Project Paparazzi

Mary Hodder
Final Masters Project
Professor Nancy Van House, Faculty Advisor
UCB School of Information Management & Systems
Presented 4:00pm May 11, 2004

Abstract

Blog conversations occur daily across the internet, though those conversations of interest and relevance are difficult to find in a timely way for most users who are not heavy readers of blogs. This is partly because search tools such as Google index information weeks after posting, and partly because their page rank algorithm means that even if a relevant post is found, the corresponding conversation between several bloggers may not be found. Even upon finding these conversations, they are difficult to see visually, either as a threaded discussion or as a cluster of comments that may occur in the main posts, or in comments below posts or via trackback.

Blog information can be very useful, as it develops across blogs or within a particular blog, and therefore browsing the information in a topical way has proven very useful to those who wish to find relevant information published by authoritative sources, even if those searching are not expert users.

Paparazzi attempts to make clear those conversations relevant in particular topic areas, demonstrate the authority of bloggers as other users have found them relevant, and to create context around those conversations by including blog authority as well as the traditional media that blogs often point to for sourcing.

Paparazzi is a prototype system meant to be implemented to meet these goals and provide more useful access to blog information, accessing it through various methods reflecting the different ways users understand and interact with this particular kind of information. It was developed in order to understand blog conversations more clearly, and to experiment with this particular corpus of data, to understand the unique relationships the data has with other data. The system design effort was meant to find appropriate ways to interact with and display blog information that is often multilayered due to the complex linking structures between and across blogs, and between blogs which tend to rely on traditional media as source material and a starting point of discussion and conversation.

Problem Statement

It has been estimated (by the NYTimes.com, other blog counting services such as Technorati.com, as well as the Pew Internet & American Life, http://www.pewinternet.org/reports/reports.asp?Report=113&Section=ReportLevel1&Field=Level1ID&ID=484) that there are 3 million blogs and 5 to 10 million daily blog readers. Twenty percent of these blogs go dead after about two months of operation, while many more are started. Of those live and regularly updated, the content, for various reasons, can be very interesting.

This kind of information, provided free on the internet by bloggers, can be useful if the nuggets of value can be extracted and understood. Creating an interface to make explicit these conversations is key to making what people say available. Most users of the internet have not yet found these conversations accessible, though many people have expressed interest, because they are difficult to find.

Blogs, because the blogging tool as a genre is so flexible and in practice is used in so many ways, to publish such a wide variety of information, are in and of themselves a unique corpus of data, requiring special attention to properly search and index for topic browsing. Part of the challenge with this data is to figure out the unique characteristics of the information, but also to figure out how the multilayered data is related or linked, and then to lead users to relevant data so that the might easily see the conversations without having to be participants in the conversations. It is this problem of context and chaining of conversation, along with the corresponding issue of user familiarity with blogs and their structures, that Parapazzi tries to address constructively.

Objectives and Scope

Our project proposes to create a useable, useful, and enjoyable interface for those who are unfamiliar with either blog terminology (the use of which might aid in searching for them) or how to access blog content that is trustworthy and useful, and how to see the conversations and linking that occur across blogs that concentrate on particular types of information or discussions. This system design relies on technology that already exists, so our concern is with designing the front end effectively. Therefore Paparazzi does not focus on the algorithms in the back end system, but rather the interface that communicates the results of an existing backend and the topic and conversation searches users perform.

Paparazzi does encompass the areas of topic browsing blogs and conversations, for the purposes of finding relevant and very current information as it rises to the top of particular topic areas. The system does allow flexibility for users who wish to change the scope of the search, via topical filters as well as various sorts. But all of this is accomplished through a system that understands the relevance and general authority of blogs based on inbound and outbound linking, as well as frequency of posting and importance and authority within a particular topical area. While this last bit of the system as described is more of a back end function, it is important to know that users will see this understanding reflected in their search results, while still being able to customize the results to reflect different needs. But the primary goal is to offer a system that serves search results that are relevant, if flexibly alterable based on the users needs, without bothering the user with too much of what the system is doing under the

hood. In other words, the system must work, and the users need choices as to their search needs, but after that the system is kept out of view so as not to clutter the search and result experience.

Case Study Background

Current tools for blog aggregation systems and search include online services such as Feedster (feedster.com), Technorati (technorati.com), Blogdex (blogdex.com) and Daypop (daypop.com). These systems function in various ways to allow users to browse bursts of activity around particular blogs, topics, words and events, or to search feeds or URLs for conversations.

Other methods for obtaining blog information include users receiving direct notice of a particular blog event, email notification of aggregated RSS blog data via one of the above services, direct search and traversal of blog links from one post to the next which relies on users already knowing where their starting point is in looking at blog information, and using RSS aggregators to pull in feeds from various sources, including blogs as well as traditional media sources such as the NYTimes.com site.

In addition, sites such as Google News (news.google.com) and Yahoo News (news.yahoo.com) compete with these news information sources to aggregate traditional media from thousands of sources.

Specific case study detail of Feedster, Technorati, Blogdex, Daypop and Google News are attached as an Appendix. Most useful, however were the following features:

- Users have been trained to see returned search results in terms of Google, so changes to that framework need to be carefully considered
- Showing key word search results with highlighted terms helps users quickly find information they need
- Keep it simple. Too much information, or information presented in a disorganized manner was confusing and not useful.
- Showing some blog and traditional media information in the results can be helpful if displayed distinctively.
- Features that show information changing over time, or comparing one time with another are popular

Research Methodology

This project was conducted after experience with usability and user interface design study, using principles from Jacob Nielson's *Usability Engineering*, Rudin's *Handbook of Usability Testing*, and Jeff Johnson's *GUI Bloopers*, along with other heuristics and recommendations based on non-fiction media analysis, journalistic principles, and information flow analysis. Needs assessment and rapid iteration for prototyping was used to create a paper prototype and then four interactive prototypes where in between each prototype, user testing or heuristics were conducted.

Needs Assessment was conducted prior to the first prototype, with two sets of interviews, and some interaction testing. The Qualitative study included 5 users who were interviewed from approximately 2 hours each about their search, writing, blogging (if they did blog) and news reading and aggregation habits were collected. The quantitative assessment surveyed 25 people about their use and habits with news and information search and browsing. The Interaction testing was done using the Technorati.com system, to assess some interactions with an existing system that had implemented some features we were interested in improving.

Qualatative Survey:

Initially, the results of our five interviews were aggregated, by question, where upon going through them, the answers were mapped to concepts central to the system, in order to find things the prospective users had in common, and which things were unique.

The process was as follows: a list of questions for a qualitative interview process was developed, and then interviews were conducted with a wide range of people who reflected those that fit the target users. These users include those who are not at all aware of or used to blogs, to those who read heavily, to those who were writers and creators. Interviewees reflected their reading, writing and search habits, and their familiarity with technologies that support these habits both offline and online. The following is a summary of findings:

Information Sources: Ultimately, the reliability and relevance of news sources were the factors that led each of our interviewees towards their preferred news sources. This put sources like The Economist and The New York Times at the top of the list. However, people found referrals from friends and referrals from blogs to be nearly as important, simply because it helped the person to select the most relevant news.

Information Seeking: There were three major behaviors that our interviewers explained to us. When in need of information, they would use a search engine, ask another person, or go to a source that they considered to be authoritative on their topic. Each of the stories the interviewees told us involved some combination of those actions. Interestingly, in a majority of the stories, the person started with Google, but ended up speaking with or e-mailing another person for the information.

Reading habits: Overwhelmingly, the people we interviewed loved to read. However, many did not have the time to read as much as they would like. These people found ways to maximize the signal-to-noise ratio in the information they read. They would use social filtering (recommended by friends) or trusted source filtering (reading from a limited number of sources with which they had good experiences).

Writing habits: We found that people either loved or hated writing. Those who loved writing did it almost every day and considered it to be a craft. Those who disliked writing felt that it was a painful or difficult process. Another enjoyed writing, but felt that it was a lot of work because he insisted on perfection. Some wrote for themselves, others only wrote if they knew they would have an audience.

Blogging habits: There was a wide variety of experience and familiarity with blogs in our set of interviews. All had heard of blogs, yet some did not have an accurate idea of what a blog was. Others were so-called "A-List" bloggers who maintained their own blogs and posted on a regular basis. In the middle, there was the set of people who read blogs as a method of information filtering. These people either maintained blogs for occasional posting or did not keep a blog.

Perceptions of blogs: This question had an incredibly wide range of answers. Some people felt that blogs were simply narcissistic outlets for the vain. Others felt that blogs were a kind of new media source or an alternative to traditional media outlets.

Blog writers: We found out that some bloggers are fixated on knowing their ranking relative to other bloggers (based on the number of references made to their blog). Other bloggers had never even looked at the number of hits their site was getting or were specifically not interested in knowing this information.

Advertising: In the interview with the market development manager, we found out that some companies had PR departments who monitor online chatter (ie, rumor web sites). We also found that advertising and marketing is very dependant on quanitative results and each company has a different philosophy as to what works.

Quantative Survey:

A survey was conducted with 25 users about their News and Blog Search and Browse Habits. Below is a summary, dated February 25, 2004 though the detailed survey data is located in the Appendix:

Survey conducted Saturday and Sunday, 2/22 and 2/23 (with 2 additional on Tuesday, 2/24)

Participants selected from emailed responses to Craig's list ad with the requirement that they be over 18 and have broadband (or midband) access at home. This produced a pool of 25 interviewees who are very much in the "always on" category of internet use and understanding and all of them appeared to be our target users:

14 men
11 women

ages:
18-24: 7
25-34: 7

35-45: 6
45+: 5

The average self rating on internet proficiency was 7.64. With the exception of one or two people, they all used the internet daily, many times a day, at home and work, or for school and work for "everything" as they repeatedly said. All but one were interested in news information, read the news and were heavy online news consumers with an average self-reported online news habit of 45 minutes a day. In fact they all mostly get their news from the internet with just a couple mentioning broadcast or old-style newspapers.

Their sources for news tended toward the traditional, though 13 do take in a mix of traditional and non-traditional (editorially controlled news verses non-edited news). News sources include nytimes.com, abc.com, cnn.com, msn.com, yahoo news, Google news, sfgate.com, and all were repeated several times. In addition, latimes.com, European websites, Reuters, local small papers, wired and salon came up once or twice. Only one said the Wall Street Journal, and she has access because her company pays for it. But it was not on the radar of the rest of the participants.

All search online, with most respondents reporting that they are looking for product information including reviews and pricing, doing research for work or school, looking for jobs, art and entertainment information including both reviews and where bands or movies are playing, sports, restaurant reviews, computer information, maps, jokes and food and wine, as well as opinion. Many people replied, upon hearing the question, that they do "everything" on the internet, and it's all about searching for the everything.

21 of the 25 had heard of blogs, but only 16 read them (one was not aware that he was using one to teach a night class at USF – though he has a different day professional job). The primary reasons people read blogs were to see what certain people they knew in some way were thinking, and to filter their news through those trusted sources and lenses. They also were trying to find people with similar interests, interesting lives, who are knowledgeable about topics and specialties. They also wanted unfilter, direct sources who would be straight with them, expose their biases and allow the reader to judge the value of their opinion and analysis.

These conclusions are made from the backup information, typed word for word as respondents said things without interruption. Complete user answer sets are located in the Appendix.

Interaction Testing 3/8/04:

Interaction testing was conducted on the Technorati.com site to assess interaction and features that Paparazzi was considering, as well as to scope out some of the issues already encountered during the low-fi paper prototype process described below. Essentially, similar problems were repeatedly encountered around users knowing where they were in the system during a given task, confusion over terminology and meaning, and lack of context and queues to understand how to take information returned in searches.

A full description of user's interaction with Technorati.com is located in the Appendix.

Personas and Goals:

Paparazzi went through three rounds of persona development. Personas in the Appendix documents present the latest revision.

Round 1 - With twelve ideas for user-types, changed into personas, and they were given names, some high-level goals, and blogging behavior/attitudes based on the interviews.

Round 2 – The twelve were then narrowed to eight and wrote full personas for each one. During the writing process, the other four were deemed to be slight variations of one of the others. One more persona was then added who had not been represented.

Round 3 - The eight were narrowed down to five. During the process of task analysis, we realized that there was enough overlap between some of the personas that they did not need a full analysis for each one. Our goal here was to pick out the four or five that could be plotted on a blogging continuum.

Abigail Rhode - Journalist, Food critic
Serena Hart - PhD Student, Education Policy
Byron Bei - Senior Product Marketing Manager
David Dursley - Political Campaign Manager
Jon Taxen - Web Developer

Complete personas are located as an Appendix.

Scenarios:

Paparazzi constructed five scenarios, one for each of the five personas. These scenarios were very important during the different design phases, assessing feedback on the prototypes against features and proposed fixes for problems, and in generally keeping the project on track. The project was dependent on them repeatedly.

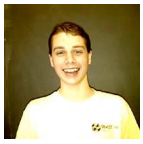
The scenarios were constructed in anticipation of the personas "real life" uses of the Paparazzi system, with the intention that the scenarios would serve as a place holder for the kinds of activities that are central to the user needs assessment conducted earlier in the system development process.

Task Analysis:

Paparazzi prepared a task analysis mapped against the personas described above. The purpose of this analysis was to see how important the tasks were to our personas and to find out how often tasks appeared to be central to the goals of our users. The net result was that certain personas, specifically David Dursley and Abagail Rhodes, performed most of the tasks. At that point, we realized Paparazzi could be designed for these two users, to effectively achieve the functionality and design goals to meet our user's needs.

The task analysis in the Appendix shows both a color and size relationship to the importance and frequency of the task, so that we could quickly assess tasks and users. While this was somewhat effective, we found that we needed to continue to discuss the distinctions between tasks and users, to make good design decisions during prototype implementation. However, we revised this matrix, to a more simple format below to get a better sense of the main tasks that we needed to support:

Using our personas and task analysis table, Paparazzi stepped back and tried to put together the top high-level tasks for each person and see how those task related to each other across personas. We then tried to group together similar tasks. The table below summarizes the discussion.

Abigail	Serena	Byron	David	 John
What's up with my competitors?	What are friends/colleagues talking about?	What's going on with my company?	Track opposing candidate's news/readership	Reading the latest on gadgets and games

Who is reading my column?	What's going on in education?	What's the industry buzz?	Monitoring general election conversations	Who's linking to my blog?
What are people saying about me?	Topical search	Investigative research on particular topics for specific projects	Tracking own candidates readership and inbound links	
What should I be writing about?	News		Political issue research	

Key:

Community, "conversation" tasks	Readership, "about me" tasks	News and research tasks

Paparazzi also spent some time discussing which of these high level task are done on a daily basis, which are done on a weekly basis, which were done at longer intervals of time, and the context of use for each persona. From this discussion, we decided that we should primarily be designing our interface for Abigail and David. Additionally, we may have to keep Byron around in our minds as the nature of his research is somewhat different Abigail and David's research tasks. But Byron would also not be the primary user.

In thinking about our interface design, our interface would need to be able to support:

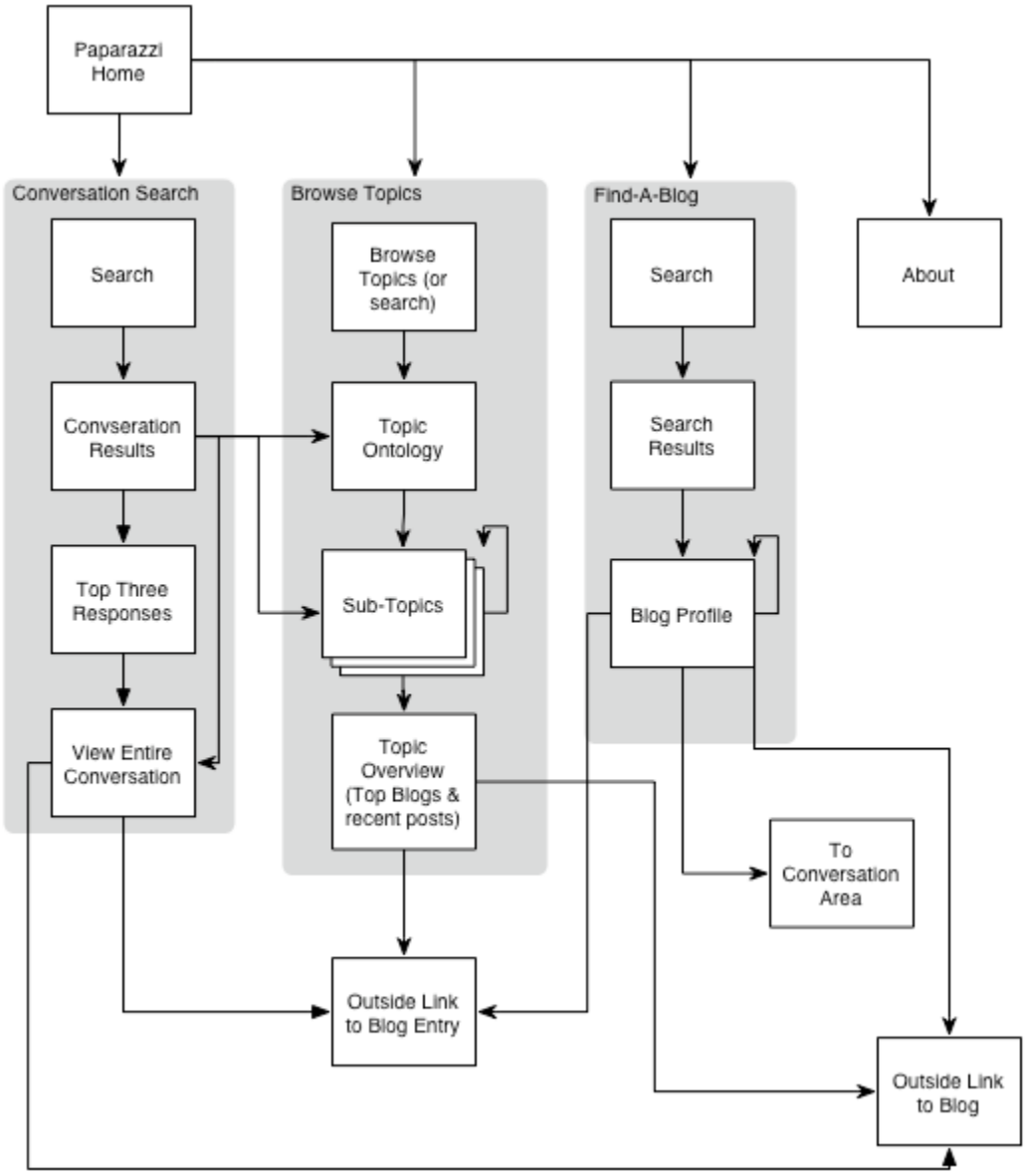
- Following a blog "conversations" (At the time, what this meant was vague in our minds. Following our prototype evaluations, we still need to better understand what this means.)Following a blog "conversations"
- Get a sense of what is being said/written about with regards to a particular topical area
- Quickly find particular blogging metrics, primarily those that inform one's understanding of a particular blog's readership

Development: First Paparazzi prototype - Lo-fi, paper

We used our first prototype to test some very basic ideas that we had regarding how users could accomplish the revised high-level tasks listed above in the task analysis matrix. We had a number of ideas of how the site should be organized, but the one we wanted to try first involved the distinct separation of the three major tasks: a section of the site to search conversations and see conversation metadata, a section to use topics to get to blog conversations and see topical metadata, and a section to finding specific blog metadata and statistics. There would be various linking between the three sections.

Materials used to make the Lo-Fi paper prototype included foam core, heavy paper, sticky notes, double-sided tape, glue (post-it style, but not post-it brand), markers, printer paper (with printed text) and the keyboard/mouse was made functional with a pencil. Photos of the prototype, testing process and the test results are located in the Appendix.

Interaction flow:



Paparazzi spent the most time discussing how one could get a sense of a relevant search result, see who responded to a blog, and to see the greater context of a blog conversation. At this point we even began to question the idea of a "conversation" as an appropriate metaphor.

Another difficulty we had was coming up with task scenarios for the test (what we came up with is located in the Appendix under Lo-Fi Testing). First, as much of the site is content driven, we knew that various aspects of the test would be artificial. For example, we would have to supply the participants with search terms. Second, we didn't have ready access to participants that matched our primary personas (Abigail and David). Furthermore, as David is dealing with political issues, we didn't want to necessarily make participants feel that we were asking them for political opinions. Nor did we want our political views to infiltrate the test. In the end, we felt we should just pick something that was a light-hearted current event (a controversial one, but not one that we necessarily were worried about).

As we were testing primarily site structure, we felt comfortable varying the types of participants. This would help us see if the interface broke down across users, even those with different levels of exposure to blogs and different levels of technical savvyness.

Finally, we tried to put real-sounding content into the search results. As this was not a test of layout, it was important to put something in front of the participants that contained a lot of information to mentally wade through.

Results of the testing with three users led us to the conclusion that we had accomplished a "successful failure." In other words, the prototype was successful, as it failed each of our design assumptions, in leading us to the realization that users wanted a combined search feature, with both browse and search functionality, that terminology and context were difficult and our familiarity with the data had to be assessed because it was a barrier to our finding solutions in some cases, and that overall users were not seeing the relationships we were making between different kinds of information. We do however, consider this a very successful test because it returned so much information for us to use in our first interactive design, with the results listed below, and specific test results available in the Appendix.

General Lo-Fi User Test Observations:

- We need to rethink our metaphor. The idea of a "conversation" is confusing to people. What is a response? Is there a real difference between what PX comments on PY's blog versus what PX comments on her own blog while referring to PY's blog?
- All three users were confused about the way the site was structure. Or rather, they did similar things for similar tasks despite range of familiarity with "standard" web interfaces. Separating the three main areas of the site is not going to work. we already have ideas of ways to unify them.
- Perhaps we are thinking about it the wrong way entirely. Rather than show "search results" (like a search engine would), we try to show relevant entry points into a greater context. This would support browsing and wandering through the blogs.
- All there users were confused by the terminology. The terminology used was lifted directly from the blog world. We think we may have to invent or adapt a new set of terms. For example, no understood with confidence what an "inbound link" was. However, P3 did guess that a "blogger" would know (indicating that P3 was not a self-described blogger).
- The users came in with different mental models of what this thing was supposed to do or should do. They compared the interface to Goolge, to an email app, to a threaded discussion list, and to a "tree" (like a discussion thread or mail list archive).
- P1 and P2 were not clear on what should constitute a "relevant" search result (which of the visible data indicates relevance). P3 said that the number of inbound link made sense for this.

Specific Lo-Fi User Test Results:

- None of the usres were quite sure what clicking on "View entire conversation" would do, though P3 was closest.
- When asked to find stats on a particular blog, no one's first instinct was to click on "Find-a-blog" (the correct answer!). All three wanted to just put the URL in the address bar of the browser.
- When asked to search for a topic, all three clicked on the link to the topic that was next to each search result. No one first went to "Browse topics."
- We had some inconsistency between post title's that would open up the actual blog vs. titles that were a link to a Paparazzi profile page.
- They all had to do some work to determine how the posts were initially sorted.
- While not definitive, date maybe more signifcant than we made it out to be.
- Wasn't clear what "Rank" really meant.

Target Users:

After conducting needs assessments and analyzing the data from the Lo-Fi prototype and testing, we determined that Paparazzi's targeted users were determined to fit into these categories, and so revised our personas and scenarios accordingly:

- *blog writers* for the purposes of seeing what others are linking to and saying in response to their writings;

- *writers from other formats* including traditional media, who might want to see how other web writers view traditional media and respond to specific work;
- *advertising purchasers* on web media, in order to place relevant advertisements with writing that is appropriate and useful for both writers and readers;
- *marketing/brand managers* wishing to see and participate in the conversations, to
- understand what people say about them.

Prototyping Process: The Interactive System

Three interactive iterations were made before the final version, with a heuristics evaluation, design comments and user-pre-testing conducted between versions in order to find bugs, test interactions, terminology and contextual chaining of blog conversations, implement color, and test icons.

The first interactive prototype was followed by a heuristic evaluation by another SIMS team, who returned extensive feedback on the Paparazzi system. All severity level three and above violations were fixed, comments from designers were addressed, and a second version was created. In the development of our second interactive prototype we focused on four general areas of change:

- Addressing the most severe heuristic violations raised by Manis;
- Improving the visual layout and design;
- Adding enough content suitable for a usability test;
- Adding in some functionality we did not build into first interactive prototype but is necessary for a usability test.

Additionally, we decided as a group to ignore some of the general terminology issues unless they were misleading or inconsistent in our usage of them in our site. There is a language that is developing around the concept of blogging. Some of this language (such as the word "blog" itself) are becoming more and more mainstream. It would probably be counterproductive to create an interface that makes these terms "intuitive." Additional information on the second prototype is located in the Appendix.

After version three was completed, we undertook user testing with three participants. We conducted testing using Paparazzi 3.0 (http://dream.sims.berkeley.edu/~jtowle/p3), iterated from the 2nd interactive prototype before testing began. Major changes made included adding color, changing vocabulary, fixing minor bugs, modifying an icon, and modifying the formatting. In addition we doubled the data set.

Purpose and Rationale for the pilot usability study

The purpose of the study was to observe, quantify and understand how users reacted to the system, gain insight into their understanding of the system and data, and gather quantitative information about the pathways and uses of the system in terms of time, clicks and efficiency. This information would then be used to plan a larger more involved user study.

Test participants

The target participant for our test would ideally consist of users of Paparazzi and users of other blog and news information sites such as Feedster (http://feedster.com/) or particular blogs such as Instapundit (http://instapundit.com/) or news information aggregation tools such as NewsGator (http://newsgator.com/). Users who actively browse and search blog and news related content online are generally more familiar with the construction and linking practices of blogs and the quirky styles that blogs sometimes maintain, but also the possibility of finding far more interesting and knowledgeable information generated by experts as compared to general news reports. These users often filter their content through blogs for mainstream news, and will need to search or topic browse for information they are looking to find. As a result of this experience and exposure, these users may offer specific opinions relating to a topic-browse blog-search site's content, layout, features, and functions. These users may also be more adept at recognizing and proposing changes and/or additions to the content, features, and functions of blog news sites.

We chose three test subject who use online blog and news sources. These individuals offered insight into our system and roadblocks that would keep them from utilizing the features or the system as a whole (names have been changed to maintain participant confidentiality):

- **John**, Lawyer, 29 years old, light blogging experience and light blog reading experience. Read and listens to traditional media sources 8-10 hours a week. Uses blog and blog aggregators, going to a couple of specific blogs daily, and finds filtering by topic, publication, and via blog references to be important in his news search. Also, it is very important to him to get news information that is more than 30 days old.
- **Eric**, 32, Lawyer, heavy blogger, heavy blog reader. 8-10 hours per week spend on news consumption, uses blog and blog aggregation sites everyday, and reads traditional news through RSS feeds, as well as clicking through RSS feeds to the traditional news sites and getting links send via email. Considers his ability to filter news by topic very important, but not so with publication. It is very important to find news information that is more than 30 days old.
- **Mike**, 35, web developer, has seen blogs a few times, but mostly uses chat rooms to get technical data, consumes news media 4-7 hours per week, never uses blog or blog aggregators, searches specific sites for articles. Considers it somewhat important to filter news by topic and publication, but very important to find information more than 30 days old.

Structure of test

Testing included:

- pre-test questionnaire
- system demonstration
- usability test
- post-test interview

Users were tested on a 15” mac powerbook, running the Safari web browser, and an attached logitech optical mouse. Two of the users were familiar with macs, one was not, though all seemed to adapt quickly to the limited keyboard requirements and frequent mouse clicking required to complete the tasks.

Participants' activity was recorded with digital video camera. The camera recorded the computer screen, but not the participant (except for the voice).

All three tests were conducted on the same day. A participant appeared individually, filled out the user consent forms, and a filled short written questionnaire (below) to get them into the "right" frame of mind. The participant was then taken to a table, where a video camera was positioned to record the computer (but not the participant, other than voice). The user was then given an explanation of the system, though not the tasks. At that point, the tasks were given to the participant, one at a time, and notes were taken as well as the video. After the tasks were completed, the user was questioned about the system and his experience with it.

Test evaluation criteria and discussion

While we see the importance of quantitative measures, we believe that we are still at the stage where qualitative feedback is more useful. That being said, we identified possible test measurements. After the test, we discussed the effectiveness of these measurements.

Possible test measurements for each scenario:

- Correct answer for each question or task
- Time
- Number of clicks for completing the tasks

While we took down quantitative measurements, in general they did not work very well during this test. Almost every task was completed correctly. In the one case where a task was not completed correctly, it is difficult to tell if

this was because of not understanding the task or not understanding the interface. The time measures of task turned out not to have value or be accurate, because users were asked to talk through their actions, which often significantly slowed their activities and caused them to experiment, read back what they were looking at, and interpret their thoughts to us. The most efficient path to success also turned out to not be a good measure, because there were often two ways to go, with an equal number of clicks to get to the information.

