

Focus and follow through

Notes on the H2O prototype

July 2016

Project description

H2O is a suite of online classroom tools that allow professors to freely develop, remix, and share online textbooks. It's based on the open-source model: instead of locking down materials in formalized textbooks, H2O believes that course books can be free for everyone to access and build on.

Though H2O is geared primarily toward law professors, the platform can be used across academic domains.

Goals

The goal of this project was to create a static prototype that demonstrates a compelling vision of H2O. How might the tool work best to serve students and professors of law? Which elements are used most, or even beloved? What functionalities might we introduce — or remove — to enhance the user experience?

Specifically, we wanted to address the software from two angles: creation and consumption.

- **Creation.** Our primary point of view. It sounds simple, but we wanted to provide a platform that *works* — that functions really well, and is easy to use. Faculty generally don't have a lot of facility with technology, so it's important to make it exceptionally easy for them to contribute their content — that is, to create casebooks — and to rely on H2O as their primary source for students' course materials and textbooks. Ideally, H2O is appealing in lieu of print-only textbooks.
- **Consumption.** Our secondary point of view. Consumption covers engagement on the student side. Ideally, for students, H2O isn't just a confusing pile from which they can grab some required printout, but something that they can interact with. We wanted to give students equal access to their own highlights and adaptations, for study and practice.

Our approach

We researched the user base by conducting several phone interviews with H2O power users and mined the extensive user feedback the H2O team kindly provided. From this background, we developed a set of design principles, a creative approach, and a prototype that's a combination of wireframes and visual designs.

This document delivers our notes recommendations for the site's strategy and design as it relates to the prototype and beyond. It aims to be a guide, not only for implementing the prototypes, but for making design and user experience decisions for screens and flows yet undeveloped.

Creative brief

At the center of H2O's core attributes is a tension between power (tradition and solidity) and grace (balance and liveliness). The ideal tone will convey a sense of power kept in reserve and used with judgment and lightness. This specific balance echoes an eastern religious philosophy of infinite power expressed through infinite subtlety. In the western world, this balance is found less in religion than in art. While our goals are more practical than artistic, our broader aim is the same: economy of expression.

We can see this balance reflected in H2O's design principles.

Design principles

Design principles are concise, specific guidelines for generating and evaluating ideas and artifacts. The principles act as a reference point and compass in conversations about the design and development of the H2O prototype. They helped us to make decisions about what to do while sustaining a consistent, coherent vision for the project and can serve the same role for you as you follow through on our vision.

We developed these principles primarily from working directly from kickoff meeting notes and user interviews, and secondarily from our own observations.

- **Start with the book.** Embrace what is fundamental about the experience of the casebook. Focus on the experience of reading and the art of getting out of the way. Encourage concentration and use functional typography so clear and strong it disappears.
- **Be straightforward.** Cultivate ease of use and conceptual consistency with clear hierarchy, plain language, and intuitive interface. Be direct, not metaphorical. Don't be clever when something simple will do.
- **Honor precedent.** Recognize the legal and academic tradition from which H2O comes by providing a trustworthy, authoritative, substantive resource that recognizes the values of its academic users. This doesn't imply a static condition of reverence, rather a space where the tradition and the individual meet in a place of mutual respect.
- **Encourage the remix.** Building a coursebook is a creative act. Cultivate practical engagement and a sense of ownership by encouraging our users to easily and meaningfully personalize, modify, and share materials. The final product is more than only the sum of its contents. Remixing is the continued process of invigoration.
- **Value openness.** The openness of the platform is a priority. Like a public service, H2O is freely available, free to use, open-source, extensible, and well-documented. There's no single, definitive course; no single, unalterable perspective on the law. We encourage a broad multiplicity of perspectives because the law benefits from broad, continued participation.

- **Do less.** Be lightweight. Focus the product on its primary users — faculty — and its most useful features, before adding to it. Follow through — make H2O as fast, powerful, reliable, and stable as it can be.

What is it look like to be powerful? We want to speak softly and show our power through restraint and utility. To that end, we're inspired by the simple and awesome — pencil and paper, a strong edit, unfussy materials. Like carved marble, we're inspired by absence as much as presence — by the mountain implied by the marble torso. We're also inspired by the sail and hull, by speed and lightness and freedom. If it's successful, H2O's success will come from the rightness of its sails and the shape of its hull — its power will come not from within but from transforming an energy from elsewhere.

