DESIGN PROBLEM STATEMENT

JD Duval

January 2017

THE AUDIENCE

The community I'm thinking about for this project is relatively large, digital and therefore dispersed, and diverse in several different ways. Every day, dozens of interesting events happen within different departments on University of Michigan's campus: dance recitals, poetry readings, TED talks, business conventions, guest lectures; renowned speakers from a hundred different fields are in and out of Ann Arbor speaking on and around campus; and students are organizing protests, demonstrations, sit-ins, community work, and so much more. The University of Michigan is a broad community with many interests that draws so many incredible events to Ann Arbor.

THE CHALLENGE

Although these incredible opportunities abound, as both a long-time student and one-time staff member of the University, it's incredibly difficult to effectively disseminate and receive information about them. As an administrator, it can be difficult to know how best to reach students and faculty with the information they need to attend events. Should every department have a newsletter? If not, is an individual email per event acceptable? And as a student it quickly becomes overwhelming when one's inbox becomes flooded with information about events, many of which may interest you but get entirely lost in the 30, 50, or 100+ emails received per day. Right now, each school and department and student group has their own, separate calendar, with no one place to go to see all of the events available on campus on any given day.

THE IDEA

In order to help the flow of information, my idea is to create a master calendar for the University community, one which would easily allow administrators, staff, and student group organizers to add events. This would give everyone in the community a quick and easy way to know what's happening on any given day, without requiring inboxes to be filled with events newsletters each week or individual event emails each time an event is happening. I imagine this solution will be cost-effective, cause minimal headaches for existing protocols, but increase the flow of information between community groups and members. I imagine that it will also allow for growth in the future: I would love for the calendar to be easy for staff, admin, and teachers to access and update, but also be geared toward students – for example, allowing students to add their assignment due dates, etc. The solution is both technical and social, relying on changes in users' behavior based on new technology available to them.

GOALS

INTEGRATE WITH GOOGLE CALENDAR

This is too ensure that everyone in the community would have access, and that it would be easy for administrators and staff to add their events.

BE CUSTOMIZABLE PER USER

In order to make a calendar with this many events viable, users would have to be able to choose which departments and organizations they want to see events from.

BE SEARCHABLE

Again, with a calendar packed to the brim with information, a robust search function will have to be in place to allow users to find events based on specific bits of information.

BE READABLE

Something like Google Calendar or iCal may not be able to usefully display the number of events that need to be shown, so a readable interface may be critical.

USE HASHTAGS OR SIMILAR MECHANISM

Using a tagging mechanism to identify events will help events be searchable and give users an idea of what kinds of events they might be interested in.

IDENTIFYING & ANALYZING COMPETITORS

JD Duval

March 2017

THE CHALLENGE

How does a person filter through dozens of events every day to find what they're interested in?

On any given day in Ann Arbor, Michigan, home to the main campus of the University of Michigan, there are dozens of events happening around the city: sports games, museum exhibits, guest speakers, student organization meetings, class outings, conventions, festivals, community meetings, etc. Administrators and organizers coordinate these events and disseminate information about them using calendar applications built into department websites, email list, newsletters, bulletins, Facebook, Google Calendar and word-of-mouth, but how much of this information reaches the audience it's intended for, and how often is that audience able to access it?

Students are overwhelmed by the number of emails they receive each day, many of them containing information they need to learn about and plan to attend events they're interested in, so they simply stop reading them and later regret missing out on events they didn't know about. Meanwhile, administrators become frustrated at low turnouts to events, despite their continued efforts to reach communities through various media.

THE IDEA

A SOCIAL PLATFORM BUILT AROUND COMMUNITY

What if calendars were more than static and utilitarian ways to divide up time? Imagine a calendar platform that functions like a social network, updating, adjusting, and suggesting based on a person's social connections, communities, interests, and associations. No more missed events because there isn't enough time to sort through emails and newsletters to find them; any happenings around campus related to a topic, organization, or network that a person expresses interest in are added to that person's social calendar automatically.

THE COMPETITORS

GOOGLE CALENDAR

THE MOST-USED CALENDAR APP

The social calendar's closest direct competitor, Google Calendar is one of the most popular calendar applications in use (alongside Apple's iCal). Google Calendar has the advantages of being the default calendar application on many phones powered by Google's Android operating system, and of being integrated with Gmail, the default email solution for the University of Michigan.

STRENGTHS

- **Breadth of feature set & integration**
  Google Calendar allows users to do a lot of things, and integrates a lot of other services: users can add and display multiple, color-coded calendars - including other people's calendars and themed calendars for things like holidays or a football team's game

schedules; add guests and participants to an event or meeting; add details for a video call; change the display of the calendar to day, week, month, 4-days, and agenda views; create reminders; and add tasks; make events public or private; email guests and participants to an event; and find a time for a meeting or event, to name a few.

- **Search**
  Google Calendar features a robust search mechanism which can find events by title, location, or description content.
- **Ubiquity**
  Because Google is so integrated into the lives of so many people, it's hard to escape Google Calendar: at the University of Michigan, if you want to schedule a meeting with a counselor, faculty member, or student, one of the easiest ways is to simply create a meeting or event on a calendar and add invite another person; even if the other person isn't using Google Calendar, they still get an email with the details of the event.

WEAKNESSES

- **Depth of control**
  For all its features, the tools to manipulate these features remains lacking. Color is the only way to distinguish one calendar from another; within calendars, events can only be one of 12 pre-chosen colors; calendars can not be re-arranged in the list of calendars; descriptions of events don't show up on detailed calendar views, even when room is available; users can only use either tasks or reminders; no dedicated categorization method for events exists--and these are just a few of many shortcomings.
- **UX design**
  Although the mobile version has made vast improvements with recent updates, the website -- both on mobile and desktop -- tries to cram too much information and too many options into each screen. The website feels like the result of a mishmash of fulfilled user requests, rather than a thing designed with specific users in mind from the start.
- **Hyper-focus on utility**
  Google Calendar's intense focus on utility before everything else leaves it feeling cluttered and somewhat overwhelming, especially for casual or new users, and it means that social features get pushed to corners (for example, the guests and participants sidebar on the right when adding an event).

FACEBOOK

THE SOCIAL NETWORKING STANDARD

Facebook is the standard by which most other social platforms are measured: it has more active monthly users than WhatsApp, Twitter, and Instagram combined; at least 1.86 billion active users share news and photos, create events, send messages and emails, buy and sell stuff, and virtually poke one another each month.

STRENGTHS

- **Suggestions**
  For better or worse, Facebook does a very good job suggesting friends and events to its users. It uses other social media accounts, friends of friends, location check-ins, attendance at events, and even interests and likes to suggest new friends and upcoming events that may be of interest to users.
- **Making events social**
  A particularly relevant feature that Facebook does is make its users events social: instead of a static header on a calendar, events on Facebook are living, with people RSVPing; a message board (wall) for attendees to write on or post images to; and polls to make. Once an event is made, users can make it as interactive as they choose.

WEAKNESSES

- **Lack of focus**
  Facebook does a lot of things pretty well, but not very many things very well. This includes events and calendars: while it does a great job of suggesting events and making events social, it's a terrible calendar app. The calendar is buried under several menus and doesn't offer more than a single view; it doesn't allow users to set reminders; and it doesn't allow two-way integration with other calendar applications, which locks you into its ecosystem.

GOOGLE MAPS

ESSENTIAL MAPPING & GPS APPLICATION

Google Maps is a web mapping app that allows users to search for specific locations, get directions to and from specified locations, browse locations, and rate and review businesses. Google Maps is an indirect competitor to the project: it doesn't have events or a calendar function, but it integrates with other apps that do, and it could also overlap with the project in the future.

STRENGTHS

- **Interface**
  The Google Maps interface is designed to do its primary function very well: browse and search a map. The application, in a desktop browser or on a mobile phone, foregrounds the map as the primary way users interact with it, while search, the second-most important function, is easily accessible. This focus on the primary function of the app is an important model to carry into the project.
- **Exploration**
  Google Maps is designed for exploration. While search is a common function, the desktop app boots up into a huge map of your current location. It provides information about locations when users click on names of places, and using search to look for generalized term like "shopping" or "grocery" highlights popular places on the map.

- **Search**
  Search functionality is easily accessible and very flexible: users can search by an address or a business name; the autocomplete feature is aggressive, which helps users who don't know the exact or entire name of the place they're looking for; and when a user performs a search, the results and the map work together to help the user find a location.

WEAKNESSES

- **Social features**
  Google Maps does not integrate much in the way of social functionality. You cannot share your location with a friend, add an event or invite your friends to a specific place, etc. You can rate businesses, but that's the extent of the social features of Google Maps.
- **Rate of updates**
  Google Maps, depending on where users search, isn't always very current: in Detroit, users can easily find businesses that no longer exist; businesses' websites sometimes aren't available or aren't current; and in less urban areas, sometimes roads aren't correctly mapped.