Qualitatively, though, we learned that users who do things via a particular path or style often replicate that path over and over, across different tasks. Therefore, judging one path as most efficient may not have value, if there are similarly efficient ways to go about a task. However, the clicks for tasks were often between two and three to find the information requested in the task, and so we generally deemed this measure not very valuable. Also, regarding clicks generally, because the users were "playing" with the interface a bit (they would often land on the page with the information, and then click around to see what else was there), we did not get good click analysis from the backbend system and it was difficult to follow manually their rapid clicks when this would occur.

Test results - what we learned

- The layout and color scheme worked well and users repeatedly expressed that they liked it. Furthermore, participants did not need to read the headers. They used the content/data itself to understand what they were looking at.
- Users understand the tasks often by associating the search results with them, and then mapping the results to it. However, once users understood what they were looking for, they had no problem retaining information. For example, Mike was unfamiliar with blog structure and the information was more confusing until he had a task and context to get it and remember it. Once he got it, though, he had no problem with it.
- We still have terminology problems with things like "Activity" and "Responses" vs. "Links" and "Posts" vs. "entries." There were both task-translation issues as well as a clear understanding of what the users made of the information results.
- We noted that users will do one thing in one particular way and then stick to it. For example, John made extensive use of the sort functionality to complete the tasks. Eric clicked through each page of results, even though he saw the sort control right away. Sorting would have made task completion easier, but he did not complain. He seemed to prefer a very concentrated search on the data itself, or going to a different kind of page to find the same information.
- We need to consider having links to have numbers of pages across the top (interesting study you could make out of this) so that users can see how much data is coming.
- We have pushed the limits of our data. In the future, we will need real data for both running qualitative and quantitative tests. Despite this obstacle, however, all users were able to complete most tasks, even if they did not completely achieve the correct answer. Those times appeared to us to be a result of the interface, not the data, and pointed us to things we might correct in the next iteration.

Interview notes are located at the Appendix.

Conclusions

- The Paparazzi layout and format is stable.
- We are still generating important information from qualitative data
- There are a number of minor issues that need to be addressed (such as icon refinement). For the next iteration we will go back to the heuristic evaluation and analyze the video from this test to prioritize changes.
- The most significant remaining issue is one of terminology. Therefore, we have chosen it as the centerpiece of our Formal Experiment Design (located at the Appendix).

V4 includes all feedback: from heuristic, designer-peers and user testing, that we were given during the prototyping process and is located here: http://dream.sims.berkeley.edu/~jtowle/p4/.

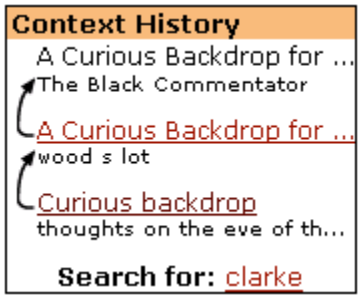
How Does the System Work?

The index page of the Paparazzi system shows a search blog, and below that, a list of topics that can be browsed. Both of these methods lead to blog posts that match either a key word in a blogs name or in the post content, or by topic browsing, to a list of blogs and relevant posts in that particular area.

Example search: a keyword search on "clarke" returns blog posts and traditional media articles containing references to that word, which is the last name of Richard Clarke. Choosing the top blog post, and selecting the link to "show more context" returns posts that have linked to the post at the top of the first result. This second result is accompanied by a Context History to the right of all the posts, which stacks the most current search result at the top of the history, followed by the previous posts, in reverse chronological order. Arrows to the left of the posts listed delineate the linking direction from one post to the next, so that a chaining effect occurs corresponding with the graphical representation of the arrows to posts. This chaining is meant to show how conversations have developed, giving the user a glance view of the conversation lineage.

Often traditional news articles are pointed to by several blogs, or several blogs will chain one to the next. In the case below, three different bloggers, who copied each others post headlines with similar text point one to the next post, and this is apparent via the arrow structure. Posts not currently at the top of the main results are hyperlinked, though the top result is not, because the user would see that post at the top of the main results section where he currently is in the system.

Below that, the search is hyperlinked so that if the original results as first returned are desired, a user can easily navigate back to that beginning point. In this case, it would be to all instances of the word, "Clarke".



Final interface design description

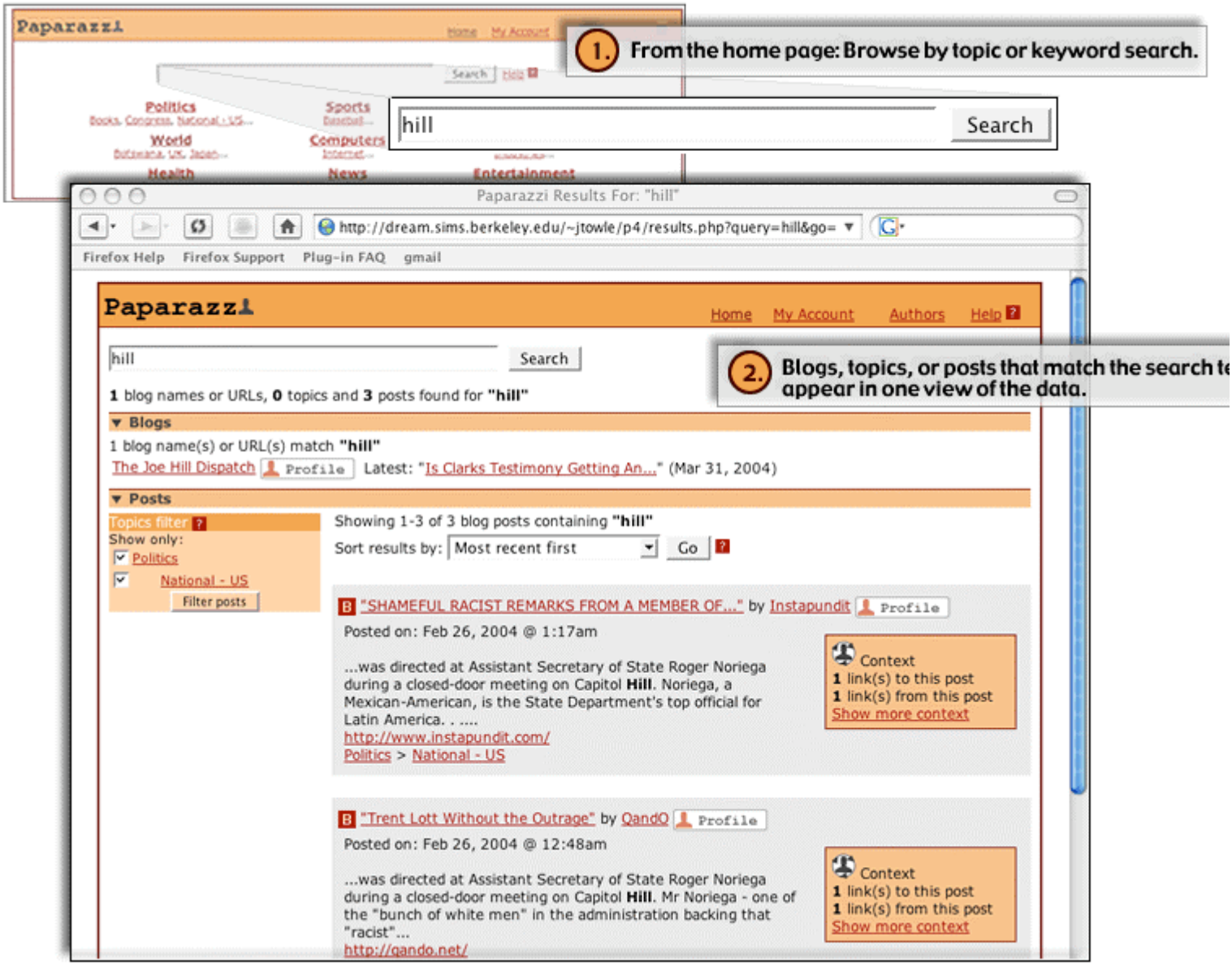
The Paparazzi interface has come as the result of four design iterations and peer feedback in-between. We have focused our efforts on designing:

- a unified search results page
- a way for users to follow blog chains
- a way to get information about a blog site, both blog metadata and posts
- a way to get topical information about blog posts, both topic metadata and posts

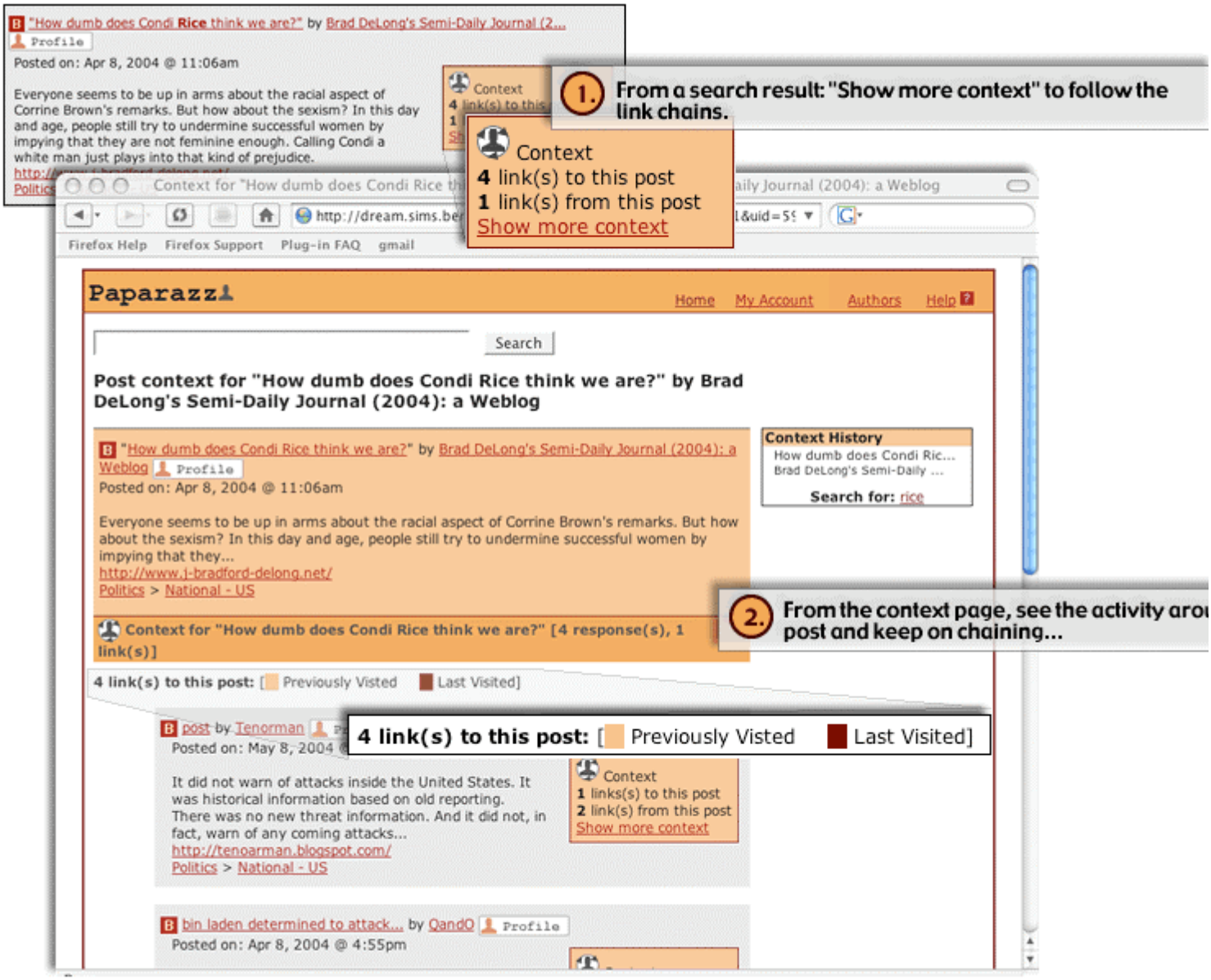
All of the content in the prototype is "faked," though some of the blogs and posts are real. However, we anticipate being able to plug our demo into a live data feed in the future.

The following figures provide an overview of how the major functionality works.

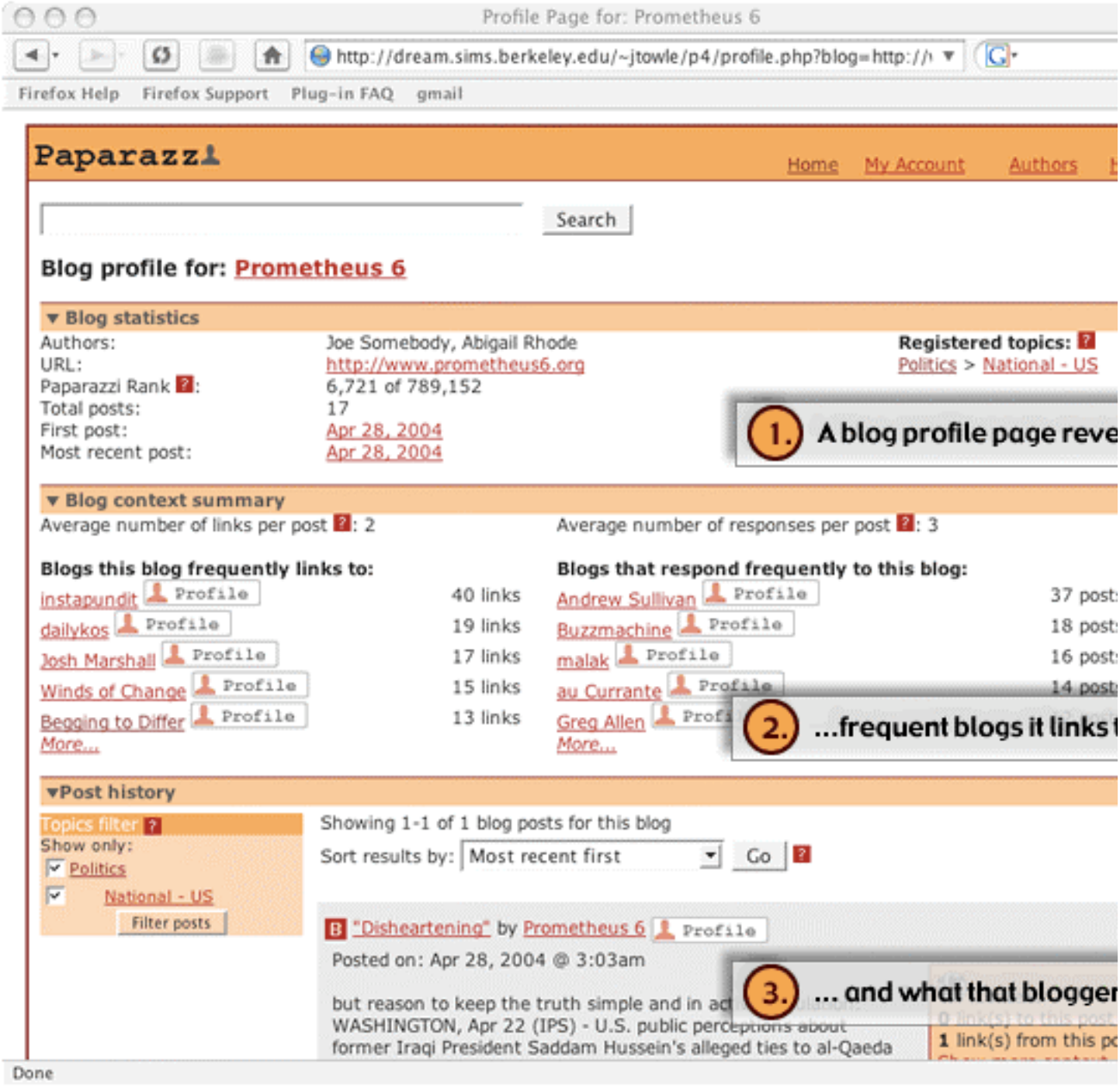
Start a search



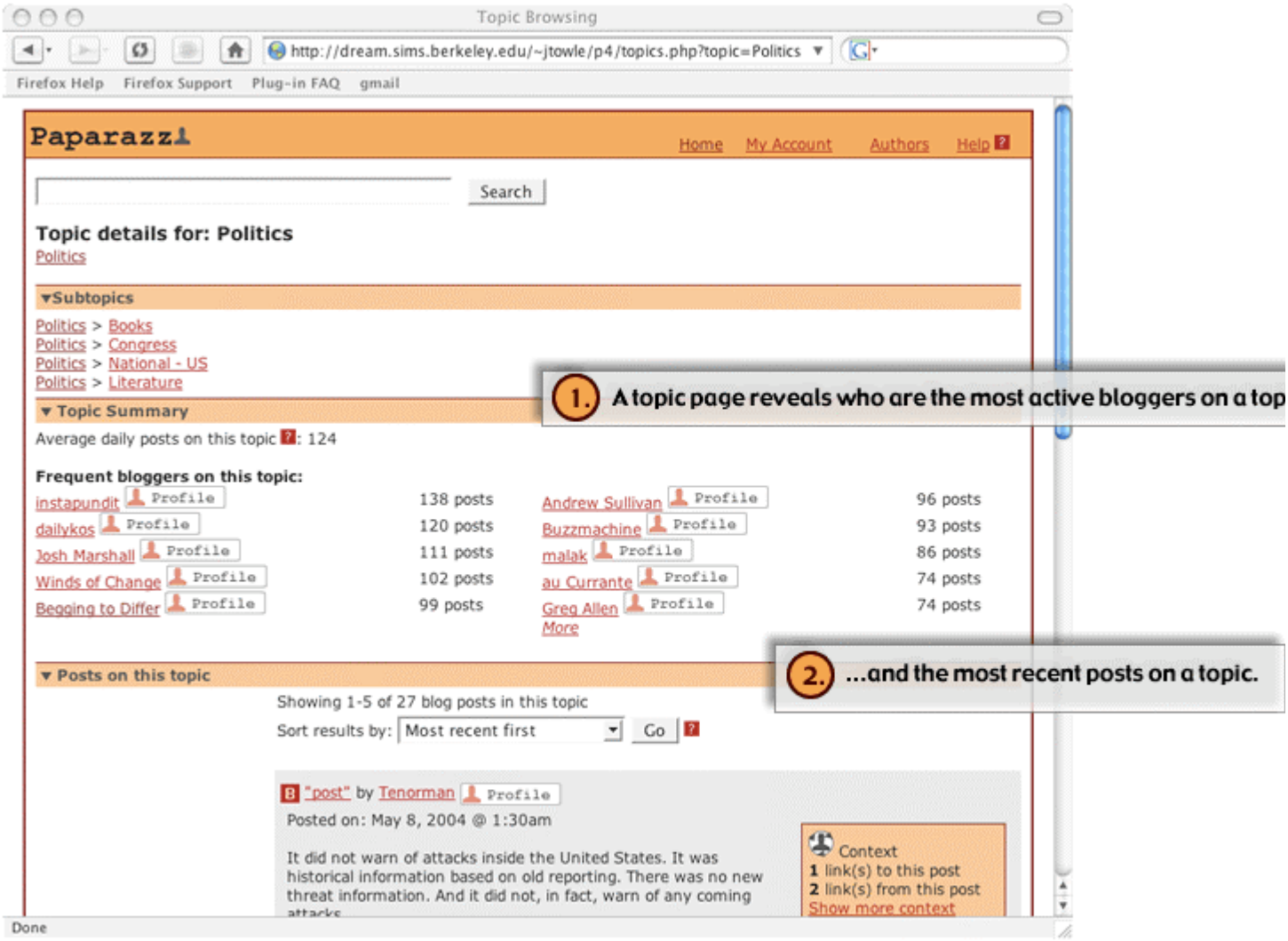
Context page


"How dumb does Condi Rice think we are?" by Brad DeLong's Semi-Daily Journal (2...
Profile
Posted on: Apr 8, 2004 @ 11:06am
Everyone seems to be up in arms about the racial aspect of Corrine Brown's remarks. But how about the sexism? In this day and age, people still try to undermine successful women by impying that they are not feminine enough. Calling Condi a white man just plays into that kind of prejudice.
Politics
Context
4 link(s) to this post
1 link(s) from this post
Show more context
1. From a search result: "Show more context" to follow the link chains.
Context for "How dumb does Condi Rice th
aily Journal (2004): a Weblog
http://dream.sims.ber
Firefox Help
Firefox Support
Plug-in FAQ
gmail
Paparazzi
Home
My Account
Authors
Help
Search
Post context for "How dumb does Condi Rice think we are?" by Brad DeLong's Semi-Daily Journal (2004): a Weblog
"How dumb does Condi Rice think we are?" by Brad DeLong's Semi-Daily Journal (2004): a Weblog
Profile
Posted on: Apr 8, 2004 @ 11:06am
Everyone seems to be up in arms about the racial aspect of Corrine Brown's remarks. But how about the sexism? In this day and age, people still try to undermine successful women by impying that they...
http://www.j-bradford-delong.net/
Politics > National - US
Context History
How dumb does Condi Ric...
Brad DeLong's Semi-Daily ...
Search for: rice
Context for "How dumb does Condi Rice think we are?" [4 response(s), 1 link(s)]
2. From the context page, see the activity aro
post
4 link(s) to this post: [Previously Visted Last Visited]
post by Tenorman
Posted on: May 8, 2004
It did not warn of attacks inside the United States. It was historical information based on old reporting. There was no new threat information. And it did not, in fact, warn of any coming attacks...
http://tenoarman.blogspot.com/
Politics > National - US
Context
1 links(s) to this post
2 link(s) from this post
Show more context
bin laden determined to attack... by QandO
Profile
Posted on: Apr 8, 2004 @ 4:55pm

Blog profile page



Topic page



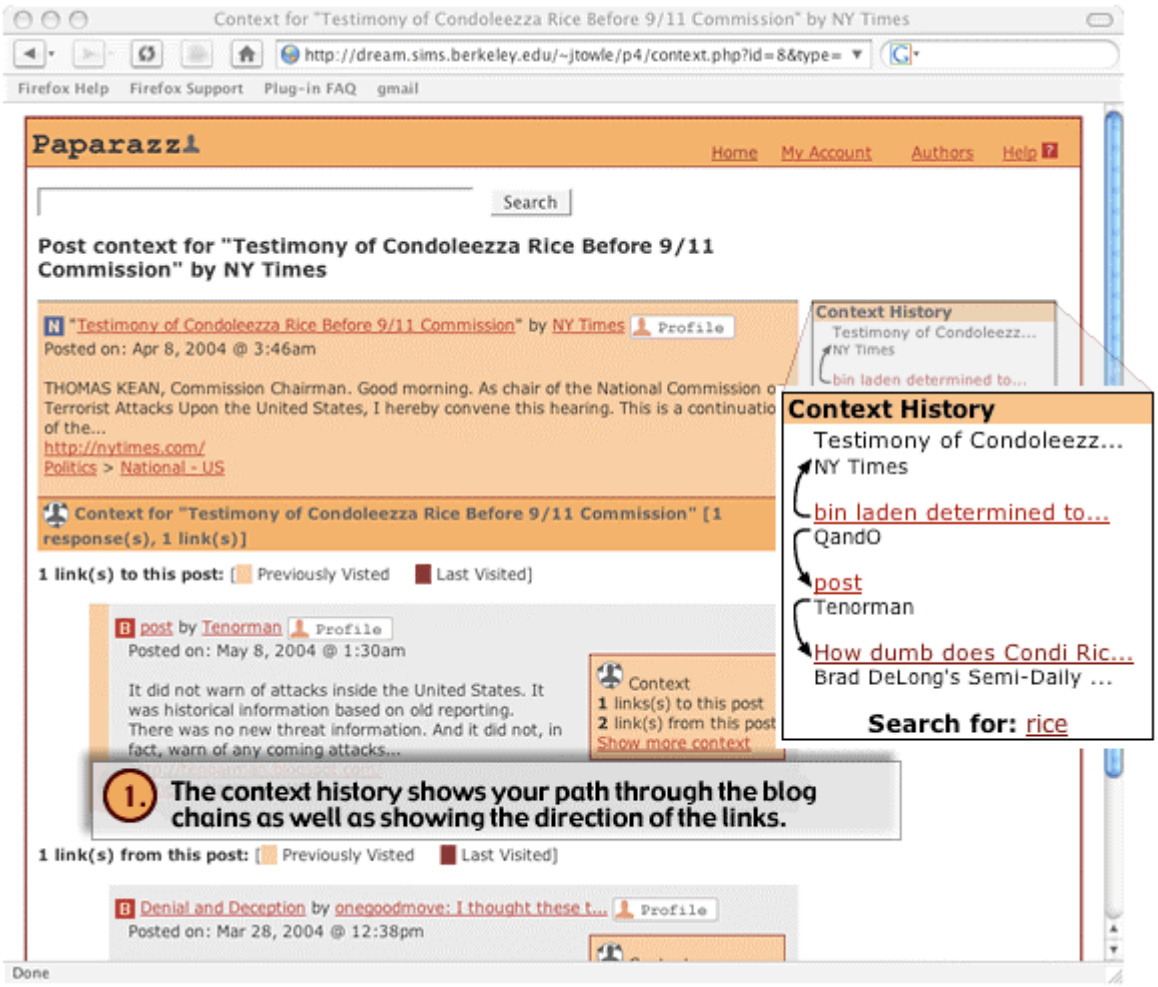
Final prototype

Most of our efforts on the final iteration were spent improving the interface so that users would be able to keep track of their activity while chaining through blog posts on our context page.

- New language for context: "links to this post" replaced "responses"; "links from this post" replaced "links"
- New context history tracker
- New visual indicators to denote the last blog post in a chain that a user visited and any previously visited blog posts
- New icons to distinguish between news articles and blog posts
- The topics filter now works

- Changes to alignment and icons to improve layout and visual appeal

New Context history - following the links



What Was Not Implemented

Below is a list of aspects of the interface not yet implemented:

- Account management tools. This will allow people to login, track particular topics, set up RSS feeds or email alerts, and so forth.
- Context sensitive help. Eventually, all help links would be context-sensitive.
- Topic hiearchies. Currently, the topics are generated from the post content. At some point they would come from some other classification scheme.

A note on visualization

Our original plans for Paparazzi included visualization to solve the problem of making blog conversations accessible. However, as the project progressed, we realized that this could be the entire project. We revisited the topic frequently. For example, following the first interactive prototype, we spent some time thinking about the use

of some type of information visualization in the context of addressing some the heuristic violations and addressing some concerns of Professor Hearst.

After some thinking and debate, we decided that while visualization would probably be helpful in many areas (perhaps even more effective than text) even a simple visualization such as a line graph to represent post activity over time would be difficult to implement in a way that would be useful for our usability tests. For example, we could see creating some non-dynamic visualizations to put in front of users, but a dynamically driven visualization would not be easy given our group resources. And, if the visualization was not dynamically driven like the rest of our content, users just wouldn't get it.

Implementation Plan

Paparazzi implementation is being negotiated, but it is likely that the system will be attached to the full backend data set available, and tested as noted below in the evaluation plan.

Evaluation Plan

Paparazzi's Formal Experiment Design (located at the Appendix) was created to address the issues we found after doing the User Pre-Test and finalizing the prototype. Next steps for evaluation would require some essential elements for both the prototype and the testing plan. If the prototype is implemented as recommended above, with access and search within the full 2.3 million blog dataset, and iterated again to account for variances due to access to the full dataset, then the Evaluation Plan as outlined in the Appendix would be the next step in finding the quantitative values in the interaction and interface design. Areas of focus would include evaluating the fastest, easiest and most clear steps to completing certain tasks, by assessing the number of clicks and scrolling required, time required to complete tasks and number of errors and non-completions.

Standards would have to be developed to understand how these measurements could be assessed, and this would also follow implementing the prototype with the full set of data.

In addition, following the Formal Experiment for quantitative data, we would also recommend an iteration, as well a qualitative assessment and heuristic evaluation to find new areas to improve with a complete dataset.

Future Directions

Paparazzi is meant to be one part of a system that is more comprehensive in scope for searching blog data, because the information is likely to be desirable from many different points of view beyond keyword and topic browsing, and is flexible enough to find more uses than we have tested. This system covers three main areas, because we wanted to limit to scope in order to cover the various design and information issues more deeply. However, we recommend that after this portion of the blog search and topic browse system is implemented, that more areas of search be assessed, as well as tested in the needs assessment process.

Paparazzi is planned for implementation integrating its functionality into a larger blog search system, with the complete backend dataset.

Tools

We made extensive use of the whiteboard and dry-erase markers throughout the design process. We created our mockups using Fireworks and Dreamweaver. Using PHP/HTML, CSS, and a little XML, we developed implemented the prototype so that we could play with the content and the visual display of that content. There was some debate internally as to whether this was too much work and if it would limit our ability to just "prototype" (i.e.. throw something together and test it rapidly). However, because our interface is so content-centric, we realized that we needed something that would be reusable for later prototypes.

A major drawback of this approach is that it requires special skills. Not everyone can manipulate PHP. Not everyone gets how CSS should be used with HTML. However, the advantage is that we have a lot of functionality and can now rapidly iterate.

