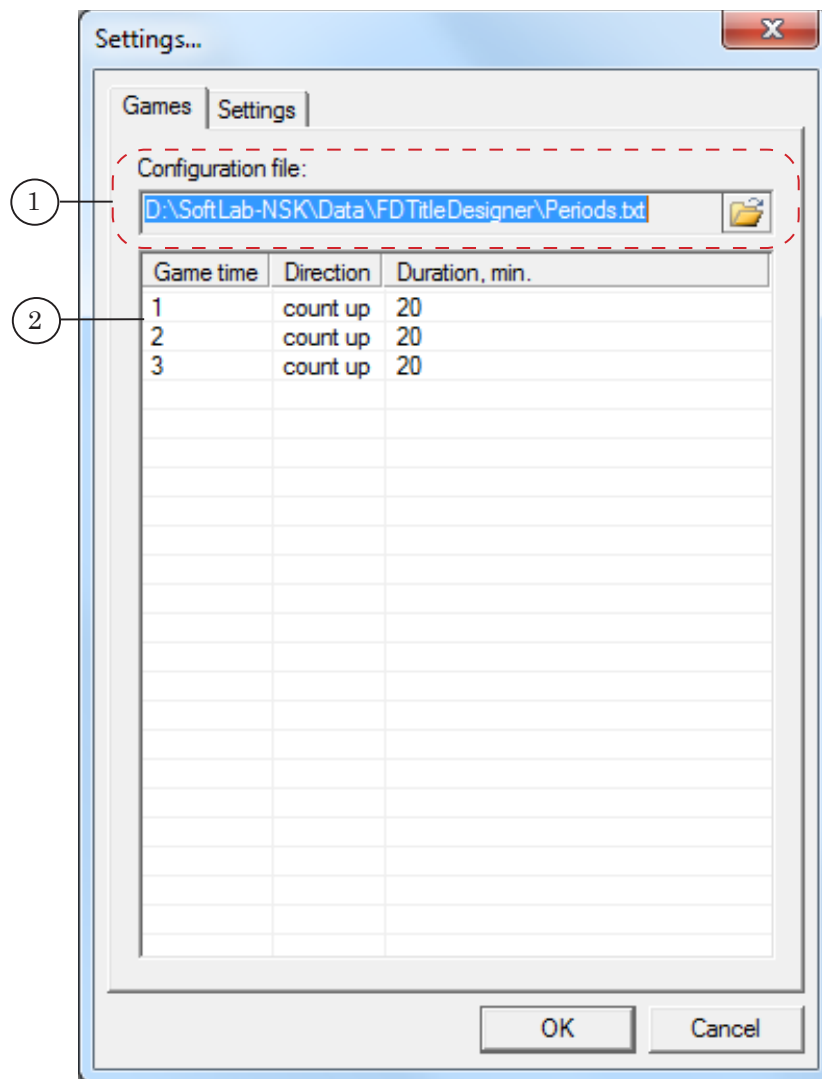
3. Settings Tab

The Settings Tab is designed to set up the parameters of the timer display in the main window and the timer commands.
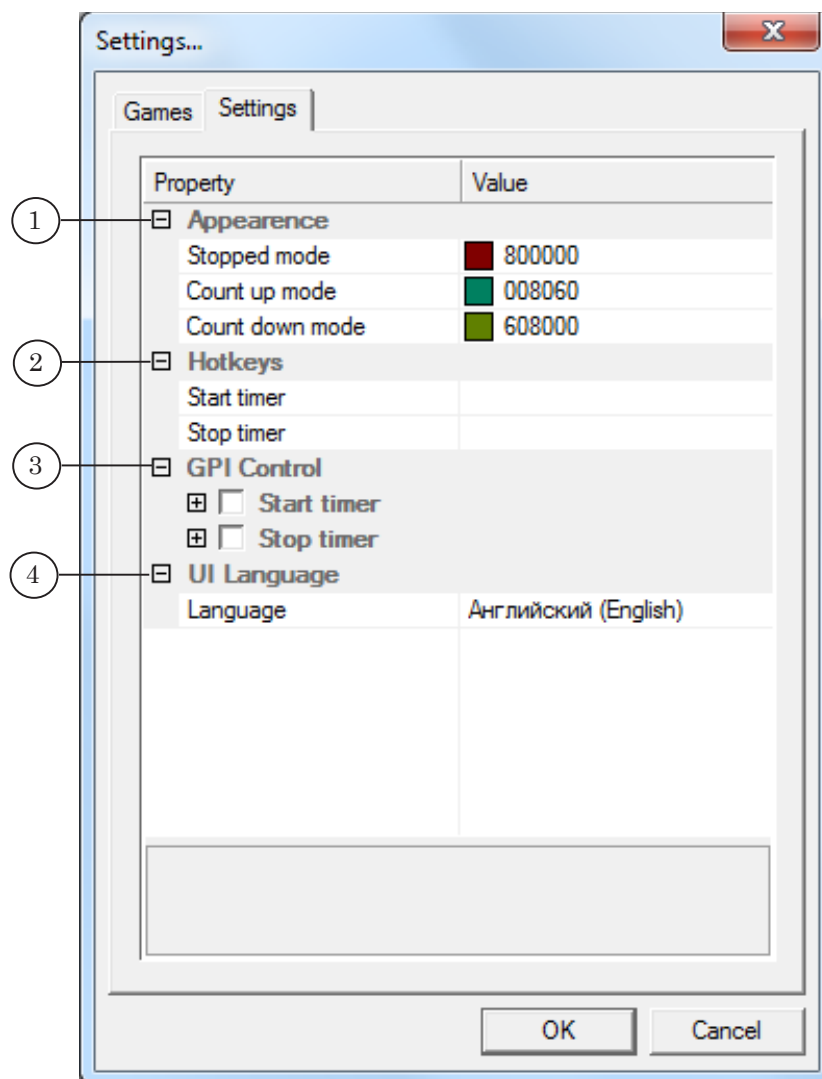
Settings. Assignment of control elements:
1 – set the number color for the timer in the main program window depending on its status: timer, countdown, or stopped; 2 – set hotkeys for starting and stopping the timer; 3 – set up GPI-signal controls for starting and stopping the timer; 4 – select the language interface of the program.

When setting hotkeys for starting and stopping the timer, the following keys can not be used: Del, Esc, Enter.

Note: Additional set up is required to use GPI-signals. For more information see the following user's guides:
1. To set up programmable GPI-signals: «Using SoftGPI signals. Exchange of control signals between programs».
2. To set up GPI-signals from external devices: «SLControlBox 101. Interaction With External Devices via GPI».

5. Set up procedure and managing the Sport Timer element

5.1. Setting up the timer

When preparing for translation, complete the following steps:

1. In any text editor, for example, in Notepad, create a configuration file. In our example for 3 periods of the game three lines are made: period number (1) and duration (2) in minutes.
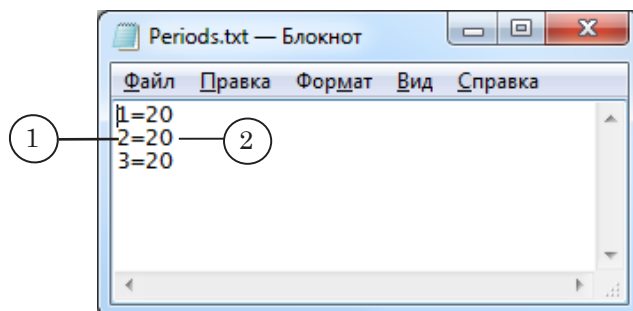
2. Start the SLSportClock program (3). Select the configuration file (4).
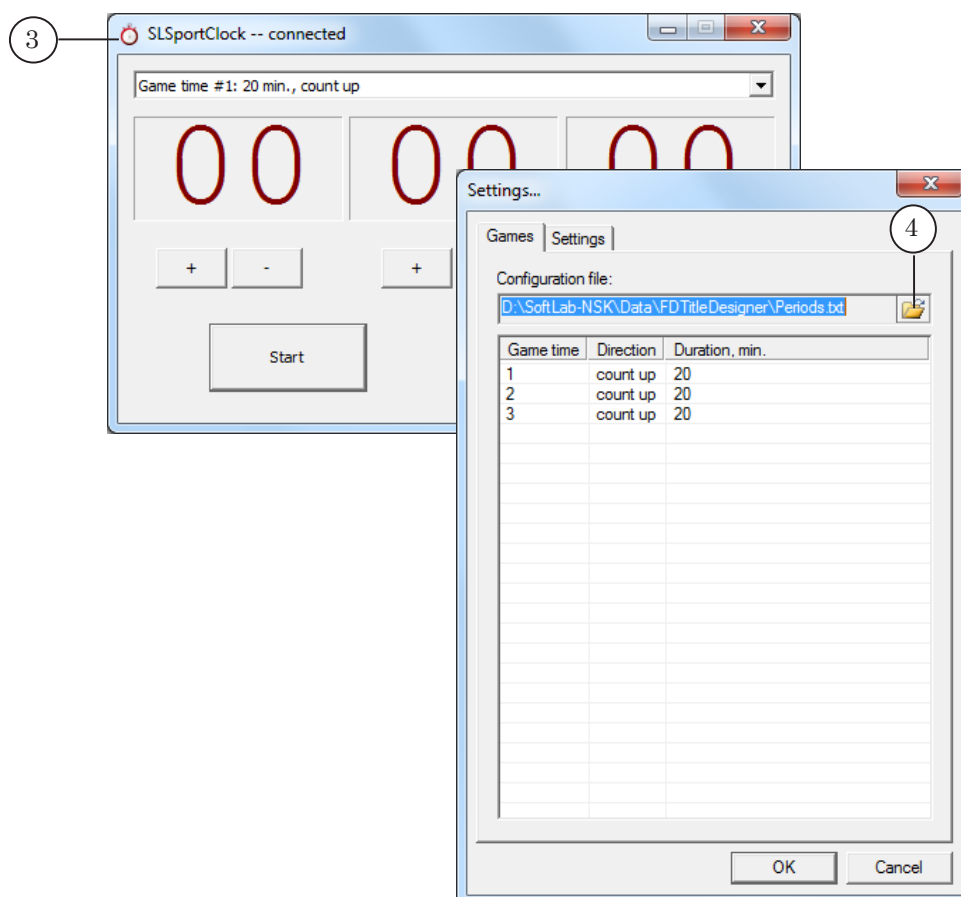
3. In the FDTitle Designer program add the SportTimer title element (5) to the title project.

4. Place the element (6). Set the time format (7). Manage other settings, if necessary.

5. Start preview mode by pressing Start Preview (8).
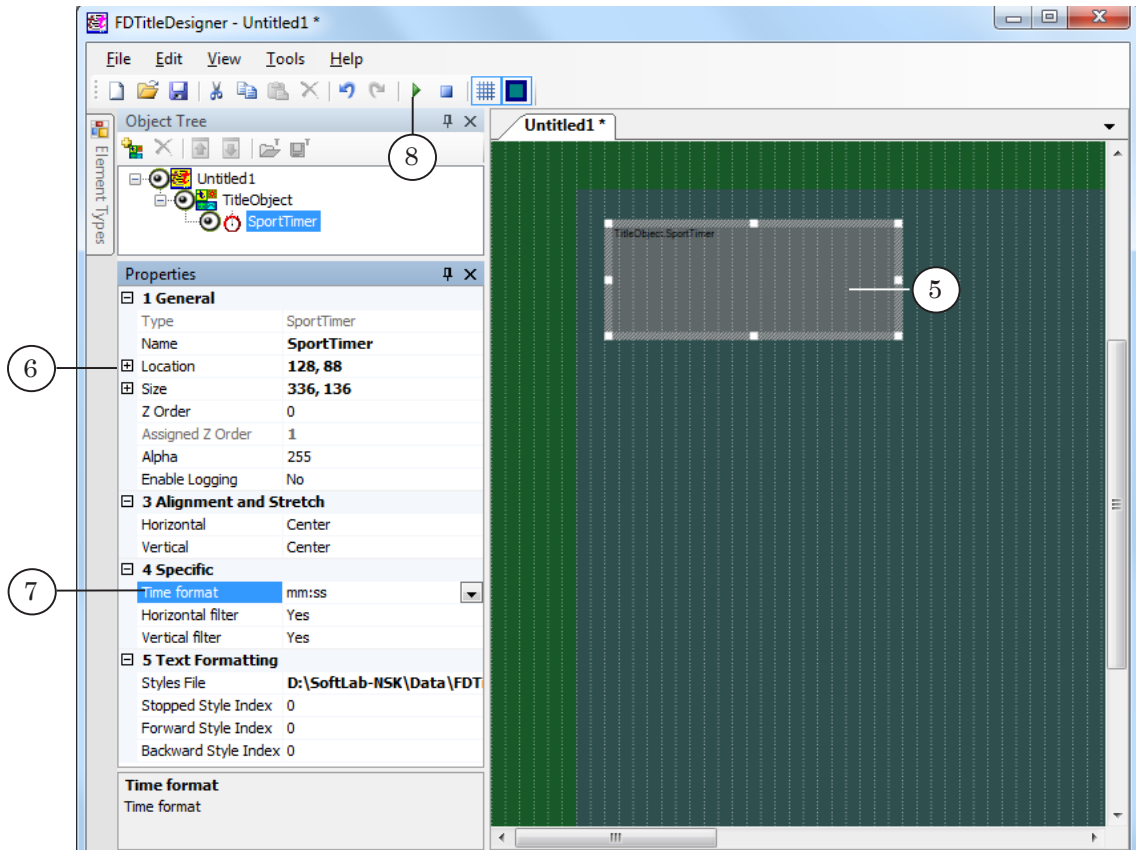
6. Select a period (9) in the SLSportClock program. Press Start (10). The timer will start.
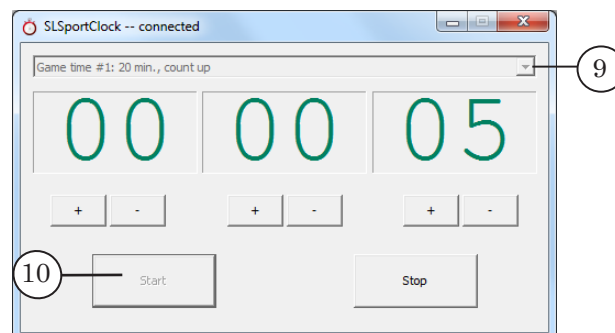
The timer value (11) will be displayed in the SportTimer element in the FDTitle Designer window.
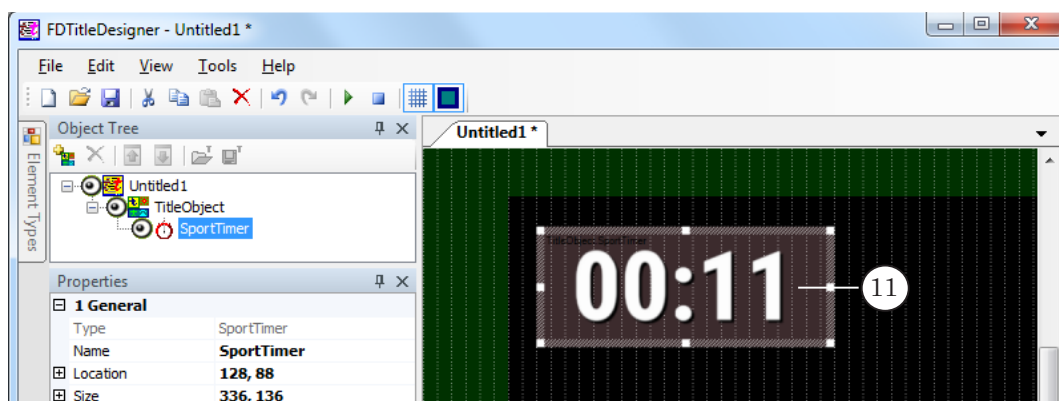
7. To double-check if the timer works, in the SLSportClock program press the Add/Subtract buttons (12). The timer value in the FDTitle Designer program needs to change accordingly.

8. Press Stop (13) to stop the timer.
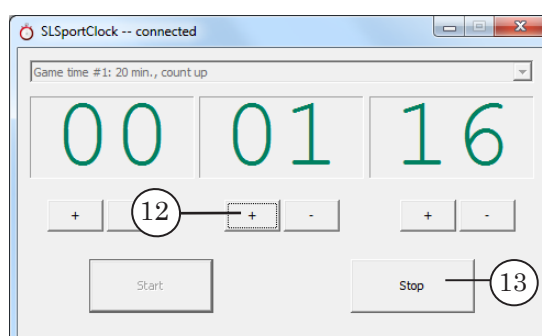
9. In the FDTitle Designer program press Stop Preview. Save the title project.

