

Portable Pictures Presentation

By

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Submitted to Professor Tom Wulf
the Faculty of the Information Engineering Technology Program
in Partial Fulfillment of the Requirements for
the Degree of Bachelor of Science
in Information Engineering Technology

University of Cincinnati
College of Applied Science

March 2005

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Professor Tom Wulf

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1. Description and Intended Use

Portable Pictures Presentation (PPP) utilizes Flash MX 2004 and XML to provide the ability to organize and present ~~and organize~~ pictures for the purpose of teaching. The application will utilize XML to store and organize the pictures for the presentations. They will be stored on a Hard Drive Partitioned with FAT32 to support multiple operating systems. The only requirements for the host (computer the application is run on) are a USB port and the Flash Plug-in.

A simple user interface will allow a presenter to prepare and show a presentation ~~presentation and show it~~ with minimal training. The application will use a dropdown list to access the pictures and add them to the presentation. There will also be a text box to add optional notes about the pictures that can ~~optionally~~ be displayed during the presentation.

This application will run on ~~a~~ multiple operating systems including Windows Operating Systems and Macintosh Operating Systems. It will work in a single user environment directly from the computer used for the presentation. A hard drive will be utilized to store the pictures and the application. ~~It will be,~~ formatted with a FAT32n partition. The hard drive can be internal or will attached to the computer through a USB port. ~~The application will run on the computer using the a browser on the computer to run the application.~~

The intended use of the application will be to serve as a teaching aid for art teachers. It will be used to present pictures of artwork and allow the presenter to ~~choose to~~ display additional notes about the picture.

2. User Profile

Primary User Profile:

There is one primary user of this application. The user is responsible for designing and presentation of showing the presentations. This user will have two main areas to work with in the application. These are the design (administrator) screen and the presentation ~~screen~~ (presenter) screen.

The user will use the design portion screen to create initial and edit presentations. Using a drop down box to choose ~~a~~ pictures, the user will create a sequence of images to show in the presentation. The user can reorganize the presentation from this screen and add notes to be displayed with the pictures. The user will see the presentation in a textual format listing the images and the notes about the images.

The user will also then use the presentation screen to display the images and the notes about them. This screen will allow the user to add a picture to the presentation while

presenting without disturbing the presentation. This will allow a teacher to change a presentation to fit the class and their level of involvement easily and on the fly.

Since the application will be Web based, the user will be familiar with many of the interfaces controls and appearances. This Web interface is simple to use and will be preformed with the minimum amount of controls to clutter the screen.

Additionally, a help button will be included with information about the use of the application, including as well as tips for using the application.

3. Design Protocols

3.1 Program Logical Flow

The flow of the PPP application is broken into two (2) parts.