Acknowledgements and Team Information

Paparazzi's user interface was designed by Mary Hodder, Jeff Towle and Dan Perkel during the course of the IS213 User Interface course at SIMS. In addition, we worked closely together to test some of the needs assessment and user interviews discussed in this document, though not all. The remainder of the work and underlying project research was completed by Mary Hodder as part of her Master's Final Project.

The Paparazzi team wishes to thank Dr. Nancy Van House for guidance with the project, user testing and the direction of the project and Dr. Marti Hearst for guidance with the project, user interface and the direction of the project. Also, John Battelle and Paul Grabowicz of the School of Journalism, Warren Sack at UC Santa Cruz informed much of the research and provided lots of direction about old media verses new media.

Comparative Analysis - Overview

Blogdex

Advantages

- The page for adding a blog to the "blogdex" was really simple and provided nice cues.
- The use of the term "weblog" vs. "blog" sounds less geeky.
- "Year ago today" features was fun and interesting.
- Overall, the site design was clean and elegant. The author claimed to want to follow the Google model "Do one thing, and do it right." Overall, I think he succeeded, but…

Disadvantages

- …(continued from above) the "one thing" neither completely matched his stated purpose nor was particularly compelling. It was difficult to envision how many tasks it could really support.
- If the term "blog" is ever mainstream, "weblog" will have to change.
- Overall, terminology was confusing; results from clicking links did not always match expectations.
- Search feature should have been more prominent, even if it wasn't the main purpose of the site.
- Search page instructions were lengthy and confusing.
- The "next" and "previous" links at the bottom of the front page didn't give any indication of how many pages there would be to click through;
- Easy to click on blog title expecting the tracking feature.
- Not clear what "recent news" would link to (under "Information" in the sidebar). Expected news articles (or blogs?) sorted by date. It turns out that it is the author's blog.
- Side bar contents changing between pages depending on context (which is a good thing in many ways), but it was confusing when items that were consistent across pages were not in the same place. On the other hand, it does make sense to see the most context-sensitive stuff to be at the top. Tricky problem.

Comparative Analysis - Tracking a conversation on Blogdex

Quoting Blogdex, the purpose of the site is "to explore what it is about information, people, and their relationships that allows for this contagious media" [src]. I gave myself the task of trying to track a conversation, or I should say "follow" a conversation as terminology can be confusing as I learned playing with the site. The front page of the site has three main areas: the top navigation, the main content area, and the right "sidebar" area that is in turn broken down to various sections. (From a graphic-design perspective, the site is very clean and elegant.)

I was hoping for a search box so that I could enter a topic. But I didn't see one. In the main section of the front page is a list of sites, the "most contagious information currently spreading in the weblog community." Upon reading this description, I was unclear as to what that meant. I looked down at the list to see if I could figure out how the list was ranked (I guessed that they were ranked by the use of the word "most" and the numbering system at the left which implied a ranking with ties). After scanning the information contained in each list item, I realized that they were ranked by the number of links. I assumed that this meant the number of "inbound" links to the article, but wasn't sure.

As expected, clicking the headline to each item in the list, brought up the linked page in the same browser window. Each item also had a link saying "track this site." I was curious as to what would happen. I imagined that perhaps it would ask me to login before I could track anything. Or maybe it would send a cookie that would somehow let me track a site. To my surprise, that link led me to another page that had a list of blog sites, grouped by date and sorted from most recent to oldest on a given day (I am guessing that these are EST).

I should note that while the "track" language was confusing, once I realized what it did, it was easy to remember. In fact, tracking a site (using Blogdex's terminology) is one way that I could follow a conversation. I couldn't see who had read whom, but I could at least see the order in which people linked to the orignal story.

So, I guessed that I knew right away what the "track this weblog" would do when I clicked on it. I was wrong. To be more accurate, I should say that I was wrong the second time I ran through it (I had tried this several hours previous to writing this up but forgot what happened). I am glad that I double-checked. I expected a list of blog posts sorted by day and by time. Instead I saw the following:

For the purposes of my task, the only relevant data were the "last changed" date and possibly the "links to this weblog." I was also disappointed that I couldn't click on the "links" to see another list of blogs.

Then, I noticed that in the right sidebar under information was a link to "search." Then I remembered that "information" had moved down one in the sections in the side-bar. I went back to the front page by clicking the back button. Sure enough, there was a search link, two down from the "About Blogdex" link.

I read the instructions and was confused right away. I saw the phrase "two techniques are available," which on the surface was confirmed by the two search boxes. But then it refered to URL search vs. Text search. I saw the that the first box was for URLs, but they second box was followed by a track button… which lead me to see that the second box was also for URLs! But, it was for "tracking" rather than "searching," according to the button. So what was "text" referring to in the instructions? I finally noticed that the first box was followed by a drop down box. I then realized that the other option would probably say "text." And it did.

Twenty five results were returned by my search for "visualization" (I had to scroll down to find that out). And after a few alternate searches, I realized that blogdex only returned 25 items on a text search (I tried "basketball" and "bush" also). I didn't try the url search. I was not sure how the results were ranked. There was not the same data about linkages that I saw on the front page. By "tracking" a site, I was able to get a general sense of the conversation based on how many people linked, in what order, on what day. This is useful, but not really good enough for my task.

The creator of the service is trying to show a list of the "fastest spreading ideas," which are displayed on the front page of the site. It wasn't clear that this is what the front page really showed. Furthermore, rather than get a sense of

the "spread" of ideas, I was only to able to see how many people linked to the primary news story or article, rather than how the ideas spread outward.

Strong points

- I liked the use of the term "weblog" rather than "blog." But, it's also not what's started to being used in mainstream media (so this could be a weak point as well).
- Although not relevant to my task, the page for adding a personal blog was great. It didn't require the user to have to jump through a lot of hoops. It also provided a nice cue to indicate what to put in what text box:

- "Year ago today" feature was really interesting. I can see this being a nice bonus feature.
- Clean, simple design; the author claimed to want to follow the Google model "Do one thing, and do it right." Overall, I think he succeeded...

Weak points

- ...(continued from above) but I don't think that the "one thing" really matched his stated purpose nor was particularly compelling. I am trying to envision how many tasks it could really support.
- Overall, terminology was confusing, or results didn't match my expectations;
- Search should have been more prominent, even if not the primary purpose of the site;
- Search page instructions were lengthy and confusing;
- The "next" and "previous" links at the bottom of the front page didn't give me any indication of how many pages there would be to click through;
- Sometimes, I got confused: I clicked on the name of a blog expecting the "track this weblog" page;
- I wasn't sure what "recent news" would link to (under "Information" in the sidebar). I thought it might be news articles (or blogs?) sorted by date. It turns out that it is the author's blog.
- I am fine with the side bar contents changing between pages, but it was confusing when items that were consistent across pages were not in the same place. On the other hand, I can see how you'd want the most context-sensitive stuff to be at the top. Tricky problem.

Google

Advantages

- Google can search a wide variety of data sets (news, Usenet, web, and others).
- The search dialog is very simple.
- An advanced search is available for more advanced users.
- The results are ranked by relevance/popularity.
- The interface allows quick switching between data set while preserving the query
- There is a built in spell checker.
- A user's position in the search results is shown by red "o" in Google graphic, which is a good system status display.
- The results show the key words in context, the page title, the URL, and page size.

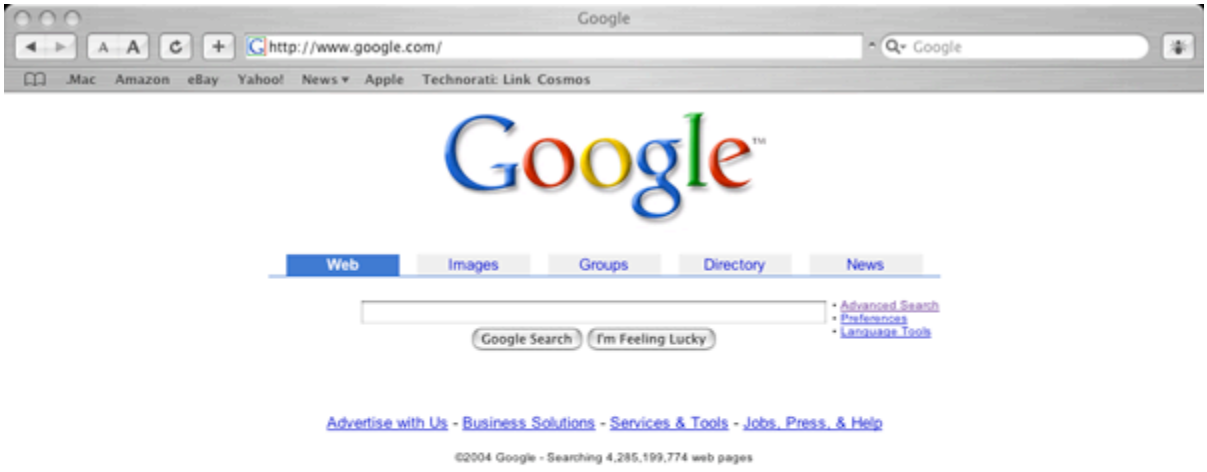
Disadvantages

- It is difficult to find the pages linking to a specific site. It is possible, but it is considered an advanced feature.
- Search results include non-blog web pages.
- It is not possible to get your rank. You can see how far down your page shows up on a specific search, but it might take a lot of work.

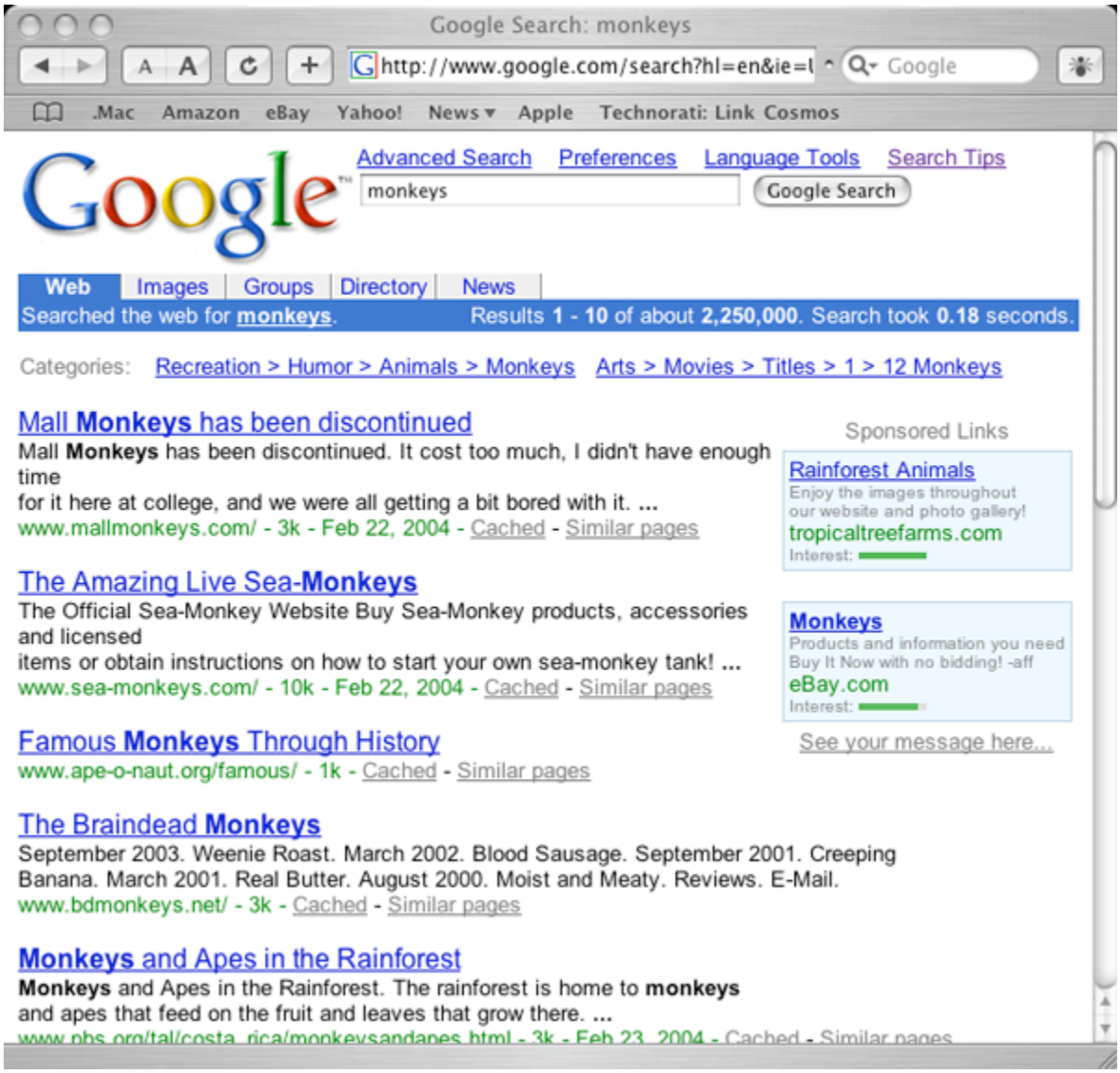
Comparative Analysis - Google

The seemingly ubiquitous Google interface is rarely seen by some heavy users. Note the built-in Google search in the top-right corner of the image below.

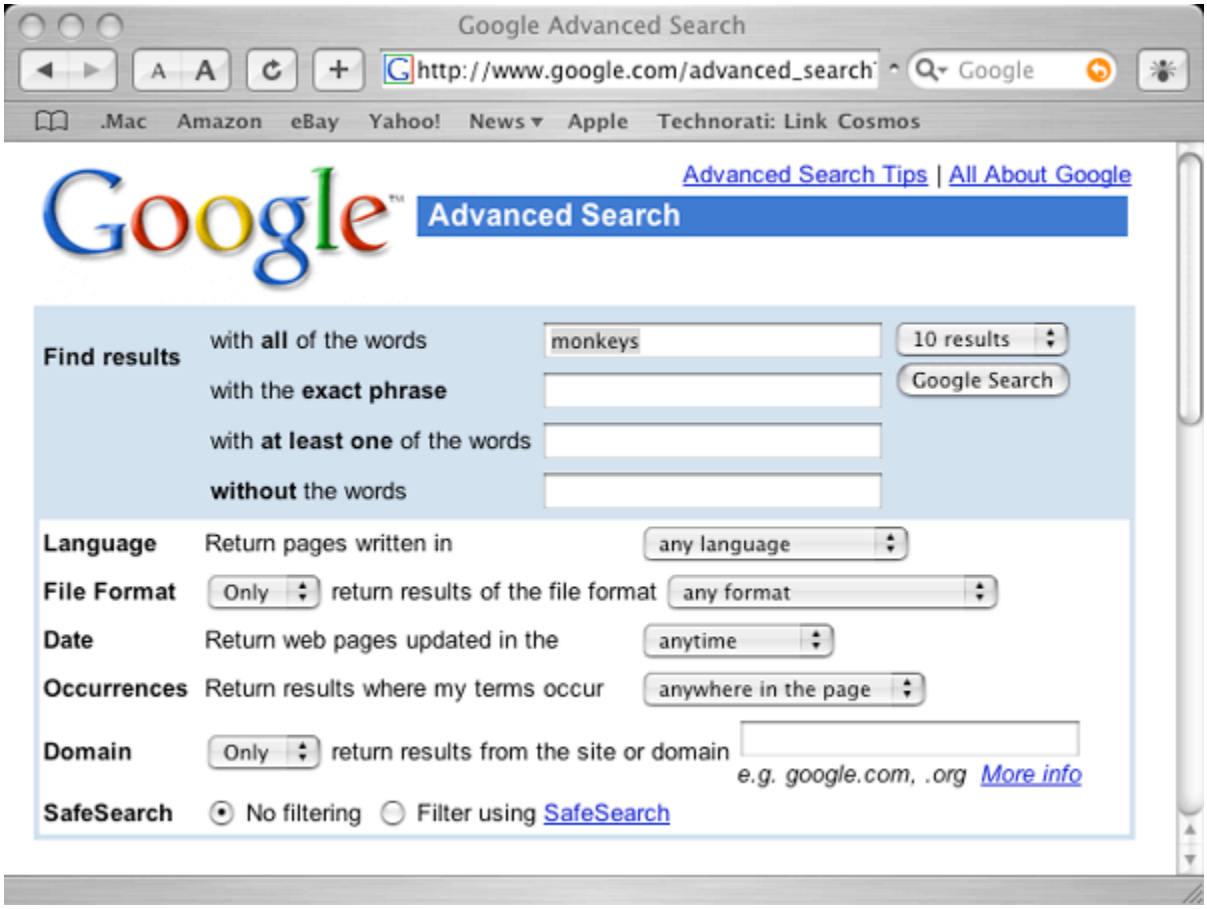
The front page is very simple, and it offers links to the various data stores, plus access to advanced features and tools. Business information is relegated to the bottom of the page.



The search results for a simple query are displayed below. Key words are highlighted in context, and some data about each indexed page is shown. The data collection can easily be changed by choosing a different tab in the header portion of the interface. Note that none of the collections are specific to weblogs.



Below is an image of the Advanced Search fuction. This is a bit of a misleading title, because many of the advanced features can only be used by including query modifiers in the query string. For example, including "link:www.yahoo.com" will return pages that link to www.yahoo.com. It is only documented in the help page.



Daypop

Advantages

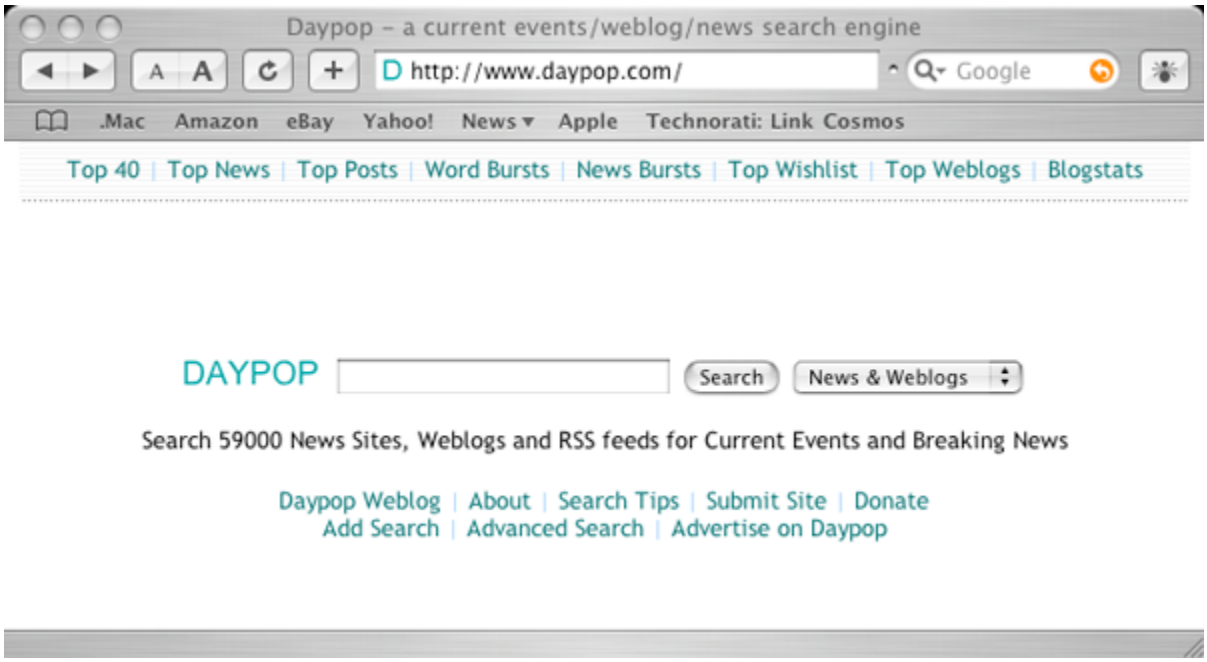
- Shows keyword in context, like Google.
- The result display is nearly identical to google, down to the formatting and delimeters.
- Sources are specific to blogs and blog-like media

Disadvantages

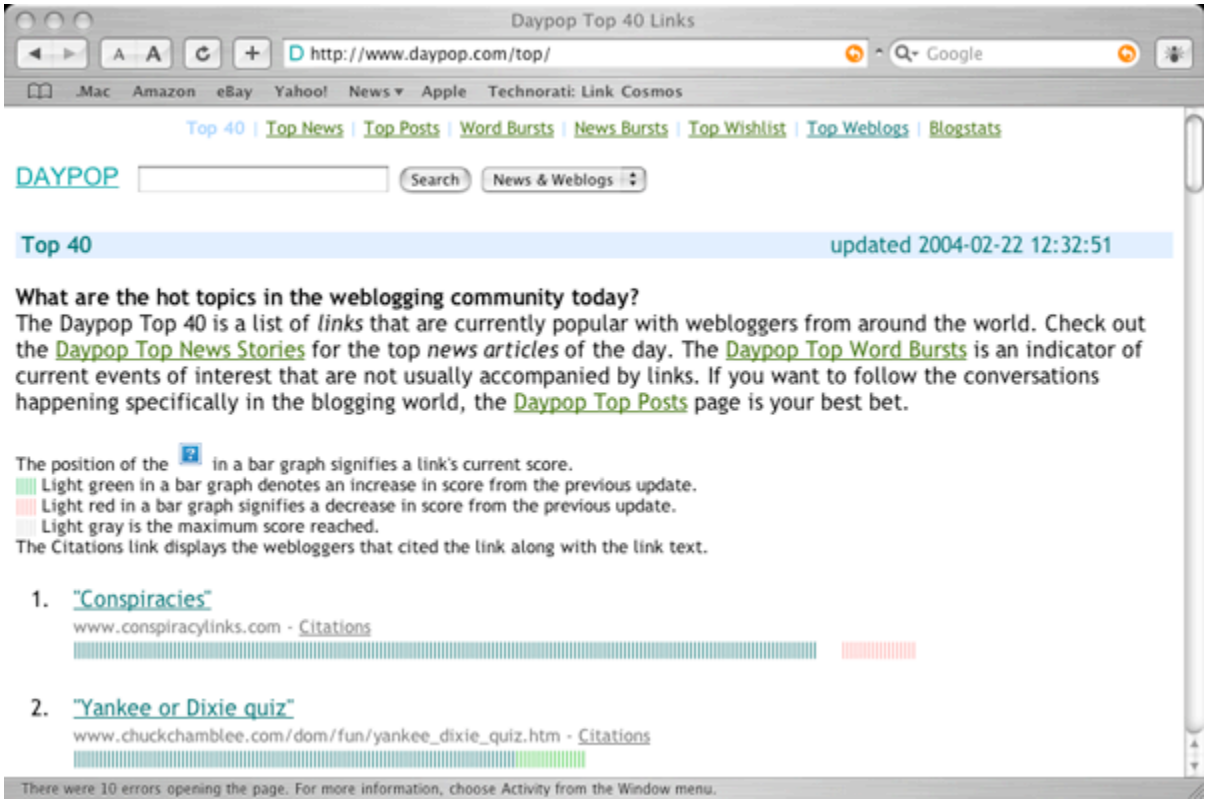
- The "Top 40" doesn't seem relevant. Many of the top sites seem domain specific. Is a guide to programming Ruby really in the top 20 topics discussed by webloggers? [Note: On closer inspection, it might be... it's an incredibly funny programming guide, with cartoon foxes who smoke cigarettes.]
- Top blog posts seem to mix languages (English and French), so many of the results aren't relevant to speakers of either language.
- There are a lot of different lists, but it isn't clear what any of them do until you've looked at them. You would need to know all the site developer's language before using the site. i.e, "top news bursts"
- Terminology is very confusing; somehow, "Most popular" and "highest rated" are different, but it is not clear why or how.
- Daypop requires several clicks to switch between data sets (select new data set, press search)
- The KWIC view does not effectively show context. The context is poorly parsed, so the keyword is often shown with unrelated bits from the next sentence or paragraph.

Comparative Analysis - Daypop

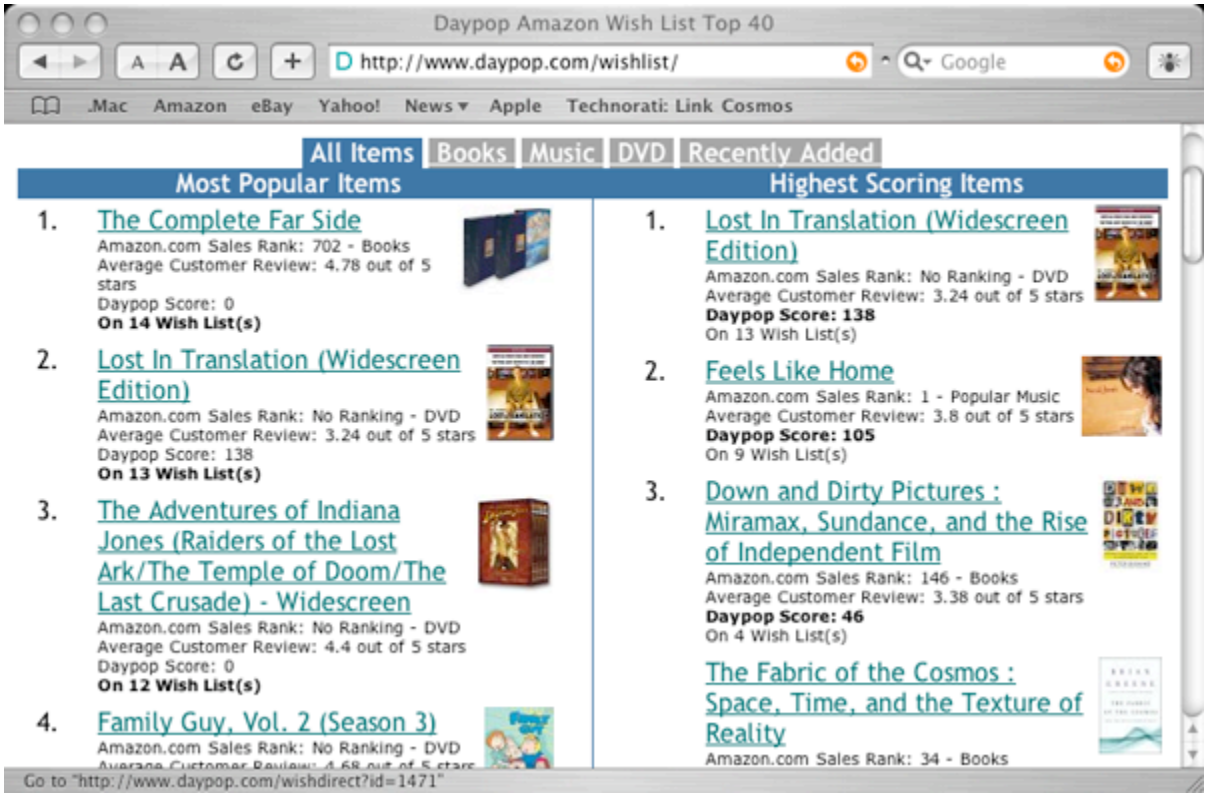
The daypop.com interfae looks similar to the Google interface. The collection is selected by using the combo-box next to the search button. At the top of the page, there is a list of the various specialized weblog listings that you can see. It is not clear what many of those mean.



Perhaps that is why they included a definition of the page's function on each of these specialized query pages. Note the "What are the hop topics..." heading in the image below.



The site sometime uses confusing language. In the image below, the results have been segregated into two categories: "Most Popular Items" and "Highest Scoring Items." It is unclear as to how they are different.



In the image below, one can see that the results returned by daypop may not be relevant to many users, especially if they are not multi-lingual. Note that the two top posts are in different languages.

Technorati

Advantages

- Returned results are extremely timely.
- Shows keyword in context with links to the result.
- The result displayed are sorted with the most recent first, though this is easily resorted by authority (most inbound links).
- Source is available with "link cosmos" which is all other blog posts that point to that blog.
- Sources are specific to blogs and blog-like media.
- Can search on URL of either a blog or other source, to find those linking to the URL.

