

User Interface Portfolio

This document contains screenshots and simple descriptions of some web and desktop applications I've designed and built in the last two years. In each of these projects I have led both the design and actual implementation all features shown here. What you're seeing is my personal contribution to the projects, and is a combination of my UI sensibilities (design) and my technical skills (implementation).

Investment and Workflow Management tool for an Investment Management company

I developed this application over the course of two distinct projects. The first project implemented a system with which the company managed profiles of investment managers in order to assess their risk and investment worthiness. This consisted of editors to manage quantitative and qualitative data for each fund, and a “profile” report system for presenting this information, and accompanying analysis, in a PDF report.

The second project replaced an aging Excel-based workflow management process for the company. I designed a custom workflow management solution with a graphical workflow component to guide users through about 25 distinct business workflows.

The applications were built using Microsoft ASP.NET/MVC, with a KnockoutJS/Bootstrap front end.

Security Editor

This is the screen on which quantitative and qualitative data is edited for fund managers / securities.

The screenshot displays the 'Edit Security' form, which is part of an investment management application. The form is organized into several sections:

- Navigation Bar:** Located at the top, it contains tabs for 'Securities', 'Indexes', 'Comparatives', 'Blends', 'Asset Classes', 'Composites', 'Misc', 'Workflow', 'Admin', 'Account', and 'Logout'.
- Form Header:** The title 'Edit Security' is prominently displayed. To its right are four buttons: 'Profile' (orange), 'Monthly Data' (blue), 'Cancel' (grey), and 'Save' (green).
- Key Fields Section:** This section contains three columns of input fields:
 - Short Name:** A text input field.
 - Long Name:** A text input field.
 - Activity Status:** A dropdown menu with 'Approved' selected.
 - Asset Class:** A dropdown menu with 'Alternative Investment - Long/Short Equity' selected.
 - External ID Source:** A dropdown menu.
 - External ID:** A text input field.
- General Information Section:** This section is divided into three columns:
 - Left Column:** Includes fields for 'Firm', 'Address 1', 'Address 2', 'Phone', 'Website', 'Blind Profile Manager Name', 'Profile Folder', and 'Profile Valid Through'.
 - Middle Column:** Contains dropdown menus for 'Investment Type & Class' (set to 'Partnership'), 'Investor Qualification' (set to 'Accredited Investor'), 'Composition' (set to 'Long Biased L/S Equity'), 'Style' (set to 'Fundamental'), 'Capitalization' (set to 'Small/Mid Cap'), 'Region' (set to 'US'), 'Redemption' (set to 'Quarterly'), 'Lockup' (set to '1 Year'), 'Class', and 'Open/Close' (set to 'Hard Close').
 - Right Column:** Includes fields for 'Portfolio Managers', 'Contact Inv Relations', 'Auditor', 'Administrator', 'Legal Counsel', 'Prime Broker', and 'Accountant'.
- Bottom Section:** Contains three input fields:
 - Inception Date:** A date input field.
 - Management Fees:** A text input field with '0.02' entered.
 - Minimum Investment:** A text input field with '500000' entered.

User Management

Each user of the system was associated with one or more roles, and a series of permissions and area visibility rules.

Home

Securityties

Indexes

Comparatives

Blends

Asset Classes

Composites

Misc

Workflow

Admin

Account

Logout

Edit User

Username

Email Address

Brand

(Default)

First Name

Is Active

☒

Receives Temporary Entry Alerts

☐

Last Name

Roles

Admin - Grants super-user access to the user

▼ Visibility and Access Restrictions

Securityties	Show <input checked="" type="radio"/> Hide <input type="radio"/>
Add/Edit/Recompute Securityties	Allow <input checked="" type="radio"/> Deny <input type="radio"/>
Create/View Security Profiles	Allow <input checked="" type="radio"/> Deny <input type="radio"/>
Edit Security Monthly Data (Returns, AIJM, Exposures)	Allow <input checked="" type="radio"/> Deny <input type="radio"/>
Market Indexes	Show <input checked="" type="radio"/> Hide <input type="radio"/>
Add/Edit/Recompute Market Indexes	Allow <input checked="" type="radio"/> Deny <input type="radio"/>
Edit Market Index Monthly Data (Returns)	Allow <input checked="" type="radio"/> Deny <input type="radio"/>
Comparative Analyses	Show <input checked="" type="radio"/> Hide <input type="radio"/>
Add/Edit/Recompute Comparative Analyses	Allow <input checked="" type="radio"/> Deny <input type="radio"/>
Create/View Comparative Analysis Profiles	Allow <input checked="" type="radio"/> Deny <input type="radio"/>
Blends	Show <input checked="" type="radio"/> Hide <input type="radio"/>
Add/Edit/Recompute Blends	Allow <input checked="" type="radio"/> Deny <input type="radio"/>
Create/View Blend Profiles	Allow <input checked="" type="radio"/> Deny <input type="radio"/>
Asset Classes	Show <input checked="" type="radio"/> Hide <input type="radio"/>
Add/Edit/Recompute Asset Classes	Allow <input checked="" type="radio"/> Deny <input type="radio"/>
Miscellaneous	Show <input checked="" type="radio"/> Hide <input type="radio"/>

