

The **FirstTime** Project

[www.TheFirstTimeProject.com](http://www.TheFirstTimeProject.com)

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## Introduction

The First Time Project is a place on the Internet for individuals to author, share, and archive accounts of their first time experiences. It draws on almost every course we took at the School of Information. Our aim was to apply knowledge gained in courses to a real-world start-up situation: designing and building a fully functioning web site in approximately four months. During this time we designed and built nearly every component of our system from scratch.

Along the way, we came to realize that developing a social media application requires new ways of thinking about designing software. Much of the character and form of the site depends on how people use it. This differs from traditional software and “Web 1.0” sites. In the old paradigm, designers could exert great control over what, when, and how information was made available to users. In the new paradigm, we can only partially “design” the user’s experience. Our role is more akin to an architect: setting in place technological affordances and constraints that can, at best, encourage certain types of behaviors while discouraging others. We came to see ourselves as constructing spaces

where different types of social interactions could occur. Yet we also came to realize how this type of space differs from most physical ones. Usually, physical spaces afford behaviors and social interactions that are tied to a particular temporal moment with a given set of participants. On our site, behavior and social interaction in space extends beyond the current moment. In our space, certain behaviors purposely leave marks that can be tied to an identity. Furthermore, the marks made by one individual affects how others will experience the space, including whether or not they will contribute a story and/or what type of story they will contribute. In other words, the way people use our space will have tremendous impact on what the space becomes and how it is used by others.

How does one design for this scenario? What follows is the story of how we came to build the site that we did. The report is divided into three main sections: a discussion of our rationale for the project, a detailed account of the process we followed, and a review of why we made major design decisions.



## Project Rationale

The rationale for our project can be derived by answering the following three questions:

1. *Why do people share personal narratives?*
2. *Why are stories of first time experiences particularly important?*
3. *Why distribute stories over the Internet?*

What follow are our answers as we came to understand them throughout the project.

### Why do people share personal narratives?

**A1:** They help us achieve empathy with others; this empathy is necessary for interpersonal relationships, community solidarity, and collective efforts.

**A2:** They help us recognize commonality between our lived experiences and those of others. Recognizing this overlap makes us feel connected, we feel as if we “belong.”

**A3:** Sharing personal stories, especially ones that involve vulnerability, can be a way to form bonds and develop intimacy.

**A4:** When shared across generations, personal stories weave our self-narratives into histories that span beyond our own lifetimes.

**A5:** When shared across cultures and other social boundaries, personal stories can help foster an understanding of those with whom we do not typically relate.

**A6:** The act of putting one’s lived experience into a narrative structure can help the individual make sense of their lived experiences. This can be particularly important for making sense of traumatic experiences.

**A7:** When we enter a new situation we look for examples of how to behave and feel in that situation. Often we do this by drawing on cultural narratives that seem applicable. While some of these narratives are commercially produced, others are shared by peers, family, and others in one’s personal network. We thus draw on, or seek out, knowledge of how others have navigated similar situations and use this knowledge to inform our own endeavors.

**A8:** Personal narratives are situational; they provide accounts of situation-dependent processes and practices. As such, they offer an important way for certain types of knowledge to be learned and disseminated. This knowledge differs from “generalized” categorical knowledge (such as that found on Wikipedia) which is seen to exist independent of the situation.

### Why are stories of first time experiences particularly important?

**A1:** First time experiences are often particularly evocative, memorable and emotionally rich.

**A2:** We often treat first time experiences as milestones in the narratives we construct about our lives, signposts that announce a period, relation, or set of practices that follows. As such, they represent more than just the particular experience that is recounted, they reference the new set of experiences for which the first time episode was a doorsill.

### Why distribute stories over the Internet?

**A1:** The Internet provides a way to disseminate personal narratives to individuals that are not part of existing social networks; as such it could allow bonding to occur across traditional social boundaries such as nationality, age, race, gender, class, and other markers of cultural difference.

**A2:** The Internet provides an efficient way to disseminate and archive personal narratives with those already in your social network.



# Process

# Phase 1: Discovery

In the summer of 2006, we decided to become a project group based on our mutual interests, compatible personalities, and complimentary skills sets. We decided it was more important to form a group based on these factors rather than based on a specific project idea. Consequently, it was necessary to embark on an extensive brainstorming and idea generation process to generate an idea for our final project.

## 1. Idea Generation & Brainstorming

To effectively manage our time constraints and balance the workload between our final project and our academic coursework, we set a weekly two hour meeting for the entire fall semester solely dedicated to idea generation. We used this time to explore areas of interest and present research conducted throughout the week. At the same time, we identified our key milestones and delivery dates.

Our initial meetings were focused on brainstorming techniques to generate numerous potential ideas in interesting problem spaces. The process consisted of rapid free

association where ideas were quickly verbalized to the group and written down onto a whiteboard. We focused on quantity and high level ideas. Once we gathered a substantial amount of leads we applied the decision making technique of an affinity diagram to sort our ideas into similar and related groups in the hope of finding common threads. [Figure 1] After an iterative process of brainstorming, each group member distilled the collection of ideas into their top choices. The top selections were then compared and six major themes materialized.

Once the six themes were identified each group member selected two topic areas to research. Following our analysis, each member presented their findings. We ultimately decided on two main topic areas to focus our efforts on for the remainder of the semester. The final two topic areas were First Time and MetaNet. Below are our descriptions of each idea:

### First Time

*First Time would provide a place on the Internet for individuals to author and share accounts of their first time*



Figure 1 - At Work on the Affinity Diagram

experiences. The subjects of these stories could vary widely: from accounts of their first day of school, to the birth of a first child, to the death of a parent. We hypothesize that these emotionally rich episodes could resonate with friends and strangers alike. We also hypothesize that the site could function as an archive of important life-moments. People might create a series of first time stories drawn from their own life or about the life of another, such as a child or parent. From an information perspective, we are attracted to notions of story-based information authoring, sharing, and retrieval. We imagine that this genre of information differs in important ways from the more transactional and clearly functional information typically studied at the School of Information.

### MetaNet

*MetaNet would explore the opportunities and dangers of recording information about an individual's location at a specific time. Systems that can record this information are increasingly being deployed in new products: General*

*Motors' OnStar, the 911-GPS technology in cell phones, and the LoJack security system for cars and laptops are just a few examples. At the same time, more and more information about happenings in the physical world are being created and shared: Flickr, YouTube, and blog sites are a few current places where this type of information is rapidly propagating. We propose recording information about our location for several weeks. We would then build a system that retrieves the records created by others around our paths in the physical world. We would use this tool to examine the potential benefits and threats of recording time and location information about an individual, looking to see what the information supplied by others allows us to infer about ourselves.*

With two potential project ideas identified each team member performed a deeper and more thorough analysis of each project space. For First Time, we did an analysis of social software to learn about current trends and identify any potential sites with a similar focus.

For the MetaNet project, we researched the current state of geotagging and GPS-enabled devices and services. We researched sites that made use of location tracking. We were particularly interested in understanding how location and time metadata were being assigned to digital media.

In addition to secondary research, we spoke with professors and colleagues to get their perspective on each project idea. Ultimately, after an analysis of the pros and cons of each project idea, we enthusiastically decided to pursue The First Time Project as our Master's project.

## 2. Comparative Analysis

### 2.1 Comparative Analysis Goals

The next step in our process was to conduct a comparative analysis of the existing ways people can share personal narratives both online and offline. We did this so we could design an offering that compliments and adds value to existing practices. Additionally, we wanted to identify best practices within social media web sites.

### 2.2 Comparative Analysis Process

Within the online environment, we evaluated 16 sites: Blogger, Dandelife, Facebook, Flickr, Gaia, Google Groups, Group Hug, Live Journal, MySpace, Our Story, Post Secret, Vox, Xanga, Yahoo! Groups, Yelp, and YouTube. We focused on the following themes:

- Public vs. private data
- Site focus: content vs. you (explained below)
- Ways of representing the author
- Reader and author feedback features
- Content upload process
- Account creation process
- Searching and browsing strategies
- Categorization strategies



Figure 2 - Social Media Landscape

- Incentives for participation
- Groups and community

For the offline environment, we focused our analysis on the following situations:

- Dating and meeting people -- the ice-breaker situation
- With good friends -- the dinner party situation or a gathering with friends
- With intimates -- bedroom conversations or walks with a sibling or parent
- With professional listeners -- therapists, coaches, or church leaders
- With purposeful strangers -- support groups.

For each analysis, we compiled our notes and posted them to our project wiki.

### 2.3 Comparative Analysis Findings

A more detailed discussion about the implication of our findings will be discussed later in the paper within the Major Design Challenges section. However, at this point it is important to note that the comparative analysis was extremely helpful in identifying the current heuristics for uploading content to the web, identifying the ways in which to classify and

organize data and ways to set privacy controls for web content.

In addition to our functional analysis, we identified a large distinction within the realm of social media web sites. We call these “You-focused” and “Content-focused” sites. [Figure 2] You-focused sites include MySpace, Friendster, Facebook, LiveJournal and Vox. They are designed in a way that highlights the individuals using the site. The content or media of the site is presented as a secondary element. For example, when a user logs into a You-focused site, the typical starting point is their profile page; many of the actions presented to the user are focused around the management of their own identity and content within the site. On the other hand, Content-focused sites such as Yelp, YouTube, Google and Yahoo! groups, Group Hug, and Postsecret are designed in a way to promote and highlight the content and media that exists within the site. The individual is presented as a secondary component. When a user logs into Yelp or YouTube they are redirected to a customized home page featuring content that others have contributed to the site. Profile and account management is

available to the user but it is displayed less prominently. Based on these insights, we have decided to position The First Time Project as a Content-focused site and design elements that will highlight the content and contributions to the community over individuality and self-presentation.

### 3. Needs Assessment

#### 3.1 Needs Assessment Goals

The purpose of the needs assessment was to understand if, how, and why people might want to share and read personal narratives. Such an assessment of need differs from those typically undertaken in the software development process. Most software development processes are meant to produce highly functional and effective tools. In such a scenario, user “needs” are often described as a set of tasks that the user needs to complete. These tasks are usually highly functional. Additionally, they are too often conceptualized as independent from the larger social context in which the tasks need to be performed. The focus is usually on one individual interacting with one computer.

Our project required a rethinking of what an assessment of need should entail. Storytelling is not often conceived as a highly functional activity; we do not think of it as a series of “tasks.” Additionally, storytelling is a social process that involves multiple people. Models that focus on the interaction of one individual and one computer inadequately capture the underlying needs of individuals involved in the social process of storytelling.

As a result, we decided to focus on the underlying needs that might motivate people to share personal stories. Obviously, a small set of interviews cannot answer this question in any scientific way. It can, however, cause us to challenge and rethink our own assumptions as to who our potential users might be, what sorts of stories they would be interested in sharing or reading, who they would want to read stories from or share stories with, and what sorts of situations would lead them to share stories.

The target group for the study were individuals who already write and share stories. We loosely separated these into three categories: creative writers (English majors, MFA students in creative writing, copywriters, poets); jour-

nalists; and bloggers who write about their own lives. While we hope our site has appeal beyond those who already write stories, we wanted to initially focus on those who are already engaged in similar forms of cultural production. We chose this group based on the assumption that these individuals are more likely to be early adopters; they have already demonstrated interest in similar forms of media production and the cost of learning a new form is likely to be less than someone who does not write or use the Internet frequently.