5.2. Managing the timer during a broadcast

In order to display the timer during a broadcast, complete the following steps:

1. Load the title project with the SportTimer element into FDOnAir beforehand.

2. The timer display is controlled in the FDOnAir programs like other title objects: using commands in the program window and schedule commands (see the user's guides: «FDOnAir: Broadcast Automation», «FDOnAir Commands: Broadcast Automation»).

3. Before the broadcast starts, start the SLSportClock program. Set the timer to the needed starting position: select the period (1); make sure that the timer displays the corresponding value (2).

4. When the game time starts, press Start (3).
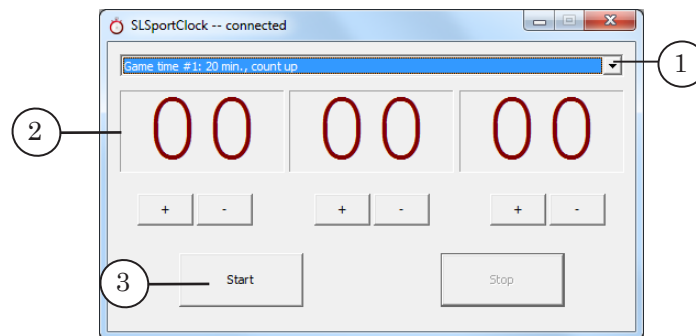
Note: You can start/stop the timer using hotkeys and GPI commands.

5. When the game time stops, press Stop (4). The timer value will be frozen. If you press Start again, the timer will resume from its frozen position.
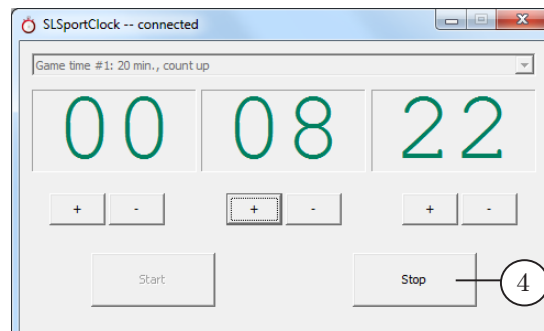
6. When a period ends, select the next period and press Start at the appropriate moment.

Additional sections

Tags of Formatting

1. General Information

Formatting tags are used in text tasks for the SMS, SMS2, SMSRoll, RollCrawl, Caption title elements. Tags allow inserting commentaries into the text and designing text messages broadcasted on air. You may:

- select text style;
- insert into text line a picture, long space, symbol of switching to another string;
- specify parameters of indentation formatting;
- specify background (for messages) and its color.

The picture below displays an example of formatting tags used as the task for the RollCrawl title element: (1) – is an initial ads text and its previewing in the TitleDesigner application; (2) – is the same text but with added tags and its prevewing in FDTitleDesigner.
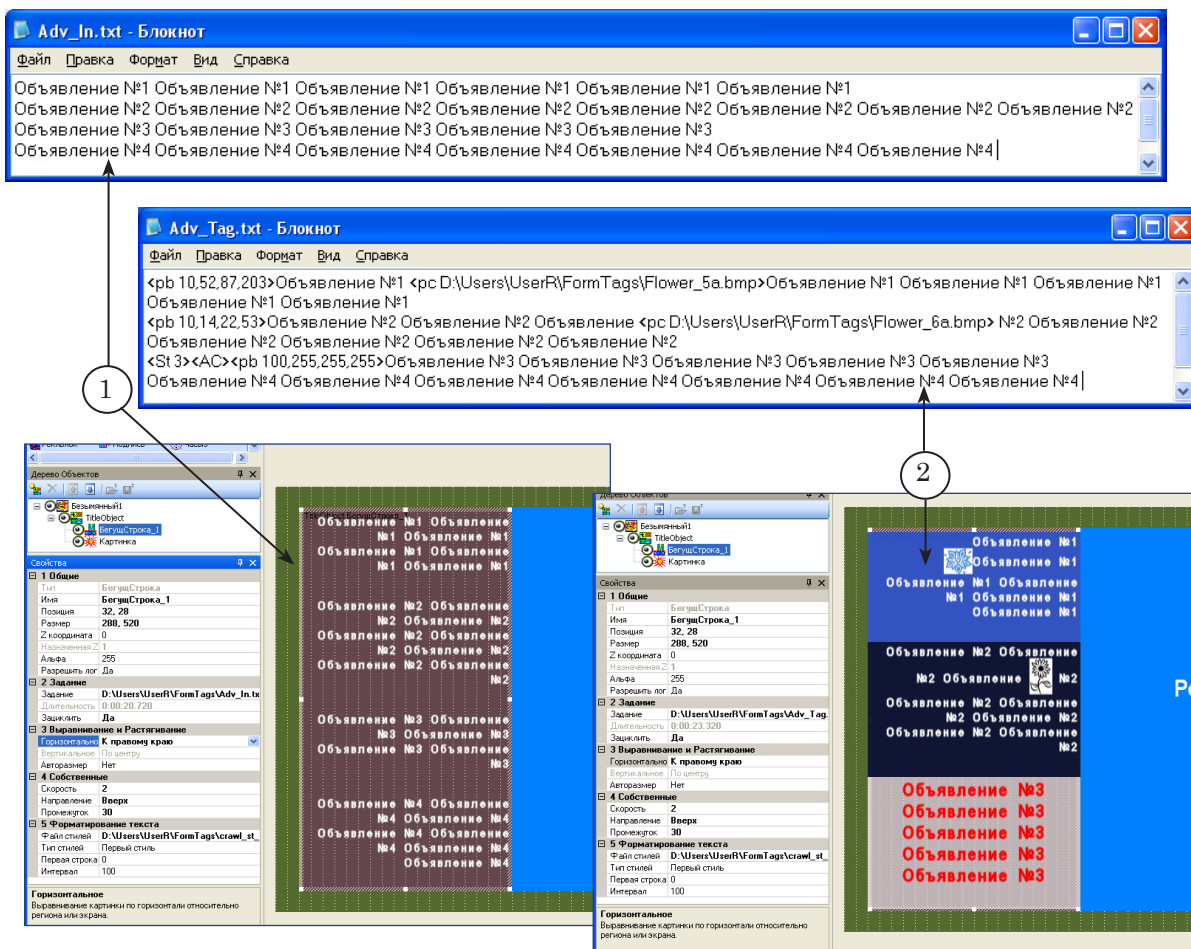
2. Use of Tags

Tag is a text put in the <> brackets. Latin, small and capital letters can be used in tags. Note that there is no any difference between small and capital letters. Text put in the brackets has a certain format (more information on this issue is given below).

Tags of formatting can be included in task text in any place and in any combinations. Work of tag depends on its type.

If tag is recorded incorrectly (incorrect format, use of unknown symbols, etc.) corresponding string will be output as a part of the text and will be displayed at message demonstration.

3. Selection of Text Style, Insertion of Symbols and Pictures

Tags of this group are used for the SMS, SMS2, SMSRoll, RollCrawl and Caption title elements.

Table 1.   Tags for Text Designing

Tag	Description	Parameters
<ST n> *Example*: <ST 5>	Use specified style. Scope: beginning from symbol that follows tag till other tag of the same type or till the end of the ads.	n – is an index or name of the style from collection. The collection is specified in properties of a title element. The <ST -1> record means that the style specified in properties of a title element will be used.
<PC n path> *Example*: <PC 50 pict.bmp>	Insert a picture from specified file into text instead of tag.	n – is a shifting of a text baseline from upper picture bound (in percent from picture height dimension). Integer from 0 to 100. If the value is absent the default value (66%) will be set; path – is a full or a relative path to the file with a picture (for more information, see the «Basic Paths to Files» section).
<LS width> *Example*: <LS 30>	Replace tag by space of a specified duration.	width – is a width of a space (in pixels). Integer number from 0 to maximal possible value depending on width of title element.
<NL>	Insert symbol of line break. Text that follows tag will be put on a new line (new inindentation).	
<CC comment>	Service text, is not displayed at output of message.	comment – text of a comment.
<uc> <lc> <dc>	Apply (or remove) a formatting tag: "All letters uppercase", "All letters lowercase". The area of effect is from immediately after the tag to the next tag from that group or the end of the message.	<uc> – all uppercase; <lc> – all lowercase; <dc> – end the effect of the previous <uc> or <lc> tag.

