

Private Portals and Dashboards: Overview

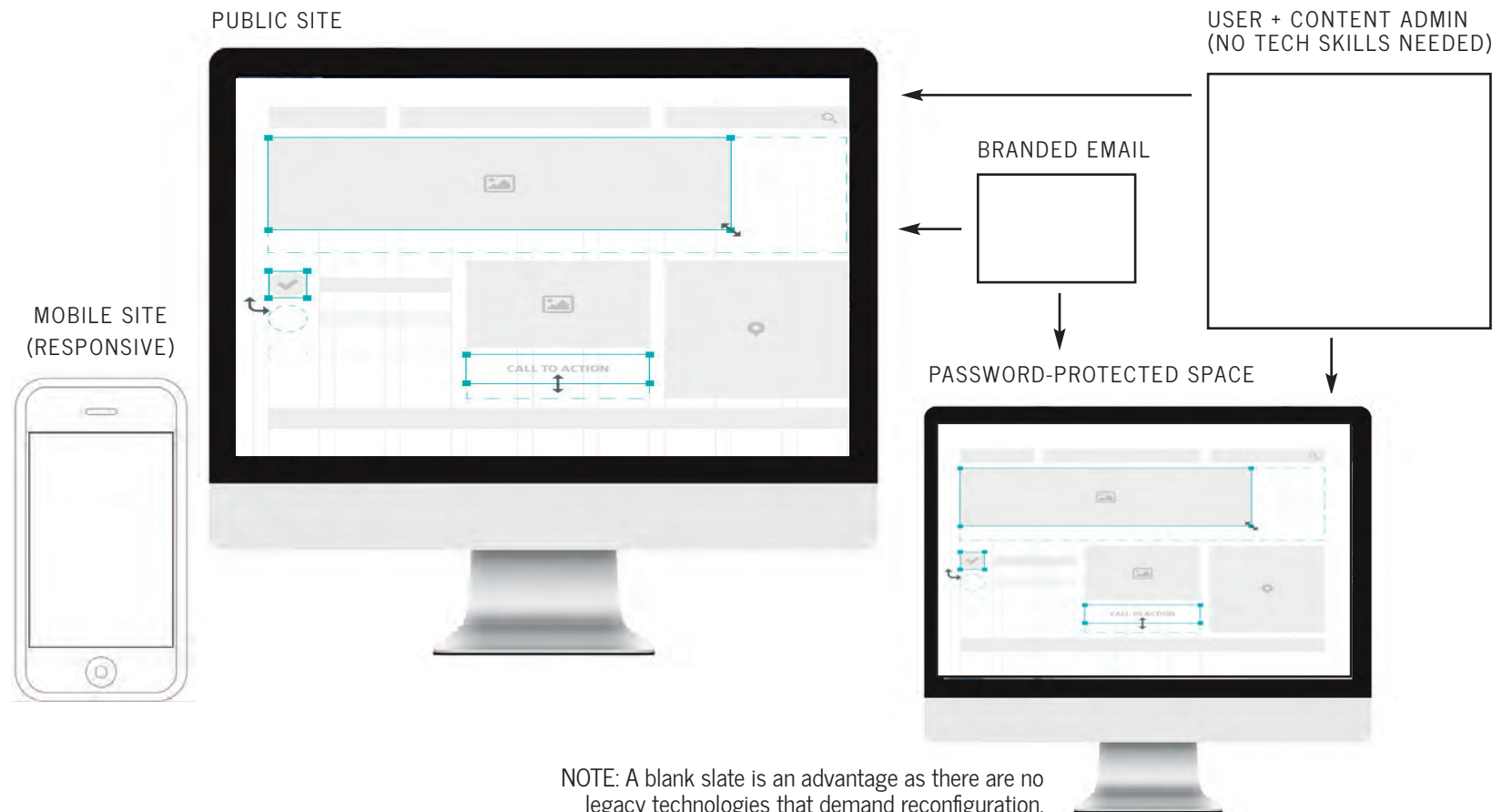
September 2016

Confidential Information (your eyes only please)

Our intention is to give you a sense of market standard to best practices in password-protected web products; clarify the process by which they are created; and provide examples of work we've accomplished in this area – from barebones (with some personalization) to premium.