#### 3.2 Needs Assessment Process

We conducted 13 interviews, each lasting roughly one hour. We developed an interview script that focused on the user’s existing storytelling experiences (both online and offline), uses of the Internet, general reaction to the First Time concept, and thoughts as to how and why people share personal stories in various contexts. [See Appendix 1]

We interviewed the following people:

- 3 Young professionals
- 1 Senior faculty member from the School of Journalism
- 1 School of Journalism graduate student
- 2 Copywriters
- 1 School of Information graduate student
- 1 MFA, poetry writer
- 1 MFA, creative writer
- 1 Comparative literature graduate student
- 1 Blogger, graduate student
- 1 Blogger, entrepreneur, also interested in journalism

#### 3.3 Needs Assessment Outcomes

Our interviews yielded many interesting findings. Most importantly, we came to realize that stories may vary according to the degree of vulnerability they expose. These differences can be mapped as a continuum. On one end of the continuum are extremely personal stories. Examples include stories about tragedy, abuse, failure, or embarrassment. People might be attracted to sharing those stories on the Internet because they can not do so in their offline communities. For

these people security, anonymity, and safety are crucially important. On the other end of the spectrum are wildly entertaining stories. Examples include stories of humor, adventure and bravado. They are more the types of stories that might be shared in a social setting. People might be interested in sharing these stories on the Internet so they can reach an audience for their tales; it is much more of a performance, a presentation of self, a call for attention.

Several interviewees made us realize that stories from one end of the continuum might dissuade contributions from the other end. We came to realize that the context in which stories are shared depends heavily on the other sorts of stories being shared in the online space. If the online space seemed filled with wild and entertaining stories then people might feel less inclined to share their vulnerable stories. In retrospect this makes intuitive sense: we look to the existing stories for example of what is appropriate in a given space. This realization led us to explore ways of partitioning space within our single web site. During the design phase we looked for ways in which certain areas of the site could

be devoted to more entertaining content while other areas of the site could encourage more personal and vulnerable content. As will be detailed in the section on Major Design Challenges, we tried to partition the space in two ways: by creating topic silos within the site, and by allowing people to construct multiple persistent identities (called Pen Names). The latter is derived from the recognition that the same person might want to change their behavior in different contexts; since the site creates records of an individual's behavior (namely, their stories, comments, messages, and subscriptions), the user needs ways to associate those records with the context for which they were enacted while keeping them separate from contexts for which they were not intended.

### Documenting Outcomes

Since our project did not map well to the functional model of needs assessment (e.g. task diagrams and software requirements), we decided to document our findings as a series of potential "motivations." We came to recognize that we could organize our potential users into three broad, and potentially overlapping, types: authors, readers, and editors.

Scoping concerns caused us to put off editors until after the end of the semester. As a result, we documented the needs of authors and readers using a new technique that we call "motivation cards." [Figure 3] For each user type, we constructed a series of cards that referenced possible motivations. The motivation cards were as follows:

#### Authors

- **Sense Making:** I am trying to understand a new experience I am currently going through or am still trying to make sense of an experience that has happened to me in the past. By sharing my story I am able to get feedback from others. I am able to hear how they might behave in, or interpret, my situation.
- **Connection:** I imagine that someone else is experiencing, or has experienced, a similar situation. I share my story to explore the possibility of forming a connection between us.
- **Vanity:** My stories are popular and widely read. It makes me feel good about myself to know that so many people like my stories. It makes me feel like a minor celebrity.
- **Sympathy:** I like it when people

indicate that they understand what I went through or am going through.

- **Release:** I need to get this off my chest. I can not tell anyone that I know.
- **Validation:** Did I do this right? Am I interpreting my experience correctly? Is this how I should feel?
- **Identity Exploration:** I am exploring new terrain. I am not quite sure if it is for me or not. When I post stories about these new experiences on the Internet it let's me try out how it feels and see how others respond to me. So far, I have not used my real name but I might someday.

#### Readers

- **Entertainment:** I enjoy reading stories that are particularly funny, suspenseful, engaging or well told. When I find a particularly good one, I might send it to my friends.
- **Sense Making and Belonging:** I am trying to understand a new experience I am currently going through or am still trying to make sense of an experience that has happened to me in the past. By reading stories of others who have gone through similar experiences I can find examples of

## Sense Making

I am trying to understand a new experience I am currently going through or am still trying to make sense of an experience that has happened to me in the past. By sharing my story I am able to get feedback from others. I am able to hear how they might behave in, or interpret, my situation.

# Author

Figure 3 - Sample "Motivation Card"

how others have approached and processed them. I might take comfort in seeing that others are also struggling to "figure things out." I might also gain insights as to how I should approach the situation or how I should interpret it.

- **Anticipation:** I am about to go through this experience, what will it feel like when I do? Reading stories provides material for imagining more richly what my experience will be like.
- **Voyeurism - Stranger:** What is it like to be this person or to go through this type of a situation? Reading stories provides material for imagining more richly what it is like to be someone who, on the face of it, seems very different from yourself.

- **Voyeurism - Person Known:** Without them necessarily knowing, I have found stories of someone I know. I am interested in reading the stories and sharing them with others who know them.
- **Avoid Socially Awkward Communications:** I want to learn about one of my friend's experiences but I am not sure if I should bring it up in person. It feels awkward to discuss some of these things, even though I know he wants me to know about it.

These cards were then used to guide the design phase of our project.

## Phase 2: Design

The design phase is when the pencil hits the paper. It is when we explore and test different ways in which we can architect a user experience that might facilitate the emergence of an online community. It is an iterative process of idea generation, model building, and testing. Our design process was broken into three overlapping stages: Information Architecture, Paper Prototyping, and Visual Design.

### 1. Information Architecture

#### 1.1 Information Architecture Goal

As noted in the last section, we wanted to find ways to partition the site into spaces that would allow for different types of storytelling. We used the information architecture phase to begin mapping how the site could be partitioned. We also used this phase to document the major information components and processes and how they would relate to each other throughout the site.

#### 1.2 Information Architecture Process

We used several mapping and diagramming techniques to arrive at a structure for the site. We started with low fidelity diagrams and moved to higher fidelity versions as our ideas became more concrete. When we reached snags in the higher fidelity artifacts we would return to lower fidelity models. Our lowest fidelity technique used whiteboards and Post-it notes. Each Post-it note represented an information component or process. We would move components and processes around until we arrived at a flow that seemed to make sense. We would then translate these models

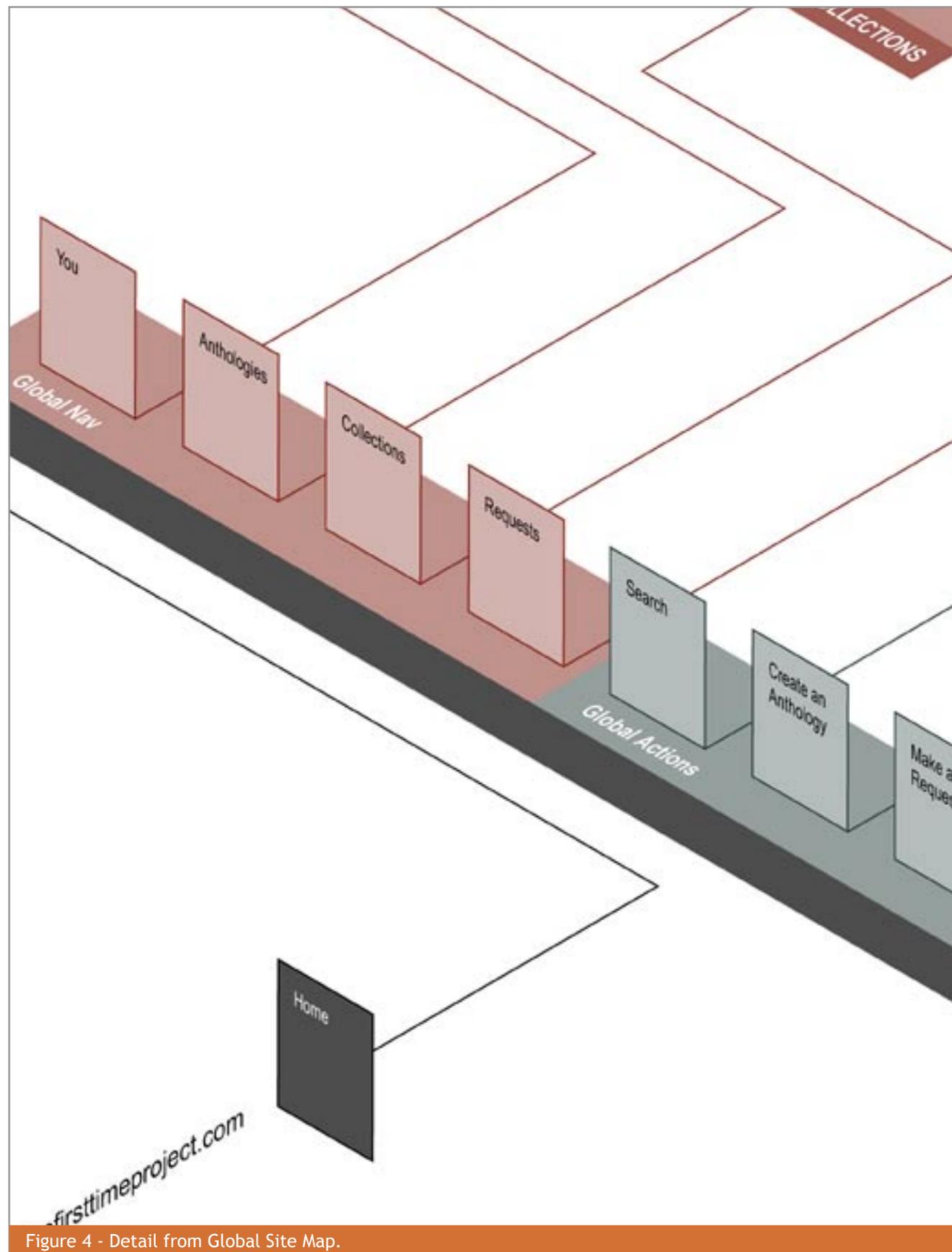


Figure 4 - Detail from Global Site Map.

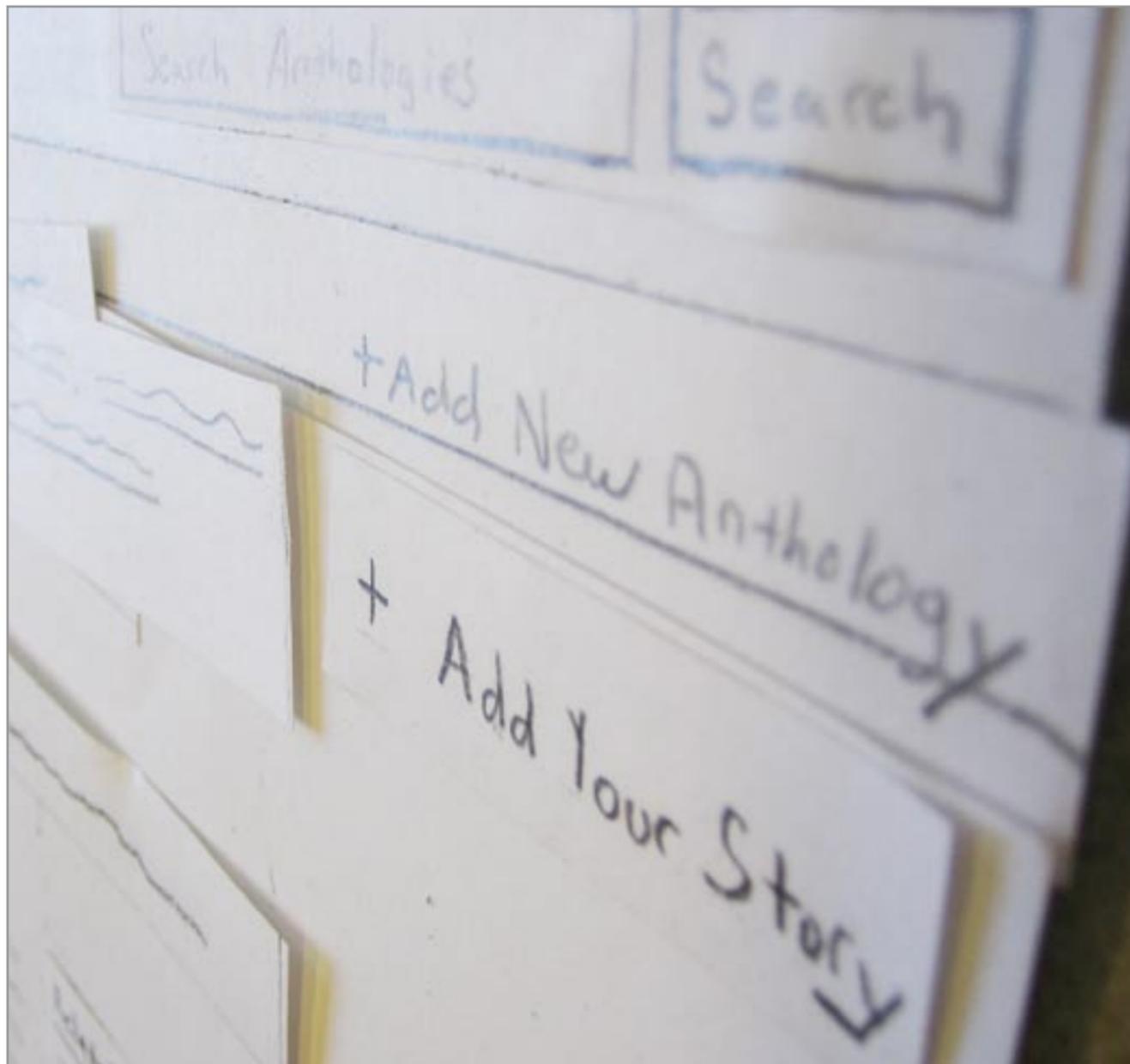


Figure 5 - Paper Prototype

into more formal activity diagrams. Finally, after most of the processes and major components were worked out, we constructed a global information architecture map for the site. [Figure 4] The global map allowed us to see all of the components and processes working together.

