

Supporting Meetings for Highly Dispersed Workforces

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ABSTRACT

Evolving communication technology and the practices that surround them will change the way meetings are supported for the workforce of the future. We report on the meeting practices of a large, high-tech consulting firm as an extreme case of a highly mobile, rapidly changing, broadly distributed workforce – what we describe as a highly *dispersed* workforce. We consider the challenges presented by a highly dispersed workforce and begin to consider how evolving communication technologies and practices can support these challenges.

Author Keywords

Collaboration, Distributed, Workforce, Meeting Rooms.

ACM Classification Keywords

H.5.3 [Group and Organization Interfaces]: collaborative computing, synchronous interaction, computer-supported cooperative work, organizational design.

INTRODUCTION

The concept of a meeting room has come to support a wide variety of activities. As such, the meeting room itself, and everything that composes it, also takes on a wide variety of forms and functions to support these activities. In this position paper, I describe the challenges faced by a highly dispersed workforce when it comes to meetings. I then consider the role of evolving communication technology and related practices in improving the meeting experience.

DISPERSION OF WORKFORCES

There are many ways to capture, describe, and categorize high-level characteristics of a workforce. As we look to designing meeting rooms, we characterize dispersion of the workforce and briefly survey the support meeting rooms provide. This characterization comes from my three months of experience employed by a large consulting firm and interviews with several consultants at the same firm. It is

meant to characterize different points in a range of workforce styles.

I differentiate *dispersed* from *distributed* by emphasizing the high level of mobility and change in teams that characterize the workforce. It is not simply about working remotely, but includes high mobility and a rapidly changing set of coworkers.

At the low end of dispersed workforces are the collocated teams. A significant portion of the workforce is located in the same geographic location. Most are aware of each other's rhythm and meter. Meeting rooms and the supporting technology generally support collocated interactions and include things such as whiteboards and projection screens.

Larger companies may consist of many geographic locations. Meeting rooms, in this context, may support connecting two or more separate meeting rooms through telephone conferencing systems (e.g. Polycom Soundstation) or video conferencing/telepresence systems (e.g. Cisco Telepresence). These meeting rooms often include mechanisms for sharing presentations across remote locations.

The workforce at a consulting firm tends to push the extremes in terms of dispersion. For example, our firm has 150 locations across the world and over 180,000 employees. Even though each person is assigned a "home office", he rarely has an assigned desk and must reserve a desk when one is needed. The majority of our employees are gone Monday through Thursday of the week at client locations and the assigned location is not necessarily at one of our own offices. For international clients, they may stay for extended periods without returning home. Client engagements may be as short as a week and their location may change from one week to the next. Alternatively, the engagement may last for the entirety of one's career, though her role and whom she works with is still subject to frequent changes. The consulting industry also exhibits high levels of attrition, which adds to the constant state of flux.

The meeting rooms that support us typically look very similar to those rooms described above, except it is extremely common to connect via a variety of communication technologies. As a result, technology is sometimes cobbled together. For instance, two groups

meeting from locations with appropriate facilities may connect via video conferencing, while several other people may dial in using the voice conferencing system. To get everyone talking to each other, we have often physically put the telephone close to the microphones and speakers of the video system so that everyone can hear each other.

Clearly, the highly dispersed workforce of a consulting firm is atypical today, but we have reason to believe, through interactions with our clients, that tomorrow's workforces will exhibit levels of dispersion that tend toward ours. We continue to hear our clients ask for ways they can increase telecommuting in their workforce, use collaboration technology toward "green" initiatives, reduce the space needed for personal workspace, and increase the space they have for specialized meeting rooms. By carefully considering the communication needs of a workforce as extreme as ours, we can inform the design of meeting rooms for workforces of the future.

DESIGNING FOR DISPERSED WORKFORCES

Our research lab has currently initiated a program that begins to look at how collaborative technology can be designed to support a highly dispersed workforce. As we begin our analysis, two themes have emerged: *Social Isolation* and *Unequal Citizenship*. We have yet to situate our observations in the context of the greater research literature, but introduce them as starting points for discussion.

Social Isolation

Due to the nature of their work, consultants often find themselves socially isolated. During the course of an engagement, they may find themselves in any part of the world as part of an engagement team. They are usually separated from their core social, professional, and family circle between Monday and Thursday. For international engagements, they may not be able to return home on the weekends. Isolation may be even worse when there is only one person on the engagement.

Though isolation includes difficulty connecting to the firm resources, many productivity tools are available to the consultant: mobile phones, email, IM, video conferencing, or the nearest office services store (e.g. Kinkos) to name a few. The isolation less supported is the social isolation consultants feel from their professional peers. They miss a class of social interactions that include "water cooler" or informal time for casual interactions and chance encounters. Olson and Olson refer to this class of social interactions as *informal hall time* [4]. Isolation is not unique to consultants on a client engagement. Studies have shown that social isolation is one of the major reasons why people do not want to telecommute [2].

As teams become more dispersed, careful design of collaboration technology can play a profound role in, not only productivity, but also social isolation. In our research and development organization, we have a permanent installation of video conferencing system between our San

Jose, CA office, our Chicago, IL office, our Sophia, France office, and our Bangalore, India office. Inspired by the Portholes system [3], the system is always on, life-sized, and installed in busy hallway. It is used to for awareness and presence of remote offices as well as impromptu and fortuitous meetings. In a similar vein, one of the consultants I interviewed described how she kept an always-on video connection with her current team because she was based in San Jose, CA while the rest of her team worked in Chicago, IL. Doing so allowed her to feel more comfortable working with her team.