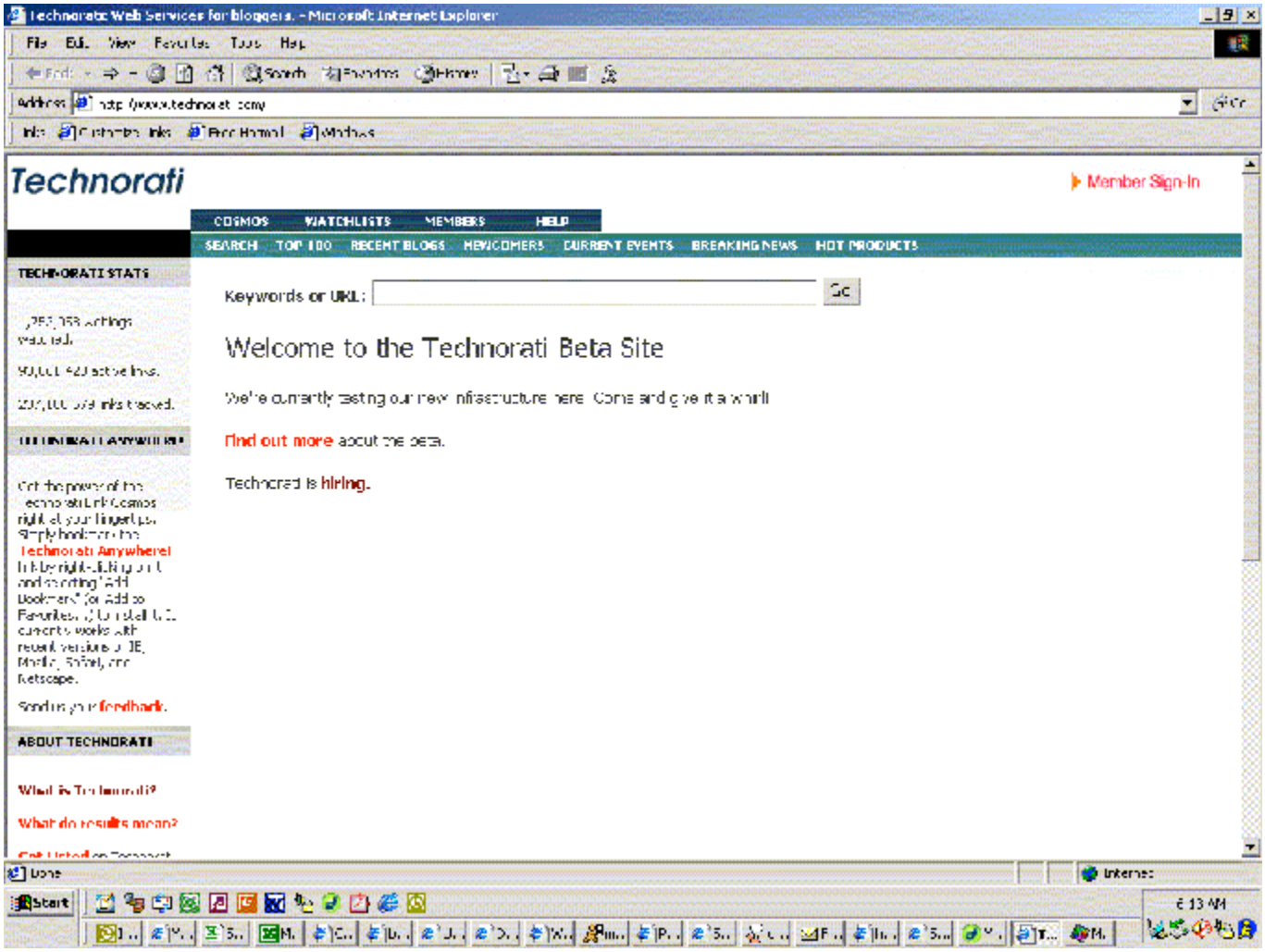
Disadvantages

- Some of the site's links (and features) don't go anywhere.
- Some of the links in search results don't connect to anything.
- Some of the names of features such as "breaking news" and "current events" don't make sense even though they do have an explanation at the top defining them, and are therefore somewhat confusing about the differences between them.
- Terminology is very confusing; for example "link cosmos" is not something most people would understand.
- Becoming a member is relatively easy at first, but the final steps and email are confusing.

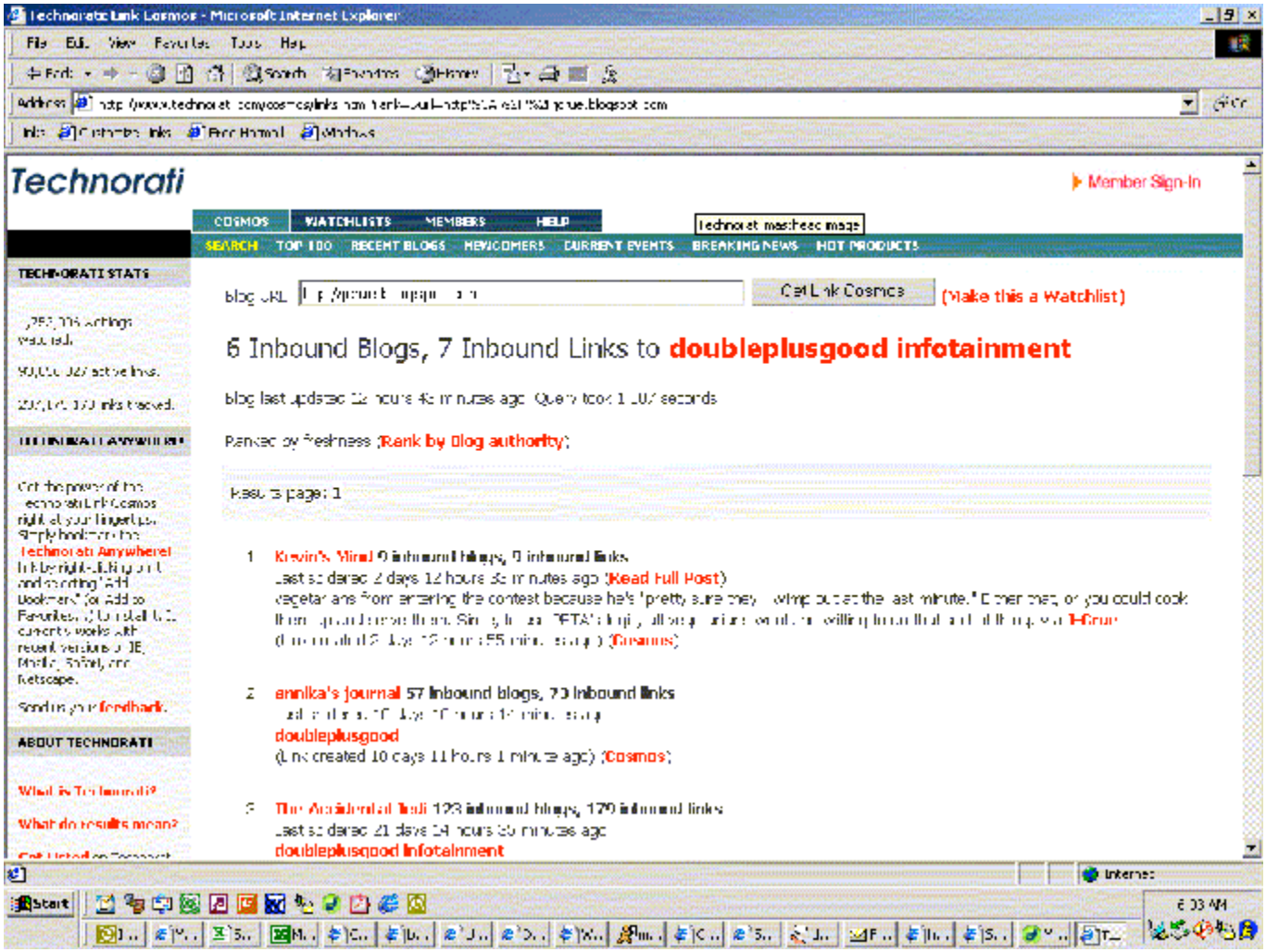
Comparative Analysis - Tracking a conversation on Technorati.com

From Technorati:

Technorati is a conversation engine. It tells you what's being said, right now, about every blog or site that has something to say -- and says it so well that others point to them. Search for the "cosmos" of any page, and Technorati lists every other page that has linked to it in the past 24 hours, ranked by freshness or authority. It shows the contextual text surrounding the inbound link, its age, and other helpful facts. There isn't another search engine like it.



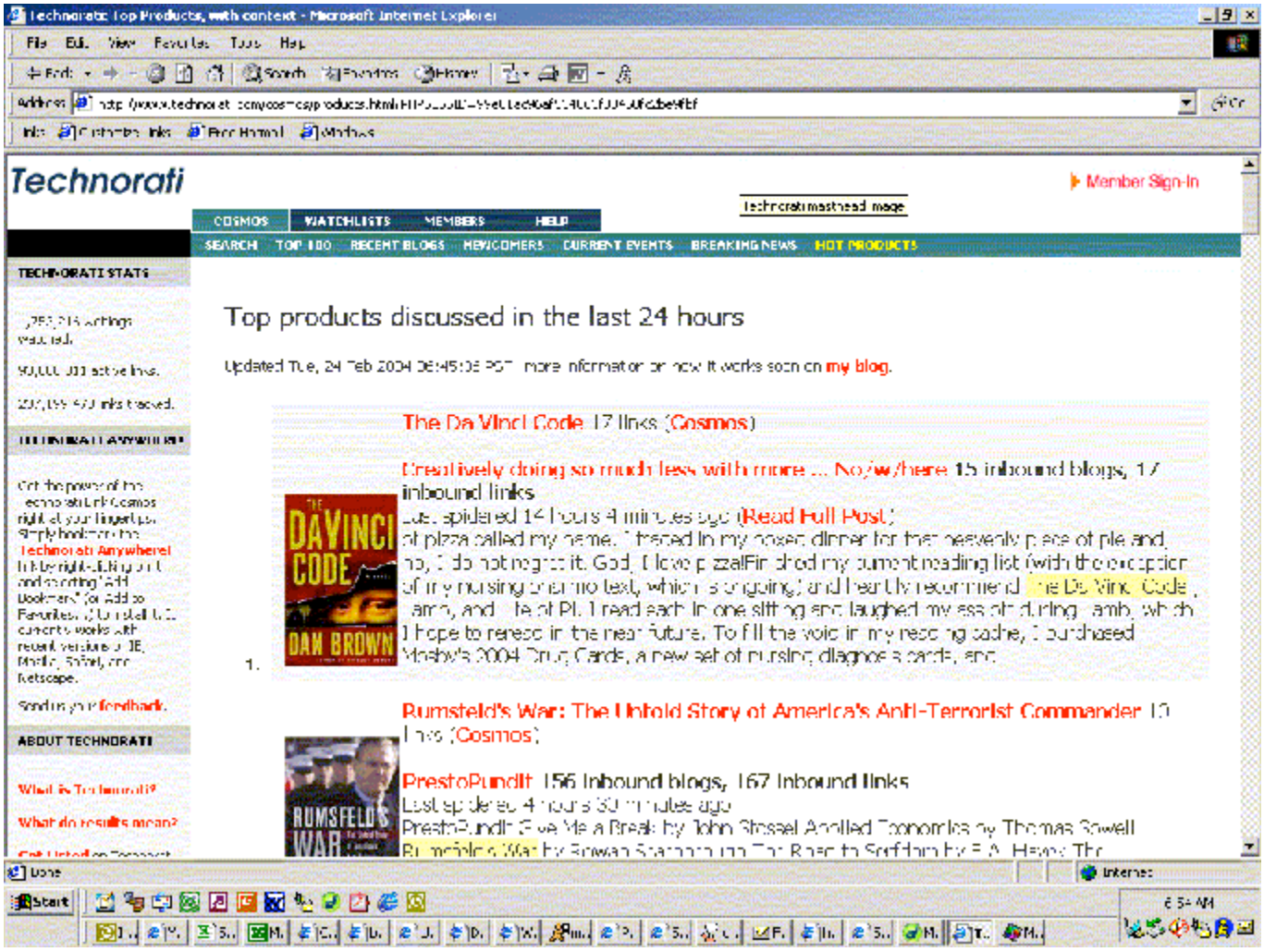
Technorati has a search box for entering either a key word or a URL. This allows for finding conversations around a topic, a set of key words, or by location. This location could either be a specific blog post, a specific blog, or a site such as the nytimes.com, which will catch all references to all New York Times articles. However, a specific article can also be searched, so that just that conversation can be tracked.



Technorati also has "Breaking News" which they describe as "Breaking News in the blogosphere, new news items reported in the last 12 hours" and "Current Events" which they describe as "Current Events in the blogosphere, based on new blog entries in the last 3 hours." It is unclear from the results of these two sorts how different they are, other than they are different sorts of conversation. However, other than seeing conversations collected over the last 3 or 12 hours, there is no clear indication as to why "breaking" covers that last 12 hours and "current" covers the last 3 hours. Clicking on the highlighted headline at the top of a conversation will connect to the article from traditional journalism sources, and then the highlighted links below connect to blogs that have discussed this article in the last either 3 or 12 hours.

Other links on the site refer to pages that say "coming soon" such as "newcomers" and "recent blogs". Both links are also confusingly named as they appear to describe the same thing, but since nothing is displayed, I cannot tell what the intension is for the definition of these sorts of data.

Other features include creating a watchlist, viewing the top ranked 100 blogs (ranked because they have the most inbound links) and becoming a member, which for bloggers might make some sense because there are some tracking features and api's that can be obtained with membership. The membership feature is difficult to use, the interaction is not flowing or intuitive, and the resulting instructions in email are difficult understand and see what is necessary in order to complete the blog claiming process.



The "hot products" link is described as "Top products discussed in the last 24 hours". This is a really interesting feature because it appears to link together posts talking about books at Amazon with the cover of the book, organized by the most talked about books first. Visually, it is one of the nicest things about the site because the graphical images of the books is engaging and a nice change from all the text on the site.

Strong points

- The fact that blogs and links can be updated so quickly is useful for finding a conversation that has just begun, and a watchlist tracking this would allow a user to step into a conversation quickly;
- Although not relevant to my task, the page for adding a personal blog was an interesting idea, though it was difficult to see how to finish the process based on the email the system sent;
- Being able to look up the latest conversations by both keywork and url, and the flexibility and speed of these search types was very useful;
- Consistently viewing the number of blogs, active links and links tracked is good, as a comparison to the search results as well as overall showing users what the pool of sources is;
- The top products area of the site is visually rich because of the book covers displayed and that differentiates it from the rest of the search or feature sorts which are all text.

Weak points

- Names of various features on the site don't match user's expections of the results they are going to see, or are confusing to the point that the user is unable to tell what the results mean;
- Some links are broken and or in need of updating;
- Search page instructions were lengthy and confusing;
- Sometimes links to a specific blog or blog post, in the context of a conversation displayed, did not route to the blog;
- The website design overall is a little confusing and hard to read due to the fonts and colors.

Feedster

Advantages

- Some blog and some traditional media sources are shown in the results, and this is an interesting view of a search that others did not provide.
- Some results from online diaries were included, that others did not include.
- The result display is nearly identical to google, down to the formatting and delimeters.

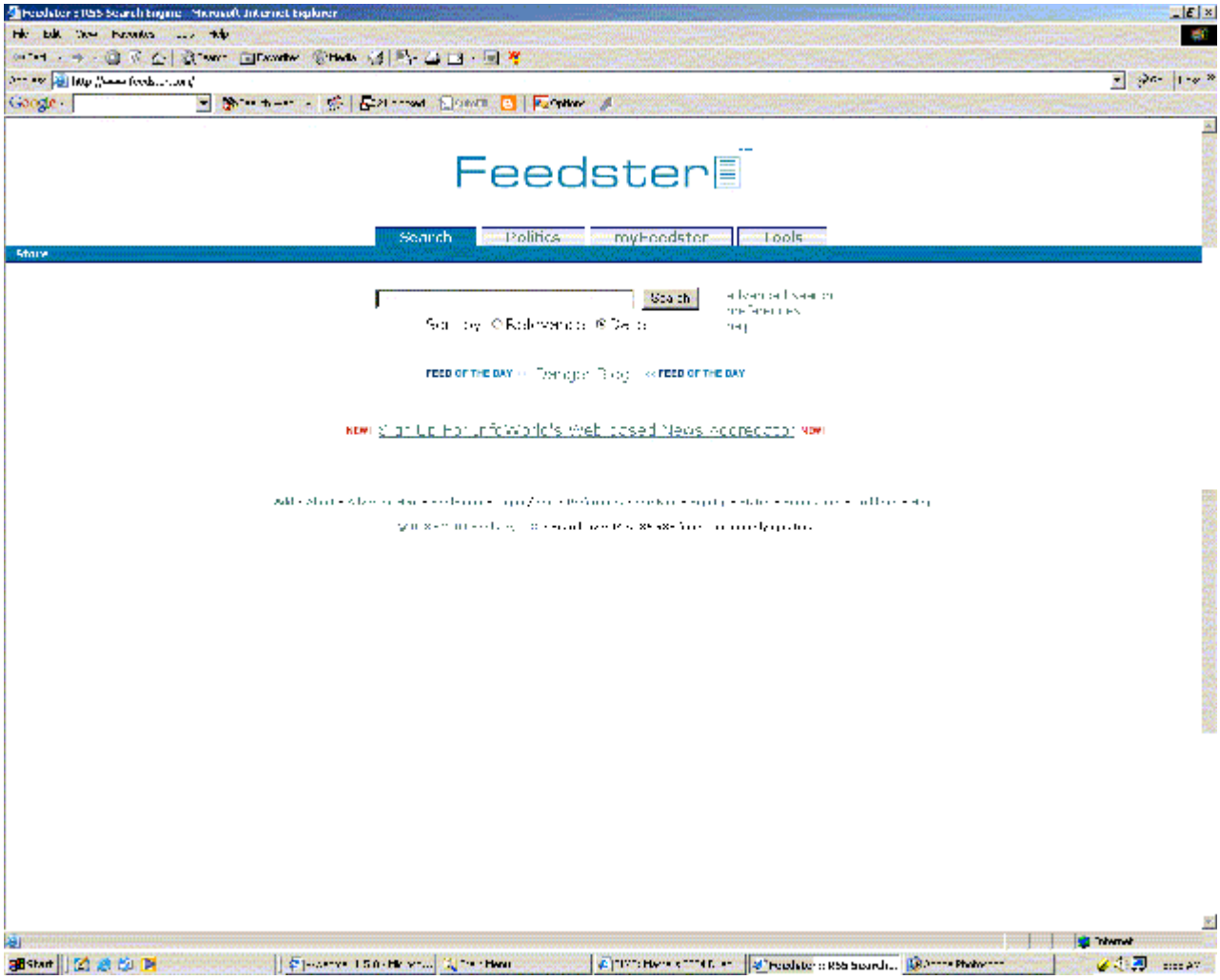
Disadvantages

- Does not show keyword in context like Google.
- Searches for more than one key word bring up results that are confusing, and often match only one of the words. This did not meet expectations as it conflicts with similar types of searching such as those performed on Google which many users are now familiar with.
- Searches with know results from other search engines (all those listed above) returned nothing.
- Some search results did not contain items from the last week or two, as search engines listed above returned.
- Terminology is very confusing: search results can be viewed by date, which is fine, but also by "relevance" and it was unclear from the results what the relevance is based on (authority of the blog, authority of the post? or some other factor). Also, the advanced search uses but does not define why someone would search based on an "RSS" feed, or an "OPML" feed.
- Joining Feedster gives a user access to various feeds and searches, but the descriptions are not clear about what these are or how beneficial they are for regular users. They appear to appeal only to high level users.

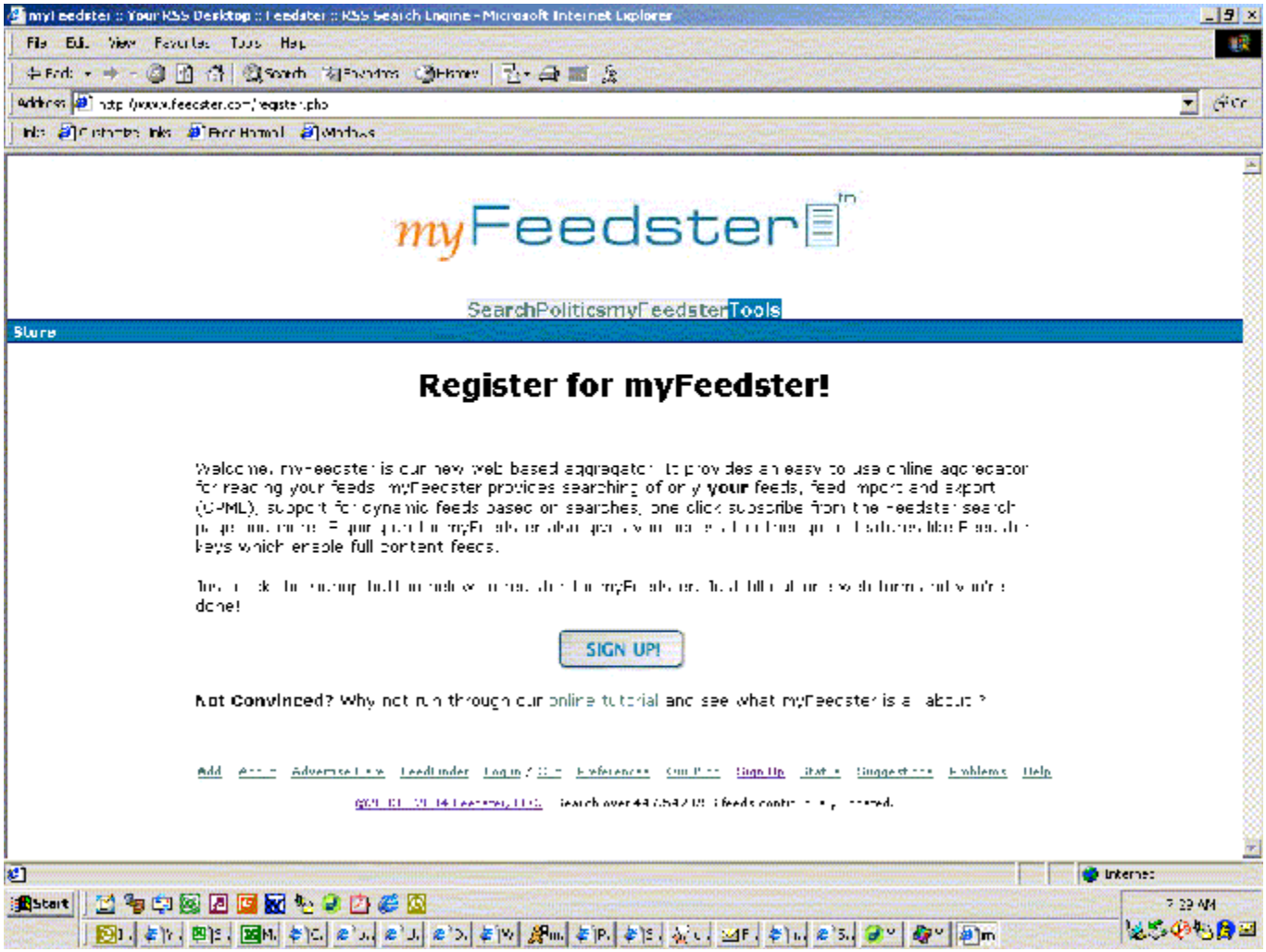
Comparative Analysis - Tracking a conversation on Feedster.com

From Feedster:

> Feedster is an RSS (really simple syndication) search engine. It searches through RSS feeds and delivers results from both blogs and traditonal media.



Feedster has a search box for entering either a key word or a URL. This allows for finding conversations around a topic, a set of key words, or by location. However, when I entered several URL's into the search box, the system reported back that there were no references or links to these sites. This was surprising and I wondered how they were getting RSS feeds and whether they were seeing new blogs (some of these are new in the last 6 months) or finding new links. Key word searches on "John Kerry" for example produced results from both blogs and traditional media, and this was intersting to compare. However, searches on smaller topics with more than one word produced confusing results, that often had nothing to do with the topic searched, and it appeared that if one word is in the document it is returned as a match. Because of the fact that results are returned by date, with the most recent at the top, several of these searches returned false drops.



Registration on the site is easy enough, as compared with other sites, though it is not so clear for lay users why they might want to do it. Feedster is a news aggregator, and does provide a view of news based on RSS feeds, however, they don't have all feeds and therefore the site's usefulness is less clear. Also, other than news aggregation, there is no clear reason to join.

The "Politics" link is described as "Bloggers, Make Your Voices Heard!" and is set up as a voting tool to capture in a poll fashion what presidential candidates their users are supporting. It is nice because it includes pictures and as far as I can tell, is the only area of the site that includes any real graphics. And it might be engaging for users.

Strong points

- Some blog and some traditional media sources are shown in the results, and this is an interesting view of a search that others did not provide.
- Some results from online diaries were included, that others did not include.
- The result display is nearly identical to google, down to the formatting and delimeters.
-

Weak points

- Does not show keyword in context like Google.
- Searches for more than one key word bring up results that are confusing, and often match only one of the words. This did not meet expections as it conflicts with similar types of searching such as those performed on Google which many users are now familiar with.
- Searches with know results from other search engines (all those listed above) returned nothing.

- Some search results did not contain items from the last week or two, as search engines listed above returned.
- Terminology is very confusing: search results can be viewed by date, which is fine, but also by "relevance" and it was unclear from the results what the relevance is based on (authority of the blog, authority of the post? or some other factor). Also, the advanced search uses but does not define why someone would search based on an "RSS" feed, or an "OPML" feed.
- Joining Feedster gives a user access to various feeds and searches, but the descriptions are not clear about what these are or how beneficial they are for regular users. They appear to appeal only to high level users.

Qualitative Interview: Purpose

This document contains questions that would be suitable for all user-types, including active bloggers. Paparazzi is using these interviews to create personas, rather than compare users specific answers, we envision that the interviews will be conversational. It will not be essential to get to each and every sub-question. The one exception is the questions regarding blogging behavior where comparison among user types is important for the personas.

Opening the interview

Paparazzi is asking them questions to determine the needs of specific populations for a new blogging application. We've identified you as a potential user for this application and we are trying to figure out what potential users may have in common.

Below are questions and the answers of three of the Interviewees. The two remaining interviews were withheld because almost every answer was identifiable and so could not publically publish them. However, we did rely on their answers as a part of our analysis.

Questions

The questions are grouped by theme. The first questions shaded in gray are background questions that lead from a discussion on one's life and habits and funnel down to questions about news and information gathering. Finally, these lead to questions specifically about blogging (awareness, reading, and writing).

1) What would you describe as your full-time occupation? Do you have any other occupations?

2) Do you read as part of your occupations?

    i) What kind of reading? Do you enjoy it?

3) Do you watch TV or video as part of your occupations?

    i) What type of media?

4) Do you write as part of any of your occupations?

    i) What type of writing

5) What do you like to spend time doing when not engaged in any of the above occupations?

6) What do you do for fun?

7) Do you watch TV?

    i) What TV shows do you watch?

8) Why do you use your computer?

    a) Do you ever use the Web to search for information, besides maps, directions, or weather? Example: research

b) From what location do you usually access the Web?

9) Do you have any sites you go to on regular basis?

a) Which sites/how often (daily, weekly, a few times a day)

b) Why do you go to those sites? What do you like about them?

10) Do you like to read for pleasure/read for purpose other than main occupations?

i) What kind of reading?

ii) What have you read that you have enjoyed recently?

11) Do you like to write?

i) If yes, why?

ii) What do you like writing about?

iii) What form does your writing take?

iv) How often do you write? Do you keep a diary?

v) If no, why not?

vi) Can you think of anything that might change make you interested in writing?

12) Do you like to stay up-to-date on news or current events?

i) If so, what topics do like to stay up-to-date on?

ii) Where do you get your information regarding current events?

iii) Do you mainly hear the news from people, newspapers, magazines, televisions, an Internet source, or other?

iv) Which ones?

v) Describe you top five news sources, across topicsÉ

13) Give an example of a recent information need and describe:

i) What is the general process you would go through?

ii) How do you decide if the information you find is relevant?

iii) How do you decide if the information you find is believable (credible)?

iv) Do you ever find yourself changing your information need in order to find more or better results?

v) When you find a relevant document, radio program, television show, do you every find yourself wishing you had more information?

vi) Do you ever go about trying to access more information on a topic?

vii) What methods do you use for finding more information?

viii) When using the Internet, do you ever follow links from articles, even if you have not finished reading the article?

ix) Is it important to you to keep track of where you are going?

x) How do you keep track of where you are going? Bookmarks? Pen/paper? Text document to take notes?

xi) Do you go to any sites on regular basis? What time of day (inc day, Of the week)

14) Have you ever heard of blogs?

i) If yes,

ii) In your mind, what is a blog?

iii) Where did you first hear the term ÒblogÓ?

(a) What are your general impressions of blogs?

iv) Have you ever read any blogs?

(a) If yes, which ones?

(b) How often do you read them? Do you have regular blogs you go to?

(c) Why do you read them?

(d) If no, why donÕt you read them?

(e) Do you subscribe to any blogs?

(f) Do you monitor any blogs?

(g) Have you ever responded to a blog?

(i) In what way (i.e.: a public comment or a direct email to author)

(h) How would you compare the blogs you read to other sources of information/news/etc?

(i) Do you read the posted comments on blog sites?

15) Have you ever written or maintained a blog or contributed to someone elseÕs blog?

i) If yes,

ii) What did you write about?

iii) Do you ever wonder who may have read your writing?

iv) What do you look for when you read other peopleÕs blogs?
Has anyone posted a reply to your blogs?

v) Do you generally respond to responses?

vi) Have you ever tried to find out what people might be reading your blog?

