

Multimedia Technologies and Design Principles

Module 7: Multimedia Authoring Tools

Module Introduction

Readings

Required

Please go to the following websites to explore each four following Adobe Authoring Tools:

- Adobe Director (<http://www.adobe.com/products/director/>
(<http://www.adobe.com/products/director/>))
- Adobe Dreamweaver (<http://www.adobe.com/products/dreamweaver/>
(<http://www.adobe.com/products/dreamweaver/>))
- Adobe Flash (<http://www.adobe.com/products/flash/>
(<http://www.adobe.com/products/flash/>))

As you read through these web sites, pay special attention to any “list of features,” “tours,” “video,” and/or “examples” created with each tool. As you go through the web sites, answer the following questions:

- What is this tool designed to do?
- What type of design metaphor does it employ (i.e. time-based, web-based, icon-based)?
- Who might use this tool?
- How much does it cost?
- How difficult would it be to learn to use?

You will want to download the free trial versions. In addition, you may also want review some of the additional Adobe Software and Open Source Web Editors...

- Other Adobe Downloads (<http://www.adobe.com/downloads/>
(<http://www.adobe.com/downloads/>))
- Google Search for Open Source Web Editors (<http://www.google.com/search?q=open+source+web+editors&rls>
(<http://www.google.com/search?q=open+source+web+editors&rls>))

For Your Success

As you have seen in the past modules, there are many types of multimedia learning programs designing one takes some knowledge of learning theories and pedagogical approach. In addition, you need to be somewhat knowledgeable about computers and digital media. In this module you will gain a broader understanding of the types of “authoring” programs that are used to develop or create multimedia learning programs.

An authoring program is computer software that is designed to help you assemble or create the various media into a program that can be run on a computer. In this module you will learn about the various types of professional authoring tools.

To be successful in this module you will be asked to investigate authoring tools that come in several types of design tools, including: icon-based, time-based, and web-based. It will be important for you to try to review several of these tools to get an idea of how they work and what they can do. It will be important for you to understand some navigational options that can be designed into most of today’s professional authoring tools. These navigational schemes are one of the main ways you can design in learner control. To be successful you will want to understand the difference between; linear, branching, and hyperlink navigation.

To be successful you will want to devote some time to download and try out some of the trial versions of these programs, because there is nothing like doing a test drive with these tools. Keep in mind that you are not to try to become totally proficient with all of the different tools, as that would be extremely difficult. In fact, many developers, generally, become experts with only one tool. The purpose of trying out several is for you to get an idea of how they work and for what they might be best utilized.

To help you compare and contrast these tool types you will have the opportunity to complete a comparison chart, which will permit you to organize the various tools into categories.

Probably the most helpful activities for this module will be the discussion. To be successful, and helpful to your peers, you are asked to locate and post some authoring tool tutorials. These resources will be very valuable as you develop your learning programs.

Learning Outcomes

- . Identify types of MM authoring tools
 - . Examine various MM authoring tools
 - . Compare and contrast MM authoring tools
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Module 7: Multimedia Authoring Tools



1. What Is a Multimedia Authoring Tool?

Authoring tools are computer programs that allow developers to create or develop multimedia for education, entertainment, and other industries. These tools provide an integrated environment for binding together the different elements of a multimedia production. Thinking about this might seem quite daunting. For example you might ask, how would I ever be able to learn something as complex as a program that would allow me to make a video game?

Actually, you probably have already used an authoring program, but didn't know it. For example, Power Point and other presentation software are often used to author multimedia learning programs. However, there are some powerful commercial authoring tools that you will learn about in this module.

Types of Multimedia Authoring Tools

- **Card or Stack-Based Authoring Tools:** These tools use cards to represent various pages (screens). By having a stack of cards, the developer can organize the information, interaction, and feedback screens.
- **Web-Based Authoring Tools:** These tools are similar to word processors that allow the developer to create and design various information, interaction, and feedback pages (screens).
- **Time-Based Authoring Tools:** These tools use a stage metaphor that provides a timeline to insert elements along the timeline where events might happen
- **Icon-Based Authoring Tools:** These tools are designed to permit the author or developer to organize page (screen) placement and navigational elements by dragging various programming elements (represented by icons) from a palette to the flowchart of the program.