Figure 1 – The Accenture Virtual Corridor is an always-on, life-sized video conferencing system installed in busy hallways. It is used for the awareness and presence of remote offices as well as impromptu and fortuitous meetings.

Current social software may also play a role in alleviating social isolation. Websites like Facebook, MySpace, and Twitter keeps their visitors up-to-date on the social happenings of their friends. With the appropriate design considerations for a business context, it may also provide an appropriate and effective tool against social isolation in a professional setting. A service, called Yammer, already provides Twitter like services for the enterprise and has found to be useful in at many companies, including our own.

Unequal Citizenship

The dispersed nature of our workforce often makes it necessary for individuals to join meetings via several different modalities resulting in qualitative differences in each person's participation in the meeting. Often, this creates unequal citizenship in the meeting.

Technical issues aside, several modalities among the participants creates a complex social ecology. For instance, we hold a weekly meeting between offices in San Jose, CA, USA, Chicago, IL, USA, Sophia, France. On occasion, Bangalore, India will also join us. The multiple sites connect using meeting room style video conference system. Several people also join the meeting using the dial-in voice-only conferencing system. Usually, one of the sites hosts a speaker. The ecology here is quite complex with several people being co-located, several groups being connected via a video conferencing system, and several individuals calling in remotely.

Differences in communication channel have been shown to affect interaction [1]. From my own experience in large meetings, those collocated with the speaker typically enjoy quick, natural, and successful interactions. Those who meet remotely via video conferencing must exert more coordination effort that might take the form of announcing, “Question from San Jose.” Even with the added effort, a response is not always guaranteed. Those who dial in to the voice system are generally silent for the meeting.

Many systems today are designed with the notion of giving each meeting participant equal citizenship. We interviewed a designer of Hewlett Packard’s Halo telepresence system. The design of Halo was based on the metaphor of the “round-table”— there is no privileged seating, no head of the table, and no mute button. However, we constantly found in our interviews that even though some feel neglected when they call into a meeting, many actually prefer to call into the voice system. They like to take advantage of the mute button and continue other work while peripherally monitoring what is happening in the meeting.

Researchers should definitely continue to explore equality in the face of mixed modalities, but we should also explore ways to leverage effectively unequal citizenship. One consultant recalls attending a conference where one of the many presentations was given by an avatar in Second Life to a live audience. When asked to recall details of the talk given by an avatar, she recalled many details about the *content* of the talk. When asked to recall details of the talk given by a talented, collocated presenter, she recalled many *peripheral* details (style, appearance, and manner). Unfortunately, there was no voice-only presenter at this presentation for comparison. However, the argument for remote presentation stands: what becomes memorable about a talk is affected by how it’s presented. We should also note that the presenter was actually sitting in the darkness near the stage somewhere, so he was not even remote.

Another meeting consisted of a presenter from a market research firm presenting to a small audience of industry analysts. During the speaker’s presentation, a member of the audience prompted the speaker to elaborate on several points. As it turns out, that audience member was acting as a surrogate to a larger group of people. During the presentation, he was actively sending out *tweets* on a microblogging service called Twitter. His tweets are received by a large following of people who subscribe to receive his short messages in real time via SMS or as a feed

from a website. They responded when they heard something they wanted to hear more about and the audience member used this feedback to bring his following into the meeting. I use this example to illustrate how the most rarified channels, such as SMS, can be effectively leveraged in meeting rooms.

CONCLUSION

In order to consider how rooms should evolve to support evolving workforces, I look at what I consider an extreme workforce available today, namely the consulting workforce for the company of which I am now a part. I characterized this workforce as highly dispersed and identify some challenges it faces: social isolation and unequal citizenship. I then ask the question of how evolving communications tools and practices – such as microblogging, social networking, and virtual worlds – can support these challenges.

ABOUT THE AUTHOR

The author of this paper is a researcher in Human-Computer Interactions with a focus on Computer Mediated Communications. He recently received his Ph.D. from UC Berkeley and joined Accenture as a researcher supporting collaboration at the firm and at its clients. In the past, he has worked on a three-dimensional video conferencing system, MultiView, and experimentally measured the effects of preserving nonverbal cues in group-to-group video conferencing.

The work presented in this paper represents early thoughts on a research agenda beginning at Accenture Technology Labs. The author would like to use this workshop as a venue to develop the ideas presented in this paper.

REFERENCES

- 1) Bos, N., Olson, J., Gergle, D., Olson, G., and Wright, Z. Effects of four computer-mediated communications channels on trust development. *Proc. CHI 2002*, ACM Press (2002), 135-140.
- 2) Cooper, C.D. and Kurland, N.B. Telecommuting, professional isolation, and employee development in public and private organizations. *Journal of Organizational Behavior* 232(4), April 2002, 511-532.
- 3) Dourish, P. and Bly, S. Portholes: Supporting awareness in a distributed work group. *Proc. CHI 1992*, ACM Press (1992), 541-547.
- 4) Olson, G. and Olson, J. Distance Matters. *Human Computer Interactions*, 15(2/3) 2000, 139-178.