Steven Chalmers
PORTFOLIO
Introduction

I excel at Interaction Design. I am versed in Tufte and Wroblewski rather than color palettes and font families.

The samples of work I have included in my portfolio are meant to show my insightful and creative design thinking that has lead to unique and effective products.

Steven Chalmers

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FlitePlan

A REDesign WITH FRESH PERSPECTIVE
Starting point

Jeppesen’s FlitePlan Online allows business aviation operators to plan a flight by reviewing airport data and weather information and by calculating fuel consumption.

When I was contracted for the project the application redesign work only had a few pages that were simply updating the UI from the older version.

Being new to the aviation domain I worked with subject matter experts and interviewed pilots to learn exactly what was needed when planning a flight.

As I reviewed the existing tool and the input from the experts in the field I formulated a design approached based on the very core of the flight: the “airport pair”. This design approach was a departure from the existing design so it took some convincing to have the project sponsors see the value.

The design won praise when it debuted in Stockholm at the EBACE convention in 2012.
The origin and the destination airport codes comprise the “airport pair”. Those values from the flight plan form, “KLAX” and “KORD” in this example, are used as navigation tools in the tab control.

On the map, leaving both KLAX and KORD selected will default the map zoom and placement to show both airports. Selecting just one airport code would reposition the map to that airport.

This selection mechanism functions the same way on the other tabs.
Review

In a short contract duration of only 5 months I was able to ramp up on a new and complex domain, identify the key design element of the application, and build that into a complete, easy-to-use design that was well received by the aviation industry.
Information Architecture

IA CAN BE FOR THE PROJECT DOCUMENTS TOO
Starting point

My contract with Trust Company of America was to redesign their application suite which was showing its age with several different design standards used over years of development. The redesign was also an opportunity to clean up the application role definitions.

The analysis process turned up 7 actor types, 10 different functionality roles, functionality inheritance and many dozens of use cases.

The complexity of the relationships of all these entities threatened to be a major impediment to accurate and useful documentation.
Solution

I created this table as a compilation of all of the input. It documents the following:

- What actors have what functionality.
- How the functionality is inherited.
- What use cases apply to the functionality.

This table became the central document for the development of the roles and permissions for the project.

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<th>Use Cases and Scenarios</th>
<th>Functionality</th>
<th>Stimulation</th>
<th>Administrator</th>
<th>Full Access Trading</th>
<th>View/Modify Trading</th>
<th>Account Management</th>
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Summary

Information architecture requires compiling complex information into a clear and effective presentation of that information, even if not for the end UI but rather for the project itself.
Troubleshooting Scripts

A POWERFUL TOOL CATERS TO NOVICES AND EXPERTS
Starting point

DirecTV telephone agents follow scripts to help diagnose customer technical issues. Simple scripts suffer from a number of issues:

• The script does not allow for information to be taken from the customer out of order
• The scripts were not written to educate the agents
• The scripts were difficult to back track on

Since resolving technical issues for customers was resulting in long call times the incentive to streamline the process was high.
Decision Support Tool

To design a solution we sat with telephone agents on live calls and watched how they used the existing scripts and interviewed them to understand the problems they were experiencing.

Agents complained they didn’t understand why they were asking the diagnostic questions in the scripts.

Agents wanted a simple way to backtrack as it was common for customers to change their answer to an earlier step.

Agents didn’t have a simple mechanism for recording information customers gave when that information was out of order to script.
Decision Support Tool

The “Step” panel either tells the agent to “Ask” something or to “Do” something, color coded yellow and blue.

When the agent is to ask something the question is not in the form of a complete sentence but rather acts as a reminder of the question to be asked. This allows the agent to speak in a more natural rhythm. For the novice user the “Say” panel gives them a complete sentence to support them as they become familiar with the tool.

The “What & Why” panel explains the purpose of the question.

Clicking either answer button in the “Step” panel advances the agent to the next question.
Decision Support Tool

If the agent receives information out of sequence they can enter it in the “Scratch Pad” panel. That panel will store the answer and guide the question path accordingly.

The agent can return to any previous step to review the customer’s answer and also to change an answer.
Usability Testing was performed in the lab where we had agents taking live calls that had been filtered for the particular diagnostic call that I created the prototype for.

