

# Workshop report: New Styles and Roles in Facilitation of Collaboration



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## Introduction

Web 2.0 and the quickly increasing use of social software and collaborative online tools require a new way of thinking about facilitation. In traditional collaboration software such as Group Support Systems the role of a human facilitator has been identified as a critical success factor, while social software tools often seem to work without such role. Certainly, with the development of more emergent and organic collaboration systems, the roles and styles in facilitation or moderation support have changed as well, and some may have been automated or removed. Questions to be addressed in the workshop are e.g.: What are the principles for effective facilitation based on available tools such as wikis, social software and forthcoming dedicated moderation management services? Is a human moderator a necessity or can collaborative networks be considered as self governed living systems? and How can facilitation work to build trust and foster collaboration within organizations, bus also across teams, organizations, cultures and other traditional managerial boundaries that are diminished or removed in social software and other new collaboration tools.

Globalization, increased complexity and competition are all drivers of an increasing need for collaboration. However, collaboration is challenging. The increasing demand to work collaboratively inspired a large amount of collaboration tools to develop such as social software tools, web 2.0 tools, virtual worlds and other collaborative online tools.

Groups (especially when 7 or more people) need guidance to structure and focus their joint effort. Facilitation is an approach to offer process support to groups to structure and focus their collaborative effort in attempt to make this collaborative effort more productive and effective. Facilitation is traditionally offered in face to face workshops. Facilitation support can be offered on four levels:

- Collaboration process design: Interventions to guide collaborators in choosing appropriate tools and techniques to support the collaboration process.
- Collaboration process execution: guidance to move from one activity to a next activity, changing the collaboration support environment to transfer between activities, while taking documents and decisions along to a next phase.
- Collaboration process guidance: Activities need to be initiated and guarded to execute the collaborative activity.
- Collaborative behavior guidance: guidance in determining and adjusting improves collaborative effectiveness.

The question posed in this workshop is: How does the role of the facilitator change when working online in these new environments, and how can we embed collaboration support or facilitation in these new environments? The goal of the workshop is therefore to identify ways to offer collaboration support in new collaborative environments.

Driving questions here are:

Can we still work with facilitators?

If yes, how does their role change

If no, what other ways can we offer collaboration support and guidance, can we put the facilitator in the box?

The workshop featured two presentations on facilitation in virtual worlds and facilitation of the introduction of social media and real time communication, both touched on different levels of facilitation intervention. Next we did an interactive session in three groups to explore changes and developments related to facilitation at three levels of facilitation interventions. The papers related to the presentation and notes of the session are presented below. The presenters were Gert-Jan de Vreede and Stefan Klein.

### **Dr. Gert-Jan de Vreede**

Dr. Gert-Jan de Vreede is a Kayser Distinguished Professor and the Director of the Center for Collaboration Science at the University of Nebraska at Omaha. He is also affiliated with the Faculty of Technology, Policy and Management of Delft University of Technology in the Netherlands from where he received his PhD. He has been a visiting professor at the University of Arizona and the University of Pretoria. His research focuses on field applications of collaboration technologies, the theoretical foundations of collaboration, Collaboration Engineering, and the facilitation of group work. He was named the most productive Group Support Systems researcher world-wide from 2000-2005 in a comprehensive research profiling study [Bragge et al. 2007]. His research has been published in various journals, including *Journal of Management Information Systems*, *Journal of the AIS*, *Communications of the AIS*, *Small Group Research*, *Communications of the ACM*, *DataBase*, *Group Decision and Negotiation*, *International Journal of e-Collaboration*, *Journal of Decision Systems*, *Journal of Creativity and Innovation Management*, *Simulation & Gaming*, *Simulation*, and *Journal of Simulation Practice and Theory*.

