Detecting high-level team intentions (three person meeting dataset)

Documentation

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1 General information

Experiment title	Detecting high-level team intentions (three person meeting dataset)
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2 Description

The dataset contains 20 recordings of scripted meetings and an annotation of the performed activities. Three persons (A, B and C) attend the meeting. Each member holds a presentation, and the meeting concludes with a common discussion. This dataset contains the individual team members positions as recorded by an indoor positioning systems.

2.1 Objective

Create a dataset of people's movement within a meeting. The motion traces and location data shall be used to infer the current meeting state (*Who is presenting?* or *Is there currently a discussion?*) and the team intention (*What is the team's agenda?*).

2.2 Data format

The `001-Observation/` folder contains 20 data files, one for each recording. The data file contains a header of column names followed by data rows. The column names are, in order:

        Time A.Seen A.X A.Y B.Seen B.X B.Y C.Seen C.X C.Y

The meaning of the columns:

Time The time-stamp in seconds (relative to the beginning of the recording) for the location data.

u.**Seen** If, at this current time-stamp, new location data for user u has been received from the location sensor. Either `TRUE` or `FALSE`.

u.**X** The X-coordinate (in cm) of user u's location.

u.**Y** The Y-coordinate (in cm) of user u's location.

For each row, a location update for at least one user has been received. User locations without a sensor update are simply copies of the last known location.

The `002-Annotation/` folder contains annotation of the individual user actions as well as a "coarse" team action. The `annon.dat` files contains the following columns.

Time The time-stamp corresponding to the observation data.

Action.A Action of user A, one of `enter`, `exit`, `moveDoorSeat`, `moveDoorStage`, `moveSeatStage`, `moveStageSeat`, `moveSeatDoor`, `present`, `discuss` and `sit`.

Action.B Action of user B.

Action.C Action of user C.

Location	X	Y
Seat A	352	658
Seat B	57	435
Seat C	274	300
Stage	> 500	> 600
Stage	> 600	any

Table 2: Location of important regions in the room.

TeamAction One of `Enter`, `PrepareA`, `PrepareB`, `PrepareC`, `PresentA`, `PresentB`, `PresentC`, `Discuss` and `Exit` for the current intention from the agenda and the transitions.

Finally, the `teamActivities.RData` is an R[1] data file containing all the data.

2.3 Dataset recording

The location data has been recorded at the Smart Appliance Lab using the Ubisense[2] indoor positioning system, where each user is wearing a tag. The coordinates are relative to the front left corner (when entering the room) in cm. The room has a total length of 703 cm and a width of 686 cm. The three seats and the stage are approximately at the locations shown in Table 2 and Figure 1.

Four voluntary subjects acted according to a script to generate the observation data for the datasets. The four subjects (three male, one female, aged 26–43) alternated between the three team member roles A, B and C. All 20 meetings had a computer-generated a-priori agenda of the following form:

1. Presentation from A scheduled for 60 seconds

2. Presentation from B scheduled for 90 seconds

3. Presentation from C scheduled for 60 seconds

4. Discussion scheduled for 30 seconds

5. End of Meeting

From this agenda, two types of detailed scripts for each team-member have been generated: compliant (seven datasets) and non-compliant (thirteen datasets). The meeting scripts for the agenda compliant case had the following form:

- A, B and C at Door

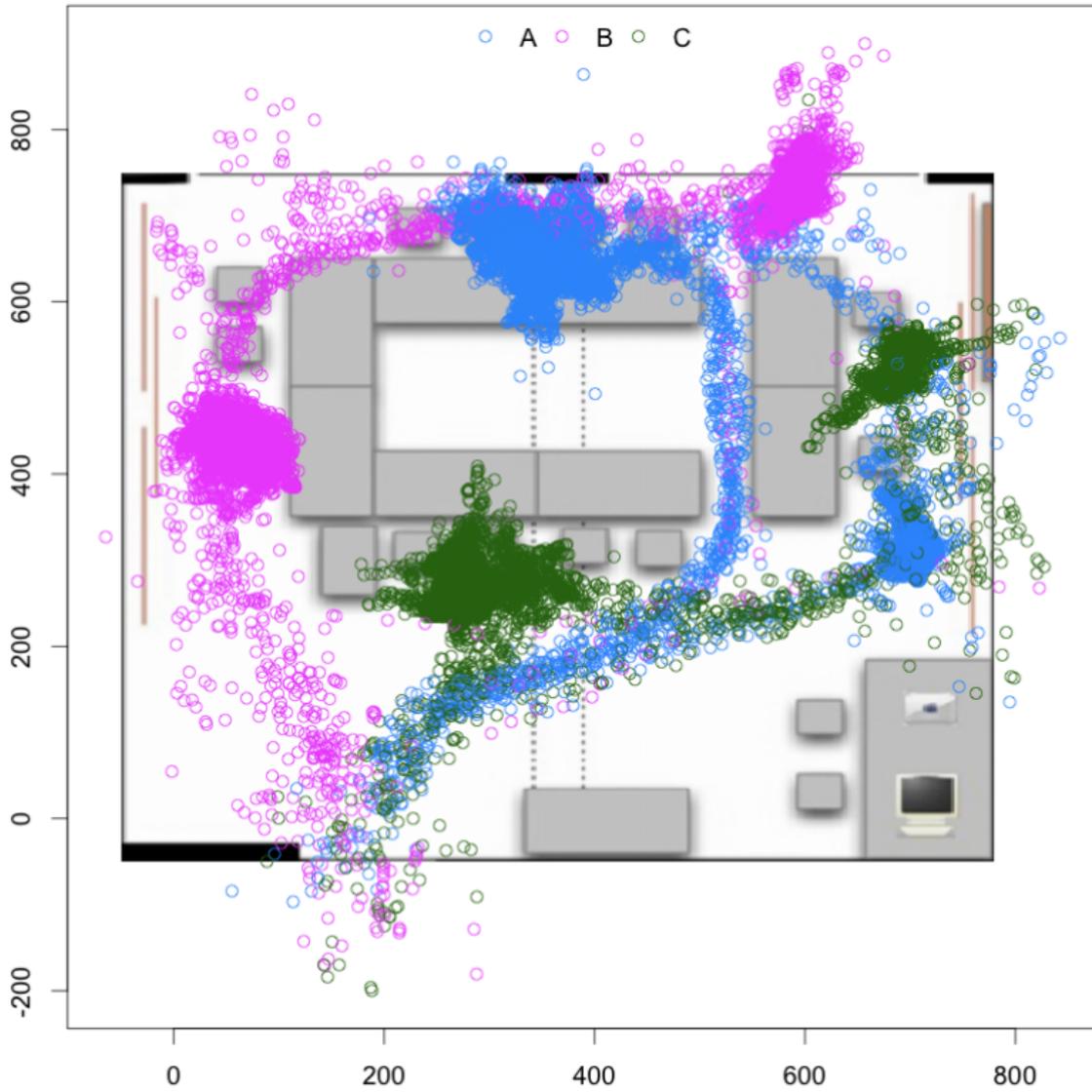[1]`http://www.r-project.org/`
[2]`http://www.ubisense.net/`

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Figure 1: Positions of the users in one dataset. The clusters are the three seats and three places where the persons stood during their presentation.

- 00:00 (000s) Present A - Prepare - A to StageA, B to SeatB, C to SeatC

- 00:10 (010s) Present A - Acting - A performs

- 01:00 (060s) Present B - Prepare - A to SeatA, B to StageB

- 01:10 (070s) Present B - Acting - B performs

- 02:30 (150s) Present C - Prepare - B to SeatB, C to StageC

- 02:40 (160s) Present C - Acting - C performs

- 03:30 (210s) Discussion - Prepare - C to SeatC

- 03:40 (220s) Discussion - Acting - A, B and C discuss

- 04:00 (240s) Exit - Prepare - A, B and C to Door

- 04:10 (250s) End

- A, B and C at Door

For the non-compliant case, the order of the presentations varied randomly (irrespective of the actual agenda).