From: **Kyle R** kyrenzie@gmail.com
Subject: Re: Buy Advisor Groups - Proposed Solution
Date: December 04, 2018 at 8:09 PM America/Los_Angeles
To: abbasalikermali@gmail.com

Alright I will share our documents as well.

On Tue, Dec 4, 2018 at 7:27 PM Abbasali Kermali <abbasalikermali@gmail.com> wrote:
> Thank you, I will let you know.
>
> On Tue, Dec 4, 2018 at 6:52 PM Simranpal Bains <sp.bains@fremtidmedia.com> wrote:
> > Hi Abbas & Kyle,
> >
> > I hope you have finalised the final project requirements. Please, if you could share the documents.
> >
> > Also, let me know what is the next step and if you need any help from us.
> >
> > Good luck with your exams.
> >
> > 
> >
> >
> > Simranpal Bains
> > *Manager*
> > **Fremtid Media Inc.**
> > Phone: +1 (778) 323-8620
> > Website: www.fremtidmedia.com
> > Email: sp.bains@fremtidmedia.com
> >
> > On Nov 28, 2018, at 18:13, Simranpal Bains <sp.bains@fremtidmedia.com> wrote:
> >
> > Hi Wasek,
> >
> > I understand how you plan to do this. However, for both the cases you need to track the user until he is on the bus. That is not very efficient way of doing it.
> >
> > Let's consider this scenario: It's 3pm and user is in UBC library and he plan to board 6pm bus for downtown, Kelowna. He opens his app and sign up for the notification. Now you have to either track him full time or at certain interval, in order to know his location and send notification. And that will lead to extra load on your server, GPS, data and battery. Also, GPS doesn't work good inside the building and I'm not sure about inside the bus.
> >
> > Here is how you can get benefited from beacons (low energy devices), because that's what they are for. Think of them as a switch or trigger. Having beacon on the bus stop will help you, when to send the notification. When user arrives on the bus stop, his app will automatically receive notification from the beacon and that will be forward to your server, notifying you user is at the bus stop. No need to track the user. You can also set the user distance from bus stop, when this is triggered, by adjusting the transmitting power of the beacon. And same can be done inside the bus.
> >
> > I think adding two beacons (at bus stop and inside bus) will be very helpful in your project. Plus you don't have to totally rely on the GPS. For tracking bus location, GPS is better choice. That way you don't have to deploy beacons along the hwy/streets.
> >
> > Regards,
> >
> > 
> >
> >
> > Simranpal Bains
> > *Manager*
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> >
> > On Nov 27, 2018, at 18:59, Wasek Habib <wasek.edu@gmail.com> wrote:
> >
> > Hi Simran,
> >
> > 1. We will get the the gps coordinates for the user and the static bus stop geo coordinates will be stored in the database. If a user's location who's tracking a bus matches with the bus stop location, we can tell he's waiting at the bus stop.
> >
> > 2. We will send the user location to the small board computer or some kind of data that indicates the user is on the bus (user and bus location matched) EE team can process it to turn off the light sensor.
> >
> > We are tracking user location only if they are tracking a bus. GPS doesn't use too much battery life. Hope this makes things clear!
> >
> > On Tue, Nov 27, 2018 at 5:36 PM Simranpal Bains <sp.bains@fremtidmedia.com> wrote:
> > > Hi Wasek,
> > >
> > > Basically EE solution is option 2 as proposed earlier without beacons. I got two questions for you.
> > >
> > > 1) How will the system know that there is a user waiting at the bus stop?
> > > 2) When the user is on the bus, the light goes off. How does system detect's this?
> > >
> > > Unless you are planning on tracking user, but that will result in more data and battery usage from users prospective.

Regards,

Simranpal Bains
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On Nov 27, 2018, at 16:37, Wasek Habib <wasek.edu@gmail.com> wrote:

Hi Simran,

Sorry for the late reply, I was heads down school work for the last few days. Our team had a meeting with EE team last week and another potential solution using GPS came up. The EE team seems to be interested into that more and we are totally fine with that. Please find the COSC proposed solutions attached to this email and let me know if you have any questions.