### **Dr. Stefan Klein**

Dr. Stefan Klein is Professor for Interorganizational Systems and a Director of the European Research Center for Informations Systems (ERCIS) at the Department of Information Systems, University of Münster. He has held teaching or research positions at University College Dublin, Ireland, University of Linz, Austria, University of Koblenz-Landau, Germany, University St. Gallen, Switzerland, Harvard University, German National Research Center for Computer Science (GMD), and University of Cologne. His current research areas are Information Infrastructures, Network Economy, Information Management, Social Media and the transformation of work. He has published widely and is a member of the editorial board of several international IS journals. He is an academic member of the Electronic Business Support Network (<http://www.e-bsn.org/>) steering group. Since 1990, Prof. Klein has done extensive research and consulting with partners from the public and private sectors on Electronic Commerce, EDI, strategic information management, and the business impacts of interorganisational systems.

# Collaboration in Virtual Worlds: How does the role of the facilitator change?

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## Introduction

Virtual worlds are becoming a popular medium for meetings and collaborative problem solving efforts (Driver, Moore, Schooley, & Barnett, 2008). At present, the most well-known virtual environment open to the public is Second Life (Takashashi, 2008). However, other virtual world environments are gaining popularity. For example, experts we surveyed indicated they also had experience conducting virtual meetings in Open Cobalt (<http://www.opencobalt.org>), Open Sim (<http://opensimulator.org>), and Assemblive (<http://assemblive.com>).

Regardless of the medium, collaborative problem solving is challenging in any world – real or electronic (Anson & Bostrom, 1995; Khahai, Carroll, & Jestice, 2007). Most challenges of real world collaboration also occur in virtual worlds because human being will always face social and cognitive problems when they interact (Bessiere, Ellis, & Kellogg, 2009; Diehl & Stroebe, 1987; Larey & Paulus, 1999). Thus, the need to overcome the challenges inherent to group work is here to stay, and the complexity of these challenges is increasing with the sophistication of technology (Bessiere et al., 2009). In other words, as technology becomes more sophisticated, the user faces greater operational complexities, which further complicates the collaborative problem solving process (Bessiere, Newhagen, Robinson, & Shneiderman, 2006).

Facilitators may be effective in guiding virtual world group decision processes using best practices for real world collaboration. However, it is likely that these best practices will have to evolve in order to meet the needs of virtual collaboration (Gartner, 2007). We cannot initiate this evolution until we understand how virtual worlds impact facilitation practices. For example, when interactions are not face-to-face, how do they change? What do facilitators have to do different when more of the person-to-person communication occurs in written form? What happens when participants have varying levels of technical and avatar management skills and what do we do? How do different social perceptions in virtual environments influence the collaboration process?

Answers to these questions will help us better understand big picture questions, such as “What best facilitation practices lead to repeatable collaboration success in virtual worlds?”, or “How do participants respond to a facilitator in virtual worlds?”. When addressing these issues, we must also determine how to measure facilitation success in virtual worlds, as well as how can and should be train virtual world facilitators. To answer these and other important questions, we first need to gain understanding of the differences between real world and virtual world facilitation.

Therefore, the purpose of this study was to study the role of the facilitator when collaboration is conducted in a virtual environment. More specifically, we were interested in identifying what key differences facilitators perceive between virtual and real world collaboration (e.g., advantages, disadvantages, best practices, and worst practices of each environment). Understanding such distinctions is necessary, but not sufficient, to design productive collaboration processes for virtual worlds.

## **Method**

### **Participants**

Six subject-matter experts (5 males, 1 female) from around the world participated in the study. Participants had experience with virtual world collaboration using Second Life, Open Cobalt, Open Sim, and/or Assemblive.

### **Procedure**

An exploratory questionnaire addressing the use of facilitation in virtual worlds was developed, piloted, and revised by two subject-matter experts. The questionnaire consisted of five open-ended questions. The finalized questionnaire was e-mailed to participants who were identified as having knowledge of both effective facilitation techniques and the use of virtual worlds to conduct collaboration. This was a sample of convenience, as the researchers utilized their network of connections in the information systems field. After receiving written responses and permission for further communication, follow-up interviews were conducted via telephone or Skype when clarifications or further probing of responses was necessary.

