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Beacon Boards

For our capstone project, we created a mobile app for hyper-localized anonymous message boards. The idea behind the app is to place the freedom that anonymity gives users online in a more interesting physical context. Our app exists for iOS and Android, and it works using bluetooth beacons to control access to message boards. When a phone is within range of one of our bluetooth beacons, which have a signal radius of roughly 50 meters, the phone is able to view and post to an associated message board. This means that although users are posting anonymously, they are within close proximity to each other.

We developed our app using the Cordova framework, which allows for simultaneous iOS and Android development. Using this framework, we were able to develop a product that has the functionality of a web app, but offers both the hardware access and user experience that are normally exclusive to a native phone app. The development process using Cordova provided a huge advantage in terms of reducing the amount of code required to produce two native mobile apps, but it also presented some downsides. We found that documentation was slightly lacking around some features of the framework, and the debugging process could be more difficult to manage than with standard web development or mobile app development.

We used Estimote bluetooth beacons, which have a powerful signal and can be stuck to any surface, to control access to our message boards. A node.js server supports the app, using a SQL database to store users' posts and socket.io for continuous communication with the client. For front-end technologies, we used HTML5 (with some mobile-exclusive features), CSS3, Javascript/jQuery, and Handelbars.js for templating.