Distance Matters

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Youtube of the day

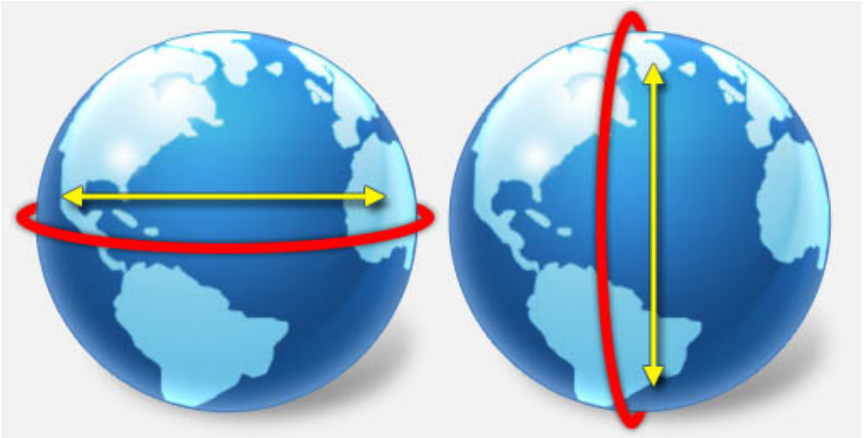
http://www.youtube.com/watch?v=zbJAJEtNUX0

Distributed teams are more likely to:

- Work on new things
- Come from different backgrounds
- Put together by management
- Subject to “out of sight, out of mind”
- Choose only the technologies they are used to

Challenges!

- Blind and invisible work (can't look over shoulders, need explicit coordination)
- Time zones (latitude matters less than longitude)
- Culture (different styles, local references to events)



What can managers do?

- Select the right people, promote common ground
- Be mindful of signals they send (e.g., through analytics….)
- Promote the right attitude, build same goals
- Assign work so that collocated people need to do more of the coordination
- Stay in close contact with members
- Have the right technology in place!

And organizations should consider:

- Who gets the credit for what?
- Are there sufficient resources?

CLASSIFICATION OF TECHNOLOGIES TO SUPPORT DISTANCE WORK

Communication Tools	Email and texting Voice and video conferencing Chat rooms, forums, blogs, and wikis Virtual worlds
Coordination Tools	Shared calendars Awareness tools Meeting support Large visual displays Workflow and resource scheduling
Information Repositories	Databases Shared files Blogs or wikis Laboratory notebook (online)
Computational Infrastructure	System architecture The network Large-scale computational resources Human computation

Choosing Technology

- the speed of response
- the size of the message/data
- security
- privacy
- accessibility
- various kinds of control of who can read/write
- the richness of what is transmitted
- the ease of use
- context information like who is doing/did what
- cost
- compatibility with other things used.

Collocated work considerations

- Stage of task
- Spatiality matters (e.g. use of hall walls, use of the “air board”, location of flip charts)
- Long term teams

Characteristics of collocated work:

- Rapid feedback
- Multiple channels
- Personal information
- Nuanced information
- Shared local context
- Informal “hall” time before and after
- Coreference (deictic references)
- Individual control
- Implicit cues
- Spatiality of reference

Remote work/learning examples…

- Corporate sites
- Scientific collaboratories
- Moocs
- Globally distributed open source projects

Successes?

- Scientific collaboratory:
  - Simultaneous access to real-time data
  - Archived online discussions
  - Highly user centric
- Software company:
  - Email, video and audio conferencing, file transfer, fax
  - Stable structure, clear ownership boundaries of work
  - Detailed process across sites
  - Stable employees (novices for 2 years)

Failures?

- Audio and shared editor not enough
- Video helped but changed work processes
- Work is generally reorganized to reduce task coupling
- Complaints about quality of audio/video
- New behaviours emerge to compensate
- Video only helpful for negotiation with unambiguous tasks
- Lack of motivation to adopt groupware (Lotus Notes)

Common Ground

- Knowledge that participants have in common, and they are aware that they have it in common
- Participants need to mutually establish what they know or understand
- Lack of common ground, misinterpretations require much time to repair
- People who have good shared common ground, can deal with poor media

http://www.youtube.com/watch?v=rD4roXEY8hk

Media richness matters

- Copresence – same physical environment/artifact access
- Visibility to each other
- Audibility (speech)
- Contemporality (message received immediately)
- Simultaneity – both speakers can send/receive
- Sequentiality – turns cannot get out of sequence
- Reviewability – able to review each other's messages
- Revisability – can revise messages before they are seen

Factors for Establishing & Maintaining Common Ground

Medium	Copresence	Visibility	Audibility	Cotemporality	Simultaneity	Sequentiality	Reviewability	Revisability
Face to face	•	•	•	•	•	•		
Telephone			•	•	•	•		
Video conference		•	•	•	•	•		
Two-way chat				•	•	•	•	•
Answering machine			•				•	
E-mail							•	•
Letter							•	•

Work coupling

- The extent and kind of communication required by the work
- How the work can be decomposed (number of dependencies)
- Tightly coupled work, forming teams is hard to do remotely, so better to do that collocated

Collaboration Readiness

- Rewarded for working together?
- Willingness to share?
- Culture of sharing should be in place first

Technology readiness

- Need skills/resources before using the technologies
- Need willingness to explore new technologies

Technology readiness order

Telephone
Fax
E-mail
Audio conferencing
Voicemail
E-mail with attachments
Video conferencing
Repositories built by others (e.g., intranet sites of static information)
Shared calendaring
Creating repositories
Hand-off collaboration (e.g., using the Tracking Changes option in MS Word)
Simultaneous collaboration (e.g., NetMeeting, Exceed, or Timbuktu screen sharing)

Out of date?

*** Communication Covenant ***

Decide on which:

- Communication tools
- Coordination tools
- Information repositories
- Computational Infrastructure

From your blogs…

- Importance of networking tools, e.g., LinkedIn (not mentioned explicitly in this article…
- Important to see how people work together, not just focus on their statistics
- "While the other problems mentioned in the article are very valid, I found the time difference to be the biggest factor in my work place."
- Perhaps distance will not matter! https://www.youtube.com/watch?v=2PpKzYjW7go#t=334 (watch this!)
- What works for distance work, may improve all work we do (just as adaptive technologies can help all of us)

From the blog…

"This culture of avoiding change exposes the necessary considerations required when determining the design of a system as part of CSCW. Cultural norms accept email as the de facto communication tool, ignoring tools, such as Slack, that may be better suited to the communication problem at hand [5]. For instance, Slack provide channels which provide context and history to current communications, whereas email relies on searching for old messages filed away in a folder."

Could Slack replace Email? What about threading?

What about the "paradox of choice"?

From the blog…

Another must watch video “I work in my pajamas”

https://href.li/?https://www.youtube.com/watch?v=8a7dw6plVC0

Future?

- Will remote ever be as good or better than face-to-face?
- Issues of trust the same or different?
- Time zones?
- Culture? Power distance.

Discussion points

- Does Github and Slack make distance irrelevant?
- What about our blog?
- What future technologies, how hopeful are you?