

Snap_{mail}

SI 682 Final Report
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0. Executive Summary

It's common for even a moderately busy person to have an email inbox containing 500 or more messages that are cross sections of their work and personal lives. Because messages often concern tasks a user needs to accomplish inboxes have become the de facto "to do" list for many. Current email applications are horribly inadequate at helping users sort, organize, and prioritize their messages and tasks. We address these shortcomings in Snapmail by giving users more ways to manage email. We want users to be able to quickly determine if an email needs immediate attention, and if not to mark the message for later handling.

Snapmail is intended primarily for people who work on many projects (both work and personal), use email to keep track of their tasks, and are overwhelmed with the amount they need to keep track of.

Snapmail is the future of electronic communication.

Swapnaa, **N**icole, **A**my, and **P**ie(Trek)

1. Planning

1.1 Planning Schedule

We will meet weekly or twice weekly as necessary and adhere to the following schedule to complete all components of the project:

	Item	Due Date
1	Competitive Analysis	10/7
2	Scenarios	10/7
3	Full Proposal	10/12
4	Structural Design	10/31
5	Visual Design	11/18
6	Production and Design Specs	11/28
7	Final Report	12/7

1.2 Division of Labor

Though we will work together on all aspects of the project, each team member will be responsible for overseeing one particular aspect of our work. This team member will work with the group to decide on the appropriate division of labor within each component. Amy will oversee the project as whole, and be responsible for meeting agendas, deadlines, and deliverables.

1. Planning

1.2 Division of Labor (cont.)

Task	Team Member	Due Date
Executive Summary	Trek/Amy	12/5
Requirements Definition		
Target Audience	Amy	10/7
Target Platforms	Amy	10/7
Business Goals	Nicole	10/7
User Goals	Swapnaa	10/7
Requirements Specifications	Trek	10/7
Personas		
Small Business Owner	Nicole	10/5
Secretary to CEO	Trek	10/5
Graduate School Student	Swapnaa	10/5
Competitive Analysis		
Mail.App	Trek	10/3
Pine	Amy	10/3
Outlook Express	Nicole	10/3
Mozilla Thunderbird	Swapnaa	10/3
Task Analysis		
Getting Mail	Nicole	10/31
Sending Mail	Nicole	10/31
Replying to Mail	Trek	10/31
Forwarding Mail	Amy	10/31
Sorting Mail	Amy	10/31
Storing Mail	Trek	10/31
Accessing Stored Mail	Swapnaa	10/31
Searching Mail	Swapnaa	10/31
Tagging Mail	Trek	10/31

Delaying Mail	Trek	10/31
Setting Mail to Auto-Archive	Nicole	10/31
Working with Mail in the Snapback List	Amy	10/31
Creating Folders	Trek/Nicole	10/31
Creating Tags	Swapnaa	10/31
Getting Help	Nicole	10/31
Prototyping & Storyboarding		
Main Window	Swapnaa	11/15
Tagging Mail	Trek	11/15
Setting Mail for Snapback	Trek	11/15
Sorting Mail	Amy	11/15
Snapback Window	Amy	11/15
Storing Mail	Nicole	11/15
Archiving Mail	Nicole	11/15
Roughs	Swapnaa/Nicole	11/15
Final Drawings	Trek	12/4
Final Report	Amy	12/5

2. Requirements Definition

2.1 Target Audience & Target Platform

Target Audience

The target audience and user base for Snapmail is:

- 15 to 65 years old
- A U.S. resident
- English-speaking
- Students, small business owners and employees, or anyone who uses email as a task-oriented application. These individuals use email as part of their daily routine, beyond casual communication
- People who receive a large volume of email on a regular basis and have difficulty keeping track of it

Target Platforms

The target platforms for Snapmail are:

- Windows 2000, ME, XP, Vista
 - o At least 256 MB RAM
 - o At least 1.5 GHz Processor Speed
 - o At least 500 MB of free space
- Mac OS X
 - o At least 512 MB RAM
 - o At least 1.0 GHz Processor Speed
 - o At least 500 MB of free space

2. Requirements Definition

2.2 Scenarios

Frank's Profile

Frank Jensen is a 58-year-old small business owner living in a suburb of New Jersey. He manufactures custom metal components primarily for companies manufacturing interiors in high-end office and loft spaces in New York City. He used to work for a larger company in a similar industry, but about five years ago he decided to work for himself. He has a staff of three in a small shop in Queens, and does all of his own managing, planning and much of his bookkeeping.

Frank has been using computers for about 15 years, but uses them at a pretty elementary level. Frank likes reading computer magazines, but with each passing year, he understands less and less of what is going on. He's had some problems with spyware, and has been known to call his children to ask for help when he can't install software or hardware. He likes the idea of using computers, but is usually too busy to be able to devote the time he needs to get more comfortable with them.

Frank has a mid-range PC at work, and another at home. He does most of his work at work, but sometimes does bookkeeping or project planning at home. Frank emails his grandchildren and relatives sometimes, and takes a lot of pictures on his digital camera. His files are pretty disorganized on his computer, especially the pictures. He likes looking at auctions on eBay, but he's never actually bought anything on it.

Frank: Small Business Owner



2. Requirements Definition

2.2 Scenarios cont.

Frank's Story

Frank arrives at work on a Tuesday and greets two of his employees. He turns on his computer and opens up his email. As he's checking his messages, he gets a message in his inbox that he earlier set to return at this time, reminding him about a meeting he has later this morning in Manhattan. He also gets a message that he set to return on this day in his inbox from his third employee, reminding him that she is taking a day off.

Frank takes a look at the window that contains emails of things coming up this week, and notes that he is meeting with his accountant on Friday, and has to place an order with a supplier by Thursday for a project that is coming up. Frank sets the email about the meeting with his accountant to return in the middle of the afternoon, so that he can work on the spreadsheet and gather the receipts he needs to prepare for that meeting. He decides to print out some old orders from his supplier so that he can call her later in the day and discuss prices with some concrete numbers in hand. He clicks on his "Suppliers" folder, and then clicks on the "receipts" tag, which highlights all the messages in that folder that have been tagged as receipts. While he's printing out a few of the most recent ones, he looks again at his list of emails describing things to do this week.

He sees that he has to deliver some work later this week, so he rolls up his sleeves and spends a couple of hours working on the heavy equipment in the next room. He goes off to his meeting in Manhattan afterwards, and comes back to the office after lunch. He sits down again at his computer and sees that he has three new emails. One is a shipping notice from a supplier, which he tags "delivery," and he sets it to return two days after the expected delivery date so that he can follow up if the delivery doesn't arrive. Another email is from a customer who is making changes to some specs on something Frank will be working on tomorrow. Frank tags the email with the name of the customer and sets it to return the next day in the morning. The last email is from his daughter, and it includes pictures of his newest grandchild, who has just started crawling. He calls his employees over to see the pictures, and then moves the message into his "Family" folder, and tags it "pictures" and "grandchildren."

Frank heads back into the shop to do some more work away from the computer. When he gets back to his desk at 4, he has the email he earlier set to return in his Inbox, reminding him to work on the things for his accountant. He also has an email there reminding him about having dinner with his wife and friends at 7 that evening. He deletes that email and gets ready to leave for the day. It's too late for him to work on the bookkeeping, so he sets that message to return to him at 10 that evening, and attaches the excel spreadsheet he's been working on, so that he can do it at home if he has time. He uses the same email program at home, and all of his folders and tags are stored in some way that lets him access the same information. If he doesn't get around to the work at home, he'll get the message in the morning at work when he comes back and do it then.

2. Requirements Definition

2.2 Scenarios cont.

Frank's Requirements

- Ability to set email to return to his inbox at a certain date and time
- Ability to mark mail quickly by several topics at one time
- Ability to search by a variety of tags
- A small Inbox so he does not feel overwhelmed by Email

2. Requirements Definition

2.2 Scenarios cont.

Ann's Profile

Ann is a 52 year old secretary for the CEO of ABC, Inc, a medium sized advertising company in Chicago. She's worked at ABC for 6 years and enjoys the faced pace work. Although she is technically only supposed to work for the CEO she is often assigned smaller side projects by other executives in the company.