### 1.3 Information Architecture Outcomes

The information architecture phase provided a roadmap for both back-end development and front-end interface design. At the end of the information architecture phase we had a set of functional requirements for the interface and core back-end processes that we could begin to implement.

## 2. Paper Prototyping

### 2.1 Paper Prototyping Goals

We designed a low fidelity paper prototype to evaluate the central and novel interactions of the site. We were interested in understanding if users could find stories and what specific retrieval strategies they would employ. In addition, we were interested in testing our concept of “Anthologies” - a collection of similar stories about the same topic. Finally, we were interested in testing if users could add a new story to the system.

### 2.2 Paper Prototyping Process

We designed the paper prototype around the core functional elements of the design. It consisted of a home page, a browse page, an anthology page, and story creation pages. [Figure 5] The home page contained a list of featured stories (title, author, and the first 30 words of the story), featured anthologies (titles only), browse button, and a global search box at the top of the screen. The story creation process allowed evaluators to add their story either to an existing anthology or a new anthology.

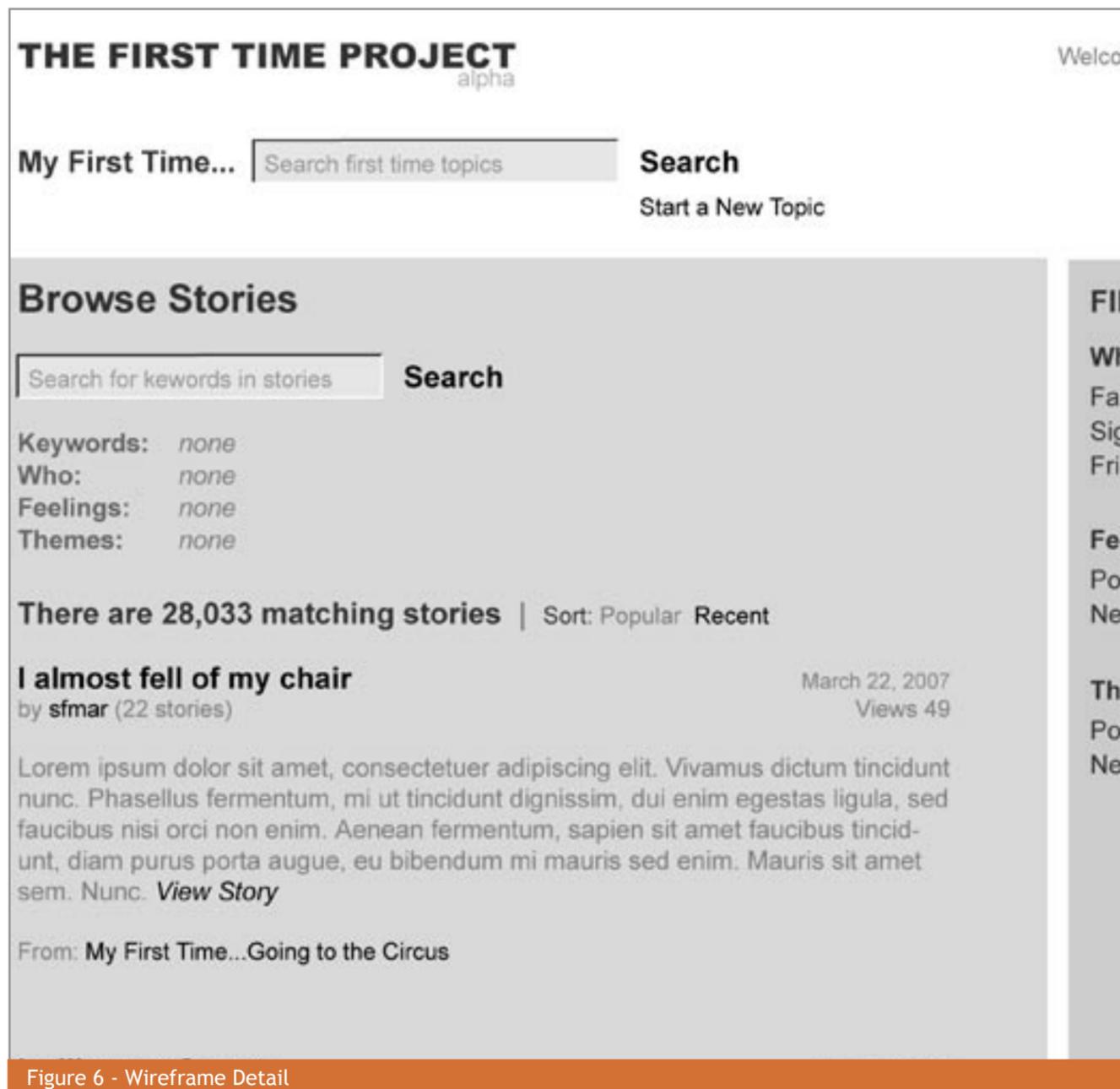


Figure 6 - Wireframe Detail

We tested our paper prototype with four graduate students and one creative writer. The evaluation lasted one hour and we presented a brief overview of our project and asked our evaluators to “think out loud” as they performed each task and encouraged them to stop and ask questions if they became lost or unsure at any moment during the evaluation. We asked each user to perform the following three tasks:

**Task 1:** Starting from the home page, find a story that interests you.

**What we looked for:** We were interested in identifying how a user would find stories that interested them. We were particularly interested to see if users would prefer browsing or searching via keywords.

**Task 2:** Starting from the home page, find an anthology that interests you.

**What we looked for:** We were interested to see if users understood the concept of anthologies and, if so, how would they search for them.

**Task 3:** Starting from the home page, create a new story.

**What we looked for:** We were interested in evaluating if users understood that in order to add a new story they would have to either create a new anthology or add their story to an existing anthology.

### 2.3 Paper Prototyping Outcomes

It became clear that our evaluators preferred browsing over searching when attempting to find both anthologies and stories. Evaluators indicated that they were not sure what to look for and thus preferred browsing the site using varying techniques such as our displayed topics and emotional keywords. In addition, evaluators found the browse page very useful because it included a list of the most recent content added to the system. An indicative quote from one of the evaluators summarizes our findings: “If something caught my eye, I would click on it.” This insight reinforced our decision to keep the site Content-focused and guided our design decisions to incorporate elements that would encourage a “berry picking” model of searching and browsing.

Evaluators understood the concept of anthologies but were having trouble with the semantics of the word. Users indicated

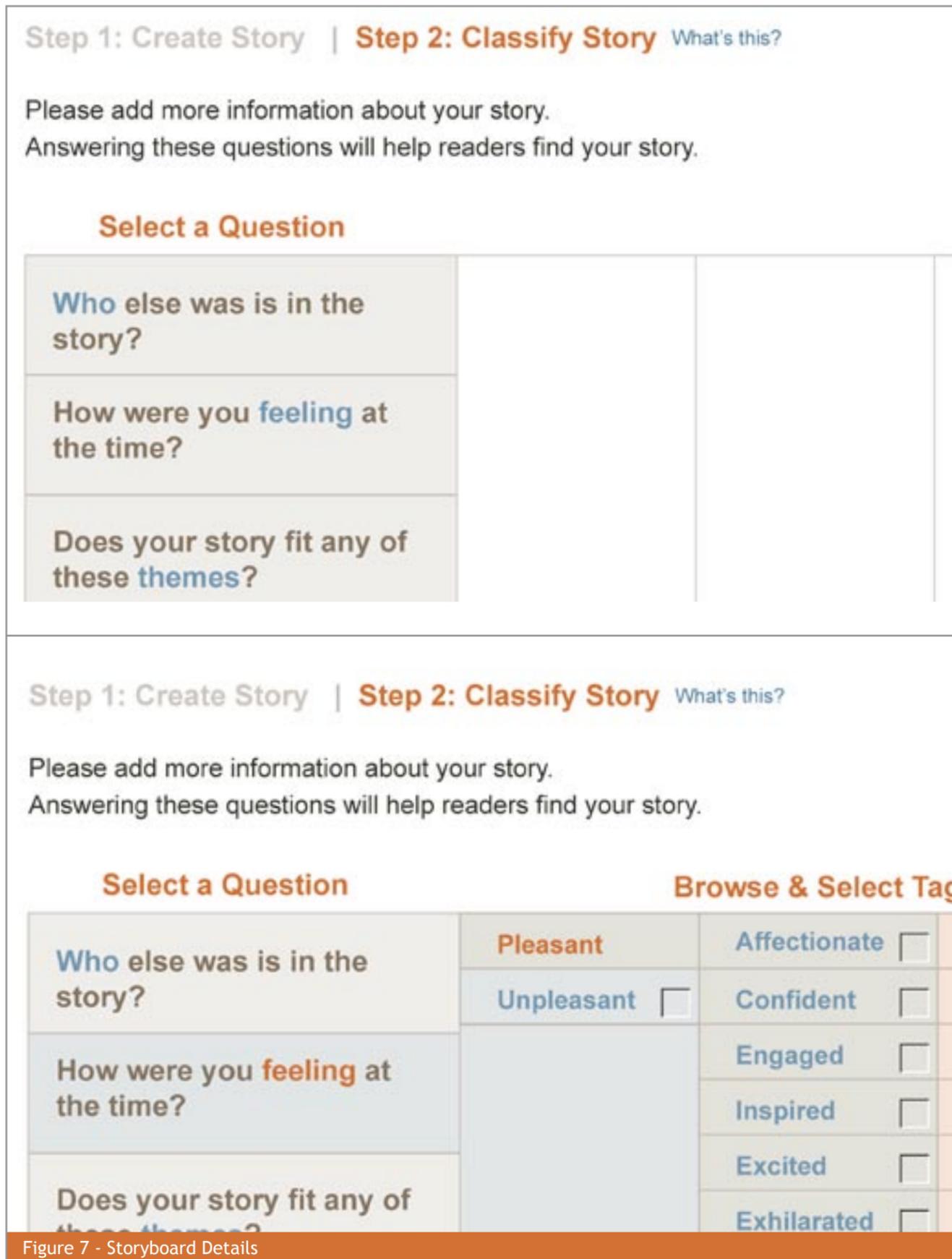


Figure 7 - Storyboard Details

that the word anthology was too “up scale” and made the site feel elitist. This insight illustrated that our concept of having similar stories pooled together was important but the vocabulary needed to be refined. Thus, to improve the semantics of the concept we changed the word “Anthology” to “Experience Topic” which better connotes the sentiment we want to evoke.