Administrator

 Create Presentation

 Edit Presentation

 Delete Presentation

Presenter

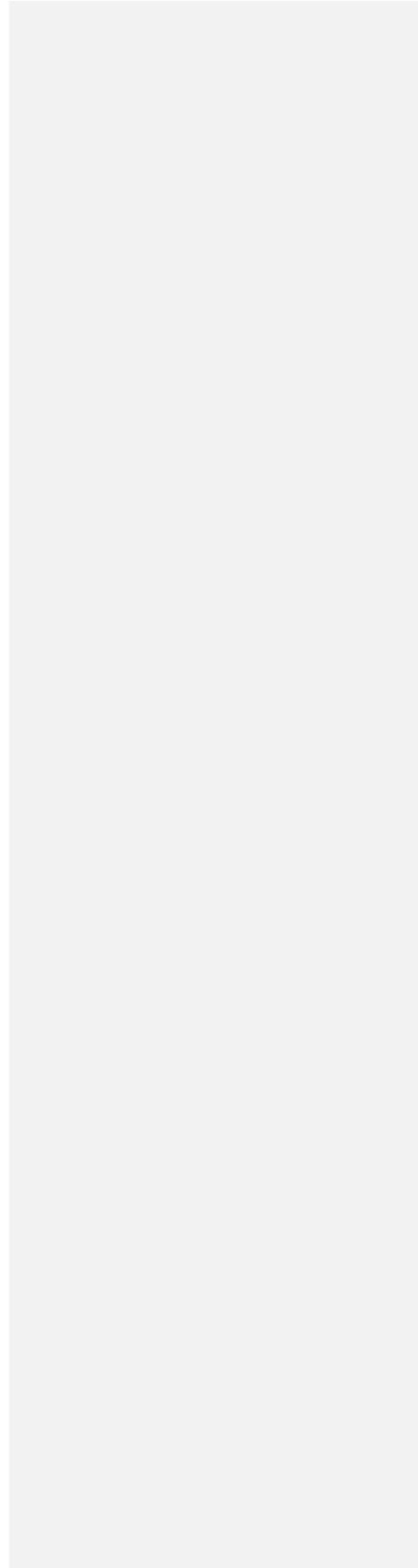
 Show Images

 This is the default step. Overridden by a Drop down Box

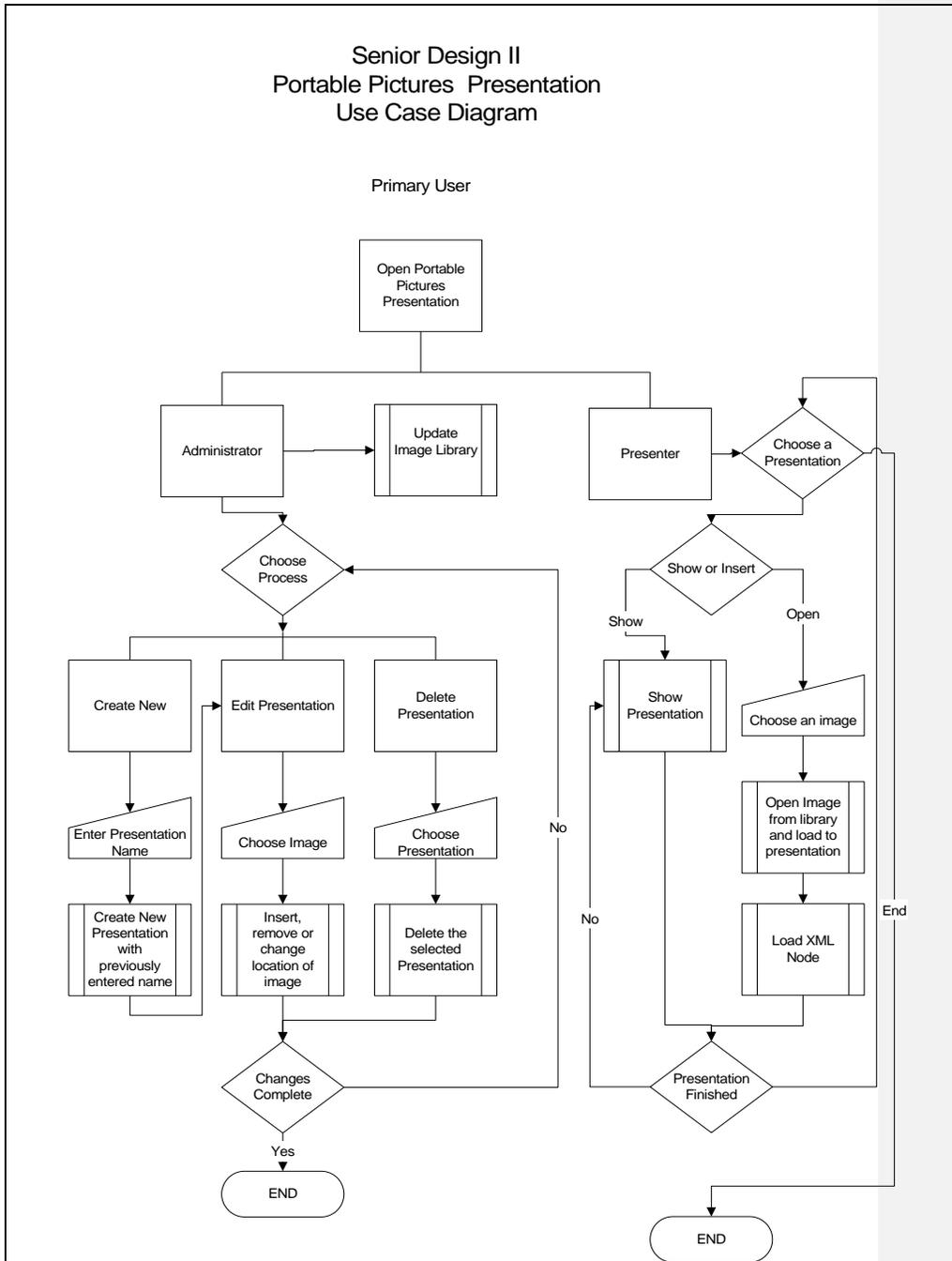
 Load and Display Image (Out of Presentation Order)

