XRC Wizards

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Awesome milestone. I'd love to get a copy. Great job.
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Introduction:

In order to produce an effective user interface, our team conducted a low-fidelity chauffeured test. The purpose of conducting this test is to demonstrate the behavior of our interface early in development, and test design ideas with real users. Low-fidelity chauffeured testing maximizes the number of times we are able to refine our design before we commit to code. The goal is to get through as many iterations as we can during the design phase, because each iteration allows us to gather feedback crucial to the improvement of our interface. Usability testing gives our team a sense of what the real issues are and focuses on those issues that will affect the success of our user interface. In addition, our low-fidelity chauffeured test allows the entire team to collaborate on the design rather than funneling all the input into one or two programmers. With this prototype being so easy to create and modify in comparison to the actual coded product, there is less invested effort to defend. As a result, our team is more flexible and willing to try new ideas. Utilizing data that we have obtained from the usability tests rather than our opinions, chauffeured testing assists our team in identifying, addressing, and prioritizing all the issues remaining in the product. In conclusion, low-fidelity chauffeured testing allowed our team to manage our risks by focusing on them earlier in the design, while there was still time to make changes and build a better product. Evaluating the results and iterating based on user feedback will help us to ensure that our design model is consistent with the user’s mental model.

Prototypes

Due to space limitations, this section will quickly walk the reader through the completion of each of the three scenarios (step-by-step). At the end of each scenario walkthrough, a brief discussion will be provided to illustrate why we made specific design decisions. The basic design of our low-fidelity prototype consists of separating the application from the Web browser; thus, our interface will have its own set of controls to print, cancel, return to a previous page, and logout.

Scenario 1:

Our first scenario asks users to login as an employee of First Magnus Financial and create a new XRC account. Upon entering the Web site, users are given the choice between “XRC Customers” and “Disaster Recovery Employee” (refer to Appendix L1; Figure A). As specified in our scenario, the user is the account representative for First Magnus. Based on this, they choose “XRC Customer.” Entered into the XRC Customer portion of the Web site, users should choose the option “If you want to create a new account, click here” (refer to Appendix L1;...
Once the user selects this option, they are taken to a “New Customer Account Information” page (refer to Appendix L1: Figure C). Users must then enter their company name and make up and confirm a password that is unique to their account. A drop down menu is then utilized to select the industry their company falls under. Once this “General Login Information” is entered, users are required to provide their “Primary Contact Information,” such as the name, address, phone, etc. of their primary company representative (the person responsible for managing the XRC Account within First Magnus). Users also have the option to enter secondary contact information, but for the purposes of this scenario, that step is unnecessary. When users have completed entering all the required information, they click “Save and Continue” at the bottom of the screen. If all fields are filled in correctly, a dialogue box appears asking “Are you sure you want to save these changes and continue?,” with the options of “Yes,” “No,” and “Cancel” (refer to Appendix L4: Figure A). The user selects “Yes” and proceeds to the main page of First Magnus Financial (refer to Appendix L1: Figure D). At this point in time, the user does not need to take any further action, and selects “Logout” to complete the scenario.

Explanation of Scenario 1:

Our group chose to use large, hyper-linked buttons to navigate through the interface in order to keep the look and feel as easy to use as possible. Rather than using fancy icons or graphics that would sacrifice the simplicity and professionalism of the site, we decided to use simple buttons with hyper-linked text. This simplicity is evident on the first page where we limit users to 2 choices (XRC Customer and Disaster Recovery Employee) in order to reduce the error rate by users (refer to Appendix L1; Figure A). Next the user enters the login page where we chose to have the “Login” and “Password” options first (refer to Appendix L1; Figure B). Since users will be logging in more often than they will be creating a new account, it made sense to order the options this way. A suggestion made by someone in class during our poster session brought it to our attention that we originally had the opposite, but that it was an industry standard to have the login first and the creation second (refer to Appendix H). Users type their login name and password in single-line text boxes because they are short strings of text and do not need full boxes.

For the New Customer Information page, we again chose to use single-line text boxes because of the relatively short character strings needed (refer to Appendix L1: Figure C). Also, standardization requirements call for single lines of text to ensure that the correct information corresponds with the correct field and this style matches the mental model of most users. The fields of “Industry” and “State” are drop down menus since there are a finite number of choices to be made. Another reason Industry is a drop down menu is because we need to limit the
amount of choices a company has to categorize themselves so there will be consistency. For example, one bank may enter themselves in the “banking” industry; while another may enter that they are in the “financial” industry. Typographical errors are another reason for a drop down box. The drop down menu is also used to select a state to ensure that all of the correct abbreviations are used.