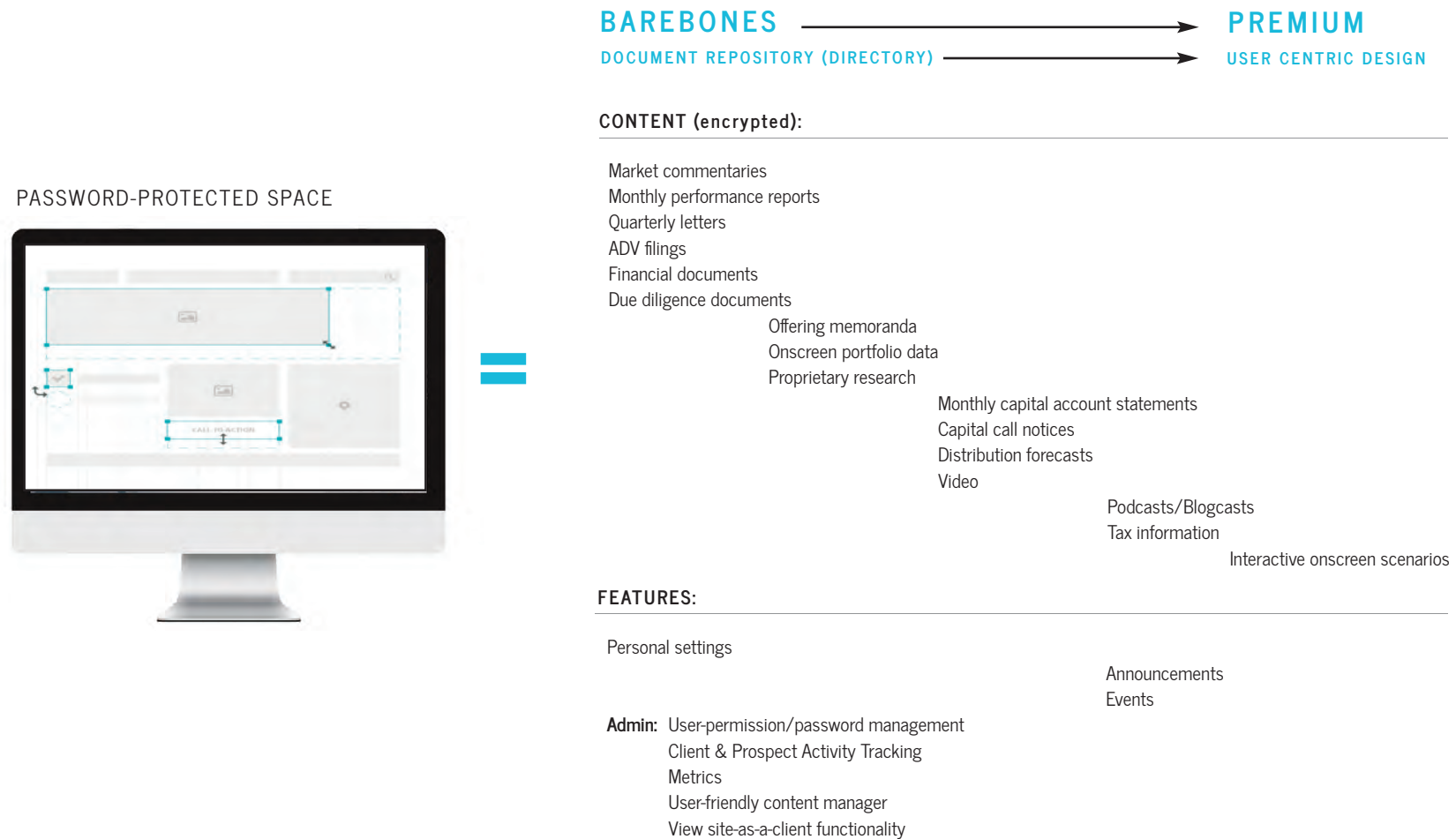
What are Market Standards?

As of 2016, the minimum market standard web assets (digital products) in the investment management space include a public website, mobile site (responsive – not simply a reduced version of the desktop site), secure private investor portal and branded email platform. To increase engagement with prospects, some firms also have a password-protected area for this audience.



Private Portal + Dashboard UX *(user experience)*

Investment managers currently provide a range of password-protected user engagements (= content + features) to their clients and prospects, from barebones to premium. That said, excellent user experiences across the interactive spectrum are raising user expectations as a whole.



What Are the Steps?

1

ESSENTIAL

Identify Content (analog + digital)

Clients

What types of content do you currently distribute to your clients?

Provide an example of each kind.

What is the source of the data for client reports? (potential for onscreen display in the portal)

Prospects

What kinds of content do you currently distribute to your prospects?

Provide an example of each kind.

IDEAL

Know Your Audiences (buyers)

Clients

Brainstorm engagement opportunities.

Conduct formal discovery (more on this later).

Develop persona profiles.

Prospects

Ditto the above

What Are the Steps? (continued)



ESSENTIAL

Define Scope of Work

Clients

Level of complexity + personalization

Define user-permission types: Admins, Client firms, Individuals etc.

Define internal mandates (encryption, security questions, IT etc.)

Mobile experience?

Prospects

Level of complexity + personalization

Define user-permission types: Admins, Client firms, Individuals etc.

