METU CENG491 2015 FALL

START-UP DOCUMENT

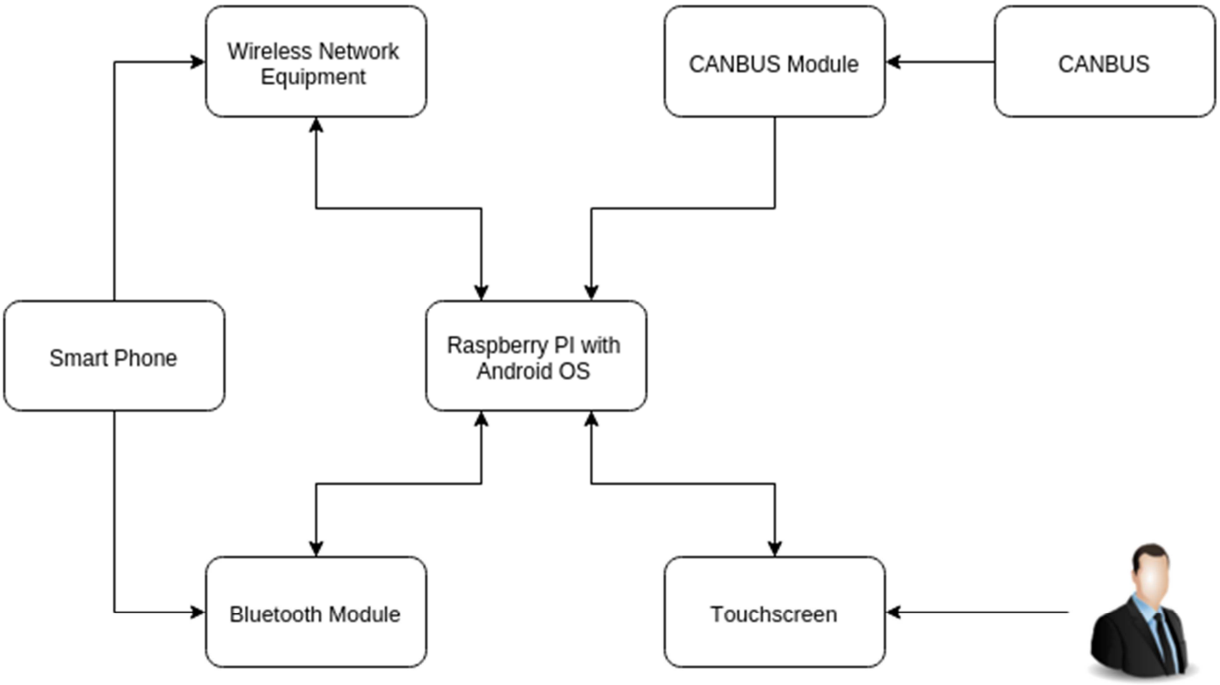
<UID>

Group Name: *Nankatsu*

Project Name: *OpenCar*

1. System Architecture

- *Draw the overall system architecture diagram. This should include (but it is not limited to) the components of the system, the interactions among the components and their dependencies.*
- *Identify and describe each component (including subcomponents if any), their interactions and dependencies clearly.*
- *Specify the user interaction model.*



- **Raspberry PI:** The board that we will use it as core component of the system. It is pre-built board and we will install Android based operation system. Every component will interact with Raspberry Pı.

- **CAN Bus (Controller Area Network Bus):** This hardware component will provide us some information from different car sensors. This component is purchasable and we will plug it directly into Raspberry PI.

- **CAN Bus Module:** In this module we are planning that gathering some data about car status from CAN Bus.

- **Smart Phone:** Any smart phone that uses Android OS. We expect this device already is owned by user.

- **Wireless Network Equipment:** There is no build-in Wi-Fi adapter in Raspberry PI. Hence we need wireless network equipment for communication with smart phone through Wi-Fi.

- **Blue-tooth Module:** Raspberry PI does not have Bluetooth card. Hence we need a Blue-tooth card. By using this card we will add to system hands-free property.

- **Touch-screen:** This component provides user and system interaction. It will be 7” sized touch screen.

2. Tentative Time Plan

- *Identify and itemize all tasks to be performed as a team in the first semester. Assign a unique TaskID for each task. Give a short name and brief description for each identified task.*

TaskID	Short Name	Description
T1	Software research	Deciding which operation system and user interface application will be used compatible with Raspberry Pi
T2	User Interface	Designing user interface
T3	Software component	Coding and testing of software components that are not bounded with Raspberry Pi
T4	Hardware supply	Getting decided hardware parts
T5	OS installation	Installing decided operating system to Raspberry Pi
T6	Integration	Integration of hardware parts(CAN bus, Wi-Fi Access Point, Blue-tooth Module and touch screen)
T7	SRS	Delivering software requirements specification report

- *Construct your time plan as a simplified Gantt chart, as shown in the following table.*

	Iteration1	Iteration2	Iteration3
T1			
T2			
…			

	17.11	24.11	01.12	07.12	15.12	22.12	29.12	07.01
Software research	X							
User Interface	X		X		X			
Component		X		X	X	X		
Hardware	X	X		X				
OS Installing		X						
Integration			X	X		X	X	X
SRS							X	X

3. Deliverables

- *Identify and list all deliverables of your project for the first 3 sprints.*
- *A deliverable is some component or sub-component, which is running and demonstrable to your assistant and your supervisor. That deliverable is of course subject to improvement over time.*
- *Fill in the following table:*

Deliverable	Description	When? (Sprint#)
D1	Operating system installation to Raspberry PI	24.11.2015
D2	First draft of user interface	15.12.2015
D3	Establishing connection between Phone and Raspberry PI through Wi-Fi direction	12.01.2016

4. Workload Distribution

Fill in the following table to distribute the workload for the first semester among your team members.

	Sprint - I	**Sprint - II**	**Sprint - III**
Sinan Tufekcibasi	T1, T4	T5, T4, D1	T6, T7, D3
Sefa Suluova	T1, T4	T1, T4, T3	T6, T7, D3
Erkan Tomruk	T1, T2, D2	T1, T3	T6, T7, D3
Mustafa Tunc	T1, T2, D2	T1, T3	T6, T7, D3