Global Meeting Report 31.10.2013

Team ITU

Date	Time	Duration	Attendees	Communication medium
Thursday, 31.10.2013	17:00pm (CET) 19:00pm (EAT)	~ 1:45 h	ITU Team (3 total): • Tomas • Christoffer • Jacob Kenya Team (2 total): • Wayua • Ann	Skype

Agenda: Status-Update

Agenda (planned):

1. Status update from Team ITU
2. Status update from Team Kenya
3. Decisions
    a. Version Control
    b. Programming Language
    c. Where to process which data?
    d. Client-Server vs. Peer-to-Peer Document
    e. Other
4. Assignments
5. Feedback
6. Other

Meeting progress

- Started at around 17:10 CEST (19:10 EAT)
- ITU student (Christoffer) attended at 18:00 CEST (20:00 EAT)
- ITU student (Theresa) and Kenyan student (Cecil) couldn’t attend the meeting

Status update from Team ITU

- Managed to figure out on how to process images and determine the path a person took:
    - Calculate the difference between the room background image and the image containing a person and get the difference image
    - Blurring and thresholding the difference image to get rid of the noise in the image
    - Determine person's area, and take it's middle/center x,y coordinates
    - Determine the whole path a person took (fairly accurately)
    - Did it with Lego figures walking around in a small shoe box.
- The web cameras are very simple, so they will be placed in a way to cover as much as possible room area

- Will probably use Programming Language “Python” on the Raspberry PIs, according to the Benchmark (Document “Java – Python Benchmark” in folder “Team ITU”)

Status update from Team Kenya

- Still don’t have the Raspberry PIs (depends on the University)
- Can borrow one from a research lab nearby if it's necessary
- Discussed specs of the UI:
  - Displaying the information from the server on the android app
  - Navigation through the android app
    - User should choose the building he wants to look at, and the specific room/floor
- Familiarized with JSON
- Concentrate on the design for now. Functionality part will be done later.

Suggestions/Information for Team Kenya

- Propose to simply have a background image of a room for the android app
- Team ITU pass x,y coordinates of a person to the server, which then can be updated on the android app to display the path or current position of the person within the room
- Team Kenya decides on the look of the Android app (colors and all)
- Will the application be able to always display the information in real time?
  - Team ITU: The information about the movement in a room will be detected and sent all the time to the server, as long as there are connection between RPs and the server. And then the android app can always get the information from the server about the movement within the room.
- How fast will the data in the server be updated? Is it every 5 seconds or minutes?
  - Team ITU: Not sure yet how often the server will be updated. It will be probably quite rapid (around a few seconds). It'll only be updated whenever occupancy is detected
- How do you know that the cameras are covering/scanning the entire room?
  - Team ITU: 3 web cameras and 3 Raspberry PIs are available for now, which will be placed in 3 different rooms. User could be able to choose which room he wants to look at

Decisions

- Version Control:
  - Git Repository will be used. According to the Skill-/Preference-Sheet it’s the most reasonable choice
  - Tomas provided a repository: https://github.com/meshake/occupancy_analyzer/

Assignments Team ITU

- Send GitHub Usernames to Tomas, so he can add everyone to the repository
- Research more on prediction models
- Try to predict which door/path a person is likely to choose when walking in the room
- Detect and process several people walking in a room

Assignments Team Kenya

- Send GitHub Usernames to Tomas, so he can add everyone to the repository
- Ask Cecil if Tuesdays evening would be suitable for a regularly meeting (instead of Thursdays), because Theresa can’t attend on Thursdays at 5pm CEST (too early)

- Check on the updates in the Skill-/Preference-Sheet and fill out missing information
- Mockups of the screen for the android app by next Thursday (7.11.2013) and share results with Team ITU
- Have a look into the document “Client-Server-Model vs. Peer-to-peer” in the folder “Team ITU” and add information/comments if you want to