In evaluating the story creation process, our research found that most evaluators did not have trouble adding a new story to an anthology. However, some evaluators indicated they were not comfortable starting a new anthology and would prefer adding a story to an existing topic area. We learned that we needed to prominently highlight this feature to allow users to easily search or browse existing topic areas during the story creation process.

Finally, our project group found the process of building the paper prototype and observing the interactions extremely helpful in working through our theoretical debates about the functionality. It allowed us to make our ideas concrete and test our assumptions.

### 3. Visual Design: Wireframes, Storyboards & Visual Systems

#### 3.1 Visual Design Goals

We used this stage to account for all the information components on each page, devise a visual system for the site and its subsections, and articulate how the various global and local information components would relate to each other throughout the site. We focused on making logical groupings of information components and then arranging these groupings according to their hierarchy and interrelation.

#### 3.2 Visual Design Process

We used three main techniques to develop the user interface: wireframes, storyboards, and static mockups of the visual system. The wireframes were grayscale page mockups created in Adobe Illustrator. [Figure 6] For each page, we created an inventory of every element that needed to appear. We then grouped these elements into logical buckets and arranged their placement and comparative scale until we arrived at an appropriate hierarchy and flow between groupings.



Figure 8 - Visual Design Detail

We used storyboards [Figure 7] to work through multi-step user processes such as “contributing a story.” We used free-hand sketching, paper prototypes, and higher fidelity mockups to bring these processes to life. In some cases we tested these processes with potential users to see where problems arose.

### 3.3 Visual Design Outcomes

The visual design artifacts provided us with a precise inventory of components and functions that needed to be produced. They also acted as blueprints for front-end development. These blueprints were produced in the form of both visual and CSS styleguides.

[Figure 9]

Finally, we translated the storyboards and wireframes into a coherent visual system for the site. [Figure 8] During this phase we chose fonts, added color, and refined the layout. We explored several possible visual directions before settling on one for implementation. Due to the cyclical nature of the development process we ended up implementing an earlier version of the visual design. We did this to get the site functioning prior to graduation. We are now returning to our code and implementing our more developed visual system.



Figure 9 - Styleguide Detail

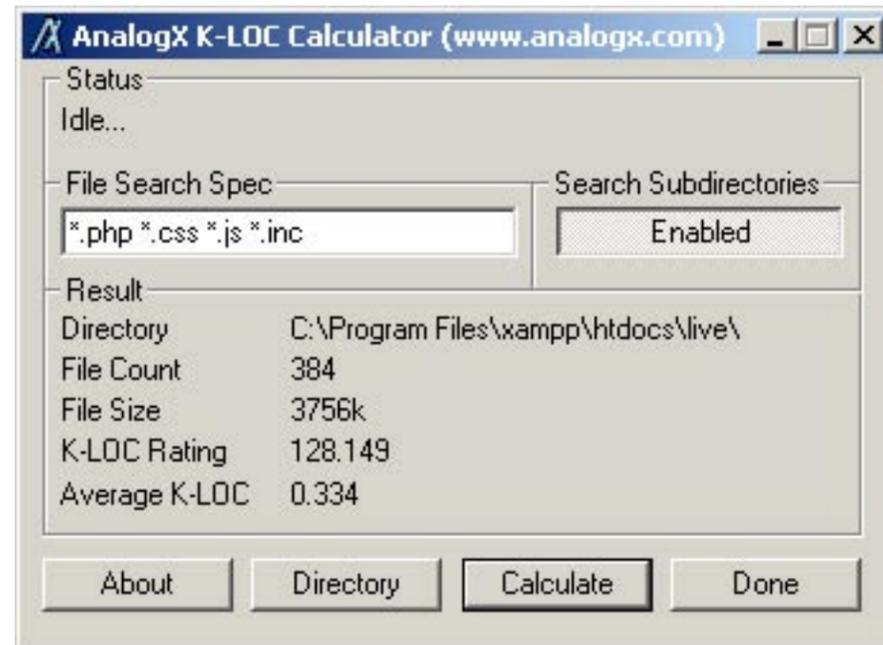


Figure 10 - K-LOC Calculator Results [Endnote 1]

## Phase 3: Implementation

### 1. Database Design

We used artifacts from our information architecture phase to design the database with little modification from our specifications. The First Time Project Database (DB) contains all of our data relating to users, Pen Names, topics, stories, subscriptions, favorites, tags, comments, browsing hierarchy, statistics, and administrative data. We currently have 31 tables in our MySQL database. Refer to Appendix 2 for an overview of the central components of The First Time Project DB. Refer to Appendix 3 for the Entity Relationship Diagram of the primary tables.

### 2. System Implementation

To bring the First Time Project to life we employed a combination of PHP, Javascript, AJAX, and CSS. PHP delivered our server-side scripting, interacting with our MySQL database to display dynamic content to our web interface. Javascript and AJAX were used to improve the usability of our design for specific processes, namely the contribute and browse processes. Lastly, CSS was used

to style our interface, giving it a completely customized look and feel.

We created a repository for our source code using CVS where we placed functional PHP files in our root directory, and created sub-directories for our front end PHP files, class files, include files, and header/footer files. This effectively modularized the code by separating the code that interacts with the database from the code that displays information on the web site.

As of May 1, 2007 we had roughly 3.8MBs of source code and nearly 130,000 physical lines of code on the First Time Project. [Figure 10]

We kept the CVS repository on harbinger.sims.berkeley.edu and developed the source locally on Windows and Mac platforms. After committing locally-tested code to our repository, it was tested on harbinger.sims.berkeley.edu before being transferred to www.thefirsttimeproject.com. We used this two-tiered system of development and testing to ensure that code was tested and debugged before reaching the production server.

Issues Assigned to You		Issues Reported by You	
No. of issues	Status	No. of issues	Status
12	<a href="#">Closed</a>	25	<a href="#">Closed</a>
1	<a href="#">Enhancement</a>	3	<a href="#">Enhancement</a>
4	<a href="#">Fixed</a>	4	<a href="#">Fixed</a>
1	<a href="#">Not a bug</a>	2	<a href="#">Implemented</a>
2	<a href="#">Open bug</a>	4	<a href="#">Open bug</a>

Figure 11 -Elementool. Web Based Project Management Tool. Endnote 2

To effectively track and fix bugs in the site, and propose feature enhancements, we used web based project management tool called Elementool. [Figure 11]

### 3. Launch Strategies

Our current launch strategy consists of two distinct releases. The first release has been with close friends that we consider either creative writers or have an interesting story to tell. The goal of the “soft” launch is to set the tone of the site by seeding it with a diverse set of stories. During recruitment, we were sensitive of gender biasing and thus attempted to recruit an equal amount of men and women to ensure balanced content. At the same time, from our understanding of Social Constructivism’s theory of interpretive flexibility we are aware that although we are seeding the site with content that we hope sets a preferred tone for the site, users may use the site in ways that are relevant to them which may change and shape the direction of the site in ways that we did not intend or have not yet considered. Despite this fact,

we believe seeding the site is an important step in determining the success of the site.

We plan on giving our initial contributors two weeks to write a story and then we intend to do a second and more extensive release. The second release will be the official release of the site and will include sending a mass email to all contacts of each group member. Although, the projected number of email recipients will be less than 2,000 people we believe that the diversity our contacts will be a good starting point to begin the spread of the site.

### 4. Future Site Directions

Due to the time constraint of the semester we were not able to implement all of our proposed features. This section describes enhancements we plan to implement in the future. All future features are intended to encourage participation on the site for both contributors and readers.

#### 4.1 Multiple Experience Topics

This feature will allow users to place stories into multiple Experience Topics. Implementation of this feature will allow authors the ability to share their story to a wider audience. At the same time, the feature will allow users to bridge the gap between multiple Experience Topics; thus, supporting and enhancing our browsing strategy.

#### 4.2 Story Annotation & Comparison

This feature would allow friends of an author to annotate an existing story which includes them. For example, if Sarah writes a story about skiing in France with her friend Kirsten, she could invite Kirsten to participate in the storytelling process. Kirsten could annotate the story with her perspective on the same event. This feature may encourage new authors to participate on the site. At the same time, this feature may enhance the readership of the site by allowing individuals to read the interplay between the two friends surrounding the same event.

#### 4.3 Story responses

The story response feature would allow an author of a new story to indicate if an exist-

ing story inspired them to write their own story to an experience topic. This feature is designed to encourage the forming of new bonds between authors. At the same time, this feature will act as another cross linking element that will support our browsing strategy. In addition, to indicate that an author has inspired other contributors we intend on displaying an inspirational badge on their profile page. This badge will act as a way to enhance an author’s reputation within the site and may encourage users to contribute high quality content.

#### 4.4 Multimedia

While the focus of our site is on the contribution of written content we eventually want to let individuals associate images with their stories. We will support contributing images directly to our site and the ability to link directly to external media sites such as Flickr and YouTube.

#### 4.5 Topic Discussions & Resources

To encourage contributors to continue to be active within an experience topic and to cultivate the community aspect of the site, we plan on implementing a discussion board and

a resource section for each experience topic. The resource section will allow individuals to post external links to information surrounding a specific experience topic that is relevant to the group.

#### **4.6 Editor Role**

The editor functionally will allow users to create and share sets of stories collected from the site around a theme of their choice. For instance, an editor may create an anthology called “Funniest stories” which may include 10 stories from various Experience Topics. Users will be able to post these “Anthologies” to their profile page. Once an anthology is created, a dedicated section will allow individuals to browse and search through the most recent and popular anthologies. This functionality will focus on users that may not be interested in authorship but want to contribute their skills in another way. At the same time, allowing users to create their own anthologies will provide more cross linking opportunities which will enhance our browsing strategy.

#### **4.7 Author feedback**

An important component for the success of site is keeping authors engaged with the system and encouraging ongoing contribution. Currently, we have feedback mechanisms that allow readers to indicate if they felt a story was entertaining, well written and moving. In the next release, we will look for ways of letting authors know when they have received a compliment or a comment.

#### **4.8 External Linking**

To encourage the diffusion of The First Time Project, we plan on implementing external linking features which will allow stories to travel outside of The First Time Project domain and allow users to disseminate the stories into blogs or other areas of the Internet. For example, we plan on implementing RSS feeds which will contain the most recent content for both Experience Topics and authors. At the same time, we plan on implementing an embedded service that will allow individuals to place a story into a blog or other sites such as MySpace or Facebook.



## Major Design Challenges

# Organizing and Relating Stories of Human Experience

As an overall goal we want to use personal narratives as a way to enable social interaction. We knew a successful social system would allow readers to find stories that would be meaningful to them. Likewise, authors would need ways to direct their stories towards interested audiences. This design goal can be partially approached as a problem of information organization and retrieval: Where should authors place their stories and where should readers go to find stories of interest?

There are many possible solutions to this problem, each with a different set of advantages and consequences. What follows is a review of each approach followed by our assessment as to which approaches should be appropriated in our design.

## 1. Popular Approaches

### 1.1 Keyword Search

While many Internet users rely heavily on keyword-based search, a keyword approach is insufficient for accessing and connecting our unique type of information. The keywords in narrative content only partially reveal

what makes a story interesting to a potential reader. Important aspects of the story - such as the relationships between its characters, its emotional tenor, and narrative "theme" - might remain semantically opaque to a keyword-based search engine. Additionally, readers might benefit from more guidance as to what elements help distinguish one story from another; they might not know what terms to type into a search box and hence be impaired from browsing in a more "berry-picking" type of manner.

### 1.2 Subject Headings

Libraries offer one possible source of inspiration. There are several forms of metadata they typically use to make narrative content accessible: author name, keywords from the title, "subject" keywords, and, sometimes, keywords from limited areas of the text. Of these, the "subject" keyword approach is the most applicable to the problem we face. Author search, while possible, is less helpful on our site since most authors will not be widely known prior to an engagement with the site. Similarly, since we are dealing with digitally stored text-based content we need not limit our keyword search to the title.