## **Results**

Responses were compiled, de-identified, and clustered. The results from our qualitative analysis are provided in a question by question summary.

**Responses to Question #1.** *“What specific opportunities do virtual world environments provide for team collaboration? As a facilitator, what do you need to do to take advantage of these opportunities?”* were divided into two categories: 1) *opportunities for team collaboration in virtual worlds* and 2) *the role of the facilitator* (see Table 1).

**Table 1.** Opportunities for team collaboration and the role of the facilitator in virtual world collaboration.

Opportunities	Role of Facilitator
Free real-time access for multiple users	Ensure required participants are ready to participate
Social awareness	Require introductions
Visualization (can draw/share images)	Ensure understanding of how to use the technology
Object manipulation	Set rules of communication
Anonymity when desired	Ask probing questions
Eliminates time/space constraints and travel costs	

For example, when virtual teams interact, social awareness opportunities occur in virtual worlds, as opposed to telephone or e-mail collaboration, because being together in the same virtual space leads to better perceptions of e-Co-presence with others. Also, associating a face with an interaction seems to be more engaging. You feel like you are really working with others, as opposed to only contributing your independent work. It is better in comparison to other collaboration technologies when it comes to social awareness.

Another example of a virtual world opportunity—object manipulation—allows users to show and explain things. They can simulate processes and co-produce things/resolve problems collectively. Further, participants report that role of the facilitator should include actions such as asking probing questions when a response is unclear so the group achieves better understanding. This is particularly important when communication is not face-to-face.

**Responses to Question #2a.** *How does the role of the facilitator change when interacting in a virtual world?*

- The facilitator appears as an avatar, making it more challenging to read body language
- All communication is written and/or verbal, not face-to-face
  - Facilitators must be clear in their instructions
  - Facilitators must ask participants if they need clarifications on instructions because they cannot observed facial expressions
- Physical charisma is different than virtual charisma
  - Virtual charisma is leveraged via chat (written) and voice communication, as well as avatar movement
  - Facilitators’ virtual world user skills may vary, thus facilitators must be prepared to explained user software usability issues

- Facilitators are likely to face more *miscommunications* and *hostile participant interactions*
- Facilitation techniques used in the real world are likely to elicit different behaviors in virtual worlds

**Responses to Question #2b.** *What remains the same?*

- Logic of the problem solving process (e.g., same thinkLet design sequence)
- Dealing with social conflict and other problems associated with managing human interactions

**Responses to Question #3a:** *What are the greatest strengths of GSS based facilitation in virtual environments (versus real-world)?*

- No GSS installation required when using a virtual PC displaying GSS
- More accurate transfer of information from participants
- All GSS stages can be anonymous, not just idea generation and voting – thus group discussion quality may improve
- Avatar appearances can be altered to avoid discrimination based on a specific appearance (e.g., race, or a disability)
- Solves time/space problem and reduces travel costs
- The use of “chat” provides a record of all conversations

**Responses to Question #3b.** *What are the greatest challenges/weaknesses of GSS based facilitation in virtual environments in comparison to real-world environments?*

- Facilitators and participants cannot perceive or exhibit true non-verbal cues
- It is difficult to monitor whether participants are paying attention
- Participants may encounter more conflict from both misunderstandings and free speech of those hiding behind keyboards
- There are more potential technical and user problems to address
- It is more difficult to monitor and solve GSS usage problems
- Discrimination/prejudice based on the appearance of avatars may occur
- Data security can be compromised
- A large data file has to be downloaded on all computers in use
- Virtual worlds can be perceived as a place for geeks and political extremists

**Responses to Question #4:** *What would you consider the best and worst practices that a facilitator could use in virtual world collaboration?*

**Part A: Best Practices ... A facilitator should:**

- ensure awareness of needed computer skills proficiencies and provide training resources, prior to the session.
- provide clear rules of behavior and communication.
- provide encouragement throughout the session.
- emphasize total anonymity when necessary.