Categories of Authoring Tools

- **Presentation:** Software like Powerpoint, Keynote, and others are well suited for slide shows, lectures, demonstrations, and other types of productions where interaction is not required but follow a storyline. Slides advance in order, manually by the speaker or user, or set to automate from slide to slide.
- **Video:** Useful for productions like lectures, introductions, and sharing information, this is probably the most widely used multimedia tool today. With the widespread use of the internet and the spread of video services like YouTube and Vimeo have made it even more accessible and brought it to the forefront of popularity.
- **Audio:** Podcasts have become nearly as important to many people as the local news and talk radio. With convenient, on-demand availability, podcasts are easy to access on your time. Using podcasts as lectures and announcements in learning situations provides your students an opportunity to listen repeatedly to truly understand the content.

- **Animation:** An animated video has its own distinct character. Typically thought of as cartoons, animation has come a long way in being a very useful tool for learning. Situations that would be difficult, if not impossible, to create with live actors can be created simply through the use animation. Computer animation tools have made the task of putting together a simple but professional looking animation for easy production.
- **Interactive:** This can include any or all of the above categories with the huge addition of giving the user an interactive role. Kiosks, quizzes, and video games. These types of productions benefit learners by requiring them to get involved in the lesson.

Visit the **Centre for Learning & Performance Technologies** (<http://www.c4lpt.co.uk/Directory/Tools/instructional.html#authoring>) for more information on different authoring tools.

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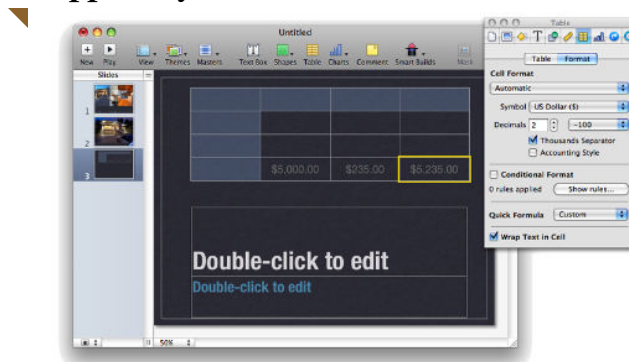
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Module 7: Multimedia Authoring Tools

2. Presentation Tools

Apple KeyNote



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Presentation tools such as Microsoft Power Point, Adobe Captivate, OpenOffice Impress, and Apple's iWork Keynote are examples of card-based authoring tools. While they have some distinct disadvantages, they can be used to produce some highly effective multimedia learning programs. The primary disadvantage is that generally the cards are created in a linear fashion, which causes them to be viewed primarily in a linear fashion. This could limit what the developer can do with the program, in terms of providing learner control and interaction. However, hyperlinks within the screens provides branching (non-linear navigation).

- Apple Keynote (<http://www.apple.com/iwork/keynote/>
(<http://www.apple.com/iwork/keynote/>))
- Adobe Captivate (<http://www.adobe.com/products/captivate/>
(<http://www.adobe.com/products/captivate/>))
- Microsoft Power Point (<http://office.microsoft.com/en-us/powerpoint/default.aspx>
(<http://office.microsoft.com/en-us/powerpoint/default.aspx>))
- OpenOffice.Org Impress (<http://www.openoffice.org/product/impress.html>
(<http://www.openoffice.org/product/impress.html>))

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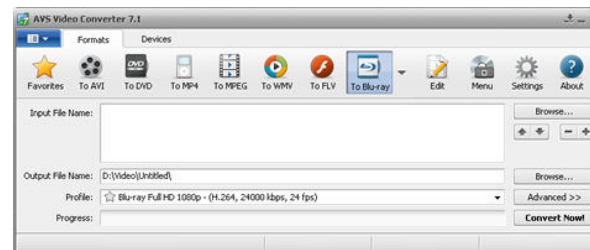
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Module 7: Multimedia Authoring Tools

