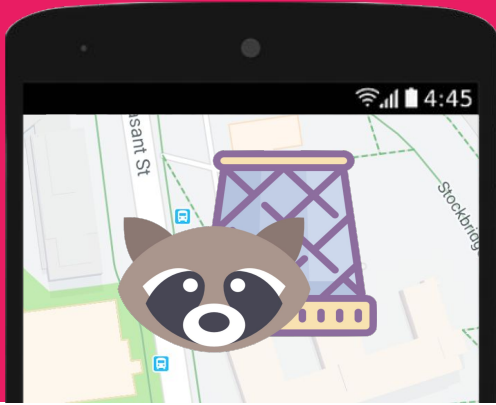


Saving the Environment with “QuickBin”



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QuickBin: An Overview

QuickBin's Focus

- To enable users to dispose their waste in the proper receptacle (recycling, compost, and trash) in lieu of littering.
- QuickBin's goals are to: (1) let users know where the receptacles are and (2) how to get them.

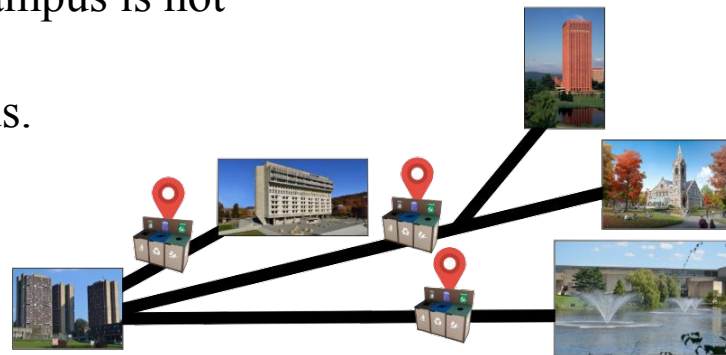


The Need

- The UMass community is large and susceptible to littering.
 - The location of each receptacle throughout campus is not currently mapped in an accessible format.
- To promote environment friendly habits on campus.

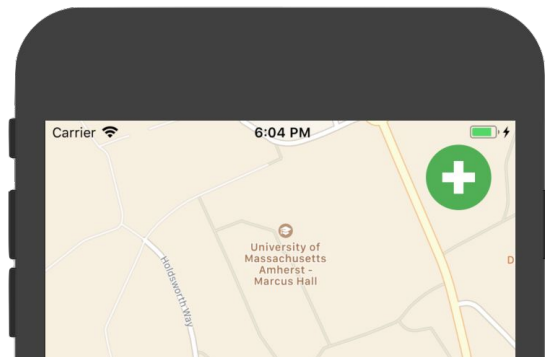
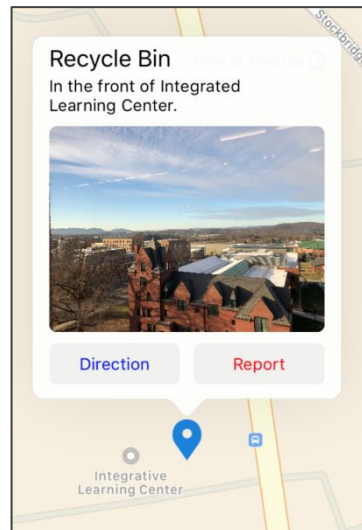
Other Approaches

- Existing apps are bound to specific locations.
 - QuickBin enables users to plot local areas.



Design Dilemmas

- Users were confused about how to add a new bin to the map (**Hard** task).
 - Moved “add new bin function” to a green “+” button that was more intuitive.
- When reporting a bin, users went into our original settings menu and tapped around the screen until they reached the “report bin” menu item (**Medium** task).
 - To fix this, we removed the settings button so that there was no confusion about where “report bin” was.

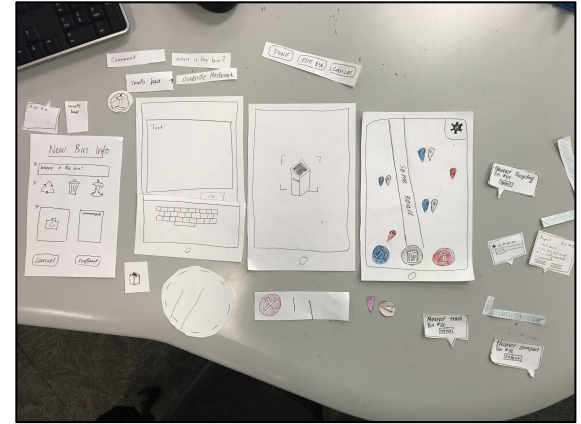
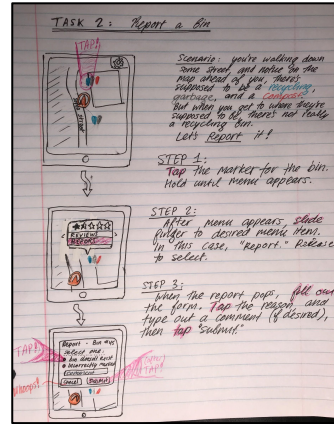


The 3 Tasks

1. Find and navigate to the nearest trash, recycling, or compost bin. (**Easy**)
 - The app will provide the location and directions of the closest bin to the user
2. Report a missing receptacle on campus. (**Medium**)
 - Users can report incorrectly displayed bins on the application that do not exist on the campus
3. Add a new nearby bin to the map. (**Hard**)
 - User can identify a bin on campus that does not exist on the app and add it to their map.

Storyboard & Paper Prototypes: How They Helped

- Precise design of our application
- Low investment in time
- Easy to test with users



User Testing Results

- Users had trouble figuring out where to click in order to report bin
 - Add redundancy to report button? Make pins more obviously clickable?
 - Add help/intro screen?
- Users didn't completely understand how to move pins in Task 3
 - Make the functionality more intuitive

Pros & Cons of Xcode

- + Interactive
- + Simple & clean
- + Various built-in debugging utilities (instruments)
- Crashes occasionally, buggy.
- iOS only

Why Xcode?

- The only free IDE for iOS development.
- Have experience in iOS programming.
- Familiar with the Xcode interface and how to use it.



Reflecting on QuickBin



- Naturally, the most interesting aspect of this project was designing the user interface.
 - Simple and easy to use. User can easily turn on the app for a quick glance at the available receptacles.
 - Updating the map with found receptacles.
- The most challenging part was incorporating the feedback given by the users. Testing our storyboard with users let us know that specific tasks are difficult to the user when we believed it is self-explanatory.
- We learned that when programming, there are special cases (icon sizes, specific app views, Xcode limitations and etc.) that we need to consider to get the application running before the due date.
- If we had to do this again, we would probably cast a more targeted net to catch a more diverse group of user testers.



Thank you for listening!