Real-time Drexel Shuttle Information
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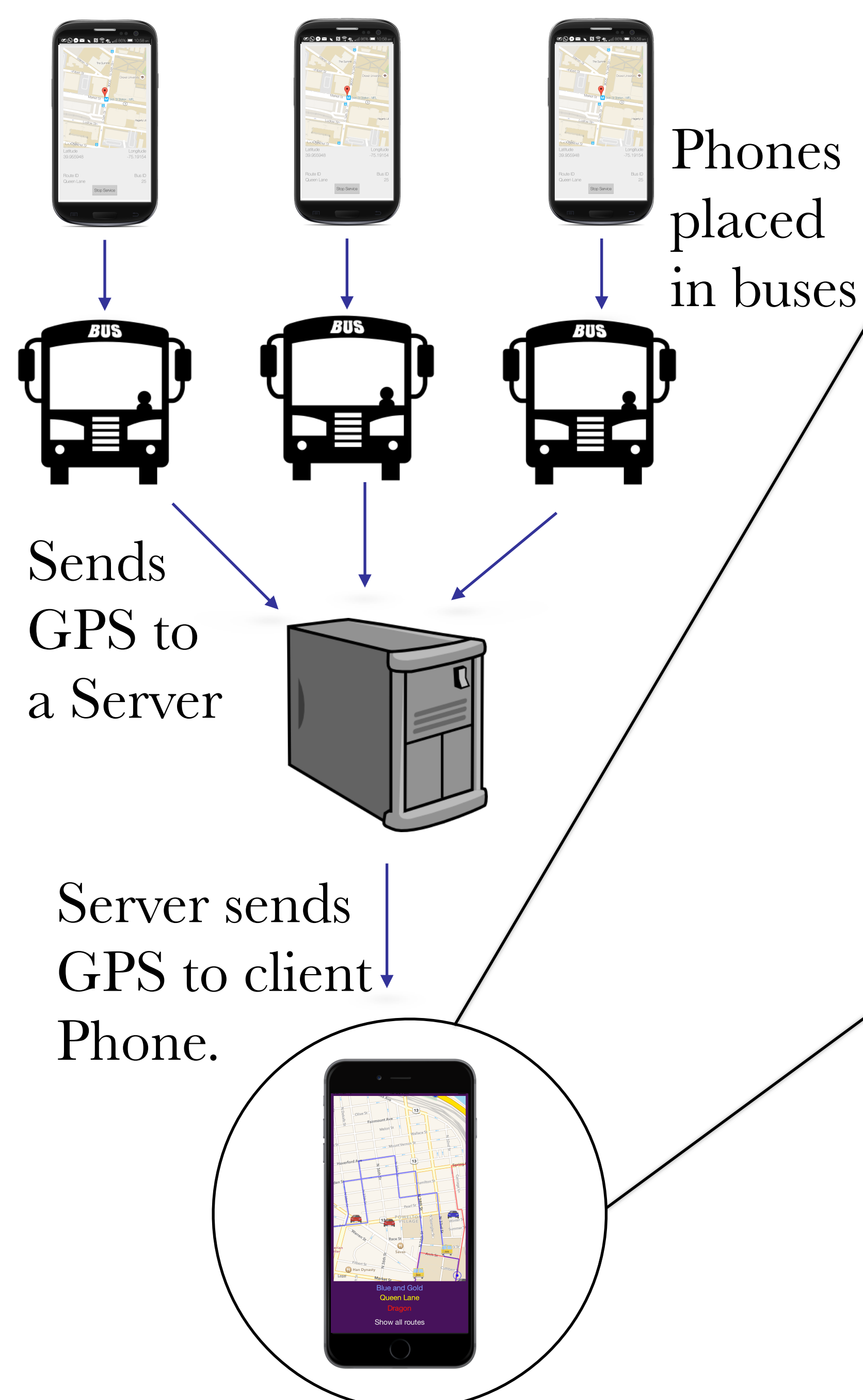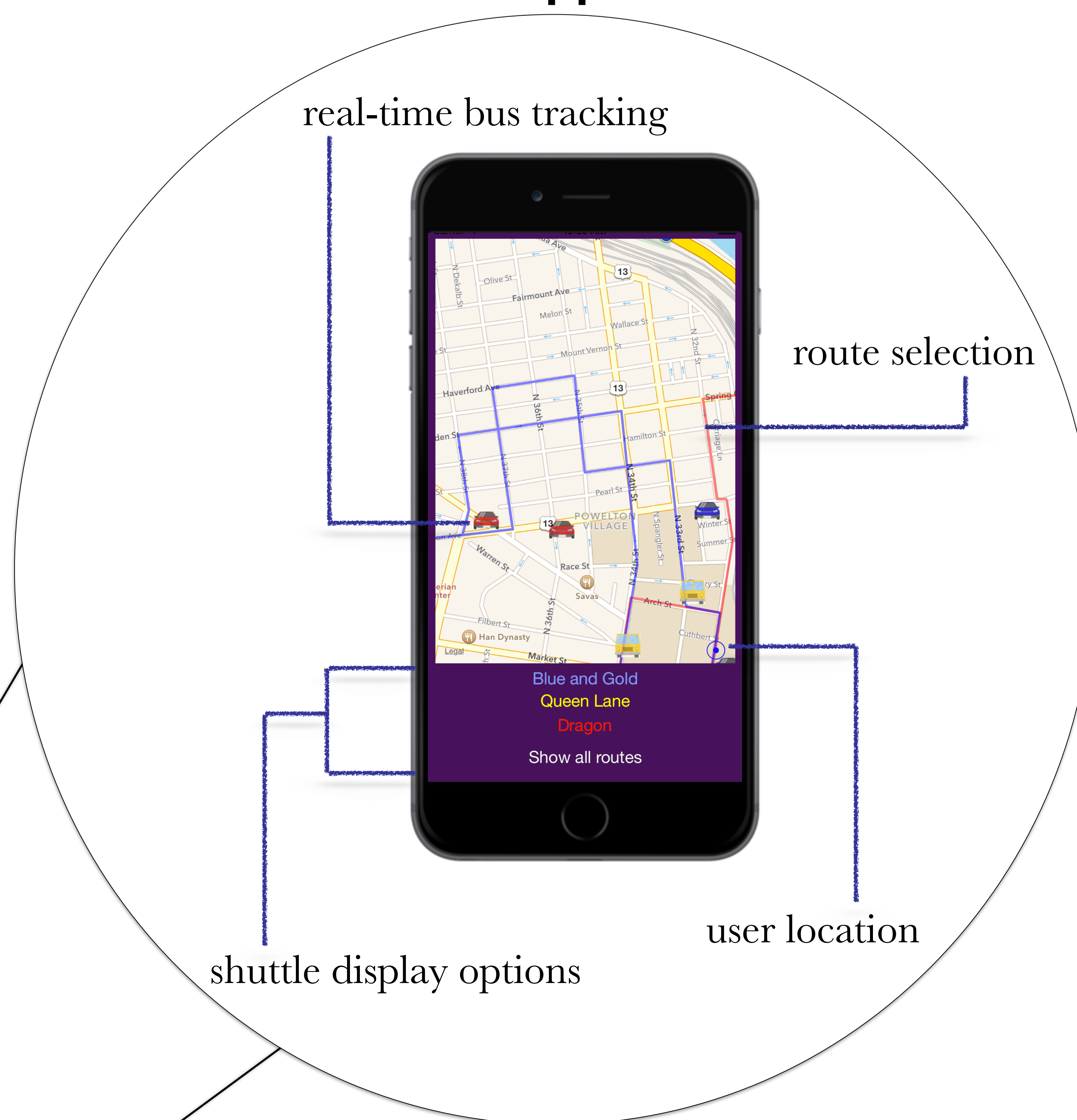Pennoni Honors College

Introduction

Many people utilize the Drexel transport shuttles on campus. Be that as it may, there is no simple way to discover where these shuttles are. In order to address this, we developed a system that allows the buses to be tracked in real time. Through a simple iPhone application, the user is able to locate each of the Drexel shuttles at the click of a button.

Process

Phones placed in buses

Sends GPS to a Server

Server sends GPS to client Phone.

Client Application

real-time bus tracking

route selection

Blue and Gold
Queen Lane
Dragon
Show all routes

shuttle display options

user location

Backend Location Service

We developed an Application Programming Interface(API) that grants access to the location data from a variety of platforms (i.e, iOS, Android, Web). This API was written using PHP, a programming language, and passes files that contain location data back and forth to the clients. The backend was implemented using a LAMP (Linux, Apache, MySQL, PHP) web server running in the cloud through Amazon Web Services.

Conclusion

Using the GPS of the phones inside the buses, a server and an iOS application, we determined the location of these buses. In turn, this allowed to attain shuttle location information with a simple click of a button.

Future work

Future work will include finding ways to better assist users with additional information like time and distance estimation, bus driver information and faster location updates. Additionally, it may be possible to expand this idea to other major transit associations like SEPTA and New Jersey Transit.

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