HCDE

Catalyst Usability
File Manager

Spring Quarter

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Part 1: User Research

Catalyst's File Manager feature allows students to store their work free of charge in a location that can be accessed over the Internet. File Manager allows each student to store up to 300 megabytes of data.

We chose part-time students living off campus, also called "commuter students," as a target group for our redesign. Students studying remotely for all or part of the week will often download reading and turn in assignments through Catalyst. Free and secure web file storage is especially valuable to students who work remotely and do not have access to other computer resources at the university including other cloud storage applications. Part–time students also tend to be older and less computer savvy.

Members of our target group are likely to use catalyst only as needed to complete their assignments. According to Spool, the author in "Designing for the Multiple Personalities of Users," our audience would fall into the category of ring users; i.e., non- expert users. In Spool´s assessment, ring users tend to:

- Expect clearly- and concisely-explained concepts and jargon;
- Want an application with step-by-step instructions;
- Defer to the application's "expertise";
- Limit their navigation mainly to basic functions.

In order to best serve ring users, our documentation should be brief and predominantly procedural. The ability to perform basic functions such as storing and retrieving files should be intuitive and require minimal navigation.

Despite the feature's potential value, few students know about, let alone use, File Manager. We believe that this is, in part, because the name "File Manager" does not imply storage space.

The current implementation of the feature is too time-consuming and cumbersome to be inviting to ring users. Once a user has signed onto Catalyst, they must navigate through three web pages to access File Manager. The help documentation for File Manager further alienates the user because it is hidden on yet another page and fails to give a sufficient procedural explanation.

In our redesign, File Manager is renamed to clearly indicate that the feature is a file storage area. Our proposed user-interface design is geared toward ring-users. Our design minimizes the number of web pages the user must navigate to access the feature and the number of clicks required to perform basic functions such as uploading and deleting files. The help page is also rewritten to give clear procedural information.

Documentation Prototype

Our design changes:

- Chose "MyUW Cloud" instead of File Manager because survey results indicated that users thought that name best represented the tool;

- Changed icon to a cloud instead of a folder, in accordance with the name change;

- Placed File Manager in the tool filter list. In the original design, it was the only tool absent from the filter;

- Reorganized the order of tools in the filter list and in the upper right icons to group related items together;

- Eliminated the two screens where the user had to click on directories because the vast majority of students would use the default Dante directory. Advanced users can still choose other directories from the pull-down at the top of File Manager;

- Items are simply downloaded when clicked instead of bringing up a menu. This is simply quicker when all a user wants to do is download files;

- Items were given checkboxes and menu actions were reassigned to buttons above the file list. This allowed users to perform actions on multiple files at once instead of clicking a menu action for every individual file.

We plan to increase student awareness of File Manager by:

- Renaming the feature;
- Adding information about the feature to the Catalyst homepage;
- Adding information on how much storage is currently in use.

This will help increase the ease of use through improving and expanding the existing redesigning the user-interface to improve navigation. Ideally, the new user-interface will be simple enough so that most users will not need to refer to the help documentation.

Part 2: Usability Test

Please see Appendices A and B for more information regarding the usability testing.

Part 3: Usability Test Results

Usability Test Descriptions

Usability testing was divided into two parts: a survey to access needs and a paper usability student to access the effectiveness of our design.

The survey was administered remotely to commuter students at both the Seattle and Bothell campuses. The survey was used to determine if these Catalyst users:

- Are aware of the feature;
- Regularly use or have previously used the feature;
- Are able to find the current version of the feature;
- Have encountered usability-related issues with the current version of the feature;
- Would like to change the name of the feature;
- Have a need for such a feature.

We constructed a paper usability study on both the existing design and the proposed redesign. Since we did not have an electronic version of the proposed design, we chose to use a paper version of the current design as well for consistency.

Since our target group members commute to campus and attend classes only part time, it was impossible to get all of the test subjects into a uniform and controlled environment to conduct usability studies. For this reason no constraints were placed on where or when a subject was tested. Each group member found test subjects through personal contacts. The subjects were tested one at a time in either private homes or coffee shops.

The subjects were asked to perform a series of tasks on first the current design and then the proposed design. The user´s responses and the time it took the user to respond were recorded. The time it took the subject to perform each task was specified as the duration of between instruction having been delivered and the time it took the subject to point to the place on the user-interface that would correspond to a click. The test questions and results are in Appendix A following this study.

