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IDT 530 Project Summary Paper

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Introduction

This paper is my reflection on the ideas, processes, and discussions that occurred during the development of the IDT 530 group project. I like challenges and this project presented exactly that, a challenge of my skills as a team manager and an instructional developer. I think that hands on learning is the best type of learning there is and this project afforded me and my teammates the luxury of honing our skills while learning to better understand the particulars of project development. In the end what we came away with was an experience that we can reflect on and reference in the years to come as instructional designers and technologists.

In the Beginning

The project began with us being assigned into groups, which for me was a relatively new experience and one that caused me to be hesitant at first because I was so used to working by myself for most of the last thirty years. My group, which consisted of Jean Young, Lisa Gebauer and myself met for the first time online using GoToMeeting. During that meeting we discussed our ideas for the project and it was determined that I would take the lead position for the group. This was also something new for me. Although I lead students through courses on a daily basis, I have never lead colleagues through the planning, designing, and development stages of any type of project. During that meeting we also agreed the team name would be *Design Time* and that our topic would be Instructional Design and Technology, specifically a tutorial that would help potential students learn more about what Instructional Design and Technology is all about, what type of offerings were available in the field and why they should consider enrolling in Cal State Fullerton's MSIDT program. As group leader my first step was to take the steps outlined by Alessi & Trollip in the section *Part III: Design and Development* of their book *Multimedia for*

Learning (2001) and transfer them into a Microsoft Project planning grid. I then assessed the

skills of my colleagues and myself and made assignments of each of us to each of the listed

tasks. Many of the early tasks like defining the scope of the project we did as a group during our

online meetings. As we ventured further into the project we took on separate tasks that were

more suited to our skills and to help expedite the completion of the tasks. In our second meeting

we went over the time schedule and assignments that were in the MS Project grid as a group and

agreed on the timing and assignments of each of the tasks. For the most part this schedule and

the task assignments were adhered to and we didn't really find it necessary to make any changes.

Planning

As I stated previously we worked together as a group on defining the project scope,

defining our audience of learners, setting our project goals, and defining objectives. When it

came to writing up the constraints we divided the tasks up. I took on the hardware, software, and

time constraints, and both Lisa and Jean worked on content constraints, budgeting and costing

the project. We all worked together on the look and feel of the project design and Jean took on

the job of putting together a style manual as this is something she has lots of experience with,

and I should add she did an outstanding job of it. In wrapping up our initial planning document,

Lisa worked on forms of assessment, I worked on the flowchart, Jean worked on the evaluation

forms, Lisa and Jean worked on the original storyboards, and all of us worked together on

usability procedures. We had one more meeting to iron out some details before submitting our

planning documents and based on the results of that meeting Lisa and I worked on culling all of

the documents created so far into one cohesive document for submission to our IDT 530

instructor. As I recall it, one of the changes made at that point was our definition of the color

purple which we wanted to use to reflect the color scheme already in use by the MSIDT

program. While perusing the MSIDT Web site in an effort to generate some ideas about what

types of information our project should convey, it dawned on me that I could view the source

code of the Web page and see exactly what color MSIDT was using for purple on their Web site.

It turned out to be the RGB triplet of 6600CC. I conveyed this to my teammates and we updated

our style document just before submitting it as part of our planning assignment.

The Prototype

The next step was to bring all of the elements of our planning document together and

develop a working prototype. We began the Design/Prototype phase by brainstorming ideas and

during that time Jean came up with a screen design that really knocked me and Lisa's socks off. I

then took the Photoshop file that Jean had created, polished it up a bit, converted the color

scheme to utilize MSIDT purple and its various shades, and took some navigation icons that Lisa

had come up with, tweaked them, and aligned them along the top tab on the folder of what was

to become our home screen. Although the look and feel of the design changed considerably

throughout all phases of project development, the major part of the content that Lisa and jean

came up with for the storyboards primarily remained the same. Once we all agreed on the look of

the home screen I was able to take the Photoshop file and import it into a newly released Adobe

product called Flash Catalyst. This is a great product for rapid application development (RAD)

because it is capable of importing either Photoshop or Illustrator files in their native format

which can then be assigned to "states" in the program, edit the composition of each state, and

add navigation and transitions to each state. Think of "states" as a single Flash frame or a

screenshot. There was a learning curve, but what I found to be its biggest advantage is that I

could use its graphical interface to create the screens and navigational structure while the program was writing all of the code in the background for me, a combination of ActionScript, Spark, and Flex. The limitation I ran into with the program was that it was limited to creating a maximum of twenty states and our entire project would require several more than that. Flash Catalyst was the perfect tool for creating our prototype but would not be able to take us to the final product for that I was going to have to use the latest version of Adobe Flex now known as Flash Builder 4.

Even though I took on the role of putting together the visual components of our project, Jean and Lisa were still very involved with performing usability testing, writing scripts for the audio portion that would come later, and getting another big piece of our project underway which was to contact former MSIDT graduates and collecting interviews and photos from them for the content of our Graduates portion of the project which was the real cornerstone of our tutorial. Many of those involved with the MSIDT program that have seen our project have all commented that the graduates section of our tutorial was a very much needed piece that the MSIDT Web site was lacking.

The Alpha Stage

One of the biggest complaints that were most common regarding the prototype version of our tutorial was that the yellow index card background was distracting and made it hard to read the text on each screen. Initially this was done to expedite the development process and to keep the size of the SWF file small since every time you add a new bitmap, the size of the SWF file increases. Even in discussions we had amongst ourselves, during our many meetings leading up to the posting of our prototype, we to felt that the yellow index cards had to go.