Although she wouldn't consider herself a computer expert she is very comfortable using the software package required for work. Ann generally likes using computers when they make a job easier, but tends to avoid using them if doing things "the old way" is faster. She has a computer at home and regularly emails her two daughters. Because he husband's job hasn't involved technology (he's a plumber) she is definitely the "computer pro" at home.

She uses a Windows machine at work(because the CEO needs her to be able to use a few Windows-only programs – most notably Microsoft Outlook), but in purchasing her newest computer at home she asked for a recommendation from the ABC tech department and they suggested a Macintosh. She purchased an iBook which she really likes and sometimes brings to work with her.

Ann: Secretary to CEO



2. Requirements Definition

2.2 Scenarios cont.

Ann's Story

It's Friday afternoon and Ann is sitting at her desk adding some appointments into her boss's calendar in Outlook. Because other departments at ABC and outside clients don't all use Outlook Ann receives requests for appointments via email and adds them manually into outlook.

While she is adding new appointments she gets three new emails. The first is from one of her daughters asking a question about an upcoming trip, the second a notice from someone at ABC about a company barbecue next weekend, and the third is a question from her boss that will take some investigating to answer. She tells the email from her daughter to come back in an hour (on her lunch break), adds "Company", "Fun" tags to the second email about the picnic and sets it to return Wednesday afternoon as a reminder, and tells the third email to return in 20 minutes (when she expects to be done with scheduling).

Ann completes scheduling faster than she thought, so she looks in her "Upcoming Mail" folder to see any items she's set to return in the near future. She sees the email from her boss about a project and starts gathering the information she needs to answer his questions. While she's working on it she gets several more emails that she can deal with later, so she sets them all to return at 1PM today (after lunch) and continues working on her project.

At 12, the start of Ann's lunch break, the email from her daughter appears in her inbox again. She answers her daughters question and heads off to lunch.

At the end of the day, Ann goes home to her apartment. Her husband has left a note that he is taking care of an emergency flood at a nearby store and might be gone late. Ann makes herself a small dinner and checks her email while eating. Her other daughter has sent pictures of the new grandkids. She spends some time looking at those and forwards a few to her friends. A new work email arrived from some one the Design department people. Ann reads it and, deciding it isn't an emergency, sets it to return Monday 9am.

Ann's Requirements

- Ability to postpone email until a later date
- Ability to sort email by multiple criteria
- Easily store email into folders for later viewing
- A mechanism to prevent missing important messages that require action taken from her boss

2. Requirements Definition

2.2 Scenarios cont.

Mark's Profile

Mark is a 28 year old freelance graphic designer from San Francisco who recently enrolled in a graduate program in information at the University of Michigan. He has taken 4 classes this semester and he still does graphic design to support himself through grad school. He has been using both IBM and Macintosh computers for more than 10 years and he uses both of them for his design work. He plays on the Ann Arbor Ultimate league and he also loves to attend classical music concerts.

Mark: Grad Student & Graphic Designer



Mark's Story

Mark needs to use his email for almost everything he is involved in at school and also for his freelancing. He receives important emails from his professors regarding classes and assignments almost everyday and he marks them as important so that he won't forget to get to them when he has the time. He is often notified about his Ultimate game schedule through an email list and he keeps track of them in his planner (paper booklet). Mark is also involved in 3 group projects and hence has to keep in touch with his group mates regarding their work and meetings. He uses his email as well as his planner to remind him of deadlines and meeting schedules.

Mark is also interested in a variety of events happening around the campus (including music concerts) that he gets notified about, and he likes to keep a tab on when he can or cannot make it. His school also organizes a host of career services and lectures that he would like to attend and tries to remind himself in various ways, including sending himself emails and writing on his hand! Since he uses his laptop, campus computers and his desktop for various purposes, he emails himself many work and personal files so that he will have access to them at any time. Of course Mark's friends party a lot and keep sending him information about birthdays and happy hours that he wants to keep track of. Every week, Mark spends a few hours simply going through his email and trying to manage his schedule during the week. Sometimes he finds himself viewing the same emails multiple times to ensure that he has either completed the task or scheduled the events associated.

2. Requirements Definition

2.2 Scenarios cont.

Mark's Requirements

- Tag emails with multiple criteria such as class name, project name, and team members
- Set emails with a "due date" closer to when the events are going to happen so he can decide if he has time to go more near to the event

2.0 Requirements Definition

2.3 Business & User Goals

Business Goals

- Create an email platform that is easy to use, easy to understand, and useful for our target audience
- Enable busy people to easily organize their email so that “to-do” tasks are viewable and at the forefront of the application
- Create a product that allows users to use email for “to-do” tasks, something no other email program does
- Successfully market to college students and small business owners initially
- Perform research and usability testing so that future versions reflect evolving user needs

User Goals

- Easily store email into folders for later viewing (Ann)
- Integrate searchable tags into message metadata (Frank, Mark)
- Mark email that contains a “to-do” component that needs to be processed at some time in the future. Easily view the list of “to-do” emails in an organized fashion so that none are missed or left undone (Frank, Ann, Mark)
- Set messages to return to the inbox at a later time that don’t need to be processed immediately, but are important and should be brought back to the user’s attention (Frank, Ann, Mark)
- Allow arrangement of email independent of usual sorting methods (date, alphabetical by name, subject, threading) (Ann, Mark)
- Keep the Inbox relatively small (10 to 20 messages) (Frank, Ann)

2. Requirements Definition

2.4 Usability Objectives

Usability Objectives

- Multiple way of performing the same actions
- All actions can be performed using a keyboard and a mouse
- A maximum of 5 clicks will be required to accomplish any task
- Color can be used as a functionality (like marking messages in different colors to mean different things), but it will not be required to do so
- Contextual help will be provided help when needed
- Any email can be processed (or organized) more quickly than in competing mail programs.
- Any email marked as an “upcoming task” can be retrieved within 30 seconds.
- Archived emails can be retrieved faster than in competing mail programs.
- Functionality will increase as the user familiarizes him/herself with the interface (beyond the scope of this project)

2.5 Requirements Specifications

Requirements

- “Delay” message for further processing
- Delayed messages become prominent at times when they needed to be processed
- Sort messages into folders (actually tags, but appear as folders)
- Search by multiple criteria
- Sort messages from current folder by multiple criteria through column headers
- Works with IMAP and POP3
- Cloud Tagging for messages
- Ability to Color Code for further organization
- Smart Folders
- XML tagging for all email
- Ability to forward email
- Ability to reply to email, and reply to all

2. Requirements Definition

2.5 Requirements Specifications (cont)

- Message Threading
- Rules for moving messages into Trash and Junk
- Email Flagging by multiple criteria
- Searching
- Advanced Searching
- Help section
- Tagging compatible with other email programs via a line in the header
- Creates symbolic links on IMAP server so folders on IMAP server will reflect tags in Snapmail

2. Requirements Definition

2.6 Competitive Analysis

A competitive analysis was performed to evaluate the features in competitor products that were most closely associated with the sorting, storing, and retrieval of e-mail messages.

We performed a competitive analysis on the following e-mail clients:

1. Mail.app (*OS X*)
2. Pine (*Unix, OS X, Windows*)
3. Outlook Express (*Windows*)
4. Thunderbird (*Windows*)

The features we analyzed are as follows:

1. Main Layout
2. Threading
3. Folders
4. Search
5. Sort
6. Rules
7. Virtual Folders
8. Archiving
9. Help

Please see Appendix B for Detailed Competitive Analysis.