> **Example:** Pictures below present examples of tags use via the Caption title element:
>
> - (1) denotes an initial ad created in a text file and "on screen" (previewing in the FDTilteDesigner application);
> - (2) denotes the same ad but with added formatting tag. Signs on the picture display correspondence between tags and their effects.
>
> All properties of the element in both examples are equal.
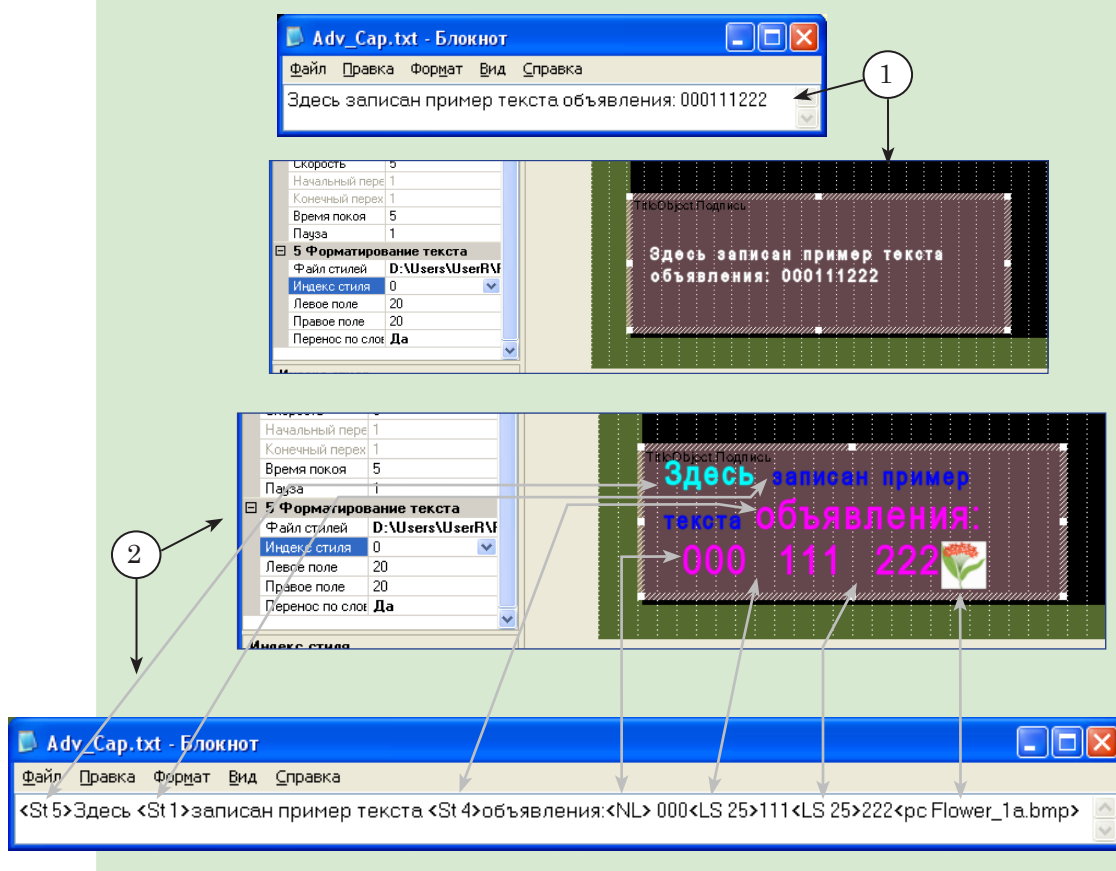
4. Formatting of Indentations

Tags of indentations formatting are used for the SMS, SMS2, SMSRoll, RollCrawl and Caption title elements in case if the following properties are specified:

- for SMS, SMS2, SMSRoll – Justify mode of formatting is on (see Text Alignment in the Text Formatting subpanel);
- for RollCrawl – Up or Down direction is specified (see Direction in the Specific subpanel);
- for Caption – Word Wrap is on (the Word Wrap property in the Text Formatting subpanel).

Table 2.   Tags for formatting of indentation

Tag	Description	Parameters
Horizontal Text Alignment		
<AL>	alignment on left indentation bound	
<AR>	alignment on right indentation bound	
<AC>	center alignment	
<AJ>	justify: left and right indentation bounds simultaneously	
<AD>	use value specified in properties of a title element	
Horizontal Offset		
<IL n> *Example*: <IL 25>	offset from left bound of page	n – is an offset value (in pixels). Integer number. Possible values: -1 – use value specified in properties of a title element; from 0 to maximal acceptable value depending on title element width.
<IR n> *Example*: <IR 35>	offset from right bound of page	
<IF n> *Example*: <IF 5>	first line (in indentation) offset on the right	
<IH n> *Example*: <IH 15>	first line (in indentation) outdent on the left	
Vertical Spacing.		
<SB n> *Example*: <SB 30>	interval before indentation	n – is a value of interval (in pixels). Integer number. Possible values: -1 – use value specified in properties of title element; From 0 maximal acceptable value depending on title element height.
<SA n>	interval after indentation	
<SL n> *Example*: <SL 150>	line spacing	n – interval in percent from height of a line. Integer number. Possible values: -1 – use value specified in properties of a title element; for SMS, SMS2, SMSRoll: 25–300 (default value: 100); for RollCrawl: 100–500 (default value: 100).

Activation of formatting tags depends on presence of paragraphs breaking. Spacers of paragraphs are added to the text in the following cases:

- if the <Enter> key is pressed at typing. Note that such spacers (symbols of indentation ending) are invisible;
- if the <NL> tag (line break) is included. Each tag (<NL>) denotes beginning of a new indentation in advertisment.

Taking mentioned above into account area of tags effect is specified accoring to the following rules:

1. If there are several tags with the same effect in one indentation the active one is the last one.

   For example, if the <AR> and <AC> tags follow each other in one line formatting will be implementing according to the last one.

2. Tag is active beginning from the indentation where it is included and untill indentation with another tag with the same effect or untill end of advertisment if the same tag won't occur.

> **Example:** Pictures below present examples of tags for formatting of indentations via the RollCrawl title element:
>
> - (1) denotes an initial ad created in a text file and "on screen" (is in the preview mode in the FDTilteDesigner application);
> - (2) denotes the same ad but with added formatting tag. Signs on the picture display correspondence between tags and their effects.

All properties of the element in both examples are equal.
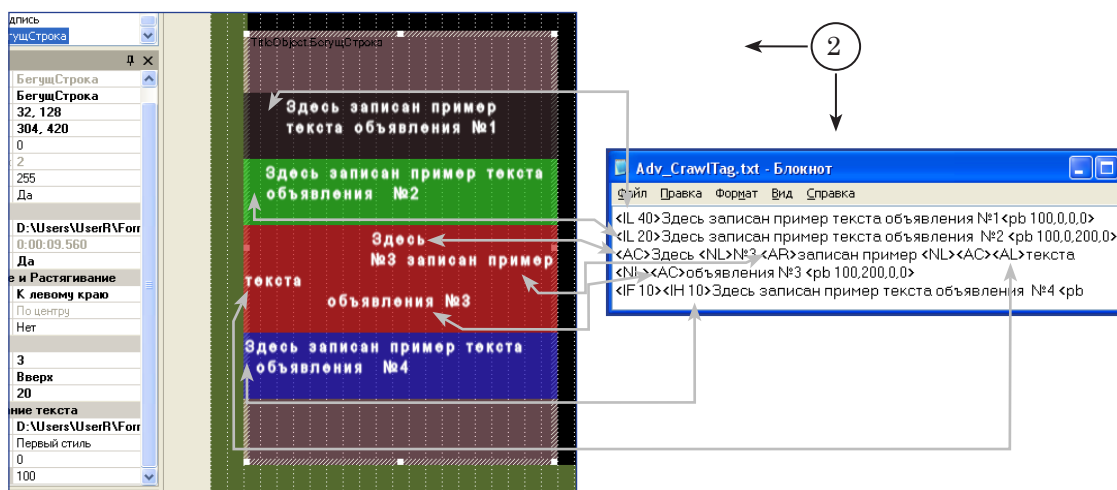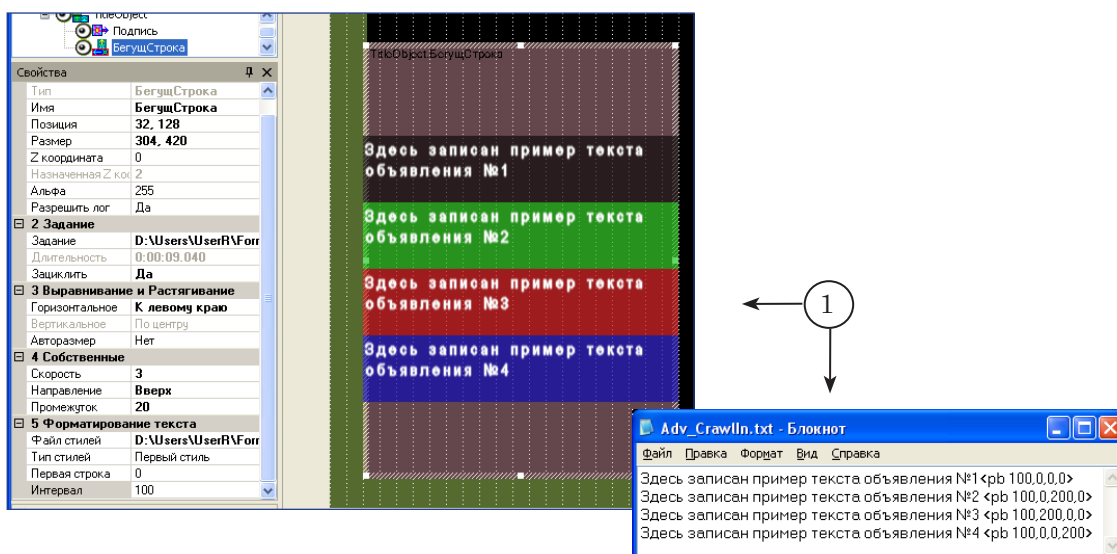
5. Design of Background