- include activities that allow monitoring of individual participation.
- have events promoting the goal of the session prior to the session.
- decorate the virtual environment appropriately.
- provide examples of what other virtual teams accomplished.

***Part B: Worst Practices***

- Creating an avatar with distracting physical characteristics
- Not providing technical support
- Not accounting for user differences, such as generational differences
- Not adapting participant management and collaboration design when necessary
- Not clarifying rules of communication and behavior
- Providing software training DURING as opposed to BEFORE session

**Responses to Question #5:** *Could virtual worlds be useful for training future facilitators? What might be different from traditional training?*

- All respondents agreed it would be useful
- There many ways in which virtual world training would be different than real world training. For example:
  - It is easier to get more practice in virtual worlds because participants are more easily accessible than in the physical world
  - Learning may be more difficult at a distance
  - Social interactions between avatars are different than between real persons
  - Virtual learners will need more technical skills, such as preparation, installation, and execution of virtual world software
  - It is harder to ensure and check understanding of students
  - There is less accountability regarding the attention of the student

**Conclusion**

Virtual environments yield new opportunities for facilitated collaboration. They are cheaper and easier to access for remote group members located around the world. Furthermore, virtual worlds provide important advantages over traditional methods of distance collaboration. For example, virtual worlds provide the opportunity for social awareness to occur due to sharing the same virtual space, associating an avatar with a person, and actively working on a task along with other participants.

Although group interactions occur differently in virtual worlds than in the real world, these interactions can still be guided by a facilitator. Thus, we must consider how the role of the facilitator is different in virtual environments before we apply known best collaboration practices to virtual world meetings. In the current study, experts identified three primary challenges of facilitated collaborative problem solving in virtual worlds. First, interpersonal management is more difficult because non-verbal cues and attention focus cannot be monitored due to the absence of face-to-face communication. Second, with the introduction of more technology to the problem solving process, more things can go wrong during a collaboration session. Third, the appearance of the facilitator’s avatar

or his avatar manipulation skills may be a source of discrimination, credibility loss, and/or loss of trust.

Experts also identified four important steps facilitators can take to optimize virtual world collaboration. The first step is to provide clear rules of communication and behavior. Being straightforward about how participants are expected to behave should reduce conflict and encourage positive problem solving behaviors. Facilitators should also ensure awareness of needed computer skills and proficiencies, as well as provide training resources prior to a session. Once a session is in progress, facilitators should provide encouragement throughout the session to put participants at ease with the software and process. Finally, it is critical that facilitators actively monitor participation so that they can assist those in need before they become too lost and/or frustrated.

The limitations of the current study must be considered when evaluating or utilizing the aforementioned results and conclusions. First and foremost, the current study was an exploratory investigation; the results were based solely on personal experiences. The results were not based on empirical data or causal relationships. Additionally, the majority of respondents were only experienced in one virtual world domain – Second Life.

Based on the results of the current study, we suggest four main research directions:

- What advantages/disadvantages do upcoming virtual environments – other than Second Life – yield?
- What factors moderate the relationship between facilitator behaviors and effectiveness in virtual environment collaboration?
- An empirical study contrasting the role and effectiveness of the facilitator in virtual and physical environments
- What are participants' perceptions of virtual environment facilitators, as well as how these facilitators are perceived in relation to physical world facilitators?

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# **Managerial challenges in the introduction and deployment of Social Media and Real-Time Communication**

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## **Summary**

Within the context of the workshop we have taken a particular view, studying the managerial challenges of the introduction of a platform or infrastructure technology in a corporate environment, namely IBM Sametime®. Management had decided to roll-out Sametime® throughout the head office as part of a strategic development plan for the organization. Extending the employees communication media repertoire by real-time communication tools is seen as instrumental to extend the visibility and approachability (availability for communication) across all levels of the organization. At the same time, management has decided to make Sametime® available to everybody, yet make its use voluntary. Nevertheless, management is acutely aware of the needs to facilitate the deployment and diffusion of Sametime®. While an information campaign and a set of ground rules have been developed at the corporate level, group managers have been inducted and are seen as critical to facilitate the use at the group level. In sum, we observe a latent contradiction between voluntary use and the need to facilitate the use in particular at the group level.