INSTAGRAM

PHOTO SHARING

Instagram is primarily a mobile photo sharing app that uses hashtags as a way to let users identify, categorize, and search images. Instagram is not a direct competitor, as it does not deal with events or have a calendar function, but it does have features that could enhance the project. It's demographics skew younger than Facebook.

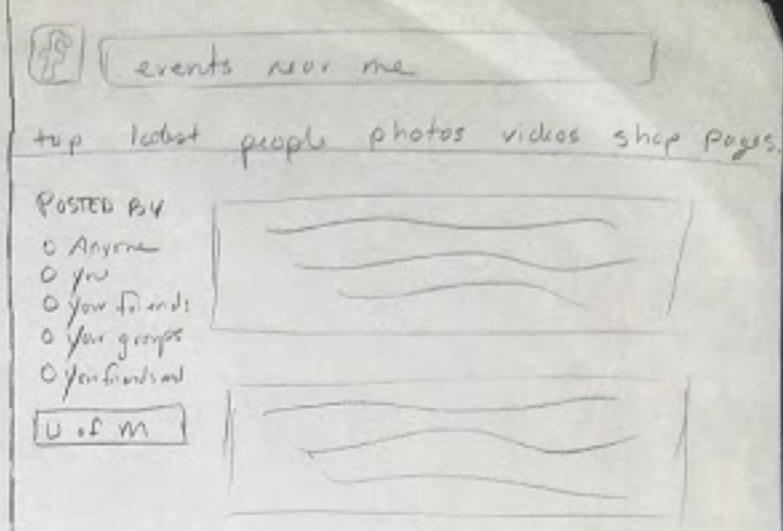
STRENGTHS

- **User categorization and identification of content**
  Instagram uses user-generated hashtags to categorize its images, which is useful because it allows users to decide what's important about their content and how they want it to be identified, but is also useful for generating categories of content that can be used to suggest new content to users. Bringing this approach to the project - allowing users to self-categorize the events they create (to some extent, at least) could make suggesting events to users more accurate.

Weaknesses:

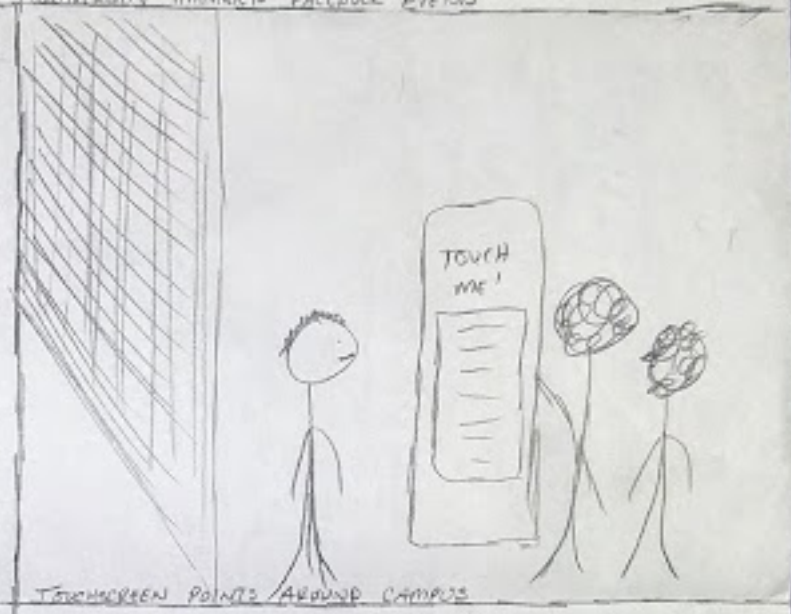
- **Inflexibility**
  Instagram is a particularly inflexible app: it's slow to give users new features (like updating multiple images at a time or uploading images that aren't square), isn't compatible or well-integrated with other social media apps, and has a bare-bones comment functionality.

COMMUNITY MESSAGE BOARDS



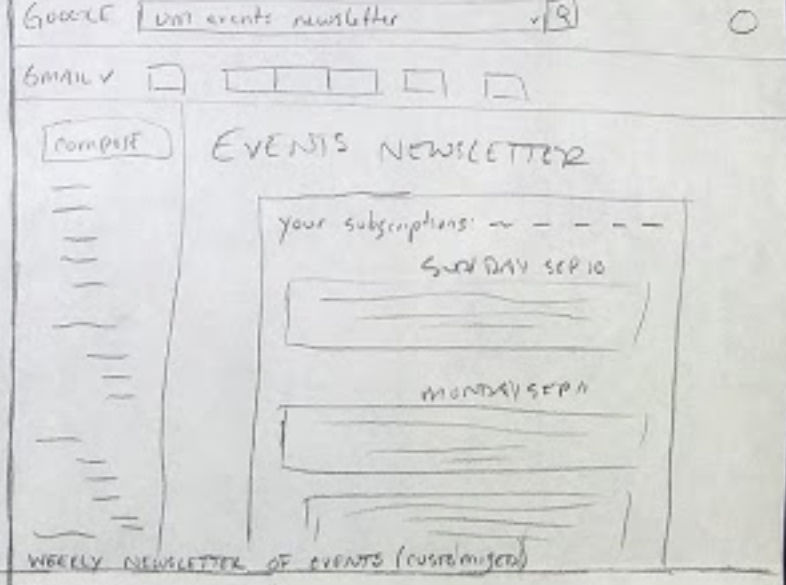
UNIVERSITY MANAGED FACEBOOK EVENTS

WOLVERINE ACCESS EVENTS

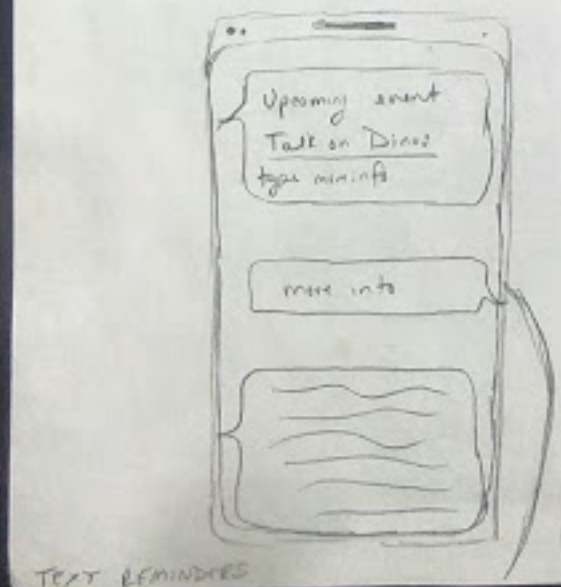


TOUCHSCREEN POINTS AROUND CAMPUS

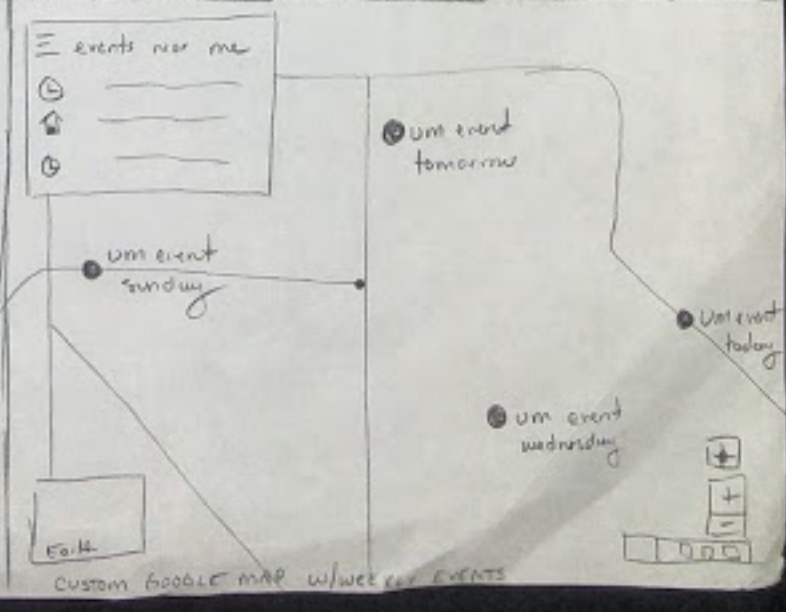
TV DISPLAYS W/ADVERTISEMENTS + SCHEDULES



WEEKLY NEWSLETTER OF EVENTS (CUSTOMIZED)



TEXT REMINDERS



CUSTOM GOOGLE MAP W/WEEKLY EVENTS

1 CUSTOM GOOGLE MAP WITH EVENTS

1A
Student with wifriends in diag

1B
Opens Google Maps

1C
Searches for nearby events

1D
Chooses event for more details

1E
Leaves wifriends for event

2 TEXT REMINDERS FOR EVENTS

2A
BUS STOP
Student checks phone

2B
Gets text notification

2C
Opens text for more info
'add to ignore'