These parts are represented in Figure 1. The diagram includes the processes that are required for the functionality ~~requested~~described. The Administrator part starts by loading all images in the image library. To add images to the library, simply name them appropriately and add them to the “/images” folder, located in the same directory as PPP.

Figure 14



Senior Design II Portable Pictures Presentation Use Case Diagram



(Under Edit, it should say "Insert, remove or change the location of image" instead of "Change location of image or remove image" only. "Insert" is currently missing.)

3.2 The required elements ~~to~~ of the project

The required elements for this application are:

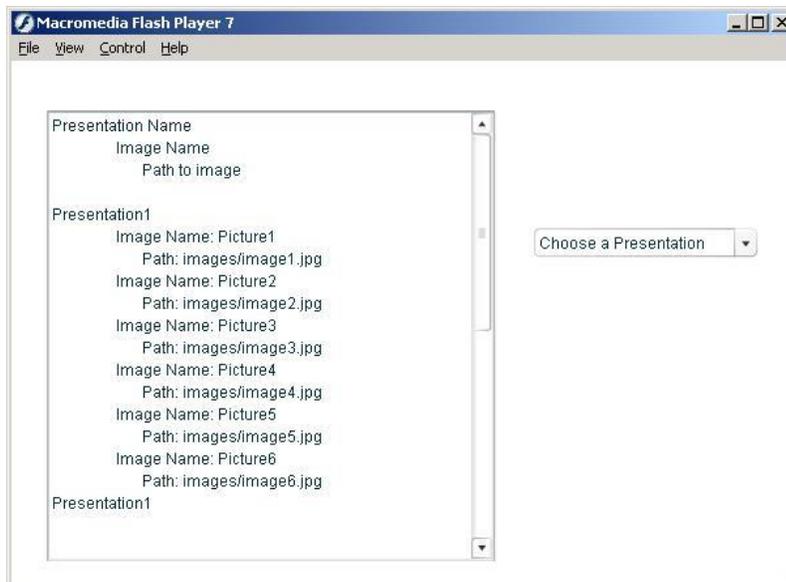
- Flash Player or Web browser with Flash Plug-in
- Hard drive
- PPP Application
- Images

3.3 Interface Design and Navigation

3.3.1 Administrator

The Administrator portion of PPP is designed to show only the required buttons and controls for the mode PPP is in. When PPP is loaded (Figure 2), it will ~~give display~~ a ~~textual representation list~~ of all saved presentations and the ~~images in them, along with a presentations~~ drop down control ~~will be visible~~ that let's the administrator select a ~~new or existing presentation~~. ~~Depending on what is chosen, the Administrator will enter one of three~~ The modes; ~~create, edit and-or delete, are chosen by the drop-down selection.~~ If the users ~~c~~hooses an ~~existing presentation, and the mode is edit or deletion~~delete mode will activate. If the user ~~c~~hooses "New Presentation," and the mode is ~~creation~~ mode will activate.

