

sdmay19-18: Real time Route Optimization

Week 4 Report

October 3 - October 12

Team Members

Zhanghao Wen — *Product Manager/App Developer/Tester*

Yuhang Xie — *Backend Developer*

Xinhe Yang — *Frontend Developer*

Junjie Wen — *Core Software/Algorithm Developer*

Tianhao Zhao — *Communication Leader*

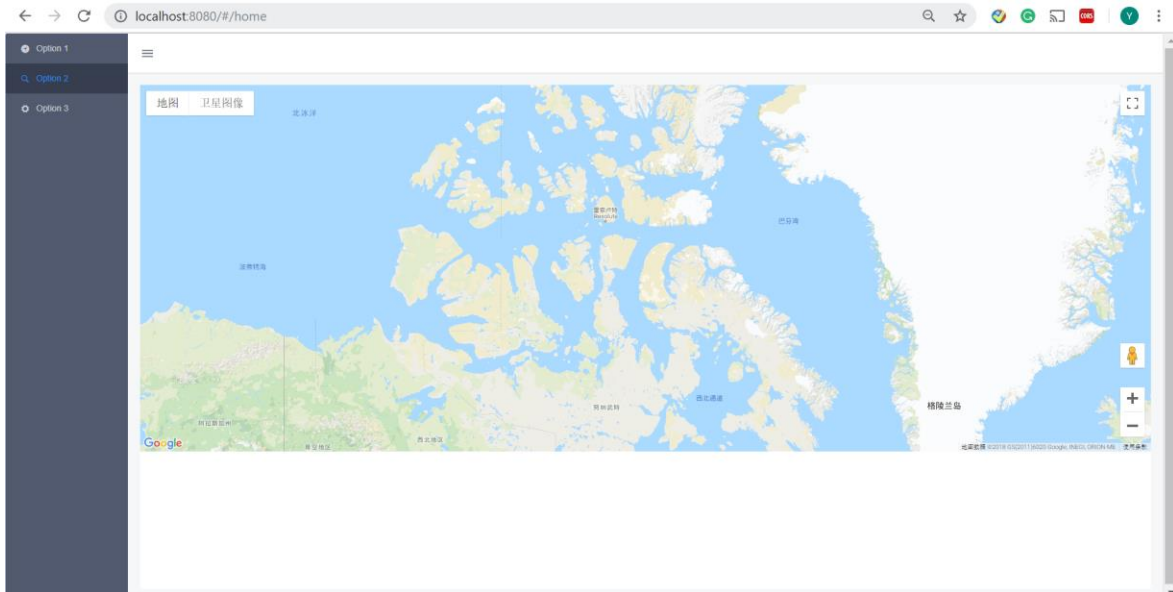
Summary of Progress this Report

This week, we get all the details of data from our client, which is greatly helpful for the future database building. And our front-end engineer build a effective clean map page, based on flat design. Moreover, our mobile team build a demo for both android and IOS platform. Finally, by communicating with our client and advisor, we get many constructive suggestions.