While “subject,” is helpful, it is also limited. What determines a narrative’s subject? Most libraries rely on a controlled vocabulary, or ontology, for subject classification. The problem with such models is that they only offer one particular organizational view on a corpus; a view that might not match the interest of all readers in all situations. For example, one ontology might differentiate texts based on when and where they were written, another based on the media format of publication. When various ontologies are used as a blanket “subject” users may have difficulty navigating to content of interest. They must first learn the ontology schemes used by the organizer and, too often, these schemes remain hidden behind a generic, and opaque, user interface: the search box.

### 1.3 Faceted Classification

A more promising retrieval interface for The First Time Project builds on the organizational strategy of faceted classification. With faceted classification, content is assigned categorical metadata along several dimensions. For example, books could be classified based on when they were published, where they were published, the language in which

they’re written, and so forth. Often facets employ hierarchically arranged controlled vocabularies. A “location” facet could categorize “Caracas” under “Venezuela” which, in turn, could be under a “South America” category. This hierarchical structure allows content to inherit metadata from its parent categories. In the above example, if a story was classified as taking place in Caracas it would inherit Venezuela and South America as valid categories.

Researchers have shown the value of incorporating faceted classification schemes into user interfaces for certain types of information retrieval. [Endnote 3]

The advantages are numerous. For one, the hierarchical inheritance allows users to drill down to their desired level of granularity; in the above example, a user could still find the story if they selected “South America” but not “Caracas.” Additionally, users can combine facets to partition the corpus in numerous different ways. “South America” could be combined with “published in the 19th Century” to get 19th Century South American writing. Since the granularity of each facet

can be controlled independently, a faceted retrieval interface allows myriad combinations of categories and, hence, a plethora of views on the corpus. The trick is designing an intuitive interface allowing navigation through the various facets as well as activation and removal of categorical constraints. Luckily, the Flamenco Project [Endnote 4] at UC Berkeley’s School of Information provides a helpful example for those wishing to appropriate such a strategy.

### 1.4 Tagging and Folksonomies

More recently, social software on the Internet has offered alternative solutions to the information organization and retrieval challenge. Folksonomies allow users to apply single word “tags” to information objects. A user might choose to tag a photo with the names of the people in the photo, where it was taken, or other single words that meaningfully describe the content. Tags can be a strategy for individuals to manage content for themselves, or as a way to allow others to find their content. Some sites, such as del.icio.us, aggregate the tags that multiple users have applied to a single information

object. When users apply the same tag, a consensus, of sorts, begins to emerge.

Tagging is most useful when the content of the information object is semantically opaque to the computer. Photos, video and other visual content benefit from the addition of this sort of metadata. Often computers do not know what is “in” the photo, at least not in a form that is meaningful to most people. Given this opacity, the addition of any human decipherable descriptions of the content is helpful.

Yet unstructured tagging is, at best, a mediocre solution. In most systems, each tag exists on a flat plane with all other tags. Some people apply tags to describe what is in the object; some apply tags that refer to when or where the information object was created; others might apply tags that help them remember the larger context of when the object was created (e.g. “vacation”). In other words, tags are not related to each other in any sort of organizational structure. Too often there is no way to navigate tags by “type” or facet. Additionally, people use numerous different words to describe the same object, idea or phenomenon. This can create challenges for

retrieval. If the user trying to retrieve content does not think of the same word as the tagger then they will not find the matching content. When lots of people tag a single object this problem is partially solved; yet it can be difficult to get people to tag content that isn't their own. [Endnote 5]

### 1.5 Anthologies, Journals, & Volumes: the Role of Editors, Collectors & Critics

When developing "new media" it can be easy to dismiss "old media" practices. Too often, old media is rejected as an archaic form of distribution in which content must pass through a narrow funnel of powerful corporate media providers. While critiques of this power configuration are welcome, designers should be careful to recognize the value these old media providers added to the media construction and dissemination processes. If nothing else, understanding their processes can help us design alternatives that don't rely on such a concentration of power.

One process worthy of emulation are the roles of editors, collectors, and reviewers. When

users seek out media for consumption they should not have to start from a blank slate. Rather, they should be able to take advantage of the recommendations and selections of others. Furthermore, some people may enjoy playing this role of recommender or editor more than that of content creator.

We see this practice all the time in old media: academic journals, magazines, anthologies, and newspapers, all rely on others to find and filter content of interest. Movie and restaurant reviews function in a similar manner. We do not want to see all movies or eat at all restaurants so we rely on the opinion of other "experts" who have already vetted the experience.

New media technologies allow interesting new ways to distribute these editorial processes into the hands of many. Explicit voting systems - such as Digg's thumbs-up/thumbs-down or Netflix's star-rating - offer one solution. Many sites, such as YouTube, also take advantage of implicit voting systems; the more a piece of content is viewed, or shared, or commented on, the more "popular" it is deemed. Google's PageRank algorithm origi-

nally worked from a similar principle: when others linked to a piece of content that content was ranked higher.

New media is also creating non-democratic ways for single individuals, or small groups, to play the role of editor or critic. Individuals writing for blogs such as BoingBoing scour the Internet in search of interesting content to share with their readers. They usually are not creating new content. Instead, they are playing a role similar to that of an editor at a newspaper; they filter and delivering content to an audience who has a limited supply of attention, a limited capacity to consume media.

## 2. Our Approach

In designing a way for our content to be organized and accessed we kept in mind two interrelated, questions: 1) What is unique about our type of content? and 2) What is the information retrieval goal of the end user? We then appropriated approaches that best matched the answers to these questions.

First, we chronicled the particularities of the type of information our system would need to support, namely: narratives. This focus distinguishes our content from most forms of information accessed through the Internet. Computer-based information retrieval systems have not been particularly good at introducing users to narrative content of interest unless the user already knew quite a bit about the desired content. Instead, people have typically relied on recommendations from friends and other people whose opinions they trust. While recent advancements in networked social software have allowed for interesting new forms of recommendation, it remains difficult to classify stories in a way that is meaningful to an uninformed seeker of narrative content.

A second unique aspect of our content is that the narratives are personal. This is both an advantage and a further challenge. On the one hand it fences off huge swaths of the narrative landscape. Science fiction, fantasy, and other forms of fiction hopefully fall beyond the scope of our project. Yet, it places an intensified emphasis on episodes of lived human experience. How does one

theFirstTimeproject  
alpha

About

myFirst

myFirstTime... **Riding a Rollercoaster** (321 stories)

Stories Discussion Resources

Search for keywords in this topic Search

Who: family > grandparent > grandfather (remove)  
 Feelings: positive > affectionate (remove)  
 Themes: respect (remove)

There are 120 matching stories | Sort: Popular Recent

**I almost fell of my chair** March 22, 2007  
 by sfmar (22 stories) Views 49

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Vivamus dictum tincidunt nunc. Phasellus fermentum, mi ut tincidunt dignissim, dui enim egestas ligula, sed faucibus nisi orci non enim. Aenean fermentum, sapien sit amet faucibus tincidunt, diam purus porta augue, eu bibendum mi mauris sed enim. Mauris sit amet sem. Nunc. [View Story](#)

Figure 12 - Experience Topic Page

classify these episodes? What makes episodes similar or different?

Answering these questions depends on who we are classifying the stories for, and what purpose, or use, the stories serve in the retriever's life. During the needs assessment phase of our project we spent good portions of our interviews and exercises trying to answer this question. We do not presume that we can fully answer these questions. But we can try to improve upon existing information retrieval strategies: configuring a solution that matches the particularities of our content and its role in people's lives. What follows is an account of the various information retrieval strategies we have designed.

### 2.1 Focused Topics

At the most primitive level, a meaningful overlap between experiences can be drawn when people title their episodes similarly. We try to encourage this overlap by semi-structuring the titling process. All stories have to be placed in an Experience Topic. [Figure 12] We let users define Experience Topics, but all must start with the words "My First Time..." This semantic consistency

encourages the community to create topics that are based on episodes of lived experience, as opposed to objects (say, "My First Bike"). Once an Experience Topic has been created, any member of the community can write their story to the topic. We hope that such an approach will lead people to bundle stories about similar episodes together. As an example, the "My First Time Having a Baby" stories would be connected together by the system. To cut down on redundant topics, we encourage users to explore existing topics before creating a new one. This strategy of making silos within the site also helps address the issue of creating appropriate contexts for different types of stories. As we learned in our needs assessment, writers do not want to place a vulnerable story next to an entertaining story. The topics feature will hopefully allow some areas to develop around vulnerable content while others develop around funny or entertaining stories.

### 2.2 Keywords

Since our content is completely text-based at this point in time, it would be foolish to not leverage keyword-based search. Users are already familiar with this format for



Figure 13 - Faceted Browse

finding content on the Internet. We decided to use keyword search in two places: to find Experience Topics and to find stories. Keywords do not differentiate between different ways in which the word might have been used in the text; rather text that uses the words more frequently will be ranked higher.

### 2.3 Faceted Classification

To complement the flat, non structured, approaches of keyword search and tagging we were drawn to more structured facets for classification and retrieval. We realized during the needs assessment that some of the aspects that make stories meaningful to people could be implemented as facets. Our interviews showed two aspects we could try to map as facets: the relationship of the author to other characters in the story, and what the person was feeling during the experience. [Figure 13] We were attracted to these aspects since they might not be revealed through keyword search. Feelings, in particular, might not be explicitly expressed in the text and, if they are, similar feelings might be expressed using different words. By using a controlled vocabulary we hope to aggregate experiences that

involving similar relationships and emotions. We also wanted to allow readers to control for one facet while exploring another. Thus, they could apply a certain feeling and then explore stories involving different types of relationships and visa-versa.

The person-relationship facet can be mapped in a hierarchical structure more easily. While we know we have not created an exhaustive list of relationship categories, we tried to place relationships into the following top-level categories: family, friends, colleagues, pets/animals, significant other and strangers. Each of these top level categories has sub-categories. For example, family has brother, sister, mother, father and so forth.

Feelings are a more difficult terrain to map hierarchically. While we did find some feeling taxonomies (used by therapists), we ended up reducing this to two levels for simplicity sake. At the top level are two options: pleasant feelings or unpleasant feelings. Each of these holds 10 or so subcategories. These were adjusted and modified from various feeling taxonomies available on the Web. [Endnote 6]

Part of the challenge of a faceted approach is associating the necessary metadata with the informational content. We spent a good portion of our design phase working on this problem - using sketches and low fidelity paper prototypes to test ideas with users. We knew we needed a way to apply the metadata that was simple, quick and intuitive. We try to motivate authors to include this metadata by informing them that it will help readers find their story.

#### 2.4 Tagging

As expressed above, we do not find unstructured tagging particularly helpful for text-based content. Many of the “objects” in the story will be revealed by keywords. But how can a reader find stories about a more conceptual category such as “loss” or “courage?” We were attracted to these types of concepts and looked widely for existing ontologies that encompassed these sorts of themes. In the end, we could find no simple, hierarchically structured set of these concepts. We thus decided to combine user-generated tagging with facets. We would not attempt to develop a hierarchical system; instead, we would allow users to tag the “theme” of the

story. As a concept, “theme” is quite vague, and can run into the same problems as the “subject” concept used by libraries. We thus pre-populated this flat-facet with a set of intriguing themes. To generate this initial list we looked at themes in Shakespeare’s plays, religious texts, and similar narrative texts.

This category acts like a facet only in the sense that it is kept separate from the keywords and other facets. One can choose a particular combination of feelings, hold them constant, and then explore various themes within the result set. This process can be applied in the opposite direction too: filtering the corpus by theme, then applying facets or a keyword search on the resulting set.

We are curious to see how this semi-structured folksonomy evolves as people join the community and use the site.



## Encouraging Contributions

As stated above, we see the sharing of personal stories through the Internet as a particular type of social interaction. When the press and popular culture refer to ambitions such as ours they use terms such as “online communities” and “social media.” But what exactly is meant by these terms? Moreover, how should we position The First Time Project vis-à-vis the other ways people are already forming community on the Internet?