Cheers,
Wasek

On Wed, Nov 21, 2018 at 6:14 PM Simranpal Bains <sp.bains@fremtidmedia.com> wrote:

Hi Wasek,

I'm going to leave the final decision on your group. EE group prefer option 2. Talk to Scott, if you like and let us know which option you would like to go with.

Regards,

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On Nov 21, 2018, at 10:43, Abbasali Kermali <abbasalikermali@gmail.com> wrote:

I don't have a very strong knowledge base with all three options. However, I find that option 2 is most reliable.

Abbas

On Wed, Nov 21, 2018 at 10:02 AM Simranpal Bains <sp.bains@fremtidmedia.com> wrote:

Hi Guys,

I would like see some comments from EE group. Feel free to propose any new solution for gateway problem. We are okay with COSC team model (attached), other than the getaway issue. If EE group like to make any change to it please feel free to share with us. To summarize, so far we have three options to go with:

Option 1: Gateway on the Bus - Cheap and easy. However, providing power and internet in the bus are the identified issue thus far.

Option 2: Standalone GPS in the Bus - "LTE enabled small board computer with gps tracker board".

Option 3: New Android App - Will make the project more complicated, time consuming and waste of resources and I don't like to change the scope of the project again. Let's not go with this approach.

Let me know what you guys think.

Regards,

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On Nov 20, 2018, at 22:02, Wasek Habib <wasek.edu@gmail.com> wrote:

Hi Simran,

Thanks for your reply. Agreed- here maps is better than other alternatives.

Sorry that it wasn't clear before, but glad that it worked out.

Like I said it's just a gateway setup suggestion from the cosc team, it should be under EE team's scope and we are hoping they can come up with some solution. However, you're right that setting up gateway on the bus is cheaper option. Kontakt's tech support said the same thing (last comment)- https://support.kontakt.io/hc/en-gb/community/posts/360001427040-mesh-network

I think there's been a misunderstanding interpreting my suggestion on "using gps". To clarify, I meant we could use only GPS to locate the bus location and then send it to server. No beacon or gateway is required for this option (not even at the bus stop). It can be done with your recommendations (lte enabled small board computer with gps tracker board or another android app from cosc team). In both cases, cosc team will have to create an extra API to receive the bus location (more server side work!) Worst case scenario cosc team can create another android app to get bus location if EE team isn't comfortable enough, but it will add up to our development time significantly (more app side work + more server side work + more continuous integration setup work!) and cant guarantee if EE team will have enough time to finish their side of work.

Looking forward to your opinion!

Cheers,
Wasek

On Tue, Nov 20, 2018 at 6:58 PM Simranpal Bains <sp.bains@fremtidmedia.com> wrote:

> Hi Wasek,
>
> I'm sure Reza have already clarified on this that we can't use Google Maps for this project because of the legal issues. You can use any other open source maps which you see fit. However, personally I think Here Maps is better option than other available.
>
> Just to make things clear, our proposed solution is only to help to guys to come up with a better solution. We don't expect you follow exactly what we propose. Just want to guide you so that we all are on right track. By the way, thanks for sharing the detail solution. This is first time we are looking at it. Pervious file that Reza shared was just an overview of this.
>
> - Is there any reason we do not want to go with the proposed solution by the COSC team earlier? We don't have problem with this, wasn't clear before. Your proposed solution looks good, however there is small problem with how you have your gateway setup. See below.
>
> - The circle is the gateway range and gateway can be placed in somewhere in the middle of two bus stops. EE team is responsible for placing and configuring the gateway and beacons so I will leave it to them to place the gateway in an optimum location. I guess you already know that gateway has range of up-to 50 meters. Using gateway to collect information is good idea. Practically we can't install Gateway at each and every bus stop. In real world environment we can't provide power and internet at all the bus stops. Cost is too high, this won't be feasible. You will have to come up with a better solution for collecting information…….. But what if you have gateway installed in the bus (but then problem will be how you provide power and Internet)? This way you can track the bus and collect information at same time. Let me know what you think about this.
>
> - Beacons are used where GPS fails. Beacons and GPS are substitutable technology. I am not sure if we use a separate GPS tracking board, what is the point of using beacons? We are using the user location using GPS anyway, same thing can be done with the bus. As you already know beacons don't share information with each other. Question arises: How do you plan to send this data to server. Gateway has range of 50 meters, if bus is out of this range you won't be able to get it's location. If you are using users phone to collect data that will increase Internet charges and draining more battery from user's prospective. And what if there is no user on the bus.
>
> - We were under the impression that we only have 1 type of user (name it regular/physically impaired) in the project based on our conversation with Reza. I will talk to Reza regarding this. For time being you can have one user type.
>
> Regards,
>
> Simranpal Bains