3. Video Tools

AVS4YOU Video converter



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Some developers create instructional videos meant to entertain and educate. These authoring tools create a digital story, documentary, or online lecture. Some video sources only require simple tasks such as conversion and volume leveling. Others may require basic edits or even combining several sources, including additional media sources like audio and images, into a complete presentation. There are different levels of tools for all of these tasks. Conversion tools like AVS4YOU Video Converter (<http://www.avs4you.com/AVS-Video-Converter.aspx>) features many presets for converting your source video into version for various devices such as DVD, online, and mobile video. It is also capable of doing some basic editing.

iLife video editor



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Several easy to use video editing applications are simple, but very effective applications for editing a single video source or combining multiple media sources. They all include transitions, splicing, importing of various media types, and exporting of different video formats.

- Windows Movie Maker (included on all Windows systems from XP to now),
- iMovie (<http://www.apple.com/ilife/imovie/> (<http://www.apple.com/ilife/imovie/>)),
- Corel Video Studio Pro
(<http://www.corel.com/servlet/Satellite/us/en/Product/1175714228541>
(<http://www.corel.com/servlet/Satellite/us/en/Product/1175714228541>))
- Adobe Premiere Elements (<http://www.adobe.com/products/premiereel/>
(<http://www.adobe.com/products/premiereel/>))

Most of these video editing tools create nice effects and title sequences, but there are additional video applications that add more creative control over your project. Some specialize in motion graphics like Adobe After Effects (<http://www.adobe.com/products/aftereffects/> (<http://www.adobe.com/products/aftereffects/>)). These types of tools go well beyond the state of simple correction, editing, and splicing with endless visual effects, keying, compositing, and animations options. Tools like these are very advanced and not for the weak at heart. However, the results can be fantastic and entertaining and very effective at grabbing the attention of your students.



video demo 1

Source: <http://youtu.be/X8oejcMoJNM>

Video title created in Adobe Premiere Elements and converted to Flash Video (.flv) with AVS4YOU Video Converter.

Static TV effect at the end of the video was applied in AVS4You Video Converter.
(created by Frederick Matzen)

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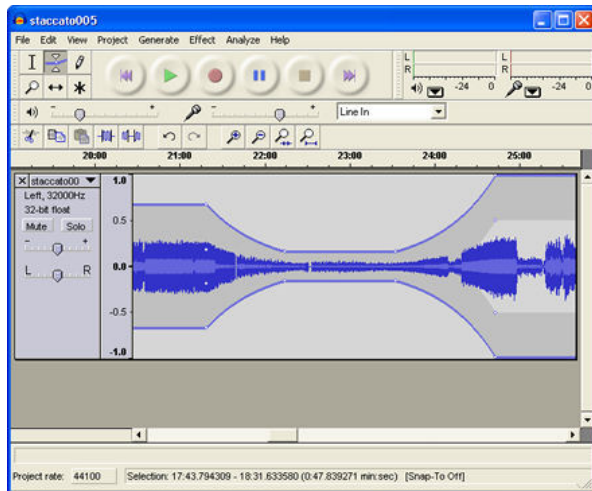
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4. Audio Tools

Audacity - Open Source Audio Editor



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Podcasts make it easy to deliver voice lectures and announcements in a simple, on-demand format convenient for both educators and students. However, we are not all professional announcers or voice talent and we *will* make mistakes, have external noises slip into the recording, and require many takes to get the message perfect. These tools help us become the professionals we all desire to be. Basic editing options correct most problems, and advanced filters and effects enhance a mediocre recording. Audacity (<http://audacity.sourceforge.net/> (<http://audacity.sourceforge.net/>)) has become the standard for open source (FREE!) audio tools. It offers all the basic tools you'll need to take care of those inevitable issues that come about in recording audio. It also offers some advanced features to help improve the quality of the audio. It's compatible with all computer operating systems. Installing the separate, and also free, LAME MP3 Encoder (<http://lame.buanzo.com.ar/> (<http://lame.buanzo.com.ar/>)) allows the export of MP3 audio files which are the primary format used for Podcasts and web audio. WMA (Windows Media Format) and Quicktime (.MOV) are also popular formats for distributing audio. Garage Band (<http://www.apple.com/ilife/garageband/> (<http://www.apple.com/ilife/garageband/>)) is native to the Mac system and has a great toolset for manipulating audio files.

