

# ATV Sample

Sample of Information Channel  
Design



*Revision as of  
January 21, 2009.*

Instruction on Installation  
and Use

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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.

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



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## Introduction

ATV Sample is included in the ForwardT Software Samples set. Set of samples is designed to demonstrate possibilities of the ForwardT product line in broadcast design. To view the samples the FD300 board is not required.

ATV is an example of an informational channel designing. It displays ways of presenting various information: weather forecast, time, currency, TV programs, commercials, SMS chat, etc.

During the sample performance several information blocks are displayed, e.g. text, pictures, video clips.

Design layout includes various types of title elements: picture, clock, RollCrawl (scrollable crawl line), AnimLogo, SMS.

The sample is designed via Forward Titling, FDImageUpdater, TV Clock, FDTitle Designer, FDOnAir programs included in the ForwardT Software package. Detailed information on program can be received from User's guides at <http://www.softlab-nsk.com/docs.html>.

During the sample performance the following programs are launched: Simple SMS Test, FDImageUpdater, SLTitlePreview, FDOnAir.

This document contains the information on installation, deinstallation, sample work, sample features and titling projects elements.



## Installation & Deinstallation of the Sample

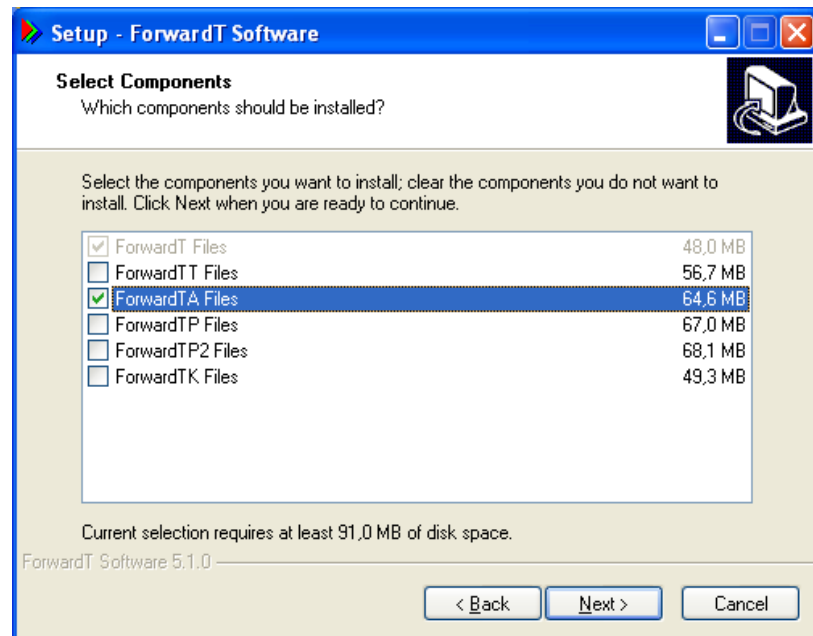
### 1. Sample Using Requirements

To install and use the sample the ForwardT Software, not less than 5.0.0 version for products listed below is required:

- Forward TA;
- Forward TP;
- Forward TP2.

The installer is on the setup disc. It can be also downloaded at <http://www.softlab-nsk.com/docs.html>

During the ForwardT Software installation the Setup - ForwardT Software window appears. Set a check mark in the appeared window opposite the name of one of the components listed above.



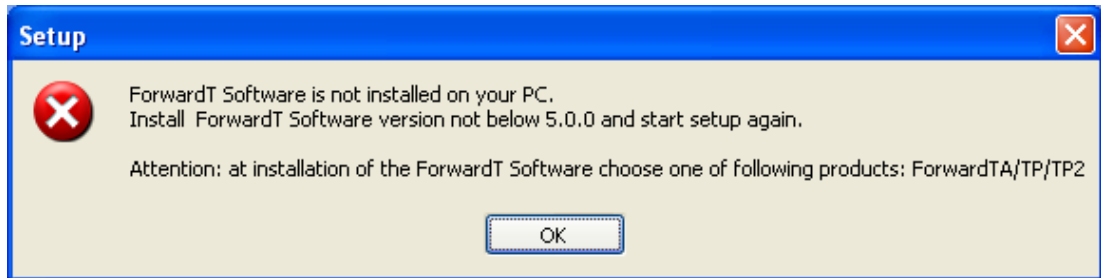
### 2. Sample Installation

Sample installation is implemented as usual. Answer installation program (installer) questions subsequently. Switching from one dialog window to another is made via **Next** (switching to the next page) and **Back** (switching to the previous page). Click **Cancel** if necessary to stop the installation.

1. To launch installing start `ATV_X_X_X.exe` file for execution where `X_X_X` denotes version number.
2. The installer finds the ForwardT Software, not less than 5.0.0 version on the computer.



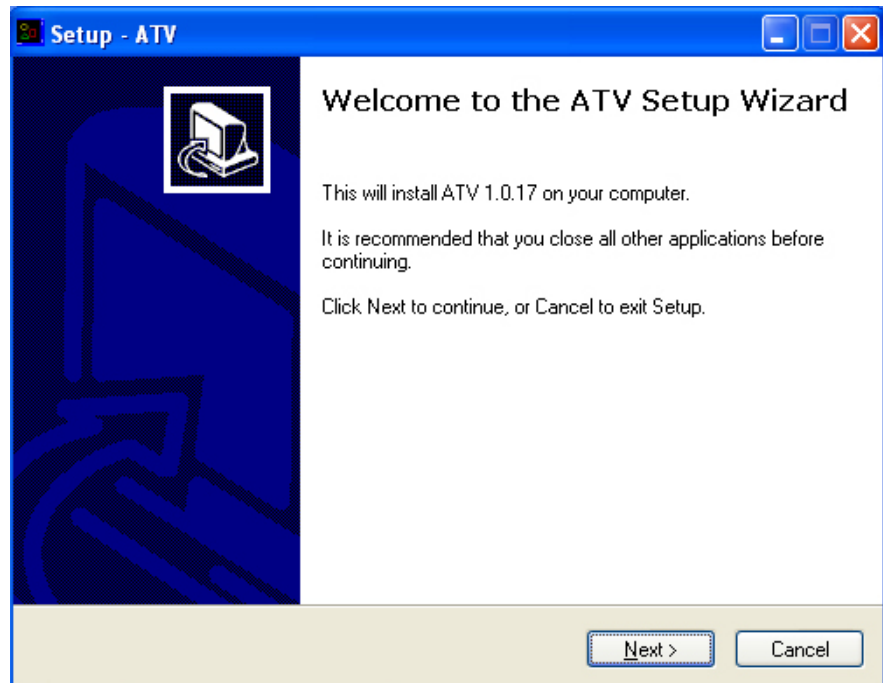
If the ForwardT Software isn't found the window with the message will appear and the installer will finish working.



In this case install the ForwardT Software.

If the ForwardT Software is installed the installer continues working.

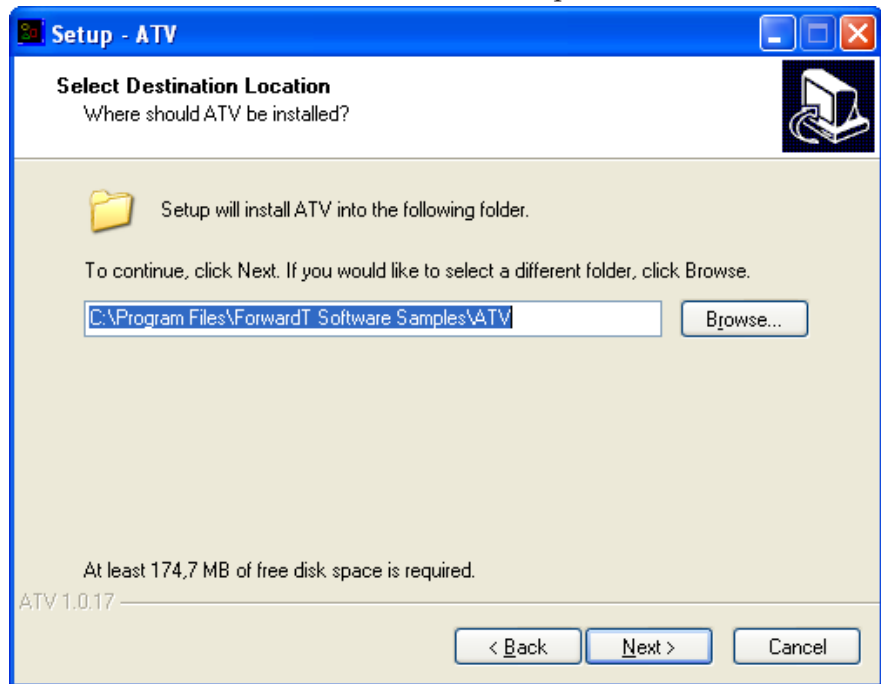
3. Welcome to the ATV Setup Wizard window appears.