2D
add
added to 'UM events'
Texts 'add'

2E
BUS STOP
Gets on the bus

3 WEEKLY NEWSLETTER OF EVENTS

3A
Student does "homework"

3B
EMAIL(1)
FB
MEME!
Gets email

3C
EMAIL(1)
YOUR EVENTS
Opens email

3D
EMAIL
YOUR EVENTS
Adds events

3E
Goes back to homework

4 TV. DISPLAYS WITH ADS + SCHEDULES

4A
Student waits for elevator

4B
Looks to wall-mounted TV

4C
Sees interesting event

4D
I should go to that
Makes mental note

4E
Gets on elevator

5 TOUCHSCREENS AROUND CAMPUS

5A
Student looks for their event

5B
TODAY'S EVENTS
Sees wall-mounted touchscreen

5C
TODAY'S EVENTS
Searches for event

5D
TODAY'S EVENTS
QUARTERLY 9
ANGELL HALL
Finds event w/ location details

5E
Leaves to find event

6 WOLVERINE ACCESS EVENTS

6A
Student registers for classes

6B
enter class number
1234560
enter
Chooses a class

6C
S1 582
(123456)
add S1 events to my calendar
register
Notices a checkbox

6D
S1 582
(123456)
add S1 events to my calendar
register
Checks box

6E
Registers for class

7 UNIVERSITY-MANAGED FACEBOOK EVENTS

7A
Student walks to class

7B
FB
Sees notification

7C
MAR 20
Clicks notification

7D
MAR 20
Declines event

7E
Puts phone away

8 COMMUNITY MESSAGE BOARDS

8A
Student walks by message board

8B
EVENT!
Sees interesting flier

8C
Scans QR w/ phone

8D
Added to Calendar
Phone adds event to calendar

8E
Student walks to class

Click the Xtensio logo to **return to your dashboard** and manage your folios.

Add collaborators to work on the same document at the same time.

All changes are **saved automatically.**

This is a private document or a live web page, **adjust privacy** and get the link.

Jimmy Baldwin

"I want to challenge myself during my college experience."

Age: 19
Occupation: Student
Family: Single, no kids
Location: Ann Arbor, MI

Personality

Introvert — Extrovert
Analytical — Creative
Passive — Active

Introverted | Techie | Self-Motivated

Goals

- Build a new social network
- Familiarize with new city / campus
- Take maximum advantage of education
- Challenge self to have new experiences

Frustrations & Challenges

- Receiving overwhelming amounts of information
- Navigating campus as a first-generation student
- Interacting with "people in charge" to obtain information
- Not being able to find information online

Bio

Jimmy has just moved away from his home in Florida, for the first time, to attend the University of Michigan. Jimmy is the first person in his family to go to college, and although he is looking forward to studying literature in Ann Arbor, he's nervous about navigating a collegiate institution. He understands the sacrifices his parents made to ensure he went to college, so he wants to use every resource available to him at the univ

Jimmy is shy, and has a hard time making friends. As a queer person of color, he wants to find others like himself to build a community for himself.

Jimmy spends a lot of time engaging with his friends back home via Snapchat, Tumblr, and Instagram; he takes a lot of pictures and videos of the places he visits in Ann Arbor.

Motivations

Fear
Achievement
Growth
Power
Social

Social Platforms

Facebook
Instagram
Foursquare
Twitter
LinkedIn
Google+
Tumblr
Snapchat

Sybil Plath

"I feel great when I help my students achieve their goals and dreams."

Age: 33
Occupation: Administrator
Family: Married, 1 child
Location: Ann Arbor, MI

Personality

Introvert — Extrovert
Analytical — Creative
Passive — Active

Dedicated | Organized

Goals

- Feel satisfied with work
- Provide students with the information they need to succeed
- Foster communication between faculty and students
- Make sure her department runs smoothly

Frustrations & Challenges

- Finding ways to communicate effectively with students
- Low turnout to department events
- Student complaints about lack of community
- Doesn't like relaying redundant information

Bio

Sybil was an undergraduate and undergraduate student at the University of Michigan, and has worked for the university for the last five years. She is the key administrator in the English department, and loves her job because she gets to help students be successful.

Sybil facilitates communication between faculty, staff, and students, is the main organizer of events, and is the point of contact for students who need information pertaining to the department. Sybil dislikes maintaining email lists and the department newsletter, because she feels like students and faculty do not make good use of these resources.

Motivations

Fear
Achievement
Growth
Power
Social

Social Platforms

Facebook
Instagram
Foursquare
Twitter
LinkedIn
Google+
Tumblr
Snapchat

Francesca Kahlo

"I don't know what's more important than fighting for equality."

Age: 27
Occupation: Graduate Student
Family: Single, 2 children
Location: Ann Arbor, MI

Personality

Introvert — Extrovert
Analytical — Creative
Passive — Active

Disorganized | Social | Leader

Goals

- Recruit new members to organization
- Plan and organize community rallies and events
- Generate social change through social awareness

Frustrations & Challenges

- Managing events
- Marketing events and rallies
- Getting in touch with younger allies

Bio

Francesca is a single mom who works for a local non-profit group that supports women's rights, specifically access to healthcare. She enjoys the challenge of balancing motherhood with her work for social justice; she loves working with people, and feels inspired by and connected with her community.

Francesca is in charge of organizing rallies, fundraisers, and other events for the non-profit. Because the non-profit is small, she is also in charge of getting word out about upcoming local events.

Motivations

Fear
Achievement
Growth
Power
Social

Social Platforms

Facebook
Instagram
Foursquare
Twitter
LinkedIn
Google+
Tumblr
Snapchat

Maya Angel

"I like the pace of life in a small town."

Age: 39
Occupation: Mechanic
Family: Single, no children
Location: Petersburg, MI

Personality

Introvert — Extrovert
Analytical — Creative
Passive — Active

Introverted | Rural | Homebody

Goals

- Caring for elderly parents
- Staying current on favorite TV shows
- Restoring an old muscle car

Frustrations & Challenges

- Keeping parents' medical regimens organized
- Slow internet services in rural location
- Locating parts for restoring car

Bio

Maya lives in her small, rural hometown, and cares for her elderly parents who live on a farm nearby. She works as a mechanic in one of the auto repair shops in town.

Maya has a close-knit group of friends that she's known since middle school. They spend most Friday nights together, and like to ride their motorcycles around town together a few times a week. On weekends Maya enjoys restoring an old Mustang, and going to the local bar where she knows most of the patrons.

Although she's considered moving to the city, Maya enjoys the slower pace of living in a small town, and wouldn't move away while her parents still needed her help.

Motivations

Fear
Achievement
Growth
Power
Social

Social Platforms

Facebook
Instagram
Foursquare
Twitter
LinkedIn
Google+
Tumblr
Snapchat

No modules added, yet.

