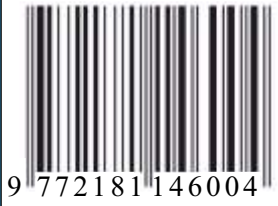




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## USING AUTOPLAY MEDIA STUDIO TO CREATE ELECTRONIC-LEARNING TOOLS

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### **Abstract:**

**Background.** *The increase in the flow of information every year makes it impossible in some cases to solve various problems without the use of computer technology. Therefore, one of the tasks of improving education is to equip students with knowledge and skills in using modern computing technology. At the same time, it is necessary to give all students not just knowledge about the use of modern computing technology and the prospects for its development, but the ability to competently use it to effectively solve a wide variety of problems.*

**Methods.** *The transfer of the experience accumulated by humanity to the new generation is carried out through education. Education is the side of upbringing, which includes a system of scientific and cultural values accumulated by previous generations. One of the modern teaching aids at the present time is electronic textbooks, which can be created using special software. Program AutoPlay Media Studio is a powerful tool for creating multimedia electronic editions for various purposes: presentations, electronic books, multimedia applications.*

**Results.** *The properties and capabilities of the AutoPlay Media Studio program are considered. When creating an experimental electronic textbook, the AutoPlay Media Studio program was used, with which you can create electronic textbooks, covers for CD/DVD, presentations, simple games, electronic photo albums, collections of video files with easy viewing, simple audio and video players. AutoPlay Media Studio has a large number of ready-made templates: to design a menu with various buttons for launching programs, playing sounds, printing files, opening Internet sites.*

**Conclusion.** *Electronic tutorials are a promising area of informatization of education, and their importance in the future will only increase. Software tools for creating electronic tutorials are endless possibilities and one of them is the AutoPlay Media Studio program.*

**Keywords:** *computer, education, e-tutorial, software AutoPlay Media Studio, presentations, electronic books, multimedia applications, audio, video, graphics and text, of flash-animation, animated objects.*

**Introduction.** Our modern world can no longer be imagined without a computer, which has penetrated all areas of the educational process. The widespread use of modern computers, which are characterized by versatility and ease of use, makes it possible to use their capabilities to solve the widest range of diverse tasks in all areas of human activity.

The increase in the flow of information every year makes it impossible in some cases to solve various problems without the use of computer technology. Therefore, one of the tasks of improving education is to equip students with knowledge and skills in the use of modern computing technology. At the same time, it is necessary to give all students not just knowledge about the use of modern computing technology and the prospects for its development, but the ability to competently use it to effectively solve a wide variety of problems. A much deeper process is being built over computerization - informational, covering all aspects of social life. This is due to the direct introduction of modern computers in almost all spheres of science, technology, and economics [1].

Since any human activity begins with learning, the computer is rightfully invading this area too.

Therefore, the most important function of upbringing - this is the transfer of the experience accumulated by mankind to the new generation - is carried out through education. Education is that side of upbringing that includes a system of scientific and cultural values accumulated by previous generations [2].

The first steps in the field of informatization of education were made in our country in 2005, when an extremely important government decision was made "On the creation of a public educational information network of the Republic of Uzbekistan" dated 28.09.2005.

The planned results should, first of all, ensure the readiness of the future teacher for practical activity, which is determined by the formation of professional skills, including methodological skills.

Compiling such lists in a methodological course is a rather difficult task, since methodological training is determined not only by knowledge and skills specific to a given academic subject, but is also closely related to the didactic, psychological and mathematical training of a future specialist. Therefore, in any methodological course, two tasks should be set.

The first is the arming of didactic skills related to planning, conducting and analyzing a lesson.

The second is equipping future teachers with methodological techniques that will allow them to manage the activities of students in the study of specific issues of content.

The acceleration of scientific and technological progress in all spheres of human activity is inextricably linked with the informatics industry.

**Methods.** The educational information environment consists of many interacting components. These are systems for automating the educational process, distance learning systems, and information and reference systems. The content basis of the educational environment is electronic educational resources and services provided by various educational institutions.