(a) How did you go about doing this?

vii) Have you ever communicated directly, via email, phone conversation, or other with one of your readers?

For advertisers and product managers these questions would come up before the blogging questions. Question 19 would be incorporated into the blogging questions, perhaps as a final hypothetical.

16) What is the general process your company (or agency, or firm) uses to track its marketing efforts?

17) Are you personally involved in any of these research efforts?

i) If yes,

ii) What is your role? What resources do you use?

18) Do you/your company/agency contracted by your company actively monitor any Web sites or chat rooms?

i) Which ones or which types? (anticipating resistance hereÉ)

ii) How do you keep track of the information your pick up from these sources?

19) Would you ever consider using a blog as a source for this type of research or activity monitoring?

a) If yes, in what way?

b) If no, why not?

Qualatative Interview #1

1) What would you describe as your full-time occupation? Do you have any other occupations?

Market development manager

Product manager/product marketing manager

truck driver

painter

lifeguard, soccer coach

Now, not so specific to a product,

but across a plotform

2) Do you read as part of your occupations?

   i) What kind of reading? Do you enjoy it?

Read ten newsletters today

Get 20 a day

Sign up for a new one

Post-production/video, programming news TV formats, broadcast engineering

News.com

Actively went out to find

Know the magazines my customers read

Went through a bunch of magazines, pulled out articles, stapled them together

Found the website, looked for a newsletter; can sign up for a batch from a publisher and unsign-up

Signed up for two more today; a lot easier than reading; magazines stack up; neat freak, like it coming at me, I know itÕs going to come to me in an email

3) Do you watch TV or video as part of your occupations?

   i) What type of media?

Watch streaming video

Link from a website like news.com

Yesterday, a ton of grid computing videos on oracle site

News.com link was referred, either from a newsletter or I found myself back there and saw something interesting

Typically, I look through the thing, so I understand what the news is and then drill down

4) Do you write as part of any of your occupations?

i) What type of writing

Write lots of plans

Project goals, components

I do a lot aggregating

Not much white paper type stuff, but anticipate more

Used to write a lot of web content for old jobs

Sources: people around the company, get everything on the table, sort through it, components, buckets > create an outline

Try to put things in context

IÕm never the expert, IÕll find someone who is, give them a template, outline to put it in context, then hand off for someone to edit

5) What do you like to spend time doing when not engaged in any of the above occupations?

Eat and drink a lot, go out all the time, gregarious human, never home

Play a little soccer, work out

Eating, drinking, cooking

6) What do you do for fun?

7) Do you watch TV?

i) What TV shows do you watch?

no tv

8) Why do you use your computer?

a) Do you ever use the Web to search for information, besides maps, directions, or weather? Example: research

b) From what location do you usually access the Web?

use it for pretty much everything

doing my best to make it the dashboard for my life, I like to dashboard everything

music, finances, work, entertainment, email, all of my communication (but phone)

9) Do you have any sites you go to on regular basis?

a) Which sites/how often (daily, weekly, a few times a day)

b) Why do you go to those sites? What do you like about them?

Nytimes, news.com, google

not much outside of news, donÕt chase down the websites

Links from things

Follow links

10) Do you like to read for pleasure/read for purpose other than main occupations?

i) What kind of reading?

ii) What have you read that you have enjoyed recently?

Mostly read periodicals (New Yorker, Wired, Economist)

80s and 90s finance binge, Barbarians at the Gate,

like fiction, but don't read much these days

11) Do you like to write?

i) If yes, why?

ii) What do you like writing about?

iii) What form does your writing take?

iv) How often do you write? Do you keep a diary?

v) If no, why not?

vi) Can you think of anything that might change make you interested in writing?

Yeah, I like to write

Depends on what you meanÉ. do I want to write a white paper, but do I take time to make sure its done right, such as emails, or putting something on a web site

prefer to write as a form of communication than publication

email socially

chatting (IM)

20% work-related

sort of a release, bitch to my friends

keep an eye on people (co-workers)

email, plans, web site stuff

15% personal

keeping in touch

in between writing a letter and a chat

donÕt write a comprehensiveÉ looking for a response

write letters, notes, thank you cards

12) Do you like to stay up-to-date on news or current events?

i) If so, what topics do like to stay up-to-date on?

ii) Where do you get your information regarding current events?

iii) Do you mainly hear the news from people, newspapers, magazines, televisions, an Internet source, or other?

iv) Which ones?

v) Describe you top five news sources, across topicsÉ

Personal: politics, technology (half personal half business), trying to immerse completely in industry, goto internet.com to look up stuff Ð webopedia (?)

pci, fiber channel,

industry as postproduction, kind of in web

keep an eye on certain companies ((my old company), adobe)

nytimes, boston globe (red sox), news.com

realized for a long time that bookmark usage is slim unless its on my address bar

forget most of the sites I have bookmarked

need to have everything pushed towards me

top 5 newssources: nytimes, news.com, broadcast engineering, napte, Òthe cutÓ favorite newslater for broadcast information

13) Give an example of a recent information need and describe:

i) What is the general process you would go through?

ii) How do you decide if the information you find is relevant?

iii) How do you decide if the information you find is believable (credible)?

iv) Do you ever find yourself changing your information need in order to find more or better results?

v) When you find a relevant document, radio program, television show, do you every find yourself wishing you had more information?

vi) Do you ever go about trying to access more information on a topic?

vii) What methods do you use for finding more information?

viii) When using the Internet, do you ever follow links from articles, even if you have not finished reading the article?

ix) Is it important to you to keep track of where you are going?

x) How do you keep track of where you are going? Bookmarks? Pen/paper? Text document to take notes?

xi) Do you go to any sites on regular basis? What time of day (inc day, Of the week)

grid computing example

met a guy at dinner with his group of guys Òmen and meatÓ

bigwig oracle sales guy, in grid computing

searched for his name and grid computing before he introduced vice presidents

wasnÕt sure if he was legit (Mjackson parachute story)

looked all over OracleÕs site

called him to touch base, got links from him to his stuff

then composed a very careful email to two big guys at (my company), etc

first went to google

listened to mp3

couldnÕt find recent stuff (2002)

looked for recent stuff, but had trouble with that

14) Have you ever heard of blogs?

i) If yes,

ii) In your mind, what is a blog?

iii) Where did you first hear the term ÒblogÓ?

(a) What are your general impressions of blogs?

iv) Have you ever read any blogs?

(a) If yes, which ones?

(b) How often do you read them? Do you have regular blogs you go to?

(c) Why do you read them?

(d) If no, why donÕt you read them?

(e) Do you subscribe to any blogs?

(f) Do you monitor any blogs?

(g) Have you ever responded to a blog?

(i) In what way (i.e.: a public comment or a direct email to author)

(h) How would you compare the blogs you read to other sources of information/news/etc?

(i) Do you read the posted comments on blog sites?

DonÕt know much about blogs

remember NPR talking about it, wired also yr or two ago

reminds me of when the web came about

under the impression to need special software

thought it was a way to make comments on web sites and anyone could see it

then heard everyone talking about it

went to blogger.com (past three weeks NOTE: BEFORE TALKING TO DAN)

seems to be more of a form of writing

law professor in Wired, the godfather of blogs

Dean seems to use it as a way to get common interests together and write about it, like listservs

probably two years ago, heard about it on the radio

thought it was a way to put to stickies on a website

thought: what's the point?

when put it into context of politics, it makes sense

not a monolithic -> dialog in context of own subcultures (punks for dean, grandmas who drive Harleys for dean, jews for jesus for dean)

have seen a page that was apparently a blog, deanÕs site

trying to figure out if it required software, went to blogger site (blogger.com), got distracted

15) Have you ever written or maintained a blog or contributed to someone else's blog?

i) If yes,

ii) What did you write about?

iii) Do you ever wonder who may have read your writing?

iv) What do you look for when you read other people's blogs?
Has anyone posted a reply to your blogs?

v) Do you generally respond to responses?

vi) Have you ever tried to find out what people might be reading your blog?

(a) How did you go about doing this?

vii) Have you ever communicated directly, via email, phone conversation, or other with one of your readers?

16) What is the general process your company (or agency, or firm) uses to track its marketing efforts?

(my company) is event based movie business: first weekend box office

measure your success : if you got fired! generated an audience

marketing effort: generate traffic to download trials Ð how many tried/how many succeeded/how many people responded Ðtracked religiously

take ads out he used to predict exactly how many units that they would sell based on the ad (spreadsheet) small product, great model

track pr stories, how many people pick up the story (anti-[cleansed product]) put together PR kit. how many illustrator sucks mentions why freehand is better than illustrator in press. send PR person stuff, send them clever things to get them to open materials. most of sales through catalog in the mail (at (my old company)), macmall, cdw played with how the ads were presented and tweak for performance. tracked meticulously. tracked who was selling through and who wasn't. track web hits.

flash: great measurement. tried to change perception that people can't see flash. hired NPD online and created flash movie, survey 10k people every quarterÑif they could see it, they would be considered flash audience. extrapolate to web audience.

back of the envelope measurement - top 50 most trafficked web sites to see if they had flash on the front page to see if it was increasing or decreasing.

current job is to measure platform market share +/- trendwatch/scri

pick 5 leading influencers in each segment (broadcst, film, commercial)

(my company) doesn't have infrastructure to measure performance

viral is unheard of at (my company) / even at (my old company) none

(my old company) is good at 1:1 marketing

crm on top of unified customer data (sucked).

iceberg :email address -> more information

survey current website and have customers rank the material..

no value in just going after customers when you want to push something on them.

monitoring chat rooms: the buzz:

at x company there are two people

[cleansed name]/reads everything

joe q. [cleansed] tech support Ð monitors the buzz

monitors lists and web sites

[cleansed]

at my company

tried to make support forums more relevant

-put on experts so that people will go there

-didn't take off

pushed as a marketing effort

he gets consolidated newsletter-- all threads from lists: tries to find out what people look for in a computer Ð worries that these lists are too narrow/biased

tech/field guy in marking organization Ð publishes papers with a pen name, pushes stuff so people don't know who he is

We all people in his group Ð look at mac rumor sites

detectives: try to figure out who leak information

pr: people who monitor site / is the buzz getting loud enough on bad batteries in ipods

PR folks monitor / bring it to somebody's attention

attributed dean's success to blogs / not heard of that in advertising

x company [cleansed] might be hip to that

radio talk show with a select group of customers control what everybody hears, shut people down before people hear it. direct the conversation.

Qualitative Interview #2:

1) What would you describe as your full-time occupation? Do you have any other occupations?

Writer and marketing consultant

2) Do you read as part of your occupations?

i) What kind of reading? Do you enjoy it?

Yes, a variety of things, including stuff online. Enjoy is not the axis.

3) Do you watch TV or video as part of your occupations?

i) What type of media?

no

4) Do you write as part of any of your occupations?

i) What type of writing

Yes, writer, so write for journals, weblog and for companies.

5) What do you like to spend time doing when not engaged in any of the above occupations?

I like opera, tv, video games, spend time with family.

6) What do you do for fun?

Yes, all those.

7) Do you watch TV?

i) What TV shows do you watch?

Daily show, west wing, sopranos,

8) Why do you use your computer?

a) Do you ever use the Web to search for information, besides maps, directions, or weather? Example: research

b) From what location do you usually access the Web?

Use it for everything, email, most friends are e-friends, word processing, games online and off, primary source of information, weather, direction, research Ð almost all research online. DonÕt read books online because they aren't there.

9) Do you have any sites you go to on regular basis?

a) Which sites/how often (daily, weekly, a few times a day)

b) Why do you go to those sites? What do you like about them?

Google, many times a day, a set of blogs, but less and less regularly over time, because I've reached saturation, so no new sources, Salon every day, Slate every two days, fills up 18 hours a day. Primary news source.

10) Do you like to read for pleasure/read for purpose other than main occupations?

i) What kind of reading?

ii) What have you read that you have enjoyed recently?

Don't do that much anymore, but for the past ten years, read mags, but not edifying, and read classics misses or didnÕt understand. But they take a long time because I donÕt put in a lot of time. Reading the Illiad now, because I read about a new translation, and they are fabulous. Discovered that I liked Horus (translation) and crappy novels on airplanes. And occasionally not crappy novels, Singer and maybe Phillip Roth, though not sure why. Used to teach philosophy and have been rereading recently. Richard Roarty. The order of things, discipline and punishment, Faucault.

11) Do you like to write?

i) If yes, why?

ii) What do you like writing about?

iii) What form does your writing take?

iv) How often do you write? Do you keep a diary?

v) If no, why not?

vi) Can you think of anything that might change make you interested in writing?

Generally yes, though sometimes no. To me, it's a craft, and it's how I imagine a furnature maker fits together and then there are times when the knotholes mean you have to through things out. But generally I really enjoy. Which also means I enjoy writing about things I don't care about, which is handy.

12) Do you like to stay up-to-date on news or current events?

i) If so, what topics do like to stay up-to-date on?

ii) Where do you get your information regarding current events?

iii) Do you mainly hear the news from people, newspapers, magazines, televisions, an Internet source, or other?

iv) Which ones?

v) Describe you top five news sources, across topicsÉ

Depends what IÕm working on. Two things. On something in particular, start at google, but much of my time online IÕm visiting my global info network. I hardly every just sit down and browse, but I spend a lot of time going from place to place, and get directed and then one link leads to another.

13) Give an example of a recent information need and describe:

i) What is the general process you would go through?

ii) How do you decide if the information you find is relevant?

iii) How do you decide if the information you find is believable (credible)?

iv) Do you ever find yourself changing your information need in order to find more or better results?

v) When you find a relevant document, radio program, television show, do you every find yourself wishing you had more information?

vi) Do you ever go about trying to access more information on a topic?

vii) What methods do you use for finding more information?

viii) When using the Internet, do you ever follow links from articles, even if you have not finished reading the article?

ix) Is it important to you to keep track of where you are going?

x) How do you keep track of where you are going? Bookmarks? Pen/paper? Text document to take notes?

xi) Do you go to any sites on regular basis? What time of day (inc day, Of the week)

Something on the tip of my brain, going to the computer, so I have to look at what I was writing about. Someone sent me, blogged about MS and XML and someone I know sent me to a page where MS has a patent on their XML schema. Or, blogging something on eTech on indigo project, searched indigo, and found a bunch of articles.

14) Have you ever heard of blogs?

i) If yes,

ii) In your mind, what is a blog?

iii) Where did you first hear the term ÒblogÓ?

(a) What are your general impressions of blogs?

iv) Have you ever read any blogs?

(a) If yes, which ones?

(b) How often do you read them? Do you have regular blogs you go to?

(c) Why do you read them?

(d) If no, why don't you read them?

(e) Do you subscribe to any blogs?

(f) Do you monitor any blogs?

(g) Have you ever responded to a blog?

(i) In what way (i.e.: a public comment or a direct email to author)

(h) How would you compare the blogs you read to other sources of information/news/etc?

(i) Do you read the posted comments on blog sites?

I do think that we should ask them what sites they don't consider to be blogs…. the trick is wording that question so that it's not reading. Perhaps just get them to name off as many sites as possible, and stop them if they say one that's bloglike, and ask them why they don't consider it to be a blog?

I'm a loose constructionist about blogs. So I'm more likely to answer the opposite. I guess what McClay writes is not technically consider to be a blog. The famous example is the Dean comment board, and A-listers discount it, because they didn't think it was a real blog.

Qualitative Interview #3

1) What would you describe as your full-time occupation? Do you have any other occupations?

student

ui designer Ð 3 years

2) Do you read as part of your occupations?

a) What kind of reading? Do you enjoy it?

no much reading, didnÕt write

3) Do you watch TV or video as part of your occupations?

i) What type of media?

looked for "cool links", online magazines, to be up on what's hot in design

4) Do you write as part of any of your occupations?

i) What type of writing

a little bit of writing, specs

wrote some copy for clients, usually edited heavily

wrote proposals, research?,

5) What do you like to spend time doing when not engaged in any of the above occupations?

read a lot

watch a lot of TV and movies

drinking

cultural events (Asian American something)

through friends, mailing lists

deletes the emails because can't bother to keep track of stuff months out

6) What do you do for fun?

7) Do you watch TV?

i) What TV shows do you watch?

Law and Order type shows

Mystery shows

BBC news

Local news in the morning

Don't watch reality shows

Big BBC fan (BBC America)

8) Why do you use your computer?

a) Do you ever use the Web to search for information, besides maps, directions, or weather? Example: research

b) From what location do you usually access the Web?

9) Do you have any sites you go to on regular basis?

a) Which sites/how often (daily, weekly, a few times a day)

always go to sfgate, bbcnews, amazon (not sure how conscious it is); yahoo! mail; looks at stuff from amazon; books: editorial reviews; music: user reviews; but often pre-judges beforehand, definitely read the editorial reviews for books

b) Why do you go to those sites? What do you like about them?

movie reviews

sfgate to read what's going on about town

showbiz gossip (bbc has a great site)

don't have time to read or watch tv daily; used to be an NPR junkie

10) Do you like to read for pleasure/read for purpose other than main occupations?

i) What kind of reading?

ii) What have you read that you have enjoyed recently?

reads a lot of fiction

non-fiction: “essays”; all sorts of stuff, Ethnic studies, Science studies “used to be a scientist”

a lot of magazine reading

11) Do you like to write?

i) If yes, why?

ii) What do you like writing about?

iii) What form does your writing take?

iv) How often do you write? Do you keep a diary?

v) If no, why not?

vi) Can you think of anything that might change make you interested in writing?

Used to be a much more avid writer when he was working

not much inspiration; question of time

used to write a lot of essay-ish; gotten stuff published

hyphen?

never kept a diary

school-writing

writes a lot of emails

school is like a business so email is the means of communication

fun activities are more to get someone out of the house

forums to get published; (did he say that?)

12) Do you like to stay up-to-date on news or current events?

i) If so, what topics do like to stay up-to-date on?

ii) Where do you get your information regarding current events?

iii) Do you mainly hear the news from people, newspapers, magazines, televisions, an Internet source, or other?

iv) Which ones?

v) Describe you top five news sources, across topics:

Topics: movies, music (specific, not generally), art and design (fine art, fashion, graphic design)

Same ways to keep up as when you are working? Yes. Don't get as much opportunities

Main news source: Sfgate, like the BBC website more than the TV because it's not "live" as the website; likes up to date information, very important

5 top news sources: Sfgate, bbc news online, bbc new tv, npr, friends

13) Give an example of a recent information need and describe:

Right now: Massachusetts ban on gay marriage, overheard on the radio, so I logged onto the chronicle web site, then went to Google which brought up far too much info, nothing really current, went to the BBC news; his history with the site make SFgate credible, history of gay and lesbian news, not authoritative: liberal bias, but generally like a newsbyte

how do you decide if a news story is relevant, gets a feel in the first couple paragraphs, on this topic can tell if it's more a human interest story

i) What is the general process you would go through?

ii) How do you decide if the information you find is relevant?

iii) How do you decide if the information you find is believable (credible)?

My political sense ("I am human"); NY times is built into my mind to be authoritative; but not a part of the "cult of ny times"; sf chronicle is shaky

Is preference for times on reputation? Yes, but I don't regularly read it, they don't cover the local issues

iv) Do you ever find yourself changing your information need in order to find more or better results?

Yes, don't always understand google's weighting, etc

v) When you find a relevant document, radio program, television show, do you every find yourself wishing you had more information?

Yes, definitely; news sites don't often go into depth; would like to talk about news; know everything that's happening;

Don't go to the editorial section of the same newspaper, DrudgeReport; don't have regular spots on the opinions; email my friends who are into journalism; trust their opinions;

vi) Do you ever go about trying to access more information on a topic?

vii) What methods do you use for finding more information?

viii) When using the Internet, do you ever follow links from articles, even if you have not finished reading the article?

Don't always know how they are related, but if its relevant I'll read it

ix) Is it important to you to keep track of where you are going?

Cut and paste into one document

Folder-oriented, put things in folders

Really bad at keeping track of next

Generally add links to favorites and then delete them after its over

x) How do you keep track of where you are going? Bookmarks? Pen/paper? Text document to take notes?

xi) Do you go to any sites on regular basis? What time of day (inc day, Of the week)

(patterns) Homepage is sfgate; click the home button a lot throughout the day; don't really scan different sites; will go to BBC without a need, but not the first stop

14) Have you ever heard of blogs?

i) If yes,

ii) In your mind, what is a blog?

Only heard of them as a “public online journal”

iii) Where did you first hear the term “blog”?

(a) What are your general impressions of blogs?

Always know that they’re out there; didn’t hear the technical term until last summer; didn’t know the term “blog” until

Something really vein about putting your diary online

Doing it for attention -- read a couple, the more personal ones

names: through livejournal -- sent to me by a friend whose friend’s blog it was (a funny story he had written)

sent by a friend who had written -- always have opinions (didn’t respond, though)

I have written letters to the editor of a magazines before; always to complain or criticize; never to say ÒI loved your piece on so and so; culturally insensitive; almost all of them about culturally insensitive or about sexuality

never to criticize someone’s views

read the comments on livejournal

they were all so complimentary, I couldn’t help but wonder if they were all friends communicating in some way, got the feeling that they weren’t strangers, but they were all diaries

essays written weren’t prompted by something already read, usually based off something

drudgereport, once every couple months -- insanely liberal or hilariously conservative (mostly because it’s the drudge report)

instant message, but not chatrooms -- get tired of people ranting

iv) Have you ever read any blogs?

(a) If yes, which ones?

(b) How often do you read them? Do you have regular blogs you go to?

(c) Why do you read them?

(d) If no, why don't you read them?

(e) Do you subscribe to any blogs?

(f) Do you monitor any blogs?

(g) Have you ever responded to a blog?

(i) In what way (i.e.: a public comment or a direct email to author)

(h) How would you compare the blogs you read to other sources of information/news/etc?

(i) Do you read the posted comments on blog sites?

15) Have you ever written or maintained a blog or contributed to someone elseÕs blog?

i) If yes,

vii) Have you ever communicated directly, via email, phone conversation, or other with one of your readers?

Mass emails -- usually to family, close friends, postcards to people who want them

---

Quantataive Surveys: Survey Questions and Answers

	Questions:		
	Name	**WHO Was Interviewed:**	
	Email	Total: 25 people	
	Age	18-25: 7; 25-34: 7; 35-45: 6; 45+: 5	
	Gender	14 men, 11 women	
	Confirm gender, 40k income, BB connection, age	**ANSWERS:**	
1	On a scale of 1-10, how familiar are you with the internet?	7.64	average internet proficiency
2	How often do you use the internet at work (daily, weekly)?	daily	average use at work
2.1	At home?	daily	average use at home
3	Are you interested in news information of any kind?	yes	all but 1 said yes

3.1	Do you read news?	yes	all but 1 said yes
3.2	Do you read online news?	yes	all but 1 said yes
3.4	From where or what kind?	see answer printouts	
3.5	How time per day do you spend on news online from whatever location?	45 minutes	avg, or they said they check news several times a day
3.6	What kind of news? Trad vs. non-trad	13 mix, 12 trad	
4	Do you search online?	yes	all yes
4.1	What do you search for?	see answer printouts	
5	Have you heard of blogs? weblog, online journals, online diaries?	21 yes, 4 no on blogs, 15 yes, 10 no on online journals	
5.1	Do you read blogs?	9 no, 16 yes	
5.2	If so, why? News, filtering, keeping up with friends, finding stuff,that is interesting or engaging content?	see answer printouts	

3.4 From where or what kind of online news do you access? (answers are direct quotes)

cnn.com, yahoo search for news, newsgroups
none
online - abc.com, cnn.com, msn.com is homepage, and then people email him stuff
cnn.com, yahoo, sjmerc,
traditional, but occasionally look at the onion Time mag (paper),
pbs.org, charlie rose interviews online, michael moore
usa today online, cnn.com, subscribed to the web version of usa today for world headline,
now and then, from Des Moines, so read the Des Moines register online, also, check sfgate
msn.com, avscienceforum.com, cnn.com, opinions.com
Chronicle, Examiner, Independent, online news but no particular site
yahoo, contra costa news site, Oakland Tribune
sfgate, nytimes, wall street journal - company
google news, yahoo news, european news websites in polish and russian, eastern europe news, washington post
yahoo news, local ABC7news.com, sjmerc
ESPN - for sports news, CNN all online
netscape.com has news on the site
nytimes, latimes, cnn, reuters, yahoo all online
yahoo news, most popular news or current,
newspapers, home page as all my news sources (sbc yahoo) world, politics
CNN.com, msnbc.com, and TV news
sfgate, nytimes.com
world news, online
tv news mostly, then email from people who send nytimes.com, wired, salon

4.1 What do you search for? (answers are direct quotes)

everything, school, personal, auto, health, news, classifieds
music, events, resource for school, art info, photography
stuff I wanna know, computers, questions about programs, how to do computer stuff, hardware, google a lot, necessities
yellow pages, people, everything, yahoo and google everything, teacher so look up ideas for school, movies, for books,
anything that comes up, go to the internet
motorcycle stuff to buy, games to buy or reviews, airsoft (hobbies), places to buy stuff
always searching for restaurant reviews, maps, google tons, very dependent on google
technology and tv issues, tivo; research on products for buying, online banking
products, shopping, research, technical stuff, answers to questions, message boards
either work stuff, at home: some products, companies, ordering things, look for best prices
work - human resources, keeping up with new labor law, travel, competitive products,
personally, it's to see what's going on in the world
shopping, email and IM,

travel agent, so search for travel stuff, student so research, editorial, articles, product research, groceries online, cosmetics from Europe, ebay
assignment research, bored surfing, product surfing, spontaneous,
need jeans so search on "jeans", watch TV with computer on, so search on what's on TV
product research for things to buy, looking up a person, restaurant, sporting event, jokes, wine
for school, project research, personally, new bands, music, products and deals, bargains
sports, basketball teams, chess tournaments with computer, news issues like war in iraq,
people's opinion, people themselves (names in news),
stuff to buy, ebay,
everything, dog info, wedding coordinator so do a lot of vendors and new info, adoption, recipes, sports, travel, first place I go
buying things, airline deals, car rentals, planning her wedding, information of interest, jobs, kinds of art, opportunities
headline news research based usually, for work, sometimes
personal to find out about a concert, whose playing
solutions to programming problems, trivia or fun stuff on bands
news events, movies, arts and entertainment, have questions and internet is her encyclopedia

5.2 If you read blogs, why? (answers are direct quotes)

News, filtering, keeping up with friends,
finding stuff, that is interesting or engaging content?
photo and image
craig' list is a source of anything you need, deals on gear
word of mouth or email to check out something interesting, but don't go out of way
avisciencefforum might be that
want to see people's opinions and the latest stuff, fascinating, people hear stuff first there
craig's (list) blog extensively, always there and local
go to some that I'm directed to
keep up with friends and family,
find people with similar interests, people who have interesting lives
instead of subscribing magazines, go to online journals to see links, discussion,
more convenient to filter stuff
gossip, for entertainment, a lot of IM profiles have blogs listed, so go to see what they are thinking about
Interesting to read other peoples thoughts about themselves and daily activities,
reading friends journals,
content management for self (teaches class with an internal blog), does not write external blog, but reads them now and then, so looks for direct content
work targets a diary making community,
often times things they write will come up in searches that then tip me off to other good stuff, sometimes faster to get you to where you want to be rather than news articles or other webpages, leading edge stuff
news related but not current events, but what's going on in a particular community
want unfiltered news and non-trad is preferable to cnn, because it's direct
double checks search, wants to see that things are good, and wants to backup what she sees, easy to navigate, easy to do; Recipe with user reviews, so easy to use, AllRecipies.com -- enjoys the way it's set up and can get all info without having to leave the site
some bloggers are experts

Interaction Testing

3/8/04 Notes on User Test #3: Interaction Testing of Technorati prototype conducted on 3/6 and 3/7/04 for the purposes of finding information on Paparazzi's similar features, not yet implemented:

Here is a summary of the 5 tests conducted this past weekend (and one additional test to test my methods, on a student). The tests lasted 1.5 to 3 hours. I asked them to perform five tasks (though the last two tests were

performed when the search function wasn't working, so we spent remaining time looking at newstalk, current events, top 100, hot products and membership.

Responses to the site are followed by their suggestions and the number of people who suggested that the item was either confusing or suggested the revision:

General:

Only one really knew what a blog was, and while they felt more familiar at the end, after surfing them, they felt they needed time to become familiar, would want to know credentials of bloggers (asked for profiles that, for example, listed a persons accomplishments. EX: Ed Felton is a CS prof at Princeton and was a fellow at the Law and Tech thing at Standford with Larry Lessig – this would help them take a blog more seriously. – the one reader of blogs reads Felton and cited that as an example of credibility for her – she is at a software security company in Alameda and reads his blog now and then.)

Site design: 2 people said nothing about it, 2 said it looked "boring", "corporate" or "too formal". One suggested these same ideas about the design, and suggested that it needed color, needed graphics or pictures. Another of them suggested that the "corporate" feel was inconsistent with the returned search content, which is informal "blog" content, and could be "ma and pa kettle" talking, and therefore the design needed to loosen up a bit.