Define internal mandates (security questions, tech platforms etc.)

Mobile experience?

IDEAL

Wireframe/IA Engagement

Clients

Outline (Information Architecture) the full portal experience in wireframes and lo or HiFi prototypes as needed

Prospects

Ditto the above

What Are the Steps? (continued)



ESSENTIAL = IDEAL

Get To Work

Wireframes (interactive as needed)

Information Architecture (IA/site map/scent of information)

Lo fidelity prototypes (interactive as needed)

Set up development server

Implement collaborative ideation, iteration, design (screens, email notification sequence, password creation etc.)

Create high fidelity prototypes (fully designed screens as needed)

Approve HiFi prototypes

Build + test

Launch

Why *aabalone[red]*?

Performance and fees aside, the wealth management space is under siege as the advisor-client relationship is increasingly mediated digitally and the media churns out bad press. For this reason, best practices demand a fresh look at the ways in which clients (and prospects) are engaged, informed and serviced online, especially on mobile devices. It is essential to have some form of password-protected product, customizable to some degree (individual user settings) and regularly refreshed with new content.

For more than 25 years, *aabalone[red]* has consulted on, created, produced and served as outsourced marketing strategists across a spectrum of traditional brand-building disciplines such as discovery^{*} and brand positioning, identity, print advertising, corporate collateral, annual meeting materials and presentations.

In 1994 we began designing and building web-based digital products (hence, our fluency in both analog and digital marketing). We have delivered a variety of straightforward and extremely nuanced custom solutions (including content management, user permissions and admin) for our clients, primarily in the wealth management and intellectual property space. These include highly secure private portfolio management portals; document repository systems (+ intranet); investor dashboards and investor reporting areas; a social media platform and a web-based payment system (see Exhibits). Our clients trust us with highly confidential information and we are rigorous in safeguarding those relationships and the integrity of the products we shepherd into being.

^{*}*aabalone[red]* recommends employing the Discovery phase of its *aaredway*SM process to ascertain the appropriate user engagement tools that will benefit your clients. Discovery entails a review of your current client touch points through an audit and in-depth discussions with your team. We then move to one-on-one phone interviews (7 anticipated) with clients whom you identify. *aared* scripts a detailed external questionnaire, principally to uncover the ways in which your clients appreciate what you are doing to engage them, and what other investment managers are doing. We will push interviewees to imagine new possibilities. Following the completion of the interviews, we distill our findings and share the results with you, both orally and via a written report. These findings drive the persona profiles – which in turn inform the UX, overall design and functionality of your client engagement portal.

A Few Words on Security

All our clients need to adhere to the highest security standards. We will speak with your IT people at the outset to make sure we understand your technical mandates. Here is some of our preliminary thinking.

User Logins

Users could have the option of logging in via their email address and password – or opt to use sign-in link that would be emailed to them.

User Passwords

User passwords are hashed (using bcrypt) and stored in the database. The plain-text (unencrypted) password is never written to the server's database or hard drive. When the user attempts to login, the hash of the password they entered is checked against the hash of their real password (retrieved from the database). If the hashes match, the user is granted access. If not, the user is told they entered invalid login credentials. This process is repeated anytime someone tries to login to their account.

"Forgot Your Password?" Feature

The user will be able to click a link and enter their email address to receive an email with a password reset link. This link would expire after 1 hour. Upon clicking the link, the user would arrive at a page where they can enter a new password for their account.

"Password-less" Login Feature

Instead of a traditional username/password login form, the user is presented with a single field to enter their email address. When submitted, the system would lookup the user's account and (if an active/valid account was found) generate an email to that address with a login link. Upon clicking this link, the user would be logged in. This auto login link could expire after one use, after a set amount of time, or some other parameter.

PDF Report Storage & Retrieval

PDF files would be encrypted (with AES-256) and stored in the database rather than in a directory on the filesystem. This adds another layer of protection in the event of a compromised server. When a user requests access to a particular PDF, the system would verify their access, decrypt the PDF and push it to the user's browser.

EXHIBIT 1: PUBLIC

Branded Entry page

This public-facing screen provides access to private portals and reporting areas.

