

ASTD TechKnowledge 2009 Conference & Exposition
Las Vegas, Nevada

Open-Source Applications for Designer-Developed E-Learning (W308CS)



Learning Objectives:

- ◆ Develop a SCORM-compliant eLearning module using free technology tools
- ◆ Calculate the cost of ownership for open-source applications
- ◆ Determine whether open-source applications are a viable fit for an organization

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Introduction

As defined by Wikipedia, open-source software is computer software for which the source code is made available and permits users to use, change, and improve the software and to redistribute it in modified or unmodified form. It is very often developed in a public, collaborative manner. One report by Standish Group (<http://standishgroup.com/>) estimates that the adoption of open-source software has saved consumers about \$60 billion per year.

While open source software has no licensing fee to download, use, modify, and distribute, it doesn't necessarily mean it is "free." As you begin to investigate the potential for using open source software in your organization, consider the following:

- ◆ Who will host and/or support the applications?
- ◆ Who will install and maintain the applications?
- ◆ How will users be trained on the new applications?
- ◆ How will collaboration be impacted by the use of non-proprietary applications?

When calculating the cost of using software, compare the cost of using an open-source application versus proprietary, off-the-shelf applications by considering the total cost of ownership by using a matrix as shown below:

Consideration	Option 1	Option 2
Application Name:		
Software vendor fee:		
License fee:		
Annual maintenance fee:		
Administration and support (upgrades and patches) costs:		
Training costs:		
Labor cost for installing:		
Programming costs for customizations:		
System integration fees:		
Hardware costs:		
Total Ownership Costs:		

(For a more extensive criteria comparison and calculation, refer to the report "Free and Open Source Software: Overview and Preliminary Guidelines for the Government of Canada" available at: <http://www.tbs-sct.gc.ca/fap-paf/oss-ll/foss-llo/foss-llo-eng.pdf>.)

After determining an application is an appropriate fit for your project's needs, download and install the desired application. The following pages will help guide you through the steps of using several applications to produce a SCORM-based E-Learning module:

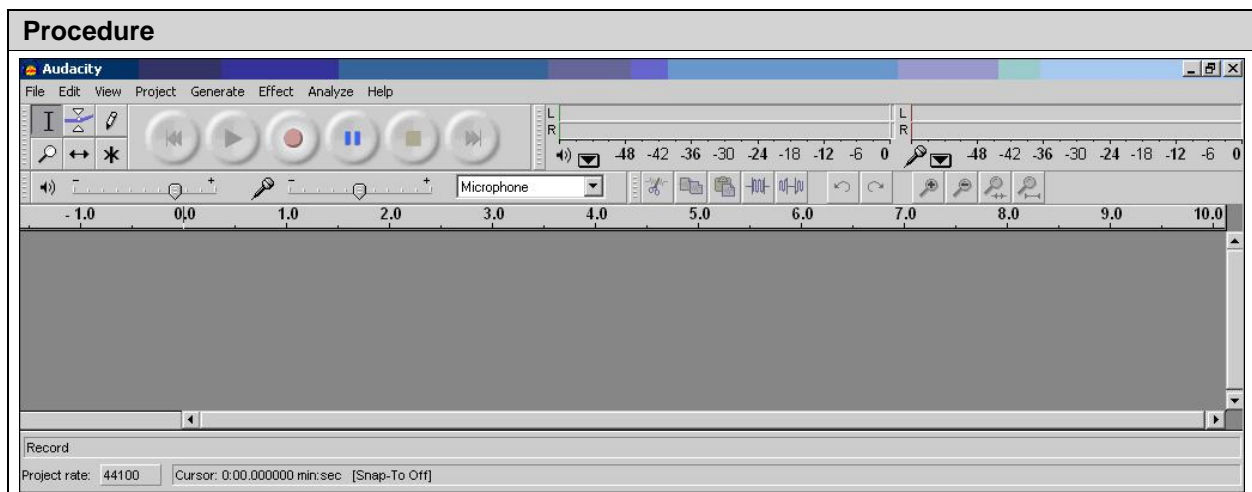
Task	Application (Page #)	Application (Page #)
Multimedia	Audacity Audio Recording (p. 4)	Wink Screen Recording (p. 10)
Image Editing	GIMP (p. 6)	Paint.NET (p. 8)
Course Authoring	eXe (p. 13)	MyUdutu (p. 16)




Audacity Audio Recording

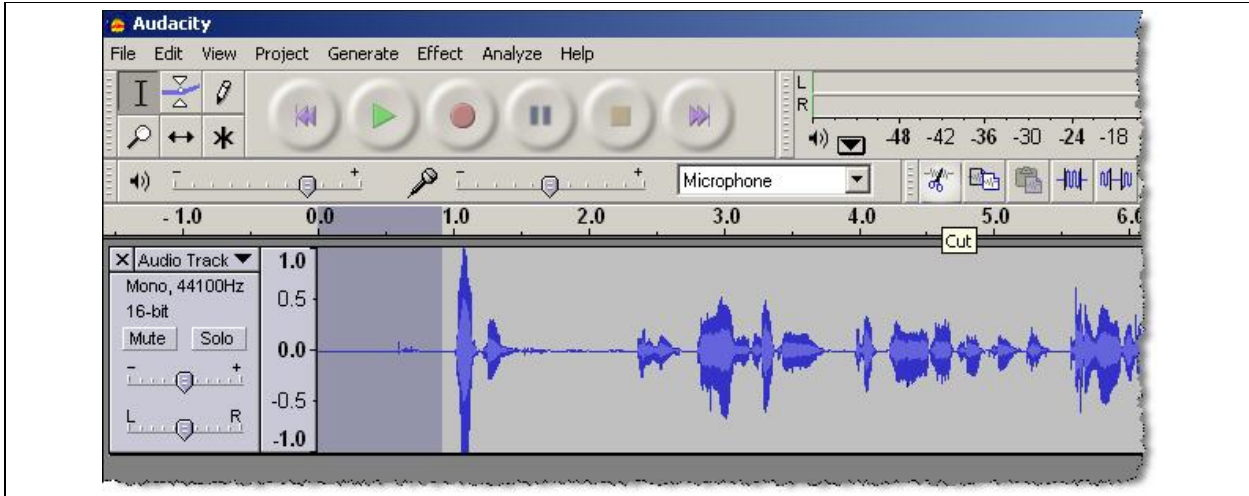
Audacity is a free, easy-to-use audio editor and recorder. You can use Audacity to:

- ◆ Record live audio
- ◆ Convert tapes and records into digital recordings or CDs
- ◆ Edit sound files (e.g., MP3, WAV)
- ◆ Cut, copy, splice or mix sounds together
- ◆ Change the speed or pitch of a recording

The following procedure shows you how to record and edit a typical voice narration audio file using Audacity:



- | | |
|-----------|--|
| 1. | Plug your microphone in and click the Record button  to begin recording. |
| 2. | Click the Stop button  to stop the recording. |
| 3. | Click the Rewind button  to return to the beginning of the file. |