The phrase “All Fields Required” is denoted in red under Customer Account Information and Primary Contact Information. Many sites also put red asterisks next to required fields, but since our page has so many required fields, it is not practical to put a red asterisk next to every field. If a field is left blank the system will recognize it and prompt the user to go back and fill it in. Once the required information has been entered, the “Save and Continue” button implies that the customer must select it in order to finalize the setup and save the information to our database.

Scenario 2:

In scenario 2, users are once again asked to act as the customer account representative for First Magnus Financial in order to add a user to the hardware account group. Identical to scenario 1, the users select “XRC Customer” upon entering the Web site (refer to Appendix L2: Figure A). Already established as a customer, the user enters their login and password and selects “Login” (refer to Appendix L2: Figure B). Now at the main page of First Magnus Financial, the user should select “Account Groups” from the taskbar on the left side of the screen (refer to Appendix L2: Figure C). Selecting this takes the users to a page in which they must first “Select An Account Group” (refer to Appendix L2: Figure D). After a drop down menu is utilized to select Hardware as the account group, the user must click on the button entitled “Manage Account Group” to add a new user (refer to Appendix L2: Figure D). The “Manage Hardware Group” page contains a list of all the names and emails of people that are already included in the Hardware Account Group for First Magnus. The user must click on “Add New User” to add Steven Johnson (refer to Appendix L2: Figure E). Once the information has been entered, users click on “Save and Continue” to officially add the new user (refer to Appendix L2: Figure F). The added user is displayed on the main page with the rest of the users in the hardware group (refer to Appendix L2: Figure G). Upon noticing that the added user’s email address is incorrect, the user must select the radio button located next to Steven Johnson’s information and choose “Modify,” taking them to the “Modify This Hardware User” (refer to Appendix L2: Figure H). Users simply correct the email address and select “Save and Continue.” This returns the user to the
main “Manage Hardware Group” screen to view their modifications and “Logout” to complete this scenario (refer to Appendix L2: Figure I).

Explanation of Scenario 2:

When customers log into their page, the title of their main page will correspond to their company name. The page for First Magnus Financial reads “First Magnus Financial” and their company logo appears at the top of the toolbar (refer to Appendix L2: Figure C). We felt that this created a sense of familiarity and customization that the user would like and would create a more amicable user environment. The toolbar itself is colored with a blue background to stand out to the user as the main focal point of the page. The toolbar method of navigation was chosen because it contains all of the critical functions that users need and it allows them to easily access other parts of the page. When the customer begins to add the new user to an account group, they are again met with a single-line drop down menu to limit which group they can be placed in, similar to “Industry” in scenario 1 (refer to Appendix L2: Figure D). For our purposes, choices are limited to Hardware, Software and Network.

Once the user selects a group, there are three buttons below the box to serve as action buttons. The actions are “View Account Group,” “Manage Account Group,” and “View Notes” (refer to Appendix L2: Figure D). Once the action is selected (in this case “Manage Account Group”), the user encounters a large table similar to a spreadsheet that lists all the names of users in the group (refer to Appendix L2: Figure E). The box is set to a specific size, so a scroll bar is afforded to see the other names that may not be visible at first. Each name is accompanied with a radio button to its left that allows users to select which user to “Modify” or “Remove.” Radio buttons were a necessary addition because we wanted to restrict users from trying to modify more than one user at a time. Check boxes were an alternative, but they allow for multiple functions to be performed which cannot be allowed with this task. Again, user information is displayed in a single line text box and the save and continue option exists for this task as well.

Scenario 3:

In scenario 3 the user is asked to switch roles and become an IBM Disaster Recovery employee. Specifically, the user must select “Disaster Recovery Employee” upon entering the Web site (refer to Appendix L3: Figure A). This selection prompts them to enter their login and password without the option to create a new account (refer to Appendix L3: Figure B). This is because only a select number of employees will be able to access this confidential information. After clicking “Login,” a screen appears with search options and a large scrollable table
that lists all existing customers, their industry, and their primary contact name and email address (refer to Appendix L3: Figure C). In order to obtain the specific information about Target that their manager has asked for, the user can either find Target in the list of customers, or use the search tool to do so. Once found, Target is clicked on and the user is hyper-linked to their primary contact information page (refer to Appendix L3: Figure D). From this page, the user is able to obtain contact information about Target and the account’s creation date. The user may now return to the main screen by clicking “Cancel.” In order to print the alphabetized report on existing customers listed in the same industry as target (as required by the scenario), a drop down menu for the “Search By” button is used to select the category to search by. This drop down menu restricts the users to search by specific categories such as name, date, industry, etc. In this scenario, the user selects “Industry” and in the “Search For” box located next to the drop down menu, the user must specify the value “Retail.” In order to obtain the list of all XRC customers in the retail industry, the user must click the “Search” button (refer to Appendix L3: Figure E). Once this list appears, the user selects the “Print” option to print the alphabetized list, and proceeds to “Logout.”

