Routine

A sequence of actions regularly followed

Knowledge on where does (or should) technology make its place in the conference room
The Technical “How”

- Developing interaction techniques
- Interactive Workspaces [Johanson et al 2002]
- Improving tech infrastructure
- obje Display Mirror [Newman et al 2006]
- IMPROMPTU [Biehl et al 2008]
- DICE [Golovchinsky et al 2009]
Research Question

What are the technology and social routines involved in a collocated meeting?

“Recognizing the subtle character of the often complex, yet unremarkable, details that surround our everyday routines places powerful requirements on any technology that might become embedded in such activities.”  --Tolmie et al CHI 2002

[Designers need to increase] support for the social aspects of meeting process.
-- Miner 1979
Field Studies: Project Room

Supply Chain Department
13,000 Employees Worldwide
Room is “Owned”
Mobile Employees

Project Room
@Alpha Corp
Field Studies: Conference Room

Wholly Owned Subsidiary

Workspace Tools

Traditional Desks/Cubicles

Managers, Industrial Engineers, Marketing, Financial Analysts

Conference Room @Beta Corp.
Field Studies

Project Room

Conference Room

Initial Interviews

Direct Observation (Existing Displays)

How do these populations use (existing) shared displays?
What are the common routines?

Project 15 / Conference 6
Display Intervention

“Project Room”

- Initial Interviews
- Direct Observation (Existing Displays)
  - Project 15 / Conference 6

4 Weeks

Add in 2nd Display Interviews

“Conference Room”

- Direct Observation (Original + 2nd Display)
  - Project 17 / Conference 9

4 Weeks

Interviews
Data Collection

- Time-stamped field notes
- Digital pictures
- Interviews
- Beginning of the study
- Midway (before display intervention)
- End of study
Information Routines: Static Displays

At-a-Glance Information Awareness
Personal Device Routines

When are devices brought in?

Social or Technical?
Personal Device Routines: Laptops/Phones

Signaling Engagement - Ephemeral Laptop Usage
<table>
<thead>
<tr>
<th>Usage:</th>
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<th>Conference Room</th>
</tr>
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<tbody>
<tr>
<td>Projector</td>
<td>50%</td>
<td>67%</td>
</tr>
<tr>
<td>Presentations</td>
<td></td>
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</tr>
<tr>
<td>Collaborative Work</td>
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<tr>
<td>Public Display of Info</td>
<td></td>
<td></td>
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<tr>
<td>(Before Intervention)</td>
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</tbody>
</table>
Shared Display Routines

- Connections to displays
Key Observation

- Connections to displays

Arrival

Retrieval

Arming

Using

Putting Away

Leaving

Plug in Cable

Shared Display
## Information Routines: Shared Displays

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| Projector | 70% | 44% |
| LCD Display | 53% | *** |
Technology Barriers

- False sense of complexity
  “You need it [technology] done neatly so folks can still feel comfortable and homey and still have good conversations amongst the technology...”

- Complexity of technology
  “I try to hold short meetings, maybe 15-20 minutes long. It’s not worth spending 5 minutes setting up equipment or software that will last 15 minutes.”
• Physical environment matters
  Improvements to technology were infrequently desired opposed to improvements to the physical space

• Learned “helplessness” for troubleshooting

• Willingness to tackle physical hardware troubleshooting but not software
Technology Architecture

Information Architecture
Recap

• Device “arming” and ephemeral personal device usage are common routines that are both technological and social in nature

• Managing at-a-glance information is important, especially for mobile workforces

• Physicality comforts and reassures

• Non-technical factors influence technology usage
Acknowledgments

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