Attributes and tone

- Calm: stable, composed, reserved
- Direct: respectful, familiar, judicious
- Strong: solid, capable, balanced
- Nimble: light, unburdened, graceful

Characteristics to avoid

- Unusual, quirky, unbalanced
- Heavy, musclebound, thick
- Dark, cloistered, musty
- Solicitous, simpering, aggressive

Style guide

We've included a style guide along with the working Sketch files we delivered. It includes clear guidance on the type choices, colors, and other visual details of the design.

Solutions

The design principles gave us a framework to work within — an approach for applying changes to the software. Our intention wasn't to change the software for the sake of change, but to update and edit it as necessary to meet the project goals, to create something streamlined, compelling, and solid. To that end, we introduced these changes.

The casebook is the main metaphor of the new H2O.

We've done away with the "playlist" metaphor, which, though neutral enough to accommodate annotations and edits to a number of different resource types, wasn't specific enough to guide the user, with intention, toward the goal of the software, which is to create and adapt casebooks for use in the classroom. Let's call the thing what it is — a playlist is a casebook, and that's that.

We haven't removed much functionality here, either. Users can still add and edit texts and other resources; but they're adding and editing them within the scope of a casebook now.

Clone

Like the playlist-to-casebook change, our interest in clone functionality was in part about its nomenclature. "Remix" as a term worked well with "playlist" as a metaphor, but, again, it wasn't specific enough. (The word also felt as if it struck the wrong chord for the audience H2O intended to serve.) And then what was the difference between "remixing" and "cloning"? We felt that streamlining the language around duplicating and sharing casebooks would fulfill our principles — e.g., encourage the remix — without sacrificing clarity.

Collaborators and version tracking

This is a new feature pulled directly from interviews with users, specifically TAs, who edited professors' work. A professor and any number of TAs would sign into the software using the same credentials, and there was no way to know who had edited what. Introducing collaborators to a casebook allows professors to grant permissions to TAs to edit their casebooks under their own credentials. Ideally, such a system would be paired with version tracking, so that collaborators can track changes and roll back edits.

Classes

Another new feature that allows professors to assign a class association to a casebook. A class association could be as simple as something tag-like, indicating a specific class for which a casebook was assigned. But it has the possibility of being even more robust, including — allowing for student privacy issues — providing a way to "push" a casebook or casebook changes to a roster of students in a particular class. For now, it's interesting metadata, but it could be more!

Follow

A simple feature that allows users to follow or “watch” a case or casebook, without the full commitment of cloning it. Perhaps functionally similar to the current bookmark feature.

Prototype

The prototype is a mix of wireframes, designed screens, and semi-designed flows of specific user interactions. It's collected in an online software package called InVision, at the link below.

- InVision prototype access: <https://invis.io/9J7JQ1WV2>

Below we'll address some specifics to the software as we've proposed to change it.

Global elements

Global elements recur sitewide, mostly in the header and footer.

Navigation

The navigation states change slightly depending on whether the user is signed into the service. Main navigation elements for signed-in users include:

- **Logo.** Links back to the dashboard, or home page, if the user is not signed in.
- **Create a casebook.** This action button allows the signed in user to immediately create a new casebook. Does not appear for un-signed-in users.
- **Browse.** Appears for both user types. You've got a lot of options here — at first, casebooks could be selected by H2O staff according to your own internal criteria. But over time, you might develop algorithms to display casebooks based on popularity over time, or by location; “most active” casebooks according to editorial activity, number of times cloned, adopted, or followed; or simply organized around tag, either by popularity or inline with world events or trends.
- **Help.** Leads to software documentation. Shown in main navigation only to signed-in users, otherwise appears in the footer.

For non-signed-in users, we show:

- **About.** Shown in the main navigation only to un-signed-in users instead of help, otherwise appears in the footer. From the “About” navigation item, users can read more about the history and details of H2O. We suggest folding the current site's About, Frequently Asked Questions, Team, and Contact into one About section with subnavigation to child pages. You might also rewrite the FAQ to be a straightforward text document with descriptions and headers, rather than the Q-and-A format.
- **Sign in.** Existing users can sign in to their accounts.
- **Sign up.** For the adventurous new user, make a simple sign up form available. Name, email address, and password should be the only required fields; the rest can be filled in by the user after she has confirmed her account.

Be consistent with your nomenclature — that is, choose “Log in” or “Sign in” to represent the action of accessing the software, and stick with it in all headings and button labels. We think “Sign in/up” is a little more friendly, but there is a certain nerdy appeal to “Log in.”

User Profile

Show the user’s name and avatar, plus verification icon, if she is a verified user. When a user clicks on her name, she’ll head to the account settings and profile page. Alternately, you could reveal a simple submenu here, with the options Profile, Account, and Sign Out. (More on user settings below.)