4. Select section to delete and click the **Cut** button .

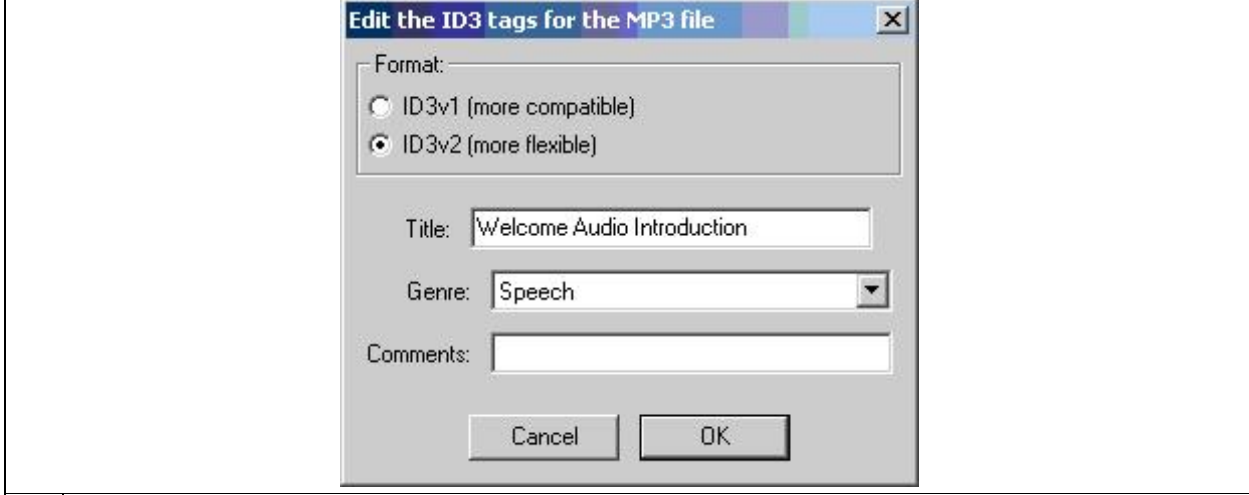
5. Click the **Generate > Silence...** menu item.



6. Type the number of seconds and the click the **Generate Silence** button .

7. Click the **File > Export As MP3...** menu item.

8. Type the file name and then click the **Save** button .



9. Type a title in the **Title** field and then click the **OK** button .

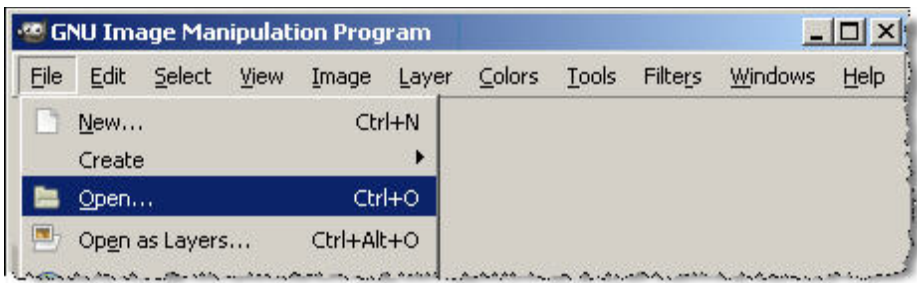
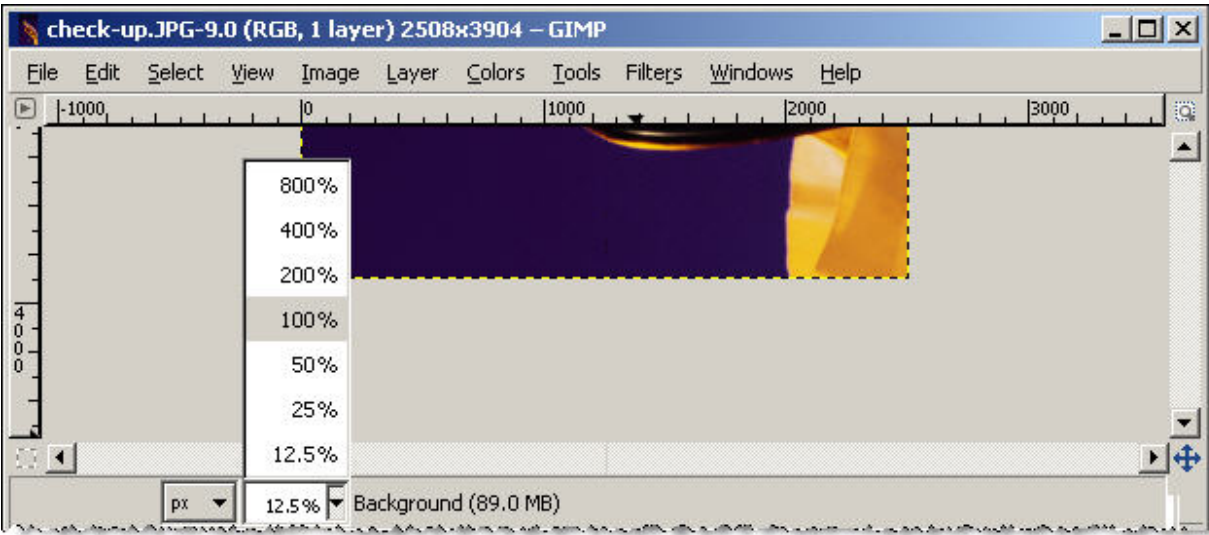
10. Click **File > Exit** to close Audacity.

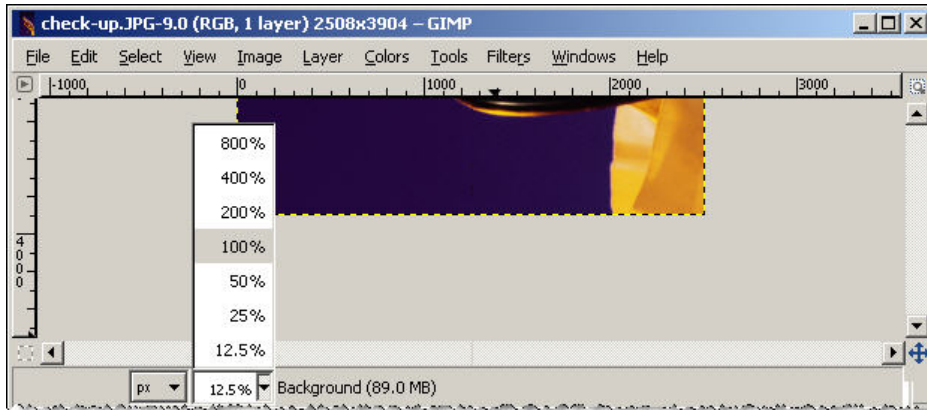
GNU Image Manipulation Program Image Editing

The GNU Image Manipulation Program (GIMP) is a multi-platform photo manipulation tool. You can use this software to:


- ◆ Retouch photos
- ◆ Compose new images
- ◆ Modify existing images

The following procedure shows you how to resize an existing image with GIMP:

Procedure	
	
1.	Click the File > Open menu item.
2.	Select the desired file and click the Open button <input type="button" value="Open"/> .
	
3.	To view the image at full-size, click the View Magnification drop-down.
4.	Click the 100% list item.
5.	To begin modifying the image, click the Image > Scale Image menu item.

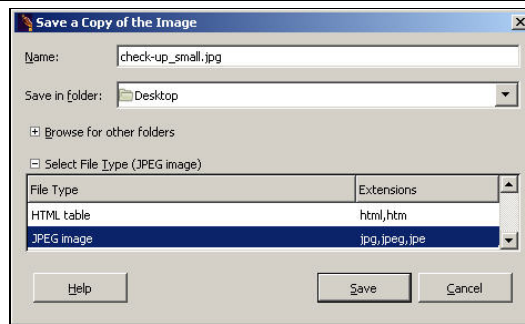



6. Enter the desired sizes and click the **Scale** button .

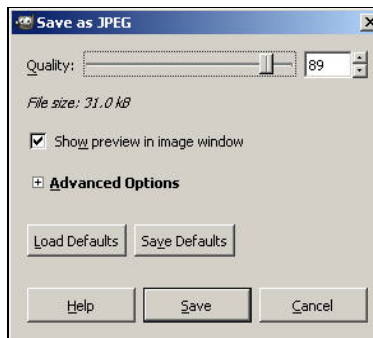
7. Click the **Crop** tool from toolbar .