Explanation of Scenario 3:

Just below the title on the main employee page (refer to Appendix L3: Figure C) are two options to search: Search By and Search For. We included a search button to give the user control and freedom. Knowing that the ability to search for specified information is a must for Disaster Recovery Employees, including the search option in our design imperative. We placed these at the top of the screen because employees often know exactly what they are looking for and giving them the functionality to efficiently complete tasks is imperative to our success. The large scrollable table in the middle of the screen contains a list of current customers, each accompanied by a button that allows the user to access further information regarding each customer. We utilized these buttons to keep the layout of our screens consistently simple and clean. After a user completes his or her search, the scrollable table only displays the companies resulting from the search (refer to Appendix L3: Figure E). Once again, this keeps the look and feel of our interface as simple as possible without cluttering the screen with unnecessary information. In conclusion, we feel that our choices give users the most flexibility in gathering customer data.

Method:

Participants:

As noted in Milestone II, the potential users of our system, XRC Customers and IBM Disaster Recovery Employees, are dispersed across the world. However, a variety of limitations forced us to find three volunteer test
participants at the **IBM** site in Tucson. With this being the only environment our group is able to observe, our hope is that it will give us an accurate depiction of the potential users in which our user interface is directed. Thus, our low-fidelity chauffeured test included two full-time employees and one supplemental employee from the Business Continuance (Disaster Recovery) Department at IBM. Laura Kern was the first test participant. In selecting Laura, we wanted to ensure that both males and females were represented, maintaining consistency with our user profile. In addition, Laura’s responsibility of maintaining copy services’ customer information over the past two years is similar to one of the main functionality features of our proposed user interface. Our next test participant, Spencer Logan, is a supplemental co-op representing the younger user working towards a bachelor’s degree. In addition to his age and educational background, we selected Spencer because his current job entails manually completing what our user interface will automate. Our last test participant, Jim Bridges, is the former Program Director for the Business Continuance Department. Accompanying his representation of the older user, Jim was selected for his vast knowledge and experience with copy services products, specifically his interest in a user-friendly interface for the XRC product. For signed consent forms, refer to Appendix F.

**Apparatus:**

In order to perform our low-fidelity chauffeured test, we utilized a variety of materials, such as: cardboard, poster-board, magnets, an assortment of special construction paper, rubber cement for gluing paper, contact adhesive and sealant for gluing the magnets, scissors, markers, colored pencils, etc. These materials were used to develop the screens for our interface. The prototype stand was built using a radial saw, pieces of cabinet-wood, and a few screws (refer to Appendix M). Prior to gluing a piece of 19 in. x 17 in. cardboard to the completed stand, we glued magnets on the entire surface of the cardboard. Once we completed constructing our user interface screens, small pieces of magnets were glued to their backs. This enabled the screens to easily be placed onto and removed from the magnetic baseboard while participants were maneuvering through a scenario. We performed the tests in a conference room located at the IBM facility. The room contained four large tables and several chairs, which was more than sufficient to perform the user tests as well as provide ample space for our group members to play their predetermined roles.

**Scenarios:**

The scenarios were slightly revised from Milestone III (refer to Appendix E).

**Procedure:**
The group worked well together and each performed different roles during the tests. John Campbell greeted each test participant by reading a greeter script aloud (refer to Appendix A), which provided background information on the project and the purpose of the test. After first shaking the test participant’s hand when they entered the room, John stood across the table and read his script. Jennifer Hunt, as the facilitator of the group, was responsible for giving the user instructions and making sure everything got done on time. Jennifer read the Facilitator/Demo Script (refer to Appendix B) to the participant, which demonstrated how the participant should interact with the prototype and encouraged the user to express his or her thoughts during the test. Following this, Jennifer handed the test participant the scenario instructions (refer to Appendix D). After the participant read the instructions, Jennifer answered any initial questions before the tests began. While the scenarios were handed to the participant one-by-one (refer to Appendix E), Jennifer continued to elicit the user’s thoughts without influencing his or her choices. After all three scenarios were completed, Jennifer debriefed each participant by gathering their opinions (refer to Appendix C) and John recorded their responses (refer to Appendix K). Finally, each participant was given a posttest questionnaire to complete (refer to Appendix G).

During the test, Marc Fariss acted as the “computer.” Arranging the prototype to simulate user selections and choices, Marc knew the application thoroughly and sustained the illusion that the paper prototype behaved similar to a real computer. He did this without explaining anything other than the behavior of the interface. Simultaneously, Steven Gebing and Ryan Keefer played their role of observers. They recorded all notes and comments made by the user. In doing so, tables were used to effectively and efficiently record the raw data from the user tests (refer to Appendix I). Each test participant was graciously thanked for their time at the completion of their test. Once all three tests were conducted, our team met to merge the logs of critical incidents recorded by Steven and Ryan (refer to Appendix J). The purpose of this was to prioritize and give severity ratings to the problems we observed.