More advanced professional tools allow using many tracks at once to combine or splice different sources into a single project. One such tool is Reaper (<http://www.reaper.fm/> (<http://www.reaper.fm/>)), a low cost, full featured multi-track editor allowing you to add additional source audio to your main clip. With a tool like this you can add introductory and exit music, clips from historic transmissions, movie audio, crowd applause, and whatever you feel would enhance the listener experience.







Reaper - Multi-track audio editor



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5. Animation Tools

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Animation tools fall into two basic categories, 2D and 3D, with some applications overlapping both.

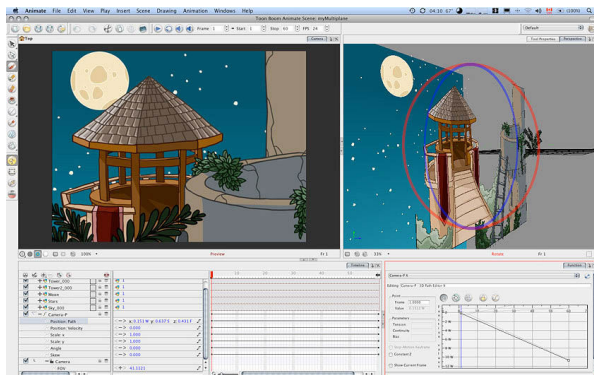
Most of these tools simplify character creation, animations, and process speed of video production for standalone purposes or inclusion into other projects. You may want to create a simple animation to

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make a point or emphasize a section of your lecture. Animations can make the project more entertaining and help keep the attention of a student in addition to enhancing the message.

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ToonBoom Studio Interface

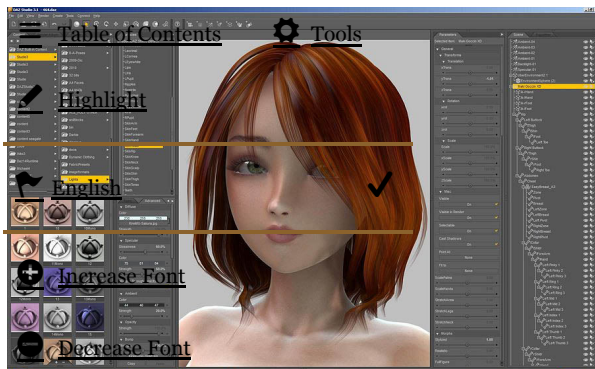


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2D animation tools are much like the tried and true method of drawing each frame by hand and photographing each frame in sequence to create a finished product. Computer animation is much simpler with the addition of tweening, bones, and ready to animate products available for purchase. The steps from start to finish of your concept can sometimes be completed in very little time due to the vast amount of compatible product and tutorials posted on the internet. Software such as Anime Studio (<http://anime.smithmicro.com/> (<http://anime.smithmicro.com/>) (<http://www.contentparadise.com/productdetails.aspx?id=14039>)) and ToonBoom Studio (<http://www.toonboom.com/main/> (<http://www.toonboom.com/main/>)) are among the available offerings. Both studios offer different versions that range in cost and options.

Daz Studio Interface

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3D presents a completely different visual, no glasses required. This variant of animation adds depth to the characters and scene, offering the potential for more realism. Many 3D applications provide exporting directly to video, or in some cases, Flash. The exported video can be used as is, or included in your main project. A popular Open Source application is Blender (<http://www.blender.org/> (<http://www.blender.org/>)). The open source community offers great support and tutorials. Two applications focused on 3D character art and animation are Poser (<http://poser.smithmicro.com/poser.html> (<http://poser.smithmicro.com/poser.html>)) and Daz Studio (http://www.daz3d.com/i/software/daz_studio3 (http://www.daz3d.com/i/software/daz_studio3)). Character animations, lip-syncing, and motion cameras are all done easily. There is no need to create your character from scratch, as there are many libraries with thousands of models available for free and purchase that import into both applications. Working with tools can both be exhilarating and fun but the results can really add value to your project.