Search

Search is much more action-oriented in this iteration of the software. We’ve moved it to a place of prominence, greatly increased the size of the input, and offloaded unnecessary secondary sorting and filtering functionality to the search results screen. Search is also:

- **Incremental and predictive.** Show results as the user types.
- **Filtered.** Users can filter results by resource type, with tabs or sections for cases, images, videos, texts, etc. Users toggle between their own resources and those belonging to others. “Primary” (original, pre-clone sources) are distinguished from their clones.
- **Sorted.** Allow users to sort results by name, date, or relevance.

Home

The home page has two states, depending on whether or not the user is signed into H2O. The marketing state is the default, non-signed-in version of the home page that any user might encounter. The dashboard is a fully customized utility for the signed-in user.

Marketing Home Page

To the unsigned-in user the home page serves primarily as orientation to H2O. This isn’t a hard sell, or a cold call — the majority of new users to the software will have been given some introduction beforehand. Our goals here are to:

- Give a sense of what H2O does
- Demonstrate benefits over alternatives
- Lend credibility by showcasing high-profile users
- Provide access to the best casebooks and cases

The main call to action is to contact the H2O team to get a full demo, but we've allowed for a simple sign-up as well.

Dashboard

Our vision for H2O includes a dashboard home page — users needn't be required, as they are in the current version of the software, to click "Dashboard" to reach vital stats on their cases and account. Once a user is signed in, the marketing home page becomes irrelevant and reloads as the dashboard. Clicking on the logo brings the user back to the Dashboard.

Newest Updates

System announcements and notifications appear here, for example new feature announcements. Users can also get alerts about cases and casebooks they own, specifically clones of casebooks and other resources. There's a lot of opportunity here — depending on how folks use the software, you might also show "related" casebooks through tag analysis. For instance, if a case or casebook is added to the system that's related topically to casebooks a user has created. More simply, the software could alert every user when a new Supreme Court case is added to the system.

Casebooks and Cases

This section collects a user's cases and casebooks in a clearly organized stack. As in other aspects of the software, we've chosen to strongly prioritize the case and casebook over other assets.

- **Your Casebooks.** Casebooks the user has created, with visual distinctions between Draft and Published, plus the ability to create a new casebook.
- **Your Cases.** Cases the user has added to the system.
- **Casebooks You Follow.** A tertiary organizational area to collect casebooks a user follows (but hasn't created herself). This section might be more prominent in the student use case — students may follow and read more than they would clone or create their own casebooks.

Casebooks and Cases

The casebook is the core of H2O, as we've described above, and we've made a number of changes to the casebook's visual presentation and interactions.

Modes

The casebook has two modes based on user perspective, Collaborator and Reader. The overall visual design and screen layout is very similar, but tools and labels change slightly depending on the user's level of engagement with the casebook.

- **Collaborator.** A Collaborator is someone with permission to edit or otherwise collaborate on a casebook. Professors assign collaborators to casebooks — for instance, a TA, or another professor. Collaborator mode offers the user tools to edit, organize, and otherwise modify the casebook and its contents, and to view detailed statistics on the casebook’s use, collaborators, and clone history. Collaborators must be signed in.
- **Reader.** Readers are everyone else. Reader mode is how a student, or non-signed-in user views a casebook. In Reader mode, users are limited in the interactions they can perform on a casebook, and can see only limited details about a casebook’s history.

Status

In Collaborator mode, the casebook has two statuses, Draft and Published.

- **Draft.** A Draft casebook is one that a user has composed, or is in the process of composing, but hasn’t yet “published” live to the site.
- **Published.** A Published casebook is live on the site, findable via search, and available to all users to read, clone, print, etc.

Draft/Published functionality is similar to the current software’s Public/Private distinction, albeit with a more editorial outlook. Visual distinction between the two is much clearer.

Tools

A suite of File-level tools for interacting with the casebook.

Clone

Clone is the main action to be performed on a casebook or case, usually by professor user, though students are able to clone cases and casebooks, too. To clone a resource is to duplicate it wholesale and “save” it as your own. A button performs this action, but it also happens implicitly when a user begins to edit a case or casebook — that is, the user does not have to explicitly click “Clone” before she can begin editing. Show confirmation dialog or modal to support this action when it happens implicitly.

We may want to provide an additional contextual menu within the clone action, to allow users to select the destination of their clone, e.g., “Clone to casebook...”

Don’t show the clone action button on a user’s own cloned casebook.

Publish

The ability for a signed-in collaborator on the case to publish the case live to the site. Shown only on Draft status casebooks.