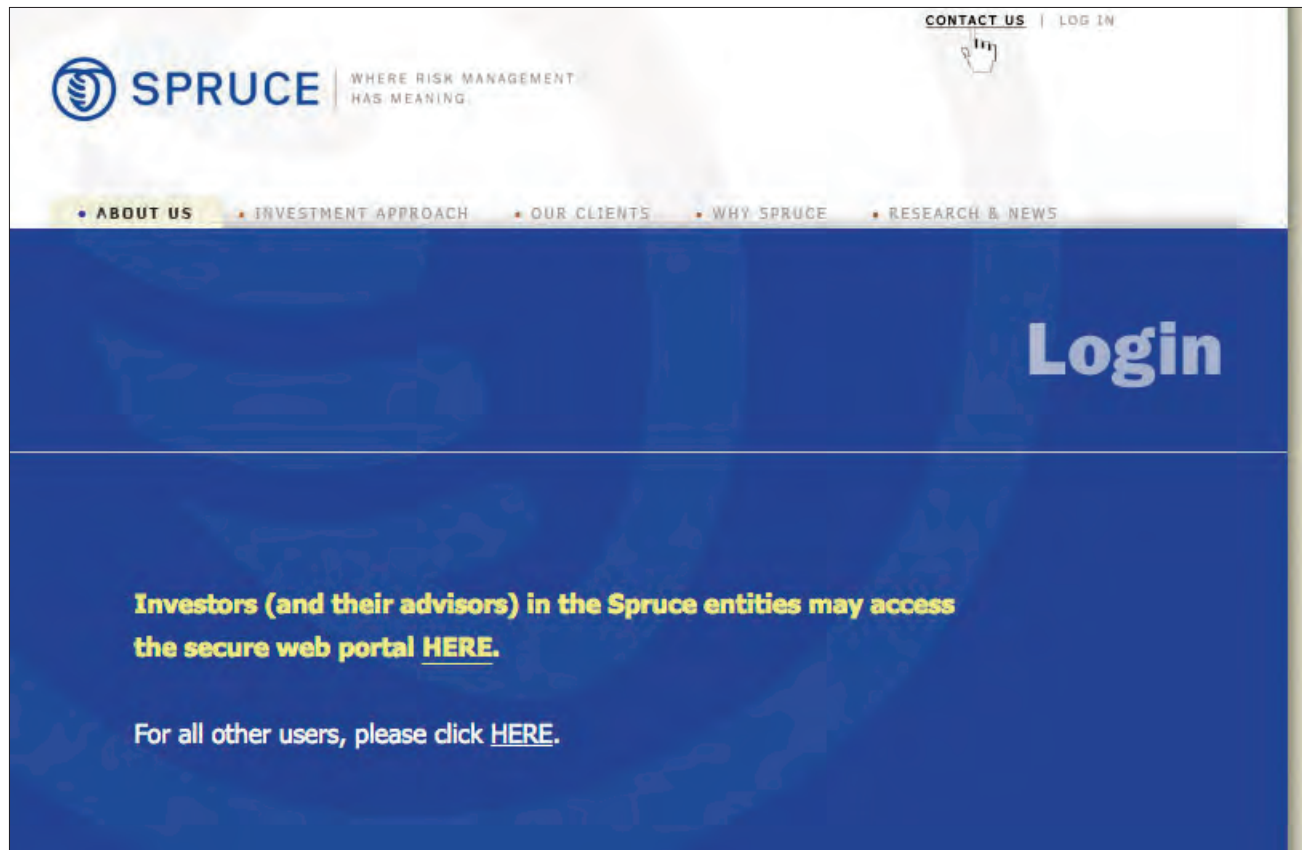


EXHIBIT 2: PASSWORD-PROTECTED

Simple Prospect Portal

This client wanted to present its marketing brochures and commentaries to prospects as premium content in a user-friendly, editorial-style design, behind a universal password. Access was given to approved applicants via a custom admin suite.