**grandma tantrum**Source: http://youtu.be/4wq_h6vc5Rk

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Quick animation created in Daz Studio (free version) and converted to Flash Video (.flv) with
AVS4YOU Video Converter
(created by Frederick Matzen)

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6. Interactive Tools

There are several types of time-based authoring tools, from very complex to very simplistic. Generally, they include a timeline upon which the developer places elements or items. These can be just about any type of digital media or elements that represent screens, actions, animations, or user decisions points for learner interactions.

Time-Based Multimedia Authoring Tools

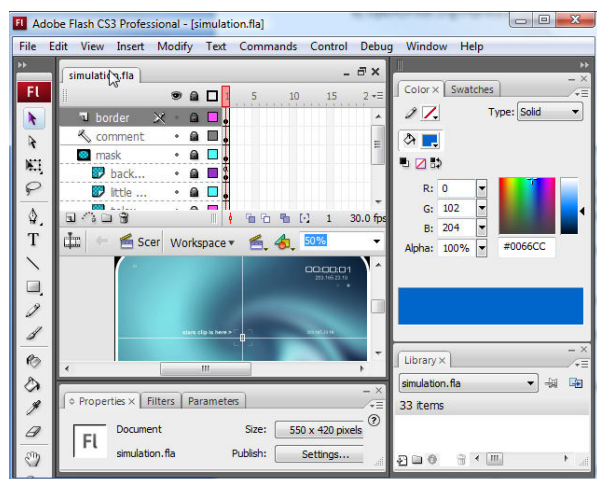
Director (<http://www.adobe.com/products/director/>
(<http://www.adobe.com/products/director/>)):

Adobe's premiere time-based authoring tool. Director uses a theater metaphor by having a timeline that provides a stage where actors are placed for entrance and exit based upon time or learner interaction. Director is a very high grade developer tool, used for a variety of multimedia development, including; learning programs and video games. Because of the power of this program, most programs must be delivered via CD or DVD.

Flash (<http://www.adobe.com/products/flash/>
(<http://www.adobe.com/products/flash/>)):

Adobe's premiere animation and video authoring tool. Flash uses a similar working interface as Director, in terms of a theater metaphor, utilizing the timeline, stage, and actors. However, Flash files compress extremely well, permitting inclusion into Web-Page design for Internet delivery. There are newer additions to the Flash family, some much easier to learn and use.

Adobe Flash Professional



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Flash Catalyst (<http://www.adobe.com/products/flashcatalyst/> (<http://www.adobe.com/products/flashcatalyst/>)):

This version brings Flash programming into the realm of non-programmers by using common tools, objects and simple menu commands. Advanced skills are not required to bring a beautiful interactive learning to life. High integration with other Adobe tools like Photoshop and Illustrator allow for a lot of creativity.

Articulate Studio (<http://www.articulate.com/products/studio.php> (<http://www.articulate.com/products/studio.php>)):

A suite of 4 tools to create a total online learning experience. Articulate Presenter takes your Powerpoint slides to another level with interaction and audio overlays.

Xerte (<http://www.nottingham.ac.uk/~cczjrt/Editor/index.htm> (<http://www.nottingham.ac.uk/~cczjrt/Editor/index.htm>)):

Xerte is an *Open Source* suite of tools for the rapid development of interactive learning content. Xerte makes it very easy to perform simple, common tasks, yet possible to create rich interactivity.