Talk bubble: two suggested reversing the tail to be on the other side, everyone thinks it's a "Q". Also, try adding a little white space on the inside of the tail, so that the dip is more apparent. (3 of 5 noted this was confusing.)

Everyone really liked "hot products" but they did note that on the home page seeing "hot products" on the left and "marketplace" on the right was inconsistent. They knew they were related (5 of 5), but wanted to see the "hot products" in the text under "marketplace" with a hyperlink (2 asked for the hyperlink) so that it would confirm that it was the same.

They we all impressed with 1.8 million blogs tracked. No one noted the links, though they read the other stats. (Based on that, we might eliminate one of the two link stats, to simplify and save space if we need space.)

All liked the search box up in the blue area under the top nav bar. 3 of 5 were confused by it when a second search bar would appear in white, with their search located in the second bar in white, because then they thought the blue search bar was to search the site, whereas the white search bar (just below the blue bar) was for searching blog info. Overall, two search bars on the same page was confusing to them, and they all commented after a while that they only wanted to see one search bar.

All were confused by terminology: inbound links, cosmos were most remarked on (cosmos is still on some of our pages as of Sunday night), "links" verses "blogs" on either returned results or top100, (no one understood these). All suggested that something else for "inbound links" would be better. 3 of 5 suggested that they didn't care to know, as long as the results were good and that maybe just some indicator, a metric of high ranking, would suffice, though they knew that even with thousands of inbound links, it was no guarantee they would get just what they needed. 3 suggested "references" to replace both "inbound links" and "inbound blogs" because they didn't care to know either the difference, or the "inbound" terminology. Once they understood that it was one blogger linking to another (this was a confusing concept though) they just wanted to think of it as a "reference", take it or leave it, from one person to another. They indicated that references counted somewhat.

All five said they would primarily use Technorati as a search tool, at some point early in the interview. Though as they looked at NewsTalk and Top Products, they liked them and said they would browse them when looking for that kind of info as they saw them as good resources. Top 100 was a curiosity, but not something they would go to much. Though 2 remarked that if they blogged they might go more. All remarked on the Iranian blog at #4, that it meant that blogging was international.

All remarked on how slow it was to search, and said at one point or another they would click away because it was too much. One guy said, "You've got to fix this or forget it. This is cool stuff, and different and better than anything else, but if it's this slow – more than a few seconds – I won't use it."

Searching for a key word:

This was natural for the three who could perform this task directly (and the remaining two described wanting to do it, and could see results from indirect searches they got to from news talk and current events by clicking on a conversation bubble to see a URL search and then see results – so they commented on format of results there).

They wanted results that somewhat mimicked google results (though they new this was different). They were all confused by the format of the returned results because they were both different and did not follow what they know from google, but also because they didn't give them what they wanted ie, the first link didn't go directly to the blog post itself, but rather to the blog in general.

Ex: they wanted "post title" by "blog" followed by some stats (they didn't care much about stats and so didn't remark, other than 3 people said they don't want to know when we spider – and they thought the term was geeky and unnecessary – they assume we spider a lot). The second, third and fourth lines should have text from the blog post with the search terms highlighted, followed by a fifth line, which should have the "references to post" and/or "references to blog" along with the time the post was created, and the conversation bubble for that particular post. Currently the conversation bubble goes to the blog in general, which people said they don't care about, and is confusing too, because if they searched on cats, got results about cats, then went to conversation bubble about some blog with one post on cats, they want to keep finding info about cats, not everyone who links to that blog, which may otherwise have nothing to do with cats. They got confused, two degrees out like this, and felt they system took them on "a wild goose chase" that was very frustrating. They did get that they are looking for conversations about cats, and wanted just those results in key word searches, and so want to follow up on posts that respond to the cat poster.

Sometimes there was a lot of a blog post text returned below the link to the blog, and above the stats. Sometimes there was hardly any. When a lot was returned (as much as 13 or 15 lines), all five remarked that it was too much, and they just wanted context with three lines and something highlighting either the key word search term or in the case of news talk, they wanted just the part that hyperlinked to the article the post referenced.

All five could look at some results even if they couldn't search, and all five remarked that it was really annoying that the "rank by freshness" and "rank by influence" would flip flop order. In other words, if "rank by freshness" was greyed out and listed first, and "rank by influence" was blue and listed second, and they chose "rank by influence", the result was that "rank by influence" was moved to the first spot and grey, and "rank by freshness" was second. At first, they though nothing had changed, because they expected the second choice which they had clicked to go grey, and stay second. Then they reread, and said that because the choices had changed order, they were forced to reread, relearn, and this was frustrating, confusing, and unnecessary. Rather, they wanted the order maintained, and whatever "mode" they were in, to be greyed out.

All were puzzled by "force link cosmos" (and conversely, by "force keyword search"). Conceptually it didn't mean anything to them, and they couldn't make sense of the results, which were often 0 and 0, for a keyword that had a forced link cosmos (the system looks for a URL cosmos and there is none). The results on a URL with a forced key word search was similar. All suggested this should be removed. Again, they also didn't like that when used, this feature/mode jumped to the far left and was greyed out, and the other feature/modes jumped right. They repeated that the feature/modes for searches should remain in order and not shift.

Searching for URL:

No one did this as a straight search, though I asked them to do it if they wanted to. They all remarked that it was not something they would do, but during other searches, in clicking on a conversation bubble, they would see it show up in the second search bar and wonder what they results meant and poke around. 4 of 5 said they probably would not do this much, but if they started reading a particular blog, they might look at this more.

One made the point that this returns very different results in a way, than key word searches. They said they thought that the site should be split in two, along this line, so that key words would be one site and url searches, and stuff about particular blogs would be another. They thought URL searches were for bloggers only, whereas key word was for everyone.

NewsTalk and Current Events:

Note: when in newstalk, users would often click a conversation bubble, which would return a result, with search in the second search bar, simulating what search returns looked like – and this did give them some sense of what searches were like, though we could not do a key word search). I would ask them to look at the site first, get familiar, but not explain much. Then, I would ask for each task, which they performed, and then ask them questions about how they perceived the results, talk through their thoughts, make observations, tell me anything they didn't understand, etc. I let them ramble, get frustrated and confused, though I did explain at the beginning that if they got frustrated or confused we needed to know why and that's why we were here, to get their help -- it wasn't their fault, but instead that we weren't expressing things well. So their frustrations would come, but they didn't leave upset with us but rather feeling like we had worked on something together.

All remarked that they liked this, wanted to know what others thought, but that they couldn't really tell the difference between the two.

They all liked the Current Events **(number)** after the subject and before the conversation bubble because it told them how many people were talking about that article. They wanted that same number in NewsTalk.

They all remarked on the up and down arrows, like them and used them a lot. However, when they would click to something (conversation bubble next to the article, the article itself, etc) and then click "back" to get back to NewsTalk or Current Events, the conversation and article they had open would close. All remarked that this was annoying because then they had to read through the titles to find the one they were looking at. They all wanted to go "back" to see the exact screen view they had before.

4 of 5 remarked, once they spent time looking through the "article titles" which are actually the blogger's words from one of the three posts, seemingly randomly picked by the system, and hyperlinked to a mainstream news article, that this was very confusing. The four who noticed, strongly wanted the actual article title, followed by the news organization or writer's name or something to tell them about it.

EX: what they see now is "hey, see this article here about such and such" as quoted from the bloggers post and hyperlinked. What they wanted instead: "Bush Sacks Cheney in Cabinet Meeting" by Joe Blow, BBC with hyperlink to the article, and BBC hyperlinked to just the BBC site.

All 5 remarked that under the articles, they wanted to see the blog post title first, then "by" and the blog title.

EX: they wanted "post title" by "blog" since they often wanted to click directly to the post talking about the news article, and when they would click on the blog, the post referring to the article had already moved down. They all strongly recommended this as absolutely necessary to get to the conversation around that news article.

Hot Products:

Everyone liked this and would use it. Wanted to know if we would make money from it. Liked the pictures, and then would remark that they wanted more pictures on the site elsewhere. Thought it was really cool because it was comparable to the NYTimes book review section where they list best sellers, but felt this was more authentic.

Membership

All five, when asked to look there, remarked that making a watchlist would be desirable, and the info we ask for is not obtrusive. 2 asked for the privacy statement, and while it wasn't there, I described our policy that users own their own data, and we own the aggregate. They were surprised, liked this, and wanted a short statement to that effect at the bottom of the signup page, along with the link to privacy (I told them the link would be added by Tuesday). All remarked that they did not want any more spam and so want to know we will not do this or sell their email address.

All were puzzled by claiming blogs, but since none blogs, that would be expected.

Personas and Scenarios

Paparazzi Personas

Note that goal terminology used below refers to the following:

- High level goals: personal or big picture goals
- Mid level goals: could be thought of as super high level tasks towards achieving high level goals

1. Abigail Rhode - Journalist, Food critic

For the past five years Abigail has been the leading food critic for the San Francisco Chronicle. She has developed a cult-like following in the Bay Area and has attained national notoriety through guest appearances on the Food Network and CNN. Her frequent readers attribute her fame to the film-noir quality of her writing: dark, sharp, and biting. As a recent blogger once commented, "If Humphrey Bogart was a food critic, he'd sound a lot like Abigail Rhode." Abigail does not just write about food; she lives food. When not writing her weekly column or reviewing local restaurants, she can be found out "in the field" at farms, wineries, cheese factories, and orchards soaking up a deeper understanding of ingredients and the science of food. She spends much of her free time in her state-of-the-art kitchen, secretly aspiring to be a great chef. But she is her own worst critic, often spending hours following her latest creation rating her own food. These stories sometimes make their way into her own column, endearing her to her fans.

But not all of her readers would consider themselves as such. Abigail is learning the price of notoriety. The food media has also discovered anti-Abigail Rhode sites. She is often accused of caring more about stroking her own ego than giving her readers a real restaurant review. "Too much color, not enough substance," complains one reader.

About a year ago, a friend emailed a link to a blog entry from one such fan. Abigail spent the next day mulling not only over the harsh criticism the furor it created in the comments section. She enjoyed the reading thoroughly. Ever since, Abigail has been on the search for blogs about herself. She has become almost as addicted to seeing her name batted around in the blog world as she is as seeing in other papers or hearing it on TV. Every once in a while, she has responded to a blog in her weekly column. In the process, she has discovered a range of blogs on food, drink, and wine. She has discovered other writers who make the frequent trips to obscure farms and orchards. A product of the mainstream media, Abigail does not consider these as "real" journalism. After all, they do not go through the same editorial process she finds herself committed to with her public writing. Nonetheless, she finds them interesting.

High level goals:

- To maintain her crediblity as a food critic
- To be nationally read and respected
- To be an expert in her content: all aspects of the food production and consumption "lifecycle"

Mid level goals:

- To know what people are saying about her, on and offline
- To be able to respond, through her column, to fans and critics
- To discover new ideas and interests through the blogs of other foodies

2. Serena Hart - PhD. Student, Education Policy

Serena Hart is a first year PhD. student in education policy at UC Berkeley. Prior to returning to school, she spent three years teaching 5th and 6th graders at a public school in downtown Oakland. As an undergraduate Serena double majored in biology and political science. Serena grew up in Cleveland, OH. Growing up in a middle-class household in a Cleveland suburb, she had early dreams of becoming a doctor and was a committed to going to medical school when she began her first year at Stanford. She made it through the weedout process of organic chemistry and bio lab with the same steady resolve and determination that drove her to the west coast in the first place. During her junior year, Serena took a class title "Race and American Politics" which radically changed her career plans. Serena realized that she wanted to be a doctor to help people, especially children, and that there were other avenues of doing this that she had not fully considered, such as public policy. She spent the next two years, working towards a political science major in addition to her biology degree.

Serena applied and was accepted to medical school, but decided to defer admission in order to teach. After a year of teaching, she put off medical school again. By the end of her second year, Serena was making plans to earn her PhD in education policy. Now, as a student, Serena is an honorary board member at the school at which she had been teaching.

While not reading or writing about policy, Serena enjoys a night out with her friends. She is single, but "always has her eyes open." She also enjoys times alone reading short stories or going on long hikes, where she can muse about life in general. Six months ago, she learned about blogging, and saw blogging as a way to write down and organize some her thoughts on life and on her work. Serena writes in her blog once or twice a week. Serena sees blogs as a notebook and a public content management system. She does not think, or care, if any one is reading what she has to say. Recently, she has begun reading the blogs of her friends at school so that she can stay up-to-date on what they are doing. Every once in a while, she has responded to someone else's blog entry with a reflection on her own blog. Serena is considering how a blog might be a useful technology to introduce to the students at her school.

High level goals:

- To earn her PhD.
- To be influential in education policy at a local and eventually a national level
- To find solutions to the problems of inner city schools across the nation
- To find a great guy

Mid level goals:

- To find other people who are engaged in similar or peripherally related research
- To keep track of what her friends and colleagues are doing
- To communicate with people influential in policy decisions

3. Byron Bei - Software Product Marketing Manager

Byron is loving life. Every day, rain or shine, he returns to his Pacific Heights flat, puts on his running shoes, and heads down to the marina for an evening run to the Golden Gate Bridge. He never gets tired of the view of the bridge and the headlands, neither from the docks on the marina nor from his rooftop deck. Sometimes on his run he stops to look at the docked boats. On the weekends, he drinks an early-morning cup of coffee and watches the boats go out. Every once in a while, he volunteers as an all-day deck hand. Byron has dreams of owning a boat. Maybe he'll sail around the world.

Byron has explored the San Francisco nightlife thoroughly. He likes the views of Pac Heights, but prefers an evening crowd with a little more grit. He dates regularly, but not too seriously.

Byron does not take this great life for granted. His current job is a senior product marketing manager at a leading business intelligence software company. He has worked his way up the ranks of various software and technology companies. His first job was working the phones of the help-desk. Byron is never the first to know about the next BIG THING, but once he decides that something is worth knowing about, he dedicates himself to reading everything he can on the subject.

Byron has a lot of friends. He "networks" when he has to, but would rather build interesting relationships with people, both clients, co-workers, and the locals at the bar down the road. His friends usually keep him up-to-date on the latest technology. For example, a friend of his sent him a link to an article on information visualization, and he quickly added the topic to his list of RSS feeds. He subscribes to various news sites, including all of the business magazines. He wants content "pushed" to him; he doesn't want to have to search for it. He makes no distinction between reading for work or for pleasure. He rarely reads a printed publication.

Byron first heard about blogs from a co-worker. He didn't think much of it at the time. But recently he has begun to wonder if perhaps bloggers are writing up things like visualizations for business software. The mainstream news outlets seem to be slow, too reliant on press releases for the sources of news articles, and too distant from the "real" industry atmosphere. He wonders if he can use blogs as a market research tool, so that he can be ahead of the competition on the buzz that is not being captured by the industry press.

High level goals:

- To buy a boat
- To continue to put out great products for his company
- To build great friendships through his various social outlets
- To retire by 45

Mid level goals:

- To know what current customers are saying about his products
- To know what potential customers are saying about his products and competitors' products
- To follow the industry conversation
- To follow conversations and find resources about specific topics
- To identify "sneezers" for viral marketing campaigns (as in people who are able to spread viruses)

4. David Dursley - Political Campaign Manager

David Dursley has spent much of his life as the biggest winner that no one has ever heard of. In high school, while his much better looking and more out-going friends were running for student government office, David was running the campaigns that got them elected. When the school surprisingly nominated his best friend Jenny for prom queen, it was David who had secretly made it happen (David had been in love with Jenny since they were six years old, but had always been to shy to tell her). David then shocked the cheerleading establishment by finding a way for Jenny to pull off the upset. David is passionate about politics and the political nature about human relationships but has rarely made a public appearance himself. He prefers to stay behind the scenes, working his magic.

As David's career as a campaign manager has taken off, he has begun to shed some of his introversion. While still staying away from the limelight, he has

chosen to for political reasons. He wants to be known. He wants to be wanted by the people who matter, not by the masses. He wants to shape the masses.

David married the first girl he loved after Jenny…and divorced her a year later, realizing that his life was destined to be one on the campaign trail. Besides, he thought, he could have done better.

David understands the vices and virtues of human nature. He also knows how to manipulate and push the right buttons at the right time. David is always looking for new ways to accomplish these goals and sees new technology and new media as the primary means to these ends. When he first heard of blogging, David recognized blogs as a new way to talk to and listen to the constituents and masses he would need to win over. He started his blogging career by publishing various blogs under pen names. He would often argue the opposite sides of the same issues, just to see what would happen. He likes knowing the statistics: how many people are reading his blogs, how many people are linking to him. He is a frequent blog reader, with subscriptions to over a hundred that he reads daily.

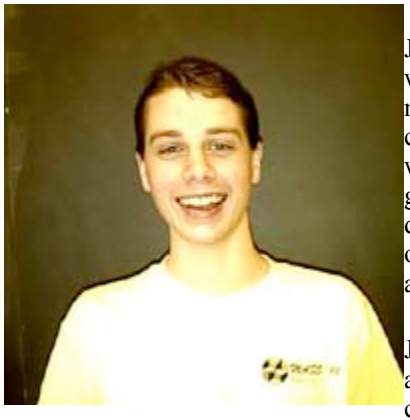
High level goals:

- To put together a winning strategy for his gubernatorial campaign
- To be seen and recognized as "the man behind the man"
- To manage a campaign in the next Presidential campaign
- To have his finger on the pulse of various constituencies

Mid level goals:

- To be able to gauge the interests of various constituencies on the issues
- To be able to learn more about the lives and interests of potential voters
- To be able to track the conversations of various interest groups
- To be able to estimate the power of various peoples' opinions

5. Jon Taxen - Web Developer



Jon knows he's not a "real" engineer. At least not according to the guys who work down the hall who talk about object serialization, fast hashtables, and neural networks. But sales folks think he's one, so he'll take it as a complement. After all, he does know some Java, can create web applications with only a smidgen of hand-holding from the strange databases guy, and is generally fluent in many web technologies. He also fancies himself as a designer or sorts. Well, he's not taken a formal class, but the marketing people often come to him for design projects and ideas. The engineers think he's an artist!

Jon likes to play. He likes to play with toys such as the new Handspring Treo and the Danger Fliptop. He has a passion for tinkering. He even built his own computer, which isn't nearly as difficult as most people think. Of course, his new Mac Powerbook is a lot better than that thing. But maybe if he installs Linux on it…

When his friends have a question about anything technical, they come to Jon. Jon helps them pick out new computers. Jon gives them the low-down on the latest cell phones (and cell phone plans if they're really curious); after all, Jon took every phone Verizon offered through a trial run before settling down on one. Jon also fancies himself as a budding wino (he never returns from Napa empty-handed). He recently bought a mini-wine cellar and is already regretting not getting the bigger model.

People think that Jon is a work-a-holic. He doesn't know if he should tell them that at least two hours out of his supposed ten-hour work days involve going to audiophile websites, reading about the latest video games, or following the threads on Slashdot. Well, maybe more than two hours. Business has been slow.

And blogs. Jon loves blogs. Jon sees blogs as a new toy to play with. He used to hate writing, though he didn't mind writing an editorial for his college newspaper now and again, but he doesn't see blogging as writing. Blogging is...well, blogging! Jon gets a thrill when he sees his latest blog up in public. Sometimes he spends hours crafting a post. Other times, he fires off a quick thought or two. He gets an even bigger thrill when someone comments or links to him. That is so cool, thinks Jon. His favorite topics usually have to do with the pros and cons of the designs of latest technologies. He often retells a story of how he helped one of his friends out and how awful the technology was designed and why did that button say "go" when it really meant "push me." Jon wonders if he could get paid to write about this kind of stuff. Do a lot of people read him? Does anyone take it seriously?

High level goals:

- To earn enough money to keep bringing in the toys and the wine
- To enjoy life without anything getting too serious
- To build a large network of friends
- To continue to build on his design and engineering skills
- To build "something really cool"

Mid level goals:

- To discover how many people read his blogs
- To communicate directly with the authors of his favorite blogs
- To improve his writing skills
- To find more techie-wine people in his area; maybe start a club

---

Task Analysis

INSERT HERE

Scenarios

Byron Bei
Daily Use Scenario

Tuesday morning: 7:30 am
Location: 3rd floor, Byron's small office (with a window)

Byron has just finished skimming the morning press releases and has turned his attention to what he considers the "real" industry news of the day: the blogs. He has recently registered for a new service called Paparazzi. In the process of registering for the site, he has signed up for four watchlists that are forwarded to his email account: one that tracks the topic of information visualization, one that tracks the latest enterprise software news, and a third that just looks for any mention of his company. Byron notices that a post from a guy named Xavier has appeared in both the info viz list and that enterprise software list. Byron seems to recall reading something else from Xavier last week on some charts that the New York Times had on the presidential primaries. Both posts were well written, analytical, and insightful. Furthermore, both linked extensively to a host of resources, such as sites, .pdfs that looked like research studies, and other blogs.

Intrigued, Byron goes to the Paparazzi site with the intention of learning more about Xavier and what he knows about info viz, business intelligence software, or both. Byron looks up Xavier's blog using Paparazzi's blog finder. He finds a blog profile that includes information on Xavier's readership, such as statistics or other metrics, and writing topics. Byron observes that Xavier has a decent sized readership, but is more curious about the type of

readers than just the numbers. Byron considers clicking through to Xavier's blog site to see the posted comments, but decides to investigate on Paparazzi a little more.

Using Paparazzi's conversation trackers, Byron can see who has been linking to Xavier's post and how the conversation has progressed. He can also see how it connects to related conversations through other blogs. Byron quickly scans through the connecting blogs and realizes that some of them are frequent writers on his enterprise software list. Byron doesn't have the time right now to go through the whole conversation as it's already 8:45 and he has a 9:00 am meeting to get to. So, he saves this conversation for future reference. On impulse, he adds Xavier to his list of blogs to track.

Byron sees that it's time to get that report printed for his meeting. He switches to his email client, finds that email that he ignored earlier this morning. He prints the email in the attachment, grabs his half full cup of cold coffee, and runs off to the printer. On the way, he can't stop wondering if Xavier may be the marketing resources he's been looking for.

Scenario: Monitoring specific topics

David Dursley
Daily Use Scenario

Sunday morning: 11:30 am
Location: Headquarters for Assemblyman Smith's Gubernatorial Campaign

David Dursley gets up every morning and reads his blog subscriptions over a bowl of corn flakes. This reading gives him enough to think about when he's on the bus, riding downtown to campaign headquarters. Every Wednesday, there is a meeting with the candidate, and Dursley opens this meeting with a rundown of the latest campaign "news" (read: gossip). He is trying to run a progressive campaign, utilizing the Internet as a tool to gather voters.

Today, being a Wednesday, is a very busy day for David. He is using his customized Paparazzi setup to organize his presentation. He needs to find out how many links his candidate's blog (SmithforCalifornia.com) is getting from other blogs, as well as its actual readership levels. Smith's opponent also has a blog (ReElectTheGovernator.com), and so Dursley also monitors the links and readershp of this blog as well. He specifically needs to know how his candidate is viewed out in the wild, so today he is writing a short report on the perceptions the authoritative bloggers have of the candidate. He has bookmarked a Paparazzi page devoted to his candidate and uses it to find the most authoritative blogs. David follows the conversations between blogs, reading and taking notes on his legal pad. He notes that blogs with large audiences are starting to link to the smaller grass-roots blogs that he has been monitoring for months. "This will be great news," he thinks to himself.

Dursley copies a few blog entries into a blank document, as he plans to pass this out at the meeting. Just as he gets up to go to pick up the printouts, he remembers to check his candidates blog ranking. Up 10 notches!

Scenario: Monitoring specific blogs

Abigail Rhode
Daily Use Scenario

Tuesday afternoon: 2:00 pm
Location: Home Office

Abigail Rhode’s weekday restaurant review was published this morning in the paper, and on her paper’s website. She publishes two to three reviews a week, typically on Tuesdays and Fridays, though sometimes in the Sunday

magazine, she writes a more general food review with recommendations on specialty items, and recipes of restaurants she profiles in that more magazine-ish piece. She's set up her daily Paparazzi news watchlists to arrive by around 2pm, the time when enough remarks have been made about her work that she can gage the blog public's reaction to her work. She also plans her weekend forays to interesting growers, farmer's markets and food shops, and so watches food topic blogs for this information as well.

It's exhilarating, but also terrifying, this habit of reading through the conversations her readers have made to talk about her column. She makes notes about possible reactions she might put into her columns to both critics and fans. She will think about it for a while, reread those posts, but it's become a habit this responding to blogs. She takes to heart the suggestions by readers that believe she missed important parts of the restaurant experience and uses her customized Paparazzi setup to organize posts she finds relevant to her work. She notes the number of people linking to her column today, and the number citing her name in posts overall. They may be critical, but she and column are hot topics.

1. Set up watchlist for 2pm daily delivery to watch herself and references to her columns, and foodie news.
    a. Read her readers reactions to her, her column, and related foodie news and information
2. Look at food blogs such as ChocolateandZucchini.com and SauteWednesday conversations for latest foodie news and pointers to new ingredients, recipes, restaurants and industry news.
3. Follow conversations, reviewing Paparazzi's list of links to an author and their blogs to check out authority.
4. Check out her competition: the food reviewer at the other newspaper in the area is also discussed in food blogs and so she watches references to his work as well.
    a. Notes a conversation where his recent review of a small local restaurant was in direct opposition to the latest Zagat's which came out just after the review. He then re-reviewed, and bloggers took note of his reaction to the people's review.
    b. Notes that these kinds of interactions between traditional and non-traditional media are becoming more common.
    c. Think about what it would mean for her to blog, and decides to discuss this with her editor. The blog focus would include information that is non-traditional and therefore not appropriate for her traditional newspaper column, and yet interesting for her foodie fans.

Scenario - Browsing for information on a specific research need

Serena Hart
Daily Use Scenario

Sunday morning: 1:30 am
Location: Serena's studio apartment

Serena is deep in thought, but nearly dozing off. She's been up way past her bedtime the last few nights trying to find inspiration for a new research topic. There is a stack of education journals on the floor next to her desk, none of which provided any great ideas. She went to the journals first, as they are the most authoritative source in her field. But since they didn't seem to provide any help, Serena decides to see what her fellow students have been discussing online in their blogs. She has been using the Paparazzi service to monitor education blogs, so she pulls up that watchlist.

Serena knows that her friends' blogs are listed in the Paparazzi directory, and often show up in topic searches on education issues, as several of them are very respected bloggers. She browses the 'Education' themed blogs, but decides that she doesn't have time to read them all (since it is getting late). She sorts the blogs by the hottest topics, in the hopes that maybe some new policy news has come out that she isn't aware of. The topics shown don't appeal that much to Serena, simply because it looks like a lot of these are being discussed by people who don't know much about education policy, and the reliability of sources is important to her. She goes back to the list of blogs and picks one by an author she knows personally, a professor at a major research institution and university. Serena quickly skims his entries, along with the entries posted by those responding to her friend. One of these responses is very intriguing! She follows up by reading the entire response, and then begins reading this man's blog,

taking note of the large number of other blogs that link to his blog as listed on Paparazzi. "He definitely has an interesting perspective," Serena thinks to herself. She adds his blog to her watchlist on Paparazzi, and heads to bed--but first making a note to send the author an e-mail with some questions about his views, as Serena thinks that there is definitely some research to be done in this area.

Scenario: A blog "superstar" monitors topics, specific blogs, and links to his own blog

Jon Taxen
Daily Use Scenario

Sunday night: 11pm
Location: Bedroom computer at home

Jon Taxen is surfing the blogs, his usual reads, as well as mainstream media. He's working on a post, and wants to see what others have been saying on the same topic. He's found those blogs via trackbacks and with other blogger's blogrolls, but he's well aware that trackback doesn't work well and so he has trouble finding all the times people link to him in their conversations about his topics: gadget-geekery, new technology, gaming, programming and blogging. He keeps up by visiting the same blogs every day, and yet, he thinks, there must be a better way to know who's talking about what, and where to find them.

Visiting a blog one day, he notes a post that talks about Paparazzi, a new blogging aggregation tool. He visits the site, discovering that he can put the url of his blog into their search tool and – exciting! – see who's linking to him. Jon also finds that if he "claims" his blog, he can get a notification every time other blogs link to him. He can also set up lists to monitor his favorite topics or to follow other blogs.

1. Join the Paparazzi members area, list his blog, and insert a small piece of code into the sidebar of his blog, so that each new post will notify the Paparazzi service for immediate inclusion into the conversations listed there.
    a. Noting again the links to his blog, he's realized there is a whole world of conversation going on, that he was halfway apart of because they were speaking to him, and now he can finally find them and join in.
    b. Set up watchlists for various key word searches and other blog communities. He plays with Paparazzi's search tool, to see what kinds of results come up, before using just the right combination of words to get the kind of conversations that matter to him.
    c. He then adds the Paparazzi watchlist output via XML to his news aggregator, so that he can read the watchlist results as he reads other blogs and news feeds he subscribes to during the day and evening.
2. After seeing the aggregator results of his watchlist choices, Jon realizes that reaching his goals for becoming a writer and making money through his blog may be closer than he thought, not to mention enlarging his circle of friends and colleagues, and learning some new programming and tech skills from these people.