Tags for designing of a background are used for the SMS, SMS2, SMSRoll, RollCrawl and Caption title elements.

Table 3.   Tags for formatting of a background

Tag	Description	Parameters
Background filling.		

<PB a,r,g,b>
<PB r,g,b>
 	
or
 	
<PB 0xAARRGGBB>
<PB 0xRRGGBB>
 	
Example:
<PB 100,255,0,0>
 	
or
 	
<PB 0x000000>
	Filling of ads background. Color of a background is specified in tenfold or hexadecimal format. Code contains 4 components: transparency, red, green and blue color components.	Integer numbers from 0 to 255 are marked by letters:
		   a – non-transparency;
		   r – red;
		   g – green;
		   b – blue.
		Hexadecimal numbers from 0 to FF (in this format) are marked by letters:
		   AA – non-transparency;
		   RR – red;
		   GG – green;
		   BB – blue.

Background image.		

<PP hor vert path>
 	
Example:
<PP HL VD picture.tga>
	Place a picture from specified file on ads background.	path – is a full or relative path to file with picture (for more details, see the «Basic Paths to Files» section);
		hor – is alignment and scaling horizontally. Possible values:
		   HL – left;
		   HC – center;
		   HR – right;
		   HS – resize a picture to fit an advertisment;
		   HT – resize a picture to fit a line horizontally;
		vert – alignment and scaling of a picture vertically. Possible values:
		   VU – up;
		   VC – center;
		   VD – bottom;
		   VS – resize a picture to fit height of ads;
		   VT – copy picture till full fit of aline vertically.

Tags for background designing are active for one advertisment. If an advertisment has several tags of background filling (<PB ...>) the last one will be active. If there are several tags for adding of a picture (<PP ...>) the last one will be also active. If there is a tag of picture adding with filling of the whole background then the picture will occupy the whole background.

Example: Pictures below present examples of tags for formatting of indentations via the RollCrawl title element:

- (1) denotes an initial ad created in a text file and "on screen" (is in the preview mode in the FDTilteDesigner application);
- (2) denotes the same ad but with added formatting tag. Signs on the picture display correspondence between tags and their effects.

All properties of the element in both examples are equal.

6. Basic Paths to Files

Tags may contain both full and relative paths to files with picture.

If a relative path to file is specified it will be searched relatively a root folder that is by default:

- for the RollCrawl and Caption title elements:
  - firstly – folder with a task file;
  - secondly – folder with EFC file (file with styles collection);
- for the SMS, SMS2, SMSRol elements – folder with EFC file.

You may specify other root folders in addition to default folders. For this use the following tag:

<BP path1;path2;...pathN>

where: path1;path2;...pathN are full paths to folders separated by ";".

Example: <BP D:\UserR\Picture;D:\Users\SMS> denotes that search of files will be implemented relatively the D:\UserR\Picture and D:\Users\SMS folders.

Tag is active within one advertisment.

Substitution File

1. General information

When working with the RollCrawl and Caption elements the substitution function can be used – the automatic replacement of certain symbol combinations in the assignment text with others.
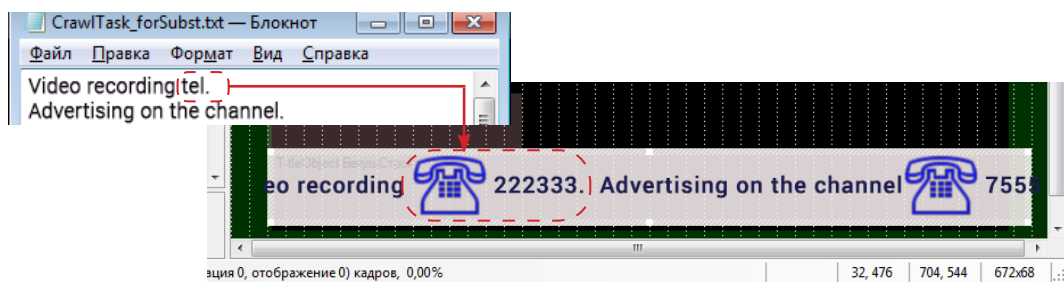
In order to use the substitution function, the substitution file needs to be prepared beforehand and the corresponding parameters of the title elements set up.

2. Substitution file

A substitution file is a text file (*.txt) that contains records with the replacement guidelines: which symbol combinations need to be replaced (1) and what they need to be replaced with (2). The file can be created in any text editor, for example Window's Notepad.
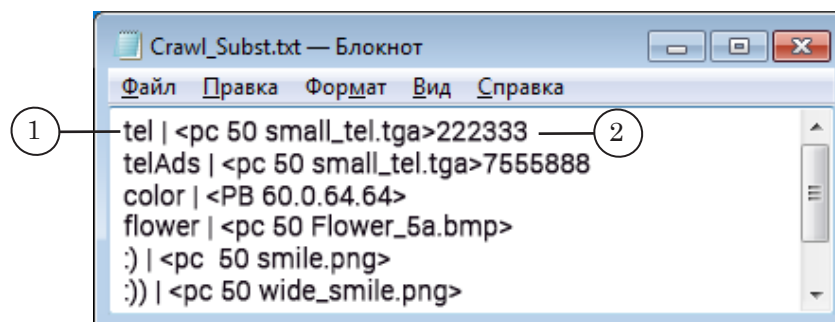
Each record starts with a new line and has the following format:

String1SepString2

where:

- String1 – string to be replaced – a combination of symbols that needs to be found and replaced in the original assignment text. The string to be replaced is the whole string of symbols from the beginning of the line to the last symbol before the separator;
- Sep – separator – a string of symbols used to separate the string to be replaced and the replacement string. Can contain several symbols, without spaces;

- String2 – replacement string – a combination of symbols that needs to be put into the assignment text instead of the string to be replaced. Can contain any set of symbols, allowed in text assignments. This includes formatting tags. The replacement string is the whole string of symbols from the beginning of the line to end of the line.

✔ **Important:** Pay attention to the use of non printable symbols, especially spaces. Pay extra attention to the beginning and end of the strings. These symbols are taken into account as well as regular symbols. Two strings whose only difference is the presence of a space at the beginning/end will be counted as unidentical, and as such the results of the replacement will differ (see example).

