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Exploring Engagement in Distributed Meetings during CV-19 Lock-down



About presenter



PRESENTER: FAHAD SAID, 23 Y/O
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BACKGROUND: BACHELOR:
COMPUTER ENGINEERING (HIØ)



MASTER THESIS: DIGITAL
FABRICATION IN EDUCATION
- INTERACTION DESIGN
- MACHINE LEARNING



EXPERIENCE:
FACULTY ENGINEER (HIØ)
-STUDENT ASSISTANT MAKERSPACE

Content

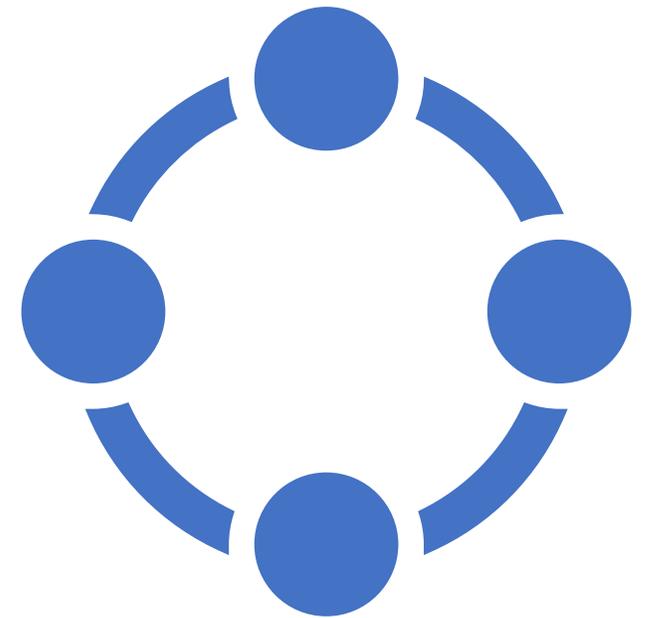
- Introduction
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Introduction

- Meetings are important in cooperative work.
- Productive cooperative work is characterized by engagement.
- Distributed meetings used to be a secondary option.
- March 2020: Governments shut down countries due to COVID-19.
- Opportunity to explore the effects of distributed meetings on engagement.
- Contribution: Provide the fields of Computer Supported Cooperative work (CSCW) & Human Computer Interaction (HCI) with

Research questions

- Distributed cooperative work.
- Takes into account the shift towards distributed cooperation.
 - With the lockdown taking place, distributed meetings are the only viable option.
- Questions are of exploratory nature and address the implications of using digital tools in remote locations.
- **RQ1:** What is influencing engagement in distributed cooperative meetings?
- **RQ2:** How to enhance engagement in distributed cooperative meetings?



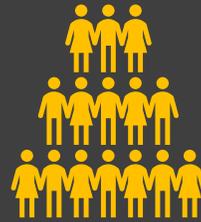


Meetings and CSCW

Used to coordinate with colleagues toward common goals either in the same sites or when we are distributed.

CSCW can save resources and improve interaction.

The majority of CSCW applications are fundamentally distributed.
(Rodden & Blair)



Engagement

Engagement is a process (Sidner et al.) where two or more parties establish, maintain and end their perceived connection.

Engagement is also a reflection of user interaction.

In the analysis of conversation, Goffman defined three main roles, namely a speaker, addressee(s) and side-participant(s).



Engagement in meetings

Engagement can be boosted using solid meeting structure and turn taking techniques.

Lack of attention and multitasking correlates to disengagement.