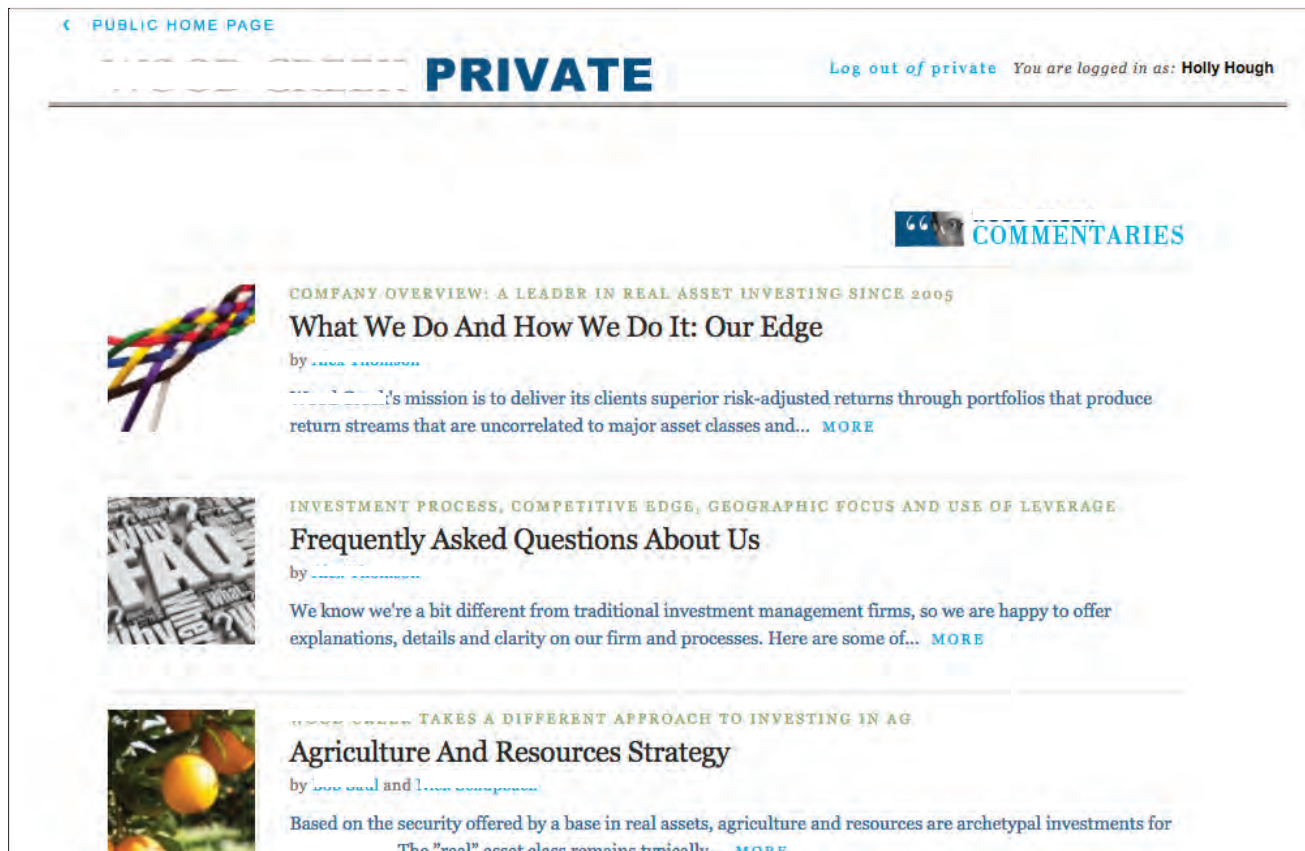


EXHIBIT 3: PASSWORD-PROTECTED

Simple Custom Admin

This barebones system includes the ability to manage pdfs, users and prospect portal settings.

PRIVATE Admin

Go to: [HOME](#) | [LINK PRIVATE](#) or [LOG OUT](#)

ARTICLESUSERSSETTINGS

[+ Add New PDF Article](#)

Change sort order of articles

Title	Published	Last Edited		
What We Do And How We Do It: Our Edge	6/16/14	10/27/14		
Frequently Asked Questions About Us	6/16/14	10/27/14		
Agriculture And Resources Strategy	6/16/14	10/27/14		
Drug Brands: Seeking Returns On Legacy Or Niche Prescription Products	6/17/14	10/28/14		
Intellectual Property Asset Management: Capitalizing On Innovation	6/17/14	10/27/14		
Music Publishing Industry Overview	6/17/14	10/28/14		
Film Industry Overview	6/17/14	10/28/14		
Insurance-Related Investments	9/11/14	10/27/14		
Fixed Crop Agriculture: Californian Pistachio Orchards	6/17/14	10/28/14		
Global Crop Supply: Investing In Brazilian And U.S. Row Crop Farmland	6/17/14	10/28/14		
Californian Water In The San Joaquin Valley: As A Commodity For Investment	6/17/14	10/28/14		
A View From The Top	6/2/14	6/10/14		

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Private Portfolio Portal/Individually Customized Dashboard

This custom intellectual property payment and portfolio management product includes the ability for Admin to “see” the page display of individual client users (view site-as-a-client functionality). Client features include onscreen data interactions and creation and export of custom portfolio reports.

The screenshot displays a web application interface for a Private Portfolio Portal. At the top, there is a navigation bar with 'ADMIN' and 'SITE' tabs, a settings gear icon, and a user welcome message 'Welcome, D. Smith' with a 'Logout' link. Below the navigation bar, a dropdown menu shows 'CURRENTLY VIEWING AS: John Smith' with a 'Select another user:' option and a search box containing 'Haldex Hydraulics Corporation', with 'Apply' and 'Logout' buttons. The main content area features a 'MyDashboard' header and a navigation bar with 'Instructions needed', 'Portfolio reports', 'File Exchange', 'Assignments', and 'History' tabs. The primary section is titled 'Give us payment instructions please!' and is divided into 'Patents' and 'Trademarks' sections. The 'Patents' section states 'Your portfolio currently includes 37 patents in 16 families. Of these:' and lists two items: '23 patents are overdue and await instructions.' and '2 patents await instructions'. The 'Trademarks' section states 'Your portfolio currently includes 20 trademarks in 13 families. Of these:' and lists two items: '17 trademarks are overdue and await instructions.' and '1 trademark awaits instructions'. A green button labeled 'Give us instructions please' is positioned to the right of the 'Trademarks' section. The date 'Today is June 13, 2011' is displayed at the bottom right.