▌➡ **Example:** The image shows the results of using two different substitution files with the same text assignment for the crawl line (1). In the first example (2) the string to be replaced contains only three letters, without spaces: tel. The assignment replaces all instances of that combination of symbols, resulting in an incorrect ad text. In the second example (3) the string to be replaced contains five symbols: the letters tel surrounded by spaces. The result is the correct ad text.
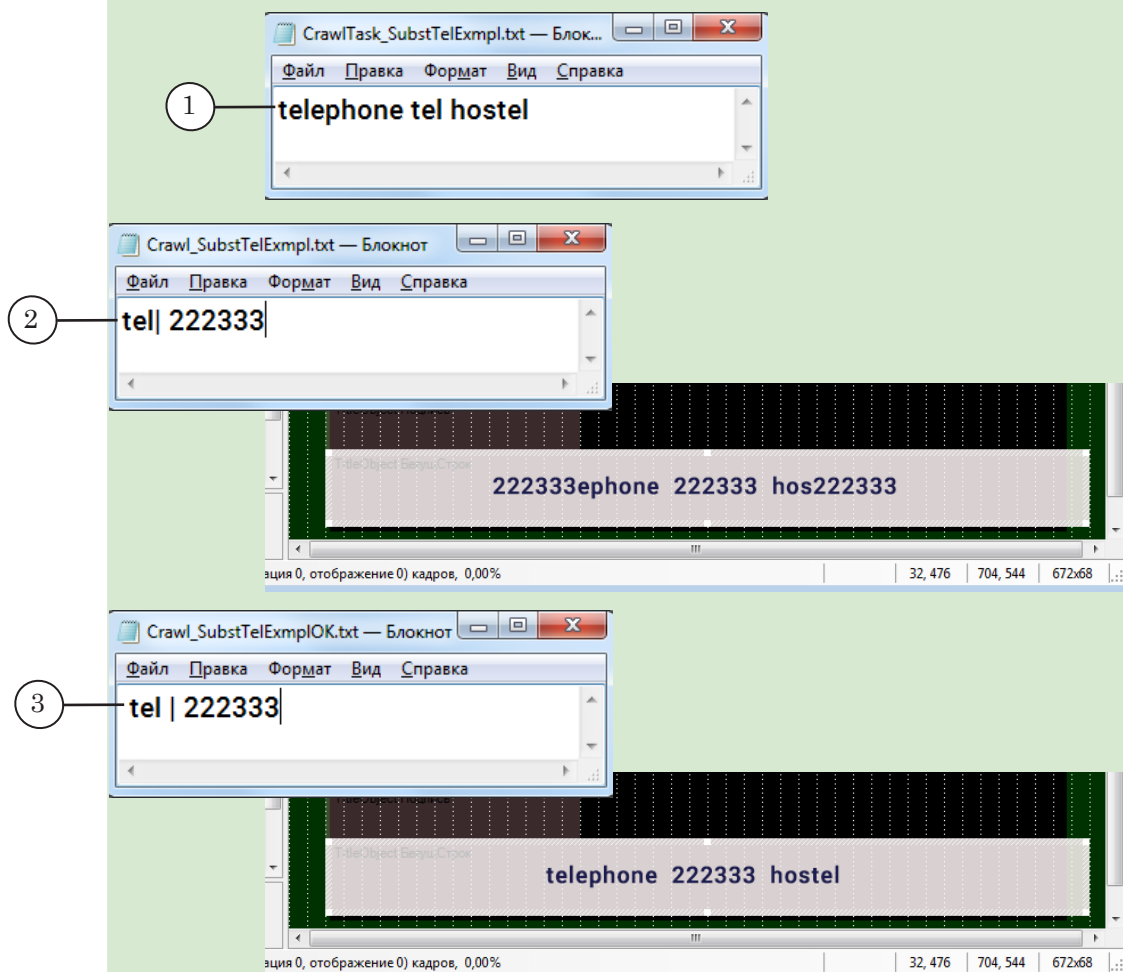
3. Element set up

The automatic replacement option is set up for each RollCrawl or Caption type element separately.

In order for the option to work, it is necessary to enter the full path to the Substitutions file (1) as well as the separator used in the file (2) in the Substitutes table.

The separator can be any symbol or combination of symbols without spaces. By default the | symbol is used.
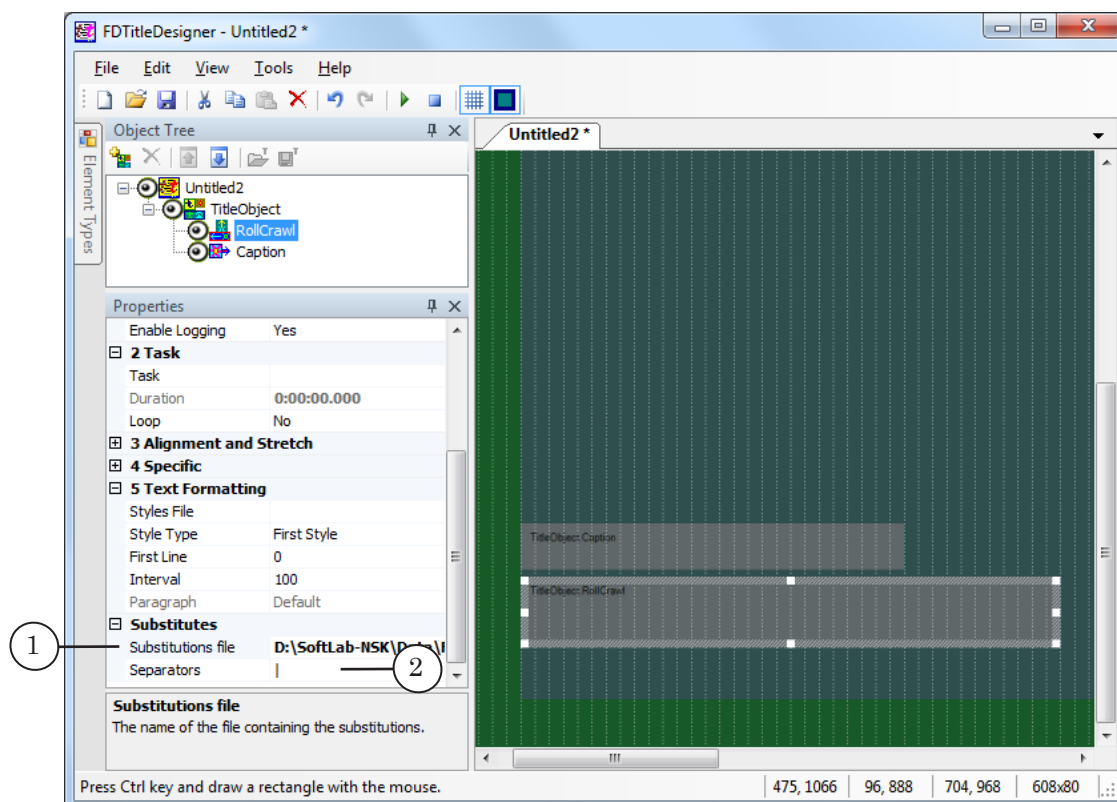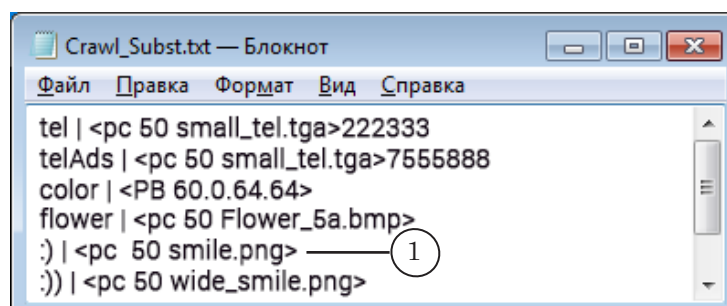

4. Image replacement

The replacement option can automatically replace a combination of symbols in the original text with an image, for example replacing a text smiley with an image: :) → 🙂.
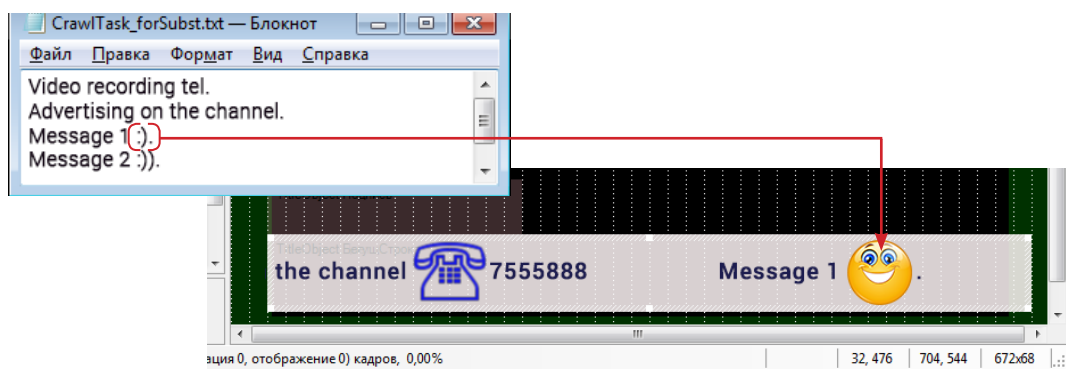
In that case the replacement string needs to take the form of the tag <pc xxx filename> (1), where:

- pc – required symbols;
- xxx – shift of the base line;
- filename – path to the image file.