Preliminary Conclusions and Recommendations

Our testing indicates that users are able to complete tasks more quickly with the new design. They were able to complete our required tasks (uploading, deleting, and renaming files) an average of 47% faster than in the original design. The most notable time improvements were seen with finding the tool, deleting files, and determining how much space remains.

The test results not only indicate that our design is an improvement from the original design, but also points to a few additional improvements on our design as well. These include:

- Confirmation of destructive action: Our prototype does not ask users to confirm if they are sure about deleting files. From a usability perspective this is an important problem, so this is at the top of the list;

- Catalyst homepage redesign: We believe that redesigning the homepage to increase contrast and place tool items closer together will help the user find things more intuitively;

- Greying out inactive buttons: Our tests indicated that users were less likely to use checkboxes if action buttons were out in the open and clickable. For example, to delete a file, they were likely to simply click "delete" first instead of checking the box for the appropriate file. Greying out inactive buttons should encourage checkbox use, which will save the user time.

- Menu for action buttons: Placing all the action buttons under a single pull-down menu will help streamline our design and make the page less cluttered.

The updated design will require testing to determine if the changes are effective. The measure of success would be: (1) a decrease in the time it takes users to implement the required tasks and/or (2) increased user satisfaction.

Appendix A

Task Scenario

The Catalyst Group Project Assignment #2 was carried out by the following HCDE 426 students:

Meredith Binder

Janet Fisher

Laura Hancock

Kevin Pak

Initial Planning and Brainstorming

The initial project planning was carried out during informal meetings after class and off campus where the team first collectively went over individual Catalyst research; the group came to the conclusion that one feature was in serious need of an upgrade that could improve usability significantly. This feature was File Manager.

In the first stage of this project it was imperative to establish and examine all possible problems with the feature. From there, the team embarked on a concerted plan of action to create a better model. The group conducted a brainstorming session and discussed various possible solutions. The team agreed that changing the tool's name and location on the Catalyst page would be our top priorities.

It was further decided to create a survey that would help determine whether: (a) the target audience knew of the feature, (b) had used it and (c) whether the actual name File Manager implied file storage.

Next the team redesigned the user-interface and created a usability study to test ideas for improving the feature. It was determined that testing would commence on both the existing design and a proposed design under timed conditions. The team prepared paper prototype mockup versions of the new design with the use of paper, sticky notes, etc. to carry out the usability study.

Once the team had the survey, prototype, and usability tests ready, it was time to look for the right test subjects, or the proposed target audience: off campus, part-time UW students.

Survey and Usability Testing

The surveys were carried our remotely using the Survey Monkey website. The test subjects were off-campus, part time UW students from both the Seattle and Bothell campuses. Meredith Binder was responsible for collating the results. Each member of the team was then responsible for finding two to three test subjects that fit the agreed profile and testing them according to plan. Results of the usability tests were sent to Kevin Pak for initial evaluation and collating.

During this time period, information was then traded back and forth between team members in order to collaboratively confirm all results and to complete all designated assignments that would be formulated into the final assignment document.

Collaborative Writing and Document Production

The actual documentation work was divided among the four members of the group according to known skills and experience in a given area.

The designated tasks were distributed as follows:

- Meredith Bender: Assignment Part One, and (final) Usability Testing Results;
- Janet Fisher: Appendix and Editing;
- Laura Hancock: Document Design and Production;
- Kevin Pak: (initial) Usability Results and Conclusions and Recommendations.

As Laura Hancock was responsible for document design and formatting, the assigned parts were all sent to her for the final formatting and projected design work.