It is the effective use of new didactic and informational opportunities that ensures the required quality of the resource. First of all, we are talking about the implementation of branched and multilevel navigation through the materials of the resource and a rich reference apparatus. The correct implementation of these two components, along with, of course, the quality of presentation of the material itself and the relevance of the topic, will determine the degree of its use in the educational process [1].

Electronic textbooks are currently one of the modern teaching aids [3]. Electronic teaching aids are classified as audiovisual teaching aids and can partially or completely replace or supplement existing textbooks [4]. Electronic teaching aids, being one of the forms of computer training systems, can be classified as automated training systems [5].

The capabilities of the electronic textbook significantly affect the development of the student's personality, equip a person with the skills to use information and communication technologies and contribute to the activation of students' independent activity in the lesson.

Sometimes, an electronic tool is understood as a collection of data in digital form, used for use in the educational process. But according to this definition, any scanned textbook could be called an electronic textbook. If we compare the benefits of using this kind of digital resources with the harm caused to health, immediately there is doubt about the appropriateness of their use. An e-book is a more appropriate name for such a resource,

The computer today is not a monologue tool, but rather a partner in dialogue, a pleasant interlocutor who helps in learning. For a computer to become such, an electronic teaching aid should be understood not just a set of digitized data, but something else.

An electronic teaching aid is a training complex designed for use on a computer, containing educational material in various forms, a search system, interactive feedback tools and allowing a student, independently or with the help of a teacher, to master the training course or its section. [6]

The main purpose of using digital resources in learning is to communicate information, form and consolidate knowledge, form and improve skills and abilities, increase interest in learning, control the assimilation of knowledge and others.

An electronic study guide must meet the requirements that distinguish it from a traditional printed textbook:

- All structural components must have a consistent style that is well understood by the PC user.
- There should be a well thought out and convenient navigation system.
- The theoretical material should be presented in various forms, including multimedia elements.
- The presence of interactive fragments to ensure dialogue with the learner.
- Availability of information retrieval system.
- The possibility of supplementing or changing the educational material when such a need arises, which is very important for such a dynamically changing discipline as "Informatics".

The e-tutorial you create can either build on an existing printed tutorial (or textbook) or be created from scratch.

It becomes clear that a creative teacher who actively uses information and communication technologies in the classroom and in extracurricular subject activities should be able to independently create the necessary electronic textbook. In the educational environment, there is an opinion that an electronic textbook is the lot of programmers, therefore, commercial products are most often used to prepare for educational activities.

**Results.** However, there is a tool that allows you to quickly and efficiently create educational projects that are not inferior in functionality to the products of professionals.

This program is AutoPlay Media Studio - a software solution that provides the creation of various complex projects: from disc menus to a complex shell of multimedia textbooks. You can easily design an electronic study guide using any content - audio, video, graphics, text, flash-animation.

AutoPlay Media Studio is a powerful tool for creating multimedia electronic publications for various purposes: presentations, electronic textbooks, multimedia applications.

AutoPlay Media Studio is a program for visually creating skins for autoplay discs. A disk autorun shell is understood as a small program with a set of functions for viewing and working with the contents of the disk. This is certainly too narrow a definition of the capabilities of Autoplay Media Studio . With it, you can create electronic textbooks, CD / DVD business cards, presentations, simple games, electronic photo albums, collections of video files with convenient viewing and much more. And all this is virtually without knowledge of programming languages. In the Autoplay Media Studio extensive collection of visual tools and settings that allow you to create programs "quickly and easily."

Areas of application for Autoplay Media Studio :

- Autorun menu for discs (for games, software products, etc.);
- Reporting (annual financial statements, etc.);
- EBooks;
- Digital magazines;
- Interactive presentations, slide shows;
- Software development;
- Tutorials;
- Custom web browsers;
- Multimedia business cards;
- Prez - releases;
- Business planning;
- Virtual photo albums;
- And much more. [7]

Let's look at a number of areas where you can apply Autoplay Media Studio.