Figure 2



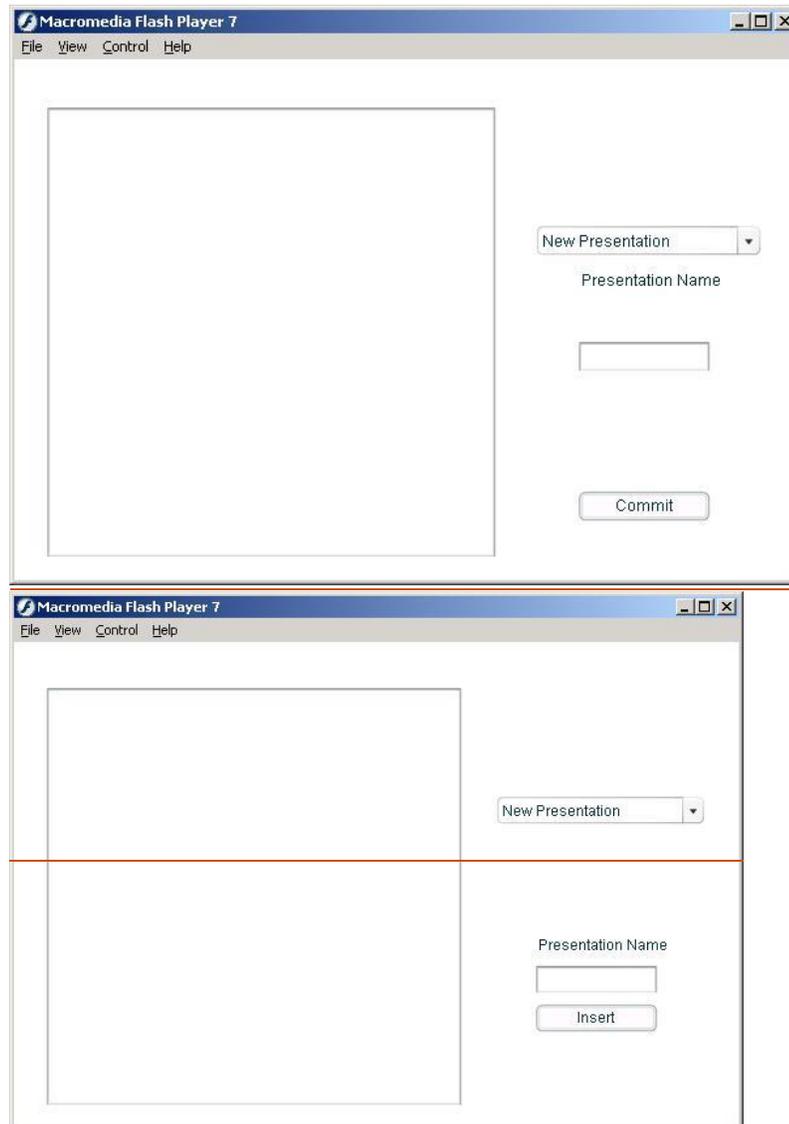
To start creating a presentation, choose "New Presentation" from the drop down box. This choice causes some additional controls to

appear. They are an input box for the new presentation's name, and a button to create the presentation. The screen is shown in Figure 3. (It looks like you have Figs 3 and 4 reversed. Fig 3 is Edit, and Fig 4 is create. In any case, you say above that the screens will only show the fields/buttons that are applicable to a given mode. But the Fig 3 = Edit screen seems to show both edit and delete mode fields/buttons. I find it somewhat confusing. Here are the specifics that strike me: (a) I don't know what "Choose from all images" means; (b) Shouldn't the before/after buttons only appear if the drop down above is to "Insert Image?"; (c) I assume I'm supposed to enter in the first text box an Image Name, but then I don't know what the "Presentation Image" drop down box is for...could one be for Insert and the other for Remove?; (d) For Insert, there's still no apparent way for me to specify the Path, unless that's what I'm supposed to enter into the 1st text box, in which case I'm not sure where to put the Image Name; and (e) I'm not sure why "Delete Presentation is shown on this screen.)

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Figure 3

Figure 2



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—To create the presentation, add a presentation name and click the “~~Insert~~Commit” button. Once this is done, PPP will ~~load~~ show the new presentation ~~to-in~~ the ~~text representation~~ list of presentations, without any images. Administration will then automatically enter the Edit mode to allow images to be added.