Test Measures:

As users completed the scenarios, we observed facial expressions as well as their thoughts being expressed out loud. We looked for any and all feedback from each participant, whether it was positive or negative. Specifically, we focused on faces of confusion, as well as positive statements about what they liked and negative statements concerning what they disliked about the interface. Notes were also recorded regarding participants
correctly or incorrectly completing a scenario. If a mistake was made, detailed notes of the user’s actions at that point in time were recorded. Particularly significant to our future design decisions, we attempted to measure aspects of the interface they found easy to use and those aspects of the interface they found difficult to use. We were also looking for feedback on the taskbar and its ease of use for accessing additional functions. In addition, we measured a number of qualities such as: aesthetics, navigation, testing, and the user’s overall experience. The results of our test measures are represented well in our completed posttest questionnaires (refer to Appendix G).

**Results:**

The tests conducted using our chauffeured prototype provided valuable feedback regarding the design of our user interface. After gathering and organizing the results of these tests, summarizing the critical incidents and identifying what our users liked and disliked is essential to improving our initial design. Furthermore, the results of our chauffeured usability tests will be incorporated into design changes for the next iteration of our prototype.

Many incidents occurred during the usability tests that allowed our group to judge the effectiveness of our interface. Within the scope of these results, we have chosen to focus on those incidents that are most critical to improving our design. Each test scenario required the users to interact with our chauffeured prototype so that the various aspects of our interface design could be viewed. With regards to the initial screen of our prototype, each user appropriately selected the “XRC Customer” and “Disaster Recovery Employee” buttons in choosing to proceed through the application (refer to Appendix L1: Figure A). After completing this, users where taken to the main screens of the two sections. Of the most significant to our design, 2 out of 3 users incorrectly tried to login to the system before creating a new user account. However, once users navigated to the new customer account form, they were able to quickly and easily fill out all the required fields. Along with this, the users recognized the “Save and Continue” button and each successfully completed the creation of their new customer accounts.

Within our second scenario, some users showed slight confusion in selecting the appropriate button on the taskbar. That is, each user seemed to contemplate between choosing “Account Groups” and “Modify User Account” in order to begin adding the user to an account group (refer to Appendix L2: Figure D). Two users were also hesitant in selecting the drop down box to indicate the appropriate account group with which to add a user. Along with this, our users showed some uncertainty in choosing the “Manage Account Group” button to proceed with the rest of the scenario. In terms of adding the account group user and modifying their email address, no problems were evident.
The third scenario presented our users with the Disaster Recovery section of our prototype. Users seemed slightly confused with the “Search by” and “Search for” aspects of the design (refer to Appendix L3: Figure C). With this in mind, one of our users tried to search for Target immediately, not realizing that no “Search by” criteria had been selected. When prompted to find a list of companies in the same industry, our users correctly used the drop down box next to “Search by” to specify “Industry.” Along with this, the users clicked on the “Search” button without hesitation after indicating the appropriate criteria. Another critical incident we observed is that one user tried to immediately “Print” the list once they saw Target on the screen. This user did not recognize the button next to each customer on the list as a way to navigate to the customer detail section of our prototype. After each user correctly used the search options to create a list, they were able to quickly “Print” the list to complete the scenario successfully.

While observing incidents during the tests gave us visual feedback, suggesting the users think aloud and complete posttest questionnaires allowed our group to determine the likes and dislikes about our prototype design (refer to Appendix G, I, J, and K). Primarily, each participant liked the simplicity and usability of the interface. More specifically, the users indicated that the design was clean and easy to use, unlike the more complicated Web sites they deal with on a daily basis. Each user expressed their positive feelings towards the additional functionality the toolbar provided. Users also liked the overall organization and appearance of the interface. The information was organized in a consistent manner and no single screen displayed too much information.

Although our participants liked most aspects of the design, they did have some problems with several important areas of the interface. First, our users did not like the empty drop-down boxes because without any information inside, the boxes looked confusing. The users also had problems locating the buttons on the customer list for scenario 3 (refer to Appendix L3: Figure 3). It is important to note, each user explained that if the prototype had been a regular computer screen, they would have been able to recognize the buttons more easily. The last problem users had with the prototype was the terminology. More specifically, the users expressed concern that the words on some of the buttons were misleading. Due to the industry standards that our users are exposed to, the terminology on some buttons did not fit the user’s mental model of what the buttons were supposed to do.