+ Add

+ Add New Section

STORY MAP

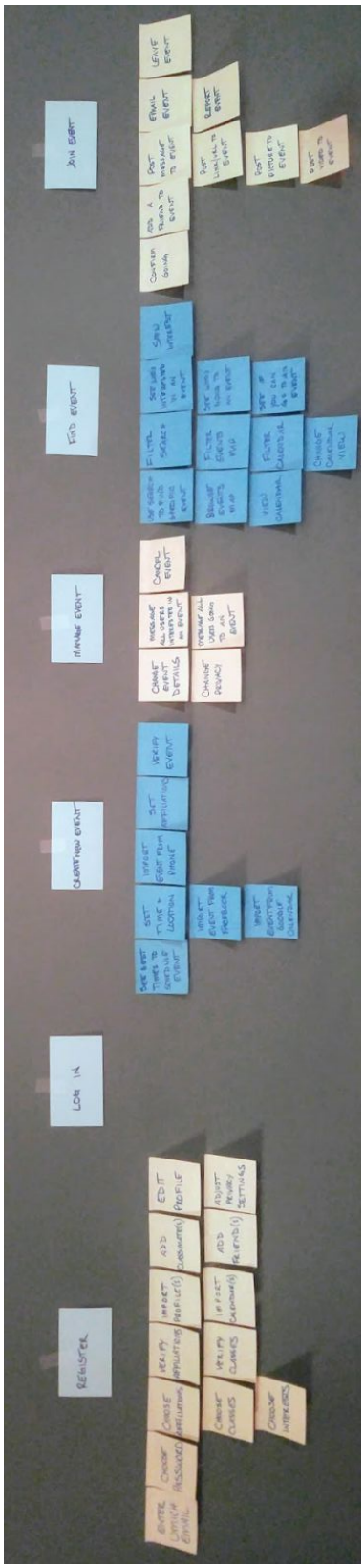
JD Duval

March 2017

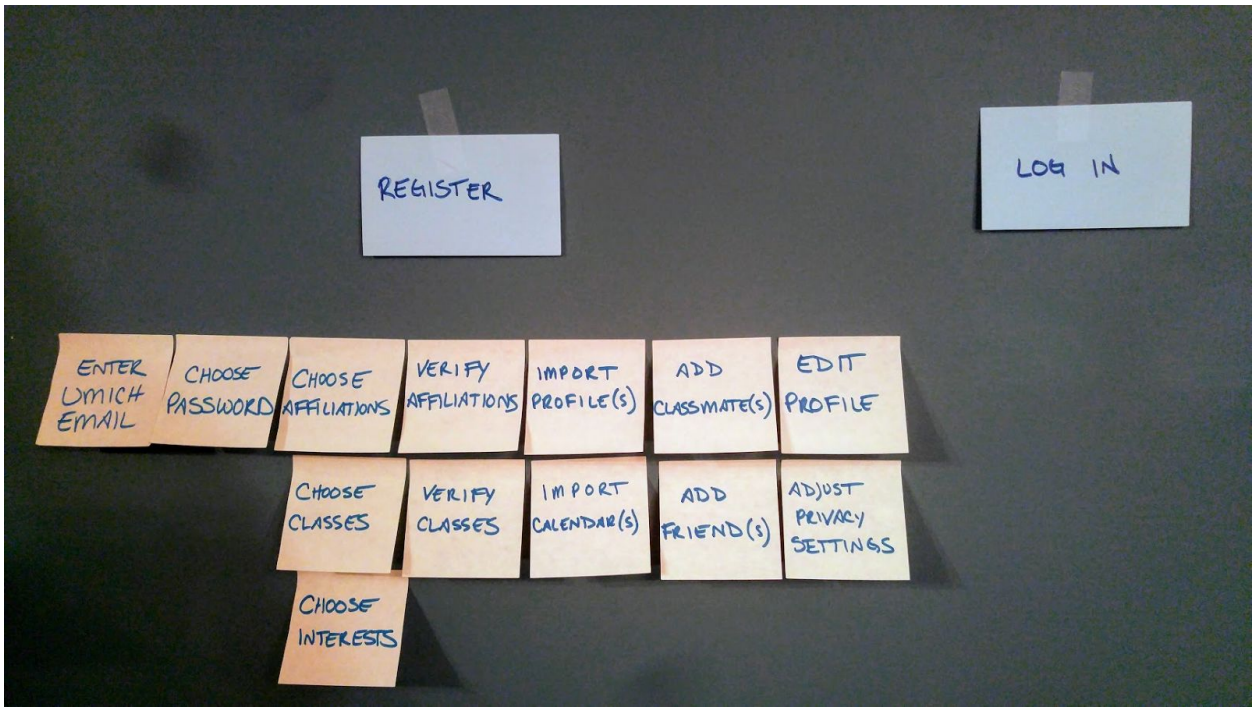
PROBLEM STATEMENT:

Students are frustrated with the number of daily emails they receive about events going on in their schools and around campus; department administrators and staff are frustrated with the tools available to them for managing and distributing information about events; faculty are disappointed by low turnouts to events.

FULL STORY MAP



REGISTER & LOGIN



Although some of the app functionality can be accessed without registering or logging in (mostly for members of the community who are not necessarily part of the University), anyone with a U-M email address will be encouraged to register and login.

Users who wish to login or register must **Enter a UMich email** and **Choose a password**.

Users may additionally choose to:

- Choose affiliations
  with departments, students orgs, or any other university-related groups
- Choose their classes
  to have their class schedule added to their calendar and classmates added to their friends list
- Choose their interests
  to help increase accuracy of event suggestions and searches
- Verify their affiliations
  if they choose to add affiliations, they must be verified by the university
- Verify their classes
  if they choose to add their classes, they must be verified by the university
- Import their profiles

Facebook, LinkedIn, other social media profile information can be imported to save time and effort

- Import their calendars
  Google Calendar, iCal, etc., can be imported to and synced with MCal
- Add their classmates
- Add their friends
- Edit their profiles

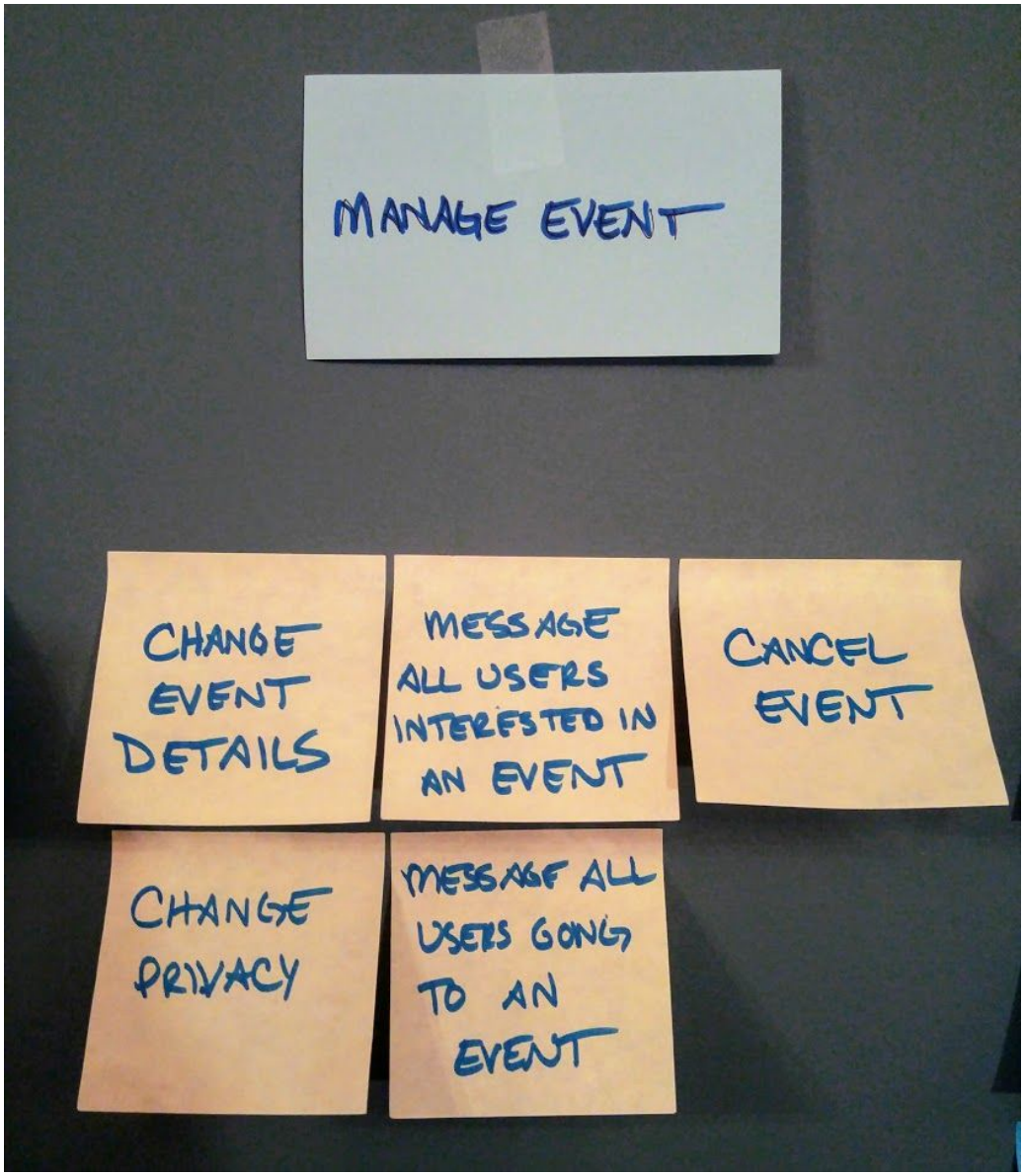
CREATE NEW EVENT

Users who wish to create events must **Set a time and location** or **Import an event** from Facebook, Google Calendar, their phone, etc**.**

Users may additionally choose to:

- Choose to see the best times to schedule an event
  based on overlap with over events
- Set affiliations
  choose to affiliate an event with a department or organization
- Verify event
  if they choose to add affiliations, they must be verified with the university