For a more extensive coverage of the case look at Klein et al. 2010 and Vehring et al. 2011.

## **Research design**

Our findings are based on empirical research in a medium-sized financial services company, identified by the pseudonym MUFIN. The focus of our case study has been the roll-out process of IBM Sametime® in MUFIN company. We have conducted interviews at different levels of the company, e.g. management and employees (multi-layer analysis), and at different points in time of the roll-out process (comparative-static analysis). Moreover, we have drawn on publicly available information describing the company and the technology focused in this research.

We began in February 2010 by conducting an extensive interview with the managers responsible for the roll-out of Sametime®. To gain a deeper understanding of the design of the roll-out process in general and of the aspect of voluntariness in detail, we subsequently interviewed representatives of the workers' council, the HR department, the IT compliance and data protection office, and the line management. In June and July 2010, subsequent to the roll-out of Sametime® in the head office of MUFIN (starting in March 2010), we conducted semi-structured interviews with 13 employees (belonging to nine different teams) of one operating department concerning their initial adoption of Sametime®. After a first analysis of the interviews, we presented preliminary results to the responsible IT managers in August 2010 in order to discuss possible implications for future stages in the roll-out of Sametime®. Since then further interviews have been conducted and we are monitoring the ongoing changes.

## The introduction of Sametime®

In line with the strategic orientation, the Sametime®’s expected benefits range from basic productivity gains to facilitating a vision of an integrated services organisation, in which knowledge sharing in business processes will be enabled by RTC-based interactions between sales organisations and head offices. The ultimate aim of introducing Sametime® is a companywide roll-out, where all employees will use Sametime® actively. Table 1 summarizes different aims related to the introduction of Sametime®.

Sametime® as ...	Visions
... a productivity tool (operational strategy)	Simplify daily routines including mundane details such as coordinating the lunch break Facilitate and accelerate communication and collaboration within teams and across the company
... part of the HR strategy	Maintain the reputation of an attractive workplace, in particular for younger employees, who are used to the Internet, mobile and social media in their private and professional life
... a building block to implement the vision of an integrated services unit	Facilitate knowledge sharing between specialised experts who are located in the head office and the sales organisations by using application sharing and text chat

Table 1. Aims related to the introduction of Sametime®

The implementation process of Sametime® has been designed as a phased process across different organizational levels (see Figure 1), which reflect the organizational and strategic vision (next section) as well as a preliminary view on its implementation.

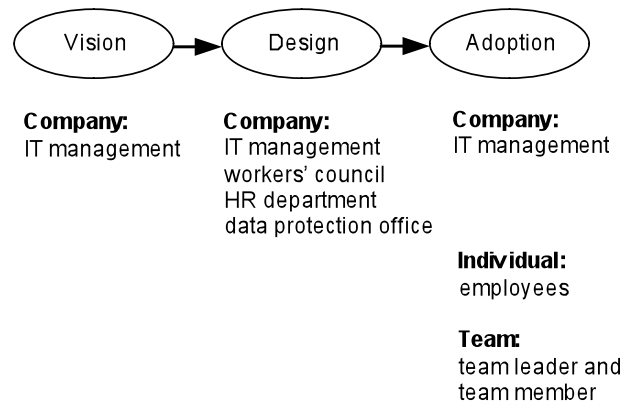


Figure 1: Stages of the Sametime® implementation process.

## Managerial tasks

Communication technology and in particular RTC is often seen as a core part of the organizational infrastructure. The notion of infrastructure highlights the dynamics of adoption, appropriation and adjustment. Given the organizational impact of RTC and potential tensions between managerial rules setting and emerging rules and routines within and across groups, we see managerial opportunities and responsibilities. While one could argue for a hands-off approach, which relies on self-organization,

appropriation and emerging forms of use, most organizations will take a more active stance of framing, contextualizing and embedding RTC (see Table 2).

