UT Dallas recently implemented its Comet Cab shuttle system. Theoretically, these shuttles will allow students to traverse the campus quickly by giving them a ride from for example, the residence halls or remote apartments, to central locations on campus. Practically speaking, the shuttles are plagued by problems of ignorance and incompetence. There have been claims of a shuttle driver taking the cab home and only coming back at the end of his shift. Dr. Wenkstern herself has shown that routes and pickups are inconsistent at best, and getting a ride to make your movement across campus faster is a matter of sheer luck in being able to successfully flag down the shuttle you want.

The solution to this obvious problem is CometRide, a three-part application designed for shuttle riders, shuttle drivers and shuttle administrators. For the riders, CometRide is a mobile application that will keep them updated on the locations of shuttles as they traverse their routes and allow them to notify shuttle drivers that they want a ride, which partially solves the efficiency problem even if luck in terms of the shuttle's location compared to a prospective rider's location will always play a role. For the shuttle drivers, CometRide is a mechanism to broadcast their shuttle's current location and status, as well as see the locations of people who want to ride their shuttle. For the shuttle admins, CometRide is a way to keep track of statistics related to the shuttles, as well as potentially set special/temporary routes. For everybody, CometRide will promote use of the Comet Cabs by making them much more accessible to riders.

The technicals of our solution rely on ubiquitous GPS and mobile data plans. Our idea is to equip all shuttles with basic Android-powered tablets that run our application to provide GPS capabilities for location tracking and a mobile data connection for status updating. GPS is a standard feature and mobile data plans can be had for $0.10 per Gigabyte if not cheaper. Likewise, we're assuming that anybody who uses CometRide to find a cab has a GPS and Mobile Data in their personal devices. However, our solution falls into place easily with just those common technologies.

The potential return on investment for this project is huge, especially since the investment is so low. A single GPS-enabled tablet per shuttle is very cheap - the current fleet of four shuttles can be equipped for under $300 USD and as previously stated, data plans are cheap. While it's certainly true that this project won't make money, the Comet Cab system was never an income source to begin with. The return on investment here will be clearly visible in shuttle ridership and student satisfaction. Most of the time I see a shuttle these days, it's either empty

or has very few riders. For a very low cost, the shuttle system can be massively optimized and the gains will be very visible in both shuttle ridership and student satisfaction.