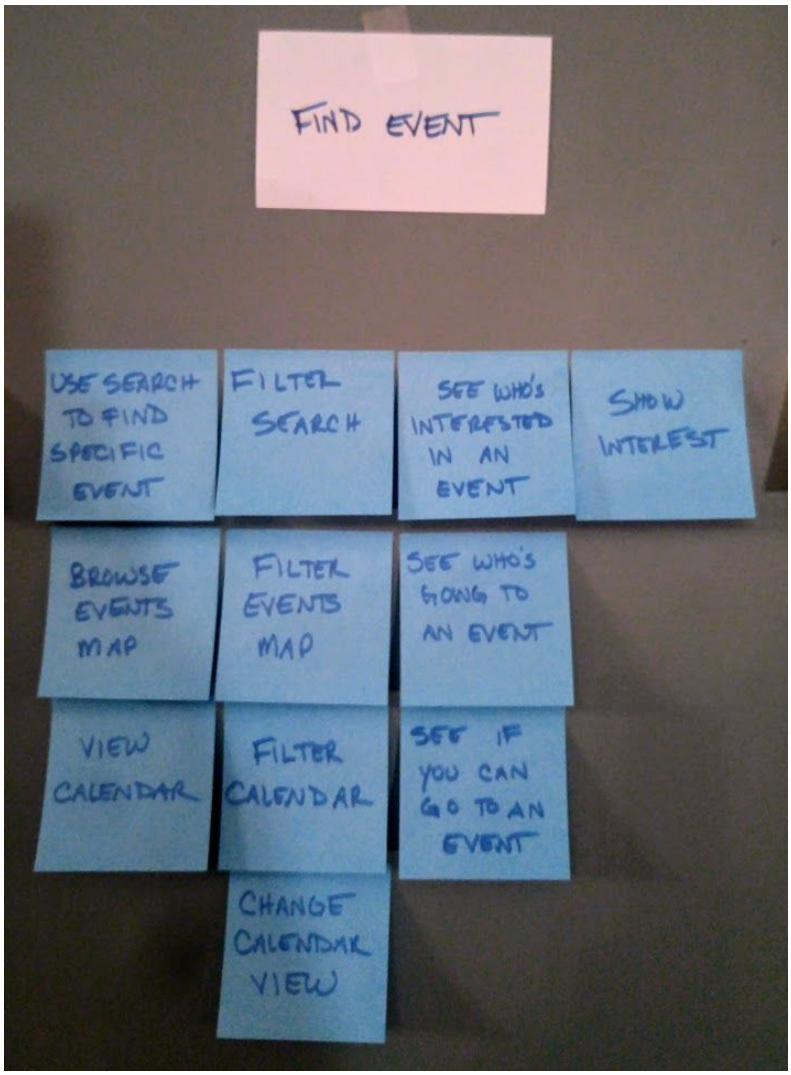
MANAGE EVENT



Users may manage their events with the following actions:

- Change the details of an event
- Change the privacy
  who can see the event
- Message all users interested in an event
  send messages to all users who have expressed interest in the event
- Message all users going to an event
  send messages to all users who have confirmed they are going to an event
- Cancel an event

FIND EVENT



Users who wish to search for an event must **Use search to find a specific event**, **browse events on the events map**, or **view their calendars**.

Users may additionally choose to:

- Filter their search results
- Filter the events map
- Change their calendar view
- See who's interested in a specific event
- See who's going to a specific event
- See if they can attend the event
  based on information about events they are going to in their MCal
- Indicate their interest in an event

JOIN EVENT

Users who wish to join an event must **confirm they are going**.

Once they have joined an event, users may additionally choose to:

- Invite friends to an event
- Post messages to an avent
- Post links/URLs to an event
- Post pictures to an event
- Post videos to an event
- Email the event to other people
- Report the event
- Leave the event

QOC ANALYSIS

JD Duval

March 2017

PROJECT STATEMENT

MCal is designed to address the challenges of managing events for a large community like the University of Michigan. MCal is designed to give administrators a single place to provide information about events, disseminate the information to the right groups of students, faculty, and members of the community, and increase awareness and attendance of events, while also helping students manage the copious amounts of information given to them and find the most relevant pieces for them.

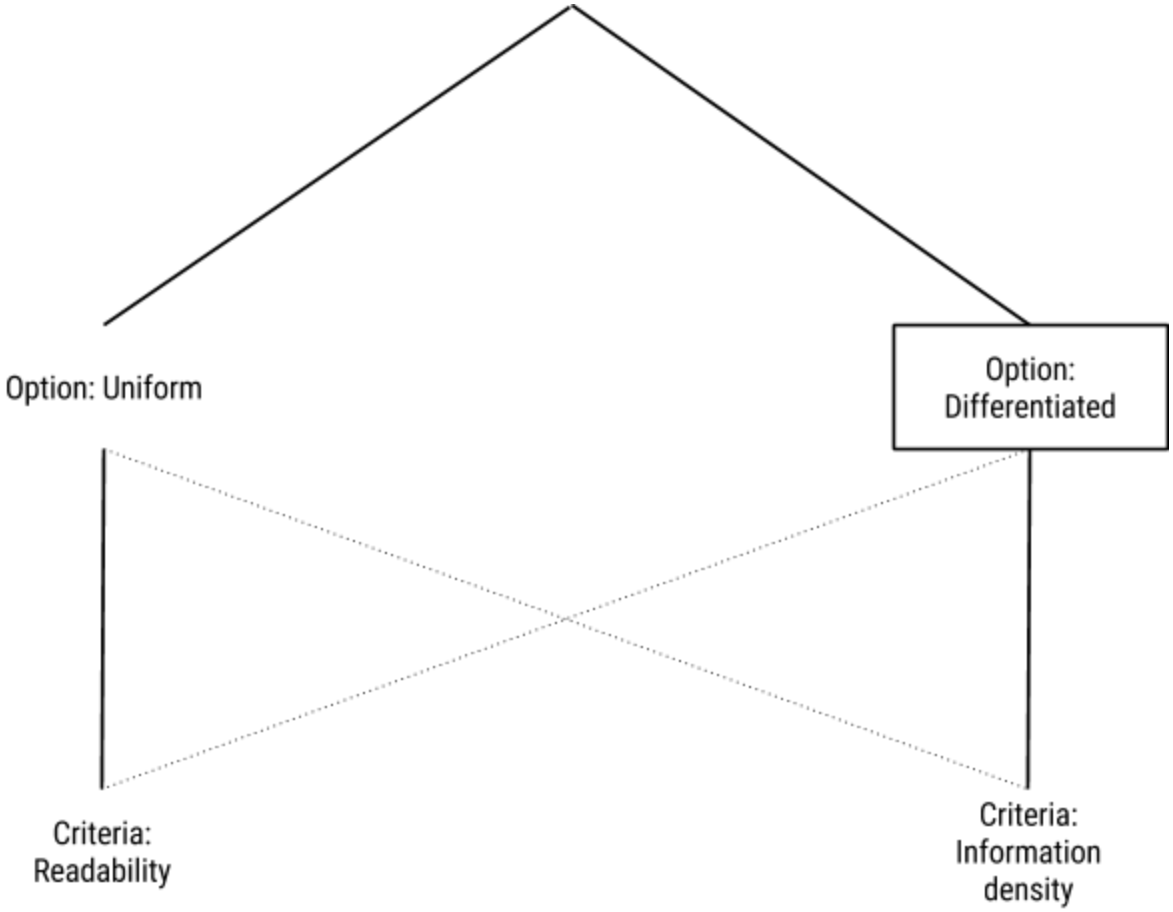
TARGET AUDIENCE

The target audience of MCal is students, administrators, faculty, and other members of the University of Michigan, particularly staff who are tasked with scheduling and advertising events, and students who are bombarded with information via email each day.