Export

Export the casebook for download. The most likely scenarios for export are:

- PDF
- Word Doc

We've separated Print from Export in the new version of the software. Ideally, exports are available immediately to download in the browser. The modal warning about export delay is an unexpected behavior, and users complain that export notification emails go to their spam folders.

Print

Print the casebook. The current print flow offers too many options to the user. Strip completely any visual design styles from the print setting options (presets, font and size, margins). It's not totally clear what the settings for TOC, titles, and show full text do; it would likely be simpler to remove them.

In fact, we lean toward stripping all print settings entirely, and instead building a solid print style sheet with built-in settings to accommodate the most common and popular casebook print settings. (We did not dig deeply into this particular realm of the software, but a quick survey could accomplish a lot. — the main complaint we heard was over confusion about when footnote text is printed, and inconsistent type styles.) Having consistent print settings would help faculty and students work confidently from the same source materials.

More

Additional action menu items.

- **Follow.** Allow a user to follow or “watch” a case or casebook, without initiating a clone.
- **Hide annotations.** Visually hide annotations on a case or casebook.
- **Report error.** Provides users with the ability to report visual or textual errors in a case or casebook. Open a contact modal.
- **Assign.** If you choose to implement “push to class” options, the ability to assign a casebook would appear here for collaborators on that casebook.
- **Delete.** For a casebook collaborator, the ability to delete the casebook from H2O.

Contents/Layout

The first tab in the three informational views of a casebook, the Table of Contents organizes casebook contents in the Reader mode, and allows the user to click through to individual resources. Layout provides the same organization for the Collaborator mode, along with the ability to edit casebook structure, and add or delete sections and resources.

Elements of the ToC:

- **Description.** A short, editable description that serves overall introduction for the casebook in general. The user has the ability to show or hide the description. Signed-in collaborators can edit the description.
- **Section.** A way to organize the cases within a casebook into logical chunks, like chapters in a book. Sections have a title and description, and show cases or other assets contained within.
- **Assets.** The individual assets (usually cases, but also possibly videos, links, or texts) contained within the casebook, usually organized in sections.

Sections and assets may be nested; users drag-and-drop to re-order.

Add Resource

The Add Resource flow handles a user's ability to find existing resources within H2O or add new ones to add to a casebook. Add Resource opens in a modal window with three tabs: Find a resource, Add a link, and Add a text.

Find a resource

Find a resource allows users to select from existing H2O resources to add to their casebook. The flow follows the site's basic search pattern as described above, with incremental search and the ability to both sort and filter results. From search results, users can drag their desired resource into the table or contents, or use the + icon to add it manually.

Add a link

Since H2O doesn't host files, adding a link to any media type is as easy as inputting a URL. Provide clear help text to direct the user to provide *http://* if necessary.

Once a link URL is added, the system will recognize its metadata and file type, and the user may either drag it into a table of contents layout, or use the + icon to add it to the table of contents. User can also cancel and delete.

Add a text

A tool for adding simple text documents to a casebook. The add text panel provides the user with these options:

- **Text title.** A title for the text.
- **Text body.** A simple rich text editor, like Tiny MCE, with Markdown capabilities. Include the ability to expand the text editor to full screen.
- **Save.** Once a text is saved, the user is presented with a confirmation screen, and can drag the text into the table of contents or use the + icon to manually add it.

Read/Annotate

For Reader mode, the read tab is a way in to read the contents of the casebook, navigating from resource to resource (or section). For the Collaborator, the tab instead is Annotate. Either way, it collects a number of editorial functions.

Hide

Hiding, or eliding, text is a way for the user to hide long or irrelevant passages.

- User highlights text with cursor, contextual editorial menu appears
- User chooses *Hide*
- Highlighted text is hidden with an ellipsis
- Contextual icon is shown to indicate that an edit has been made to the resource, and is clickable for collaborators on that resource to make additional edits
 - Elision can be deleted
 - Elision can be edited
 - Elision can be turned into a replacement text

Replace

Replacing text is a way for the user to hide long or irrelevant passages, replacing them with shorter or summary text.

- User highlights text with cursor, contextual editorial menu appears
- User chooses *Replace*
- Inline input appears where user can enter replacement text
- User hits Enter to save replacement text
- Replaced text is hidden and replaced with new text
- Contextual icon is shown to indicate that an edit has been made to the resource, and is clickable for collaborators on that resource to make additional edits
 - Replacement can be deleted
 - Replacement can be edited
 - Replacement can be turned into an elision

Highlight

Highlight is a tool that allows users to highlight a line or paragraph of text, just like you would with an old-fashioned highlighter pen.

