Group 4:

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Project Proposal: Mobile app for PATH real-time service alerts, scheduling, and map

Value Proposition

The Port Authority of New York & New Jersey currently does not have an official app for the PATH train. There are other third party apps for schedules available, but none of them include real time alerts, and do not generate any revenue for the agency. The app we're proposing to build will be a prototype for an official PATH app, that incorporates both scheduling and alerts, in addition to maps, while serving as a mid step toward a larger, future PATH app that includes mobile ticket purchasing and mobile station-entry capabilities.

Real-time alerts provide particular value over the user's current experience, as presently, they can subscribe to a Twitter feed, which is slow and cumbersome to search through for PATH alerts. They also can subscribe to alerts via e-mail or text, both of which do not work as intended (i.e. users sign up but never receive alerts). If they want to check the PA website for alerts or schedules, they have to click through 3-4 different links to get to the information they need, which is difficult to do on a mobile device, as the PA only has a desktop site. This app would make access to this information immediate and frictionless. It also benefits the agency, as they can consolidate alerts communications into one place, and eventually incorporate mobile payments technology into this platform.

Use Cases

The PATH mobile app will ideally serve **4 primary use cases**:

- User clicks **Schedules,** selects **Timetables**, then picks a route from a dropdown menu, i.e. "Hoboken to 33rd St.", and receives a timetable showing the time the train arrives at each station in the route, for an entire day's worth of trains

- User clicks **Schedules**, then selects **From-To,** then a "From" and a "To" station, and receives a smaller table of all trains departing and arriving at only those two stations, for the day

- User clicks the **Alerts** feed icon and receives a list screen of real-time alerts for the past 8 hours

- User selects **Map**, then receives a screen displaying a map of all routes in the PATH system.

Optional use cases (if time / capability allows):

- User is prompted to opt in / out to enable **push notifications**, which will:
    - Send real-time service alerts

- User is prompted to opt in / out of providing **current location**
    - Push notifications will be sent to users notifying the approximate time of the next train entering the station, and where it is headed

Stack:

- **Front End:** We will use HTML5/CSS, with embedded Jquery to trigger data requests from our server, based on user interactions and events. We will use Dreamweaver as the environment to write our code, and publish to the server.

- **Server**: Stern Websys3

- **Back End:** Our algorithm will be coded in NodeJS and/or Python.

Technical Issues / Obstacles

- One technical issue that we face is that the data for schedules does not come in a query-friendly format. We will have to clean the data and rearrange it into a query-able table.

- Another is that for the “From-To” function, when a user selects a station and a destination, those stations could technically appear in multiple routes. We need the algorithm to figure out which route the user is on without making them actively choose, as it may be too many steps for the user. We think this may be possible to do based on the user’s current location and the time. Another option for this situation is to provide the times for both stations for all routes they are members of, in the results.