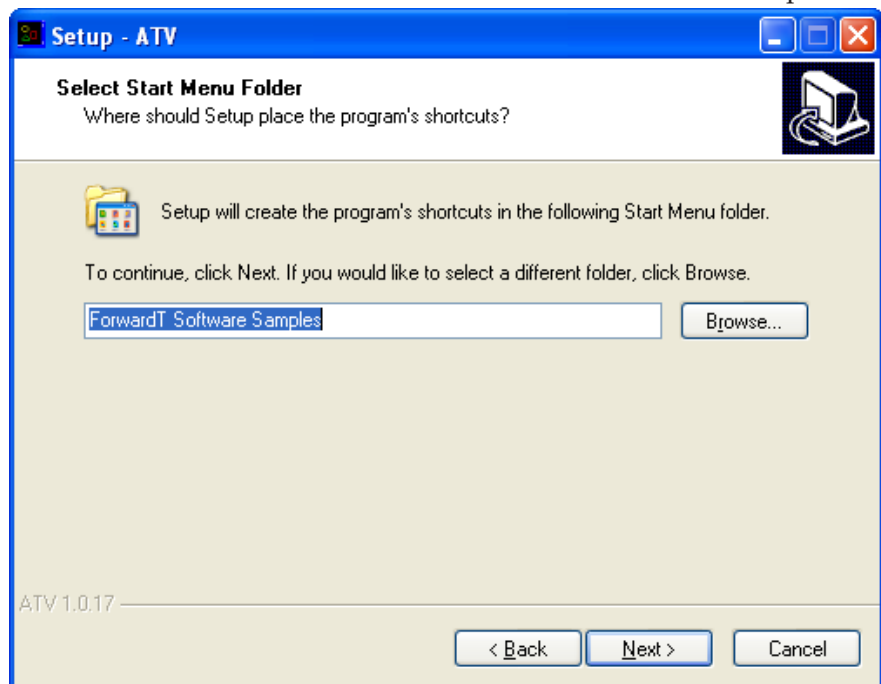
Click Next to continue.



4. Select a folder to install the ATV sample.



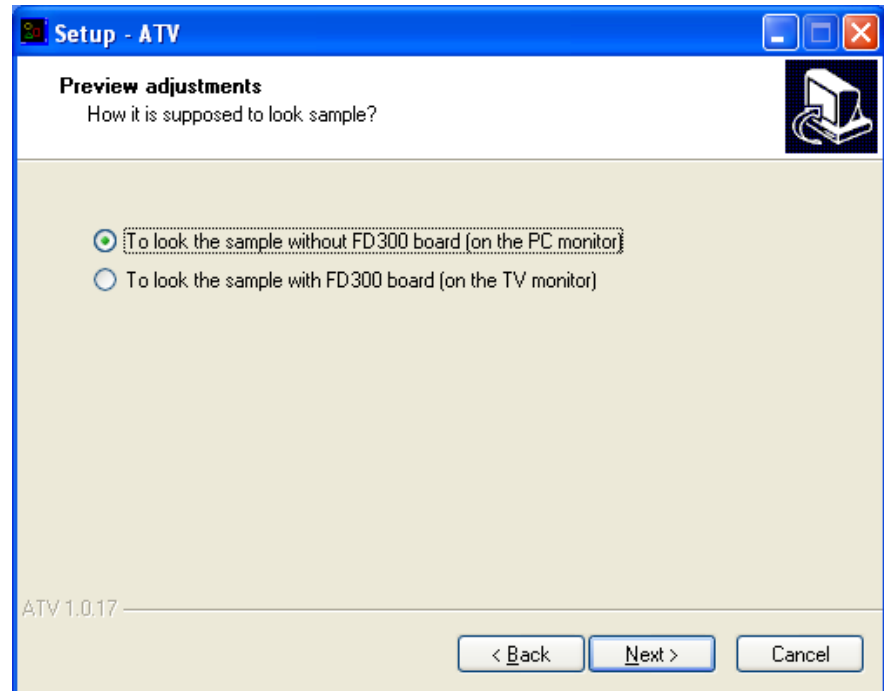
5. Select Start menu folder to create shortcuts for the sample.



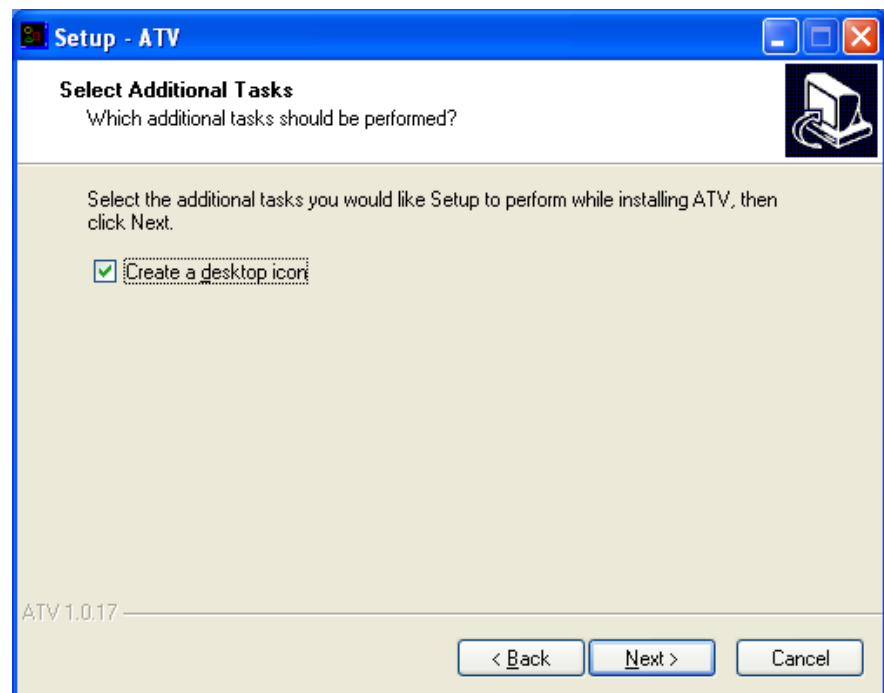


6. Choose one of preview adjustment modes:

- To look the sample without FD300 board (on the PC monitor) – view without the FD300 board;
- To look the sample with FD300 board (on the TV monitor) – view on the TV monitor or in the FDPreviewMonitor window if the FD300 board is installed. This program requires the board.