Category	Status	Count
Patents	Patents are overdue and await instructions.	23
	Patents await instructions	2
Trademarks	Trademarks are overdue and await instructions.	17
	Trademark awaits instructions	1

EXHIBIT 5: PASSWORD-PROTECTED

Private Investor Portal

This premium portal presented clients with sophisticated options for interacting with their investment data – a decade and a half before their competitors even reached the starting gate.

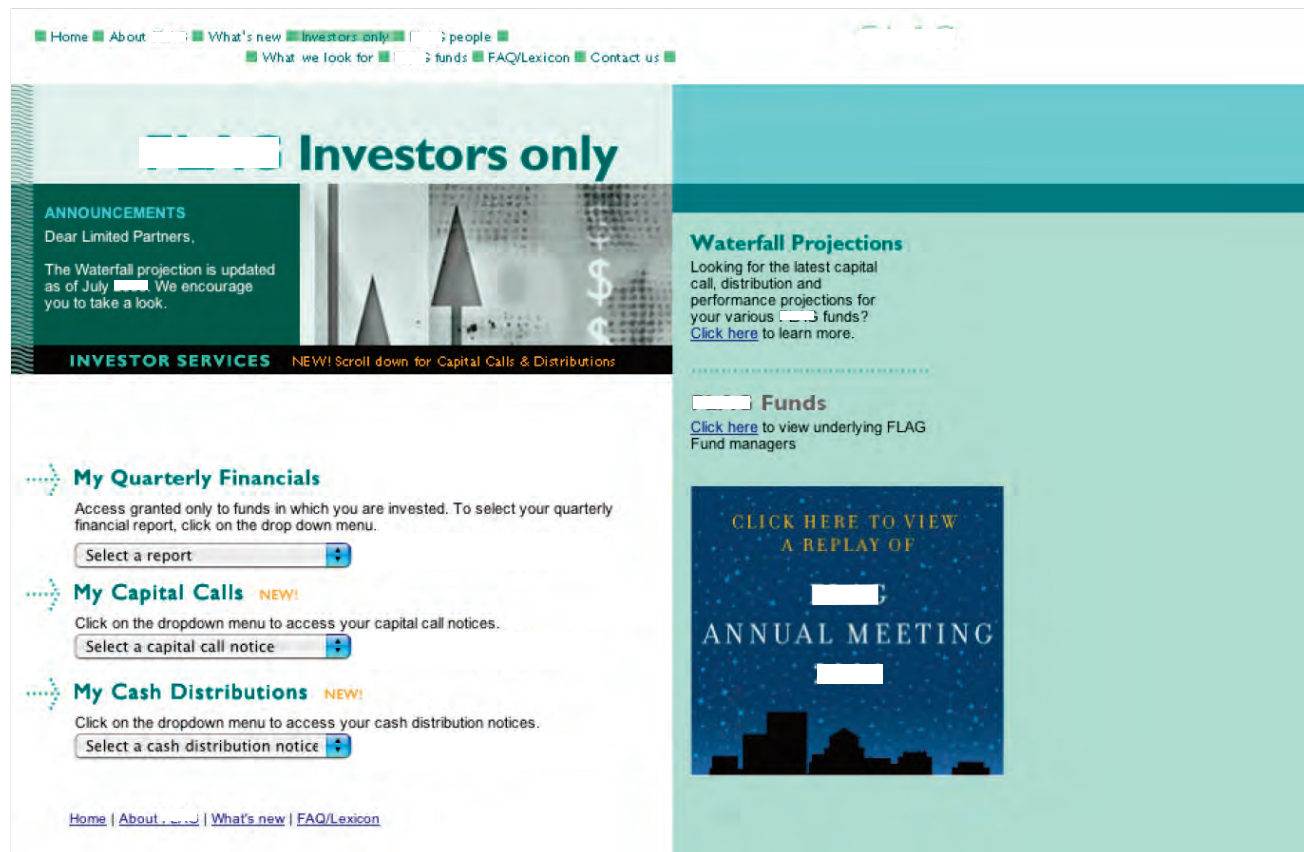


EXHIBIT 6: PASSWORD-PROTECTED

Individual Portfolio inside the Investor Portal

Custom display includes aggregate public companies data in user's portfolio by stock price, etc.

