# MODERN TECHNOLOGIES FOR LEARNING CONTENT CREATION

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One of the teacher's main task is to make his subject as more creative as it can be possible for students to interest them in it. There are many ways to make your lesson more cognitive and useful (for instance, usage of free open educational resources), but nowadays visual interactive learning tools become more popular and popular. And the problem is where to find or how to create necessary staff for you.

Open resources usually do not satisfy all requirements as it were made for special reasons. It is possible to find some templates that give possibilities to create your own virtual lab or other tools, but it happens rare and quality of output is very low. So the best way to provide your class with necessary staff is to create something by yourself. Let's consider opportunities which help as to create necessary virtual lab or other rich Internet applications (RIA). It is an application that has many of the characteristics of desktop application software, typically delivered by way of a site-specific browser, a browser plug-in, an independent sandbox, extensive use of JavaScript, or a virtual machine. Currently the most popular technologies are Adobe Flash(desktop browser penetration rates around 96% as of August 2011), JavaFX(76%), and Microsoft Silverlight(66%). Lets shortly consider some basic aspects of these platforms.

Adobe Flash technology as the most popular is used to create content for the Adobe Engagement Platform (content for mobile phones, web applications, games and movies etc.). There are also third-party tools like Ajax Animator, UIRA aim, Vectorian Giotto, Anime Studio, swfmill, SWFTools, and MTASC to create fully-featured SWF files by compiling text, actionscript or XML files into Flash animations. Ming library allows to do the same programmatically using C, C++, PHP, Perl, Python, and Ruby. There are also several programs that create .swf-compliant files as output from their programs (FlashToGo, Screencast tools as instance). These programs are typically designed for use by non-programmers.
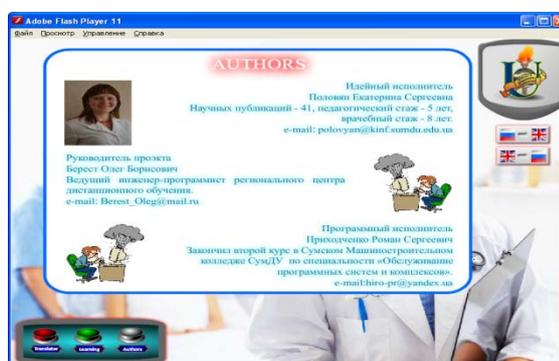


**Figure 1** – Example of virtual learning tool which is made with Adobe Flash technology

Alternative to Adobe Flash platform is Microsoft Silverlight applications that can be written in any .NET programming language. Microsoft has positioned Microsoft Expression Blend as a companion tool to Visual Studio for the design of Silverlight User Interface applications. Visual Studio can be used to develop and debug Silverlight applications.

JavaFX is also a software platform for creating and delivering rich Internet applications that can run across a wide variety of connected devices. The current release (JavaFX 2.2, August 2012) enables building applications for desktop, browser and mobile phones, TV set-top boxes, gaming consoles.

Each platform has its own advantages and disadvantages and can be recommended in different cases. But total control of one technology can't be predicted in the nearest future.

**References:**

1. "Rich Internet applications". Adobe. Retrieved April 10, 2012.

2. "Get Microsoft Silverlight". Microsoft Silverlight home. Microsoft Corporation. Retrieved 9 December 2011.