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On Nov 19, 2018, at 23:24, Wasek Habib <wasek.edu@gmail.com> wrote:

One more thing, I just realized after all the scope changes our app does not compete with Google maps as we are not using any of their features to compete (i.e. static bus schedule). Is it okay to use it for the project as it's more stable than Here maps and has more resources and active community online?

On Mon, Nov 19, 2018 at 11:09 PM Wasek Habib <wasek.edu@gmail.com> wrote:

> Hi Simran,
>
> Thanks for the clarifications! Your proposed solution is definitely a way to do it. However, is there any reason we do not want to go with the proposed solution by the COSC team earlier?
>
> Please find an updated version of the proposed solution by us attached. I tried to avoid any technical terms, but please let me know if you have any questions/concerns. I have replied to some of your questions/concerns on the comment doc- please have a look at that too!
>
> Please note that we have a hard deadline with Scott tomorrow at 5:30pm, where we have to show him the latest requirements and scope changes. After that we can not change any project requirements and scope.
>
> Thanks,
> Wasek
>
> On Sun, Nov 18, 2018 at 8:31 PM Simranpal Bains <sp.bains@fremtidmedia.com> wrote:
>
> > Hi Guys,
> >
> > I understand the scope keeps on changing every time we hit a hurdle. I'm trying my best to keep the scope same and still successfully finish the project.
> >
> > Please the attached files for all your concerns and let me know if you have more questions.
> >
> > Regards,
> >
> > Simranpal Bains
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> >
> > On Nov 18, 2018, at 18:11, abbasali kermali <abbasalikermali123@hotmail.com> wrote:
> >
> > Hello all,
> >
> > Simran, Could you please send all email to abbasalikermali@gmail.com because I think there seems to be a problem with this mail box.
> >
> > Thank-you for your findings Wasek, we were experiencing road blocks as well. Could Fremtid provide a clear cut scope of what exactly needs to be done by the engineering team now that the scope has changed and other alternative methods have been introduced, just so we all have the same picture and goal.
> >
> > Kind regards,
> > Abbas

From: Wasek Habib <wasek.edu@gmail.com>
Sent: Sunday, November 18, 2018 5:50:17 PM
To: sp.bains@fremtidmedia.com
Cc: Kyle R; abbasali kermali
Subject: Re: Buy Advisor Groups - Proposed Solution

Hi Simran,

Thanks for the solution proposal. I have attached some of my concerns/comments with the email. Please have a look at them when you have time.

Cheers,
Wasek

On Thu, Nov 15, 2018 at 8:17 PM Simranpal Bains <sp.bains@fremtidmedia.com> wrote:

> Hi Guys,
>
> I see the project has changed a lot since you guys started working on it. Specially, the beacons are only one-way communication devises. Good job figuring out.
>
> We can't tackle the problem same way as before. Therefore, we are proposing a different solution which is within the scope of this project and will help you achieve your goal. Also this project is no more cellular data free. User will need cellular data/internet to use the app, since beacons don't trace/collect user information. Let me know what you thing about it.
>
> Attached to this email is a diagram explaining how our proposed solution works. You don't have to exactly do the same. You can come up with your own solution, as long as it works. Let me know if you have any questions or concerns. Please come up with a solutions by coming Monday. I will schedule a call with you either for Monday or Tuesday to further discuss the same.
>
> Good Luck,
>
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