2. Requirements Definition

2.7 Inventory of Interface Elements

Mail Boxes

Mail	Thunderbird	Pine*	Outlook	SnapMail
Inbox 	Inbox 		Inbox 	Workspace 
Outbox 	Unsent Messages 		Outbox 	
Sent Mail 	Sent Messages 		Sent Items 	Sent 
Local Accounts 	Local Folders 		Local Folders 	
Remote Account 	Email Source 		Outlook Express 	
Drafts 	Drafts 		Drafts 	Drafts 
Trash 	Trash 		Deleted Items 	Trash 
Junk Mail 	Junk 			Junk 
Folder 	Folder 		Mail Folder 	
Smart Folder 				Tags 
				Archive 

*As a command line tool, pine does not have any graphical icons.

2. Requirements Definition

2.7 Inventory of Interface Elements (cont)

Message Manipulation

Mail	Thunderbird	Pine*	Outlook	SnapMail
Save Message as Draft 	Save 		Save 	Save 
Send Message 	Send 		Send 	Send 
Delete Message 	Delete 		Delete 	Delete 
Mark Message as Junk 	Junk 			Junk 
Forward Message 	Forward 		Forward 	Forward 
Reply All to Message 	Reply All 		Reply All 	Reply All 
Reply to Message 	Reply 		Reply 	Reply 

As a command line tool, pine does not have any graphical icons.

2. Requirements Definition

2.7 Inventory of Interface Elements (cont)

Column Content

	Mail	Thunderbird	Pine*	Outlook	SnapMail
New Message					
Replied					
Replied Rollover					
Forwarded					
Forwarded Rollover					
Redirected					
Very High Priority					
High Priority					
Flagged					
iChat Buddy Available					
iChat Buddy Away					
Attachment Included					

As a command line tool, pine does not have any graphical icons.

3. Task Analysis

3.1 Getting Mail

The default is for mail to be retrieved every 5 minutes when the user is online. This setting can be changed in Preferences.

1. Click on the "Get Mail" Icon on the toolbar.

3.2 Sending New Mail

1. Click on the "New Message" icon at the top of the main screen [A compose message window opens.]
2. Type your message and subject and fill in the names of people you are sending the message to. Names of recipients will autocomplete as enough of the name is entered.
3. Click "Send" when you are ready to send the message. [The window closes, and a copy of the message is stored in the "Sent" location.]

3.3 Replying to Mail

A single message must be selected for this to work.

1. Click on the "Reply" icon in the toolbar. [A new window appears with the contents of the message quoted, and the subject and to fields already filled out. The cursor is at the top of the body.]
2. Type your message
3. If needed, click "Reply All" to change the messages recipients to all people from the original message in the "To:" and "Cc:" fields
4. Click the "Send" icon in the toolbar

3. Task Analysis

3.4 Forwarding Mail

Option 1:

1. When a message is selected in the main window, click on the "Forward" icon in the toolbar at the top of the window. [A new window opens with "Fwd: [original subject]" as the subject.]
2. Enter the names of recipients. The message subject and body can be edited as well.
3. Click "Send." [The window closes. A copy of the message is saved in the "Sent" messages location.]

Option 2:

1. If the message is open in its own window, click on the "Forward" icon in the toolbar at the top of single message window. [A new window opens with "Fwd: [original subject]" as the subject.]
2. Enter the names of recipients. The message subject and body can be edited as well.
3. Click "Send." [The window closes. A copy of the message is saved in the "Sent" messages location.]

3.5 Sorting Mail

Default sorting is descending by date.

1. In the currently selected mailbox, mouse over the area next to the heading name to see an up arrow. Click on this arrow to sort by ascending order, and the arrow will become opaque. A number will appear next to the arrow to show if this is the first sort parameter, or the second, third, etc. The default is for that number to be the lowest number not already appearing on the screen.
2. Click the arrow again to change it to sort descending, which is represented by a down arrow.
3. Click the arrow again to stop sorting by that heading.
4. Click the number on the column to change the sort order. Each click reduces the number by one. Command-click reduces the number by one. (For example, clicking on 2 will change it to a 1.)

3. Task Analysis

3.6 Archiving Mail

1. When the message(s) are selected in the main window, click on the "Archive" icon in the toolbar at the top of the main window.
2. The message(s) selected disappear from their current folder (e.g., Workspace or SnapBacks), and appear in the Archive location.

3.7 Accessing Archived Email

1. Click on the location "Archive" either at the top of the list of messages or in the upper section of the left pane. [The list of messages will update so that only archived email appears in it.]
2. To see emails with a particular tag, type the name of the tag in the search field (upper right of main window) and click on "Tag" in the area just below the search field. Messages matching search terms appear as you type. You can also use the advanced search process to view archived email with specific tags.
3. Scan through the returned list of messages. Apply the sorting email process to sort the list if necessary.
4. Click on any email to view it.

3.8 Searching Mail

Simple Search

1. Enter a search term in the search field in the upper right of the main window.
2. The location searched is the one already selected in the left part of the section just above the list of messages (a la iTunes). The default location upon opening Snapmail is "Workspace." To change the location searched, click on another location name, e.g., "Archive" or "Snapbacks."
3. The default is to search all fields for that word or words; "All" is selected in the right part of the section just above the list of messages. To change the field searched, click on the field name in this list, e.g., Subject or Tags.

3. Task Analysis

3.8 Searching Mail (cont)

Advanced Search

1. Click on the magnifying glass in the search field to open the Advanced Search window.
[The Advanced Search window opens between the bottom edge of the toolbar and the top of the list of messages.]
2. The default Advanced Search has just one line of drop down menus containing search options. Choose the way of searching from the first drop down menu. Examples are "From," "Date Received," and "Message is Tagged with."
3. The contents of the second drop down menu change to reflect the choice made in the first one. For example, if you chose "From" in the first field, the second field will let you choose between "Contains" and "Does not contain," and a blank field appears to the right. If you chose "Date Received," the second field will let you choose between "is in the date range" and "is the exact date," and the third area will show either one or two fields, depending on your choice of second field. If you chose "Message is Tagged with," the second field will update with the list of tags.
4. To add additional lines of drop down menus, click on the + sign at the end of the line of drop down menus. To remove a line of drop down menus, click on the – sign next to it.
5. Message list updates as you enter search parameters.
6. Click OK to remove the advanced search window.

3.9 Tagging Mail

Option 1:

1. Click on the message or messages you want to tag.
[A list of suggested tags, based on the contents of the message, appear at the top of the individual message pane. All tag listings are listed in order of popularity. Tags in the left pane always include the tags for the message selected, and other tags listed are the most popular tags. If the list of tags for a message exceeds the space for tags, click on "More Tags" to see a complete list of tags for that message.]
2. Click on a tag name to select it for the message(s). It will turn dark grey, and the text will turn white.
3. If the tag is not in the list of recommended tags, enter the tag name in the blank field to the right of the recommended tag list. As you enter a tag name, existing tags matching the letters you have entered appear by frequency of use. Continue typing until you see the name of the tag you want in the field, arrow down to the tag you want, or use the mouse to select the tag from the list that appears. Then hit enter. The tag will be added to the list at the left and in the list of recommended tags.

3. Task Analysis

3.9 Tagging Mail (cont)

Option 2:

1. Click on the message or messages and drag to the tag name in the left pane.

Option 3:

1. Click on the tag name in the left pane and drag it to the message.

3.10 Having Mail Snapback

Having mail snapback is possible when one or more messages from the Workspace are selected. Following these instructions for more than one selected message will snapback all selected messages for the date specified.

1. In the field next to "Snapback:" above the short message headers, type in the day you want the message to snapback and press enter. Examples of things you can type into the field are: today, tomorrow, next Friday, March 14, 3/14/05, etc.
[The message then appears in the Snapbacks list in the time area describing the date of snapback. The message disappears from the Workspace. When the date of the snapback ends, the message goes back to the Workspace, unless it was set to auto-archive.]

3.11 Setting Mail to Auto-Archive

1. When a single message is selected, either in the main window or in its own window, the area above the headers contains a field labeled "Archive."
2. Type the date you want the email to be archived in the field. The date can be written as a relative date (e.g., now, tomorrow, next Friday) or as an absolute date (e.g., March 14, 3/14/05)
3. If you type "now," the message will immediately disappear from the selected folder and appear in "Archive." If you type another date, the message will move to the "Archive" location from its current location on the given date.