7. If the check mark Create a desktop icon is set the shortcut for launching the sample will be placed on desktop.

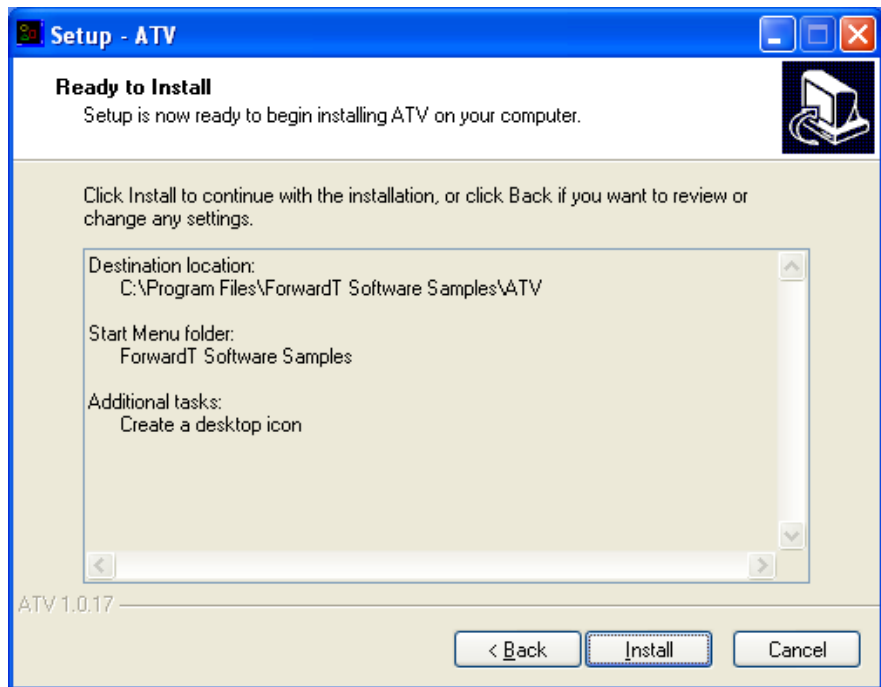




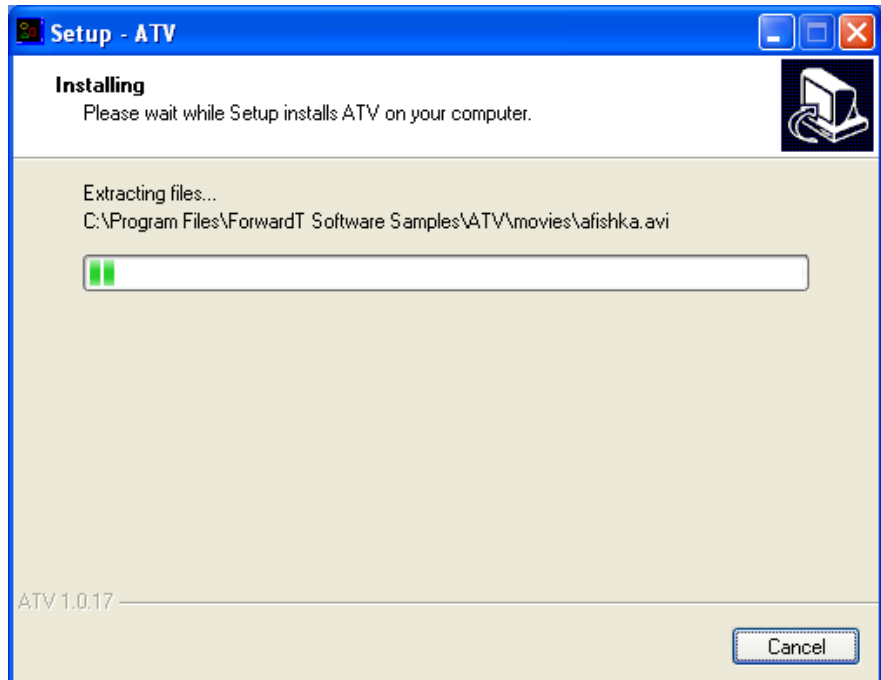


8. Check the information on installing parameters. Click Back if necessary to adjust parameters.

To continue installing with selected parameters click Install.



9. The installer installs files in the indicated folder.

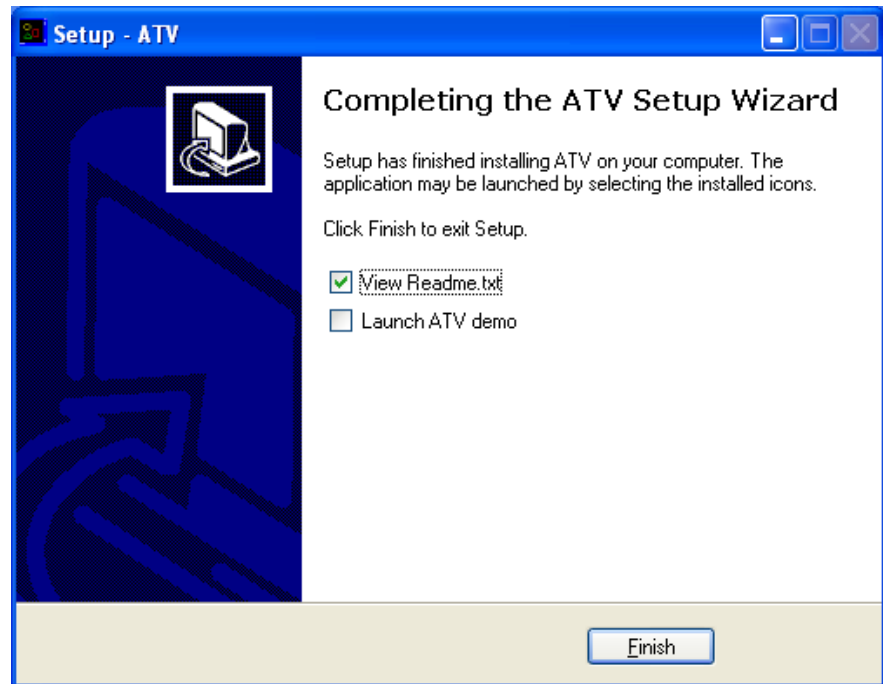




10. After installing is complete set corresponded check marks to perform necessary options automatically:

- View Readme.txt – open the file with supporting information;
- Launch ATV demo – start the sample performance.

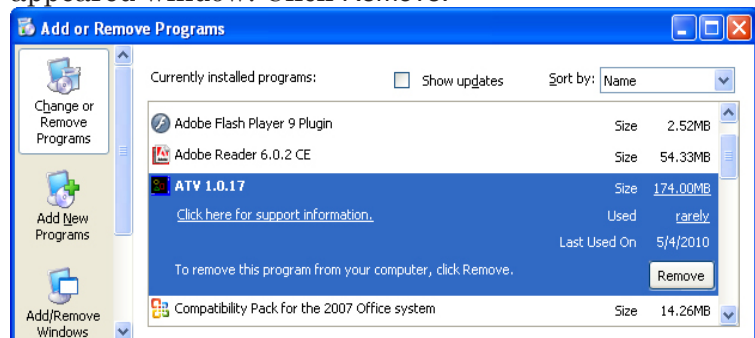
✓ **Important :** : If radio button To look the sample with FD300 board is clicked plug TV in the board output or open FDPreviewMonitor program to view.



### 3. Sample Deinstallation

There are 2 ways to deinstall the sample:

- Via Start Menu command: Programs > ForwardT Software Samples > ATV > Uninstall;
- Via Control Panel: open Add or Remove Programs window. Click left mouse button on the bar with the sample name ATV X.X.X, where X.X.X – version number in the appeared window. Click Remove.





## Sample Demonstration

### 1. Demonstration Launching

To start the sample demonstration use either the desktop icon or the Start menu command: Programs > ForwardT Software Samples > ATV > Start.

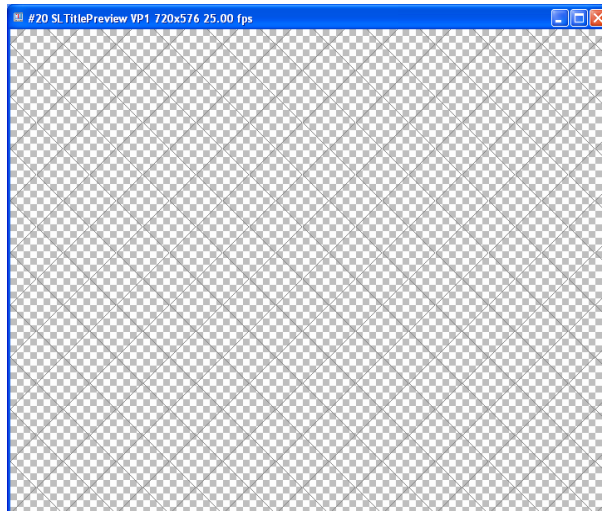
Perform one of the following operations before launching the sample demonstration if during the sample installation the mode To look the sample with FD300 board was set:

- Connect board output to TV video input to view the sample on TV monitor;
- Launch the FDPreviewMonitor program to view the sample on computer monitor. To do so use either the desktop program shortcut or the Start menu command: Programs > ForwardT Software > Tools > Preview Monitor. In the appeared window remove check mark Input and press Show. Sample demonstration will be implemented via this program.