**CD-ROM AutoRun Menu.** This is where it all started. AutoPlay Media Studio is actually an industrial standard for creating professional menus for optical applications carriers. In a matter of minutes, you can create a menu for viewing documents, reviewing disk contents, go to an Internet resource, send an e-mail and much more.

**Multimedia business cards.** Making original multimedia applications isn't big complexity in the environment of this tool. As a basis, you can take the existing standard delivery templates and examples.

**Own WEB-browsers.** An example of the original browser is among the ready-made templates. Little improving it, you can create a fully functional tool for working with network resources.

**Educational interactive applications.** Integration of various formats of information presentation (text, audio, video) using navigation tools makes it possible to create convenient, quality training courses.

**Own audio players.** It's easy enough to create your own player with the original interface, support for playlists and navigation.

**Slide show.** The ability to create colorful slideshows from photos with musical accompaniment and navigation will not be difficult if you use Autoplay Media Studio.

**Interactive presentations.** Create interactive presentations with video inserts, audio support, links to network resources - a matter of a few minutes. Can use both ready-made templates and create presentations from scratch.

**Catalogs.** The latest versions of the program have tools for working with databases. Therefore, developers have the opportunity to create illustrated catalogs with search and sort functions.

**Advertising discs and business cards.** Using the built-in programming language, as well as complementing the flash product animation, you can create bright advertising brochures and business cards on optical media.

**Resumes, electronic portfolios.** The electronic portfolios created by using AutoPlay Media Studio. For implementation, digital photos, videos and description text associated with navigation elements.

Naturally, the list can be continued indefinitely. The above are just a few thematically grouped areas.

AutoPlay Media Studio - does not require programming knowledge and is very quickly mastered, in addition, the delivery includes ready-made templates for decorating the menu with a variety of buttons for launching programs, playing sounds, printing files, opening Internet sites, and so on, allowing you to easily make a CD interface most friendly and beautiful.

**Discussion.** Program AutoPlay Media Studio is designed to create multimedia projects. With AutoPlay Media Studio, you can create electronic textbooks, CD/DVD covers, presentations, simple games, electronic photo albums, collections of video files with easy viewing, simple audio and video players. AutoPlay Media Studio has a large number of ready-made templates: to design a menu with various buttons for launching programs, playing sounds, printing files, opening Internet sites. The project can be decorated with music, video, flash- animation, text. The project can include graphic, video, audio and animation objects prepared using specialized software. The capabilities of this program significantly increase with the skills of working with the programming languages C, C ++, Java, Visual Basic. Any object of the project can be assigned a specific action. The program provides a wide variety of different actions that can be associated with objects. It is possible to create free-form autorun windows using transparency masks. Such a mask can be graphic files in the formats .jpg, .bmp, .png. An application created with AutoPlay Media Studio is presented as an object model at the final stage. This model consists of a group of separate pages on which you can place any objects (graphics, text, video, Flash, HTML, etc).

The capabilities of AutoPlay Media Studio can be extended using additional plug-in modules. With their help, you can automate some frequently performed tasks. The finished project can be