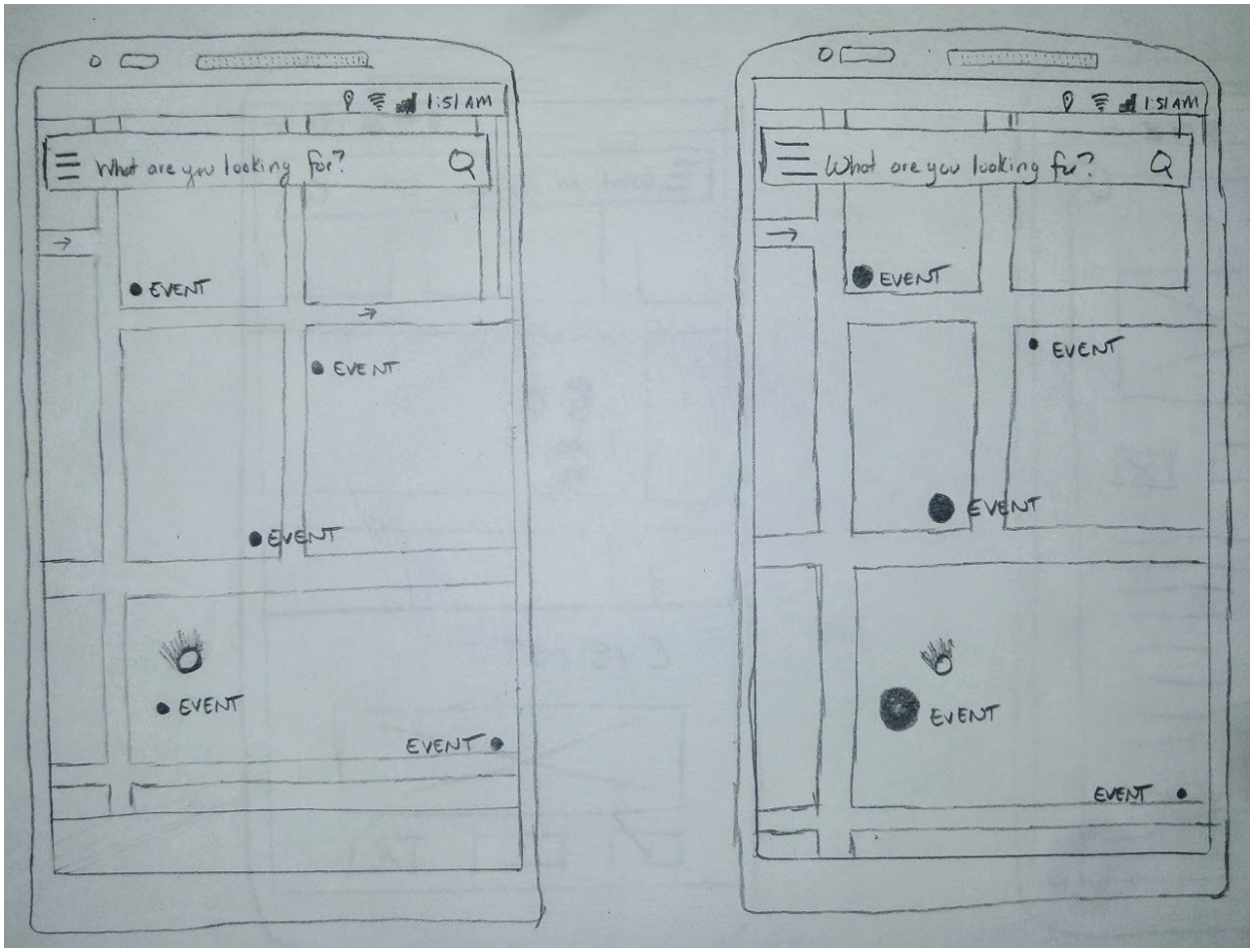
QOC ANALYSIS: MCAL EVENTS MAP

This QOC analysis will focus on one of the main features of MCal, the Events Map. The Events Map is the default “home page” of the app, the place users will be encouraged to search for events. User can interact with the Events Map in a number of complicated ways, but this analysis focuses on the most common interactions: locating events on the map, getting more information about individual events from the map, and accessing the calendar from the map.

QUESTION 1: HOW TO DISPLAY INDIVIDUAL EVENTS ON THE EVENTS MAP?



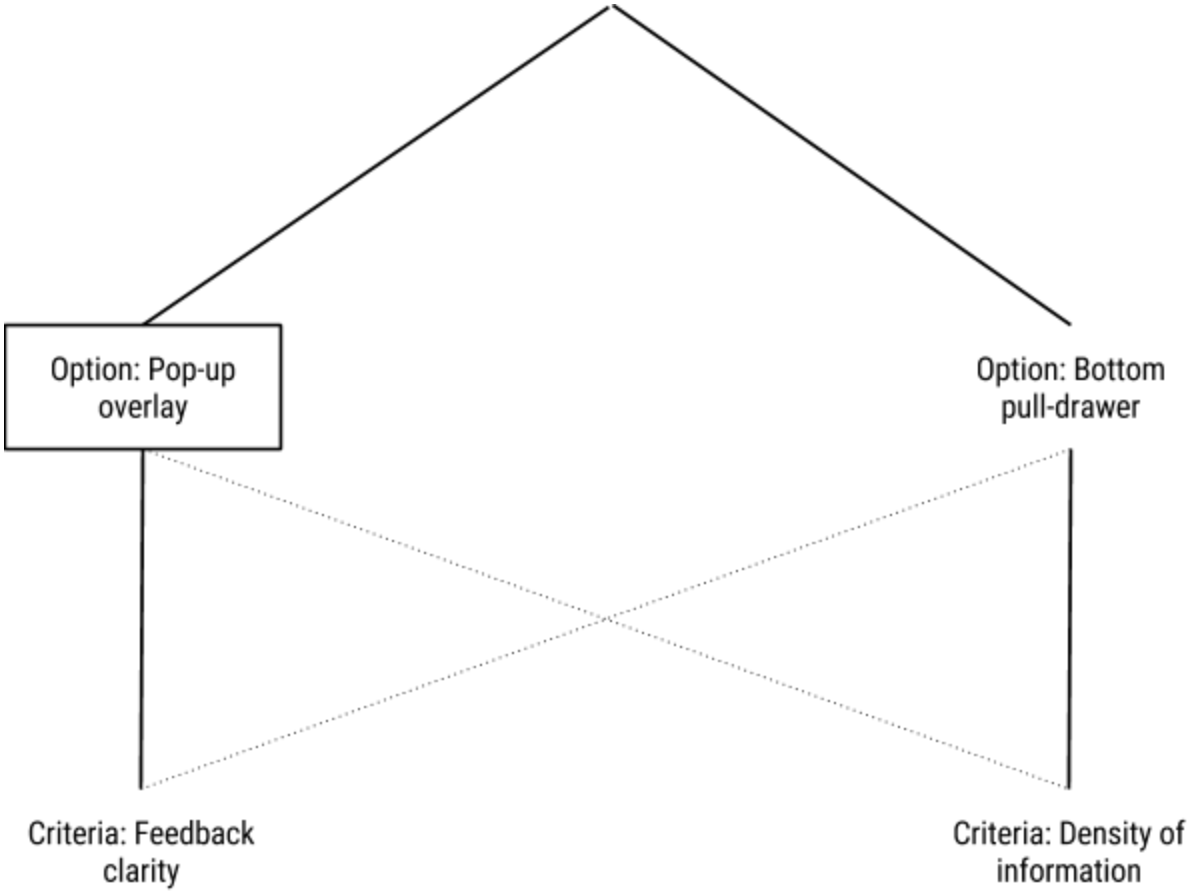
WIREFRAME



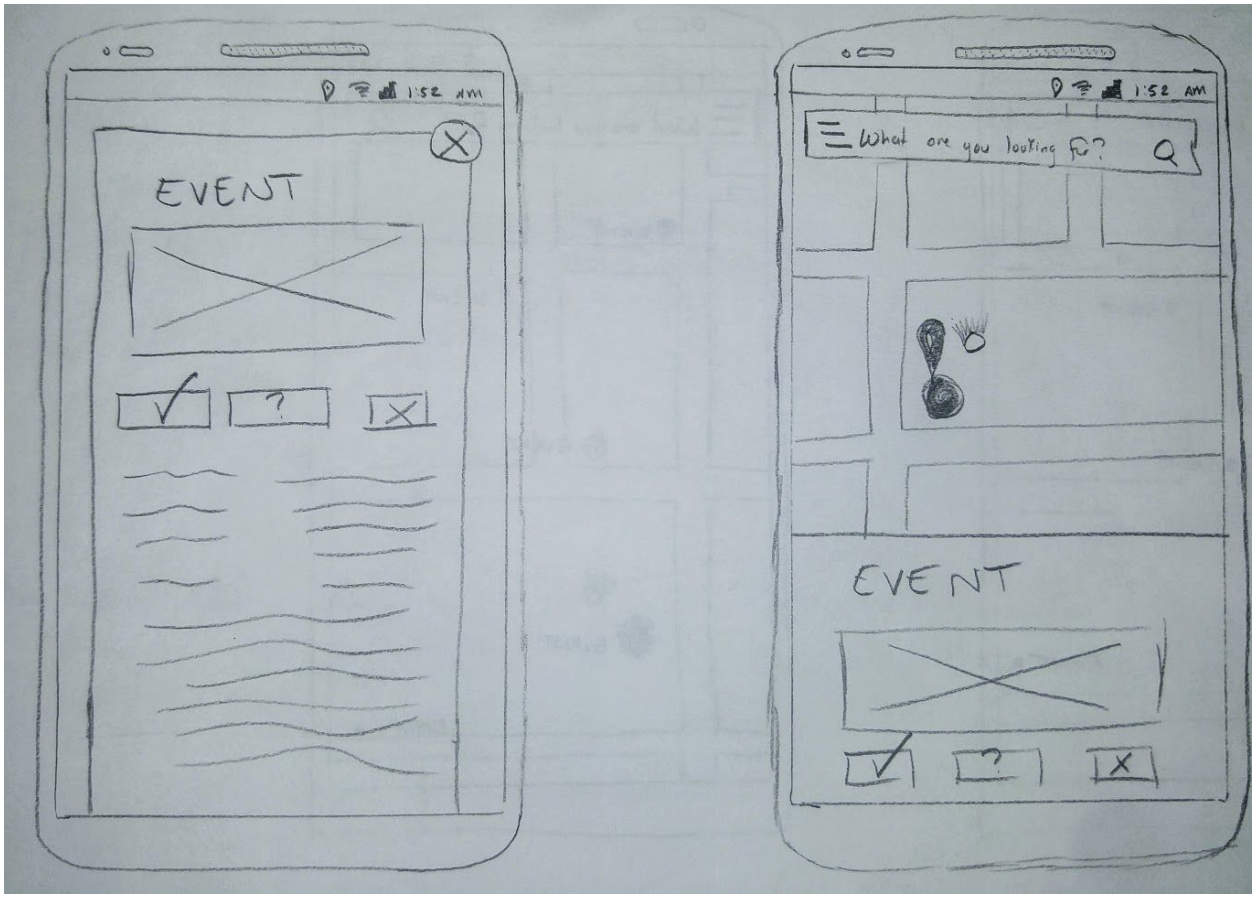
ANALYSIS

On the events map, the app could either display all events the same way (e.g., in the wireframe on the left, as a standard-sized dot) or it could differentiate them based on, for example, the number of people who have indicated some interest or confirmed attendance (e.g., in the wireframe on the right, where the dots are different sizes). The MCal app should differentiate the dots (by size, also likely by color or shape) in order to achieve an efficient information density: looking at a map of events indicated by icons that are all the same is quicker to read, but provides less useful information. Since the goal of the app is to make information about events more relevant to the user, it makes more sense to have ways to indicate which events the user should be paying attention to.