Prototypes

Paparazzi Paper Prototype Testing

Paper Prototype User Study Outline

[Participant's Name] thank you for participating in our usability study. We're designing a specialized blog search engine to allow people to search and track blogs. We just want to emphasize that we are testing the interface ideas, not you as a user. We have three tasks for you to do, each of which has several sub-tasks. As you do these tasks, we would like you to "think-aloud." That is, tell us what you are thinking as you move about the interface. For

example, if you decide to push a button, tell us why. We may interrupt and ask you what you are thinking. Feel free to ask us questions, but keep in mind that we may not answer them in the interest of testing the interface. If you feel uncomfortable at any time during this session, you are free to stop at any time.

Task 1: Search

1. Search for "Janet Jackson Super Bowl"
    a. Browse the results and determine which post has been linked to by the most bloggers. Open this blog.
    b. Open the post with the third most responses.
    c. Open the most recent blog post that matches the query.
2. Find the top response to "Some Good News, Some Bad News"?
    a. Then find the article that "Some Good News, Some Bad News" is in response to.

Task 2: Browse

1. Locate two of the top blogs in the entertainment category.
2. Locate two entertainment subtopics.
3. Open up the most recent post on the subject of movies

Task 3: Find blog info

[Give them a blog name and a blog URL]

1. On average, how many different bloggers link to this blogger's posts?
2. Locate and open up the blogger's most recent post.
3. Locate the blog that links fourth most to this blog. Then find that blog's Paparazzi rank.

Debrief/Follow up questions

Start with these two, and move on to questions regarding our observations:

1. Is there any point where something happened that you didn't expect?
2. Is there any point where you expected something to happen that didn't?

Paper Prototype Photos

Materials:

- Foam core
- Heavy paper
- Sticky notes
- Double-sided tape
- Glue (post-it style, but not post-it brand)
- Markers
- Printer paper (with printed text)
- Keyboard: pencil

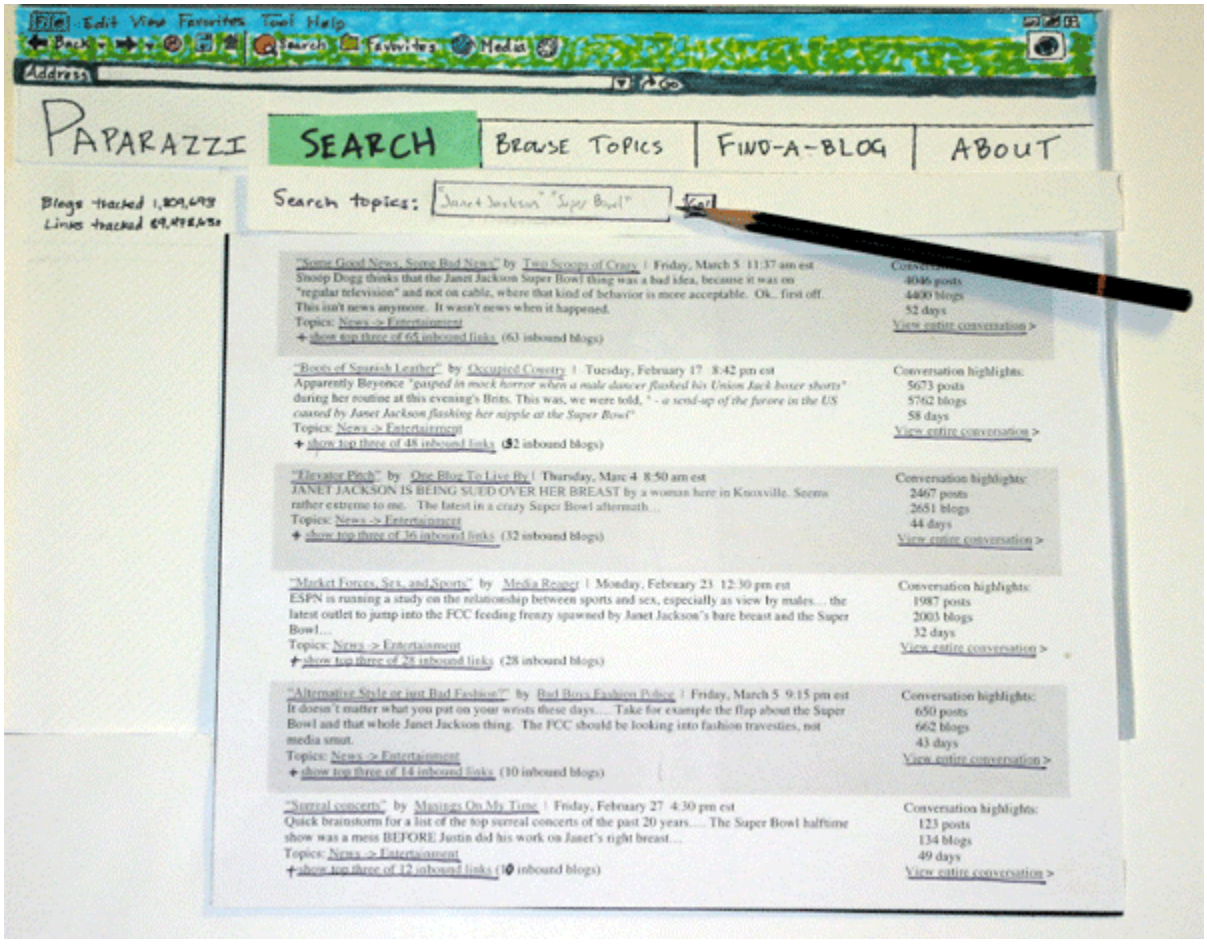
Photo sample:

The big picture

The nav bar

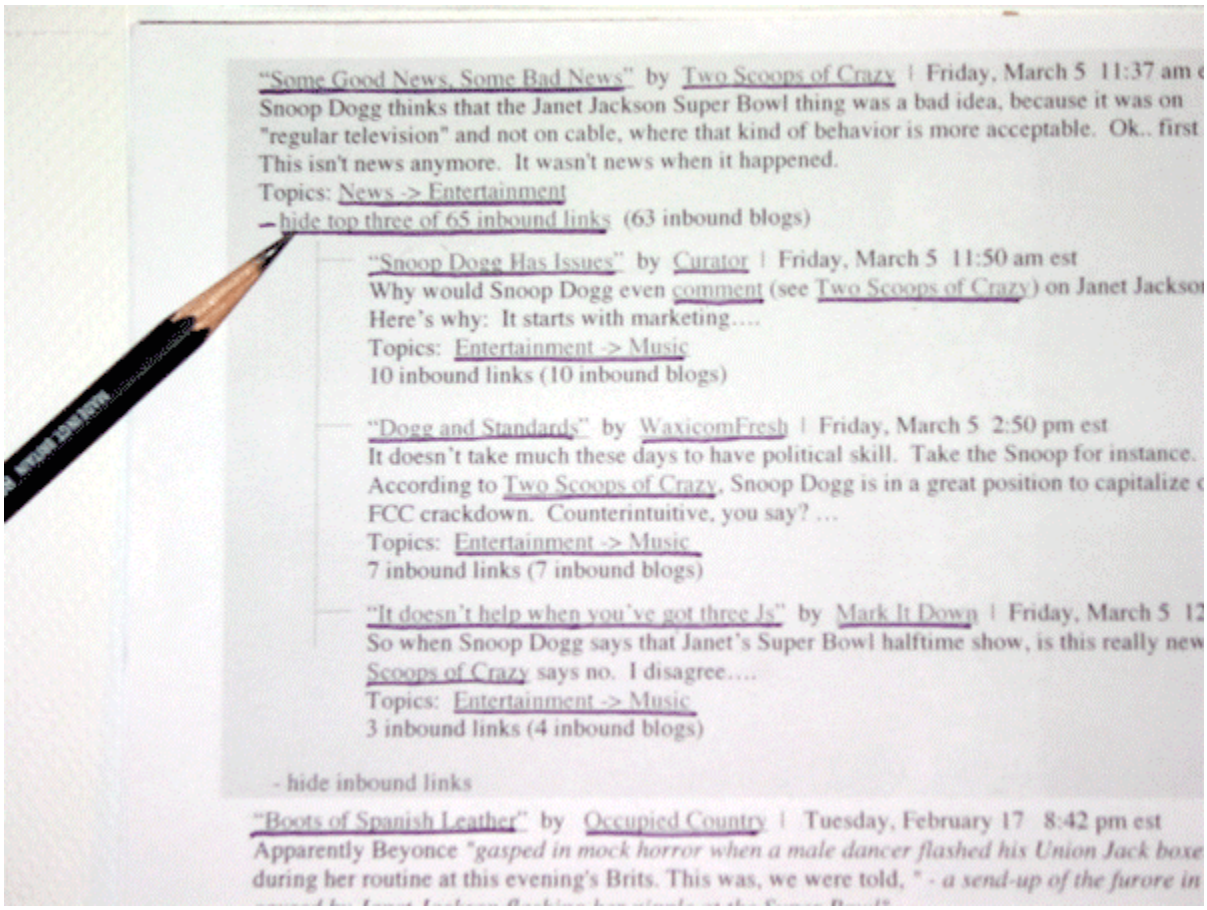
Search results for "Janet Jackson Super Bowl"

(Disclaimer: the content is a combination of real blogs and post content and fictional ones)

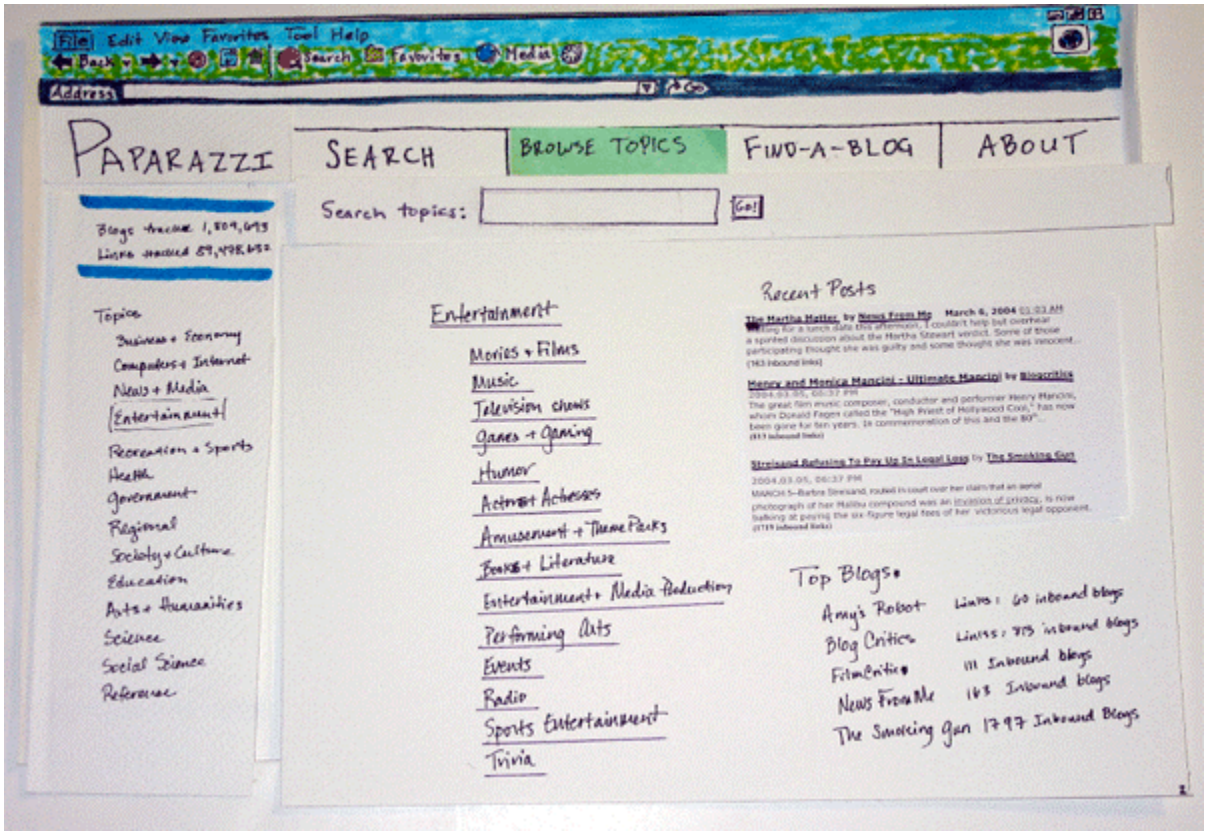


Top three responses to "Good News, Bad News"

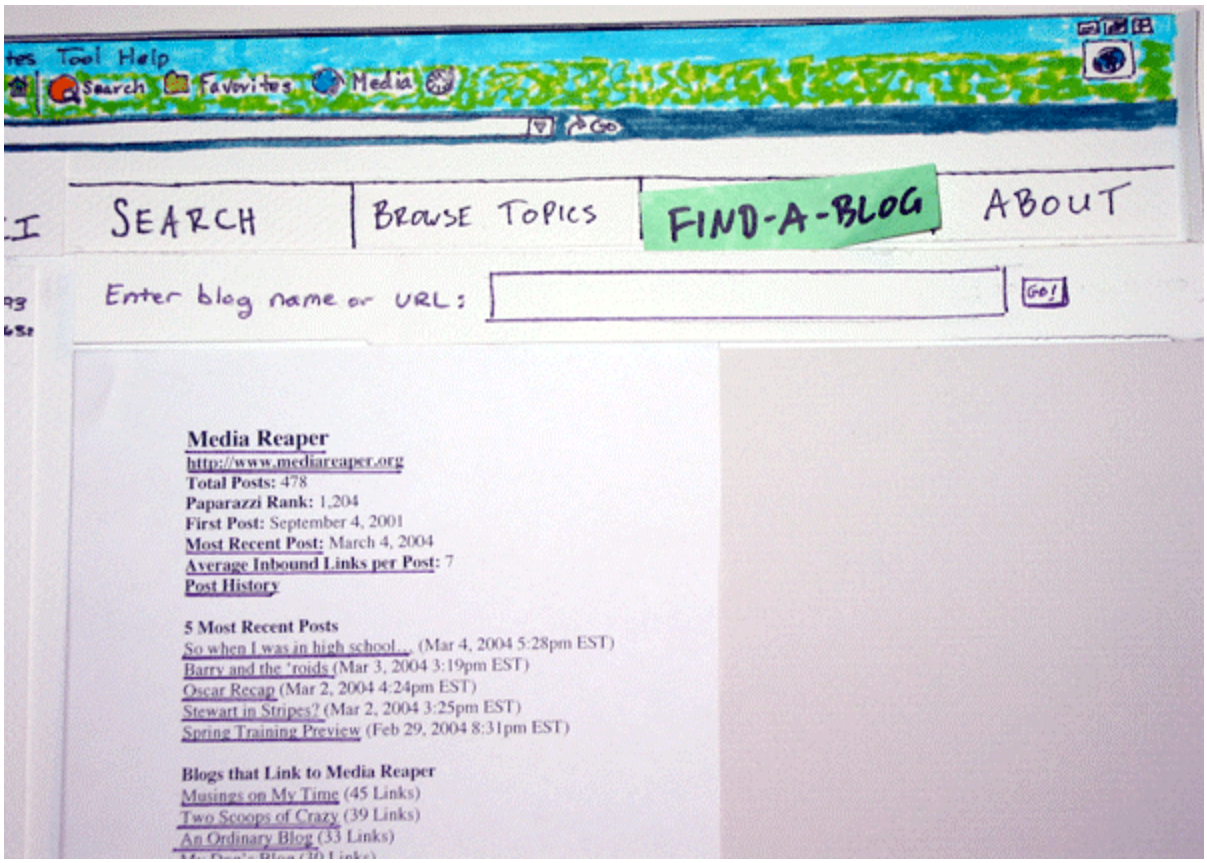
(Disclaimer: the content is a combination of real blogs and post content and fictional ones)



Topics "results" pages



Find-a-blog search for mediareaper.org (fictional)



Lo-Fi User Test Results:

P1 - 3/7/04

- Graduate student in law and foreign service from East coast
- Graduating this year and will be working as a prosecutor as a DA
- No experience with blogs (had only heard of them recently before the user study)
- Generally not tech or web savvy

Task 1: search on "janet jackson superbowl" and then browse the results, and find the most referenced blogger. Clicked on the first result, on the post name. Other tasks included the third most referenced blogger, and so clicked on that post name. Found the three links that linked to the top post. Read through the post,

Task 2: locate top two blogs in entertainment. Browsed topics. He noted that the blogs under top blogs, while having different amounts of inbound links, were all top blogs, so therefore picked the first two, even though they weren't necessarily the most linked to blogs.
Found posts on movies easily.

Task 3: find mediareaper blog. Searched media reaper while still in "topics". confused. then typed in the browser address bar, but then went back to paparazzi, to "find a blog" and typed in the name of the blog. Search returned a profile of the blog.

Asked to find average links to blog, and had some trouble finding the avg, but then located it, then the fourth most linking blog, which was "my dog;'s blog" and then found the ranking.

.....
Comments from him: have to get comfortable with blogs, and who is linking, because until you know that, it doesn't make sense. Conceptual issue. Maybe phrase it, do a title of the section of stats on a blog, bigger letters or colored, to know that that section of stats is about who links to "my dogs blog."

Janet Jackson search made more sense, where it was posts returned on topic. Didn't know what inbound links was, or what it meant. Inbound linking of a post means it links to the lead post, seems natural, but could be confusing for people. Maybe instead of inbound blogs, could be in caps, responses to this article. People don't know what blogs or inbound links are so synonyms are better. RESPONSES. Or a definition of a blog.

Didn't know what "about" was, and thought Paparazzi was for top ranked blogs.
Said in task 3, never use "find a blog" type stuff. Used to just putting in a search term and searching, like on Google. So find a blog was not something he would use. Wanted to just do a regular search, but then get some queue in the results that would lead to that blog's info.
responses may do it, cites, search on blog, expects to get the blog itself. asked if a search result block, with a link to blog stats, a link to the blog itself, and then a googlelike lists of posts referring to the blog would help more, so that find-a-blog was combined with general search, to respond to the idea that he wouldn't use "find-a-blog" and he said yes.
suggested looking at westlaw and lexis to see how they link from one cite to another. Another idea: westlaw or lexis feeds to see what law profs/lawyers etc are talking about say for the past month…

P2 - 3/7/04

- Senior product marketing manager at major hardware/software firm
- Lives in San Francisco, from the Bay Area
- Familiar with blogs, though hasn't read much
- Both web and tech savvy (not a programmer, but can set up wireless networks, build websites, and so forth, and has a good understanding of many computer technologies)

Task 1: search on "janet jackson superbowl" and then browse results. he would do "janet jackson" +superbowl.

is reading the stuff. interesting things about the way he looks at results, looks at it like google, and never goes for the top result because of paid inclusions, so goes for the second result, but in this case likes snoop dog, so might look at that. what is he looking for? post linked to by the most bloggers. wants to know the source, but blogs are different, by def by anyone, but would want to know source, but would choose no 1, cause it seems most interesting.
asked to find third most linked to, so would click on "show top three" which is located at the bottom of the third linked post… would click around by trial and error, would click on "view entire conversation" at far right, to see that too,
asked to find most recent post, so he would click on "alternative fashion..." post title.
find a talk response to "some bad news.." so would click on "some bad news" to see conversation around that.

might also click top three at bottom of post, and if that didn't do it, would use "back" to look at other choices, but "view entire conversation" would not be natural choice...
define top response -- "snoop dog has issues"
define parent -- would go to "view entire conversation" though doesn't look to the right.

Task 2: locate blogs by category. locate top two blogs in entertainment.
would click entertainment link, under a post from the previous search, to click through to entertainment topics...
return would be "entertainment topic"
amy's robot and blog critics because they are at the top...
locate two subtopics of entertainment... found them
locate most recent posts on movies, would click movies subtopic...
he would assume they are in chron order... so would pick the first two blog posts

Task 3: find an author's blog: find mediareaper.
put mediareaper into the address for the browser, not the search bar
reframed task, to ask for paparazzi info on blog... so with that he would go to find-a-blog, though might find it in search as well, but would try find-a-blog
types in "mediareaper.org"
asked to locate average number of inbound links, pointed to it.
asked to locate and open most recent post so would pick "when i was in HS"
find 4th most, clicks "my dog's blog" and expects to go to the blog
actually gets history on blog, but then likes the history
asked to find blogrank, and sees it... thought that it was the most linked to site linking to Paparazzi site...
wants to see how relevant this site is in a graphical way, and tell me how relevant that site is. that means more than rank.

.....
comments: generally stimulates interest in blogs, has continued to see value of signing up with more info, in his industry area, but gets email and it takes him to sites, doesn';t use bookmarks cause has too many, but gets newsletters in email, and those are better, knows from email what is useful, and then clicks on link back to site from that email.
was there a time when you were using and you got back unexpected results... no, generally surf with trial and error mentality, uses the back button a lot...
paparazzi rank is some context...unless he knows the org, it's nice to get context from the system...

used the link at the bottom of a post result that said "show top three posts" verses the "top conversations" because doesn't go to the right,
inbound links: didn't think about it, but assumption the whole time is that it takes him to the blog, not the links, but thinking more about it, it would be links to that blog...
one thing, he hasn't used blogs, so think of it as a thread, people chimming in on stuff, or one person keeping a diary, but if looking for something, hoping I can round up anything i'm interested, ranked according to relevance, and chron because don't want old stuff, unless looking for something old...
...date doesn't catch attention until pointed out, but it was useful after that, but "by" helps because then think the author is the "by", and the quotes help because makes it more like a title...

each post is someone's rant, seems derrogatory to say that, but thinks of them as part of a whole, like an email discussion thread... each is a message on that thread
with each of his email, where they send latest, and so more and more, they don't do a good job culling the info, so he deletes them, doesn't read them so much now, but now, takes too much time, so looks at sidebar and news from them, so wants more filtered stuff...
just want to quickly do a find for something specific... and not waste time with noise...
still doesn't know what inbound links is, has been treating it like a thread the whole time, but a blog is a thread, inbound blogs sounds like a mishmash... somehow it's people's messages to that blog...
likes references... maybe it's backup... maybe credibility... more links means more cred... avg is better...
wouldn't go to find a blog...

P3 - 3/8/04

- Graduate student in Information Management
- Graduating this year and will be working as a developer for a non-profit
- Experienced with blogs both as a reader, has written in his blog but would not describe self as a "blogger"
- Technologically sophisticated

Task 1: Search for Janet Jackson Superbowl.
Guessed that posts were responses, when asked to find the post with the most responses. Find the top link to some good clicked first on view conversation, then later clicked on show top three links which brought them up. Then clicked on comments

Task 2: clicked on entertainment for the entertainment screen.
Found top two posts and then assumed that entertainment topics were inclusive, and found 3movies, to find movie subtopic list, to find top post.

Task 3: find out about a blog: searched on blog for search topics
no results. Clicked on find-a-blog. Entered URL. Got blog history, found stats as requested. When asked to find a blog, expected to find a history on that blog, though he would not be confused to find that actual blog site. Since there is only one link, not clear how to get to that blog if that=92s what was desired. Find rank, right at the top.

Anything that happened that you didn't expect to happen? Would have expected to have a search on a blog return that blog, not history.
Confused because we asked him for responses, but the word =93response=94 wasn't used to describe responses on the site. He understood a response to be a blog pointing to another blog.

Bloggers know about inbound links, and so they would know what that is about. Also, an inbound link could come from an article, like from a newsite, but he wouldn't think it was a response. Rather, onsite remarks as comments, as well as other blog posters who talk or link would be responses. But articles are not responses. In a post at the top, with subposts, if the top post has no links, then he looks to the posts indented and listed below as being attached in some way, or assumes some kind of link to the first post at the top.

Saw view entire conversation as a tree, as it could be a mail-list, where there is a threaded conversation. If search results are information that is out of context, then maybe what we are trying to make is something that can pull in context.

Paparazzi Interactive Prototypes:

Second Interactive Prototype

In the development of our second interactive prototype we focused on four general areas of change:

- Addressing the most severe heuristic violations raised by Manis;
- Improving the visual layout and design;
- Adding enough content suitable for a usability test;
- Adding in some functionality we did not build into first interactive prototype but is necessary for a usability test.

Additionally, we decided as a group to ignore some of the general terminology issues unless they were misleading or inconsistent in our usage of them in our site. There is a language that is developing around the concept of blogging. Some of this language (such as the word "blog" itself) are becoming more and more mainstream. It would probably be counterproductive to create an interface that makes these terms "intuitive."

2nd Interactive Prototype: http://dream.sims.berkeley.edu/~jtowle/prototype/

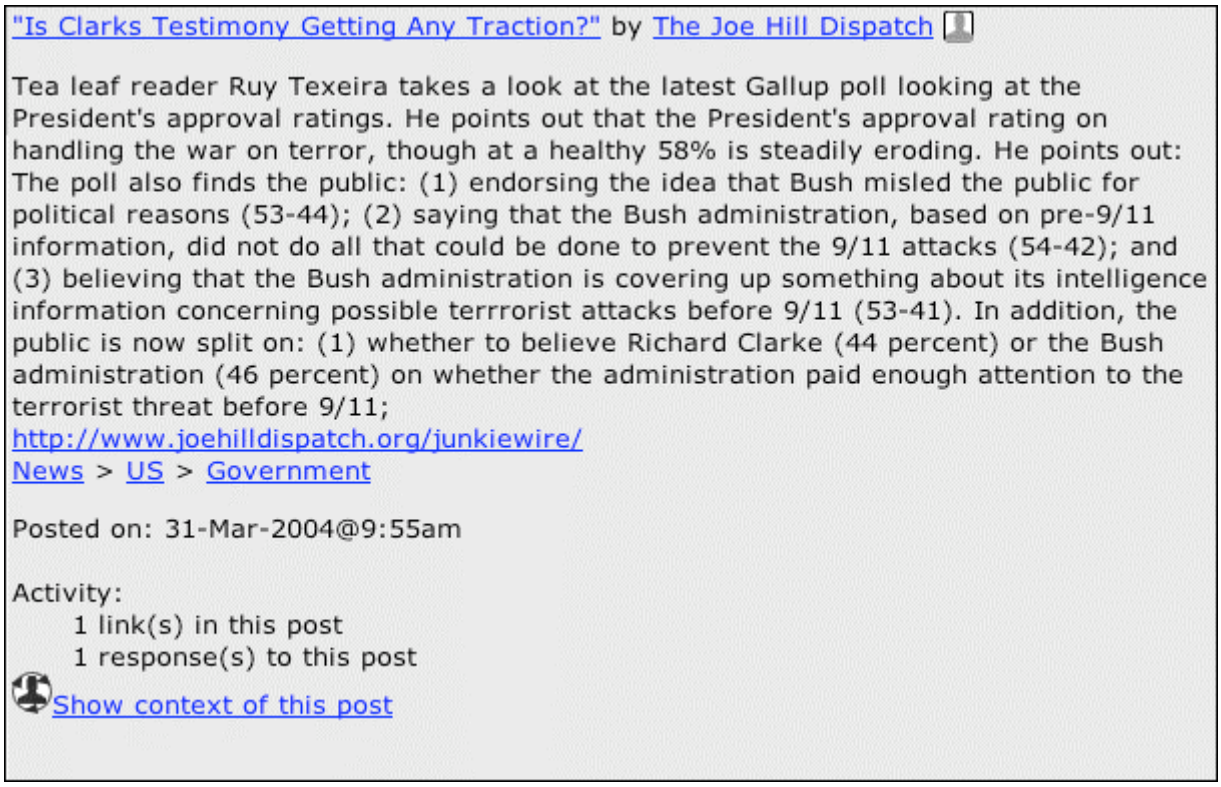
Major changes made:

New format for individual search results
Based on some of the heuristic violations raised by Manis (http://www.sims.berkeley.edu/academics/courses/is213/s04/projects/Manis/assignment6.html#HEPap) we redesigned the format for the search results so that the "context" information would be offset from the search results "content." We actually had attempted to do this in our paper prototype, but found that users would only look down a list of results and would not look to a side area that had data about the post. However, by placing the search results title (the blog post title, the author, and so forth) above the content and context information we could address this issue.