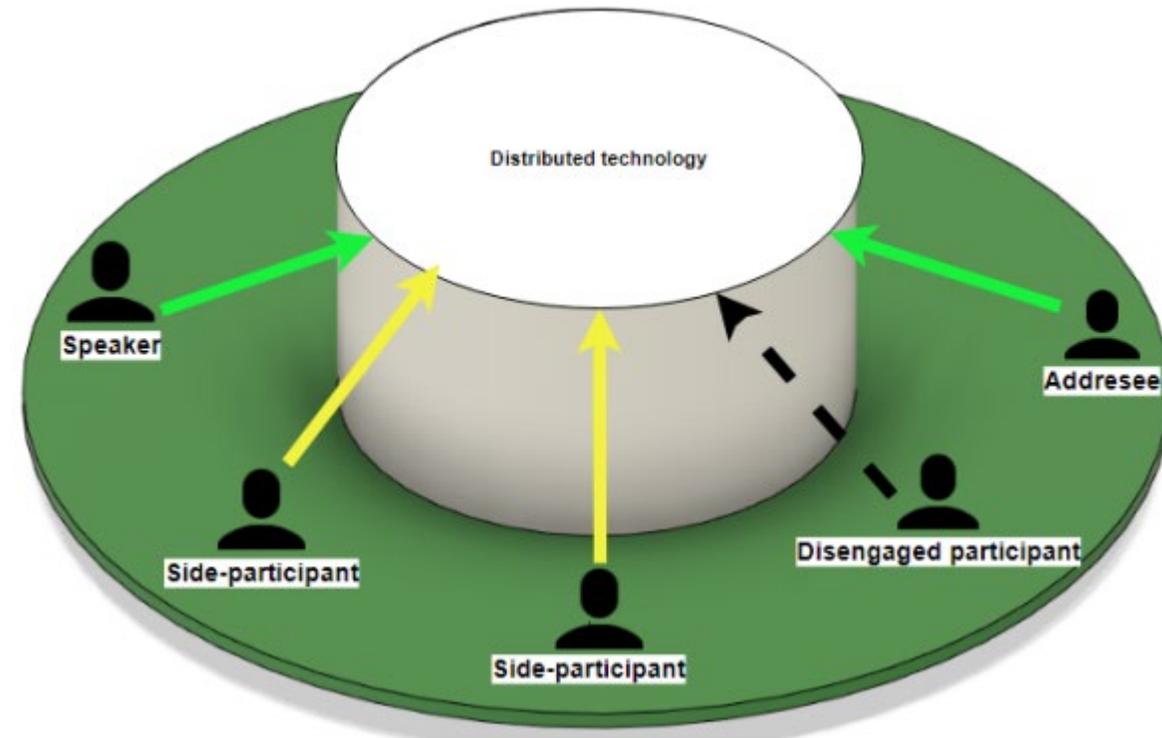
Visual cues allow participants to express understanding using gestures.

Sharing documents in distributed cooperative work keeps the context intact

Background

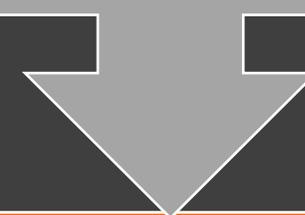
Framework: Analyzing engagement in distributed meetings

- Two levels of engagement with technology at its center.
 - Interaction between the participants with the meeting content(Dark Green area).
 - Interaction between the participants through the distributed technology(White are).
- Active participant (Green arrows)
 - Speaker and Addressee(s).
- Passive participant(Yellow arrows)
 - Side-participants.
- Disengaged participant (Dotted arrows)
 - Engagement lost due to lose of interest, multitasking and technical problems.



Methodology

Exploratory approach: Two methods to collect qualitative data



Data collection

Semi-structured interviews

Participant observations

Data collection Interviews

- Reason for selection: Unique nature of worldwide shutdown and forceful transition towards distributed technology.
- Data was transcribed.
- Subjects were operating a home office during the shutdown.
- Sample: 11 interviewees working in national and international organizations.
- Average time spent: 18 minutes.
- Interview guide
 - Frequency of distributed cooperative sessions.
 - Nature of work
 - Use of video feed
 - Self assessment on level of engagement
 - Multitasking and it's implications

Platform used for interviews:



Data collection

Participant Observations

- Reason for selection: Capture and observe the natural engagement that occurs in distributed meetings.
- Presenter operated as the investigator.
 - Participated as a participant in five distributed cooperative meetings(8,4,6,4 and 13 participants each) and used handwritten notes that were expanded on after each investigation.
 - Easier to collect data as the participants did not increase their threshold to participate due to the presence of the researcher.
 - Created a schema on each participant.
- Collected data on the following:
 - Absence of participation from certain participants.
 - The addressee's perception to received information.
 - Eye gaze and gestures.
 - Use of video feed (and vice versa).



Data Analysis

- Used on interview transcriptions and notes from observations.
 - Open coding and grounded theory to analyze data.
- Grounded theory
 - Beneficial in ensuring that the findings can be transparent in a credible matter.
 - Created 13 codes initially and ended up with 26 codes after multiple iterations of going through raw data.
 - Categories were created as a result.
 - RQ1: Five categories.
 - RQ2: Four categories.



Findings

- Based on our analysis
 - Findings suggest these factors to be influencing engagement in distributed cooperative meetings.
 - In addition, the listener (whether it be the addressee or the side participant) has an important role in maintaining the established connection in order to sustain engagement.
 - The suggested framework seems to detect the levels of engagement on both levels.

RQ1: What is influencing engagement in distributed cooperative meetings

Personal interests. Turn Taking.
Meeting Structure. Visibility.
Communication and Trust.

RQ1: How to increase engagement in distributed cooperative meetings

Social norms. Visual enhancement.
Facilitator. Visibility.

Final remarks and future work

- Limitations
 - Number of observations and interviews.
 - Scope of investigation could have been implemented at a larger scale in international organizations.
- We hope that this paper can start a discussion on how to develop CSCW technology that can address such issues.
- Digital meeting platforms as a tool in CSCW should adapt to the needs of distributed cooperative work .