8. Select the area to be cropped and click within the cropping area.

9. Click the **File > Save a Copy** menu item.



10. Type the file name, ensure the correct file type is selected, and then click the **Save** button .



11. Click the **Save** button .

12. Click the window's **Close** button .

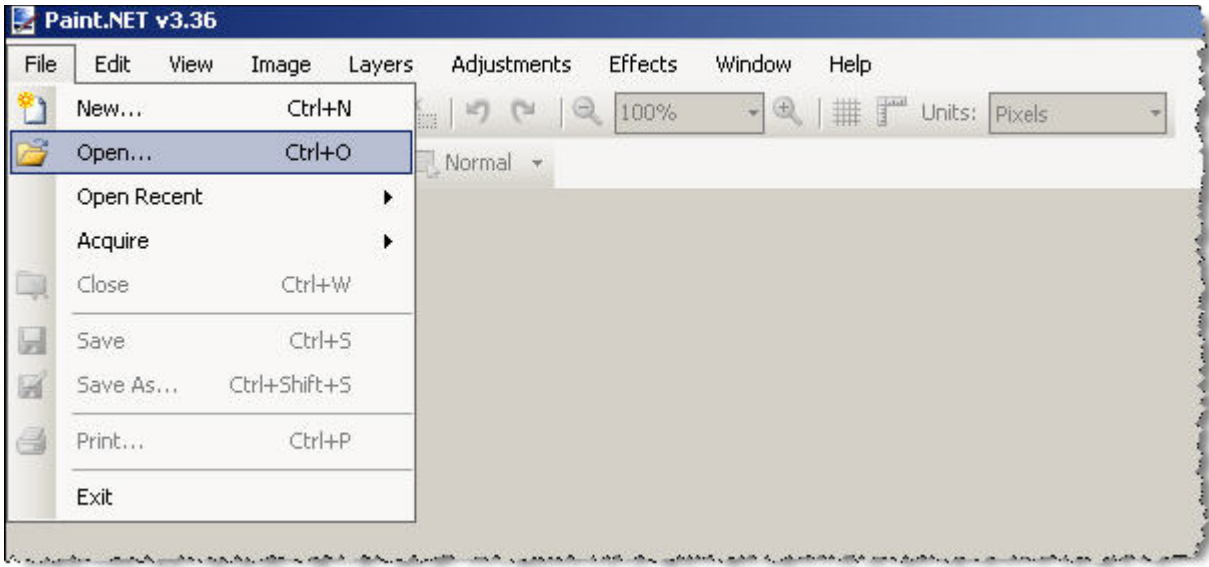

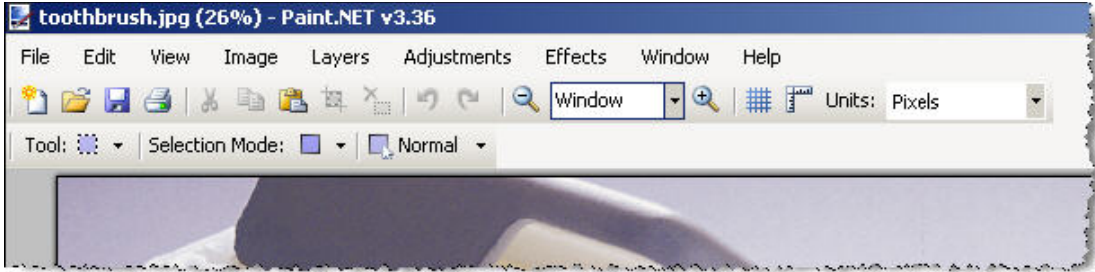

13. Click the **Don't Save** button  to preserve the original file.

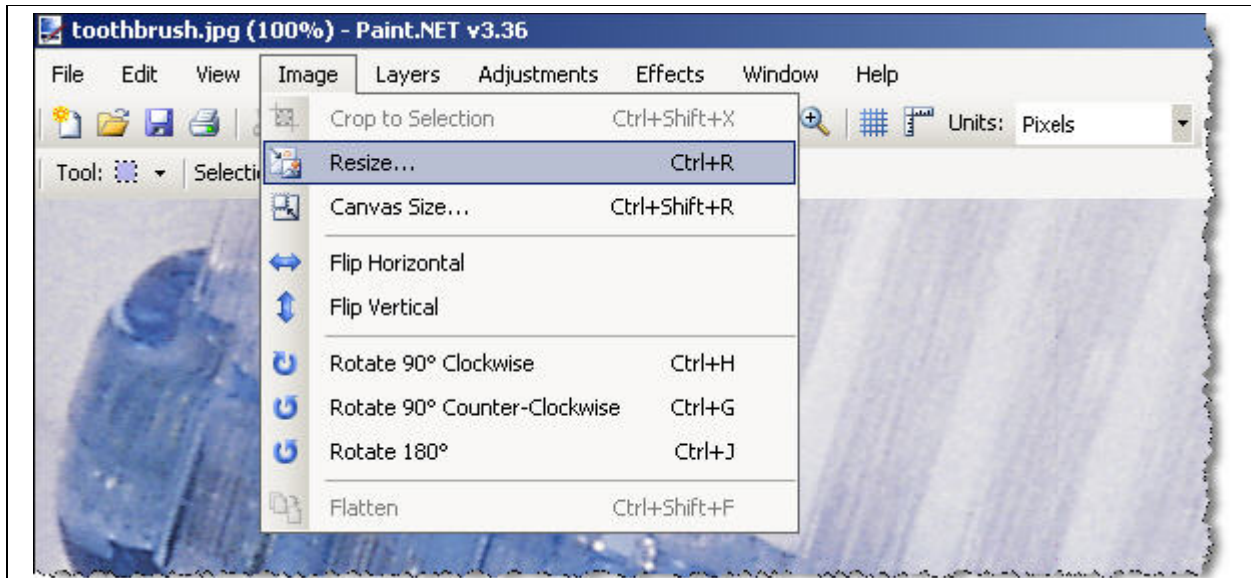
Paint.NET Image Editing

Paint.NET is free image and photo editing software for Windows. It features an intuitive and innovative user interface with support for:

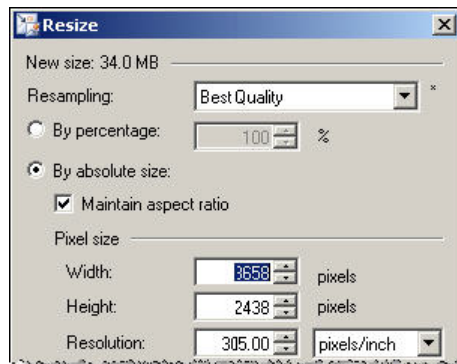
- ◆ Layers
- ◆ Unlimited undo
- ◆ Special effects
- ◆ Useful and powerful tools

The following procedure shows you how to resize an existing image with Paint.NET:

Procedure	
	
1.	Click the File > Open... menu item.
2.	Select the desired file and click the Open button  .
	
3.	To view the image at full-size, click the Magnification drop-down  .
4.	Click the 100% list item.



5. To begin making modifications to the image, click the **Image > Resize...** menu item.



6. Click the **By absolute size:** radio button By absolute size.

7. Click the **Height:** text box and type the new height .

8. Click the **OK** button .

9. Use the Selection tool to select the desired area and click the **Image > Crop to Selection** menu item.

10. Click the **File > Save As...** menu item.

11. Name the new file and click the **Save** button .

12. Click the **OK** button .

13. Click the **File > Close** menu item.

Wink Screen Recording

Wink is a Tutorial and Presentation creation software, primarily aimed at creating tutorials on how to use software applications. Using Wink you can:

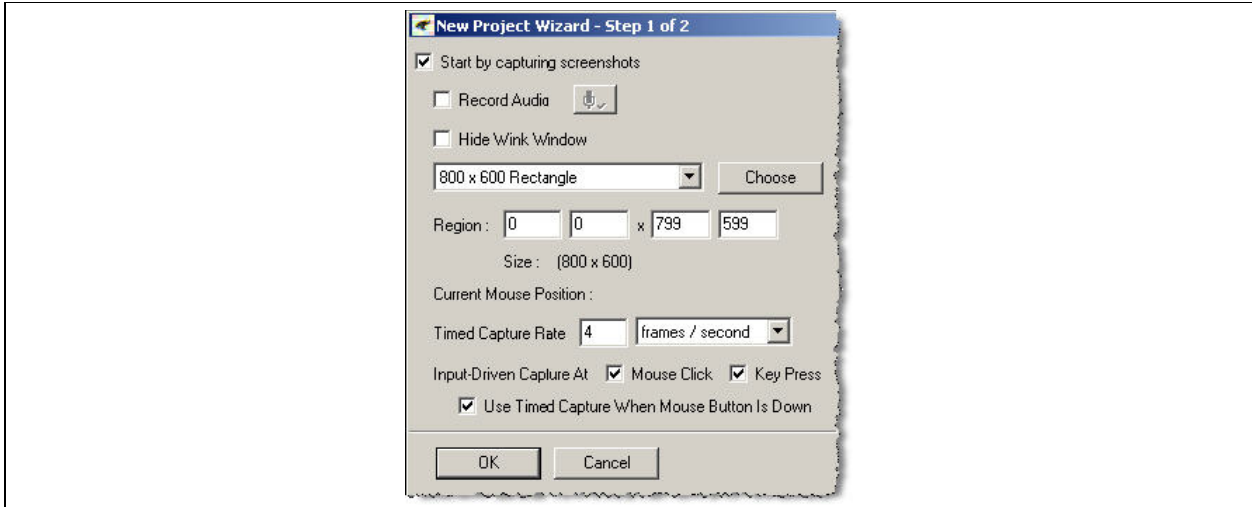
- ◆ Capture screenshots
- ◆ Add explanations boxes, buttons, and titles
- ◆ Generate a Flash-based demonstration of the steps and actions







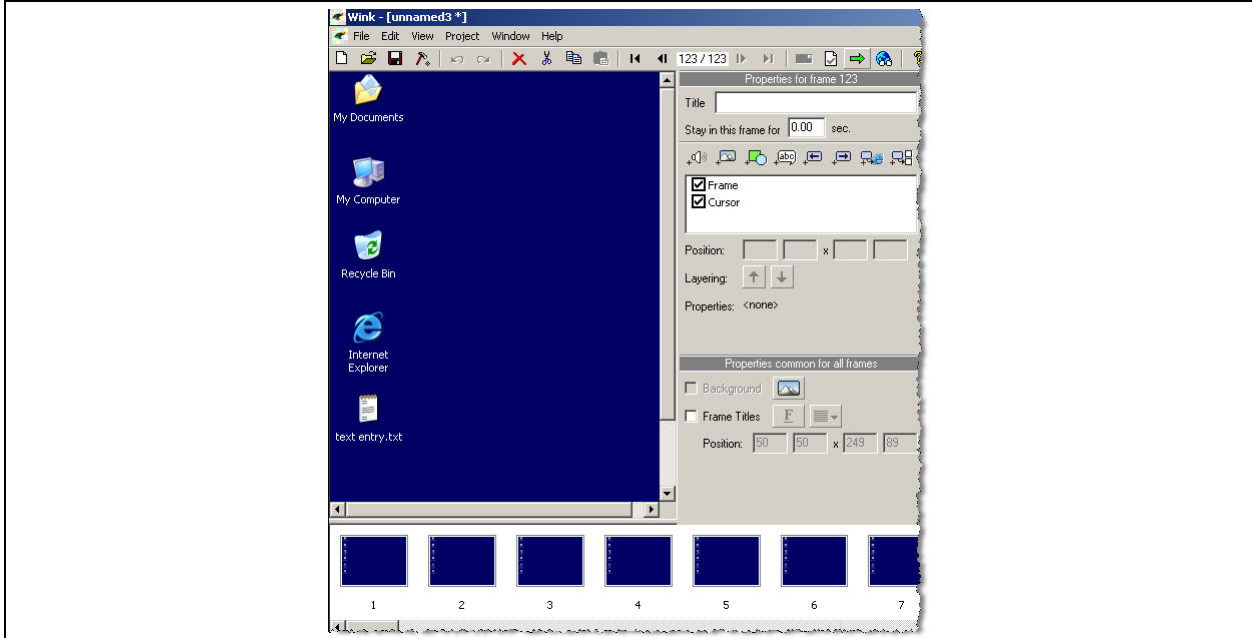
Note: Wink is a free software application offered by Debugmode. It is copyrighted by Satish Kumar. S., and as such, is not considered an open-source application. However, because of the usefulness and no-fee nature of this tool, Wink is included in this workbook.


The following procedure shows you how to create a software demonstration recording using Wink:

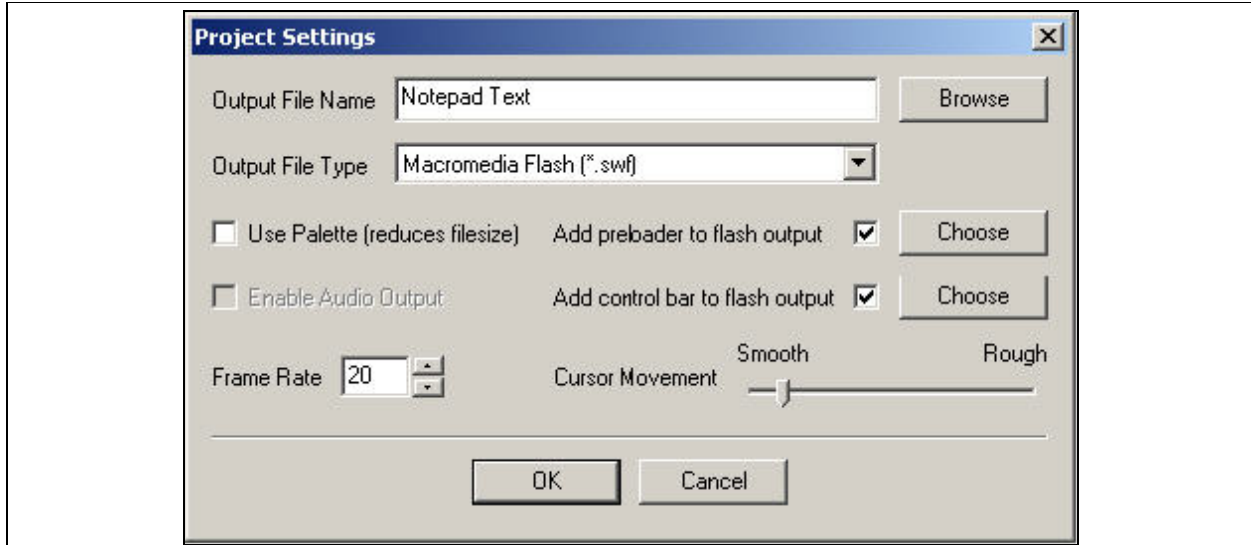
Procedure	
1.	Click the New Project button .