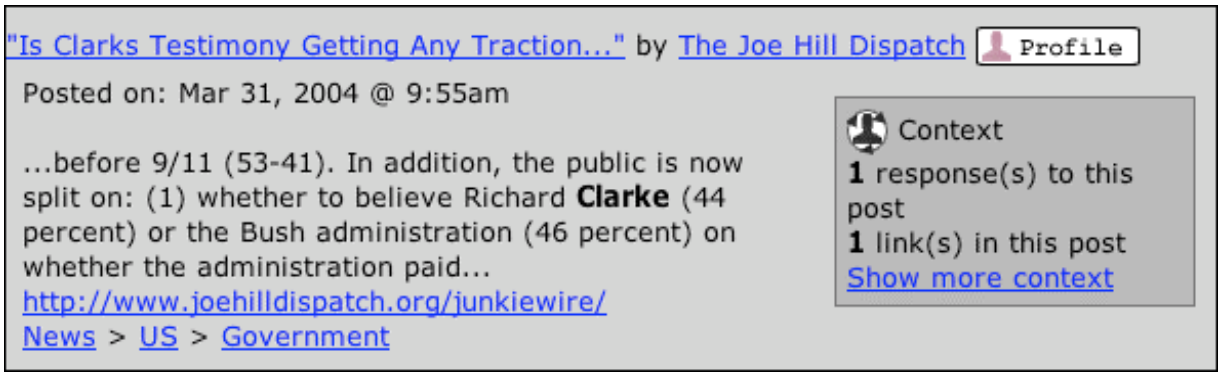
We also limited the number of characters displayed in the search result content highlights (the KWIC sections). Ideally, the right content would be pulled out in the same manner as Google or other search sites. We incorporated some rules but could not implement the ideal.

Search result changes

Before (note that we had always planned to trim content, so this isn't quite a fair comparison):



After:



Addition of results summaries
Manis found the section headings confusing, and after conversation with them, we believe that this was primarily the case when there were no results found for a particular section. We discussed various ways of dealing with this issue. In the end, we decided to summarize the results at the top of the page and then not include that section if there were no results for a particular section.

Results Summary

Before:

After:

Removed the post topics filter from the topics page
The original idea was that if someone were one a topic page for a topic that had lots of subtopics, there would be a lot of posts on that topic and it would be beneficial to allow them to filter by those subtopics. However, the Manis evaluators were confused by how the subtopics filter related to the topics browsing hierarchy in general and it was especially confusing on this page (as we allow users to navigate down the hierarchy by presenting the subtopics first in the page). Therefore, we traded power for simplicity and removed the topics filter in the posts section on this page.

Modifications to the context page
Partly in response to some feedback from Manis, Professor Hearst, and our own intuition, we made some changes to the context pages. We had a lengthy debate of somehow showing chaining history and could not reach a solution we liked as a group. The only thing we were sure on is somehow visually indicating which post a user had just come from in the chain. That post would appear first in either the "responses to this post" list or the "links from this post" list. Our current solution is another icon. For the moment, the text should be considered as placeholder until we find a better solution.

Note: The solution is still not quite working as intended. Rather than sticking to "the chain," clicking the graphic only takes the user back to the post he/she just came from, not to the one that resulted from a click on "show more context."

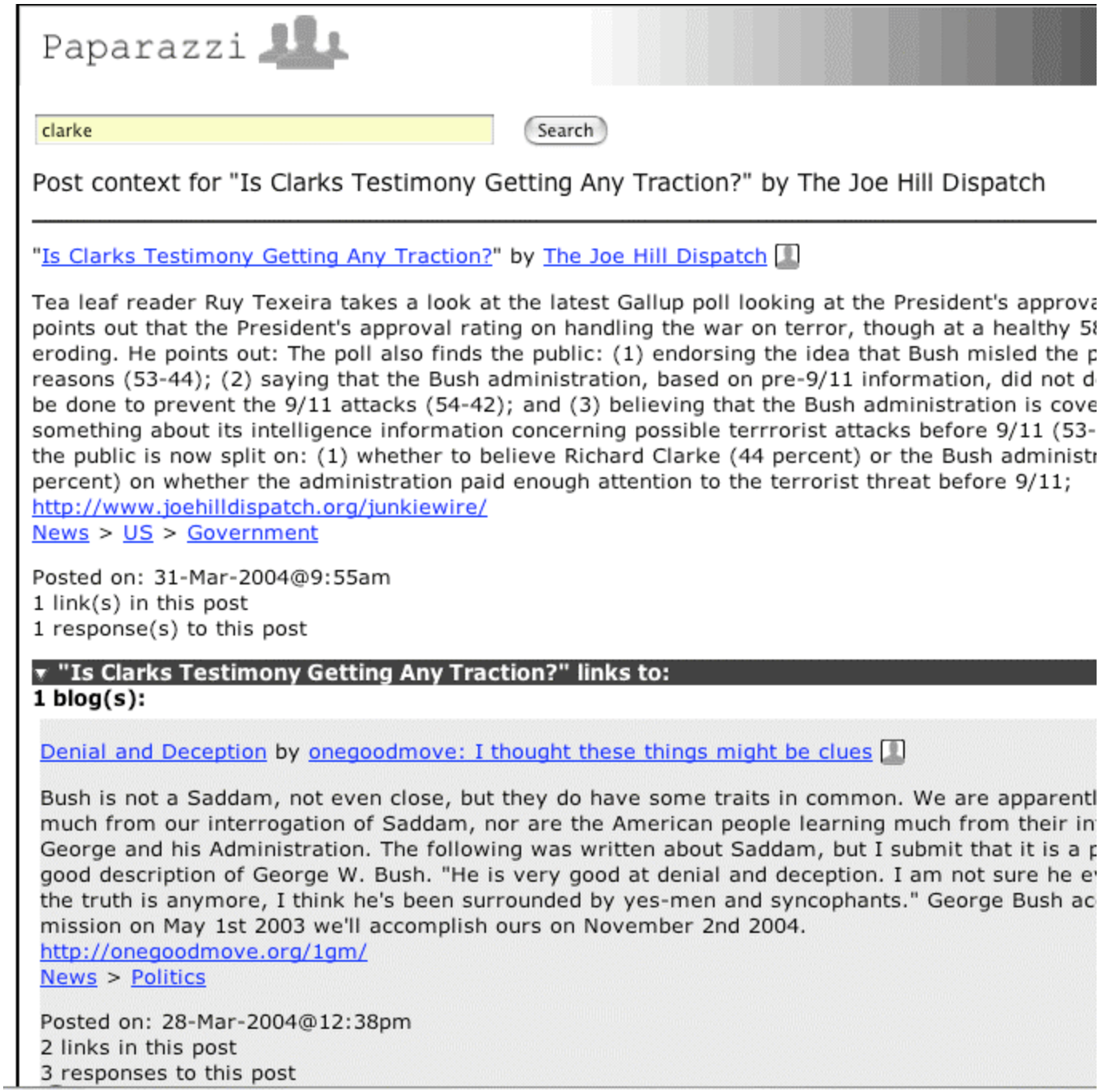
We presented some thoughts to the class on 4/12/04. They had some interesting ideas. We're still trying to figure out how to incorporate them.

We did decide to incorporate news articles in the context page. We realize that this potentially opens up many questions such as "should there be a profile page for each news source?" We decided to ignore news articles, for the moment, in all other areas outside of this page. As so many blogs link to news or non-blogs, it seemed impossible to even discuss "context" without including them here.

Finally, we switched the placement of the context sections so that chaining down took precedence over chaining up.

Context page screenshots

Layout before:



Layout after:

Context icon for where user just came from:

Icon design
One of Manis's evaluators found the icons unreadable in general and another found the profile icon confusing because of its proximity to the blog link and some inconsistencies. In general, they liked the context icon, though. We still felt we needed the profile icon rather than only a text link to the profile page. So, we made the profile icon more of a graphic that included the text "profile." While, we're not settled on a final design, we feel that this will eliminate the confusion while providing visual interest on such a text-heavy page.

Profile icon screenshots

Before:

After:

Links to "home" and "help"
While they liked having the search box on every page, the Manis evaluators wanted a way to start over from the front page of topic browsing. We considered having an "All" topics page (like any other topics page) but decided to start with having an explicit link home.

We also added a link to a general help page, though did not implement the help.

General design changes
The first interactive prototype did not emphasize visual look and feel, though it did work on layout. We were happy to see that the layout passed the heuristic evaluation. We made some changes to incorporate a softer look.

Other changes

- implemented the topics filter check-box interaction (we had a plan before the first prototype but didn't put it in our scope)
- made the search term appear in bold everywhere on the search results page
- changed ordering and layout for blog matches in the search results
- fixed a font issue we were having that did impact readability of results of first prototype

A note on visualization

First, though, we spent some time thinking about the use of some type of information visualization in the context of addressing some the heuristic violations and addressing some concerns of Professor Hearst. After some thinking and

debate, we decided that while visualization would probably be helpful in many areas (perhaps even more effective than text) even a simple visualization such as a line graph to represent post activity over time would be difficult to implement in a way that would be useful for our usability tests. For example, we could see creating some non-dynamic visualizations to put in front of users, but a dynamically driven visualization would not be easy given our group resources. And, if the visualization was not dynamically driven like the rest of our content, users just wouldn't get it. However, we have been in contact with some groups in the Info. Viz class and hopefully, there may be a way to link the work in the future.

Response to Manis heuristic evaluation

We noted above that many of the changes made were in response to violations found by Manis. Below is a summary of how we addressed those issues. The numbers at the left were ones that we provided for Manis's violations. This table only includes the level 3 violations but supports adding in other changes to less severe violations.

#	Description	Violation	Severity	Our changes
1	Initially, it's unclear how to tell which post has been linked to by the most bloggers (task 1b). Eventually I found it under "show context of this blog" (while I was browsing through the interface).	H1 Simple and Natural Dialog	3	Changes to search results format as described above addresses these issues. We have taken away the word "activity" and reformatted the results so that the high level context information stands out more.
2	The blog statistics are hard to find. The tool tip for the icon says "Profile," which doesn't necessarily suggest statistics.	H1 Simple and Natural Dialog	3	This is a task terminology issue... not sure what the right solution is right now.
8	The visual similarity of the text makes it difficult for users to distinguish between different elements of content.	H1 Simple and Natural Dialogue	3	Resolving (1) addresses this issues.
9	Users may find it difficult to navigate the site. Is the topics hierarchy meant to aid in navigation of the site? The breadcrumb structure seems to indicate that it does, but I'm not certain that was the intention.	H1 Simple and Natural Dialogue	3	After discussion with Manis, this had mainly to do with confusion about topic browsing, not site navigation. The two main changes we incorporated to address this issue were: • Changed the title of the page so that the title doesn't link and we include the hierarchy below it. Like Yahoo! • Removed the topics filter from the topics pages with understanding that this might be an advanced feature. Here we are balancing between usefulness and confusion. • Included a "home" link to allow users to get back to the main topics browsing page (which we think they will think of as the "home" page). • We are also considering an "all" topic page that effectively would show the top bloggers across all topics and

				would show the most recent posts. This could be interesting, but is not a high priority right now.
13	The 3 section headings on the search results page are too terse: Blogs, Topics, and Posts. It would be nice if there was more information about how these sections are related to the search term (e.g. Posts containing the term "Clarke").	H2 Speak the User's Language	3	We are not having a search results summary at the top of the page. If no results are found for a given section, that section won't appear below. We don't think that the problem is that the labels are too "terse." We think that the content they found when they did the search did not provide a good understanding of what they were seeing. Additionally, we are making the search terms bold.
19	Currently there is no indication of what the user entered as a search term. It would be helpful for users to know what they entered or clicked on when looking at a result set.	H3 Minimize User Memory Load	3	We have made the search term bold wherever it appears (following convention of Google).
20	Reduce the screen real-estate taken up by the post summary so more results fit on a page without scrolling, allows the user to scan more results and assess current search.	H3 Minimize User Memory Load	3	Solved by (1)
22	Inconsistent use of terms. The Context Page says "linked to..." while Results Page says "responses to..." Unclear if these phrases are supposed to mean the same thing.	H4 Consistency	3	Solved by (1)
28	Tool tips for hyperlinked icons would help users figure out what they are. Without some sort of help documentation, they may confuse some users. In general, a good help section will be essential for Paparazzi. A tagline under the site name may also help users figure out what the purpose of the site is.	H10 Help and Documentation	3	We have included a link to a main help page, though the help has not been implemented. We are also considering appropriate places to add more context-sensitive question mark icons. Manis understood those.

Prototype v3:

Paparazzi Pilot Usability Study - Interview Notes

Participant #1

John, Lawyer, 29 years old, light blogging experience and light blog reading experience. Read and listens to traditional media sources 8-10 hours a week. Uses blog and blog aggregators, going to a couple of specific blogs daily, and finds filtering by topic, publication, and via blog references to be important in his news search. Also, it is very important to him to get news information that is more than 30 days old.
Started with an explanation of the system by the tester. John understands inbound links as like trackback and that the "context will take you to the post."

Task #1

His first search was for "richard clark": though John commented that if his task were to do research for a paper, he would first want to go to the source of the actual article vs. commentary. He would want authoritative news articles, can't remember where in the interface the source was that he just saw a traditional source article. Said that maybe he should be searching on "dick clarke", though the results and his wanting to alter the search could be reflection of small data set because we are still testing. Thinks this may be a google-like tool that will do it, but not sure.

Task #2

John remembered there was a hotlink on the front page to "politics" so would browse that way.

Task #3

Noted that there were categories of news but not for people (bloggers), but Joe Hill is pretty easy to find and that his profile is well ranked. John would assume that Joe Hill was conservative because of the Andrew Sullivan links on the profile. Noted the total number of links, which looks small to him, but that could be a dataset problem also. Notes that Joe Hill is well linked to by this community.

John also noted that Joe Hill Dispatch misspelled Dick Clarke's name, and so would wonder how closely Joe Hill was following the dick clarke thing.

John noted that may have just gone in a circle with the data.. Joe Hill led John to the "price of arrogance post", but on context -- clicking through takes you back to Joe Hill listing. John was a little confused as to whether this was supposed to happen, he's not sure what's going on, looks like a circle to him.

GENERAL COMMENTS:
John though it was a "neat system" and that he would use it regularly.

Questions..
What aspects of the site that were unclear?
John: though it does make sense to him, it might be politically unfeasible, but he would identify news sources differently from blogs.

Yesterday, he was talking with a person who noted that a blog system like this where the point of the system would be to have more cohesion to follow a conversation across blogs is needed but it's also temporal, info gets stale very fast and so the system would have to accommodate that. He would expect a search on the congress to ….

John really liked the context on various bloggers, could tell relevance, could see what people are saying, because the current way of finding conversation is hard, where you either have to spend tons of time or be a blogger yourself. The idea of tracking blogs this was is very cool.

What about going in circles? can you explain that?
First, John replicated it. But after he saw the looping nature of links in the blog posts, he got the circle more clearly.

Thought the UI was well organized and clean, like the amount of excerpt, like colors, boarders.

Noted more generally that blogs are contextually lacking, because when he clicks through to the post, they don't really tell you much about what's going on in the post. They just launch into their rants, as though they expect readers to be up on them and their subjects already. But maybe there is a way to excerpt key words or get more across, without more words overall. He wonders if this is just a problem of the medium of blogs generally.

Any unexpected results occuring?
Don't remember anything like that.

How would you compare using this to other system?
He has a daily routine, WSJ, certain news sources, so the closed thing is news.google.com, likes categories there, but has stats on see the wdcpost, plus 400 stories, so he can pick and choose. Liked seeing the similar version on the number of blogs posting on the topic. So the total posts are useful, liked other stats as well.

Participant #2

Eric, 32, Lawyer, heavy blogger, heavy blog reader. 8-10 hours per week spend on news consumption, uses blog and blog aggregation sites everyday, and reads traditional news through RSS feeds, as well as clicking through RSS feeds to the traditional news sites and getting links send via email. Considers his ability to filter news by topic very important, but not so with publication. It is very important to find news information that is more than 30 days old.

Eric said the search bar seemed to him the best easiest way to search for "Richard Clarke." He would assume that 1 "link" is a response. He first saw links, then responses, and questioned what responses were in comparison, though he is not sure what the difference is between a link and a response. Would assume that a link is just a link, and a response is with commentary, though he's not sure how the system would tell this.
He noted that he's been ignoring headings, focused on the talk in the posts.

Task 1.3 seems like there are 17 different posts and there is a little discussion but not a lot, some people are pointing but there is not a threaded discussion, not add on add on add on, but "being a blogger myself, know that comments" are important across blogs.

He's not clear on how he gets to the two responses with the one link, but clicking there, apparently it is an outgoing link. Now it makes sense, can see how that works. Would click on context to get to more responses to links, without additional commentary, but don't know how you know that… but he would assume that's what it is.. he thinks that over time, after using tool, would probably figure it out.
He's not sure about the "meet the press" text, is it commentary verses a traditional article? Again thinks that once he figures things out in a system, he doesn't need to keep reminding himself over and over what things are, so figures that would happen quickly.

Task #2

This confuses him a little, in black, how the number of posts is shown.

Now after Task 2.9, get links, which are links out to other things.

Aside: he really like the design, spacing, the lines of color but in comparison, there was one page that did seem crowded to him at first.

Task #3
He would assume a profile is most if not all he would need about a blogger. He would assume that that ranking means Joe Hill is somewhat popular.

General Comments:
He really like the topic filter, like spacing, categories. Would use this system.

General Questions:
What was unclear or confusing?
"Initially, some of it is hard to understand." He thought to himself … what does this information mean, didn't read what a link was closely, wasn't sure what the profile graphic and the names of the blog, but visually he gravitated to the data verses the category. Once he had links and references in his head, then he got them.

Overall, it's pretty good, but have to get what things are, like the question mark for help. Didn't know what "activity" meant, though he knows what most recent first is, and maybe "newest first."

What do you expect to happen now? (Showing filter by activity, freshest, etc).
He said that it will resort by activity, and guesses it would mean the most numbers in the context.
If he were really interested in this, he's not sure about links verses responses, wasn't sure what would happen but got nothing unexpected. Only one thing, wasn't sure if with "A richard clarke traditional article" link, he would get a blog, or a news article, but once he clicked it was clear, so because it's one of five blogs, he's expecting blog posts.

He liked the profile because it is what he expected, liked the person icon in the name and for profiles, because he reads blogs as people, where as msnbc is a news company or an entity, and so likes the people symbol.

The search for him was not clear, wasn't sure what the scope of the search was, because other sites might search their own stuff, and then search the web, and the search box and the button are generic and so look like other ones, though once people use the search they'll know what it does once see the results, by trial and error. He got it right away but the style of the search bar and button are still generic.
Really likes the tool.

He though it could do to have arrows maybe to things inbound, or out, so directional, posts pointing to this post, verses and arrow out for links pointing out. To - from, verses the to-in or maybe it "links to other posts". Thought about a temporal filter... default 30 days, but then choose longer periods for search.. and this would be handy.

At bottom of results, like seeing page 1, 2, etc with first last and previous, next.. etc. But would want to emulate Google results at bottom.

When he clicked on Andrew Sullivan, he expected to get search results for that, not his actual blog, can search, but would expect something like the profile, with posts and context to posts. Though when he saw the profile, he figured it was more static or stats, though the stats would change…. Maybe there should be a separate profile and posts. Maybe open a new window when you go to a new site.

Participant #3

Mike, 35, web developer, has seen blogs a few times, but mostly uses chat rooms to get technical data, consumes news media 4-7 hours per week, never uses blog or blog aggregators, searches specific sites for articles. Considers it somewhat important to filter news by topic and publication, but very important to find information more than 30 days old.

Task #1

Mike sees the results as showing up with the greatest number of responses, maybe?
Sees he's finding the most respondents.

Task 1.3 He's not seeing any responses in the context box, but see numbers and links,
would expect to see other links and responses, go to a second page or sort. Seems somewhat confused.
He found two posts that linked to the "meet the press" story by searching for the title of the story in the search box.
He thought the "meet the press" link would be a blog post about meet the press, not the meet the press article.

He found the other link in the previous post.

Task #2

He forgot the task, while looking through the interface and trying to see what was there, repeated, then found profiles not linked to profile, or blogs linked through to blogs.
Seemed to understand the task and system better and commented: this is a cool product.

Task #3

Mike opened Joe Hill, then went to the Joe Hill profile, and then found ranking. Asked a question, what is ranking, popularity? Commented that it was probably some sort of hit counter, page views, number of people, relative he bets.

General Comments:
More sorting would be nice. Context is giving a little bit of a threading of conversation.
It would be nice to have thumbnails of posts to the side, to have a sense of it, something besides just text. Had the expectation of the content type, opinion or editorial, as opposed to factual bits of info.

Topics: is there a topic beyond politics, browse, might have been good to have a thumbnail of the main topics to jump around, or a sidebar so that wherever he is, there could be a dropdown that lets him jump from one area to another.

He's timestarved and lazy, so he might want the latest coolest pre-picked posts in an area so that he could just glance at it…

He got the filtering mechanism, where unchecking a filter would bring less posts because only the other filters would have posts shown, liked it. Might add stats under the orange context box… maybe rank, or something more of the context.

Pre-User Test Interview

Note:

- In the context of this interview, blog means "A weblog, newest entry at the top, updated often, with linking, and a permalink to the post, and date and time stamp."
- The interviewer will state the question and recite the available options. Where appropriate examples (show inside parentheses) will be stated.

1. From what sources do you obtain news information? (identify all that apply)
    a. Television
    b. Radio
    c. Newspaper (physical/paper)
    d. News magazine (physical/paper)
    e. Mainstream Online Sources (newspapers/publications/content sites)
    f. Non-Mainstream Online Sources (portals, weblogs, wikis, community sites, newslists)
    g. Other (please state)

    _____

2. How much time do you spend reading/viewing/listening to news per week?
    a. < 1 hr/wk.
    b. 1-3 hrs/wk
    c. 4-7 hrs./wk
    d. 8-10 hrs/wk.
    e. > 10 hrs/wk.

3. How often do you use the blog and blog aggregations sites?
    a. Never
    b. Once a month
    c. Once a week
    d. Every Day
    e. Other. If so, how often? _____

4. If you read news online, where do you go to read news information?
    a. Browse specific news sites (ie NYTimes front page or CNN.com)
    b. Browse sections and headlines by topic of interest (ie technology or business directly)
    c. RSS feeds in your aggregator from news organizations
    d. Other (please describe) _____
5. If you read news online, how would you describe your method(s) for retrieving or accessing news (identify all that apply)
    a. Read specific blogs of interest
    b. Search for specific articles on sites
    c. Use blogs to find / filter news information
    d. Click through RSS links to news
    e. Other (please describe) _____

6. How important to you is the ability to limit a search to news content within a particular topic? (i.e. news, technology, business)
    a. Very Important
    b. Important
    c. Somewhat Important
    d. Not Important

7. How important to you is the ability to limit a search for news content by publication? (e. g. New York Times or CNN.com)
    a. Very Important
    b. Important
    c. Somewhat Important
    d. Not Important

8. How important is it to have access to news which is more than 30 days old?
    a. Very Important
    b. Important
    c. Somewhat Important
    d. Not Important

Paparazzi Pilot Usability Test - Tasks

Thank you for participating in our test of the Paparazzi interface. Paparazzi is designed to enable people to search a large, up-to-date database of blog entries, to browse topics, and to monitor specific blogs and statistics about them. It is also designed to enable people to follow discussions that occur in blogs, by allowing them to see when a blogger has responded to an entry made by another blogger, and vice versa.

Before we begin, I would like to walk you through the various parts of the interface. The first area is the topics browsing area, which is much like Yahoo! Or Google Directory. From here you can either pick a topic and browse, or perform a keyword search.

A keyword search will display results for specific blog site matches, where a keyword has matched a word in the title of a blog. It also displays for topic matches, where a keyword matches one or more topics in our list. Finally, it will match keywords in individual blog posts.

From here, one can see a blog profile, where statistics and new posts can be found. You can also see the "context" of a blog entry—that is the posts that this post links to and the posts that link to this post.

This is by no means an exhaustive list of features, but we just wanted you to get the feel for the interface before we begin.

I will be giving you several tasks to complete. I, along with my teammates, will be using your actions to evaluate the interface. We are testing the interface, not you. So if you ever feel frustrated during the test, please let us know, as this is something we would like to prevent in our final design. As you perform the tasks, we would like you to think-aloud. That is, try to explain what you are thinking as you read, look at the screen, or click the mouse. The more information you can provide, the better. I may ask you to explain what you are thinking in order to encourage you to share this with us.

If at any time you feel uncomfortable and would not like to continue, simply let us know.

Context:
You are researching the Richard Clarke story for an article that you have to write. In addition, you will have to give a presentation on your findings. Your angle is to try to get a sense of what alternative media sources are saying about the story. You have come to Paparazzi to help you do this investigation.

Task 1
Search the Paparazzi web site for "Clarke." Look through the results and determine which blog post or news article has received the most response from bloggers. How many posts responded? How does this number compare to some of the other results?
Open up this post or article. When you're done, go back to the search results and find the titles of the blog posts that responded to this post or article. How many blogs responded in turn to these posts?

Task 2
You want to gain a better understanding of who is blogging on the issues related to politics. How many posts are there on this topic per day? Name the three bloggers who blog the most about politics. What is the title of the most recent post on this topic? Which post links to the most articles or other blogs? Which post has the most responses?

Task 3
The Joe Hill Dispatch is a blog that has spent a lot of time covering the unfolding story of Richard Clarke. You want to learn a bit more about this blog. Open up the Joe Hill Dispatch. Using Paparazzi, you can find more information about this blog. What is the ranking of the Joe Hill Dispatch? Who are its authors? How many blogs have responded to this blog's most recent posts?

Paparazzi Pilot Usability Test - Post Test Interview

We started the discussion with the following five questions and then asked questions specific to things that came up during the test itself.

- What aspects of using the site were unclear or confusing?
- What aspects of the using the site did you find clear?
- What tasks did find frustrating to complete?
- What, if anything, happened during the test that was unexpected?
- How would you compare using this site to your experiences with other news sites or other information sources?

Future Plans for User Testing: A Formal Experiment Design

The purpose of this study would be to determine which terminology should be used in the Paparazzi interface to distinguish between links that are in a blog entry but link to other sites and reference or links to a blog entry from other blog entries. This study would also inform our development of the Paparazzi help system.

Background

The Paparazzi interface enables users to follow blog chains in two directions. We have tried different versions of this language in every one of our prototypes. Each time, there has been confusion for our users. The model that we have is that there are different types of links associated with a particular blog entry. Some are links in from other entries. Some are links out from that blog entry to other articles or entries. Additionally, we believe that some of this confusion may come from the fact that in our user tests, written or spoken tasks are phrased using a particular set of terms and may strongly influence the user's interpretation (and amount of user misunderstanding). In some sense, this language introduces an element of artificiality to the user task as we do not know exactly how a user might describe a given concept internally. Therefore, testing language will also reveal users' mental models of blog linking to some extent.

Variables

Factors (independent variables)

- Terminology used to describe links out from a blog entry and language to describe links in from a blog entry as a pair. We will not test these independently, as we are confident from our previous user tests, heuristic evaluation, and other feedback that the language for each reinforces and helps define the other. Some of the phrases will be those that we have already tried in previous user tests, and some will be new (still to be determined).
- Terminology used to phrase these concepts in tester-supplied tasks.
- Order of the tasks
- Level of blog expertise/usage (see below under "Participants")

Response variables (dependent variables)

- Time to complete the task
- Number of clicks total
- Number of "unnecessary" clicks (a type of error)

Hypotheses

- Users will perform the best for every response variable when the terminology in the task matches the terminology in the interface.
- Users will perform better on tasks that follow the language match than those previous (the terminology match will also serve to educate users on how the interface works)

Sources of error

- The visual layout of the language. How the language appears visually in the screen may influence user preference, independent of word choice.
- Accounting for which task follows the "matching" task

Design implications

The goal is to use terminology that makes the linking model as transparent as possible, so users can easily understand how it works. If one set of terms seems to work much better, then we will use that set in the interface. However, even if no phrase pair out performs the other, the test will not be a failure, as it will show that either both sets of terms are difficult to understand or that there is not a universal mental model to describe blog chains and the tasks of moving up and down through them.

Design and blocking

Participants

32 participants, all with a baseline familiarity with blogs. We will then use a screening process to try to map them on a continuum of blogging expertise, which will be a factor of the participation in blogs (writing, reading, or commenting). We will then split the group of 32 into two groups along the median of this continuum.

Between subjects factor

- Terminology in the interface

Within subjects factors

- Level of blog expertise
- Language of the tasks as supplied by the testers
- Order of the tasks

Blocking

We will randomly assign participants to 2 different versions of the language, resulting in 2 groups of 16. However, these groups will contain an even number of people from each of the groups formed when splitting along the continuum of usage (as described above) to ensure that not all novice or expert users end up in the same condition.

Each group will get 4 different tasks, one of which has language to match the interface. Thus, groups of 16 are subdivided into 4 groups of 4, each one seeing a different combination of the tasks.

Example for one between-subjects group:

1 (m)	4	3	2
2	1 (m)	4	3
3	2	1 (m)	4
4	3	2	1 (m)

Note that the between subjects groups of 16 would not get the exact same tasks, but they would get the same "pattern" in terms of where the matching task appears.

Interface Language to Test

X response(s) to this entry (existing)
Y links in this entry (existing)

X links to this entry (proposed)
Y links from this entry (proposed)