

Collaborative Information Behavior Workshop Notes
GROUP 09
May 10, 2009

Discussion

After workshop participants presented their papers, we had a discussion in which all participants took part. The question we discussed was: If we were to pitch collaborative information behavior (CIB) research to NSF or other funding agencies, what are the issues, themes, and research questions we would focus on?

The following are notes from the discussion:

There are two aspects to CIB research:

1. foundational research -- we don't have a model for CIB, we only have some early models, very little conceptual understanding of CIB
2. technical design -- there are many different tools built to support CIB, need to make clear what are the goals of these tools.

Some issues important for CIB research:

- The extent to which we are trying to add collaboration features on top of existing workflows and systems, vs. bottom-up approach of building such systems
- Methods: What are the methods for doing research, how do we capture CIB?
 - Ethnographies are important for building tools
- Explicit vs. implicit collaboration: Invisibility of the collaborations that occur during information seeking
- Evaluation of CIS tools
- Ethnographic methods vs. systems building methods: via systems building we can study phenomena which don't even exist otherwise.
 - Micro-ethnographic approaches.
- Scale in CIB: Small group, large group, organization, and social scale.
 - What is small group? When does small group become big group? What about teams?
- What are we talking about when we say CIS/CIB?

Issues we are going to discuss at the workshop:

- Conceptual frameworks/models
- Methodology for CIB research
- Scales of collaboration
- Design of CIB tools

Conceptual frameworks/models

- What do models capture and what don't they capture?
 - 2x2 models
 - What can models of individual information seeking contribute to CIB models?
 - Most CIB models are descriptive, not predictive.
 - Synchronous/asynchronous and implicit/explicit are some dimensions that could be used in models.
- Problem with models is that they tend to be rational/normative, which is not how collaboration is.

- Models of individual information seeking tend to have step-by-step process of how people seek/find information. In groups, there are subtle interactions instead of rational step-by-step process. So it is not effective to take individual models and apply them to collaborative domains.
- Uniqueness vs. generalization
 - Models based on behavior: problem with generalizing from such models is that behavior is situated in unique contexts.
 - Makes more sense to think in terms of patterns of behavior. Patterns are a good middle ground.
 - One way of generalizing is to identify a range of behaviors such as that in Reddy and Jansen's CIB model.
- Validity of models: how do we evaluate models?
 - Simulation models can be evaluated against empirical data
- Domain-specificity of models: how can we use models developed in particular domains in other domains?
- Phases/classes of collaboration can be modeled
 - Phase-wise models such as Barbara Gray's model of negotiation, direction, and implementation.
 - We need a provisional working definition of collaboration to bound the scope of our discussions. Identify the classes of collaboration (e.g. ad hoc collaboration vs. planned collaboration).
- Questions
 - Are there ideological differences in models that prevent them from being imported to other domains?
 - Is there a distinction between collaborative and social systems?
 - For instance in the case of the social Web – existing services from which collaboration came out as an interesting side effect or a by-product.
 - What do we want to do with these models?
 - How do models fare with funding agencies?

Methodology for CIB research

- Qualitative: naturalistic methods, ethnography, interviews, video-taping, audio-taping
 - In qualitative research, there is a long line of studies on decision-theoretic factors that are based on information seeking behavior.
- Quantitative: log analysis, surveys
 - Quantitative methods are good for examining group sizes, length of collaboration, logs of interactions etc. This could be followed up with qualitative analysis of chat sessions and logs. Need both qualitative and quantitative to get the whole picture
- Experiments/lab studies: Not many exist
- Comparative analysis of incidents which are similar
- Important to connect methods to research questions
- Questions
 - Can we observe groups without influencing the group process?
 - We can eliminate such influences by using trace data (e.g. from search engine logs)

Scale of CIB research

- Different group phenomena occur at different scales and so we might need different vocabularies for them.
 - These phenomena are: accountability (e.g. is the information being shared anonymous

- and public vs. accountable and private), persistence (products of collaboration might persist over time and other people might join in and collaborate), culture (affects how people search), proximity, time zones, communication patterns
 - ‘Collaborative’ can mean 2 people to 2 million people. Need to make a distinction between ‘collaborative’ and ‘social’.
- Distinction between purposeful small team collaboration and indirect large-scale collaboration (e.g. in case of recommender systems)
 - Increasingly things are becoming muddy with respect to scale. For instance, small teams of people doing tech support are talking to much larger organizations and maintaining big systems.
 - In collaborative learning, teacher breaks down a classroom into small groups but everyone in the class knows everyone else.
 - In small groups in hospitals: group members have their own vocabularies and can personalize software to use this vocabulary for the small group, but when the same software is used in the larger hospital or medical community, issues of scale come up.
- Group vs. community: Distinction might lie in strength of tie
- Different methods will be used for different scales.
- Groups vs. teams: teams are more purposeful, with well-defined tasks

Design of tools

- Co-opting systems designed for other purposes (such as Twitter, IM, email)
 - Twidale’s appropriation
 - We can take existing tools and add collaborative features on top of them. Tools sometimes get adapted to different uses (e.g. the case of how Twitter and tinyurl.com are combined to share links with others)
 - Why are we designing these systems?
 - To support current practice or influence ‘future’ practice?
 - Seems like with the recent explosion of CIB tools we are trying to support current practice, but through design we can bring about a paradigm shift and influence future practice.
 - Is design driven by researchers or users?
 - What are the hard questions for design?
 - Local knowledge vs. global knowledge (e.g. in the medical space, local activities take place in wards which can affect collaboration on the hospital-wide scale)
 - Patterns of behavior or collaboration? How do we capture such patterns?
 - Web search is an interesting case: how do we export patterns of Web search to other domains?
 - Are patterns static or are we looking for patterns of change?
 - Capture the process vs. the product
- Adopting tools
 - If we adopt tools used for other purposes, we need to consider the costs vs. benefits of adoption.
 - It’s hard to predict what tools will be adopted and how?

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Workshop Organizers

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