Survey Answers and Charts

A. Initial Survey Results

1. Do you know about the Catalyst File Manager feature?

- Never heard of it
- I know about it, but do not use it
- I know about it, and have used it
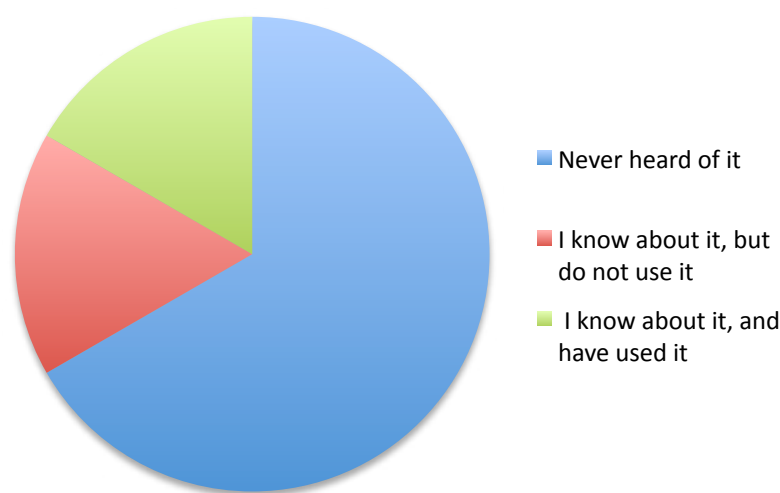
Never heard of it	8
I know about it, but do not use it	2
I know about it, and have used it	2

2. If you know about the Catalyst File Manager feature but do not use it, why not?

- Too Slow
- Too Complicated
- Don' tfeel I need it.
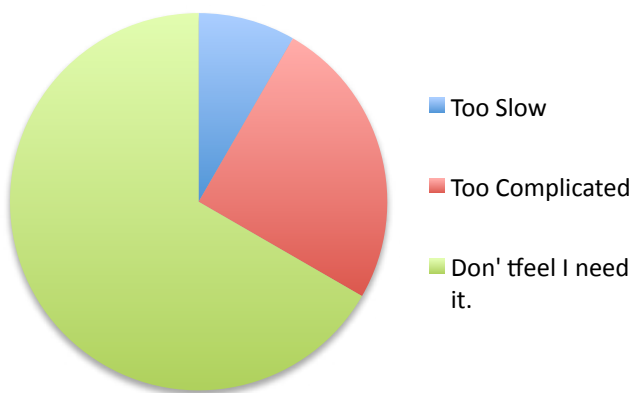
Too Slow	1
Too Complicated	3
Don't feel I need it.	8

3. What name out of those below most strongly indicates a space for students to store files?
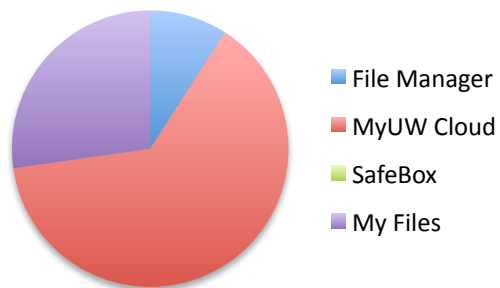
File Manager	1
MyUW Cloud	7
SafeBox	0
My Files	3

3. Where do you store and back up class assignments? (Check all that apply.)
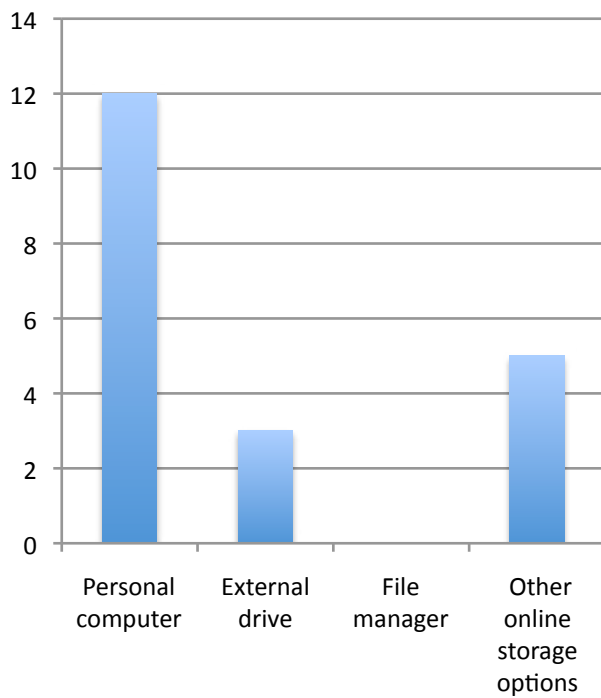
Personal computer	12
External drive	3
File manager	0
Other online storage options	5

Usability Test Results

Usability Test Questions:

The * symbol denotes that this question is used for both the existing and new designs. Some questions will only be used for the new design.