2. Click the **OK** button .
3. Click the **Minimize To Tray** button .
4. Complete the steps and actions you wish to demonstrate and capture in the recording.
5. Right-click the **Wink Capture** button  in the Windows Taskbar.
6. Click the **Stop Timed Capture** menu item.
7. Right-click the **Wink Capture** button .
8. Click the **Finish Capture** menu item.



9. Click the **Render** button .



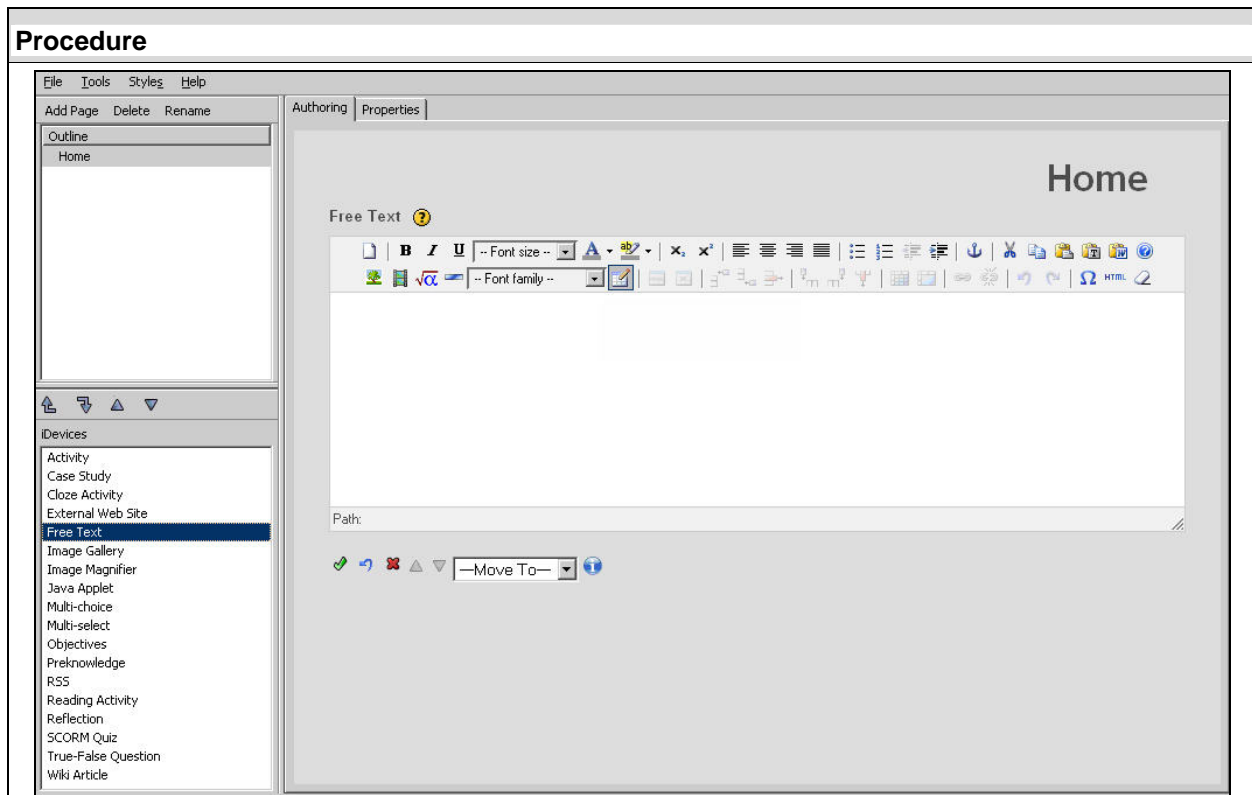
- | | |
|-----|--|
| 10. | Type the Output File Name and click the OK button  . |
| 11. | To view the recorded demonstration, click the View Rendered Output button  . |
| 12. | Click the Close button on the output window  . |
| 13. | Click the Save Project button  . |
| 14. | Enter the file name and click the Save button  . |
| 15. | Click the File > Close menu item. |





eXe Authoring

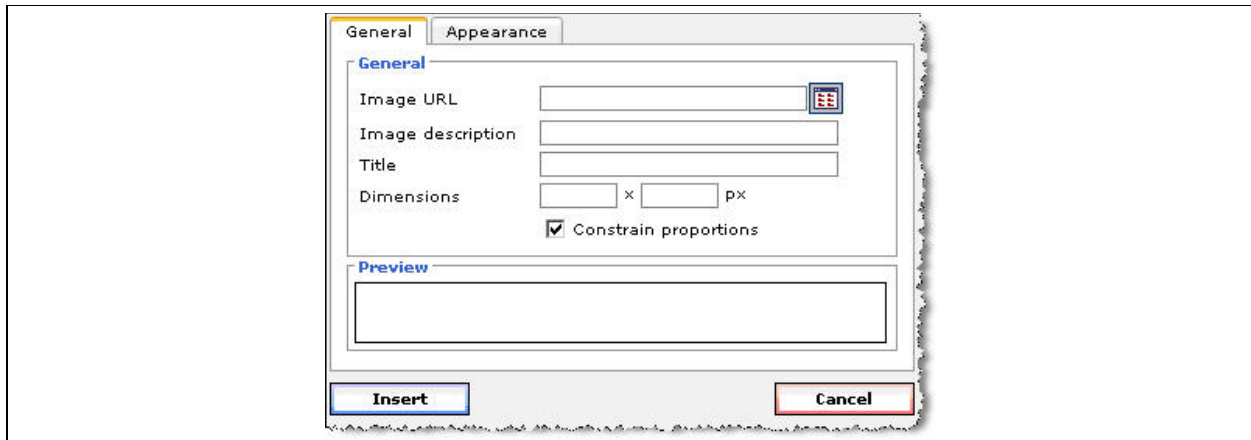
eXe is a freely available open-source authoring application to assist teachers and academics in publishing web content without the need to become proficient in HTML or XML markup. eXe allows users to:












- ◆ Use instructional devices (or iDevices) to build course content
- ◆ Format content with a rich text editor
- ◆ Embed multimedia assets
- ◆ Package and export resources in IMS Content Package, SCORM 1.2, or IMS Common Cartridge formats or as simple self-contained web pages

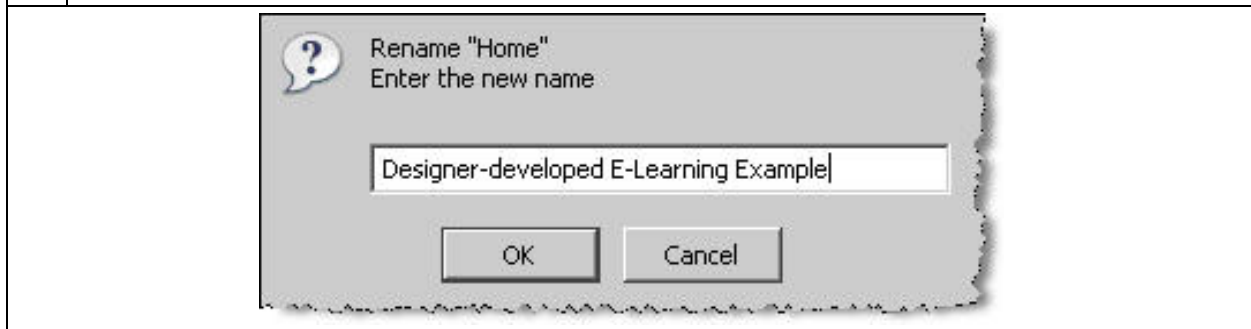
The following procedure shows you how to author an E-Learning course online using eXe:






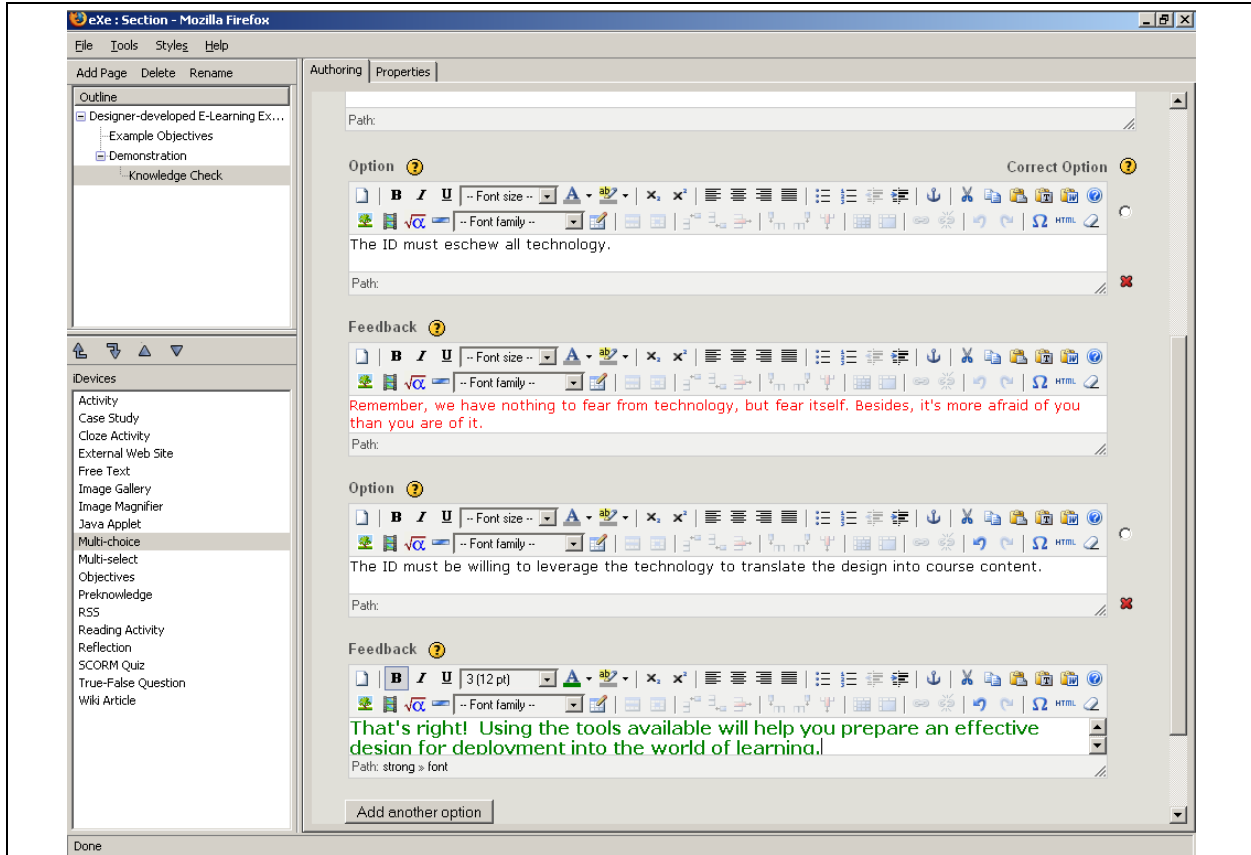
1.	Click the Free Text iDevice  .
2.	Click the Insert Table button  .
3.	Click the Insert button  .
4.	Type the text for the page in the text entry box.
5.	Click the Image button  to insert an image.










6. Click the **Browse** button .
7. Select the desired image file and click the **Open** button .
8. Click the **Insert** button .
9. Click the **Done** button to save the page .
10. Click the **Edit** button  to edit the page content.
11. To add an audio narration, position the cursor in the text box and click the **Insert Media** button .
12. Select the desired media format.
13. Click the **Browse** button .
14. Select the desired media file and click the **Open** button .
15. Click the **Insert** button .
16. Click the **Done** button to save the page .
17. To rename the page title, click the **Rename** button .



18. Type the new page name and click the **OK** button .
19. Click the **Add Page** button  to add the next page.
20. Repeat the appropriate steps to add iDevices, course content, and media assets to the course.
21. To add a knowledge check page, click the **Multi-choice** iDevice .



22. Type the question, hint, option/answer, and customized feedback in each of the text boxes.
23. To add additional answer and distracters, click the **Add another option** button 
24. Click the **Answer** radio button next to the correct option.
25. Click the **Done** button to save the page .
26. Click **File > Save** to save the course package.
27. Click the **OK** button .
28. Click the **File > Export > SCORM 1.2** menu item to create an exportable package.
29. Type the name the package file and click the **Save** button .
30. Click the **OK** button .
31. Click **File > Quit** to close eXe.
-  **WARNING:** Do **NOT** use the Window close button to close eXe. The window will close, but the eXe session will continue running
32. The packaged course  is ready to be loaded to your learning management system.

myUdutu Authoring

myUdutu™ is a free web-based tool which allows users to create highly interactive SCORM-compliant E-Learning courses quickly and easily. myUdutu provides:

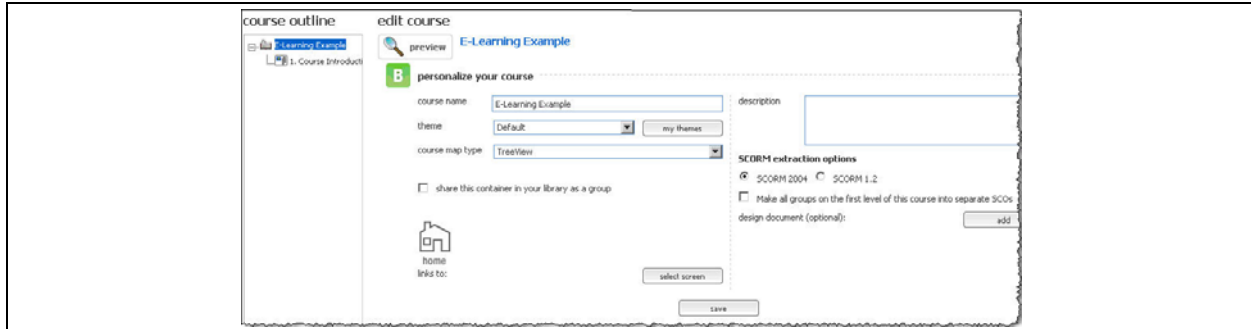
- ◆ Collaborate from anywhere
- ◆ Stencil-based authoring
- ◆ WSIWYG (What You See Is What You Get) editing so users don't need to know how to write code
- ◆ Templates to build branching scenarios



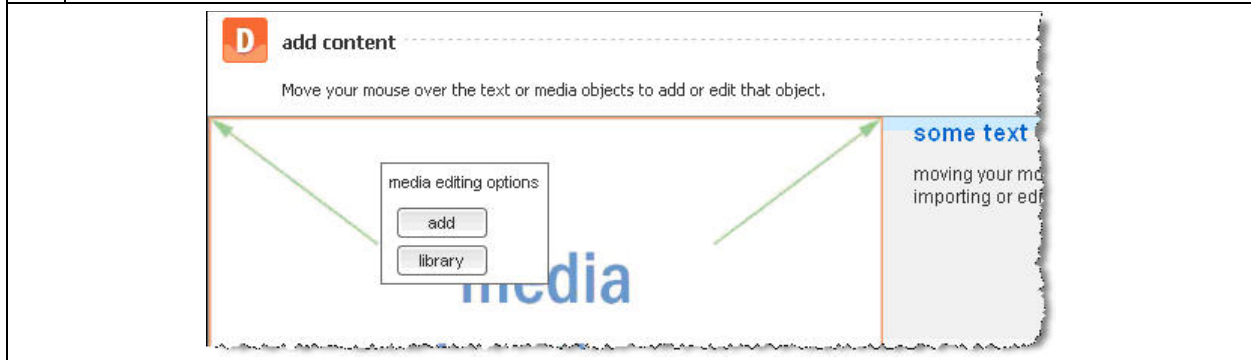
Note: myUdutu is offered by Udutu Learning Systems Inc. It is a trademarked system, and as such, is not considered an open-source application. However, because of the full-featured functionality, ease-of-use, and no-fee nature of this tool, myUdutu is included in this workbook.