	<b>Managerial tasks</b>	<b>Specifically ...</b>
Strategic orientation	Framing	Vision of the communication environment and the strategic role of communication routines. Application or infrastructure: scope and modes of use.
Organizational design	Context setting	Management approach: corporate policies vs. hands-off, decentralized approach. Related organizational approach: operational integration and control vs. self-organization.
	Embedding	... into the organizational culture. ... into the organizational structure (responsibilities, mandates etc.) and relating to organizational levels (corporate, business unit, group, individual).
	Rule setting	Defining the scope and level of policies and rule setting. Developing, negotiating, setting and - over time - adjusting rules.
	Creating support infra-structures	.. for routine and emerging forms of use. Responding to user requests and needs.
Implementation process	Managing the implementation	Procedural and developmental view: planned vs. emergent development, tactics of scoping and roll-out.

Table 2: Managerial tasks and responsibilities

In consequence we see an interdependent set of management decisions with particular emphasis on the early stages of the RTC implementation. Building on Fröblier's (2008) work, we are trying to reconstruct and understand the scope of ex ante rule setting and indeed negotiation of rules. Managing the implementation of RTC appears like a balancing act between the characteristics of RTC, organizational goals and organizational culture.

We hypothesize that the organizational and managerial framing as well as the process of implementation will shape the outcome.

### **Group-level usage practices**

Besides some one-to-one communication, Sametime® was mainly used for team communication. To inform others about their absence from the workstation, employees started to use the *group messaging feature* of Sametime®. Group messages allow informing a group of people about something which is only relevant at a special moment, e.g. "I will be in a meeting for the next 30 minutes". In contrast to email and chat, group messages cannot be answered. They are non-persistent and only appear in a pop-up window on the screen of the addressed users until the pop-up window is closed.

The practice of coordinating presence and absence on the team level has a long tradition at MUFIN. Most of the users had welcomed Sametime® as a more appropriate medium for this communication purpose than email, which had been used before. Hence,

appropriation of the new technology for this purpose was a natural step for most users adopting the technology. However, for this joint signalling practice to be effective, a full group adoption is required (Sanderson, 1992). This means that all team members need to be connected to Sametime® so that all team members are able to reach all other team members through this medium (Markus, 1990). This requirement however is at odds with the aspect of voluntariness. Our interviews revealed that there were different ways how team leaders and the teams dealt with this conflict:

1. *Ignoring the principle of voluntariness*: A few team leaders ignored the principle of voluntariness and required their team members to use Sametime®. However, some of the members in these teams contacted the workers' council and reported to management. As a consequence, the management subsequently reprimanded these team leaders.
2. *Compliance with voluntariness*: Spurred by the workers' council requirement to keep adoption voluntary, some team leaders reported that they did not dare to even talk to their team members about Sametime®. As a result, these teams normally comprised users and non-users, which meant Sametime® was not usefully adopted for team communication. Here, voluntariness acted as an inhibitor to full diffusion. Interestingly, those users and team leaders who were aware of Sametime®'s potential for full-scale team communication wished for more specific rules and commitment to Sametime®, at least with regards to the team level, if not for the entire organisation.
3. *Joint Agreement on Sametime® use*: In some teams team leader and team members discussed and jointly agreed on the use of Sametime®. In these teams, the aspect of voluntary, individual use has been replaced by a joint agreement to commit to the use of Sametime®, at least with regards to the within-team communication.
4. *Peer pressure*: Finally, in some teams that did not negotiate a joint agreement, the use of Sametime® turned out to be self-regulated by a form of peer pressure. While team leaders in these teams reported that no one had to use Sametime®, the leaders themselves had adopted Sametime® to inform their team about relevant information. As a result, some team members decided to use Sametime® at least passively to be able to receive this information.