QUESTION 2: HOW TO DISPLAY MORE INFORMATION ABOUT A SPECIFIC EVENT?



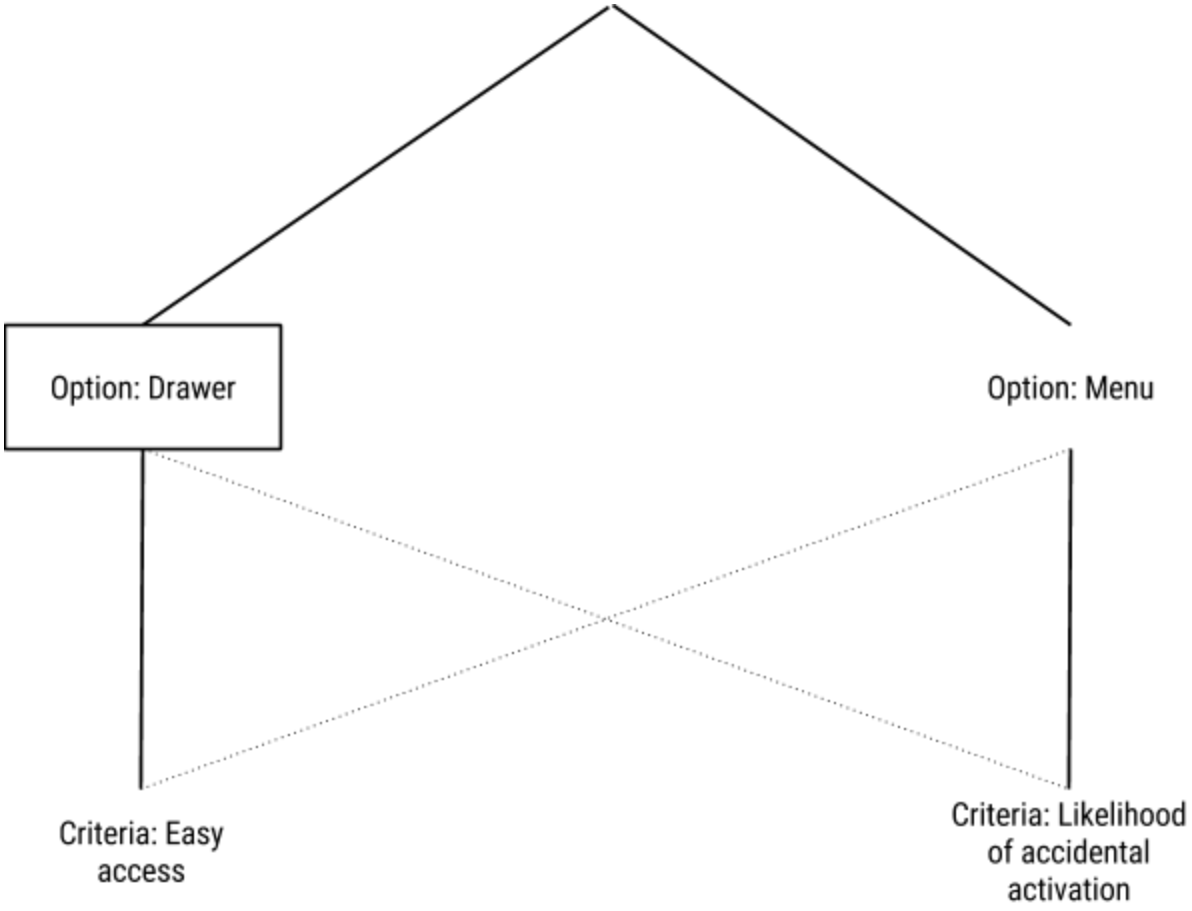
WIREFRAME



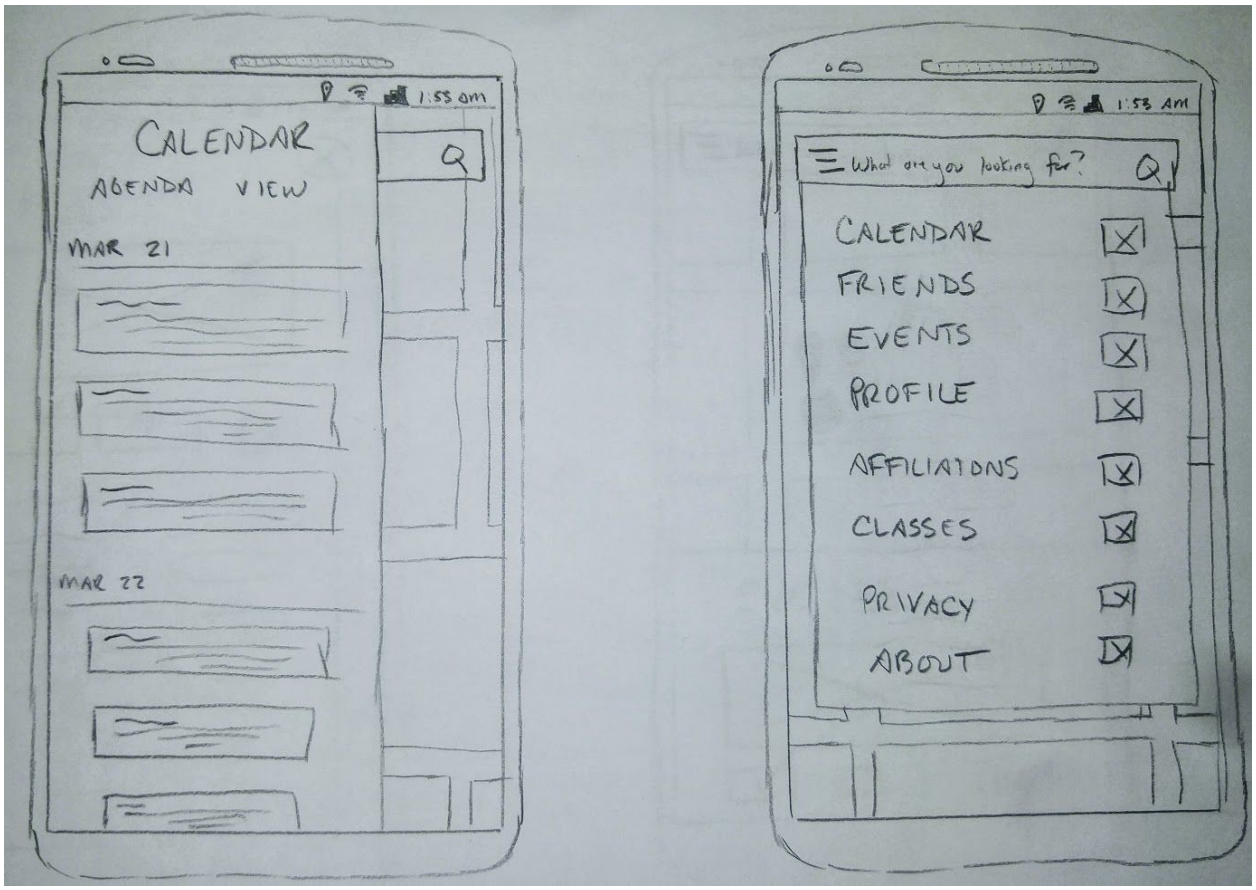
ANALYSIS

Clicking on an event to get more information is an important interaction on the Event Map. When a user clicks on an event in MCal, the wireframe on the left shows a pop-up overlay which sits on top of and obscures the map, but provides information about the event in a clear way. In the wireframe on the right, when a user clicks on an event, MCal presents a drawer at the bottom of the screen which the user can drag up to expand; it initially leaves the map open, so the user knows where the event that they clicked on is. Although the drawer option makes better use of screen real-estate and provides more information density, here I think it's important for MCal to provide clear feedback: if a user clicks on an event, they want to see pertinent information right away, so it doesn't make sense to force them into another interaction (making them drag a drawer) to see that information. I've chosen instead to go with the overlay for its clear feedback: when a user clicks on an event, they immediately see information about the event.