Throughout our usability testing, the users provided our group with several suggestions for improving our interface design. On the initial screen of our prototype (refer to Appendix L1: Figure A), one user thought the “Disaster Recovery Employee” button might be a subset of the XRC Customer portion of the prototype. With this
in mind, this user suggested we change this button to say “IBM Disaster Recovery Employee.” As a result, there would be no confusion between the two sections of our interface. Along with this, several users suggested we change the “Login” field on the login screen (refer to Appendix L1: Figure A). They suggested we change this to read “User ID” so that users will more instinctively know what to put into the field. Furthermore, the field would then closely resemble industry standards. Two users also suggested that we rename the “Manage Account Group” button to be “Modify/Edit Account Group” (refer to Appendix L2: Figure D). Like the previous suggestion, the users felt this would be more effective in matching the terminology used in most IT environments. Related to this, users suggested that the “cancel” buttons might be misleading. They felt some users might not use this button to get back out of a screen. In regards to all the drop-down boxes within our prototype, each user suggested we default the boxes to have a choice pre-selected. This will result in users easily recognizing the purpose of the drop-down menus. The last suggestion the participants offered was that our prototype include a “Print” feature within the customer detail screen (refer to Appendix L3: Figure D). Instead of having to manually write down the information scenario 3 required, one user recommended adding a print option to this screen. As a result, users could quickly print the screen and move on to other portions of the application.

**Discussion:**

In order to decide which changes will be made in the next iteration of the prototype, our group thoroughly discussed the results of the chauffeured usability tests. By discussing all the problems uncovered during these tests, our group has chosen to change several aspects of the interface design. However, there were also some problems identified that our group will not address in the next iteration.

The majority of the changes to be made to our prototype reflect the lack of closeness between our initial design model and the user’s mental model. The first problem identified dealt with the XRC customer login page (refer to Appendix L1: Figure A). Thrown off by the login term, one user stated “[they] saw login and wanted to say yes” rather than enter a username and password. Our group has decided to change “Login” to read “User ID,” as this fits the industry standards our potential users are accustomed to. Similarly, another user had difficulty choosing the “Manage Account Groups” button (refer to Appendix L2: Figure D). Due to the amount of time it took this user to choose the correct button, they suggested we use “Edit/Modify Account Groups” instead. After discussing this, our group has chosen to change the button to read “Edit Account Groups” because “Edit” implies changing, whereas the users believed “Manage” implies that you need to be a manager to select this option.
Another problem identified during the tests was our user’s confusion using the search criteria in scenario three (refer to Appendix L3: Figure C). Two users said the multiple search boxes confused them at first because they did not know how to distinguish “Search for” from “Search by” until they clicked on the drop-down box and saw the selections. Our group has decided to address this problem by putting a default value in the “Search by” drop-down menu. Having a default value will separate the two search fields and allow users to easily see which field to enter their search criteria in. The “Print” button on this same page also caused problems during the user tests. More specifically, several users incorrectly attempted to use this feature to print out the details of an XRC customer. After analyzing this screen in relation to the following screens in our prototype, we agreed that confusion was due in part to the lack of a “Print” button on the customer detail page (refer to Appendix L3: Figure D). Since the user could not print out the needed information on this page, they assumed the initial screen provided this functionality. In order to help resolve this issue, our group has decided to add a “Print” button to the company detail page. Our hope is that this will help users realize that the initial “Print” button only prints the customer list, not the customer detail.

On the initial screen of our prototype, two users pointed out that some Disaster Recovery employees might actually work for an XRC customer, causing them to be uncertain as to which option to select (refer to Appendix L 1: Figure A). This uncertainty prompted the users to suggest we change the button from “Disaster Recovery Employee” to “IBM Disaster Recovery Employee.” However, after some discussion our group has chosen to not implement this change in our next iteration. We agreed that a user logging in to our prototype will know whether they’re an XRC customer or D/R employee. In a real world situation, the user’s ID and password would be registered as a customer or disaster recovery employee. Therefore, the user would know which section to choose. Furthermore, we believe the users were confused because they were already a D/R employee and had a hard time understanding that they had to act as a customer, given the scenario instructions.

The last problem identified with the interface was on the XRC customer login page. During the first scenario, two users attempted to login immediately rather than select the “Create a new account” option. However, as users read the scenario more closely, they admitted the mistake was simply that they did not fully read the scenario the first time through. In order to fix this problem, our group discussed moving the “Create a new account” option above the “Login to existing account” option. After some thought, our group decided against this because a user only creates a new account once, whereas users will be logging in to their existing accounts on a daily basis.
Greeter's Script

Hello, my name is John Campbell and I'm a student in MIS 441 at the University of Arizona. This semester our team is focusing on the interface design of a proposed system that will act as a pre-sales configuration wizard for IBM's XRC copy services product. The purpose of today’s testing is to gain tangible feedback about our system by observing potential users completing sample scenarios.