The following procedure shows you how to author an E-Learning course online using myUdutu:

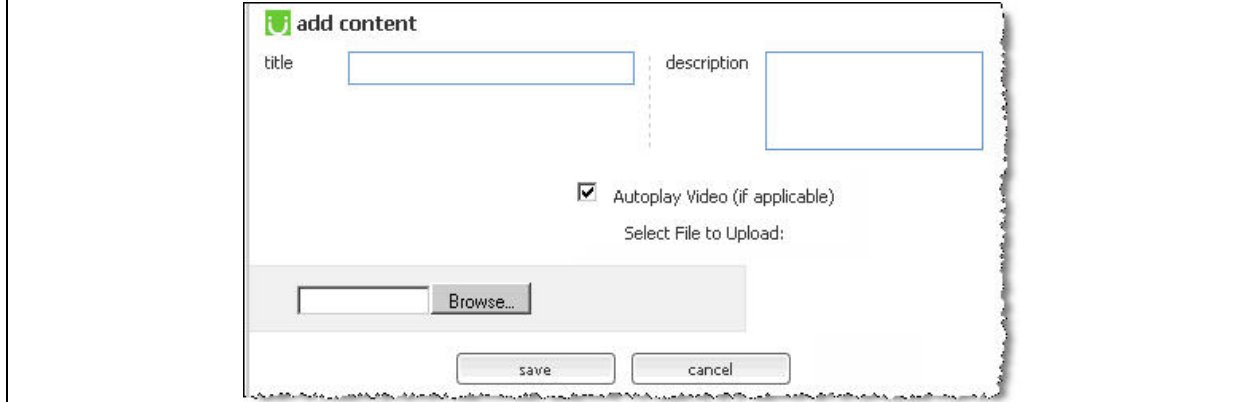
Procedure	
<p>OPTION A start a new course</p> <p>Your course name <input type="text"/> <input type="button" value="create new course"/></p> <hr/> <p>OPTION B select an existing course</p> <hr/> <p>OPTION C import an extracted course or restore an archived course</p>	<p>1. Type a course name in the Your course name field and click the Create New Course button <input type="button" value="create new course"/>.</p>



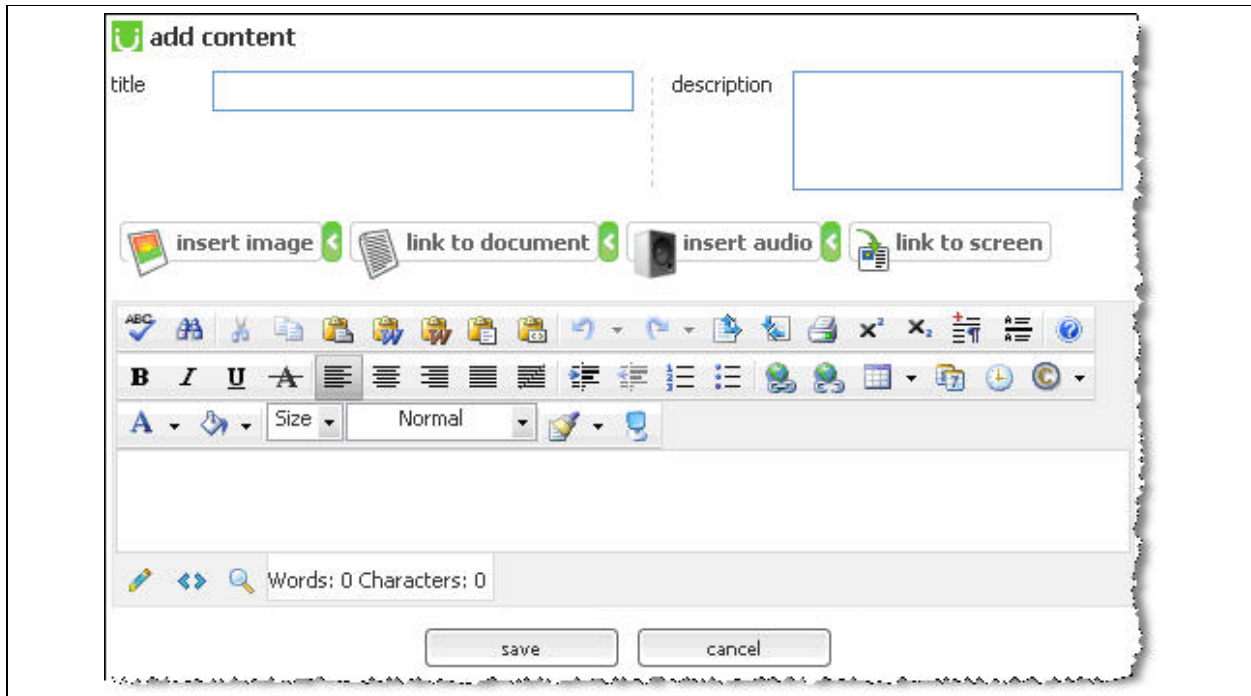
2. Click the **SCORM 1.2** radio button selection .
3. Click the **Save** button .
4. Click the **1. Course Introduction** course outline page item.



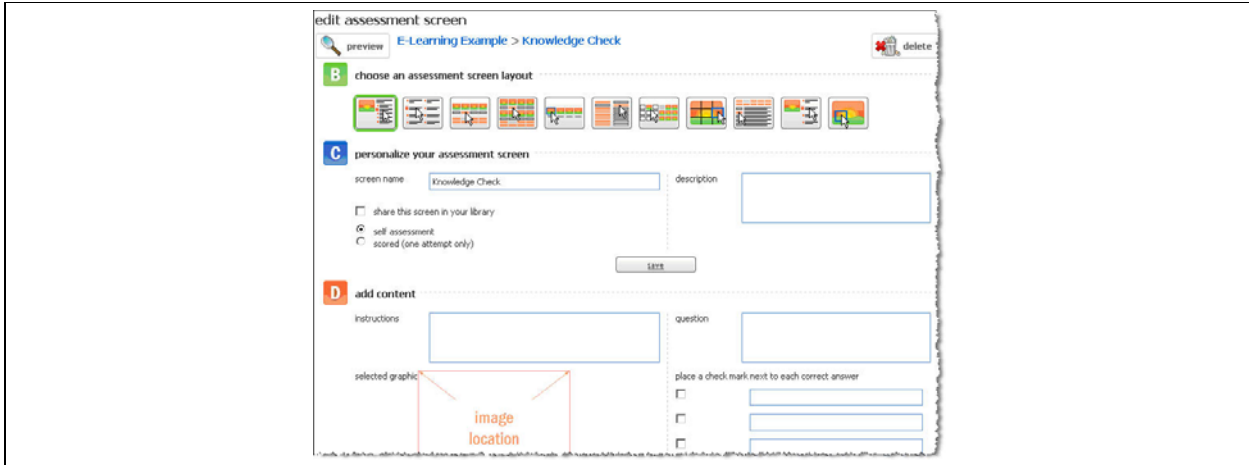
5. Roll your mouse cursor over the **Media Location** and click the **Add** button .