Once a presentation is loaded (Figure 4), either ~~after~~ as a result of the creation of a New Presentation or by choosing an existing one in the initial Administrator drop down, new controls appear. These controls are for the edit mode. The edit mode allows the user to add, insert, remove or change the location/order of images. The functionality of each is listed below. ~~to the presentation (the latter via insert/remove?). (It would be better at this point to explain the 3 edit modes in order using bullets or numbered/lettered sub-paragraphs. That would then look like:~~

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1. Insert: lets the user insert an image anywhere in the presentation. This is accomplished by ... first choosing an image from the Image Library Dropdown box. Next the user adds optional text into the box below the Image Library Dropdown. Next choose before or after an image and then choose the image to insert before or after.
2. Remove: lets the user remove any image. This is accomplished by ... choosing a presentation. In the Image Library Dropdown there is an option for Remove Image. If Remove Image is chosen, select an image from the Presentation Image Dropdown and click on Commit. This will delete the image from the presentation.
3. Reorder: lets the user change the order of the images. This is accomplished by ... ~~Do you have Reorder designed, or did you intend to just say that reordering requires that an image be added where desired and deleted from its prior position?)~~ choosing reorder from the Image Library Dropdown. The user will select an image and choose the image to move before or after.

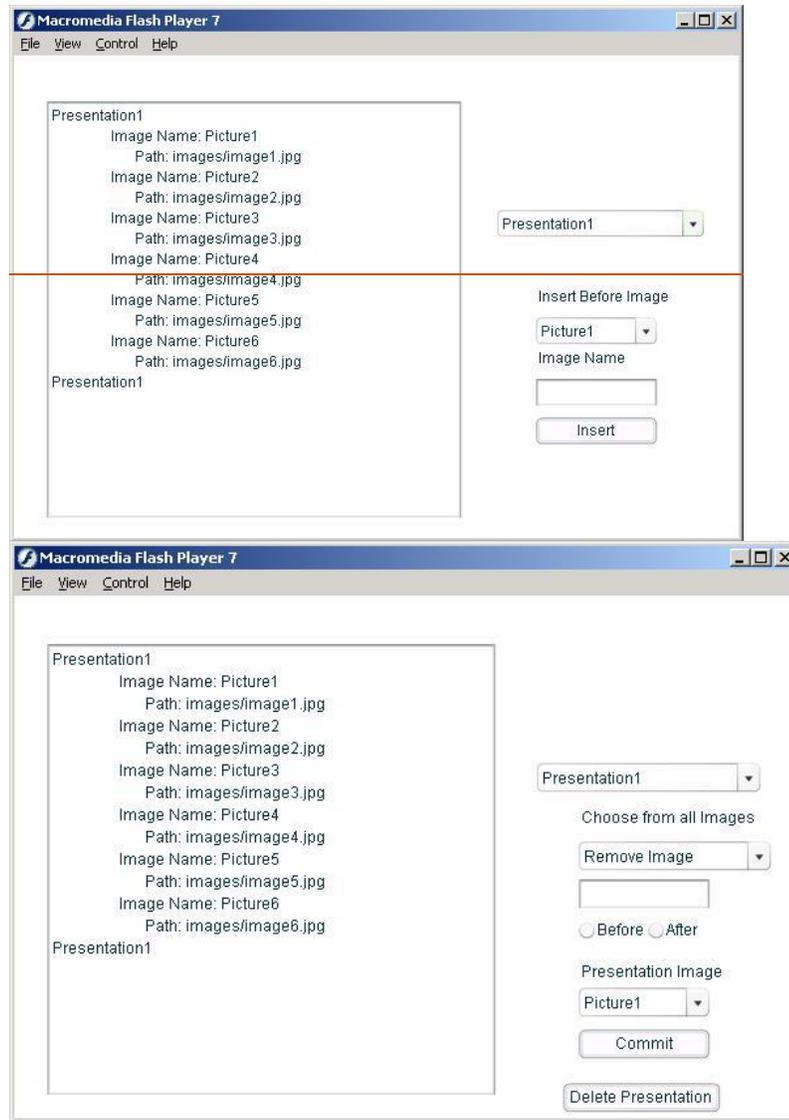
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As more images are ~~added~~ inserted, the user can append images in any order. This is accomplished by choosing ~~an~~ the image to insert "before" and entering an a new image name. Next, the user hits the "Insert" button, which adds the image to the presentation. The textual representation will update to show the new image in the presentation. ~~(Is there a way to insert an image at the end? If the only option is "insert before," then I'm not sure how to insert after the last image. Similarly, if you change it to "insert after," then you need a way to insert a new first image. You could do all this with just insert and remove by adding the first/last image twice and deleting the redundant one in the end, but a better explanation would help.)~~

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Figure 34



(From the screen shot above, I'm not clear how/where I would enter the image path since there's only a place for the image name.)