Welcome **XX** Investor
J Smith

December 25, 2005

Announcements

Please join us for **XX** ; **Quarterly Limited Partner Conference call**
Thursday, January 27, 2006 at 2:00 PM xxxxx time.
RSVP **XX** or **XX**

SAVE the DATE for **XX** , 2006 in City name
at the **XX**

myAggregate

myPortfolio News

my**XX**

XX funds

XX Insights

Contribution, distribution and performance projections for **XX** funds

Welcome to your personal **xxx** investor page. All data here represents your current limited partnership investments with **xxx** Management. Please [contact us](#) should you have questions, suggestions or experience any difficulty.

my^{xxx} aggregate position as of 12/31/04
(Click fund name to view its quarterly highlights)

Fund	Size of Fund	Commitment	% Commitment	Contributions/Distributions	Return (cash on cash)	Partners Capital
XX	107	500,000	.0097	500,000 / 850,000	1.7x	45,000
XX	325	1,000,000	.0031	950,000 / 1,000,000	1.1x	201,000
XX	225	1,000,000	.0044	850,000 / 1,830,000	1.9x	168,000
XX	250	750,000	.0053	500,000 / 625,000	1.3x	65,000
TOTALS	907	3,250,000	.0038	2,300,000 / 3,480,000	1.5x	479,000

(change account name)

my K-1 report
Click [here](#) to download your current limited partnership report.

Quarterly Highlights
Use dropdown menu to view your current highlights by fund

Select one of your funds

Quarterly Financials
Use dropdown menu to download current or past reports by fund

Most recent Capital Calls
(click fund name to view current notice & history)

Fund	Due date	Contribution
XX	9/20/04	\$ 85,250
XX	9/18/04	\$230,389
XX	9/22/04	\$ 42,500

Most recent Distributions
(click fund name for current summary & history)

Fund	Amount	Date of	Distri #
XX	\$ 12,344	6/28/04	5
XX	\$ 65,000	6/30/04	4
XX	\$ 2,474	6/27/04	5

EXHIBIT 7: PASSWORD-PROTECTED

Private Portfolio Dashboard

This custom intellectual property portfolio management product includes “action needed” feature; onscreen data interactions and creation and export of custom portfolio reports.

The screenshot displays a web application interface for a private portfolio dashboard. At the top, there is a navigation bar with links for HOME, Logout, and Contact us. Below this, a welcome message for Joe Smith is shown, along with the date April 25, 2010. The main navigation menu includes Payments, My Portfolio, Resources, and Reports. A red button labeled 'Action needed (6)!' is visible. The dashboard is divided into several sections: 'Welcome to your [redacted] account', 'Your previous visit here was 5:00pm EST U.S. on February 12, 2010', and 'ACCOUNT OVERVIEW'. The 'ACCOUNT OVERVIEW' section is further divided into 'PATENTS', 'TRADEMARKS', and 'LITIGATION'. Each section provides a summary of the user's portfolio and lists of actions that need to be taken. For example, under 'PATENTS', it states '20 new matters have been opened' and lists '400 patents in 150 families'. Under 'TRADEMARKS', it states '6 U.S. trademarks and 0 International trademarks'. Under 'LITIGATION', it states '3 litigations are active' and '1 investigations are underway'. A 'Quick links' section on the right provides shortcuts to various features like 'Run a Report', 'Order a Patent', and 'Build a custom non-disclosure agreement'.

HOME | Logout | Contact us

Welcome, Joe Smith!
Today is April 25, 2010

Payments | My Portfolio | Resources | Reports

CREATE A NEW REPORT | BROWSE SAVED REPORTS

Welcome to your [redacted] account

Your previous visit here was 5:00pm EST U.S. on February 12, 2010

ACCOUNT OVERVIEW

20 new matters have been opened

PATENTS

Your [redacted] managed portfolio includes:
400 patents in 150 families
230 are U.S. and 170 are International patents

View your patent portfolio by:
[Title](#), [Country](#), [Inventor](#), [Status](#) or [Category](#)

Patent activity:
8 await annuity instructions - 2 are overdue
You have 3 uncompleted patent orders
4 patents have been issued
5 applications are waiting to be filed
3 documents require action

TRADEMARKS

Your [redacted] managed portfolio includes:
6 U.S. trademarks and 0 International trademarks

View your trademark portfolio by:
[Mark](#), [Country](#), [Class](#), [Status](#) or [Category](#)

Trademark activity:
4 require renewal instructions
5 trademarks have been registered
2 applications are waiting to be filed

LITIGATION

Take a look at your:
[Case names, case documents or upcoming dates/deadlines](#)

Litigation activity:
3 litigations are active
1 investigations are underway

Quick links

[Run a Report](#)
[Order a Patent](#)
[Build a custom non-disclosure agreement](#)

[Exchange files with us](#)
You have file(s) waiting!