About Permissions

These options allow you to control whether a given user can see various areas of the application, and whether they can perform specific functionality. For example, if you choose to "Hide" the Market Indexes section from the user, they won't see the Market Indexes menu, and they won't be able to perform any of the actions specific to Market Indexes. For more granular control, you can choose to "Show" a section, but deny the user access to specific actions. For example, you might choose to allow a user to add a new Market Index, but not allow that users to edit the Monthly Returns for Market Indexes.

Note that if the user has the ReadOnly role, many of the Allow/Deny choices become moot; for example, even if you "Allow" the user to edit Market Index Monthly Returns, having the ReadOnly role will supercede permission and prevent them from editing the returns.

Similarly, having the Admin role overrides all of these selections; Admins have full access to all functionality regardless of the choices made here.

Workflow Dashboard

The Workflow Dashboard was a customizable search dashboard which each user could configure to show the information they felt was most relevant to their work. From here users would drill in to modify the basic details of a workflow instance, or manage the steps that the workflow took through the system.

Home

Securities

Indexes

Comparatives

Blends

Asset Classes

Composites

Misc

Workflow

Admin

Account

Logout

Workflows

Begin New Workflow

Text Search

Q Just Activity

Q Just SPV

Exports

Advanced Search

Current Filter: Status: [Reopened, Pending, Complete]

ID	Workflow Definition	Status	Client	Amount	Due Date	Last Updated Date	Last Completed Step	Actions
4810	Liquid Alternative (Non IRA) - Partial Liquidation	Pending			2016/11/15	2016/09/27 05:10:36 PM	Send documents to client for signature.	
4809	Illiquid Alternative (Non IRA) - Activity	Complete			2016/09/26	2016/09/27 01:57:32 PM	Confirm that funds were received.	
4808	Illiquid Alternative (Non IRA) - Activity	Complete			2016/09/26	2016/09/27 01:44:04 PM	Confirm that funds were received.	
4807	Illiquid Alternative (Non IRA) - Activity	Complete			2016/09/09	2016/09/27 09:24:15 AM	Receive confirmation from manager that wire has been received.	
4806	Illiquid Alternative (Non IRA) - Activity	Complete			2016/09/09	2016/09/27 09:23:08 AM	Receive confirmation from manager that wire has been received.	
4805	Illiquid Alternative (Non IRA) - Activity	Pending			2016/09/26	2016/09/26 05:20:25 PM		
4804	Illiquid Alternative (IRA) - Activity	Pending			2016/10/01	2016/09/28 09:11:21 AM		
4803	Illiquid Alternative (IRA) - Activity	Pending			2016/10/01	2016/09/26 03:38:27 PM		
4802	Illiquid Alternative (Non IRA) - Commitment	Pending			-	2016/09/26 09:11:48 AM	Submit all documents to manager and request confirmation	
4801	Illiquid Alternative (Non IRA) - Activity	Pending			2016/09/30	2016/09/23 04:27:46 PM		

Show 10 entries

Showing 1 to 10 of 4,425 entries

First

Previous

1

2

3

4

5

Next

Last

Workflow Fields Editor

Each workflow required distinct data entry. The workflow editor dynamically presented inputs for each relevant field depending on which workflow was chosen, along with potentially complex validation rules.