The images need to be saved in graphical files on the hard drive. The allowed formats are: TGA, PNG, BMP, JPG, JPEG.

When preparing the images, the size of the text font of the message should be taken into account as well as the size of the title element – the height and width of the image needs to be appropriate. Images are placed into the text with the original height and width, without scaling.

When displaying a crawl line the lower edge of the image will be set as the lower edge of the message text. The text will be replaced according to the shift of the base line from the upper edge of the text.

The substitution file can contain a tag to fill in the message background or any other tag instead of an image tag. For information on using tags, see the «Tags of Formatting» section above.

Examples of Usage

### 1. Using the "Pseudo Yes" Value of the Loop Property

The Loop property is used to specify whether or not to loop the playback of the title element content.

The Caption and AnimLogo title elements have a Pseudo Yes value of the Loop property in addition to Yes (loop the playback) and No (play back once).

The Pseudo Yes value is used to loop the playback until playing a title element with the largest duration within the object is over.

This value is convenient when it is required to specify synchronous departure of title elements of the same object from the screen.

Example: Let there are two title elements used in the title project: Roll-Crawl (1) – to display a crawl line with ads and Caption (2) – to display a pop-up title for the crawl line.

It is required that the caption departs from the screen simultaneously with the crawl line when the advertisements are over.

To achieve this, perform the following steps:

1. Have both elements joined in one title object (3).

2. Select Pseudo Yes for the Loop property (4) of the Caption title element.
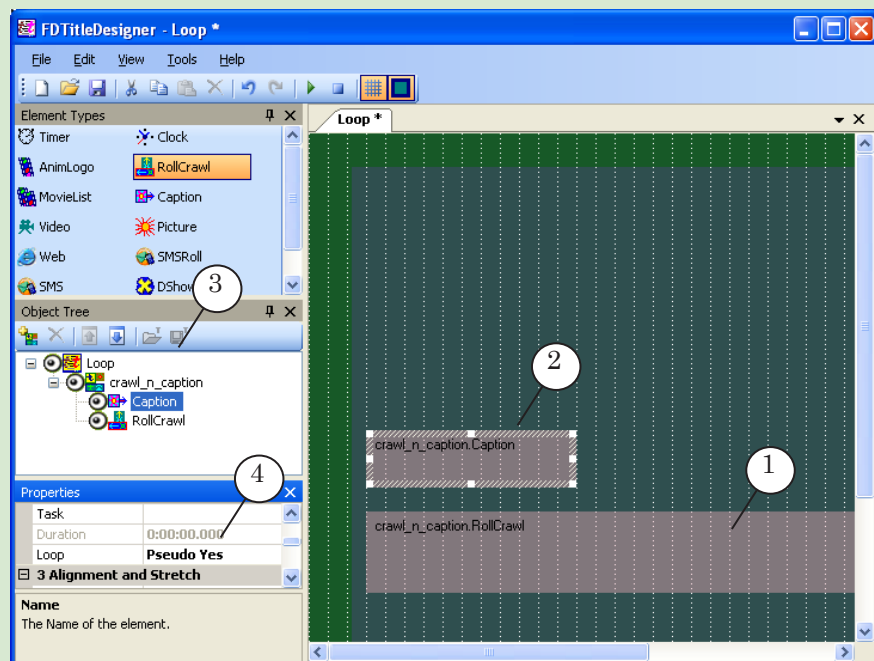
When playing titles, the caption for the crawl line will be on the screen exactly as long as necessary to scroll the crawl line with ads.
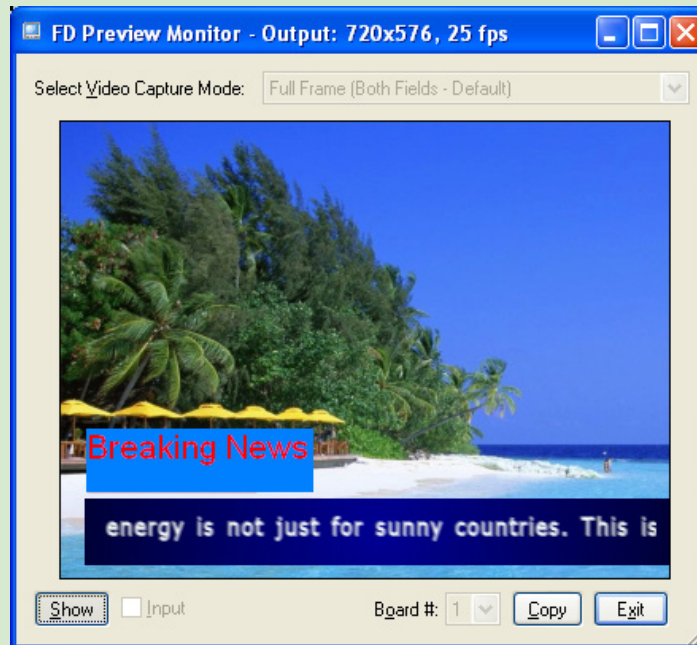
2. Guidelines for Adjusting Full-Screen Image in Title Elements

To save resources, use not full-screen clips for AnimLogo, MovieList, Picture, Flash title elements but clips with the frame width and height that match the element rectangle size.

Full-screen clips with transparency being used as the task, specify a bounding rectangle in such a way that it bounds not the whole screen but the area occupied by the opaque image.

Example: Let a full-screen video file is used to display a block of commercials. The file image size is 720x576 pixels, the opaque part being a small area of 528x64 pixels at the lower part of the screen in the center. The rest of the frame is transparent.

To play back the video clip in the MovieList title element, specify the bounding rectangle in such a way that its position and size match the opaque part of the clip. I.e. place a title element of 528x64 pixels at the lower part of the project field, in the center.

To achieve this, perform the following steps:

1. Draw a bounding rectangle of the title element on the project field.

2. Specify the task file for the title element. To do this, double-click on the title element, select the required file containing full-screen image in the dialog box opened.

3. Specify the title element properties: set the type of alignment and scaling – to Screen (a), horizontal alignment – Center (b), vertical – Bottom (c).