### 2. Begining of Demonstration

Programs windows will appear automatically in a subsequent way during the sample launching on the computer monitor:

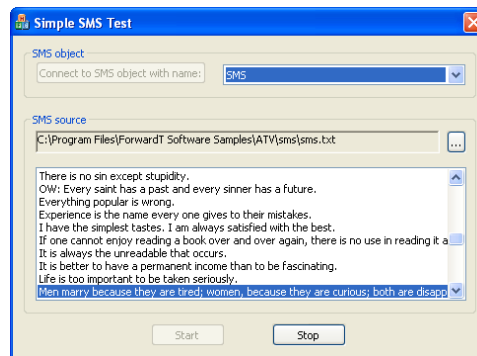
1. SLTitlePreview, instance #20 window will appear if during ATV installation the mode To look the sample without FD300 board is set.



SLTitlePreview program is designed to view FDO nAir output data without the FD300 board.



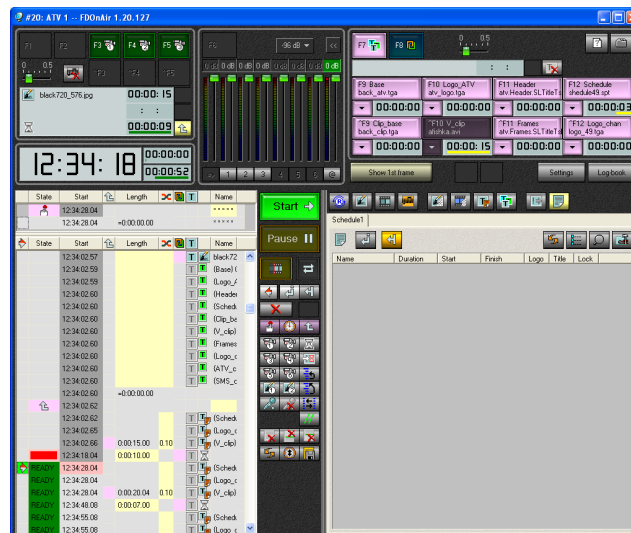
## 2. Simple SMS Test.



Simple SMS Test imitates controlling application work which loads SMS in the title project.

Application which considers certain SMS-provider standards is required to load SMS. ForwardT Software developers offer special SDK to create such applications.

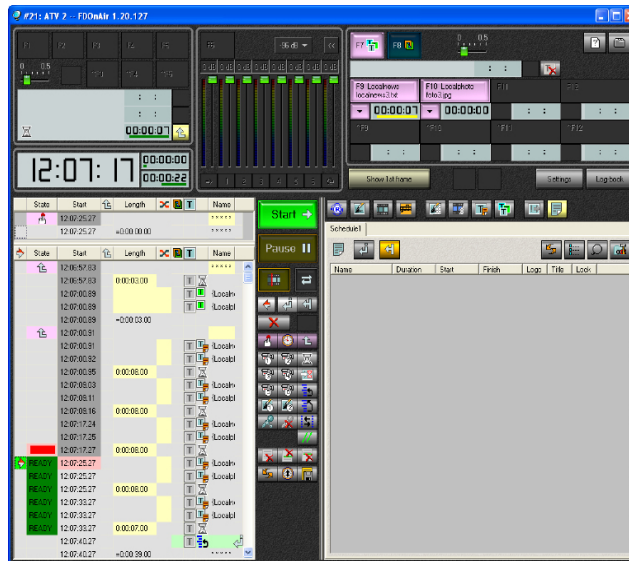
## 3. FDO nAir, instance #20.



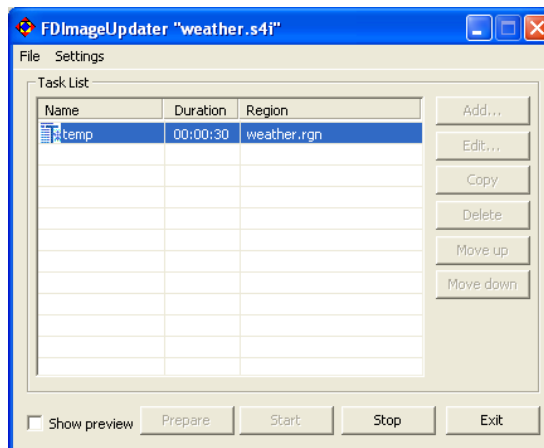
The FDO nAir application is designed to control broadcasting in an automatized way i.e. schedule preparation (play-list), broadcast realization, broadcast control and its adjusting.



#### 4. FDO nAir, instance #21.



#### 5. FDI mAgeUpdater.

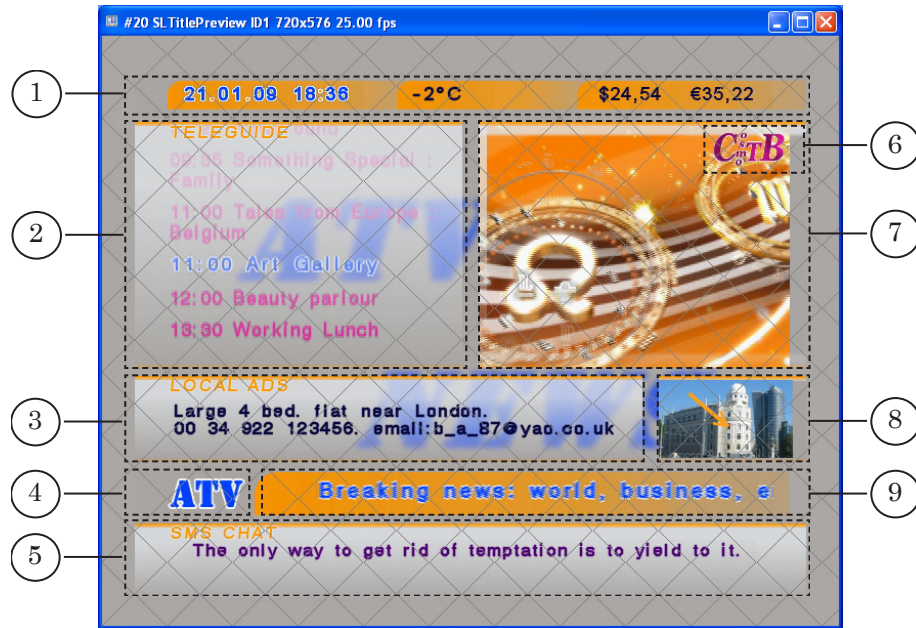


FDI mAgeUpdater program is designed for dynamic change of graphic files. FDI mAgeUpdater output information is updated during broadcasting e.g. temperature, pressure, humidity.

### 3. Displayed Data

Launch both FDO nAir program instances to display information either on TV or in the view program window.

SLTitlePreview program window that appears during the sample demonstration is shown below.



The table below contains a short description of displayed information blocks.

Short description of information block	Picture index	Title element
Data on time, weather forecast, exchange rates	1	Picture, Clock
TV Schedule:		
TV Schedule text (lines change bottom-up)	2	RollCrawl
channel logotype	6	Picture
video clip	7	AnimLogo
Ads		
Ads text (text contains one message and appears/dissapears smothly)	3	Caption
picture accompanying the Ads text	8	Picture
ATV Logotype	4	Picture
SMS-chat (text appears/dissapears smoothly)	5	SMS
RollCrawl (text moves from right to left)	9	RoltCrawl

#### 4. Sound

Sound is played via video clip of TV schedule block during the demonstration.

If the SLTitlePreview program is used to view the sample the sound will be played via sound device used by default on PC. Test sound will be played on the sound device from the program launch moment to the start of information displaying.



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## 5. View Completion

Close the appeared at the beginning windows to complete the sample view.

