Global Meeting Report 26.11.2013

Team ITU

Date	Time	Duration	Attendees	Communication medium
Tuesday, 26.11.2013	17:10pm (CET) 20:40pm (EAT)	~ 3:30 h	ITU Team (4 total): • Tomas • Christoffer • Jacob • Theresa Kenya Team (1 total): • Cecil	Skype

Agenda: Status-Update

Agenda (planned):

1) Discuss Status Update Kenya
2) Discuss Status Update ITU
3) Feedback on communication
    a. Meeting report
    b. Server installation
4) Open Assignments for Team Kenya:
    a. If you send a request with a start time and an end time, you expect a list of objects, where each object represents a person with the latest coordinate. Why do you send a start time and an end time to the server in the first place, when you only want the latest coordinate of a person?
    b. When you want the end-user to provide a start time and an end time, you probably want the path of each person in that time span. That means that you will get several coordinates for each person. To clarify, please write down EXACTLY what you want. What input and what output (including the format).
    c. Is one method enough to cover all App functionalities?
5) Setting up the server
6) What to use the Prediction for? (ITU Advisor said it’s a requirement from Strathmore)
7) Connection of the rooms
    a. should be configured on the Android App
8) Assignments for this week

Meeting progress

- Started at around 17:10 CEST (19:10 EAT)
- ITU student (Jacob) attended at 17:23 CEST (19:23 EAT)
- Kenya student (Ann) was missing: Cecil excused her for having difficulties with the internet connection
- Kenya student (Wayua) was missing: Won’t be in the project anymore

Status update from Team Kenya

- Update on Project team: Wayua has excused herself from the project, because she's quite busy. She will be no longer in this project.
- Team Kenya has now access to Raspberry PIs
- Cecil: Currently trying to setting up the local server (installation of JAR-File)
- Anne: Currently working on the android development (UI and canvas)
- Answers from Team Kenya according to the questions in the meeting report from last week
    - There’s no need to have start and end time if we want only the latest coordinates
        - start time and end time will return a lot of data. When we have so much data requested at once, the phone might not respond very well. In this case we will not need start and endtime as parameters, only roomID. In otherwords, when we focus on the latest update of a room, the phone will respond much better
        - Requesting room status only by roomID

Status update from Team ITU

Image Processing:

- The timestamp is still long “real” timestamp, which can be converted to date / UTC time
- Tresholding: RP will only send coordinates to the server, if a person moves significantly
    - The point of sending coordinates of a person only if they move significantly is to avoid sending "useless" data of people who don't technically walk, but are standing or sitting in one place and only move their hands/heads or something like that.
    - Prediction does not get impacted by this

Prediction model:

- Converted C#-Implementation of the prediction-model into Java
    - Because the server was written in Java so it made sense to redo the prediction in Java (originally in c# because it made some testing parts easier)
- Bug Fixing
- Answer from the Advisor:
    - prediction part was originally a request from Strathmore to make the android app more interesting
    - Team ITU should have received some detailed requirements from Team Kenya

Server:

- Connection-Fix between RP and Server: If there is no data update from the RP to the server for 5 seconds, the connection will be closed; A new connection will be built up when RP wants to send data to the server after 5 seconds
- RP will only send one coordinate for each object to the server instead of a coordinate-path
    - Example file of the JSON sent to the server from the RPs on Google Drive
- Created JAR-File of the server
- Bug Fixing

Decisions/Discussions

- Prediction (View from Team Kenya): When will a person leave the room?
    - Feedback Team ITU:
        - Why you want to know the probability of someone exiting the room in the near future? What is the near future?
        - What is the probability regarded to?
        - We don’t have information about speed of an occupant
- Prediction (View from Team ITU): On which exit a person will leave the room?
    - One room with many exits: Determine which exit, the person is likely to take
    - Server will return a list of exits with corresponding probabilities and the android app could just pick the exit with the highest value. That way the android app only show an alarm if the probability is greater than 60% or something like that. With a room with only one door, a person will take this exit with a 100% probability.
- Prediction is calculated on the server
- Android App requested prediction data from the server
    - Methods have to be defined
    - Server will give back coordinates
    - Android App can choose a labelling for the exits
- Prediction data on the Android App
    - Toast on the android app: Display prediction data as an alert just below the screen
    - Suggestion Team ITU: Check the prediction for one occupant. Server makes a prediction for the given occupant and returns the probabilities of the person going to each exit of a room
- Logic of the connection of the rooms has to be made in the android app
    - The server only knows that there're different rooms/corridors (corridors are also just rooms), but doesn’t save information about how they are connected to each other
    - This part of prediction ("person1 is in room 1 and is heading to room 2"), has to be set up in the android app
    - Exits are saved manually on the server
    - Android app needs to request those exists to build up a reasonable connection of the rooms (because the following does not make sense: Room1 has 1 exit. Room 2 and 3 can be entered from Room1)
- Suggestion for methods from Team ITU (at least required)
    - getRoomStatus: Containing the latest coordinate for each object
    - method where the android app gets information on which rooms are existing and where the exits are in each room
    - method to request the prediction data (which probabilities for each exit for one object in a room)

Instructions for setting up the server

1. Push windows button and push the "r" butten just after (win + r)
2. Then type "cmd"
3. Now navigate to the directory where you have put the file
    a. To go one directory up, type "cd.."
    b. to enter a directory type "cd directory-name"

4. When you're at the folder type "java -jar GSDServer.jar"

If java is not recognized as internal or external command:

- Install java
- Set up environmental variables
  - JAVA_HOME as variable and link it to your java folder (jdk) as value
- If the problem continues → google it
- If you still have problems with setting up the server, ask Team ITU (Christoffer)

Feedback on communication

- If questions are asked, do answer them as requested asap
- Give replies on meeting reports, especially if they are explicitly requested
- Why do we have meeting reports?
  - everyone has an committed statement on things we agreed on
  - everyone has the chance to correct/complete the information
- Always communicate when you need help and cannot finish your assignments

Assignments Team ITU

- Theresa will write the meeting report
- Implementation of the last requirements this week (afterwards only bug fixing, testing and writing the report)
- Update the JAR-file with the prediction part and the new requirements and send it to Team Kenya
- Write an status update on the day of the next regularly meeting (Tuesday, 3. Dec. 2013) and send it to Team ITU before the meeting
- Check and answer emails according to this project regularly in the next days and try to be visible on Skype as much as possible

Assignments Team Kenya

- Write down an exact definition of the ALL methods, which are needed on the server for the android app (till Wednesday, 27. Nov. 2013)
  - Team ITU will only implement requirements this week
  - Suggested structure: CommandName, Parameters (name, datatype), output, and description.
  - At least the suggested three methods (see Decisions/Discussions)
- Installation of the server application
- Write an status update on the day of the next regularly meeting (Tuesday, 3. Dec. 2013) and send it to Team ITU before the meeting
- Update of the android app mockups
- Summary on the prediction data
- Check and answer emails according to this project regularly in the next days and try to be visible on Skype as much as possible

Reminder

1. Dec. 2013 Finishing a first working prototype of the occupancy analyzer. After this Team ITU will concentrate on writing the mandatory report. Further minor improvements and testing will be made in parallel.

16. Dec. 2013 Hand-in of the report (End of project)

➔ **Just 5 days for finishing the prototype!**