First and foremost, I would like to thank you for taking the time to help us gain feedback about our project. Currently, this system is in its early stages of design, and we are looking for areas that users may find difficult or confusing to use. It is important for us to observe the problems areas of our design so we can fix any usability issues before developing our actual user interface. Don’t worry about getting it “right,” the question is whether or not we are flunking. So remember, the interface is on trial, not you. If you fail to understand something or can’t complete one of the tasks, that’s a sign of trouble with the design, not a lack of intelligence on your part. Please note that this test is completely confidential and the results will remain anonymous.

If at anytime you feel uncomfortable or simply don’t want to finish the test, feel free to get up and leave. We appreciate any and all time that you can give us. Do you have any initial questions?
Facilitator/Demo Script

Now that ______ has provided you the background information on the project and the purpose of this test, I will be facilitating the remainder of this test. As the facilitator, I will be the only team member allowed to speak freely during the test. In a moment, I will be giving you your instructions and making sure everything gets done on time. In the meantime, let me briefly explain the role of each group member. ______ will be acting as the computer. He knows the application logic thoroughly and will manipulate our prototype as if it were a real computer. The other team members will be taking notes and observing the tests to ensure all necessary feedback is recorded.

Once the test begins, you will only be communicating with me and no one else. However, we strongly encourage you to describe your thought process out loud. Having you think aloud will give us a more accurate representation of what aspects of our design are successful and what aspects need improvement and why. Do you need an example of thinking-out-loud?

Your pointing finger will serve as the cursor, and expressions like “I type ‘9000 South Rita Rd.’ in the field” substitutes for keyboard entry. This magnetic screen we have created will act as the monitor. If and when you touch a control, ______ (the computer) will arrange our prototype to simulate the response, taking care not to explain anything other than the behavior of the interface. With any action you take, please describe your reasoning aloud to assist us. When you find something confusing, explain why you feel that way. Thinking aloud may feel awkward at first, but keep in mind that this is the most accurate way for us to understand where our design needs to be improved and changed. Also, if you encounter problems during the test, we will not be able to provide assistance because we are trying to create the most realistic situation that actual users may experience. Even though I will not be able to answer any questions, you are encouraged to ask them anyway so we are able to more accurately assess areas of confusion. I will be able to answer questions once the scenarios are completed.

Once again, before we begin, I strongly encourage you to express your thoughts during the test. Do you have any questions before the test begins?
APPENDIX C

Debriefing Topics
Debriefing Topics

Now that you have completed the test, we would like to spend a lo-minute debriefing session asking questions and gathering your impressions.

- Point out for the final time what we were trying to find out during the test.
  - The purpose of observing users is to see what parts of our product might be difficult to use or ineffective.
- Answer any remaining questions the participant might have.
- Discuss any interesting behaviors we would like the participant to explain.

- General Questions:
  - What is your overall perception of the current user interface?
  - What aspects of the interface did you like most?
  - What immediate changes would you like to see made?
  - Do you have any suggestions in terms of how we can improve our testing process?
  - Any further suggestions, comments, or feedback?

- Fill out Posttest Questionnaire

- Give THANKS, THANKS, THANKS
Scenario Instructions
Scenario Instructions

Now it is time to begin the test. This test will consist of completing three separate scenarios. You will be handed each scenario separately. Please read through each scenario thoroughly and remember that you may reference the scenario at any time. The 3 scenarios difficulty range will consist of easy, medium, and hard. During the completion of each scenario, you will not be able to see the other two scenarios at any time. Once you have completed a scenario, the observers may take a few extra minutes to write down any last minute notes. After this has been done, the next scenario will be handed to you. This same routine will be followed until all the scenarios have been completed. If you find a scenario to be confusing, express your concerns out loud, but keep in mind that we cannot assist you or answer any questions concerning the scenario itself.
Scenarios Handed to Users During Tests
(Slight Revisions from Milestone III)
SCENARIO 1:

First Magnus Financial is interested in becoming a customer of IBM’s copy services product entitled Extended Remote Copy (XRC). You are the employee of First Magnus Financial who is responsible for managing the account associated with XRC. IBM has a copy services Web site where you can create, develop, and manage your customer account. The Disaster Recovery employees responsible for managing and making recommendations for your account have directed you to this Web site in order for you to create your user account. Your company information is as follows:

- Company Name: First Magnus Financial
- Industry: Financial
- Password: 12fmfc34
- Name: Larry Jones
- Street: 115 W. First St.
- City: Tucson
- State: Arizona
- Zip: 85711
- Phone: 520-745-5 101
- Email: jones @ firstmagnus.com
- Job Title: IT Manager
SCENARIO 2:

As the customer account representative for First Magnus Financial, you are responsible for overseeing the successful completion of your company’s customer system environment form. Completing this form requires that a number of employees from different departments use the First Magnus Financial user account. In order to more effectively manage the number of First Magnus employees using the same customer account, you must assign certain employees to specific user groups. Currently, a user needs to be added to the Hardware account group.