1. FDImageUpdater.
2. Simple SMS Test.
3. FDOonAir (instances #20 and # 21).
4. The program where the view is performed:
  - SLTitlePreview;
  - FDPreviewMonitor.

✓ **Important:** First close all FDOonAir instances, then close SLTitlePreview program window.



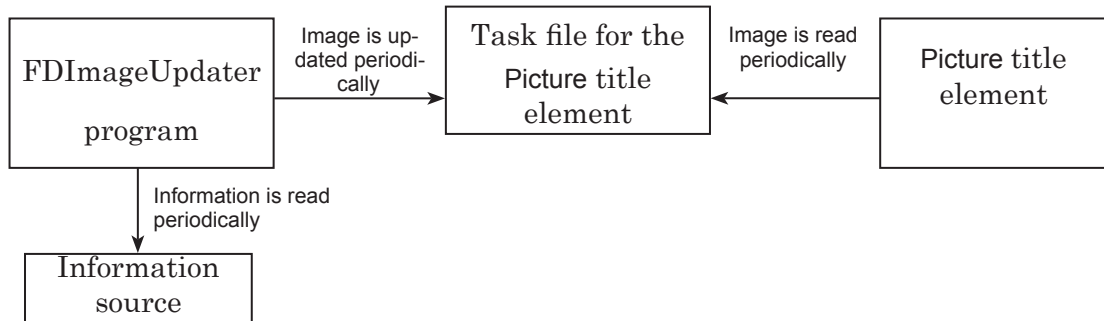
## Sample Features

### 1. Dynamic Update of the Title Element Content

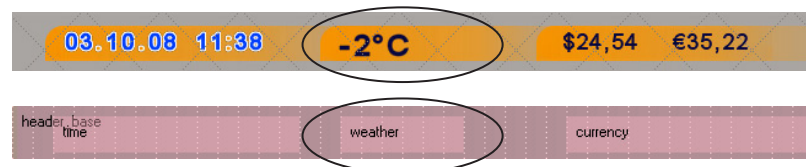
Our sample shows how title elements are used to broadcast information on air. The information is updated during broadcast e.g. current weather forecast (with the atv.SLTitleProj title project).

To do so use the Picture title element and the FDImageUpdater program.

FDImageUpdater reads the information from the specified source during certain time periods. The source may be a text file, weather station or a Web site page. With this information FDImageUpdater updates graphical file which is the task for the Picture title element. The title element reads the task file periodically (once per second). If changes are found the title element will reload the picture from the task file.

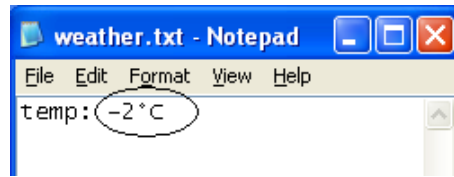


Text file as the information source for the FDImageUpdater program in the ATV sample is used. In specified time periods (30 sec in this sample) FDImageUpdater reads the information from the Weather\weather.txt file and updates the Weather\weather.tga file. The latter is the task for the weather title element.



If during demonstration the weather.txt file is modified at some time period specified in project settings after file saving these modifications will be displayed in the view window. Specified time periods should be not more than 30 sec. Only the text followed «temp:» can be modified.





## 2. FDO nAir Instances

There is a possibility to launch several FDO nAir program instances with one FD300 board concurrently. One instance is a background server (video server) and an overlapping server (title server), other instances are all overlapping servers.

FDO nAir #20 and FDO nAir #21 instances are used in the ATV sample. Every instance has its own loaded title project and its own schedule. Both schedules are performed concurrently so that independent control of information blocks is realized.

The table below contains information on instance modes, file names with title projects and schedules.

FDO nAir instance number	Background server (video server)	Foreground Server (title server)	Title project name	Schedule name
#20	+	+	atv.SLTitleProj	atv.air
#21	-	+	atv_2.SLTitleProj	atv_2.air

Title project loaded in the FDO nAir #21 instance contains title elements for the Ads block demonstration. The corresponded schedule contains commands for changing the tasks of these elements. So control of the information block Ads (demonstration and its updating) is performed independently from other information blocks.





## Detailed Information on Title Projects and Schedules

### 1. General Overview

Layout of air design with titles is made via title projects. Projects are created via the FDTitle Designer program (for more information, see «FDTitle Designer. Title projects editor. User's guide»).

Specify set, types of title elements, their screen position and tasks when creating a new title project.

All title elements are distributed according to title objects, which are specific named groups. Title objects are used in the FDO nAir program to manage titles: titles switching on/off, task updating and etc. (for more information, see «FDO nAir. Broadcast automation. User's guide»).

Atv.SLTitleProj and atv\_2.SLTitleProj title projects are used in the ATV sample. Following chapters contain more detailed information on these title projects.

### 2. Atv.SLTitleProj Title Project

#### 2.1. Title elements list

Atv.SLTitleProj project is used in the FDO nAir #20 instance. Elements of this title project are divided into 2 groups for content design and content display.

The table below contains information on all title elements, its name, type, task name, element purpose (content design or content display), element grouping according to title objects.

Title element name	Title element type	Task file name*	Purpose	Title object name
base	Picture	StatTitles\back_atv.tga	Design	Base
logo_ATV	Picture	StatTitles\atv_logo.tga	– « –	Logo_ATV
header_base	Picture	StatTitles\header1.tga	– « –	Header
weather	Picture	Weather\weather.tga	Information	
time	Clock	atv.clc	– « –	
currency	Picture	StatTitles\curr.tga	– « –	
prgrm_schedule	RollCrawl	Schedules\shedule49.spt	– « –	Schedule
clip_base	Picture	StatTitles\back_clip.tga	Design	Clip_base
v_clip	AnimLogo	–	Information	V_clip
clip_frame	Picture	StatTitles\clip_frame.tga	Design	Frames
news_frame	Picture	StatTitles\news_frame.tga	Design	
logo_chan	Picture	Schedules\logo_49.tga	Information	Logo_chan