QUESTION 3: HOW TO ACCESS CALENDAR FROM EVENTS MAP?



WIREFRAME



ANALYSIS

I want users to have access to their calendars as easily as possible, since management of events is a major goal of the app. For this reason, I have chosen to make the calendar available from a simple swipe from the left edge (left wireframe) as opposed to putting it into a menu (wireframe on the right). Although some users may accidentally activate the menu while swiping the screen, I think it's a necessary tradeoff to have the calendar always accessible so that users have access to the information they need. While moving the calendar to a menu ensures that users only access it when they mean to, it also means that users have an extra click to get to pertinent information.

PAPER PROTOTYPING - NOTES FOR VERSION 2.0

JD Duval

April 2017

THE FEEDBACK

After two rounds of feedback from potential users, the most common feedback revolved around the tutorial messages which appear upon first-time use of the app, and the activation mechanisms I chose to use for accessing search results and the calendar.

Tutorial messages

In version 1.0 of the paper prototypes, when a user begins using the app for the first time, there are three dismissable prompts which comprise a short tutorial on how to use some not-so-obvious features of the app. However, both of the users who tested version 1.0 of the prototype found interacting with the tutorial itself to be confusing. The tutorial presents three messages as individual prompts, one after the next after the next. Each prompt describes an action users can take inside the app: swipe in from the left edge to see the calendar; swipe up from the bottom to access search results; tap blue dots on the map to get more information about events. The two prompts that tell users they can swipe each have an arrow indicating the direction users should swipe. Both of the test users were compelled to do the actions immediately, though this does nothing during the tutorial.

Although each prompt had an X icon in the top right corner to close it, the users also were inclined to close the prompts by mimicking the actions the prompts described, rather than with the X icons.

Calendar & search results activation

One user forgot that they could swipe in from the left edge to access the calendar. The other user did not find swiping in from the left edge to be an effective mechanism for accessing the calendar, expecting something more straightforward, like a button.

The same user who forgot that they could swipe in from the left edge to access the calendar also forgot that they could swipe up from the bottom edge to see a list of the events currently on the map. The other user, who also did not like swiping in from the left edge to access the calendar, did not like swiping up from the bottom edge to access the list of events.

THE CHANGES

Based on the feedback from the two rounds of user testing, I decided to eliminate swiping in from the left edge as a mechanism for accessing the calendar, and instead will mimic Google Maps method of using a hamburger menu on the left side of the search field at the top of the app to access the calendar. The hamburger menu, though it has its drawbacks, is a recognizable convention for accessing additional content. Although I considered adding a tab on the left edge to indicate a drawer, I didn't want to obscure the map with too many additional interface components.

For the list of events on the map, I decided to have the top of the visible at all times, similar to the search results list in Google Maps. User can still pull this drawer up to see the full list of results, but it follows conventions laid out by Google, and should therefore be a little less obscure than the implementation in version 1.0.

For the tutorial, rather than having pop-up screens, I will simply dim the background and have arrows which point to the hamburger menu, top of the search results list, and a blue dot on the map, with short instructions on what each is for. At the bottom of this dimmed screen, will be a button that says “Okay, I got it.”

FINAL PROTOTYPE & REPORT

https://pr.to/U2JJMF/

JD Duval

April 18, 2017

PROBLEM STATEMENT

Members of the University of Michigan community are bombarded by emails with information pertaining to events that they may or may not be interested in. Additionally, there is no centralized location at which community members can search or browse all of the events occurring on and around campus.

SOLUTION OVERVIEW

MCal combines aspects of social networking, productivity, calendar, and map applications into a single application to create a searchable, browsable hub for events happening in the University of Michigan community. As students are the largest population, and the driving force (either directly or indirectly) behind many of the events that take place on camps, MCal has been designed with students in mind. Both undergraduate and graduate students who have any experience using Google Maps, Facebook Events, and/or Google Calendar will be able to comfortably make their way through MCal to browse events that are happening near them, see what events their friends are going to, or search through the database of events to find something related to their specific interests.

MCal users can see what events their friends have indicated they're going to, and join those events; they can do a keyword search to find upcoming events that match their search terms; they can add events to their personal calendars; they can browse their friends profiles to see what classes and interests they share; and they can, of course, find detailed information about events like time, location, and messages from event creators.

FINAL DESIGN

EXCITING ASPECTS

Drawing from different genres

One of the most interesting parts of this project for me was drawing ideas from a lot of different genres in the early stages of ideation. I think the way that the design combines location-based mapping with a huge database of events and a network of friends makes it really unique, and potentially very useful for students and other members of the community who are interested in keeping up with the amazing events that are constantly happening around campus.

Using friends to recommend events

Although it's already a feature on Facebook, event suggestions get lost in the flood of information that bombards users on that media platform. I think the idea of building a social network around the pillars of friends and events offers a lot of opportunities to support university communities, which are also built on the same foundations: people and events.

UNIMPLEMENTED IDEAS

Because this started as such a huge project, there are a lot of ideas that I didn't get to prototype for this project. I was really excited to model a signup process that would automatically build a profile for users based on the information they've already given to the university - so, for example, automatically suggesting courses to add for the current or upcoming semester based on their class schedule or backpack, adding them to the user's profile for their classmates to see, and adding recurring events for classes to their calendar. But such an ambitious onboarding process was just not feasible for this project this semester.

I also had a user flow for the back-end of the app, for the administrators and staff who would be adding and managing events. However, most of these flows were for a desktop application. Since I wanted to model the most important functions for the most important user base - students - I decided to go with a mobile app, which precluded prototyping the administrative functions of the app.

TOOLS & APPROACHES

Tools used

I wanted to spend the majority of my prototyping time modeling the actions, rather than worrying about piecing together art and design pieces, so I chose Proto.io as my prototyping tool for this project. This turned out to be both a blessing and a curse; it's large libraries of pre-made icons and design tools did, in fact, save me a lot of design time. However, because it is an online application, I struggled with a lot of its technical limitations. In the future, I might choose something a little more lo-fi, since the high fidelity of Proto.io was sometimes a distraction from the flow of interactions, which should be the focus here.

Pros

First, Proto.io is dead simple to learn. I was able to dissect a sample prototype that was provided with the trial version in about half an hour, and felt comfortable enough after that to start working with the tool myself. I didn't spend too much time looking for something I needed, and I never felt like I was lost or confused by the tool, which I really appreciated.

The ease with which I was able to find conventional icons and material design artifacts to design for an Android-based app was incredible. Proto.io saved me hours of designing or searching for icons, figuring out settings for drop shadows, etc., because it already had the basic components of material design ready for me to use.

Cons

On the flip side, I struggled with Proto.io's speed, especially once I had more than a dozen layers per screen to work with. Simply turning layers on or off became a chore, since the app had to rely

on servers rather than my computer to process my requests. This somewhat counterbalanced the time I saved from using Proto.io's Material Design artifacts and icons.

The other thing I found incredibly frustrating about Proto.io during this project is it's Preview mode. Preview mode takes several refreshes to catch up to saves, which became very bothersome when I was trying to record my videos of MCal in action: several times, I'd find a small error I'd need to correct, use the editor to do so, then come back to the Preview mode and start recording only to find Preview mode hadn't caught up to all the changes I'd made.

DESIGN EVOLUTION

The design of MCal changed very significantly after I sketched alternative designs. Before that, I had imagined MCal would look like a simpler, more intuitively designed Google Calendar. But after the sketches, I realized that there were so many ideas to borrow from other genres - specifically, the idea of a map that highlighted events rather than locations. That was the biggest change that occurred during the design process.

After demoing the paper prototype with classmates, I received a wealth of feedback on smaller items in the design. This led to some significant changes on the maps page, like changing the activation mechanisms for accessing the calendar and search results list. In drafts of the digital prototype, I embellished with things like hover-text for events (I had only intended for users to be able to tap them for more information), and a blinking location marker. I also designed a profile page from scratch during one of the digital prototype drafts, as that felt like an important part of the design that had not yet been fleshed out.

IMPACT

I think an app like MCal could be a really important resource for the University of Michigan community. The campus is so full of incredible events, but it's very difficult to disseminate information about them because email is the primary communication for a variety of different kinds of information. Having a dedicated app that everyone - administrators, staff, students, faculty, organizers, etc. - use for planning and sharing activities on campus could help students who feel overwhelmed by email or frustrated at the lack of a central database to find information more easily. I think it would really increase attendance at many of events, and from there, could improve our sense of community.