VELOCITY RAPTORS

Gold Master

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1 Design Document Original to Alpha

1.1 Requirements

Requirements changes, mainly Musts to shoulds.

List of musts to shoulds.

6,7, 9,10,11,12,13,14,15,16

1.2 Milestone 2 Changes

1.2.1 Responsibilities Changes

From:

Aidan & Anthony: Algorithm for calculating ETAs / Bus location (Using Next Bus)

Jackson & Nic: UI for navigating through buses / stops.

To:

Aidan & Anthony : Writing Route and Stop Java classes. Pulling parsed data from the database and populating Java classes inside the Android app for Nic and Jackson to use to view on the UI.

Jackson & Nic: UI for navigating through buses / stops.

1.2.2 Milestone 2 Requirements Changes

from (4,6,7,8) to (4,8) (6,7 pushed to Milestone 3)

1.2.3 Rationale for Milestone 2 Changes

Populating Objects from a database was more complicated than first thought so the team was unable to get maps implemented. Also we pushed requirements 6,7 (maps) since we thought fundamental portions of the app needed to be fixed first before we could implement the map. We also changed a lot of the parts we thought we could do without as a Minimum Viable Product and changed a lot of requirements involving the map to "Shoulds" so that would not be overzealous and try to not come short with a product we did could not complete in time.

1.3 Milestone 3 Changes

1.3.1 Description Changes

From:

All information is now graphically represented on the map using the Google Maps API (Pins[buses, stops, the user], Routes). The user can interact with all of these objects (click on pins to get additional information, etc). Scheduled information is now available in the Schedule page on the main menu. The system should also be able to recognize invalid times from NextBus, and have the ability to fall-back to default times.

To:

The team will attempt to implement the Google Maps API and connect our information with the map, including the pins on the map. If the team cannot implement the map, the application will be a very basic UI showing the schedules from Guelph transit. Supposing the map is implemented, information is now graphically represented on the map using the Google Maps API (Pins[buses, stops, the user], Routes). The user can interact with all of these objects (click on pins to get additional information, etc). Scheduled information is now available in the Schedule page on the main menu. The system should also be able to recognize invalid times from NextBus, and have the ability to fall-back to default times. The application should be able to calculate the estimated time of arrival of each bus for each stop, as well as calculating the bus current location.

1.3.2 Requirements Changes

Pushed (6,7) from Milestone 2 into Milestone 3

1.3.3 Deadline Changes

From: Wednesday, March 4th, 2015

To Sunday, March 15th, 2015

1.3.4 Responsibilities Changes

From:

Aidan & Anthony: Create Nextbus fallback algorithm, connect map pins to respective pages.

Jackson & Nic: Introduce Google Maps, integrate location pins, and polish UI

To:

Aidan & Anthony: Algorithm for calculating ETAs / Bus location (Using Next Bus)

Aidan & Anthony: Create Nextbus fall-back algorithm, connect map pins to respective pages.

Jackson & Nic: Introduce Google Maps, integrate location pins, and polish UI

1.3.5 Rationale for Milestone 3 Changes

We pushed the deadline 11 days to pick up slack on requirements 6,7 and have ample time to implement the map and tackle any problems immediately along the way. This was our biggest milestone with an explosion of features and changes.

1.4 Milestone 4 Changes

1.4.1 Milestone 4 Deadline Changes

From: Wednesday, March 18th, 2015

To: Sunday, March 22nd, 2015

1.5 Milestone 5 Changes

1.5.1 Deadline changed

From: Wednesday, March 25th, 2015

To: Saturday, March 29th, 2015

1.6 Milestone 6 Changes

1.6.1 Description Changes

From:

A setting is introduced to allow users to sign in as a Transit Driver or Administrator. Administrators have a permanent username and password which they can use to sign on and create or delete Transit-Tickets. These tickets will be associated with a unique bus route and a decay time. Drivers may use these tickets to sign in to the application and use their phones GPS to update the buses current location. Tickets are deleted after their delay time, and locations that are not consistent with the bus routes will be considered invalid.