We noticed a curious pattern that several testers exhibited in that they were clicking an answer for the current step in order to see what the next question was. This of course would help them prepare for when the customer did answer the question.

As this was clearly useful for the agents I modified the prototype to display the subsequent step when the mouse was hovered over one of the answer buttons.
Summary

Usability testing proved that agents found the tool useful and that they were easily able to master the functionality.

When I left DirecTV the I.T. team had implemented a subset of the functionality of the prototype and had plans to build out the rest of it.
Dashboard Tags

CREATING ORDER FROM CHAOS
DirecTV telephone agents are directed to greet and handle customers based on certain triggers from the customer database. For instance, if the customer had been with DTV for some time the agent was to thank them for their long service history.

DirecTV had chosen to implement this by displaying of 43 different graphics which the telephone agents were supposed to recognize and remember the meaning of. The screen shot shown here lists 2 of those tags. Unfortunately there were far too many to remember and thus the approach was failing.

My task was to design a new approach for communicating to the agents what they were to say for each call the received, and, it had to fit in the same 100 x 70 pixels.
Tags - Revisited

I met with the group that designed the tags, a few of which are shown here, to understand what the agents were supposed to do or communicate for each.

After evaluating the purpose of each tag I realized I could put the intended actions into 3 categories: 1) What do I say? 2) What must I say? 3) What can I say?

I used the categorization as the design foundation.
With the categorization of the information the agents are supposed to use, the 100 x 70 pixels were sectioned into 3 parts and the content for each part was keywords instead of graphic slogans.

The agents were then simply trained to greet the customer with the top row of keywords, trained to mention each of the items in the middle section and trained to make use of the special offers in the bottom section.

The redesign simplified training for the agents and improved effectiveness for the messaging.
Starting point

3t Systems’s Mortgage Cadence application is a powerful tool for managing real estate loans. The first generation design was showing its age and was in need of an update.

The typical user of Mortgage Cadence was a loan officer who would spend several hours a day with the tool relying on it for a wealth of information that needed to be quickly accessed.

I decided to base the redesign on the familiar layout of Microsoft’s Outlook combined with the newly released ribbon concept in the Office Suite. This combination was well suited for primary navigation to the high level functions of the application as well as fine-grained information access using the ribbon.
Progressive Disclosure

The ribbon proved to be an excellent pattern for displaying information at 3 levels.

The most summarized information was displayed in each panel in the ribbon. The intermediate level of information was displayed as a pop-up frame and the final detail level of information would be displayed in the work panel of the application.
Summary

The Mortgage Cadence application redesign was based on the profile of the typical user. These users review large amounts of data for numerous loans for several hours each day. As such the application could justify more advanced navigation mechanisms as the small learning curve was well worth it for the advantage of a wealth of information at the user’s finger tips.
Rule Builder

A SMALL CHANGE MAKES ALL THE DIFFERENCE
At 3t Systems a very bright and talented developer created this visual rule builder tool. He succeeded brilliantly in building a very engaging tool that updated the visual representation of the rule in real time.

The problem I had with it is that I could not read the query.
Solution

With the addition of the curly brackets and the dashed blue lines as well as repositioning the logical operator vertically centered on the curly bracket, it is much easier to understand the logic of the query.
Benefit Search

DEVELOPER COLLABORATION ENRICHES UX
Starting point

When I took over a project to add a search mechanism to the huge list of customer health benefits the proposed design used a simple pattern the user would type a string and could advance to each occurrence of the string in the list.

This design required the user to manually sift through potentially dozens of entries, required that they spelled the entry correctly and with the list being so large it was easy to get lost.
Solution

I learned from the development team that they were working with XML data so I designed this interaction.

When the search tool is launched the user simply selects a letter of the alphabet. All the keywords in the benefits tables are then displayed.
Solution

The user then selects a keyword to see the list of benefits that include that keyword.

Clicking the benefit takes the user to the occurrences of that benefit in the benefits table.
Summary

User experience design cannot be performed independently of development. The two must work together to achieve ideal results.

My background in programming gives me valuable insight into the possibilities of implementation and allows me to work comfortably and easily with the development team.