4. Click the Start Preview button (d).
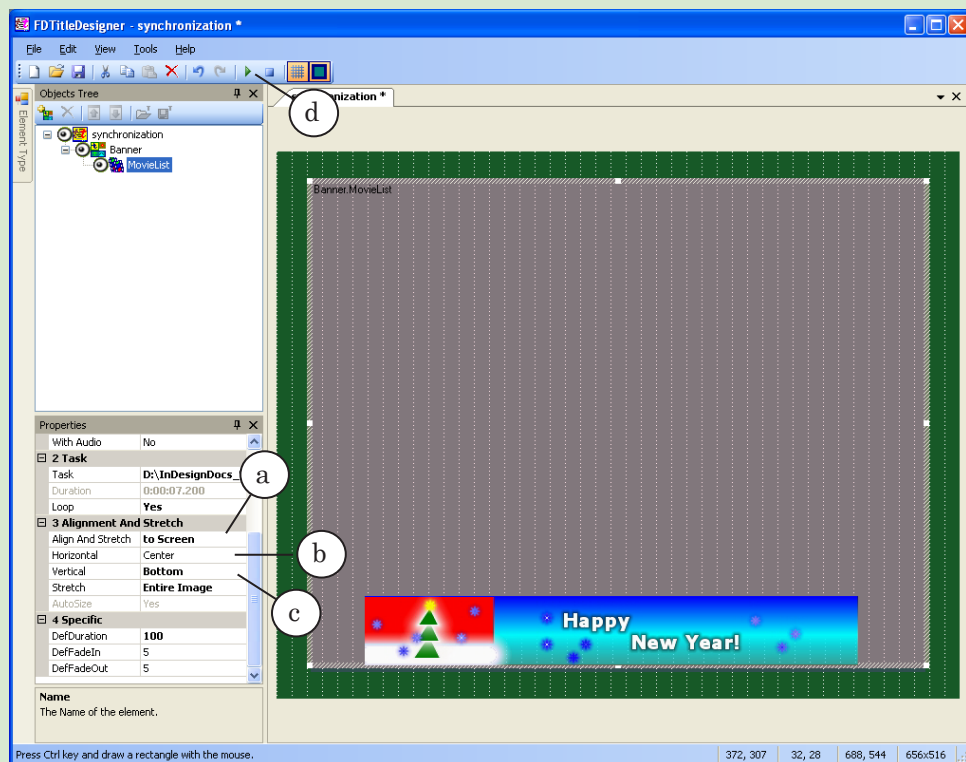
5. Fit the element rectangle to the content size. Place the mouse pointer over a sizing handle on the element rectangle (the mouse pointer changes to ⬌, or ⬍, or ⬀), click and drag the rectangle to the content size (e).
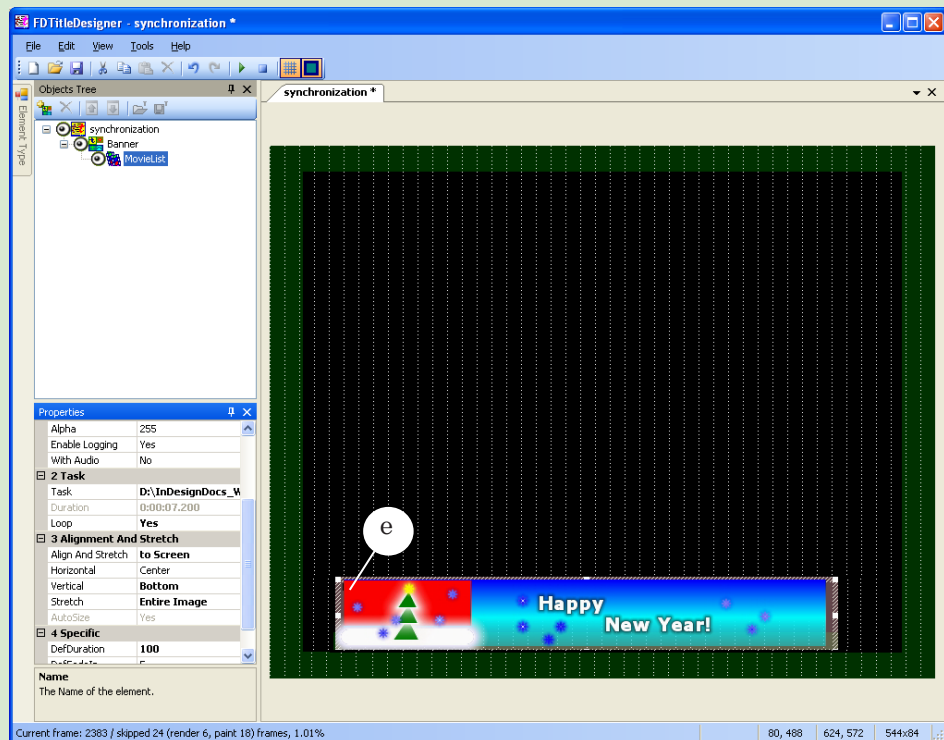

When these guidelines are observed, the CPU resources are used to play back a minor part of the image bounded by the element rectangle, which significantly decreases the CPU load.

Image Filters

The image filters functions Horizontal Filter and Vertical Filter can be used for the RollCrawl, Caption, Clock3 title elements.

If the image prepared for display has thin, crisp, contrasting lines, for example crisp symbol contours or thin, contrasting horizontal or vertical lines (like in the image below (1)), then when displayed in the interlaced mode defects like flickering or disappearing lines can occur.
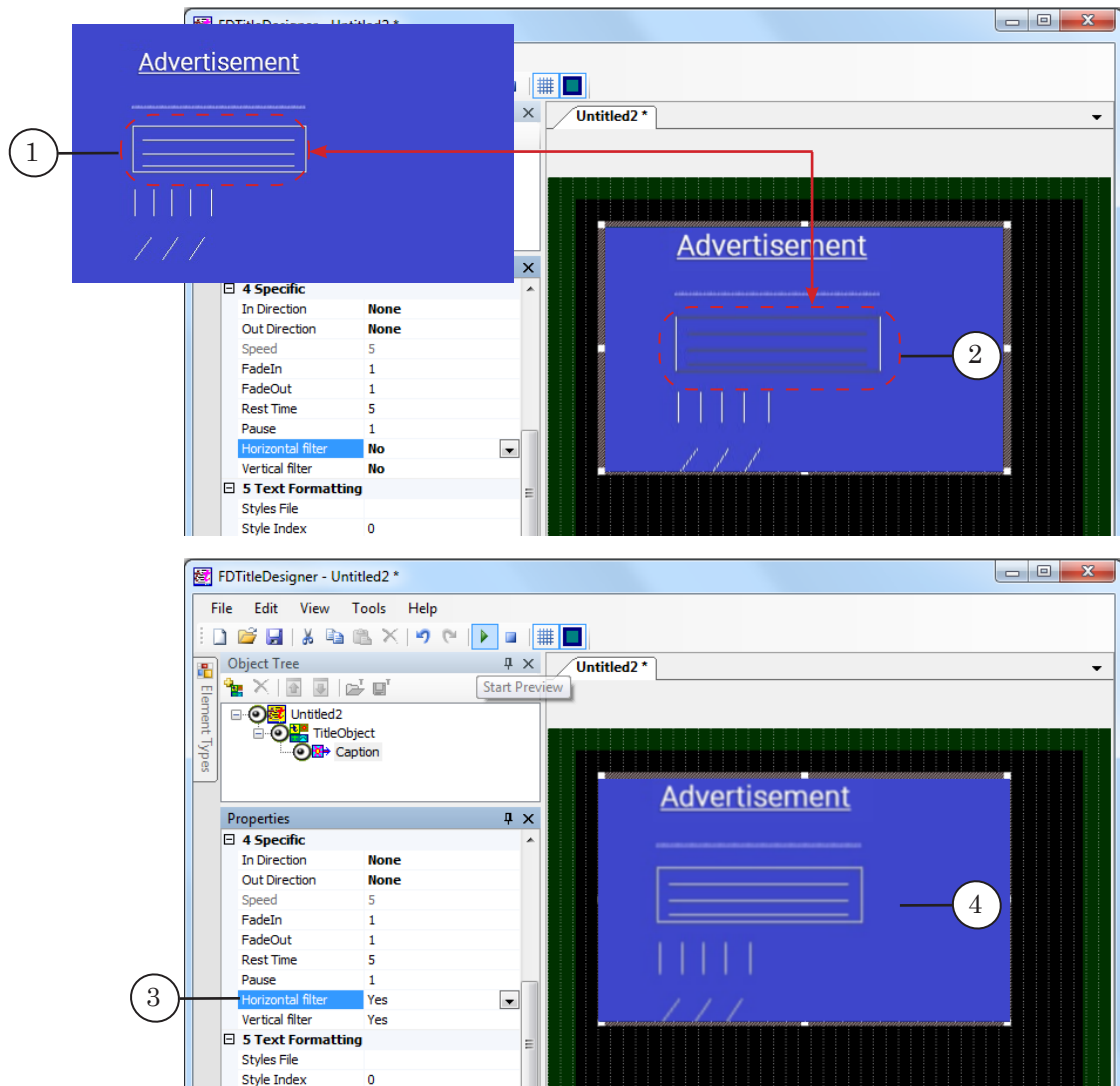
In order to fix the image flickering, turn on the Horizontal Filter or Vertical Filter functions (3) in the title element property sheet.

The limitations of using the filter should also be noted: a smoothing, blurring of the resulting image (4) can occur, as well as an increase of the processor load. As such, it is recommended to turn off the filter if, for example, the fonts used have a blurred contour (the Glow effect).

Useful Links

Forward T Product Line: Description, Software Delivery, Documentation, Ready Solutions

http://www.softlab-nsk.com/forward/index.html

Tech Support

http://www.softlab-nsk.com/support.html

e-mail: forward@softlab.tv

forward@sl.iae.nsk.su

forward@softlab-nsk.com

Forums

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

Documentation for more information:

FDOnAir – Broadcast Automation. User's guide.

Forward Titling – Graphics Editor. User's Guide.

FDOnAir – Additional Sections. User's Guide.

TV Clock Designer. User's Guide.

TGA2AVI – Creating an AVI file from a sequence of images. User's Guide.

FDImageUpdateManager – Dynamic change of graphic files. User's Guide.

SPTEditor – task editor for the RollCrawl title element. User's Guide.

Crawl automation TXT2TGA. User's Guide.

Open source scripted objects – TSF – free library of the open source scripted objects.

Closed source scripted title objects – TS1 – paid library of the closed source scripted title objects. User's Guide.

Translation from
March 24, 2017