The Computer Mediated Communication class at the School of Information, as well as our own comparative analysis for this project, remind us that online communities come in many shapes and sizes. As stated earlier, one way to distinguish between various online communities is to view them as architectural spaces that afford, constrain and encourage different behaviors and social interactions. They do so by many methods but for the sake of our project we decided to primarily focus on two themes: the core informational unit they support as well as how those informational units are organized and related to one another. [Endnote 7] Together, these design decisions encourage and discourage different types of behavior and social interaction.

Many of the currently popular online communities privilege information about the individual. They primarily form structure by using explicit connections between these individuals. Social networking sites such as MySpace, Facebook and Friendster fall into this category. So too do many of the diary-style blogs and Flickr accounts. Often, but not always, they build off of people’s preexisting social networks. [Endnote 8]

Other sites bring people together through commerce, creating marketplaces for the exchange of goods and services. Ebay, CaféPress and Etsy fall into this category. The main architectural unit is the object being exchanged through a commercial transaction: a doll house on Ebay, a T-shirt on CaféPress, a handmade necklace on Etsy.

A third category of online community brings individuals together around the creation of a common information resource. Wikipedia and Yelp exemplify this type of community. While individuality can be an important component of these sites, the main objects being systematically related are documents: reviews on Yelp, encyclopedia articles on

Wikipedia. Such an approach relies on collective contribution to a central article. In the case of Yelp, individual reviews are organized around places, mostly commercial establishments, in the physical world; together they form a collective “article” about the place being reviewed. These sites then aggregate and relate these articles, forming a larger information resource in the process.

A fourth category, and probably the oldest form of online community, is structured around electronic communication between a set of individuals, usually gathered around a common interest or facilitating communication for an existing offline community. The Well and USENET are early examples, Yahoo! and Google groups are more recent incarnations. Email lists and electronic bulletin boards are perhaps the simplest versions. Even some video discourses on YouTube, where people post videos back and forth in response to one another, can be seen as this type of phenomenon. These communities can vary greatly but they share common architectural structures: a group of individuals, and threaded electronic messaging. Technologically, being “in the group” usually refers to having read-

ing and writing access to the threads. Unlike sites like MySpace, that privilege the individual and his or her social connections, these technologies relate individuals in two ways: by belonging to the group, and by using messages to engage in dialog with others.

A final category of online community brings people together around synchronous virtual activity in a persistent virtual space. Games such as World of Warcraft and virtual worlds such as Second Life are currently popular examples of this sort of community. The focus tends to be on real-time activity and interactions.

Most online communities combine architectural elements from several, if not all, of the above mentioned categories. All represent the individual in one form or another, all allow for some form of messaging, and all end up forming some sort of record of previous activity. Where they differ, is in what sorts of information and behavior they privilege.

## 1. Where to Position The First Time Project?

Given the diversity of architectural options currently in use, which should be appropriated and/or expanded for the purposes of The First Time Project? Since architectural choices affect behaviors and interactions we started by asking what type of activity we wanted to encourage. Only then did we attempt to match architectural strategies to those objectives.

### 1.1 Design Objective: Accumulate a Pool of Interesting, Moving and/or Entertaining Stories

While we know people will use stories as a way to express themselves, we wanted to steer the community towards storytelling, as opposed to profile construction. Numerous sites already allow people to present themselves by posting pictures, indicating their tastes and preferences in popular culture, and signifying to whom they are socially connected. We thus decided to constrain such expressions on our site.

Instead, we privilege the story as a central information object. The main structure of the site is built around stories and collections of stories. While people may view stories based on the individual who authored them, such a structure is secondary. At the moment, there is no way to “friend” someone else, although you can subscribe to their stories. Authors can construct “profiles,” but the profiles only allow two ways for explicit self presentation: the choice of a pen name and a text field where they can describe themselves. We do not allow people to upload pictures to their profile, and we do not encourage explicit indications of their tastes in popular culture. Instead, a person’s profile reveals aspects of their activity within the community: the stories they have written, the Experience Topic they have started, and the topics or authors to which they have subscribed. The latter two deserve additional comment: by making subscriptions public they become more than convenient tools for remembering or keeping abreast of information; they become ways for individuals to express their tastes, interests and affiliations, not in popular culture generally but within The First Time Project. Obviously this design choice has implications

for whether or not someone will subscribe to something. When the act is carried out in public it might dissuade users from subscribing to certain topics. The way we attempt to overcome this challenge is discussed in the section on pen names and privacy.

We also employ several other incentives for encouraging authorship and “good” behavior. By allowing for persistent identity, as opposed to just anonymous postings, we allow people to build reputation within the community. Authors can build a following of readers by writing consistently good stories. Additionally, if they behave in a socially distasteful manner, say leaving offensive comments, they could damage their reputation.

We also make public how many stories someone has written, what topics they have started, and for how long they have been a member. Making this public can cut two ways. On the one hand, it allows readers to assess how active someone is in the community and how long they have been active. This could encourage people to sign up early, so that they will have one of the “oldest” profiles on the site. This sense of seniority will also

be conveyed in less explicit ways through the uniqueness of Pen Names. Since Pen Names cannot be duplicated on the site, those with short or straightforward Pen Names might signal that they have been a member since this beginning. This signaling could be akin to those with short .com URLs on the World Wide Web. The downside of such an approach is that it could intimidate newer users from participating. If, over time, the community seems dominated by long-term members then new users may be timid to get going. If our site persists we will need to design incentives to attract newer users. For now, though, we will leverage the incentive of being an “early adopter.”

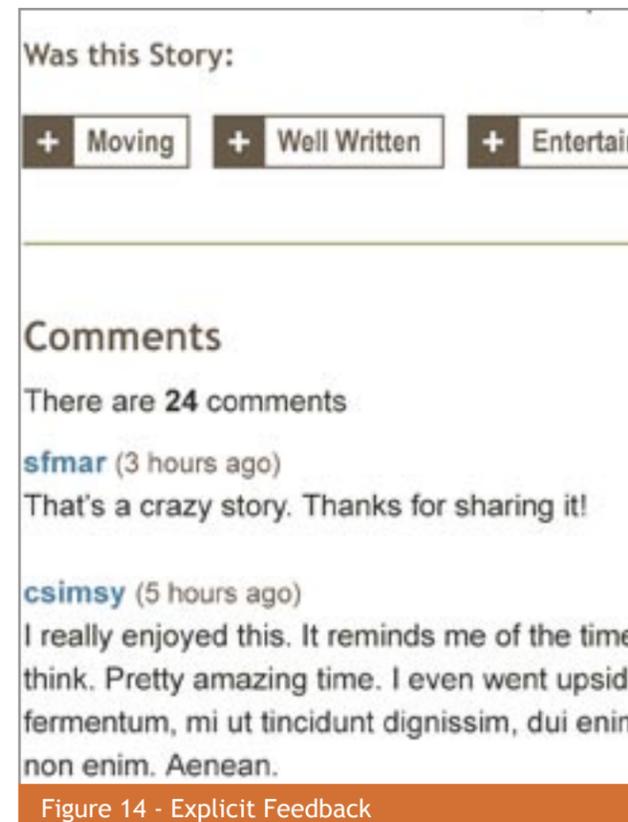
Lastly, we provide a host of ways by which the author can get feedback as to how their story is being received by the community. At the most basic level, this feedback allows authors to recognize whether or not they have an audience for their stories. Some of this feedback is public and some is only made visible to the author. We publicly display how many times a story has been viewed, shared, and favorited. We make this information public to help readers make an assessment as

to the quality of the material; the assumption being that popular stories might be more interesting than less popular ones within a given domain. Since older stories will tend to have more activity associated with them, we also reveal when the story was created. For many returning readers, they will want stories that are both popular and new.

All of these indicators can be seen as implicit forms of feedback; they attempt to capture how readers are using the story. Those records hint at how the story is being received. We also allow for more explicit forms of feedback: a voting system, private messages and comments. [Figure 14] For explicit feedback, we let the person receiving the feedback to control its visibility. Messages and the voting system are always private. Comments can be public but the author controls their visibility. Authors can also choose to disable comments if they don't want to receive that form of explicit feedback on a given story.

In terms of purpose, comments provide the opportunity for readers to provide short feedback to the reader. When made public, these can act like positive testimonials of how the

public is reacting to the story. They also provide a venue for ongoing conversations based on the story. Private messaging allows for longer forms of feedback that are not public. It allows readers to contact the author without making that act of outreach public. Finally, the voting system allows for a simple, positive only, vote in three areas: was the story moving, entertaining, or well written. Readers can cast a vote in each category. We purposely avoided rating systems that allow for negative feedback. Examples include a thumbs down or any of the scale-based rating systems such as stars or 1-10 rankings. We made this choice so as to encourage people to share personally vulnerable stories. Since the content is so personal, getting negative feedback can be interpreted as a personal critique. As one of our interviewees noted in our needs assessment, "I wrote for an online fiction site for a while. At first it was great and then somebody totally slammed me. I never went back."



# Identity Management

In designing a system where users upload original content that can vary widely in theme and potentially leave authors emotionally exposed, having well-designed privacy controls and mechanisms for identity management are critical. The goal of our site is to encourage the sharing of content that is moving and memorable, and in many cases this might be sensitive to a particular author, a trait we describe as a vulnerable story. If an author writes a story that is vulnerable, we want to make sure s/he feels comfortable in sharing the story and is reinforced by the surrounding community.

## 1. The Need for Privacy

We approached this design task from two different angles. The first was how we should design privacy into the system, and the second was how we support author identity on the site. Naturally, these two are heavily interconnected, but there are specific aspects of both that could be emphasized or constrained depending on specific design goals. From our interviews and comparative analysis we determined that we wanted to

focus more on identity management and less on privacy controls.

Privacy controls have been the flavor of the month for many social media applications. Nearly every site in the social media landscape offers users control over who views their content and how that content is presented. Websites like Facebook and Vox have been working to provide increased granularity of privacy settings, allowing users to identify specific groups, such as friends or family, who can view their content. The implementation of privacy controls usually involves adding a step to the contribution process, where users upload their content and then identify exactly who they want to view their content.

[Figure 15 ]

Allowing the user to specify who can view (or modify) uploaded content can increase the users' sense of privacy. Thus, these sites generally host a wide variety of content and assign specific controls to allow or restrict access.

The screenshot shows the 'Edit Album' interface for an album titled 'Winter Break 06-07'. The top navigation bar includes 'Profile edit', 'Friends', 'Networks', and 'Inbox', along with links for 'home', 'account', 'privacy', and 'logout'. Below the navigation bar, there are several action buttons: 'Edit Photos', 'Add More Photos', 'Organize Photos', 'Edit Album Info' (which is highlighted), 'Delete Album', and 'Back to Album'. The main form area contains two input fields: 'Name:' with the value 'Winter Break 06-07' and 'Visible to:' with a dropdown menu set to 'Only my friends'. At the bottom of the form are two buttons: 'Save Changes' and 'Cancel'.

Figure 15 - Facebook Photo Upload Process

For The First Time Project, we decided to make most of our content completely public. Since our site emphasizes the stories more than its users it is critical that we make all of the stories publicly viewable, without a hierarchy of privacy controls preventing users from accessing certain stories. This is clearly a design trade off as some users might be turned away by the thought of not being able to control exactly who can read their stories and who cannot. This is where identity management can be leveraged to provide a different kind of control over the information presented on our site. Instead of providing layered privacy controls to allow or restrict certain users from reading stories within our system, we use identity management to determine how the story is related to the author contributing the story. We achieve this by allowing a single user to have multiple identities on the site. We call these identities “Pen Names.” [Endnote 9]

Our choice to facilitate the use of multiple identities on the site was a direct result of our user interviews. We found out that potential contributors did not necessarily want granular privacy controls surrounding their stories.