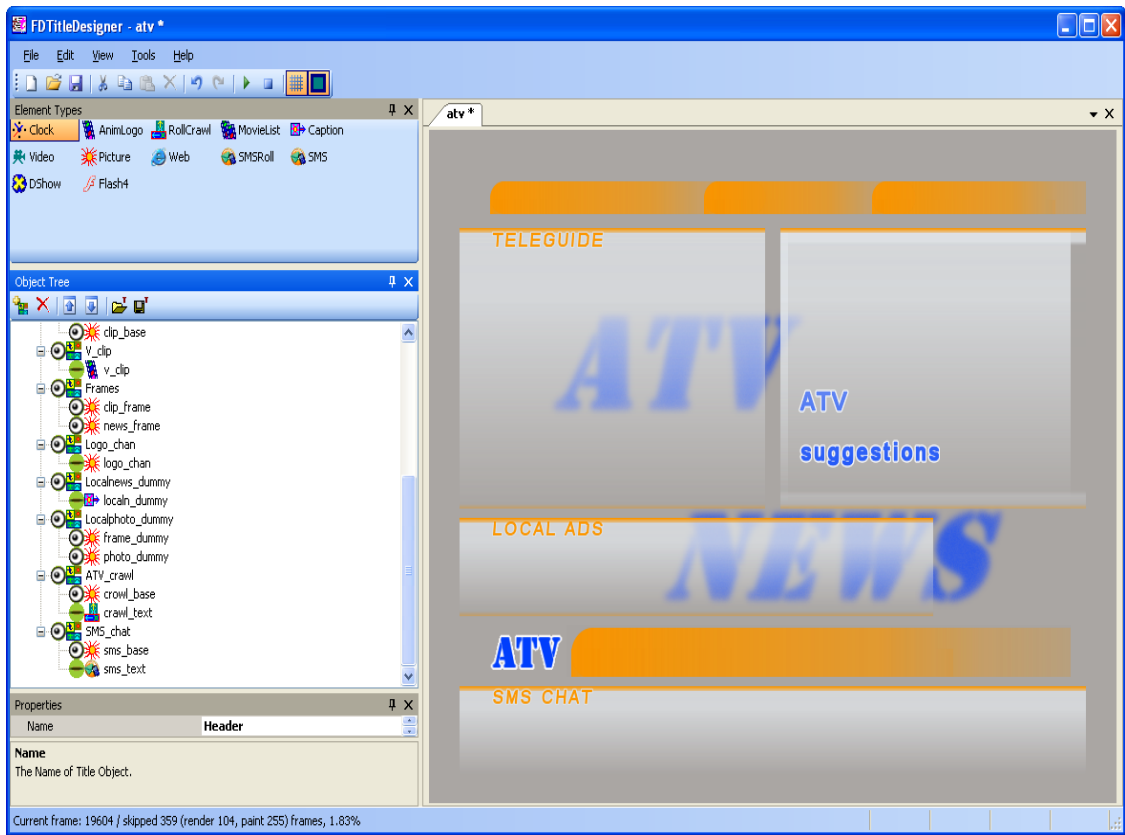
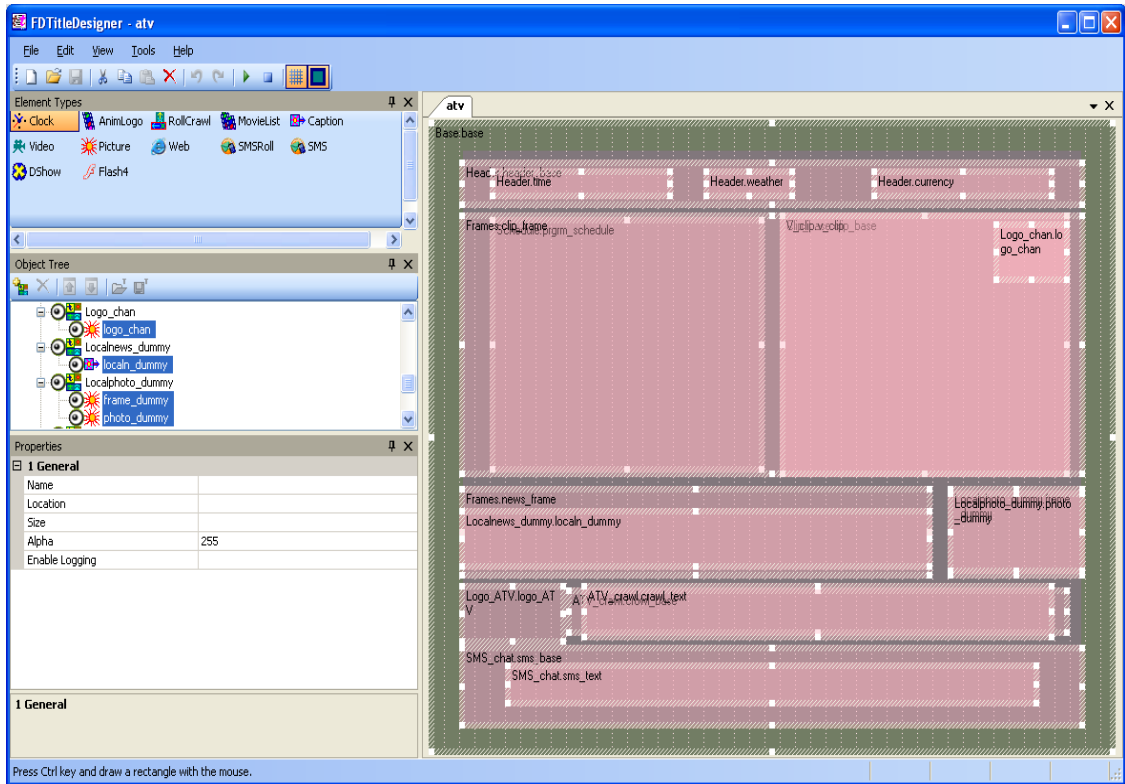
Title element name	Title element type	Task file name*	Purpose	Title object name
localn_dummy	Caption	–	Layout marking	Localnews_dammy
frame_dummy	Picture	–	– « –	Localphoto_dammy
photo_dummy	Picture	–	– « –	
crawl_base	Picture	StatTitles\crawl_still.tga	Information	ATV_crawl
crawl_text	RollCrawl	atv_crawl.spt	Content	
sms_base	Picture	StatTitles\sms.tga	Information	SMS_chat
sms_text	SMS		Content	

\*Hereinafter file paths are indicated concerning the ATV folder. Given file names are specified during title elements configuration in FDTtitle Designer.

## 2.2. Background Element

Title elements used only for designing are always displayed (are in «On» mode). Task updating is not available here. These elements display background and divides broadcasting field into information blocks.

The FDTtitle Designer program window in edit and preview modes are shown on pictures below. Title elements grouping for background element mentioned in the table are also shown below, others elements are hidden.



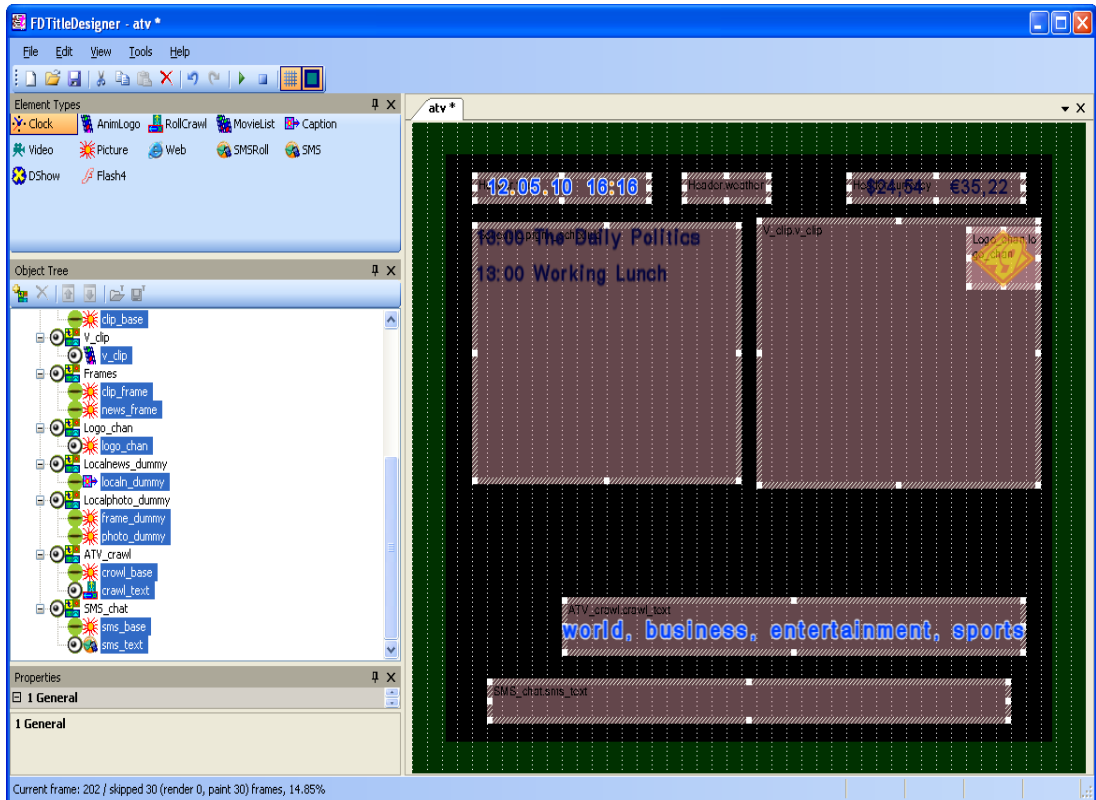
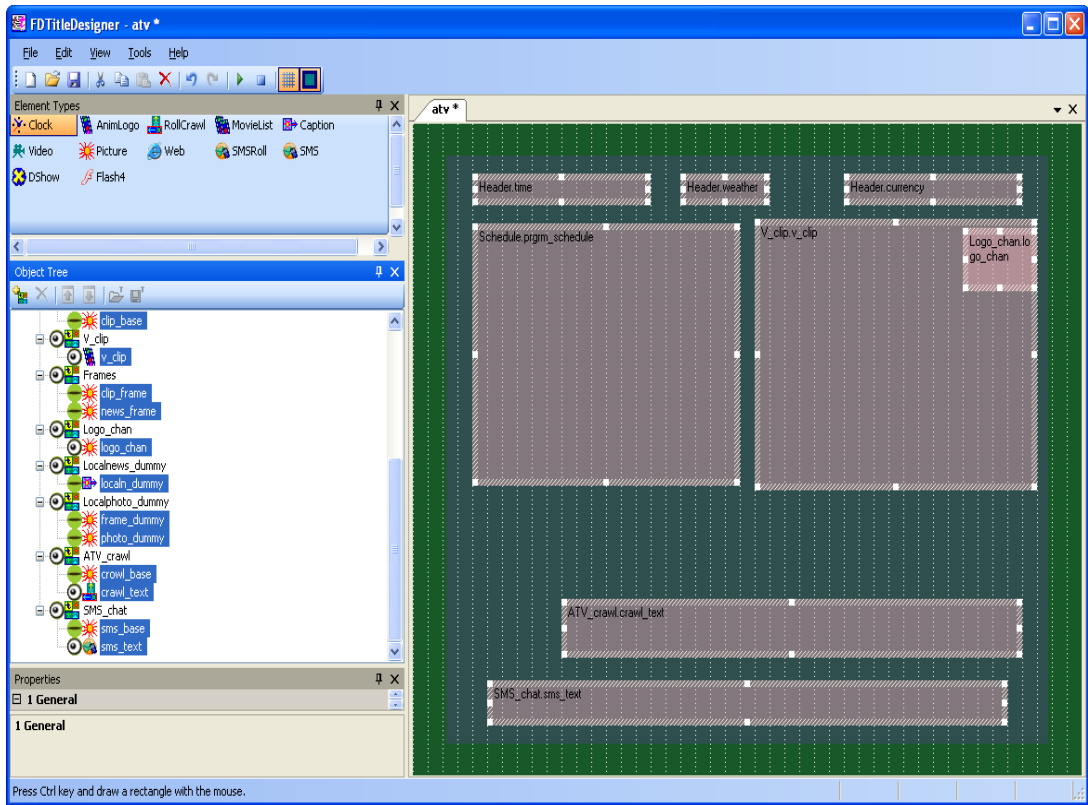