- **Login:** First Magnus Financial
- **Password:** 12fmfc34

Please add Steven Johnson to the Hardware account group. The user’s information is as follows:

- **Name:** Steven Johnson
- **Email:** steven.johnson@firstmagnus.com

Once this has been completed, you must view Steven Johnson’s account group information to ensure he has been added correctly. Upon viewing this user’s information, you realize that the email address you have entered is incorrect. The user will have difficulties utilizing their group account if any inaccurate information exists. To ensure the user has no problems accessing their account group, please update his email address. The correct email address is as follows:

- **Email:** sjohnson@firstmagnus.com
**SCENARIO 3:**

You are an employee in the Disaster Recovery Department at IBM and have just arrived to work. Upon checking your email, you discover a note from your manager. Your manager is concerned about an upcoming meeting with Walmart, an important customer of the XRC product. In order for your manager to better prepare for this meeting, he has asked you to find information regarding a similar customer, Target. Specifically, your manager has asked for the date Target’s account was created, as well as their primary contact’s name and phone number. The note has also requested that you print an alphabetized report on existing customers listed in the same industry as Target.

- Login: jthomas
- Password: jthomas1
APPENDIX F

Consent Forms (Signed)
User Test Consent Form

I, **Laura Kern**, agreed to participate in the XRC Wizard’s user testing of their low fidelity prototype for their MIS 441 project. The team conducted this test on 3/18/02 from 2:00 - 3:30. I acknowledge that the team fully briefed me on the logistics and requirements of the user testing. In addition, three scenarios were given to me to complete, with the option of quitting at any time. Once the testing was finished, a posttest questionnaire was given to me to complete. Along with this, the group answered any remaining questions that I had.

The team informed me that the results of this test are purely for the purpose of system evaluation and redesign. The XRC Wizards agree to keep all events of the testing confidential and anonymous.

Participant’s Signature: **Laura Kern**

Date: **3/18/02**

Phone Number: **799-2716**
User Test Consent Form

I, G. Spencer Logan, agreed to participate in the XRC Wizard’s user testing of their low fidelity prototype for their MIS 441 project. The team conducted this test on 3-18-2002 from 3:00-4:00. I acknowledge that the team fully briefed me on the logistics and requirements of the user testing. In addition, three scenarios were given to me to complete, with the option of quitting at any time. Once the testing was finished, a posttest questionnaire was given to me to complete. Along with this, the group answered any remaining questions that I had.

The team informed me that the results of this test are purely for the purpose of system evaluation and redesign. The XRC Wizards agree to keep all events of the testing confidential and anonymous.

Participant’s Signature: [Signature]

Date: 3-18-2002

Phone Number: 520-799-2088
User Test Consent Form

I, James Bridges, agreed to participate in the XRC Wizard’s user testing of their low fidelity prototype for their MIS 441 project. The team conducted this test on 03/18/02 from 45:30. I acknowledge that the team fully briefed me on the logistics and requirements of the user testing. In addition, three scenarios were given to me to complete, with the option of quitting at any time. Once the testing was finished, a posttest questionnaire was given to me to complete. Along with this, the group answered any remaining questions that I had.

The team informed me that the results of this test are purely for the purpose of system evaluation and redesign. The XRC Wizards agree to keep all events of the testing confidential and anonymous.

Participant’s Signature: James Bridges

Date: 3/18/02

Phone Number: 799-40-40
APPENDIX G

Posttest Questionnaires (Completed)
Posttest Questionnaire

Please answer the following questions based on your experience using the XRC Configuration Wizard. Where appropriate, we would appreciate if you would explain your answers in the space provided below the question.

1. Overall, I found the XRC Configuration Wizard easy to use. (Check one.)
   
   ____ Strongly Disagree
   ____ Disagree
   ____ Neither Agree nor Disagree
   ____ Agree
   ____ Strongly Agree

2. I found the blue **taskbar** an easy-to-use method for accessing additional functions within the wizard. (Check one.)

   ____ Strongly Disagree
   ____ Disagree
   ____ Neither Agree nor Disagree
   ____ Agree
   ✔ Strongly Agree

3. I found the following aspects of the XRC Configuration Wizard particularly **easy** to use. (Please list from O-3 aspects.)

   1.) **Login**
   2.) **Change the users email address**
   3.) **Viewing Act Information**

4. I found the following aspects of the XRC Configuration Wizard particularly difficult to use. (Please list from O-3 aspects.)

   1.) **Print in the Disaster Recovery**
   2.)
   3.)

5. I would have organized the material differently. (Check one.)

   ____ Strongly Disagree
   ✔ Disagree
   ____ Neither Agree nor Disagree
   ____ Agree
   ____ Strongly Agree
6. Terminology was clear and precise. (Check one.)