If they wanted to share a story with just one person or a small group, they would probably just email the story to them directly. We found that potential users wanted to share their stories with everybody using the site so long they could control how their stories would be associated with their identity, both offline and within the site.

We learned that users might not want to associate their real name or a commonly used online screen name with a certain subset of their stories. This was the first big clue into investigating the use of multiple identities within the site. Using standard access control lists would not achieve this design goal as they only allow or restrict viewing. We do not want to restrict readers, we just want to control how they associate their stories with an author’s identity. Thus, instead of allowing the user to control who sees their story using traditional privacy controls, we could allow the user to choose how they sign their story and in effect control the identities associated with their stories.

## 2. The Role of Multiple Identities

At this point we decided to closely examine the relationship between the use of multiple identities and traditional privacy controls. Identity management is a popular area of research in Computer Mediated Communication, and is even the focus of another School of Information final project, Stagecraft.

Privacy controls are commonly used in single identity systems where one user is relating content to an identity that is often a representation of their offline self. Returning to the Facebook photo example, a user generally uploads photos that are directly associated with their Facebook profile (which in many cases is a depiction of their offline identity). At the end of the upload process, they determine who will be able to view these photos. Facebook users commonly allow only their friends, other Facebook users who they have negotiated a network connection with, to see their photos. Setting access controls effectively limits who can see certain content relating to that identity. Thus, if the goal is

to share a certain piece of content with only a select group of people then privacy controls are ideal.

With The First Time Project, it is clear that this is not our goal. We want our users to share their stories with the entire community of users. Our goal is to share stories with everybody while protecting our authors from any number of backlashes associated with posting sensitive content. With multiple identities, a user could assign a identity to a specific piece of content and publish it to the system under that identity. Thus, a level of privacy is created around the control of identity within the system. Only a user knows that their Pen Names are connected (unless they somehow mistakenly divulge this information).

## 3. What Do Multiple Identities Afford The First Time Project?

To illustrate the use of multiple identities in The First Time Project and how they support our design goals, it helps to take a look at a simple scenario involving one user and

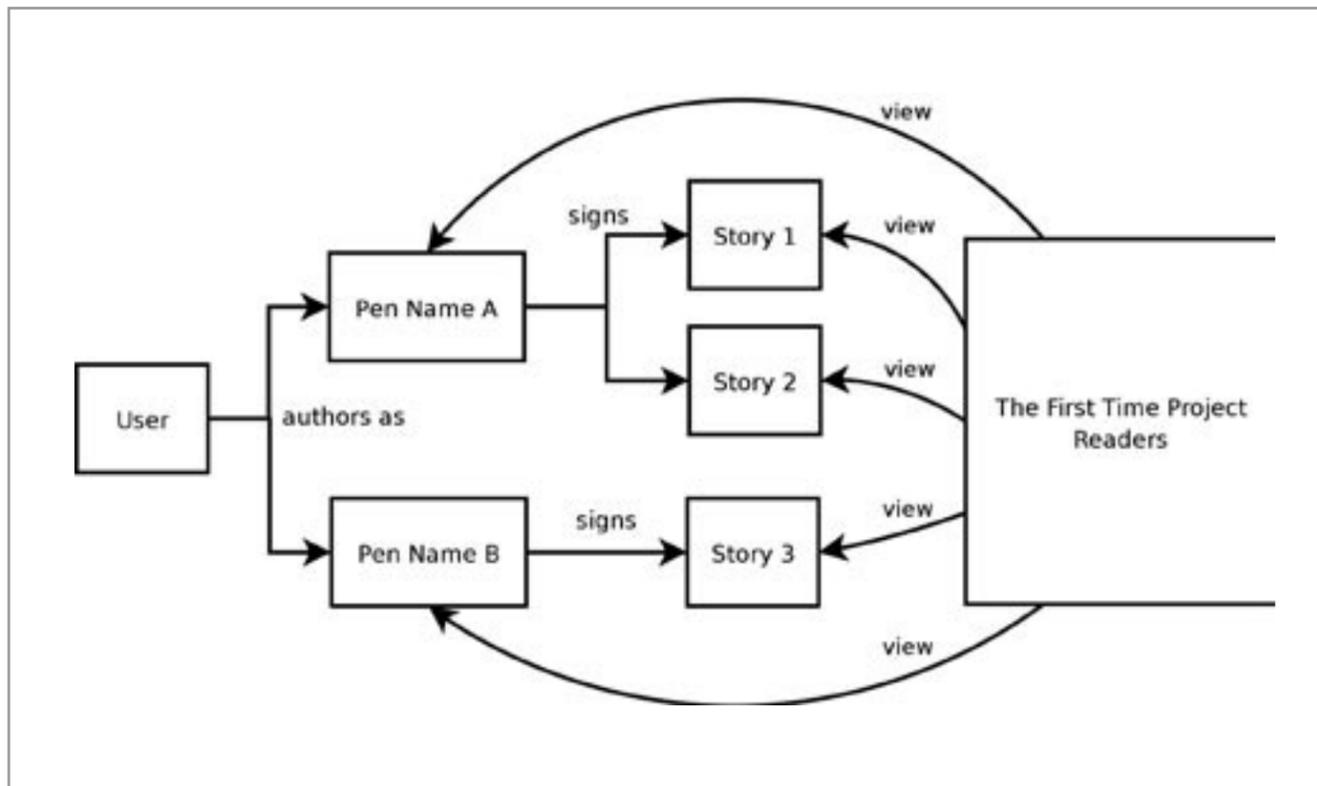


Figure 16: User Associates Pen Names with her Stories

the three stories she has written for the site. Story 1 and Story 2 are “coming of age” stories that involve comedic situations. The user has told these before and does not mind associating her name with them. In contrast, Story 3 is particularly vulnerable, involving a delicate family situation that the user would like to share, especially with others experiencing the same situation, but not necessarily associate with her real name or commonly used screen names.

share Story 3 without identifying it as one of the user’s stories. Since privacy controls are usually designed as mechanisms to specify who is allowed to access content (known as a whitelist), the user can only specify who she wants to view her story. This would be an impossible task as it would amount to enumerating all those who do not know the user. If the user was able to specify who could not access Story 3 (known as a blacklist), this would also fail. There is no way to prevent someone who is new to site (yet to be identified as a friend or family member) to access the story. A way around this problem is to not share the story, which is obviously not what we are trying to achieve. Figure 17 shows how this situation would look with traditional privacy controls.

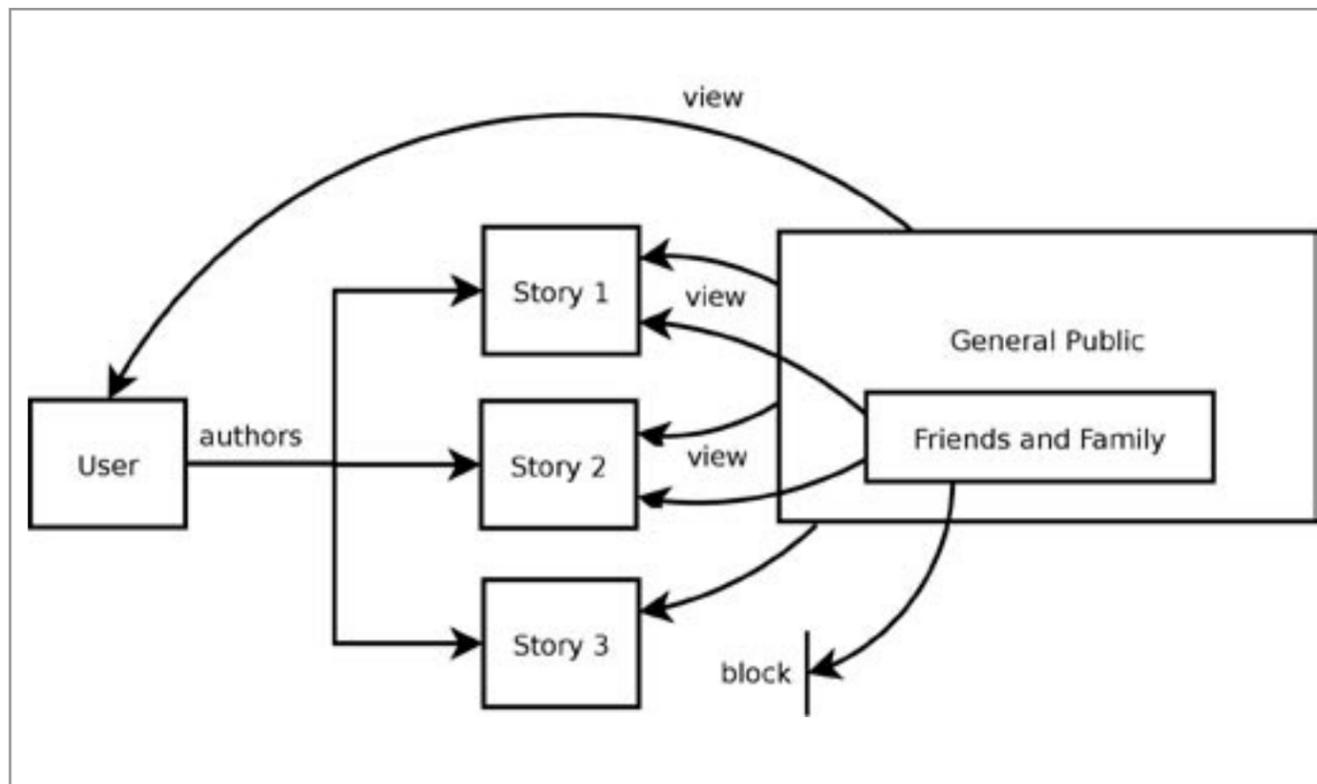


Figure 17 - User Determines which Readers can View her Stories

A multiple identity system is well suited for this scenario. Our user could assign one identity, called Pen Name A, to Story 1 and Story 2 and another identity, called Pen Name B, to Story 3. While all three of these stories would be completely public, those reading Story 3 would not be able to associate it with the Story 1 or Story 2. Readers get the value out of reading Story 3 but are unable to tie the story back to other distinguishing stories in the user’s life. [Figure 16]

This scenario could not be achieved with traditional privacy controls. While the user could just allow Story 1 and Story 2 to be viewed by the entire site, there is no way

Additionally, the use of traditional privacy controls would add unnecessary layers of complexity to our system. Please see Appendix 4 for an example of our preliminary Privacy Strategy, which shows our first effort in identifying the privacy issues associated with sharing stories on our site.

### Your Pen Names

Name	✉	Stories	Views	Subscriptions
<b>Jeff</b> - Edit	0 New	44	114	20
<b>coasterguy</b> - Edit	0 New	21	40	2
<b>jeffkal</b> - Edit	0 New	1	10	1
<b>Jeffrey</b> - Edit	0 New	0	0	0
<b>JeffKalvass</b> - Edit	0 New	0	0	0
<b>JeffreyMKalvass</b> - Edit	0 New	0	0	0
<b>maximlife</b> - Edit	0 New	0	0	0

[+ Add New Pen Name](#)

Figure 18: Your Pen Names

#### 4. Using Pen Names within The First Time Project

In order to facilitate the use of multiple identities within The First Time Project, we need to add a completely new layer of interaction between users and the site. Not only do stories need to be signed by a Pen Name, but new Experience Topics, subscriptions, comments, and messages would also have to be retrofitted to support Pen Names. The key is that every public facing interaction must be protected behind a Pen Name. For example, with story comments, a user might choose to use an alternative Pen Name to comment on a story that he or she would not normally associate their offline or other online identities with. See Appendix 5 for a complete set of flow diagrams of processes affected by use of multiple Pen Names within the First Time Project.

