



Gaucho Transit

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Background

- The SBMTD transit service provides for Santa Barbara residents, commuters, and students from UCSB and SBCC
- The bus system is a vital tool for students living off-campus or in the Santa Catalina Residence Hall
 - For getting to classes, running errands, etc.
- UCSB students experiencing challenges using the bus
 - Extreme delays, bus no-shows
 - Difficulty navigating the hours bus runs on weekends and holidays
 - Physical timetables do not reflect holiday times and/or are outdated
 - Present apps do not help with navigating





Problem Statement

Through thorough examination of the current SBMTD bus apps, we aim to design a new bus app that will promote easier navigation of the MTD bus system.

Current Bus Apps



Transit App

- Lacks capability to plan trip without premium
- Unclear on how to choose destination
- Unreliable bus tracking



SBMTD BusTracker

- Displays somewhat real-time bus location
- Does not display when bus stops running
- UI is very user-unfriendly



Google Maps/iMaps

- Determines which bus(es) to take to get to from A to B
- Shows when a bus is delayed
- Sometimes shares wrong information

Research Method

Our research involved investigating the different types of bus apps used by UCSB students and focused on the following activities:

Surveying

UCSB students who use the MTD bus system to gather feedback on the current bus app options

UCSB Bus System Feedback Survey

Hi! This survey is only for students who use the UCSB bus system. We'd like to hear your honest feedback. If you've never used the UCSB bus system or don't plan to, you can skip this survey. Thanks!

achavez569@ucsb.edu Switch account

✉ Not shared

* Indicates required question

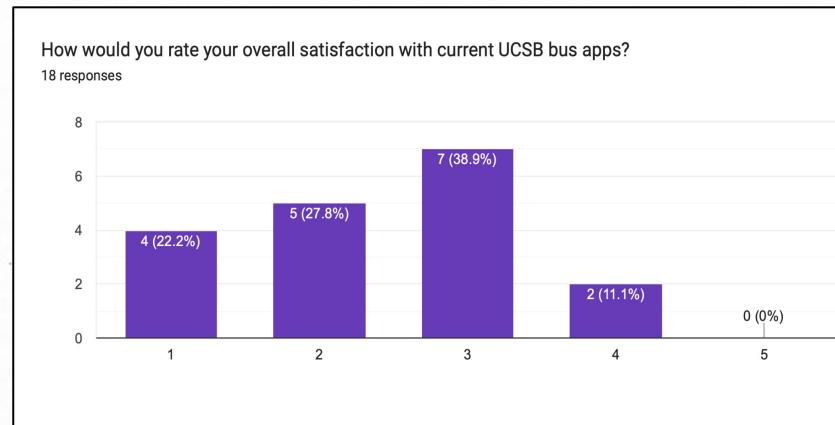
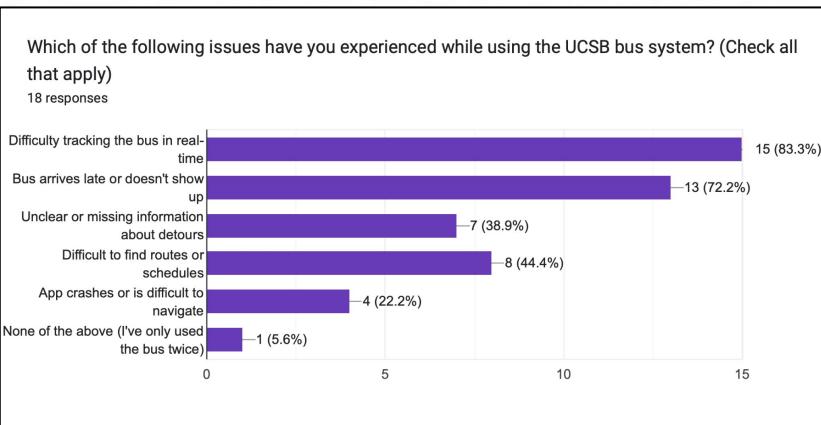
Interviewing

The *MTD Services for Passengers With Disabilities* explore how a bus app could better support these students in ways similar to the physical accommodations they offer



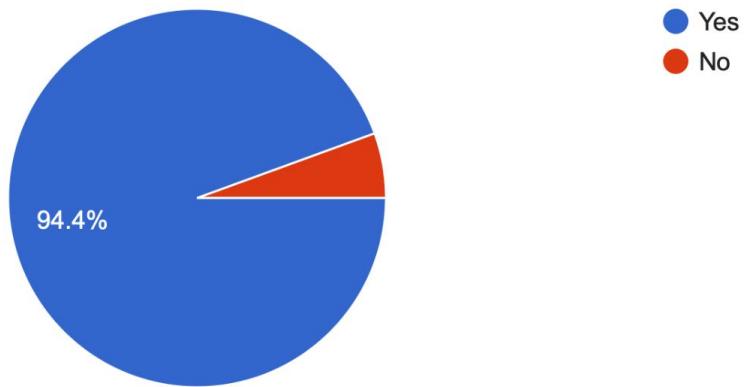
Survey Results

- Survey conducted with Professor Huk's WRIT 50E students
- A majority of respondents are unsatisfied with the current bus app
 - Difficulty tracking the bus in real time
 - Bus arrives late or never shows up
 - App crashes and/or extremely slow



Would you be willing to try a new UCSB bus app with the improvements mentioned above?

18 Responses



A new app is preferred!

How to Improve

To evaluate how to improve, we have to focus on the merits of existing apps that we can pull from in our app with enhanced features that we came up with.

Merits

- Occasional live tracking
- Shows which lines go where
- Allows you to plan trip ahead of time

Improvements

- Add reliable live-tracking and notifications for delays
- Add notifications of detours that change your route
- Adding easy access for commonly frequented locations with set reminders on when to get off

How to Test Efficacy

- Consult with SBMTD experts before test trials
- Select 30 diverse students to use existing bus infrastructure
- Have the same 30 students navigate again using the new bus app
- Compare based on a self-survey of app usability to see if there is a significant increase in ease of use



Cost

For the cost of this new app, we explored two different avenues, one of which has a significant savings for SBMTD.

Professional

- \$50,000 - \$150,000
- Professional App development
- Cost of hiring a software developer until the completion of the project

Student

- \$1000 - \$3000
- Partner for an SB Hacks Challenge
- Possibly less professional work but with significant time and cost savings
- Cost of prize money and expert advice

Why Us?

Our bus app has features that we surveyed to be lacking in the current bus app options including:

- Live Bus Tracking
- Route displays of different bus lines (with the use of different colors)
- Notifications on route changes, no shows, detours, bus time of arrival, and reminders of when to pull the stop cord

Accessibility:

- Text-to-speech (TTS)
- Keyboard navigability
- Adjustable font size
- Color Contrast



Conclusions and Recommendations

The current app options lack intuitive features and are not accessibility friendly. We recommend creating an app that improves all the features other bus apps lack, including **accessibility features** and the overall **user-experience**.



Thanks for Listening!