- User highlights text with cursor, contextual editorial menu appears
- User chooses *Highlight*
- Editable highlight appears, along with contextual icon
 - Highlight can be deleted

- Highlight can have a note added to it

Add note

Note is a tool that allows users to add a note or “aside” to a line of text or paragraph, like writing in the margin of a textbook.

- User highlights text with cursor, contextual editorial menu appears
- User chooses *Add note...*
- Contextual input appears, where user can input note text
- User hits Enter to save changes
- Editable note appears highlighted in the flow of the text — user clicks icon to reveal note — along with contextual icon
 - Note can be deleted
 - Note can be edited
 - Note can be changed to highlight-only

Add link

Link is a tool that allows users to add a hypertext link to a line of text or paragraph.

- User highlights text with cursor, contextual editorial menu appears
- User chooses *Add link...*
- Contextual input appears, where user can input URL
- User hits Enter to save link
- Editable link appears as underlined text, along with contextual icon
 - Link can be edited
 - Link can be deleted

Bookmark

Place a bookmark in the case, paragraph by paragraph. Allows user to know where she left off.

Toggle headnote

Show or hide the headnote introducing the section or case.

Details

The details tab displays metadata about the case or casebook. This is another place where growth of the software could organically lead the way to more or interesting data displays. Here are a few ideas to start.

Tags

Tags associated with this case, added by case collaborators. These could be from a set of system-defined tags, or user-generated content. In the Collaborator view, users have the opportunity to add, delete, and edit existing tags.

Class association

Casebooks only. If the casebook is associated with a class, show that class information here. In the Collaborator view, users can add, delete, and edit existing class associations.

Adoption

Casebooks only. Has another user cloned this casebook and adopted it for her own class? If so, show that here. It could be fun to show geographic locales for adoption, or just institution names — but you could have fun with this data.

Clone history

History of clones to the case or casebook. This module stands in for Activity in Reader mode. In a way, this module could be a bit of a popularity contest. Who has the most-cloned casebook?

Activity

Collaborator mode only. A full editorial history of the casebook or resource. Show details on major actions performed, like adding or deleting a case, cloning a casebook, adding a collaborator, highlighting, adding links, and so on, all the way back to the original clone or casebook creation. Display action, user who performed it, date. Ideally, we'd provide GitHub-like version control functionality, allowing users to roll back changes.

Collaborators

Collaborator mode only. A list of collaborators on a casebook, and the ability to add, delete, and edit collaborators. Collaborator functionality solves the problem of TAs using a professor's single login to manage casebook edits and prevents users from clobbering each other's changes.

The Add Collaborator flow should resemble the sign-up flow — name, email address; user gets an activation email. Keep it as simple as possible.

Settings

We haven't prototyped a User Settings screen — these suggestions can serve to guide the choices you might make for this part of the site. Settings should be accessible through the User Menu item.

Open settings on a typical screen, not a modal. Organize settings into sections, with a header for each setting type. Change the *Submit* button language to *Save*.

Account

Include only these settings, as modifiable inputs.

- Username (required)
- First name
- Last name
- Email address
- New password
- Password confirmation

Profile

- Affiliation
- Biographical information (textarea; formerly “Description”)
- Photo
 - Show current thumbnail or “blank face” if none
 - *Upload a photo* button opens system dialog
 - System scales photo to meet requirements on the backend

From the current software, eliminate entirely:

- Time zone
- Default font
- Default font size
- Show comments
- Show paragraph number
 - It’s not clear to us that these settings get much use
- “Open new collages, media, texts, playlists, etc. in a new tab?”
 - This is easily enough done with a command-click
- All print settings; we’ve addressed those separately

Postscript

H2O, the name. It makes almost no sense as a product name and we never know how to capitalize it, or whether the “O” is the letter O or a zero. With all the work we’ve done to improve the software, it’s worth considering whether it’s time to rename it as well. Is the name H2O working as hard as it could for the product? Is it helping strengthen our core values and communicate those values to our users?

A name isn’t required to fulfill all of our design principles, but it should try to contradict them as little as possible.

The new name should:

- Be simple and memorable
- Be straightforward
- Reference the legal tradition of thoughtfulness, action, and analysis
- Be serious enough to hold up to the product’s content
- Reference interconnection and openness

We’d like to propose **Cortex**.

The outer layer of the cerebrum (the *cerebral cortex*), composed of folded gray matter and playing an important role in consciousness.

It’s got punch, presence, and professionalism, but can also recede and play backup to the content. It evokes thoughtfulness and seriousness, as well as a light, but obvious, wordplay with *core*, *court*, and *text*.

No icon, no logo, just a simple wordmark.

Cortex

Build a better casebook.

Roll it around a bit. We’ve been living with it for a few months, and it still feels good.