3. Task Analysis

3.12 Working with Mail in Snapback List

Change View of Snapback List

1. Click "Snapback" then "Change View" from the menu [A window will pop up.]
2. Select from checkbox list categories for viewing. Select from:
 - a. This Hour
 - b. Next Hour
 - c. Today
 - d. Tomorrow
 - e. 3 days from now
 - f. 4 days from now
 - g. 5 days from now
 - h. 6 days from now
 - i. This Week
 - j. Next Week
 - k. 2 Weeks From Now
 - l. 3 Weeks From Now
 - m. This Month
 - n. Next Month
 - o. 2 Months From Now
 - p. This Year
 - q. Next Year
 - r. 2 Years from Now
3. Click OK.

Snapback messages will appear in the earliest possible category they fall into.

View or Hide Snapback List:

Click Snapback heading (in green) in the right pane to collapse and expand view of Snapbacks.

View Message in Snapback List:

1. Double click on an individual message to pop up the message
OR
1. Click on "Snapbacks" from the top of the mailbox view box to display messages in the Snapbacks list in the main message list.

3. Task Analysis

3.12 Working with Mail in Snapback List (cont)

Set Flags and Colors for “Crucial” Messages:

1. Click “Set Flags and Colors” from “Snapbacks” menu at the top of the screen. [A window will pop-up.]
2. Select “Set Flags.”
3. Choose Type of Flag (Icon based) from drop down list. Next to the list of Snapbacks sort criteria, choose a color to auto-set flags based on due date

3.13 Creating Tags

Option 1:

1. Click on “Add Tag,” which is the second to last option in the list of tags in the left pane.
2. A tag with the name “New Tag” appears just above the “Add Tag” icon. “New Tag” is highlighted for immediate editing.

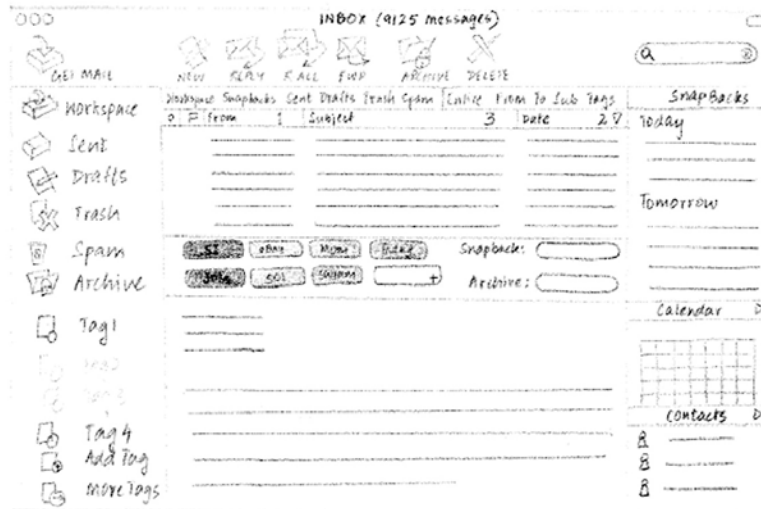
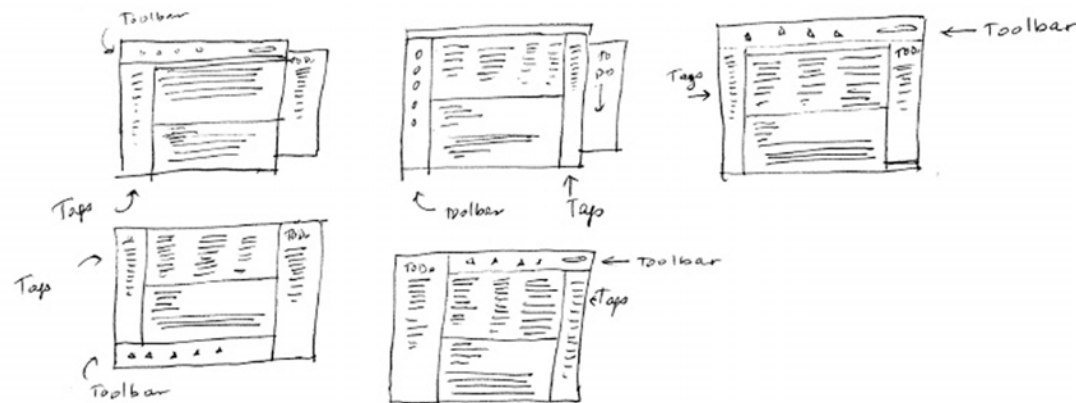
Option 2:

1. As you are tagging a message, type a tag name into the empty field next to the list of recommended tags. A new tag will automatically be created with that name.

4. Prototypes

4.1 Main Window

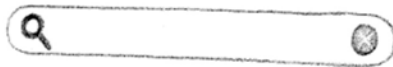
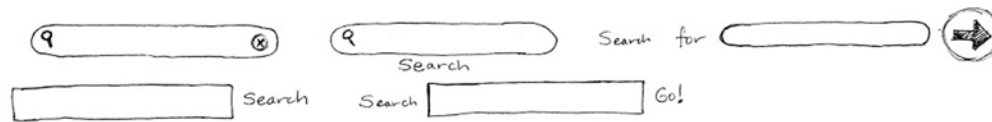
4.1 Main Window



4. Prototypes

4.2 Search

4.2 Simple search



4. Prototypes

4.3 Advanced Search

4.3 Advanced Search

The image displays five hand-drawn prototypes of an 'Advanced Search' interface, arranged in two rows. Each prototype shows different combinations of search criteria and controls.

- Top Left:** Titled 'Advanced Search'. It includes fields for 'Search in' (with a dropdown menu) and 'for' (with a text input). Below this is a checkbox for 'Find messages with attachments' and a date range selector 'Find messages received within [] of []' with a 'by the month' label. At the bottom are 'Search' and 'Cancel' buttons.
- Top Middle:** Titled 'Advanced Search'. It features a 'Search in' dropdown, an 'AND' dropdown, and a 'for' text input. Below is a date range selector 'Search for messages made between [] and []' with a 'date' label and a checkbox for 'Only with attachments only'. At the bottom are 'Cancel' and 'Search' buttons.
- Top Right:** Titled 'Advanced Search'. It includes a 'Find' dropdown, an 'AND OR NOT' dropdown, and a 'in' dropdown. Below is a date range selector 'Search within [] of []' with a 'date' label. At the bottom are 'Cancel' and 'Search' buttons.
- Bottom Left:** Titled 'Advanced Search'. It features a 'Search for' text input, an 'in' dropdown, an 'AND' dropdown, and a 'in' dropdown. Below is a checkbox for 'Attachments only' and a date range selector 'Search between [] and []'. At the bottom are 'Cancel' and 'Search' buttons.
- Bottom Middle:** Titled 'Advanced Search'. It includes a 'Content' dropdown, a 'Search for' text input, an 'in' dropdown, and a 'in' dropdown. Below is a checkbox for 'Search for messages with attachments' and a date range selector 'Search between [] and []'. At the bottom are 'Cancel' and 'Search' buttons.

The image shows a hand-drawn prototype of a search criteria selection dialog. It is titled 'Contains messages which match (all) of the following:'. Below the title are three rows of criteria, each with a dropdown menu, a text input, and a '+' or '-' button:

- From [] Contains []
- Date [] from around [] [12/28/04] [12/28/05]
- Tag [] [to mom]

At the bottom are three checkboxes:

- ☐ Include messages from Trash
- ☐ Include messages from Sent
- ☐ Include messages from Archive

At the bottom right are 'Cancel' and 'OK' buttons.