In order to give users the ability to sign their stories, Experience Topics, subscriptions, messages, and comments with Pen Names, we first had to build a Pen Name management system. Each user has to be able to create Pen Names, edit their Pen Name information, and

delete Pen Names. Upon registration with The First Time Project, we require users to create their first Pen Name. By requiring that a user keep at least one Pen Name at all times, they will always have at least one identity associated with The First Time Project. We decided to centralize all of the Pen Name functions to the You Page, where we give the user a dashboard of their Pen Names and the ability to add a new Pen Name. [Figure 18]

We provide a snapshot of each Pen Name, highlighting new messages, number of stories, views, and subscriptions. With Pen Names created, the user can then use their desired Pen Names to create topics and stories, add subscriptions, leave story comments, and send private messages. [Figure 19]

Lastly, we had to approach our message Inbox from a completely new perspective. Since users would be sending private messages to Pen Names, not to a specific user, the Inbox had to be organized by Pen Name. Thus, a user can receive new messages from various Pen Names addressed to their various Pen Names. [Figure 20]

Sleeping Under the Stars

**Examples:** Finding True Love  
Having a Child  
Getting a Job  
Doing a Triple Backflip

This topic will be created by:

Jeff [What's this?](#)

- Jeff
- coasterguy
- jeffkal
- Jeffrey**
- JeffKalvass
- JeffreyMKalvass
- maximlife

Figure 19: Experience Topic Creation

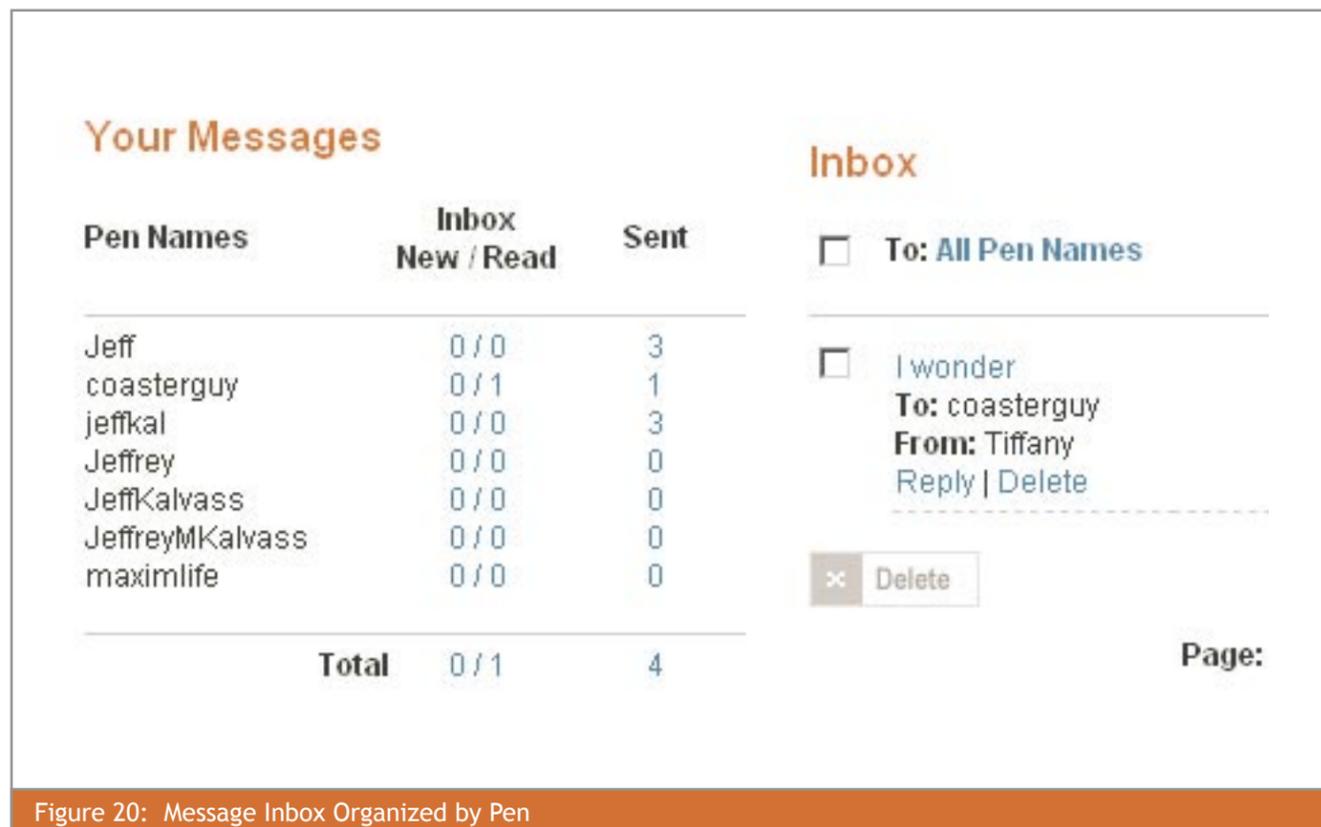


Figure 20: Message Inbox Organized by Pen

## 5. Effects of Pen Name Use

Enabling users to manage multiple identities in The First Time Project will invariably alter how the system is used. First, every user will approach the opportunity to use multiple Pen Names differently. Some users will likely use one Pen Name only, other users will create ten or more.

Since Pen Names create a way to anonymously contribute to the system, there exists a way to avoid the construction of a persistent identity. While this is acceptable, the anonymous user will be unable to benefit from having a robust positive reputation on the site. We hope the desire to develop a positive reputation will curb people from taking advantage of anonymity for antisocial behavior.

Alternatively, users might use Pen Names for specific actions. While we have envisioned a Pen Name being its own separate identity, a vertical silo of activity within The First Time Project, there is nothing preventing users from using one Pen Name to author stories, another to comment on stories, and another to subscribe to authors and Experience Topics.

As The First Time Project matures, it will be quite interesting to track Pen Name usage, especially the role they play in facilitating the sharing of vulnerable stories. We have already seen users create various Pen Names for different purposes, suggesting that some users are developing an understanding of the concept. This is an early, but positive, affirmation of our interview findings.



## Conclusion

The First Time Project draws on nearly every aspect of our collective School of Information coursework, from Information Organization and Retrieval, to Database Management, to User Interface Design, to Computer Mediated Communication. Our aim was to create a fully functioning site within the time constraints of the semester. Doing so has allowed us to emulate how knowledge learned in a classroom setting can be applied in a real world development scenario. The exercise has been both invigorating and challenging.

In trying to develop a system that will be largely shaped by the behavior of its users we have had to rethink the design process. We have borrowed the analogy of architecture to guide our design process. Our goal was to set in place technological affordances and constraints that encourage certain types of

behaviors while discouraging others. Key to our solution has been the partitioning of space within The First Time Project. We recognize that users will want to share different types of stories depending on the context in which the stories will be received. This context is partially shaped by the location of the story within the larger site. It is also shaped by the identity that users associate with the various forms of publicly viewable behavior. We have attempted to give users the ability to create silos within the site, as well as control over how their identity is linked to their viewable behavior. It is our hope that these strategies encourage users to collectively produce a rich and diverse collection of personal stories, a unique and valuable form of content that has been under-supported by most currently popular information systems.

1. K-LOC Calculator. A free Windows-based tool for counting physical lines of source code. Available at: <http://www.analogx.com/contents/download/program/kloc.htm>
2. Elementool. Web Based Project Management Tool. Available at <http://elementool.com/>
3. Hearst, M., A. Elliott, et al. (2002). "Finding the flow in web site search." Communications of the ACM 45(9): 42-49.
4. See <http://flamenco.berkeley.edu/>
5. del.icio.us offers an interesting example of how a task that benefits the individual, bookmarking, can be of collective benefit when metadata is shared.
6. For example lists of feelings see:  
<http://www.cnvc.org/feelings.htm>  
<http://www.psychpage.com/learning/library/assess/feelings.html>  
[http://www.drnadig.com/feelings\\_list.htm](http://www.drnadig.com/feelings_list.htm)  
<http://marriage.about.com/cs/dialogue/a/feelingwords.htm>  
<http://www.eqj.org/fw.htm>
7. We do not intend to provide a comprehensive analysis of all forms of online community. Such an endeavor beyond the scope of our project and paper.
8. Obviously these sites allow for many different types of connections between individuals. Common interests, geography, membership in institutions such as schools and companies are also used to bind individuals. Yet, their primary organizational unit remains the individual.
9. We chose to call each identity a Pen Name as it best embodied the spirit of our site.

## Thanks!

We would like to thank our advisor, Coye Cheshire, for all his guidance and support. We'd also like to thank all of those who participated in our needs assessment and launch phases.

## Photo Credits

Snowmobile:  
<http://www.flickr.com/photos/tkellyphoto/>

# Appendix

### Interview Script:

#### Identify usage patterns and experiences

- How often are you online?
- What sites do you go to most often?
- What things do you typically do online?
- Do you belong to any type of social networks
- Do you Blog?
- Do you read other people's Blogs?
- Are there any sites that you contribute content to?
- Do you write in a journal?

#### Introduce the FirstTime Site Idea

- What are your first impressions of the FirstTime site?
- Does this seem like something you would use?
- Why do you think people share personal stories with one another?
- Why do you think first-time stories are particularly interesting?
- Do you think you would share any of your personal first time stories on the site?
- What types of stories would you consider sharing?
- Would you mind sharing these stories to everyone on the site or just your friends & family?
- Is archiving your personal stories important to you?
- Would you like to add images to compliment your story? Video? Audio?
- How would you like to display all of your stories?
- Would you welcome comments from strangers about your personal story?
- Would you mind if people rated your story?

- What would you like them to judge your story on? (Writing style? Emotional impact?)
- Do you think you would be interested in reading other people first-time stories?
- What kind of stories would you like to read?
- How do you think you would search for stories?
- When searching for a story, what things would you look for?
- Writing style? Emotional impact? Content of story? Lessons learned?
- When evaluating a story...
- What things would be important to you to know about the author? About the story itself?
- Would you like to rate other people's stories?
- What criteria would you like to use to rate the story?
- Would you like to be able to comment on someone else's stories?

## Primary Tables

### ft\_story

The Story holds the story text, title, posted date, whether the author allows comments, the ID# of the Pen Name the story was signed with, and the experience topic the story belongs to. Currently, a story can only belong to one Experience Topic and can be signed only by one Pen Name, but with the development of new features this can be easily expanded in the DB.

### ft\_topic

The Topic table holds the title of the topic and the ID# of the Pen Name and the Pen Name who created the topic.

### ft\_penname

The Pen Name table stores the Pen Name, a description, created date, and the ID# of the user in which the Pen Name belongs.

### ft\_user

The User table contains all of the information about the user, ranging from email address, password (hashed), and date of birth to information about account activation. We also store the number of times a user has logged in.

### ft\_mail

The Message table stores all of the data for private messages in The First Time Project. Besides the subject and message, we store the Pen Name ID#s of the sender and receiver, sent date, whether it has been read, and whether it has been trashed.

### ft\_comments

The Comment table holds all of the information for stories, including the Pen Name ID# of the comment writer, the ID# of the story being commented on, and the date the comment was posted.

### ft\_favorites

The Favorites table contains the ID# number of the story being favorited, and the user ID# of who is favoriting the story. The key here is that favorites are related to the user, not

a specific Pen Name. Since Favorites are not publicly viewable and are only available on a user's You Page, we choose to cut out the Pen Name layer from this component.

### ft\_subscription

The Subscription table stores the Pen Name ID# of the Pen Name adding the subscription, the type of subscription (author or topic), and the ID# associated with that type.

## Story Metadata Tables

There are three tables holding information about who was in a particular story, what feelings were associated with that story, and what themes were featured in the story. Since both feelings and people feature a hierarchical classification, we also store an ID# that enables us to build this hierarchy within the database.

## Browse Tables

Our browse works by applying story metadata to filter the collection of stories. Three tables are devoted to holding data about feelings, themes, and people associated with specific aspects of the browse stories feature.

## Statistics Tables

The First Time Project DB is built with record-keeping in mind. Six tables are devoted to site statistics, ranging from who viewed what profiles on what dates, to what keyword searches are being performed.

## Administrative Tables

We have built a completely functional administrative interface for the First Time Project. There are three tables containing information on specific administrative functions and privileges.