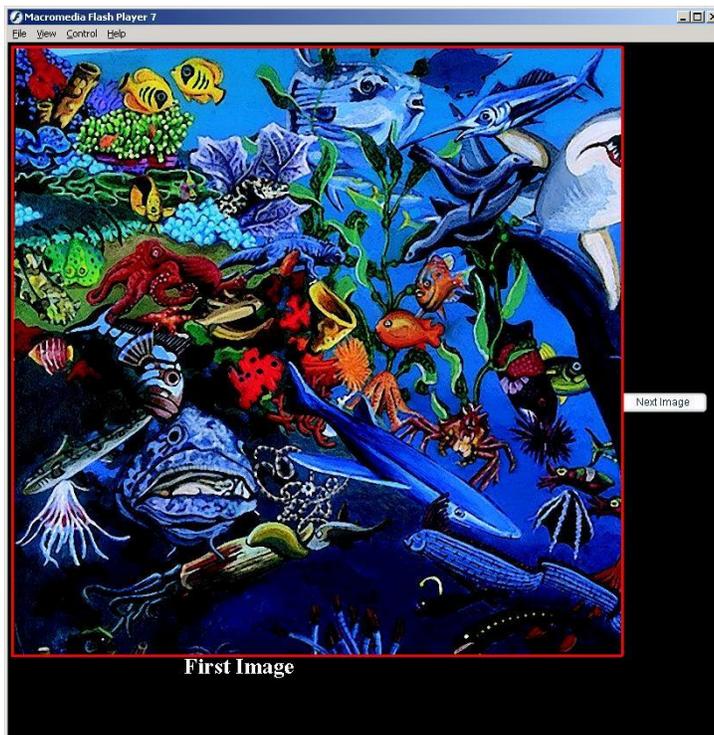
— In all modes, the presentations will be automatically saved as they are created.

3.3.2 Presentation

The presentation portion of PPP has only one control present on the screen. This control is a drop down list with all ~~images~~ images in the

images directory loaded in it. This control allows the user to show-select any image without having to leave the Presentation portion of PPP. ~~(I'm not really following this. Don't you need to describe first how the user selects a particular presentation to show (i.e. to :load" in the terms used in the next sentence? After that, then you can describe how the user is presented with a pull down menu that allows them to dynamically add images during the presentation. Right?).~~ When PPP Presentation is loaded (Figure 5), it will automatically load the first image in the presentation to the viewer. Directly below the image, the image information box shows an optional short description or other commentary ~~one~~ of the image.

Figure 45



———To manipulate the image, right mouse click on the image and choose “Zoom In”. ~~(Is there any other option to select? If not, why do I need to choose Zoom In? If there is, don't you need to describe the other options also?)~~ This enlarges the image, making it larger than the screen can show. When an image is in this state, you can drag the image to see sections of it by holding the left mouse button while over the image and moving the mouse. You can reset the size by right mouse clicking on the image and choosing either the “100%” or “Show All” option from the

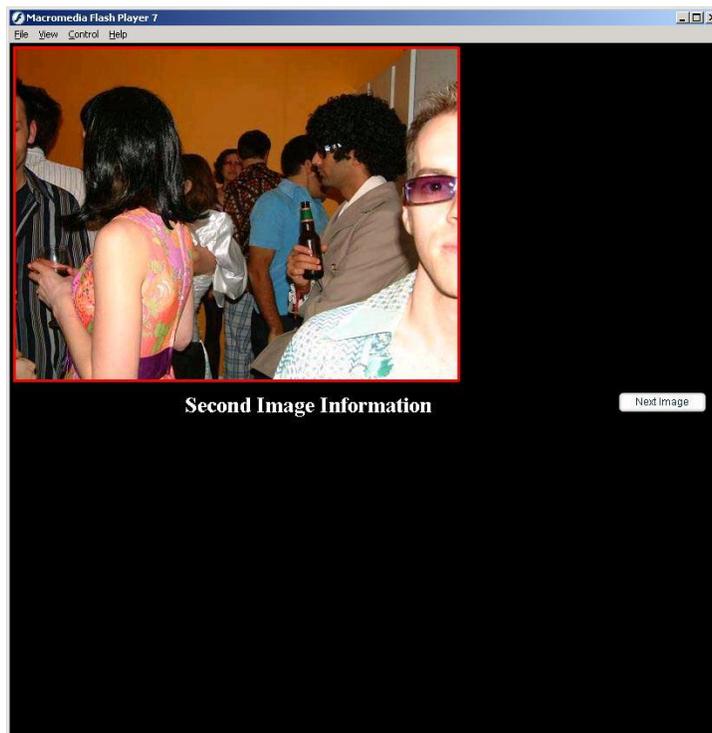
menu. (After looking at the prototype, I'm getting the impression these are Flash things. That's great, but a clearly explanation may be needed both in this doc and in the program's Help.)