4. Prototypes

4.4 Sorting

4.4 Sorting

Inbox (To Do) Archive Drafts Sent Trash
Subject ▼ Sender ▼ Date ▼ Size ▼

Sort By Subject ▼ then Sender ▼ then None ▼ Sort

Subject ① ▼ Sender ② ▲ Date ► Size ►

Subject ▼ Sender ① ▼ Date ② ▲ Size ③ ▼

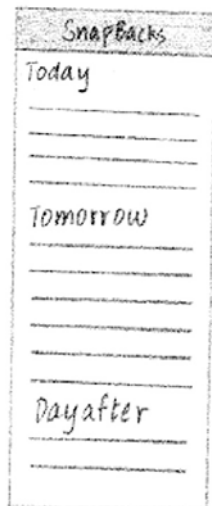
Sort By
Sort by Subject ▼
then Size ▼
then None ▼
Sort Cancel

From 1 ▼ Subject ► Date 2 ▼ Size ►

4. Prototypes

4.5 Snapback List

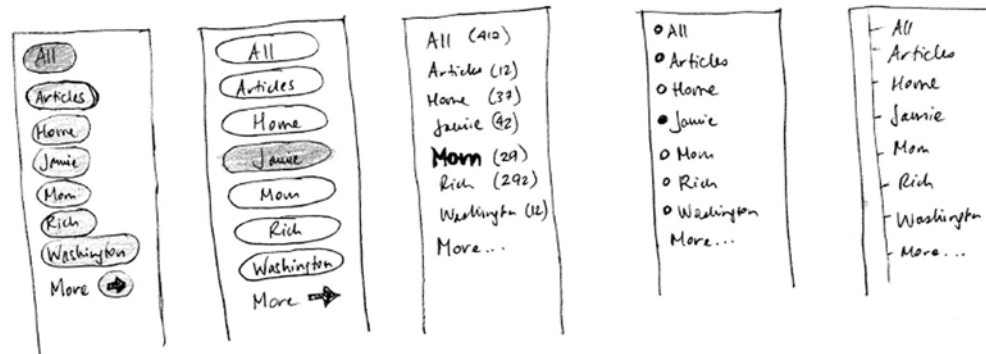
4.5 Snapback List



4. Prototypes

4.6 Tags

4.6 Regular tags



4.7 Move tags - Click on more



4. Prototypes

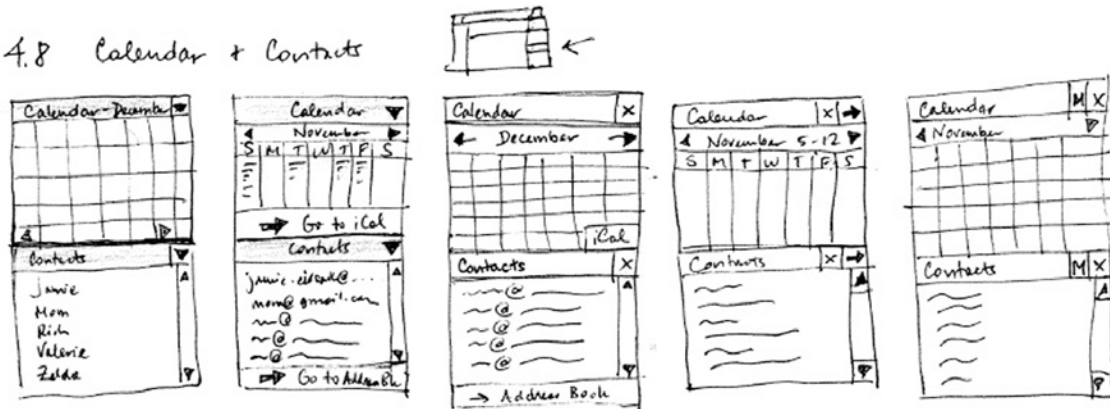
4.6 Tags (cont)



4. Prototypes

4.7 Contact & Calendar List

4.8 Calendar + Contacts



4. Prototypes

4.8 Snapback Window

4.9 Snapbacks



ST	ebay	Mom	Anna	Snapback:	
Tab	501	Shyam		Archive:	
From: _____					
Subject: _____					
Date: _____					
To: _____					

4. Prototypes

4.9 Inbox

4.9 Snapbacks

The image displays five hand-drawn wireframe prototypes for an email interface, arranged in two rows. Each prototype represents a different state or layout for an email, specifically focusing on the 'Snapbacks' feature.

- Top Left Prototype:** Shows an email header with fields for 'To:', 'From:', and 'Subject:'. Below these is a 'Snapback on' field with a dropdown arrow, followed by a 'Tags' field with a dropdown arrow. The body of the email is represented by several horizontal wavy lines.
- Top Middle Prototype:** Shows an email header with fields for 'To:', 'From:', 'Subject:', and 'Date:'. To the right of the 'Subject:' field is a 'Tags' field with a dropdown arrow. Below the header is a 'Snapback on' field with a dropdown arrow. The body of the email is represented by several horizontal wavy lines.
- Top Right Prototype:** Shows an email header with fields for 'To:', 'From:', 'Subject:', and 'Date:'. To the right of the 'Subject:' field is a 'Tags' field with a dropdown arrow. Below the header is a 'Snapback on' field with a dropdown arrow. The body of the email is represented by several horizontal wavy lines.
- Bottom Left Prototype:** Shows an email header with fields for 'To:', 'From:', 'Subject:', and 'Date:'. To the right of the 'Subject:' field is a 'Tags' field with a dropdown arrow. Below the header is a 'Snapback on' field with a dropdown arrow. The body of the email is represented by several horizontal wavy lines.
- Bottom Right Prototype:** Shows an email header with fields for 'To:', 'From:', 'Subject:', and 'Date:'. To the right of the 'Subject:' field is a 'Tags' field with a dropdown arrow. Below the header is a 'Snapback on' field with a dropdown arrow. The body of the email is represented by several horizontal wavy lines.

5. Storyboards

5.1 Getting Mail



5. Storyboards

5.2 Sending Mail



Send

Save

New Message

Attach

Address Book

To: Jim (jimbean@umich.edu)

Cc:

Bcc:

Subject: I Love Snapmail!

Tags: software, snapmail

Jimbo!

You totally need to use SnapMail! It makes outlook look like warmed over crap!

Love,

Lisa

5. Storyboards

5.3 Replying to Mail



New Message

Send Save Attach Address Book

To: Jason (jastaft@umich.edu)

Cc:

Bcc:

Subject: Possible Job

Tags:

Hey Hon,
You may want to check this out!

-Trek

Begin Forwarded Message:
This is the last day to include your resume in the Fel Group Resume book in iTrack. The book will be sent out today.
(see information below).

For an effective job search, you need to utilize any and all resources available to you.

Good luck!
Joanna Kroll

----- Forwarded Message -----
Date: Thursday, October 20, 2005 2:24 PM -0400
From: jckroll@umich.edu
To: simple.students@umich.edu
Subject: Fel Group- Resume book

The Fel Group, a professional search firm that specializes in searches in



5. Storyboards

5.4 Forwarding Mail



New Message

Send Save Attach Address Book

To: Jason (jastaft@umich.edu)

Cc:

Bcc:

Subject: Possible Job

Tags:

Hey Hon,
You may want to check this out!

-Trek

Begin Forwarded Message:
This is the last day to include your resume in the Fel Group Resume book in iTrack. The book will be sent out today.
(see information below).

For an effective job search, you need to utilize any and all resources available to you.