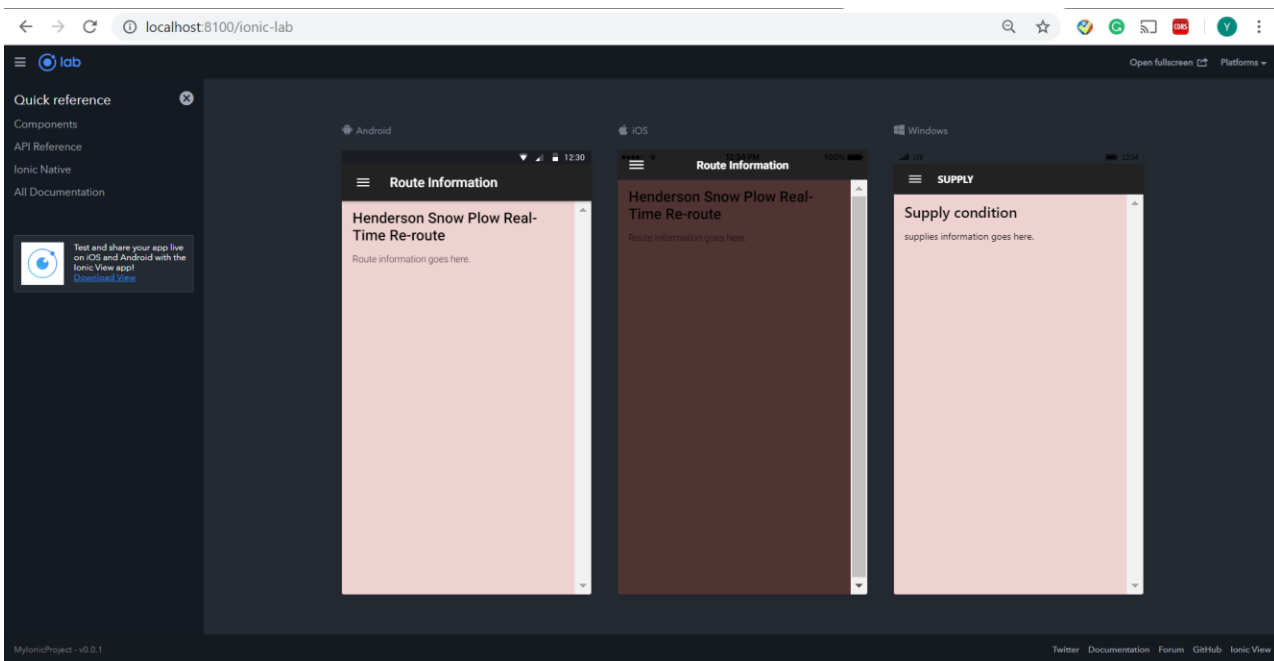
Past Week Accomplishments

Device	Conveyor					
Node	6					
Baud	250					
RX (MOSI)						
	Bytes	Description	Index (hex)	Subindex(Decimal)	Datatype	Details
COBID: 0x206						
PDO 1:	0-1	CommandAll	2000	1	U16	Bit Description 0 Switch On 3 Enable power stage 6 Open Drain Output 1 On 7 Open Drain Output 2 On 8 Open Drain Output 3 On 9 Open Drain Output 4 On 10 Open Drain Output 5 On 11 Open Drain Output 6 On 14 NA
	2-3	Command Speed	2000	2	S16	
	4	CommandAccelerationChange	2000	5	U8	
	5	CommandDecelerationChange	2000	6	U8	
	6-7	-empty-				
TX (MISO)						
	Bytes	Description	Index (hex)	Subindex(Decimal)	Datatype	Details

This is the sensor data from our client, including commandAll, Command Speed, CommandAccleration and CommandDecelerationChange. With those data, we are able to build a more usable table now. And also can build some logic for data change (like adding alert for high speed).



This is the main page of our web. In this website, user can observe the map information that we need. In the page, user can easily get an overview, or switch to details information just by simply change the scale. And the map will automatically decide how detailedly the map info should be.



This screenshot is our mobile app. Our mobile team build this demo with ionic (a powerfully cross-platform front-end framework), and successfully launch in emulator of android and IOS platform. Currently this app contains multiple tags for sub-index, and a simple introduction of our project.

Finally, our advisor give us a suggestion about dynamic re-route based on materials left, real-time truck location and route priority. Our web main page should be able to do response (like change color or change size) for user clicking, and will show route priority by give different path different color.

Pending Issues

1. Showing multiple dynamic vehicle in web base front page.
 2. Mobile app function design not clear enough, need more discussion from our adviser.
 3. Front end still did not talk to backends
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Plans for Upcoming Reporting Period

Meeting with client on campus to learn more about how the truck works and what data type we have by observing from data generator, to learn more about what expectations we have in implementation of the project.

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Junjie Wen	Communicate with client for sensor data, and analyze data type to build database.	10	33
Zhanghao Wen	Work on Ionic to develop app, MoM recorder.	10	32
Yuhang Xie	Helping mobile team set up ionic app.	10	34
Xinhe Yang	Build a front-end main page.	10	34
Tianhao Zhao	Developing app, create and develop design features, documentation.	10	32

Gitlab Activity Summary

Nothing to report.