### 2.3. Information Content of Titles

To display information channel content other title elements are used. The content of these elements (tasks) updates periodically.

Title element name	Displayed information	Notes: how is it realized
weather	Temperature, °C	Use in this case the Picture title element. During its work the image is reread. The FDImageUpdater program is used for a dynamic picture updating in the task file.
time	Clock displaying current time and date. Timing every second.	Use in this case the Clock title element. During the title element Clock configuration as the time source computer system clock is selected. For Clock source property System time is selected.
crawl_text	RollCrawl with ads text	Use in this case the RollCrawl title element. During the title element configuration its task demonstration is looped. For Loop property Yes is selected.
prgrm_schedule (title object Schedule)	TV programs are displayed by turn	New tasks are periodically loaded into title objects during the title project demonstration in the FDOOnAir program. All objects are loaded simultaneously.
v_clip (title object V_clip)	Video clips are displayed by turn	Use the Load title object schedule command to load tasks in title object.
logo_chan (title object Logo_chan)	Channel logotypes are displayed by turn	
sms_text	Messgaes appear and dissapeat gradually	SMS is loaded in element during broadcast via special application.

The FDTtitle Designer program window in edit and preview modes are shown on pictures below. Title elements grouping mentioned in the table are also shown below, others are hidden.





### 3. Atv.air Schedule

Atv.SLTitleProj title project objects control is made via FDO nAir #20 with atv.air schedule.

State	Start	Length	Name
	16:01:36.84		*****
	16:01:36.89		black720_576.jpg
	16:01:36.98		{Base} On
	16:01:36.99		{Logo_ATV} On
	16:01:36.99		{Header} On
	16:01:36.99		{Schedule} On
	16:01:36.99		{Clip_base} On
	16:01:36.99		{V_clip} On
	16:01:36.99		{Frames} On
	16:01:37.01		{Logo_chan} On
	16:01:37.01		{ATV_crawl} On
	16:01:37.01		{SMS_chat} On
	16:01:37.01	=0:00:00.00	
	16:01:37.01		{Schedule} shedule49.spt
	16:01:37.04		{Logo_chan} logo_49.tga
	16:57:48.25	0:00:15.00 0.10	{V_clip} afishka.avi
READY	16:58:03.61	0:00:10.00	{Schedule} shedule7&7.spt
READY	16:58:13.61		{Logo_chan} logo_7&7.tga
READY	16:58:13.61	0:00:20.04 0.10	{V_clip} Sport2.avi
READY	16:58:33.65	0:00:07.00	{Schedule} sheduleCsm.sp
READY	16:58:40.65		{Logo_chan} logo_Csm.tga
READY	16:58:40.65	0:00:12.76 0.10	{V_clip} astro.avi
	16:58:53.41	0:00:03.00	
	16:58:56.41		

The schedule consists of 2 command blocks.

The first block is started with the Wait previous command (⏸).

The Display picture from file command (🖼) displays black720\_576. jpg file. In the same table line the mark for title demonstration control Titling on (🗎) is set. This command permits to demonstrate titles and other information simultaneously. Title demonstration is switched on during the whole sample work period.

Lines with the Title object On commands (🗎) transmit title objects with specified names in «On» mode.

The second block (2) starts with the Wait previous command(⏸) and finishes with the Repeat current block command (🔄). Cyclic block commands execution is made via these options.

Block contains 3 command groups (3–5). Every group includes the Load title object (🗎) and the Pause commands (⏸).

The Load title objects commands are designed to load tasks in title objects with the corresponded names – Schedule, Logo\_chan, V\_clip.

The Pause command starts to be executed after completing clip demonstration in the V\_clip title object. Switching to another commands group will be made in a certain period of time. This period of time is equal to the duration of the Pause command execution.





Simultaneous logotype change and its demonstration, TV schedule and a certain TV channel ads demonstration at the same time are implemented in this way.

For more information, see «FDOnAir commands. Broadcast automation. User's guide».

#### 4. Atv\_2.SLTitleProj Title Project

This project is used in the FDOnAir #21 instance.