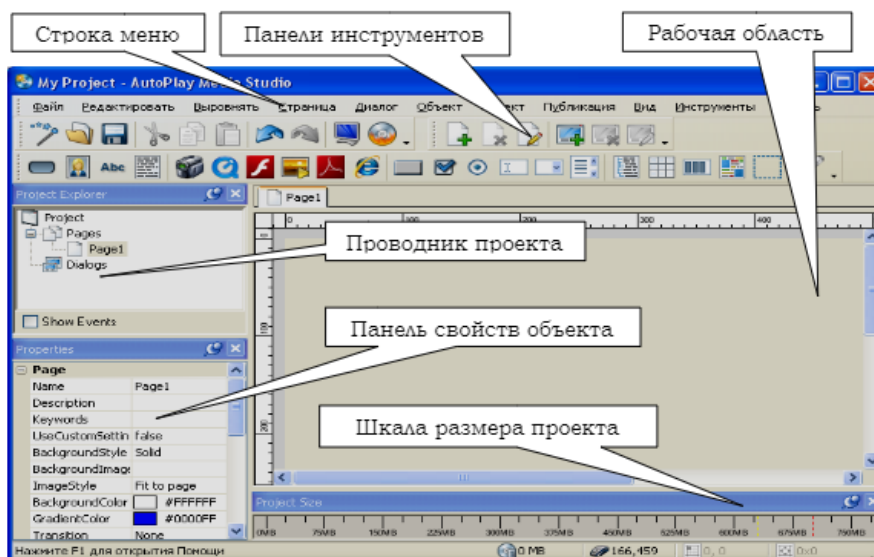
presented in the form of a self-extracting archive, saved in a separate folder on the hard disk, or burned to CD/DVD/BLu-Ray directly from the program. The program creates a graphical disk shell and all the necessary files for its autorun. At the same time, you do not need to have AutoPlay Media Studio installed on your computer to run the project.

The main advantage of AutoPlay Media Studio is its ease of use. The user-friendly interface allows you to create the simplest application in the first a few minutes of acquaintance with the program. Drag and Drop technology combined with built-in programming language does not restrict the developer in writing projects of any orientation and level of complexity.

In addition to the capabilities of the program itself, the developer has applications a lot of plugins that can be downloaded from both the official site programs and from third-party developers.

The creation of a project in the program is done entirely on a visual basis, drag and drop images, text, music and videos, dropdowns and web content directly into the development environment with the mouse. Built in library over 250 actions add interactivity to your projects.

**INTERFACE OF THE PROGRAM.** The AutoPlay Media Studio 8.0 window (Fig. 1) includes a menu bar, toolbars, project explorer, object properties panel, work area and project size scale. Menu bar Toolbars Workspace Project explorer Object properties panel Project size scale Fig. Menu bar The menu bar contains menu titles: File, Edit, Align, Page, Dialog, Object, Project, Publish, View, Tools, Help.



**Fig. 1. Window Program AutoPlay Media Studio 8.0**

1 - the working field of the program. This is where we place the objects of our application: text, graphics, video, objects for working with sound, tables and others.

2 - the main menu of the program, which, like most software products has a nested hierarchical structure. To access menu items you need to click once with the left mouse button on the name of the menu and in the opened select the desired item in the list by single-clicking the left mouse button.

3 - a set of the most frequently used operations, presented in the form graphic elements. To activate any of the items, you need to click on him once with the left mouse button. For each of the items opens the corresponding dialog box. When you hover over any of the items a pop-up hint about the purpose of this item appears.

4 - (Project Explorer) - project explorer. Designed to work with objects who participate in the project, that is, with those objects that are present in the working field (1) of the project. With this window we can group objects, do what - then the objects are temporarily hidden, eg. With this window we can change properties of several objects (pre-selected).

5 - (Properties) - properties. the properties window of the selected object. With this window we can change any parameters of the selected object: width, height, color, lettering, location on the work field and much more.

6 - (Project Size) - project size. In this block, we can observe such project parameter, as the size in Mb. Needed in order to navigate: fit our project on the selected medium (CD / DVD) or not. Using the View menu item, you can supplement the program interface additional toolbars.

You can hide unnecessary ones. It is possible to drag windows across the working to build up programs for the purpose of individual arrangement of instruments. For this left by clicking the mouse grab the window by the title bar (blue area) and without releasing the left drag the mouse buttons.

Work in the AutoPlay Media Studio environment.