To:

Main features should now be implemented into the application. The team should be debugging, polishing and fixing up any problems the application has. As well as this, the team will implement would-be-nice features as well as the following for the Gold Master.

A setting is introduced to allow users to sign in as a Transit Driver or Administrator. Administrators have a permanent username and password which they can use to sign on and create or delete Transit-Tickets. These tickets will be associated with a unique bus route and a decay time. Drivers may use these tickets to sign in to the application and use their phones GPS to update the buses current location. Tickets are deleted after their delay time, and locations that are not consistent with the bus routes will be considered invalid.

1.6.2 Milestone 6 Deadline Changes

From: Wednesday, April 1st, 2015

To: Sunday, April 5th, 2015

1.6.3 Rationale for Milestone 6 Changes

The team it would attempt to implement would-be-nice features to the gold master since we thought we would be able to get a lot more done on time.

2 Design Document Alpha to RC changes

2.1 Milestone 5 Changes

2.1.1 Description Changes

Remove Help page Remove clearing favourites

2.1.2 Responsibilities Changes (Aidan and Anthony only)

From: Aidan & Anthony: Backend functionality for the favourites menu.
To: Aidan & Anthony: Implement server web-scraper to application requests / Implement schedule update to automatically update

2.1.3 Rationale for Milestone 5 Changes

The team hit a few roadblocks as the code grew bigger and bigger. Some classes were tightly bound and conflicting with each other too much. Code needed to be debugged and re-factored. Unexpected problems with NextBus web-scraper on the server was causing the back-end team to grind to a halt.

2.2 Milestone 6 Changes

2.2.1 Description Changes

Remove anything to do with transit driver stuff Colouring system added

2.2.2 Responsibilities Changes

From:

Aidan & Anthony: Create administrator and ticket database, make tickets decay, and relate these tickets to specific bus routes. Create ticket activation systems, and connect bus locations to tickets current location. Jackson & Nic: Create UI for login and administrator and driver pages. Distinguish buses viewed on GPS vs schedule.

To:

Aidan & Anthony: Implement map colouring schema / Fix any remaining data bugs

Jackson & Nic: Polish UI / implement Help and About page

2.2.3 Requirements Changes

From:(33, 34, 35, 36, 37, 38, 39, 40)

To: (18, 31, 32)

2.2.4 Rationale for Milestone 6 Changes

The team understood that implementing another user-base system would be next to impossible to fit in with what time we had left and still needed a lot to fix. Knowing that the user-base system would have to be built, tested and debugged, the team decided to scrap anything to do with Transit User Usage and push it to a "After 3760" section (see below). The colouring system was added to give the user a better experience knowing when a bus would be coming by based on the pins.

2.3 After 3760 Section

All pushed requirements and things that "would-be nice" or "could" do but were not necessary for functionality in the app were pushed to a section called "After 3760". We left it open as a possible summer project to implement some of the features that were missed throughout development.

2.4 Release Candidate Changes

Removed requirements 31,32 (Help page).

2.5 Gold Master Changes

From: The team will attempt to implement would be nice features such as making accounts for Transit Drivers and Transit Administration for the personal GPS bus tracking system. Further explanation would be, Transit Administration should be able to make ticket IDs for Transit Drivers so that they log into the system and put their phone down. The phone will transmit their bus location to our server and track the bus. This would be used in the even that the bus currently being used does not have a GPS, therefore NextBus times are inaccurate. Hopefully this will rectify this problem. **To:** The team will smooth out UI design and implement the Help and About page in the application. These need to be done last since we will not be able to entirely write these pages without actually having a final product. Pin colouring will be introduced so the user can easily see where the bus is about to arrive based on the schedule times.

2.5.1 Rationale for Gold Master Changes

A lot of what we thought would get done was unable to get completed so we just focused on getting the app working properly.