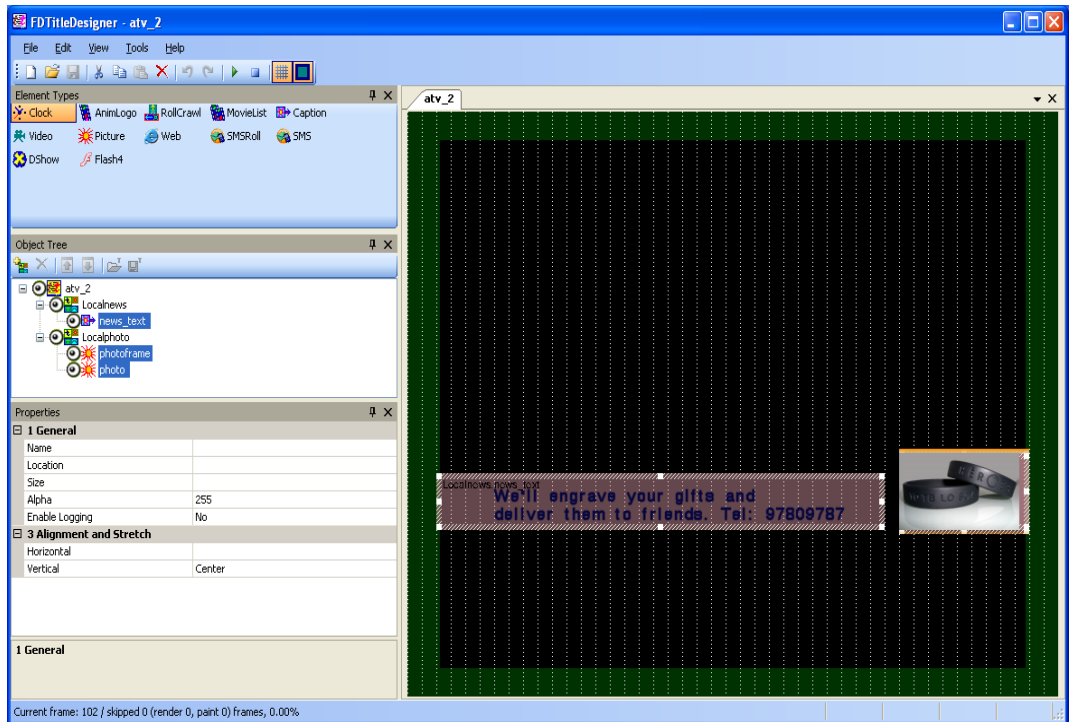
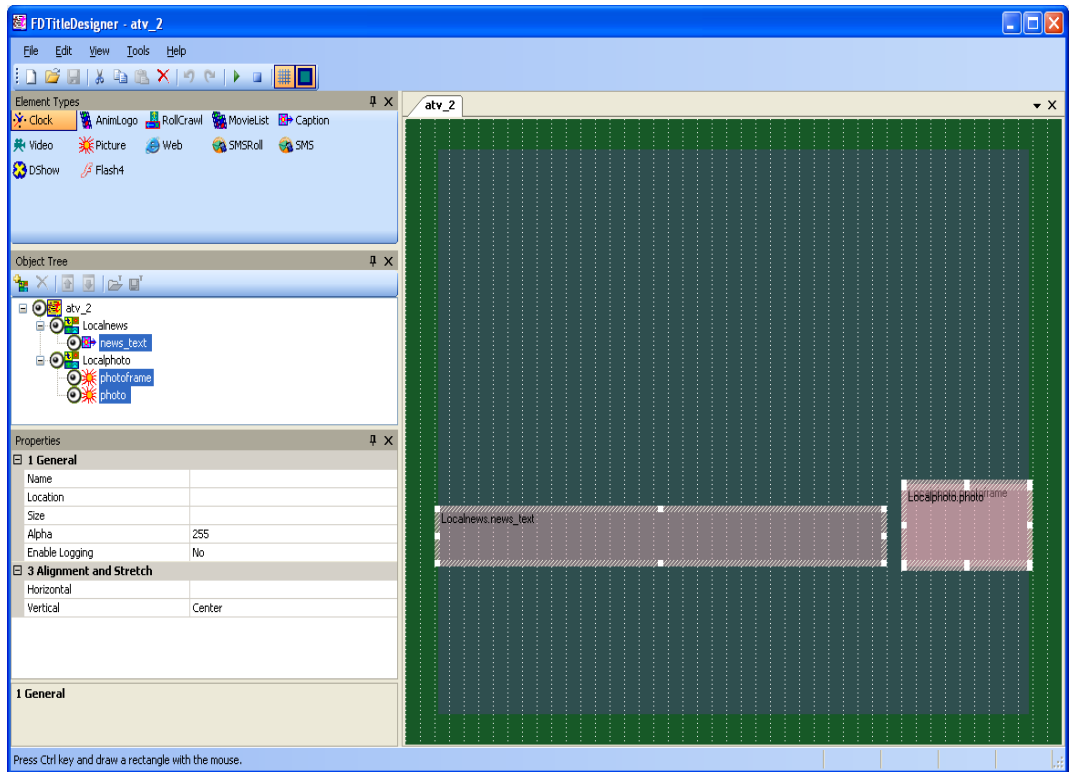
The table below contains information on all title elements, its name, type, task name, element purpose (content design or content display), element distribution according to title objects.

Title element name	Title element type	Task file name	Purpose	Title object name
news_text	Caption	LocalNews\localnews1.txt	Information	Localnews
photoframe	Picture	StatTitles\photo_frame.tga	Design	Localphoto
photo	Picture	LocalNews\foto4.jpg	Information	

Elements with the news\_text and photo names are designed for information transmitting. Tasks elements are periodically updated via the atv\_2.air schedule commands.

The FDTitle Designer program window in edit and preview modes are shown on picture below. Title elements grouping mentioned in the table are also shown below.







## 5. Atv\_2.air Schedule

Playback control in the FDO nAir #21 program instance is made via the atv\_2.air schedule. In this instance the atv\_2.SLTitleProj title project is loaded.

State	Start	Length	Command	Name
	17:04:06.85		*****	
READY	17:04:06.85	0:00:03.00	⏸	
INVALID	17:04:09.85		🟢	{Localnews} On
INVALID	17:04:09.85		🟢	{Localphoto} On
	17:04:09.85	=0:00:03.00		
	17:04:09.85		⏸	
INVALID	17:04:09.85		📄	{Localnews} localnews1.txt
INVALID	17:04:09.85		📄	{Localphoto} foto1.jpg
	17:04:09.85	0:00:08.00	⏸	
INVALID	17:04:17.85		📄	{Localnews} localnews2.txt
INVALID	17:04:17.85		📄	{Localphoto} foto2.jpg
	17:04:17.85	0:00:08.00	⏸	
INVALID	17:04:25.85		📄	{Localnews} localnews3.txt
INVALID	17:04:25.85		📄	{Localphoto} foto3.jpg
	17:04:25.85	0:00:08.00	⏸	
INVALID	17:04:33.85		📄	{Localnews} localnews4.txt
INVALID	17:04:33.85		📄	{Localphoto} foto4.jpg
	17:04:33.85	0:00:08.00	⏸	
INVALID	17:04:41.85		📄	{Localnews} localnews.txt
INVALID	17:04:41.85		📄	{Localphoto} empty.tga
	17:04:41.85	0:00:07.00	🔄	
	17:04:48.85		*****	
	17:04:48.85	=0:00:39.00		

The schedule consists of 2 command blocks.

The first block (1) begins with the Wait previous command (⏸). Then follows the Pause command. Its duration is 3 sec.

Title object On command (🟢) make the Localnews and Localphoto title objects in the «On» mode.

The second block (2) begins with the Wait previous command (⏸) and finishes with the Repeat current block command (🔄). Via these options cyclic block commands execution is made.

The second block (2) contains five command groups (3–7). Every group contains the Load title object (📄) and the Pause commands (⏸).

The Load title object commands are designed to load task in title objects with the corresponded names – Localnews and Localphoto.

The Pause command starts to be executing after tasks load in title objects. Time between title objects task reload is set via this command. Loaded tasks demonstration is executed during period of time equal to the Pause command execution.

For more information, see «FDO nAir commands. Broadcast automation. User's guide».



## Main Steps for Sample Creating

An approximate workflow for ATV Sample designing with is given in the table below.

No n/n	Executed operation	ForwardT Software package application	Outcome
1	Video material preparation	Any applications for video and sound cut including Forward AV Studio	movies\*.avi
2	Text files creating	Text editor, e.g. Notepad	LocalNews\*.txt sms\sms.txt Weather\weather.txt
3	Creating of type styles collection	Forward Titling (graphics editor)	efc\*.efc
4	Creating of tasks for the RollCrawl title element	Text editor, e.g. Notepad	Schedules\*.spt
5	Creating of the FDImageUpdater program configuration file for weather.tga image generation from the weather.txt text file	FDImageUpdater (program for graphic files dynamic update)	Weather\weather.s4i
6	Creating of graphic files (images)	Forward Titling (any graphic editors supplied specified file extensions)	LocalNews\*.tga pictures\black720_576.jpg Schedules\*.tga StatTitles\*.tga Weather\weather.tga
7	Creating of clock image	TV Clock (clock editor)	atv.clc
8	Creating of title projects	FDTitle Designer (title projects editor)	atv.SLtitleProj atv_2.SLtitleProj
9	Creating of schedules	FDOOnAir (program for broadcast automation on the FD300 board basis)	atv.air atv_2.air

\* denotes all files in the folder with the specified extension



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## Useful Links

### **ForwardT Software set: description, download, documentation, solutions**

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

### **Support**

e-mail: [forward@sl.iae.nsk.su](mailto:forward@sl.iae.nsk.su)

[forward@softlab-nsk.com](mailto:forward@softlab-nsk.com)

[forward@softlab.tv](mailto:forward@softlab.tv)

### **Forum**

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

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