Good luck!
Joanna Kroll

----- Forwarded Message -----
Date: Thursday, October 20, 2005 2:24 PM -0400
From: jckroll@umich.edu
To: simple.students@umich.edu
Subject: Fel Group- Resume book

The Fel Group, a professional search firm that specializes in searches in



5. Storyboards

5.5 Sorting Mail



5.6 Storing Mail

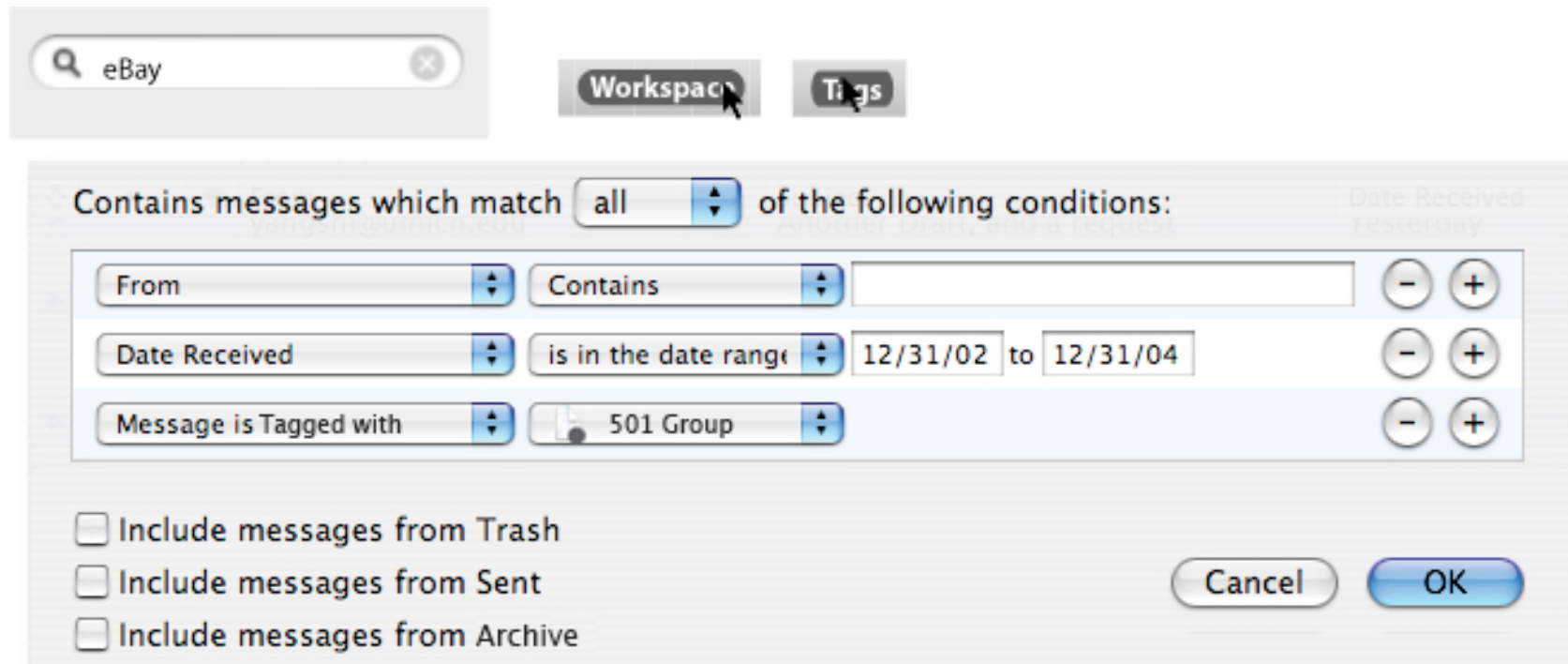


5.7 Accessing Stored Mail



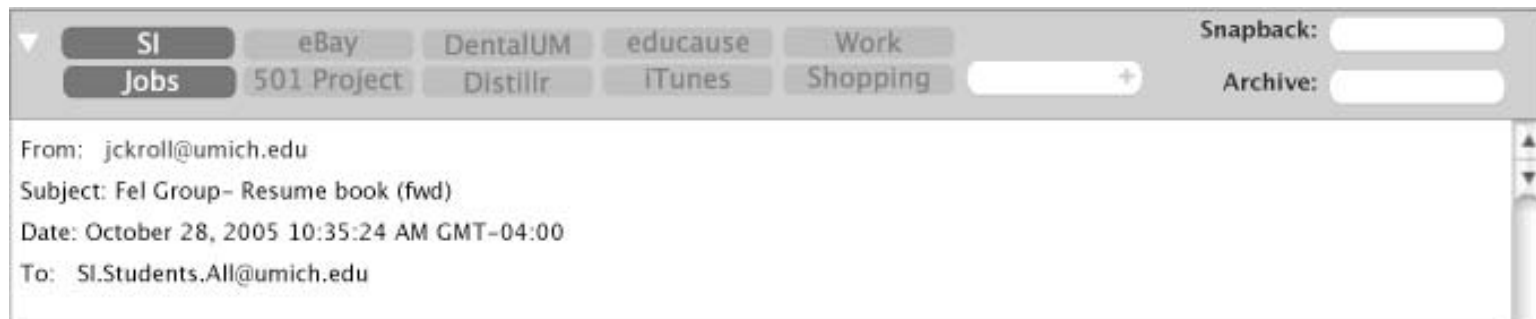
5. Storyboards

5.8 Searching Mail



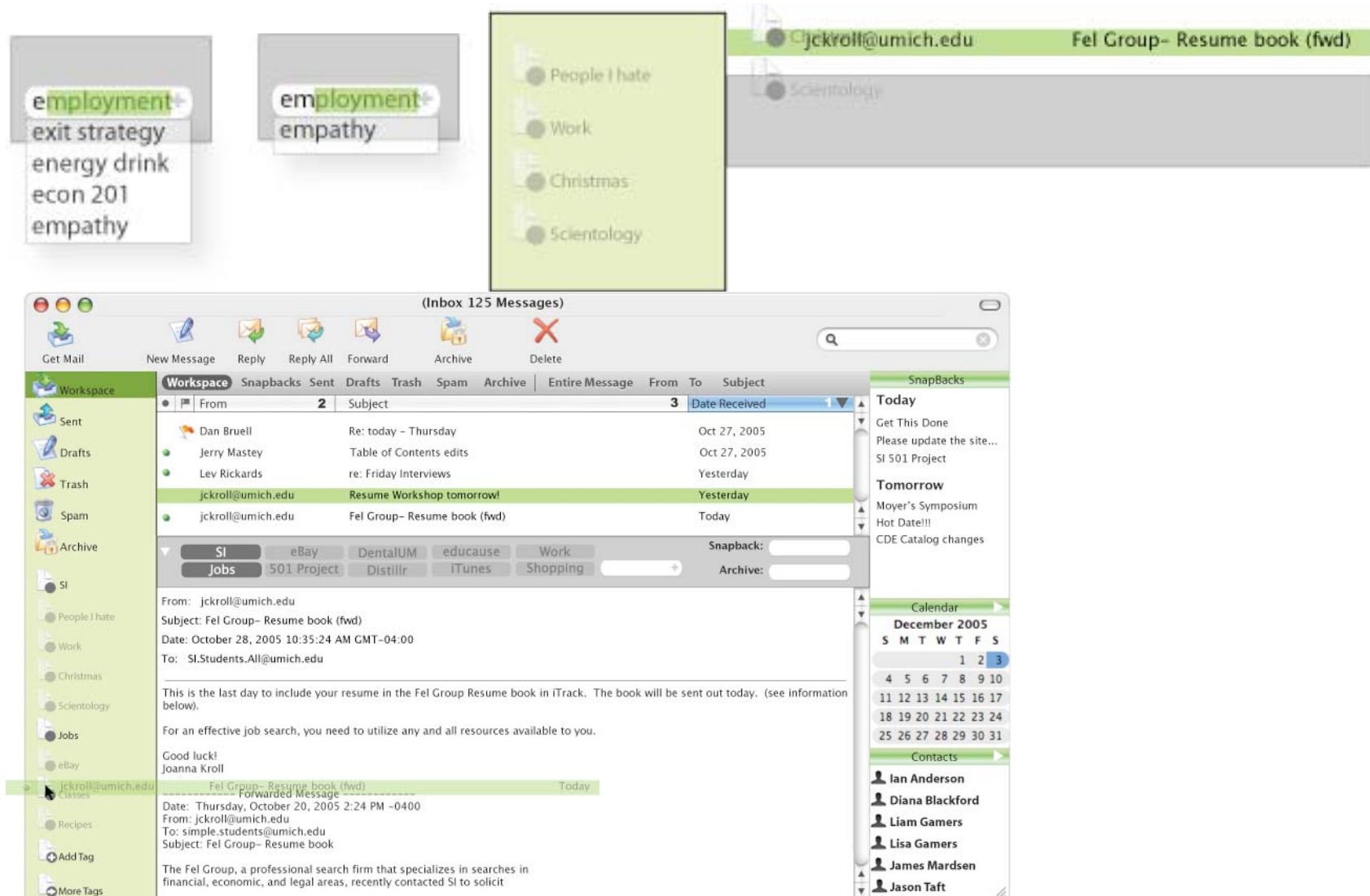
5. Storyboards

5.9 Tagging Mail



5. Storyboards

5.9 Tagging Mail (cont)



5. Storyboards

5.10 Delaying Mail

Snapback: tomorrow	Snapback: 11/10/05/ 9am
Archive:	Archive:

5.11 Setting Mail to Auto-Archive

Snapback:	Snapback:
Archive: tomorrow	Archive: 12/24/05 11:00

5.12 Working with Mail in the Snapback List

SnapBacks
Get This Done
Please update the site...
SI 501 Project
Tomorrow
Moyer's Symposium
Hot Date!!!
CDE Catalog changes

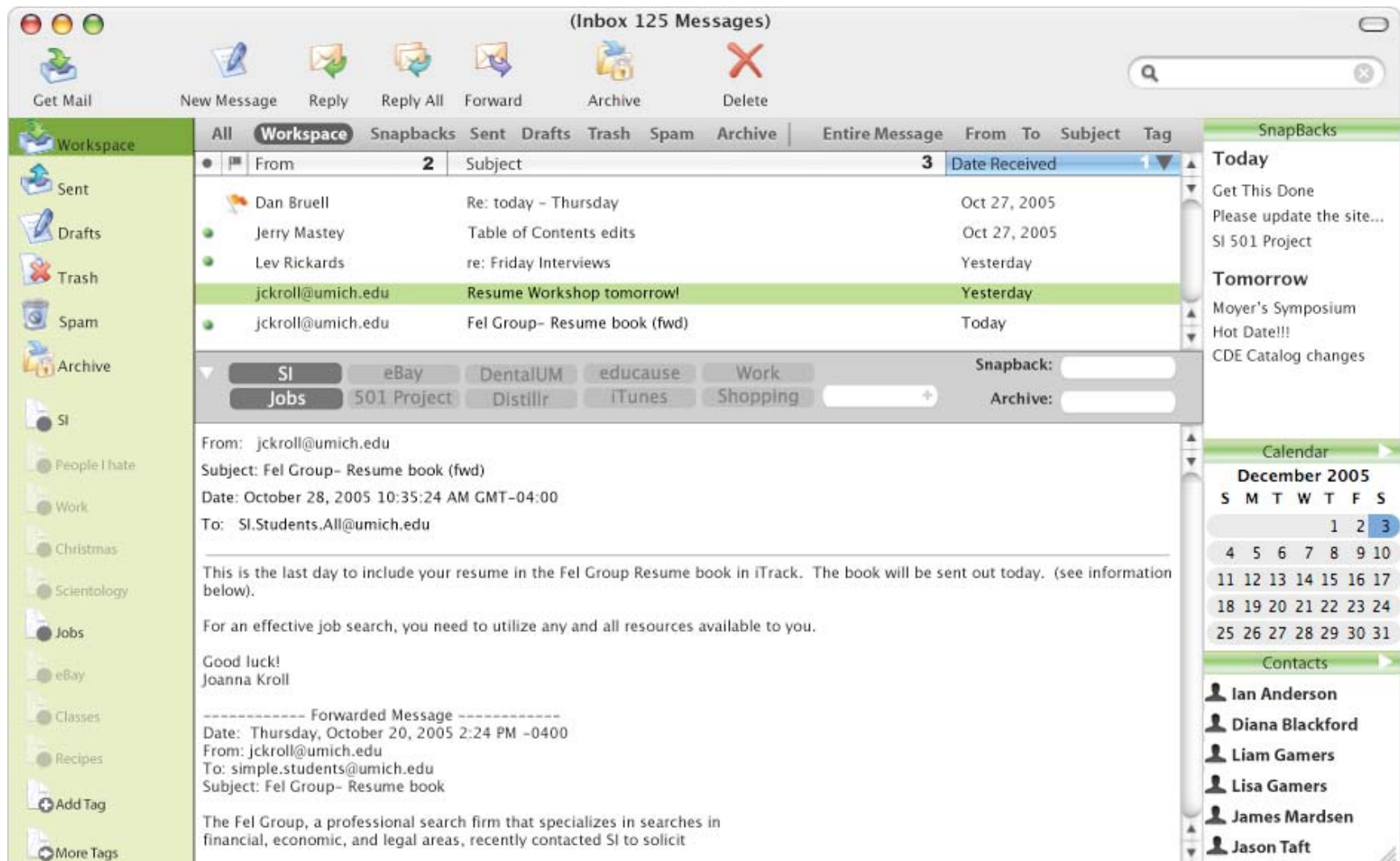
5. Storyboards

5.13 Creating Tags



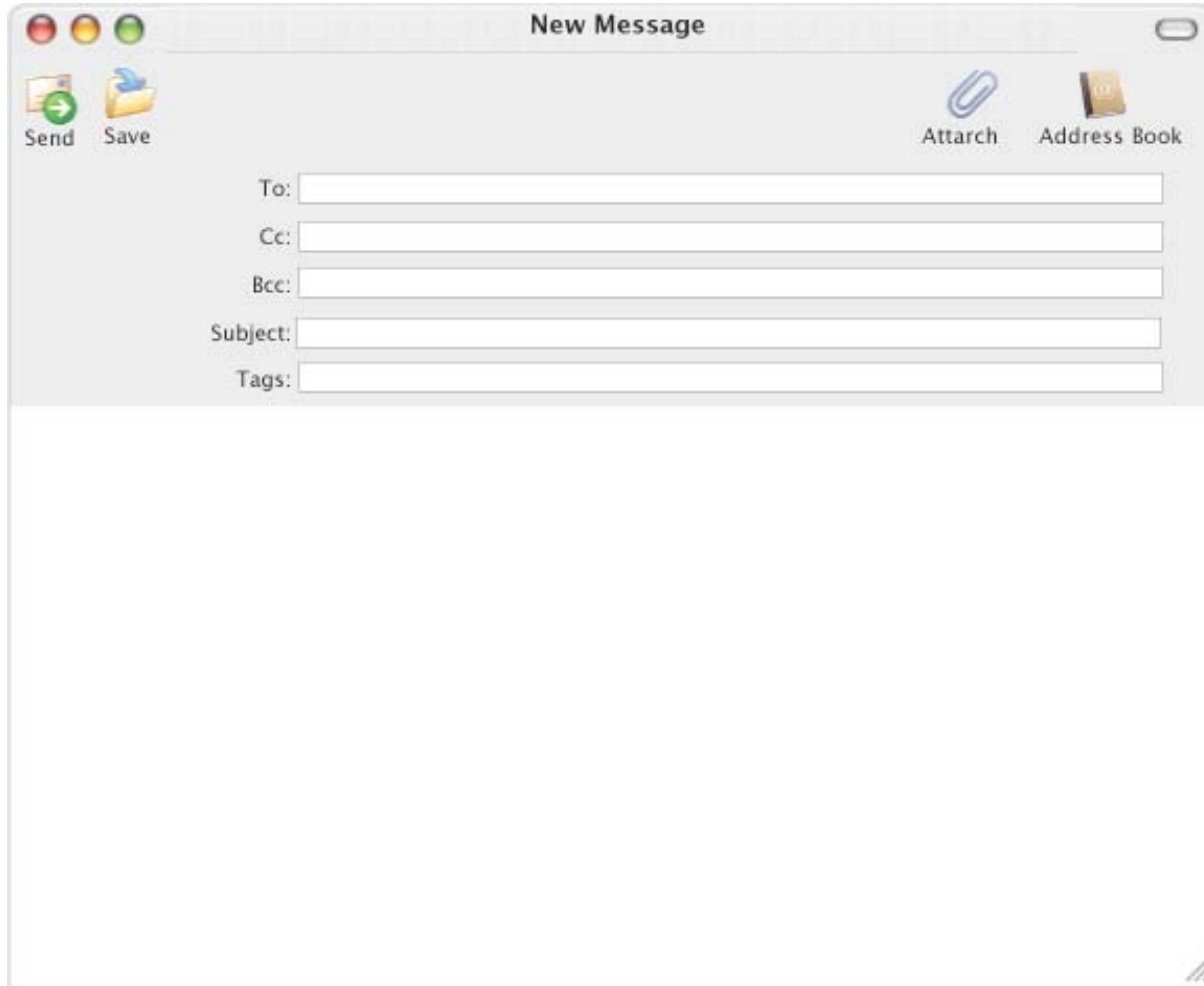
6. Final Drawings

Snapmail Main Window:



6. Final Drawings

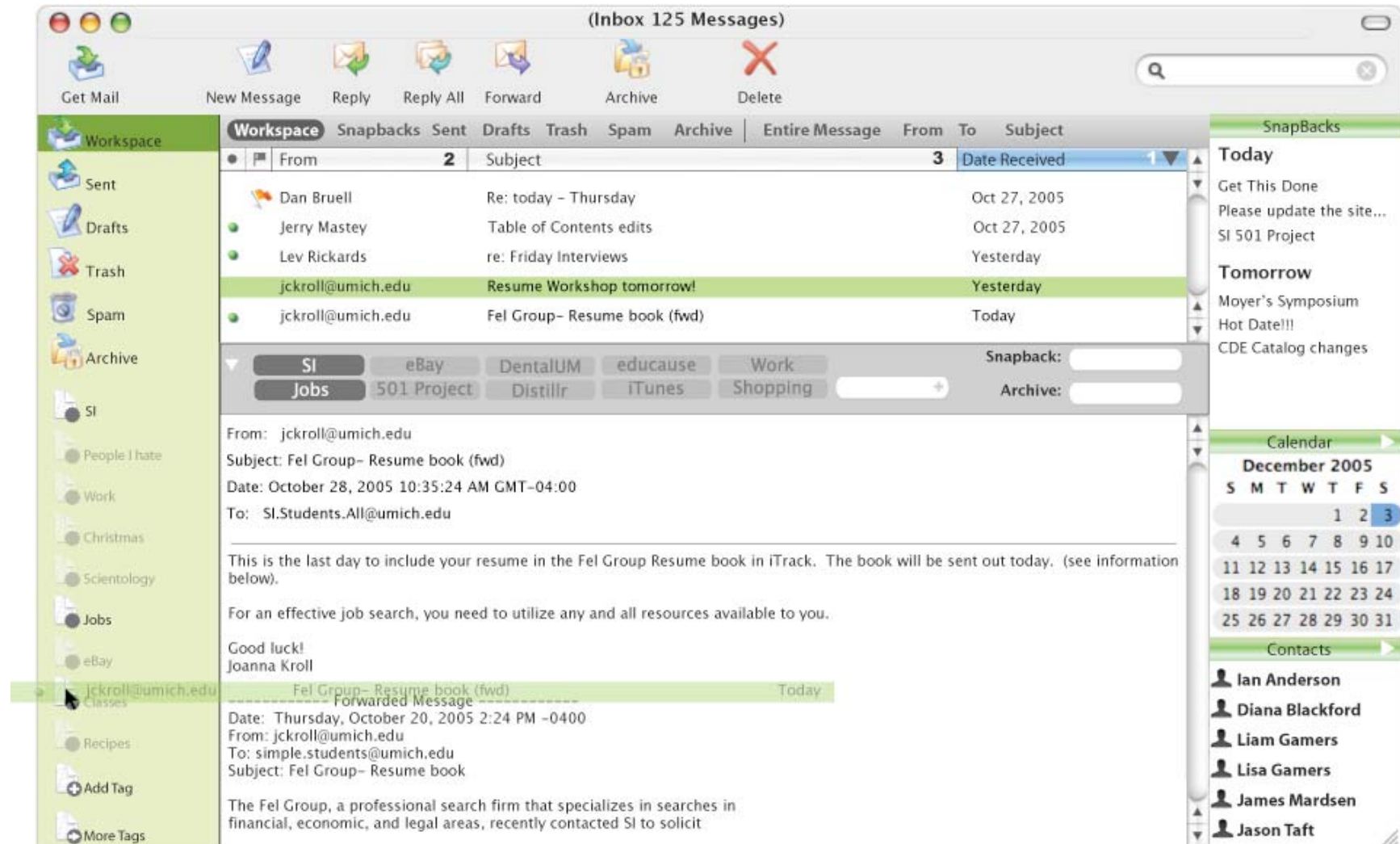
New Message Window:



The image shows a 'New Message' window with a standard macOS-style title bar (red, yellow, green buttons) and a close button. Below the title bar, there are two buttons on the left: 'Send' (with a green arrow icon) and 'Save' (with a yellow folder icon). On the right, there are two buttons: 'Attach' (with a blue paperclip icon) and 'Address Book' (with a brown book icon). The main area of the window contains five text input fields, each with a label to its left: 'To:', 'Cc:', 'Bcc:', 'Subject:', and 'Tags:'. The 'To:' field is the first and shortest, followed by 'Cc:', 'Bcc:', 'Subject:', and 'Tags:' which are progressively longer. The bottom half of the window is a large, empty white area for the message body. A small double-slash icon is visible in the bottom right corner of the window frame.

6. Final Drawings

Adding Tags to Message:



6. Final Drawings

Adding multiple tags to a message:



Adding tags to a message with tag field:



6. Final Drawings

Adding tags to messages (2):



6. Final Drawings

Creating new tags in left column:



Advanced Search:

Contains messages which match all of the following conditions:

From	Contains		-	+
Date Received	is in the date range	12/31/02 to 12/31/04	-	+
Message is Tagged with	501 Group		-	+

☐ Include messages from Trash
☐ Include messages from Sent
☐ Include messages from Archive

Cancel OK

6. Final Drawings

Auto-complete tag text:



Appendix A: Style Guide

SnapMail Style Guide

Horizontal Patterns

Top Menu Bar (Center Repeat)



Selected Column



Unselected Column



Window Borders



Sidebar Heading



Location Bar



Colors



Selected Location
(Side Bar)



Other Locations
(Side Bar)



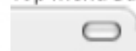
Selected Text

UI Element Images

Top Menu Bar (Left)



Top Menu Bar (Right)



Bottom Corner (Right)



Text input area



Fonts

Window Heading Lucide Grande Bold 12pt rgb(35,31,32)

Top Nav Locations Myriad Bold 12pt rgb(77,77,77), white drop shadow

Selected Top Nav Locations Myriad Bold 12pt white with rgb(77,77,77) background

Icon Title Lucide Grande Regular 10pt rgb(35,31,32)

Sort by Number Arial Black Roman 12pt rgb(35,31,32)

Sidebar Title Lucide Grande Bold 12pt rgb(35,31,32)

Contacts Myriad Bold 12pt rgb(35,31,31), white drop shadow

SI Myriad Bold 12pt white, with rgb(38,38,38) background

eBay Myriad Bold 12pt rgb(35,31,32), with rgb(162,162,162) background

Sidebar tags Myriad Roman 12pt rgb(35,31,32)

Sidebar unselected tags Myriad Roman 10pt rgb(167,167,167)

Sidebar Location Lucide Grande Regular 10pt rgb(35,31,32)

Appendix B: Competitive Analysis

1. Mail.app
2. Pine
3. Outlook Express
4. Thunderbird