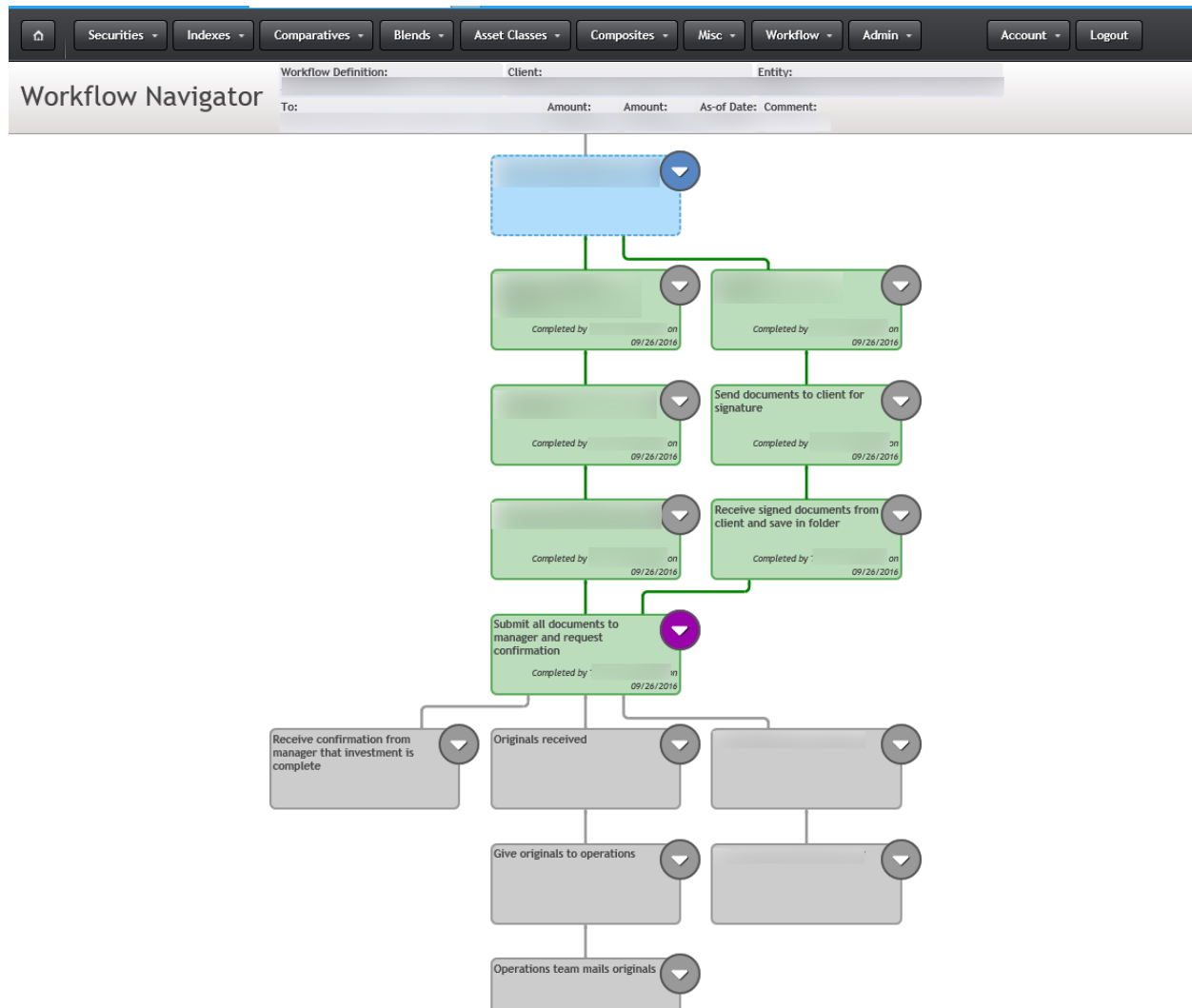
Begin New Workflow

☐ Create another

Select Workflow	Liquid Alternative (Non IRA) - New
Client	[\$793,474.91]
Entity	[\$793,474.91]
From	[\$519,495.29]
To	
Amount	12,500 \$12,500.00
As-of Date	End-of-month date is required for this field. 10/26/2016
Date Paid	
Comment	WARNING: The Comment editor doesn't work properly in Internet Explorer. Any changes you make to the content of the Comment will not be saved. Please use Chrome, Firefox, or Safari if you need to edit a comment.

Workflow Navigator

The Navigator presented a visual graph of the steps in a given workflow. Within a single workflow a step (or path) could be dynamically hidden or shown based on the values entered on the Fields Editor. Each step in the workflow could be moved through various statuses to indicate its completeness, along with other details. Steps had to be completed in order. The visual layout was computed using Microsoft Automatic Graph Layout for dimensions and coordinates, but the UI was developed in pure HTML and javascript.



Onsite POS System for a sporting goods company

A national sporting goods company hired us to redesign and reimplement an aging WinForms application used by their sales team to generate orders at client locations. We built the new application in WPF using Prism for MVVM. The application is used by hundreds of sales and customer support reps across the country.

The primary functionality of the application was to allow users to enter customer orders and indicate customization of specific products. A Customer Dashboard also provided a holistic view of individual customers.

Customer Search

A basic search tool to find customers, serving as a launch point for creation of new orders, or navigation to other customer-related areas.

The screenshot shows a Windows application window titled "Customer Search". The window has a dark blue header bar with a red "X" icon and the word "Close" in the top right corner. Below the header, there is a search section with a "Search For" text box containing the letter "a", a magnifying glass icon, and a "Search" button. Below the search box, there are two radio buttons: "Containing" (selected) and "Beginning With". Below the radio buttons, there is a "Look In" dropdown menu with "Location Name" selected. Below the search section, there is a table with the following columns: Customer, Location Name, Payer, Contact, City, State, Phone, E-mail, Territory, Sales Rep Number. The table is currently empty. At the bottom of the window, there is a navigation bar with six icons and their corresponding labels: a plus sign for "New Order", a pencil for "New Plan", a paint palette for "C. Dashboard", a folder for "Archive", a car for "NewTicket", and a barcode for "Inventory".