Clicking on the right arrow or space bar on the keyboard will advance the presentation one (1) slide. The previous image can be viewed again by using the left arrow on the keyboard. (The screen shot shows "next image" but no right and left arrows.)

Use the drop down to select and view any image in the images directory as though it was included in the presentation in the position at which it was selected. Advancing and regressing as though the additional image was never selected are still then accomplished by using the previously defined keys. (I don't see a drop down in the screen shot.)

When a new image is loaded (Figure 6), it will be shown without Zoom, at whatever sized it happens to be, appropriately and the image description will move to directly below the image.

Figure 5



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——When the presentation is complete, the screen will go to all black to indicate the presentation is completed. At this point, the user can open another presentation or exit PPP. (How do they open another presentation if the screen is all black. Perhaps it ought to go back to the original presentation selection screen when it's complete.)

3.4 Icons and Graphical Symbols

3.4.1 Icons

Icons in the program include:

- ComboBox: Used to pick information from a list
- Button: Used to trigger an event

3.4.2 Graphical Symbols

Graphical Symbols

- Image: This is the image displayed
- Outline: This is the textual representation of the presentation

3.4.3 Color Scheme

The color scheme for the Design portion of the application will be a black background with white lettering. This will allow for the best contrast of text that may overflow onto the image being displayed. (I don't follow the point about overflowing onto the image. When might that occur?)

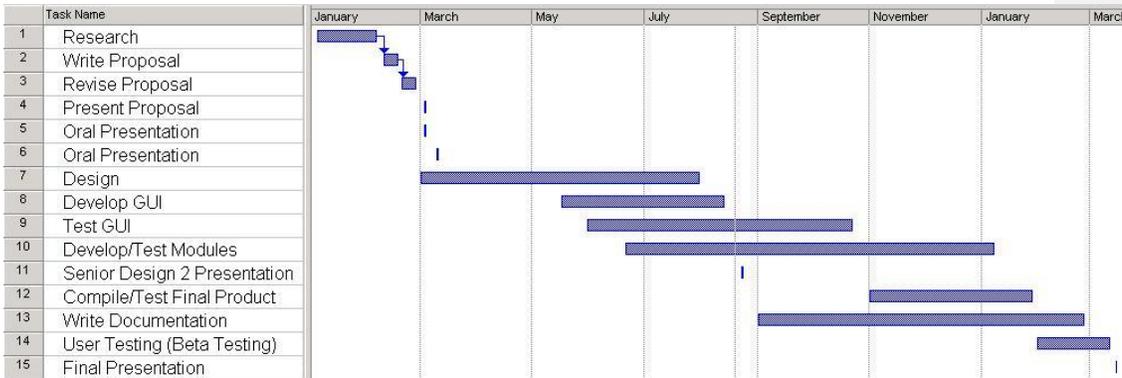
The Color scheme for the Presentation portion of the application will be a white background with black lettering. This is the color scheme most familiar in a Web browser.

3.4.4 Help

Help will be available to the user by clicking the help button. The help section will include information on using the application, as well as a "Tips" section for increasing design speed. (What do File, View and Control do? Are these native Flash menu options? Are they relevant in using PPP?)