EXHIBIT 8: PASSWORD-PROTECTED

Private Document Repository/Dashboard

Designed in directory-style, this custom document management system provides intricate, varied permission levels to an assortment of users, each of whom control their dashboard settings. Admin suite is elaborate.

Jul 2, 2013
Logout

ADMIN

Calendar

GUI Wiggins

Home My Profile My Mail Law Depts Other Depts People Docs/Links IT HR/Insurance

Docs Docs by File Names Links Links by URL Categories Living Reports

All Documents in

A-J K-O P-Z

Core Unpublished

A	File Name	Screen Name	Location	Updated	Who
	2013 CSRM Trademark Fees-all.doc	Standard Trademark Fees - ALL	Multiple	4/24/13	HOH
	2013 CSRM U.S. ONLY Trademark Fees.doc	Standard Trademark Fees - US Only	Multiple	4/24/13	HOH
	2013_Federal_Holidays.pdf	2013 Federal Holidays	General Info	6/18/13	GW
	2013_Holidays.pdf	2013 CSRM Holidays	General Info	6/24/13	GW
	Abandonment Procedure.docx	Copyright Abandonment Procedure	Copyright	3/14/13	HOH
	Assignment Procedure.docx	Copyright Assignment Procedure	Copyright	3/14/13	HOH
	att_conference.pdf	How to Set up an AT&T Teleconference Call	General Info	3/21/13	HOH
C	File Name	Screen Name	Location	Updated	Who
	caim_BCgenLocations.doc	Procedure - Records Management: Area Barcode Labels	IT	3/21/13	HOH
	caim_BCgenMatters.doc	Procedure - Records Management: Matter Barcode Labels	IT	3/21/13	HOH
	caim_BCscanning.doc	Procedure - Records Management: Barcode Scanning	IT	3/21/13	HOH
	caim_matterlist.doc	Class Matter List	IT	3/21/13	HOH

EXHIBIT 9: PASSWORD-PROTECTED

Sample Activity Feed - Admin Feature

This is an admin's view of all user actions inside the private document repository.

The screenshot displays the 'Admin' section of a web application. At the top, there's a navigation bar with links like Home, My Mail, Law Depts, Other Depts, People, Docs/Links, IT, and HR/Insurance. Below this, the 'Admin' section is active, showing tabs for Activity, Alert/Train/Announce, Users, Settings?, and Marked for Removal. The 'Activity' tab is selected, showing a list of user actions. The list includes columns for Location, User action, Date, and Time. The actions are filtered by 'activity...' and the period is set to '30 days including today'.

Location	User action	Date	Time
Int'l Patents	Gail Wiggin edited doc 0 Sample	May 22 2013	3:45 PM
IP Transfers	Gail Wiggin edited doc 0 Sample	May 22 2013	3:07 PM
Trademarks	Gail Wiggin replaced The-withdrawal.doc with Trademark-Withdrawals-excelior.pdf	May 20 2013	7:26 PM
Litigation	Gail Wiggin edited link PACER	May 20 2013	5:30 PM
Copyright	Gail Wiggin added link Dialog	May 20 2013	4:13 PM
Admin	Gail Wiggin edited link USPQ Online	May 20 2013	10:10 AM
Billing	Gail Wiggin edited link Espacenet (changed the name from Espacnet to Espacenet)	May 14 2013	3:45 PM
General Info	Gail Wiggin edited document 00 Test	May 10 2013	3:07 PM
IT	Holly Hough edited link Acronym Finder	Apr 30 2013	7:26 PM
HR/Insurance	Holly Hough edited link Acronym Finder	Apr 30 2013	5:30 PM
IP Transfers	Holly Hough edited link Dictionary.com	Apr 30 2013	4:13 PM

EXHIBIT 10: PASSWORD-PROTECTED

Sample Document Management Model

This is an admin's view of a custom modal created for uploading files into a private document repository.

Logout SSJR Calendar Client Hub SSJR Hub Admin Gail Wi

My Hub My Mail Law Dents = Other Dents = People Docs/Links IT HR/Insurance

cs/

TS

nents.

Name

00 Tes

A & I F

AIM - H

EFS Ap

EFS Ce

EFS Ch

et

EFS Design Application Cover Page

U.S. Patents 3/14/13 HH opa_EFS_ChangeComAddress.doc

U.S. Patents 3/14/13 HH opa_EFS_DesignAppCover.doc

Department Head Add a Document to [redacted]

Screen Name:

File: **Browse to upload:**

Make it available in EFS like this: ☒ Make it visible (publish it) now ☐ Don't publish it yet

Select Category:

Thank You!



Virtually yours, principals Gail, Alec and Holly
aabalonered.com/snapshot