Customer	Location Name	Payer	Contact	City	State	Phone	E-mail	Territory	Sales Rep Number
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Customer Dashboard

The Customer Dashboard presented summary information, and more specific details, about each customer.

The Customer Dashboard interface features a top navigation bar with icons for Customer Search, Order Search, Product Search, Mail Orders, New Ticket, New Order, New Plan, Archive, New Ticket, Inventory, Change Customer, and Close. Below the navigation bar is a sidebar with icons for Overview, Account Info, Contacts, Notes, Sales & Pricing Programs, Sales History, and Deliveries. The main content area displays several tiles:

- Overview** (Refresh button)
- Recently Shipped Deliveries** (Showing: Within 90 days) - No items found
- Deliveries Shipping Soon** (Showing: Just this Month) - No items found
- Late Deliveries** (Showing: Within 90 days) - Filter button
- Held Orders** (Showing: Just this Month) - Filter button
- Recently Cancelled Orders** (Showing: Just this Month) - Filter button
- Orders in Progress** - Filter button

Order Details:

Order #	Delivery #	PO #	Est Delv Date
3012193690 (Cus)	00007938225	RAIN	07/21/2016
3012193688 (Cus)	00007760179	BASICS	08/25/2016

Unsubmitted Plan

# of Orders	Req. Date
60	01/15/2015

Order Details:

Order #	PO #	Req. Date
268 ()		09/20/2016
277 ()		

Order Entry

The order entry screen allowed users to search for the product, enter quantities, and customize products.

The screenshot displays the Order Entry interface. At the top, there is a navigation bar with icons for Customer Search, Order Search, Product Search, Mail Orders, and New Ticket. Below this is a search bar and a 'Quick O/E' button. The main area is divided into a left sidebar with categories like Apparel, Shoes, Gloves, Socks, Bottoms, and Other. The central table lists products with columns for Image, Description, Price, Qty, and sizes (SM, MED, LG, XL, XXL, XXXL). The bottom section, titled 'Order Tally', provides a summary of the selected items, including their quantities, prices, and customizations.

Image	Description	Price	Qty	SM	MED	LG	XL	XXL	XXXL	Ext Price	Customization
		\$34.00	4	4						\$136.00	
		\$34.00	6	1	2	2	1			\$204.00	ID:1 L Sleeve
		\$34.00	5		5					\$170.00	

Customization UI

Most products in the application could be customized, including a logo or other personalization. In their original system there were seven distinct interfaces for customizing products. In the new application I generalized the implementation to a single configurable customization tool that worked for every product type.

Customize OUTERWEAR

New

Clear

OK

Cancel

ID

Select Contact from

2

- Or Enter -

Contact Name

Contact Email

Contact Phone

Location

Left Collar

Logo

Logo ID

162341

Color Up

Club Colors

Location

Left Sleeve

Logo

Personalize

Logo ID

162648

Color Up

Color Coordinate

Location

Right Chest

Logo

Personalize

Imprint

Bob Smith

Font

Script

Pers. Color

Azure

Color Up

Club Colors

Add

History

This Order

ID	Times Used	Select & Apply	Copy	Edit	Delete	Location 1	Location	Logo ID	Other Location Comment	Logo Desc	Logo Status	Color Up	Other Colo
1	4	<div></div>	<div></div>	<div></div>	<div></div>	Location 1	Left Sleeve	162341			Repeat	Club Colors	Club Colors
2	1	<div></div>	<div></div>	<div></div>	<div></div>	Location 1	Left Collar	162341			Repeat	Club Colors	Club Colors

Clinical Trial Analysis tool for a Pharma company

This relatively simple tool presents a pivot table representing the intersection of attributes among subjects in clinical trials. I developed the tool using KnockoutJS for data binding and Polymer for UI controls.

The tool supports faceted filtering of results, options to control the display of the results, and a pivot table showing the number of trial subjects matching the Row/Column pairs.

Filters

CLEAR FILTERS

× COMPLETE RESPONSE

× PARTIAL RESPONSE

× PROGRESSIVE DISEASE

Medication Category:

Study ID:

Therapy Type:

Treatment Name:

Options

Rows:

Columns:

Totals:

Display as Percentages

Total by Row

Refresh:

Auto Refresh

REFRESH

Other:

Truncate Row Titles

SWAP ROW AND COLUMN

Pivot Table: Each individual cell reflects a count of unique patients.