Eye-Contact & Seating Arrangement
Eye-Contact

- General Information
- Running in the Rain experiment
- The GAMESHOW experiment

Seating Arrangement

- General Information
- t-Room
Eye-Contact

- General Information
- Running in the Rain experiment
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Seating Arrangement

- General Information
- t-Room
Eye-Contact - General Information

Studies showed that native English speakers complete their cooperative/guided tasks (e.g. repairing a bicycle) just as well unrelated to the way of communication they use (Audio-Only, Co-Present, Video-Tunnel, ...)

Non-native speakers profit from Video-Supported communication

Benefit of Video-Support depends on the task

Only tasks evolving conflict resolution or negotiation profit from Video-Supported communication including Eye-Contact
'Running in the Rain' experiment - “Run or Walk?”

Three types of pairs:

- Audio-Only (remote)
- Side-by-Side/Face-to-Face (co-present) [Fix]
- Video-Tunnel (remote) [Side-by-Side/Face-to-Face]

Interface to configure settings as

- Position of the runner
- Speed of the runner
- etc.

Environment: SharedARK

**Object:** Agree when it's worth running in the rain
'Running in the Rain' experiment - “Run or Walk?”

Video-Tunnel:
'Running in the Rain' experiment - “Run or Walk?”

Results:

➤ Audio-Only participants were more detailed and negotiated more about task division

➤ Co-Present participants had the problem of frequently mutual gaze

➤ Video-Tunnel participants used the tunnel mainly while not using the interface and had a higher meta-level activity (e.g. making jokes)
Switched between Side-by-Side and Face-to-Face to avoid gaze and to see the interface like the partner does
The GAMESHOW experiment

up to 5 Participants (Users/Groups) using

- Audio-Only
- VMC* without Eye-Contact
- VMC* with Eye-Contact

Object: Which strategy is the best? Stick or Change?

Environment: KANSAS

* VMC = Video Mediated Communication
The GAMESHOW experiment

Results:

Participants that switched from stick to change

<table>
<thead>
<tr>
<th></th>
<th>Change</th>
<th>No Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audio Only</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>VMC with Eye Contact</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>VMC without Eye Contact</td>
<td>1</td>
<td>9</td>
</tr>
</tbody>
</table>
Conclusions:

Importance of Eye-to-Eye Contact depends on the task

Only available for pairs not for larger groups

Types of connection between participants can be mixed (e.g. Co-Related & Video-Tunnel) to be able to work Side-by-Side as well as Face-to-Face
Eye-Contact

• General Information

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• The GAMESHOW experiment

Seating Arrangement

• General Information

• t-Room
Seating Arrangement

Usually Side-by-Side while having group-to-group Video Mediated Communication

Seating Arrangement depends on the goal of the participants (e.g. locally grouping same opinions)
t-Room (Set-Up)

(a) Local of (a) Remote of (a)

(b) Local of (b) Remote of (b)
t-Room (in Use)

Second monolith from leftmost side
Fourth monolith from leftmost side
Life-size image

Table

Mac is at a remote site. His image is projected on screen.

Gaze
Ann

Bob

Mac's face on display

LCD

Left-side of Mac's face on display

User facing toward arrow direction

[5] [6]
“desert survival task”

Task: Order twelve Items by importance after a airplane crash in the desert

Set-Up:
“desert survival task”

Results (Speaker Switch)

Overall

Without mentioning the next Speaker

[8]

[9]
Thank you for your attention!
Discussion

What do you think about the importance of Eye-Contact and Sitting arrangement while doing Computer Supported Tasks?

disturbing?

conductive?

dependent?

indifferent?
[1],[2] Richard Joiner, Eileen Scanlon, Tim O'Shea, Randall B. Smith, Canan Blake
Evidence from a series of experiments on video-mediated collaboration: does eye
contact matter? In Proceeding CSCL '02 Proceedings of the Conference on Computer
Support for Collaborative Learning: Foundations for a CSCL Community Pages 371 - 378
UK/USA 2002, International Society of the Learning Sciences

[3],[4],[5],[6],[7],[8],[9] Naomi Yamashita, Keiji Hirata, Shigemi Aoyagi, Hideaki Kuzuoka,
Yasunori Harada Impact of seating positions on group video communication In
Proceeding
CSCW '08 Proceedings of the 2008 ACM conference on Computer supported
coopeative work ACM New York, NY, USA 2008