4. Timeline

4.1 Gantt Chart



4.2 Specific Dates and Durations

Task Name	Duration	Start	Finish
1 Research	24 days	Mon 1/5/04	Thu 2/5/04
2 Write Proposal	6 days	Tue 2/10/04	Tue 2/17/04
3 Revise Proposal	6 days	Fri 2/20/04	Fri 2/27/04
4 Present Proposal	1 day	Wed 3/3/04	Wed 3/3/04
5 Oral Presentation	1 day	Wed 3/3/04	Wed 3/3/04
6 Oral Presentation	1 day	Wed 3/10/04	Wed 3/10/04
7 Design	110 days?	Mon 3/1/04	Fri 7/30/04
8 Develop GUI	65 days	Mon 5/17/04	Fri 8/13/04
9 Test GUI	105 days	Mon 5/31/04	Fri 10/22/04
10 Develop/Test Modules	145 days	Mon 6/21/04	Fri 1/7/05
11 Senior Design 2 Presentation	1 day	Mon 8/23/04	Mon 8/23/04
12 Compile/Test Final Product	65 days	Mon 11/1/04	Fri 1/28/05
13 Write Documentation	128 days	Wed 9/1/04	Fri 2/25/05
14 User Testing (Beta Testing)	30 days	Mon 1/31/05	Fri 3/11/05
15 Final Presentation	1 day	Tue 3/15/05	Tue 3/15/05

5. Budget

The budget for this application is listed in Figure 7. The items necessary for this application are the software, hardware and the images. The software should be purchased through Macromedia.com. The supplemental hardware (it's assumed the user has an appropriate computer) can be purchase at any computer electronics store, though at the time the best price was found at Microcenter.com. The images have been gathered through different teaching materials.

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Figure 6

	Item	Details	Retailer	Cost
Software	Flash MX Pro	Development Software	Macromedia.com	\$699.99

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Hardware	USB/FireWire Hard drive	Device to hold application and pictures	Microcenter.com	\$85.00
Other	High Quality Pictures	Cost of rights to pictures is free for education	Distributed with Art Teaching materials and texts.	\$0.00
Total				\$784.99

6. Deliverables

PPP has three (3) groups of deliverables: ~~The groups are~~ “Administrator” application, the “Presentation” application, ~~“Administrator” and supporting Documentation deliverables.~~ All the deliverables are listed ~~by group~~ below with specific details. (Change the order of what’s below to show Admin first since logically you start with Admin before doing Presentation.)

- Administration
 - Create presentation
 - User can create a new presentation
 - Edit presentation
 - User can add and delete images to the presentation
 - Delete presentation
 - User can delete any saved presentation
 - View textual representation of presentation
 - This text box shows the present layout of the presentation currently selected
 - Save presentations
 - Automatically updates the XML document that saves the presentations. Automatic saves will occur whenever a change is made to a presentation
- Presentation
 - Show images
 - This deliverable displays the images in the presentation
 - Zoom images
 - Allows for the image to be enlarged
 - Move focal point of images
 - When image is enlarged this allows the image to be repositioned to focus on a specific area of the image
 - Alternate visible images
 - Allows the user to display an image from the image library without exiting the presentation
 - Increment images (show presentation)
 - Shows the next/previous image in a presentation when one of event triggered by the user is fired. The triggers for this are

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the “right and left arrows” and the “space bar” on the keyboard, and the “next image” button on the screen(?).

- Documentation
 - User Guide
 - Full instructions on using Administrator and Presentation portions of PPP.
 - Help Documents
 - Includes a “Frequently Asked Question” (“FAQ”) area
 - Includes specific instructions on tasks involved in using PPP
 - A section that includes “Tips” for easy ways to use PPP

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7. Proposed procedures for Testing

Testing for PPP will be done in three (3) stages. The first two stages are done by the developer. These stages are the “Functional and Logical” and “Application” tests. The third stage is done by the end user.

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The “Functional and Logical” testing involves two parts. Testing functions is handled by passing parameters to the functions in PPP and checking for expected results. Testing classes will involve creating new instances of all classes and checking that all logical functions are executable and return proper results.

The third stage of testing is done by the end user. I have one end user that will test the application by using it as designed. This involves creating presentations, editing presentations, and deleting presentations.