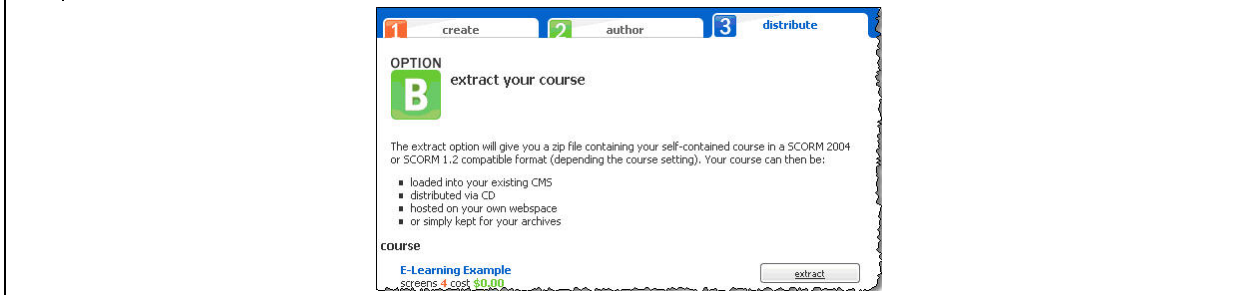
6. Type a title in the **Title** field.
7. Click the **Browse...** button .
8. Select the desired file and click the **Open** button .
9. Click the **Save** button .
10. Roll your mouse cursor over text object and click the **Add** button .



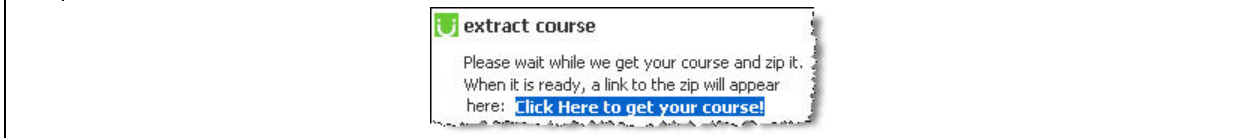
11. Type a title in the **Title** field.
12. Type the text for the page. The rich text editor allows you to do basic text formatting.
13. Click the **Save** button .
14. Click the **Add** button to add a narration audio file .
15. Type a title in the **Title** field.
16. Click the **Browse...** button .
17. Select audio file and click the **Open** button .
18. Type a transcript for the narration file in the **Narration Script** text entry box.
19. Click the **Save** button in the Add Content Editor window.
20. Click the **Save** button in Edit Basic Screen window to save the page.
21. To view how the page will appear online in a course, click the **Preview** link .
22. Click the **Basic Screen** link to add a new page .
23. Repeat the appropriate steps to add content and media assets.
24. Click the **Assessment Screen** link to add a new assessment page.
25. Type a title in the **Title** field.
26. Click the **Save** button .




- 26. Type any instructions for the question in the **Instructions** text entry box.
- 27. Type the question in the **Question** text entry box.
- 28. Type the answers and distractions for the question in each of the **Answer** text boxes.
- 29. Click the **Correct** checkbox next to each correct answer.
- 30. Type any desired customized feedback in the **Feedback** text entry boxes.
- 31. Click the **Save** button to save the page.
- 32. To publish the course, click the **Distribute** tab [distribute](#).



- 33. Click the **Extract** button .



- 34. Click the "**Click Here to get your course!**" link.
- 35. Click the **Save File** radio button Save File.
- 36. Click the **OK** button to save the packaged ZIP file.
- 37. Click **File > Exit** to close your Web browser.
- 38. The course has been packaged  and is ready to be loaded into your LMS system.

Resources

You can use the following links to access, download, and experiment with these resources that will assist Instructional Designers in developing E-Learning assets:

Application	Site URL
7-ZIP	http://www.7-zip.org/
7-Zip is a file archiver with a high compression ratio. Supports packing / unpacking 7z, ZIP, GZIP, BZIP2, and TAR formats.	
Audacity	http://audacity.sourceforge.net/
Audacity is a free, easy-to-use audio editor and recorder. You can use Audacity to record live audio and create/edit sound files (e.g., MP3, WAV).	
eXe	http://exelearning.org/
eXe is an authoring application to assist teachers and academics in publishing Web content without the need for writing code.	
GNU Image Manipulation Program	http://www.gimp.org/
The GNU Image Manipulation Program is a freely distributed piece of software for such tasks as photo retouching, image composition and image authoring.	
LimeSurvey	http://www.limesurvey.org/
LimeSurvey basically contains everything you need for doing nearly every survey with grace.	
myUdutu*	http://www.myudutu.com/
myUdutu is easy-to-use online learning authoring software that allows you to build a course very quickly, no matter where you are. myUdutu's WSIWYG online learning software makes it easy to produce media-rich, engaging online courseware without having to rely on programmers or multimedia experts.	
Paint.NET	http://www.getpaint.net/
Paint.NET is free image and photo editing software for Windows computers, featuring an intuitive and innovative user interface with support for layers, unlimited undo, special effects, and a wide variety of useful and powerful tools.	
Reload Editor	http://www.reload.ac.uk/
RELOAD Editor is part of a suite of software tools for authoring and delivery of standard-compliant learning objects, allowing users to author and transfer learning objects, in specification compliant format, between authoring and design tools, local and distributed digital repositories, and virtual learning environments. The associated SCORM Player is a cross-platform desktop application that lets you "play" and test your SCORM 1.2 package.	
SourceForge*	http://sourceforge.net/
SourceForge is the global technology community's hub for information exchange, open source software distribution and services, and goods for geeks.	
Wink	http://www.debugmode.com/wink/
Wink is a Tutorial and Presentation creation software, primarily aimed at creating tutorials on how to use software (like a tutor for MS-Word/Excel etc) by capturing screenshots and adding explanations/instructions.	

* *Web-based tool or service that is used online and is not downloaded*

ASTD TechKnowledge 2009 Conference & Exposition
Las Vegas, Nevada

PowerPoint Slides
for
**Open-Source Applications for
Designer-Developed E-Learning
(W308CS)**



Learning Objectives:

- ◆ Develop a SCORM-compliant eLearning module using free technology tools
- ◆ Calculate the cost of ownership for open-source applications
- ◆ Determine whether open-source applications are a viable fit for an organization

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Where are You From?



Why participate in this session?

- Determine whether open-source applications are a viable fit for an organization
- Calculate the cost of ownership for open-source applications
- Develop a SCORM-compliant eLearning module using free technology tools

Questions to Consider

- What is open-source software?
- Does IT fit?
- Would these apps work for me?
- How much do these apps cost?
- How do I show my message?
 - Paint.NET
 - GIMP
- How do I demonstrate steps?
 - Wink
- How do I tell my message?
 - Audacity
- How do I put it all together?
 - eXe Learning
 - MyUdutu

What are other resources?

- Primo PDF
- 7-ZIP
- OpenOffice
- GoogleDocs
- GoogleVideo/YouTube
- Picassa
- Zoho
- Skype
- Reload Editor
- LimeSurvey
- ATutor
- Moodle
- eFront
- FileZilla