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- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

7. Please rate the following qualities from 1 to 5.

<table>
<thead>
<tr>
<th>Quality</th>
<th>(worst)</th>
<th>(best)</th>
</tr>
</thead>
<tbody>
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If you find a particular issue listed above to be of concern, please note the issue and give a detailed description of how you would like to see this improved.

I prefer red & orange purple colors.

But it was great.
8. Using the following rating sheet, please circle the number nearest the term that most closely matches your feeling about the XRC Configuration Wizard.

Simple. ............... 3, 2, 1, 0, 1, 2, 3. Complex
Easy to Use ........... 3, 2, 1, 0, 1, 2, 3. Difficult to Use
Friendly. .............. 3, 2, 1, 0, 1, 2, 3. Unfriendly
Professional .......... 3, 2, 1, 0, 1, 2, 3. Unprofessional
Attractive ............ 3, 2, 1, 0, 1, 2, 3. Unattractive
High Quality .......... 3, 2, 1, 0, 1, 2, 3. Low Quality
I like ................... 3, 2, 1, 0, 1, 2, 3. Like
I don't like I DON'T LIKE

9. Please add any comments in the space provided that you feel will help us to evaluate the XRC Configuration Wizard. We would especially like your input on the following topics:

- Functions that are essential and unessential to your work
- Features you would like to see on future products
- Any other suggestions or feedback

This is a very good easy to use product. I would just add the print feature so you had the right buttons to help me back out of a screen and get back on track.
**Posttest Questionnaire**

Please answer the following questions based on your experience using the XRC Configuration Wizard. Where appropriate, we would appreciate if you would explain your answers in the space provided below the question.

1. Overall, I found the XRC Configuration Wizard easy to use. (Check one.)
   - ___ Strongly Disagree
   - ___ Disagree
   - ___ Neither Agree nor Disagree
   - ___ Agree
   - **Strongly Agree**

2. I found the blue taskbar an easy-to-use method for accessing additional functions within the wizard. (Check one.)
   - ___ Strongly Disagree
   - ___ Disagree
   - ___ Neither Agree nor Disagree
   - ___ Agree
   - ___ Strongly Agree

3. I found the following aspects of the XRC Configuration Wizard particularly easy to use. (Please list from 0-3 aspects.)
   - 1.) Account Creation
   - 2.) Account Management
   - 3.)

4. I found the following aspects of the XRC Configuration Wizard particularly difficult to use. (Please list from 0-3 aspects.)
   - 1.)
   - 2.)
   - 3.)

5. I would have organized the material differently. (Check one.)
   - **Strongly Disagree**
   - ___ Disagree
   - ___ Neither Agree nor Disagree
   - ___ Agree
   - ___ Strongly Agree
8. Using the following rating sheet, please circle the number nearest the term that most closely matches your feeling about the XRC Configuration Wizard.

Simple. .................. 3 2 1 0 1 2 3 ... Complex
Easy to Use........... 3 2 1 0 1 2 3 ...... Difficult to Use
Friendly. ............... 3 2 1 0 1 2 3 ...... Unfriendly
Professional. .......... 3 2 1 0 1 2 3 ...... Unprofessional
Attractive .............. 3 2 1 0 1 2 3 ...... Unattractive
High Quality.......... 3 2 1 0 1 2 3 ...... Low Quality
I like................... 3 2 1 0 1 2 3 ...... I Don't Like

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- Functions that are essential and unessential to your work
- Features you would like to see on future products
- Any other suggestions or feedback

On future products:
1. The ability of the program to generate cost estimates for implementing different XRC configurations.
   i.e: config A: $ 1,000,000
   config B: $ 750,000
Posttest Questionnaire

Please answer the following questions based on your experience using the XRC Configuration Wizard. Where appropriate, we would appreciate if you would explain your answers in the space provided below the question.

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   2.) __________
   3.) __________

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   1.) __________
   2.) __________
   3.) __________

5. I would have organized the material differently. (Check one.)

   ___ Strongly Disagree
   ___ Disagree
   ___ Neither Agree nor Disagree
   ___ Agree
   ___ Strongly Agree
6. Terminology was clear and precise. (Check one.)

- [ ] Strongly Disagree
- [ ] Disagree
- [ ] Neither Agree nor Disagree
- [x] Agree
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- Attractive ............. 3..2...1...0...1...2...3. ..... Unattractive
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- I like ................. 3..2...1...0...1...2...3. ..... I like

9. Please add any comments in the space provided that you feel will help us to evaluate the XRC Configuration Wizard. We would especially like your input on the following topics:

- Functions that are essential and unessential to your work
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- Any other suggestions or feedback

It would have been much easier to use an actual computer to create the prototype.