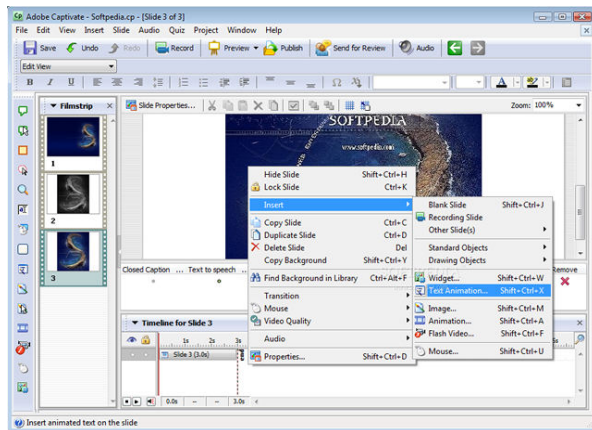
Other Flash format tools:

There are many small tools on the market that produce Flash format files. Among the most popular are SwishMax (<http://www.swishzone.com/index.php?area=products&product=max> (<http://www.swishzone.com/index.php?area=products&product=max>)) which has a

powerful set of tools that allow for the creation of nearly any type of production you require. KoolMoves (<http://www.koolmoves.com/> (<http://www.koolmoves.com/>)) also has grown into a very powerful, yet budget minded tool for interactive design.

All of the above tools will allow you to create entertaining interactive learning tools. Pre-planning your scenario with a story board or outline will save you time in the development process.

Adobe Captivate



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Another powerful tool is Adobe Captivate, which utilizes an icon-base development environment, resembling Powerpoint. When using Captivate, the developer can create slides, quizzes, animations, product demonstrations, entire interactive e-Learning experiences. Much of the interface is built upon drag and drop or wizards in a user friendly environment making it easy to create professional output. Screen recording, in either demo mode or full motion video, makes it easy to create vivid e-Learning lectures and training projects. The possibilities are endless and interaction with other Adobe products, like FLASH and Photoshop, make this an expansive tool.

View a Multimedia Feature list of Captivate

([http://www.adobe.com/products/captivate/features/?](http://www.adobe.com/products/captivate/features/?view=topnew)

view=topnew) (<http://www.adobe.com/products/captivate/features/?view=topnew>)

If you want free Adobe Captivate training, click **HERE**

(<http://www.adobe.com/products/captivate/training/>):

(<http://www.adobe.com/products/captivate/training/>) to learn more about this icon-based authoring tool.



Check Your Understanding



Click Here to Begin



References

Adobe Captivate (<http://www.adobe.com/products/captivate/>)

Adobe Flash <http://www.adobe.com/products/flash/>

Adobe Premiere Elements: <http://www.adobe.com/products/premiereel/>

Anime Studio: <http://www.contentparadise.com/productdetails.aspx?id=14039>

Apple Keynote <http://www.apple.com/iwork/keynote/>

Articulate Studio: <http://www.articulate.com/products/studio.php>

Audacity <http://audacity.sourceforge.net/>

AVS4YOU Video Converter: <http://www.avs4you.com/AVS-Video-Converter.aspx>

Blender: <http://www.blender.org/>

Corel Video Studio Pro: <http://www.corel.com/servlet/Satellite/us/en/Product/1175714228541>

Garage Band <http://www.apple.com/ilife/garageband/>

iDVD <http://www.apple.com/ilife/idvd/>

iLife – Multimedia Suite from Apple that Includes

iMovie <http://www.apple.com/ilife/imovie/>

KoolMoves <http://www.koolmoves.com/>

LAME MP3 Encoder: <http://lame.buanzo.com.ar/>

Microsoft Power Point <http://office.microsoft.com/en-us/powerpoint/default.aspx>

Movie Maker for Windows

Vista <http://www.microsoft.com/windows/products/windowsvista/features/details/moviemaker.msp>

Movie Maker for Windows XP <http://www.microsoft.com/windowsxp/using/moviemaker/default.msp>

OpenOffice.Org Impress <http://www.openoffice.org/product/impress.html>

Poser: <http://poser.smithmicro.com/poser.html>

Reaper: <http://www.reaper.fm/>

SwishMax: <http://www.swishzone.com/index.php?area=products&product=max>

ToonBoom Studio: <http://www.toonboom.com/main/>

Xerte: (<http://www.nottingham.ac.uk/~cczjrt/Editor/index.htm>)

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