1) Open File Manager / MyUW Cloud. *

    a) Click Icon

    b) Click name

    c) No idea

2) (Use only if user clicked the name in question 1) If you wanted to find information on File Manager, what would you do?

    a) Hover over icon

    b) Click icon

    c) Click elsewhere

    d) No idea

3) (Use only if the user clicked on the name in question 1 and after asking question 2) What would you do to access File Manager?

    a) Click "Your name"

    b) Click elsewhere

    c) No idea

4) (use if icon was clicked in question 1) What would you do next? *

      a) Click File Manager/MyUW Cloud

      b) Click elsewhere

      c) No idea

5) Upload a document *

      a) Click Upload

      b) Click elsewhere

      c) No idea

6) Delete files 1 and 2. *

      a) Click on either box 1 or2 (for File Manager) or check boxes for files 1&2 (for MyUW

      Cloud)

      b) Click Elsewhere

      c) No idea

7) Rename file 3.

      a) Click on file name (for File Manager) or click box next to file name (for MyUW

      Cloud)

      b) No idea

8) How much space do you have left? *

      a) Read the number and subtract from 300 (for File Manager) Read the number (for

      MyUW Cloud)

      c) No idea

User #1		Task	Action Taken	Time (in seconds)
	Current Catalyst Version	Open File Manager	Click Name	00:03.2
		What would you do to find information on File Manager?	Click Icon	NA
		What would you do to access File Manager?	Hover over	NA
		Upload a document	Click "Upload"	00:02.3
		Delete files 1 and 2.	Click on file	00:03.5
		Rename File 3	Click file name	00:01.2
		How much space do you have left?	Read number	00:02.2
	New Prototype Version	Open File Manager	Click Icon	00:03.0
		What would you do next?	Click File Manager	00:03.5
		Upload a document	Click "Upload"	00:02.2
		Delete files 1 and 2.	Check boxes	00:02.0
		Rename file 3.	Click file name	00:01.0
		How much space do you have left?	Read number	00:00.5

User #2		Task	Action Taken	Time (in seconds)
	Current Catalyst Version	Open File Manager	Click Name	00:02.1
		What would you do to find information on File Manager?	Click Icon	NA
		What would you do to access File Manager?	Hover over	NA
		Upload a document	Click "Upload"	00:02.0
		Delete files 1 and 2.	Click on file	00:03.3
		Rename File 3	Click file name	00:01.2
		How much space do you have left?	Read number	00:02.1
	New Prototype Version	Open File Manager	Click Icon	00:02.0
		What would you do next?	Click File Manager	00:02.2
		Upload a document	Click "Upload"	00:02.0
		Delete files 1 and 2.	Check boxes	00:02.1
		Rename file 3.	Click file name	00:01.3
		How much space do you have left?	Read number	00:00.5

User #3		Task	Action Taken	Time (in seconds)
	Current Catalyst Version	Open File Manager	No idea what to do	NA
		What would you do to find information on File Manager?	Click Icon	NA
		What would you do next?	Clicked on a non-specified part of the screen	00:05.0
		Upload a document	Click upload	00:08.0
		Delete files 1 and 2.	Click on file	00:06.2
		Rename File 3	Click file name	00:05.8
		How much space do you have left?	Read number	00:09.1
	New Prototype Version	Open File Manager	Click Icon	00:06.2
		What would you do next?	Click File Manager	00:08.6
		Upload a document	Click "Upload"	00:08.9
		Delete files 1 and 2.	Check boxes	00:05.9
		Rename file 3.	Click file name	00:05.6
		How much space do you have left?	Read number	00:06.2

User #4		Task	Action Taken	Time (in seconds)
	Current Catalyst Version	Open File Manager	Click name	00:07.1
		What would you do next?	Click File Manager	00:03.2
		Upload a document	Click "Upload"	00:06.4
		Delete files 1 and 2.	Click on file	00:06.2
		Rename File 3	Click file name	00:05.8
		How much space do you have left?	Read number	00:09.1
	New Prototype Version	Open File Manager	Click Icon	00:04.2
		What would you do next?	Click File Manager	00:03.5
		Upload a document	Click "Upload"	00:04.1
		Delete files 1 and 2.	Check boxes	00:03.0
		Rename file 3.	Click file name	00:02.8
		How much space do you have left?	Read number	00:04.1