The second big change that came about as part of the Alpha stage was that I switched from using Flash Catalyst to build the tutorial to using Flash Builder 4 due to the state limitations previously mentioned. This was an easy process, just a simple export from Flash Catalyst to an FXP file that could then be imported into Flash Builder 4. Another limitation with Flash Catalyst is that although it wrote code behind the scenes it would not let you edit the code, only view it. One of the drawbacks of Flash Builder 4 is that it doesn't have as sophisticated a graphical interface for manipulating the components of the project as Flash Catalyst does; although there are some graphical tools, Flash Builder is more of a code oriented program. Initially I spent a lot of time going back to Flash Catalyst to make changes and then copying the code into Flash Builder. Slowly but surely I caught on to the coding structure and how things worked at the coding level. The more proficient I became with the code the more I loved working in Flash Builder. In my opinion, Flash builder will become a dominant tool for developing Rich Internet Applications including the now popular mobile phone apps. Behind the scenes there are two powerful programming languages Spark, an update to the Flex language, and ActionScript. Spark is used to build the structure of the application, much like HTML is used to structure the content of Web pages, and ActionScript is used for the programming logic just like JavaScript (which ActionScript is based on) is used in the Web world.

Lisa and Jean continued to conduct usability studies using friends, neighbors, and people they worked with to evaluate our tutorial. They also were working hard contacting former MSIDT graduates and collecting the content needed to build our Graduates section of the tutorial.

The Beta Version

Towards the end of the Alpha development phase, I began devising ways to help reduce the file size of our project in order to be able to replace the yellow index card background with several different background screens based on content sections that we eventually divided the tutorial into. Another aspect of the Beta phase was that I discovered that I could reduce my coding time when changes were made by organizing the screens into what Flash Builder calls "components". Components amount to separate MXML files (the native file format of Flash Builder) and their advantage is that a component can be represented as a single line of code in the main file instead of the thirty or more lines that made up each screen. It also simplified updating the transitions between screens. Before components I had to go to each screen transition section and modify several lines of code depending on how many pieces needed to be transitioned on a per screen basis. Once I collected the pieces into components there was only one line per screen to change in any given transition. During this stage Jean and Lisa forwarded to me most of the content that would be used for the graduates section of the tutorial. Since I now understood the advantage of components it was much easier to build the graduates section than I had previously anticipated. The beauty of it was that once I built one graduate screen I could simply copy its component files (screen, scrollbar, content, etc.) and simply rename the file to the new grad and update the particulars for that graduate. I was really thrilled with how smoothly this section went together. One other problem I was able to solve during this phase was the Help screen. I didn't want viewers of our tutorial to lose their place when viewing the Help screen and I didn't want to have to deal with coding bookmarks or the transitions needed to make it work; I knew it would be quite challenging. The solution I came up with is one that I had first seen used at Netflix.com which is to place the new screen, in our case the Help screen, in from of the

previous screen. This made it easy to return the viewer to their previous screen once the Help

screen was closed. Jean and Lisa, in addition to gathering the graduate information continued

calling on friends and neighbors to perform usability testing on our tutorial and forwarding to me

their feedback.

The Final Project

During the end of the Beta phase Lisa had developed a prototype for our assessment form

in order to give future viewers of our tutorial the ability to provide us with feedback and to

request more information from the MSIDT program. We had received an indication from Dr.

Carter-Wells that our tutorial might be incorporated, in some form, into the MSIDT Web site as

part of its update which was anticipated to occur during the end of the summer semester. Based

on these comments we felt it was important to create an assessment form that would help to

improve the MSIDT Web site and provide future students with a method to request more

information from the MSIDT program easily. I began building the assessment into our tutorial

during the closing of our Beta phase but was left with several issues that were unsolved prior to

working on the final project. Passing variables from the main program into a component was one

challenge that really took some research, but one which I am happy to say I was able to solve.

The assessment form also brought the need for data validation into play and was also solved. The

biggest issue we had to deal with in the final phase was that the size of our main project file was

getting too large. I was able to implement some optimization to reduce its size, like loading

background images on the fly instead of embedding them, but still in the end it was taking 15

seconds to load over a 2Mbps DSL connection. Due to this reality we decided that the audio

narration that Jean had created for each screen would not be used because it would increase the

size of the file so much that it would deter viewers, feeling that many who might normally view the tutorial would give up from waiting too long for it to download and begin.

Conclusion

In the end I think we turned out a top notch tutorial with a very professional look and feel. Even though I had my doubts in the beginning about working with others on a large project and being successful, I must say that I feel blessed to have worked with both Jean and Lisa on this project. Both gave their all and their contributions were invaluable. In hind sight the one thing I would try to change is that I would like to have been able to include Jean and Lisa in the coding process. Because I was not familiar with either Flash Catalyst or Flash Builder when we began this project, I had no idea what the learning curve would be and whether or not we would have enough time for all of us to contribute to the coding. I do wish that they had been able to get that experience and if I were a more experienced manager, I think I might have been able to delegate certain pieces to each of them, especially since I now understand that individual components can be built separately and then incorporated into the final project. As they say hind sight is 20/20 and although I cannot go back and change their contributions to the coding, I have given a lot of thought to how I can make changes should I have the opportunity to work on a project similar to this one in the future. Yet another example of several invaluable lessons I learned from this assignment.

Works Cited

Alessi, S. M., & Trollip, S. R. (2001). *Multimedia for Learning 3rd Ed.* Boston: Allyn and Bacon.