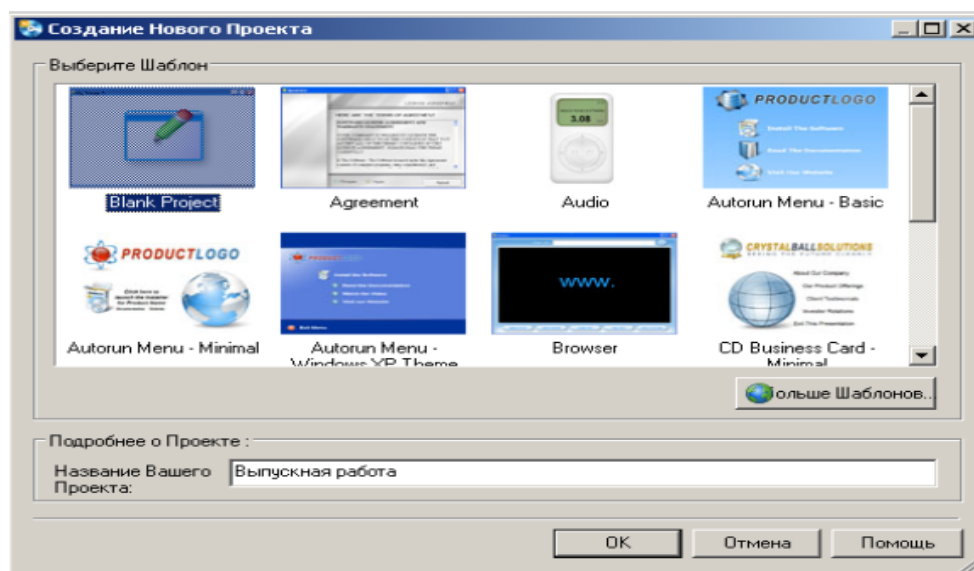
1. Start AutoPlay Media Studio by double-clicking the left mouse button on the icon (Fig. 2).



**Fig. 2. AutoPlay Media Studio icon**

2. In the Welcome to AutoPlay Media Studio dialog box, select Create a new project and left-click.

3. In the New Project Creation dialog box that opens (Fig. 3), enter the name of the project, for example, Graduation work in the Your Project Name: text box. Fig. 3 Select the Blank Project template by double-clicking the left mouse button and in the Confirm Overwrite window answer Yes. The Page1 page of the new Final work project will open in the AutoPlay Media Studio working window. Fig. 3.



**Fig. 3. Dialogue window - Create a New Project**

*Note.* The window AutoPlay Media Studio by default should be set toolbar: Pages (Pages), Standard (Standard), Objects (Objects). If these panels are not installed, install them using the commands: View> Toolbars>. The default edit window should be set to Large. If a different size of the editing window is set, then using the command: Project> Settings open the Project Settings dialog window. In the Window Size drop-down list, find the Large size and left-click. Click button OK.



Here's a quick guide to getting started with AutoPlay Media Studio. A more detailed description of work in the program, readers can find at the site address <https://docplayer.ru/30039772-Sozдание-multimediynyh-prilozheniy-v-srede-autoplay-media-studio.html>.

*Answers to questions about Autoplay media studio*

*"Is it possible with this wonderful program to burn to DVD discs for ordinary players to watch videos on your home TV?"*

By and large, no. Autoplay media studio creates programs with the EXE extension. This file type is not supported by conventional DVD players. You can try to create an Autoplay media studio project and place the AUDIO\_TS and VIDEO\_TS (movie) folders in the project root. Then, perhaps, it will turn out that the DVD player will "see" and play the contents of the folders "AUDIO\_TS" and "VIDEO\_TS", and in Windows the EXE file of your program will be launched.

*"When adding a file to an action button (open document function), an error appears"*

The following validation error has occurred: The document to open could not be found "- Like the file was not found. But the file (presentation) is in the project folder and opens fine. What do you advise?".

The file name may be too long. Or try renaming it using only English letters, numbers, and dashes or underscores.

"I insert a" New PDF object ", set the path to the PDF file (the file contains text and hyperlinks to open a web page). I launch the program, the text is displayed correctly, but nothing happens when I click on the links. "

Try in the Adobe Reader settings in the Trust Manager section, click on the Change settings button and in the window that appears, select Allow PDF files to access all sites.