User #5		Task	Action Taken	Time (in seconds)
	Current Catalyst Version	Open File Manager	Click name	00:05.3
		What would you do next?	Clicked on a non-specified part of the screen	00:03.1
		Upload a document	Click "Upload"	00:03.0
		Delete files 1 and 2.	Click on file	00:04.2
		Rename File 3	Click file name	00:02.3
		How much space do you have left?	Read number	00:04.0
	New Prototype Version	Open File Manager	Click Icon	00:04.2
		What would you do next?	Click File Manager	00:04.0
		Upload a document	Click "Upload"	00:03.5
		Delete files 1 and 2.	Check boxes	00:03.5
		Rename file 3.	Click file name	00:03.1
		How much space do you have left?	Read number	00:02.0

User #6		Task	Action Taken	Time (in seconds)
	Current Catalyst Version	Open File Manager	Click Icon	01:26.0
		What would you do to find information on File Manager?	Click Icon	00:18.0
		What would you do next?	Clicked on directory	00:30.0
		Upload a document	Click upload	00:07.8
		Delete files 1 and 2.	Click on file	00:33.0
		Rename File 3	Click file name	00:17.0
		How much space do you have left?	Read number	00:13.0
	New Prototype Version	Open File Manager	Click Icon	00:23.0
		What would you do next?	Click File Manager	00:18.0
		Upload a document	Click "Upload"	00:21.0
		Delete files 1 and 2.	Check boxes	00:15.0
		Rename file 3.	Click file name	00:08.0
		How much space do you have left?	Read number	00:08.0

User #7		Task	Action Taken	Time (in seconds)
	Current Catalyst Version	Open File Manager	Clicked Icon	03:31.0
		What would you do next?	Clicked on directory	00:49.0
		Upload a document	Click upload	00:20.0
		Delete files 1 and 2.	Click on file	01:12.0
		Rename File 3	Click file name	00:20.0
		How much space do you have left?	Read number	00:08.0
	New Prototype Version	Open File Manager	Click Icon	00:45.0
		What would you do next?	Click File Manager	00:10.0
		Upload a document	Click "Upload"	00:27.0
		Delete files 1 and 2.	Check boxes	00:18.0
		Rename file 3.	Click file name	00:11.0
		How much space do you have left?	Read number	00:09.0

User #8		Task	Action Taken	Time (in seconds)
	Current Catalyst Version	Open File Manager	Clicked Icon	02:16.0
		What would you do next?	Clicked on directory	00:19.0
		Upload a document	Click upload	00:20.0
		Delete files 1 and 2.	Click on file	00:04.0
		Rename File 3	Click file name	00:17.0
		How much space do you have left?	Read number	00:12.0
	New Prototype Version	Open File Manager	Click Icon	00:58.0
		What would you do next?	Click File Manager	00:2.0
		Upload a document	Click "Upload"	00:19.0
		Delete files 1 and 2.	Check boxes	00:18.0
		Rename file 3.	Click file name	00:11.0
		How much space do you have left?	Read number	00:13.0

User #9		Task	Action Taken	Time (in seconds)
	Current Catalyst Version	Open File Manager	Clicked Icon	01:13.0
		Upload a document	Click upload	01:30.0
		Delete files 1 and 2.	Click on file	01:13.0
		Rename File 3	Click file name	00:23.0
		How much space do you have left?	Read number	00:28.0
	New Prototype Version	Open File Manager	Click Icon	00:50.0
		Upload a document	Click "Upload"	00:19.0
		Delete files 1 and 2.	Check boxes	00:10.0
		Rename file 3.	Click file name	00:26.0
		How much space do you have left?	Read number	00:25.0

User #10		Task	Action Taken	Time (in seconds)
	Current Catalyst Version	Open File Manager	Clicked Icon	00:50.0
		Upload a document	Click upload	00:30.0
		Delete files 1 and 2.	Click on file	00:5.0
		Rename File 3	Click file name	00:39.0
		How much space do you have left?	Read number	00:26.0
	New Prototype Version	Open File Manager	Click Icon	00:40.0
		Upload a document	Click "Upload"	00:18.0
		Delete files 1 and 2.	Check boxes	00:24.0
		Rename file 3.	Click file name	00:45.0
		How much space do you have left?	Read number	00:24.0