*"Is it possible to make it so that after the end of the video, it seems to itself come out of full screen mode and return the menu? As, for example, on purchased DVDs after the end of the movie, it goes back to the menu."*

Try on the Script tab and place the below code on the On Finish tab for the video object.

```
Video.SetFullScreen("Video1", false);
```

*"Tell me how to make the window of the finished project can be dragged across the screen."*

In the project settings, on the Appearance tab, enable the Movable option.

*"Why don't thumbnails appear in the Select File window when I select buttons?"*

In this window, change the display mode, the Views button in the upper right corner, to Thumbnails.

*"How to organize the download of files through the disc menu? Those. I created a disc menu, placed an inscription in one of the sections. I need to start downloading the file (archive) to the user's computer when clicking on this inscription, like downloading from the Internet. "*

In the properties of the caption on the Quick Action tab, select View Website, in the Web site field, enter the address for the file you want to download.

*How long does it take to create a program?*

A fully functional program can be created in minutes, for example, based on a template. It all depends on what exactly you want to do. But, in any case, the development of a software product of a similar complexity in Autoplay media studio will be faster than in Visual C ++, Delphi or Visual Basic. I also want to add that, provided that the program is at a sufficient level, 60-80% of the time is spent on creating content (video, audio, text, images, and so on) and developing a design (working in a raster or vector editor). It should also be taken into account that the design (idea) of a software product can take a very long period in comparison with the development. On average, it takes me about 3-6 hours of continuous work to create such programs, provided that all the content is already ready and there is a plan of what specifically I want to do. At this time, the design development in Photoshop (or Illustrator), the direct creation of the first version of the program in Autoplay media studio 8.2 and several cycles of testing-fixing / changing the created program are included.

*Who is already using Autoplay media studio?*

This software product is used by everyone, from individual developers to large companies.

*Do I need to pay for created programs?*

No. After purchasing a license for Autoplay media studio, you do not have to pay anything else.

*Can you distribute created programs by email?*

Yes. Autoplay media studio can export your created program to a self-extracting archive. You can attach it as an attachment to the letter. If the file is too large, you can upload it to the cloud storage and mail the download link.

*Does Autoplay Media Studio recognize mouse clicks and movements?*

Yes. Recognized by pressing the left and right mouse buttons, movement, hovering over an object and loss of focus from the object. You can assign a reaction to all these actions. You can assign the program's reaction even when the user just moves the mouse.

*Can AutoPlay Media Studio read and write registry values and XML files?*

Yes. In addition, it is possible to determine whether the user account under which the program you have created has read and write permissions to the registry.

*Can I add my own data to the properties of the executable file of the generated program?*

Yes.

**Conclusion.** Based on the foregoing, it can be concluded that an electronic textbook is a comprehensive-purpose educational software system that ensures the continuity and completeness of the didactic cycle of the learning process: providing theoretical material, providing training educational activities and control of the level of knowledge, as well as information retrieval activity, mathematical and simulation with computer visualization and service functions subject to interactive feedback. An electronic textbook, being a multifunctional tool, is able to replace some of the traditional teaching aids.

Electrons tutorials are a promising area of informatization of education, and their importance in the future will only increase. Software tools for creating electronic tutorials are endless possibilities and one of them is the AutoPlay Media Studio program.

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UDC: 517.923+517.925.54

### THE INVERSE PROBLEM FOR SYSTEMS FIRST ORDER INTEGRO - DIFFERENTIAL EQUATIONS WITH MEMORY

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**Abstract:**

**Background.** Many physical processes are represented by a system of equations of the hyperbolic type of the first order. For example, a system of acoustic equations, electromagnetic vibrations, dynamic equations of the theory of elasticity, and others. It is well known that second-order equations are derived from them by a number of additional constraints. Solving inverse problems directly leads to solving these systems. Systematic research in this area were conducted in