All in all, while we observed that there were some teams, where a joint agreement or peer pressure had led to full team-level diffusion of Sametime®, there were still some teams where voluntariness acted as an inhibitor to full adoption. As a result, in these teams Sametime® could not be used effectively for team coordination. At the group level we observe group-specific externalities, i.e. rather than just relying on broad network externalities, positive group externalities rely on a full adoption across the group. This reinforced the tension between voluntariness and group adoption.

## **Conclusion**

While management explicitly upheld the notion of voluntariness, they still used measures to facilitate diffusion and use at different levels:

- Educating and motivating team leaders in order to have them as promoters;

- Providing support during the introduction and adoption phase, such as flyers, helpdesk, meetings etc.;
- Actively encouraging non-users to try Sametime® for two weeks and only then make a final decision.

Given the organizational dynamics and challenges at the different levels of the organization, we clearly find need for management facilitation to encourage voluntary use as well as appropriation.

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## **Notes of the interactive Sessions**

**Gert-Jan de Vreede**

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**Jens Fahling**

**Yi-Te Chiu**

**Stefan Klein**

The role of the facilitator depends on the fit between task and technology, the intensity of communication and interdependency of the team. A facilitator can be a designer of collaboration, an executioner of a collaboration process, an evaluator or trainer. Depending on the role of the facilitator, the proximity of participants, the number of participants, and the level of involvement in the task, a facilitator can be a performer, conductor or choreographer.

Online collaboration is often more longitudinal than traditional face to face meetings and workshops, further, the lack of body language cues makes it more vulnerable to conflict and misunderstanding, and distrust. The group made the following observations based on experiences with same time, sharepoint, adobe connect, blog's, wiki's, GSS etc.

Online communication forces more formal decision making. Example is nodding which creates a sense of agreement in a face to face meeting, will have to be replaced by an actual yes or no decision in online environment which reduces nuances and forces a more formal decision, while maybe and I guess might be more instrumental agreements at some points in collaborative processes.

An issue is that online people are represented by e.g. avatars or an online personal profile. The question is to what extent this personal information is instrumental to build trust. Some environments might be anonymous to reduce barriers for contribution, but at the same time might cause free riding and lack of trust.

A third observation was that new online environments create an expectation of 'self' management. They seem to be build without the intention to appoint a facilitator. While there might be a leader or initiator role, this person seems to have an initiating and coordinating role, not so much a facilitating role. Offering groups structure and guidance in shaping their activities might be perceived strange and inappropriate in these environments.

Because of the large need for tools for collaboration support many tools have been developed that tackle a very small challenge in collaboration. An example is doodle for polling or to create an appointment. This tool is very simple and effective in a very small collaborative task. However, a challenge is to combine a set of these kind of tools to support collaboration in a larger context such as a team, group or project.

Another challenge we identified is the integration of the facilitation role with leadership or natural leadership. As traditionally meetings are the key collaborative activity in groups and teams, and they are mostly chaired by the group or team leader, this seems also the dominant role model in online collaboration tools, making facilitation more challenging.

Also, we found that often online collaboration environments are rather rigid, the choice for an environment sets the tool set and possibilities and it is difficult to adapt or change the environment during the process. To make these environments user friendly they are build in a way that offer limited flexibility, which in turn creates difficulty in changing the structure for collaboration.

An issue in virtual collaboration is the sock puppet vs meat puppet, is the person responding a real person, or an agent, or the same person but under a different name, or a friend that responds in favor?

Familiarity with a particular technology typically yields trust. Information ownership can become a critical issue. The ground rules are typically defined by institutional governance rules, such as “everything that is being articulate on company computers is owned by the company”. Here communication is crucial to manage expectation and explain the rules. Anonymity is often seen as a protection of the individual. It can take various forms such as multiple personae or pseudonyms, which allows to build a reputation.

Questions in virtual collaboration are:

How to establish trust, familiarity, benevolence in the environment?

How to send ground rules such as all that is shared will be owned by the company, which can be a barrier to contribute. –also how to deal with classified information while benefiting from collaboration –?

Ethics to clarify policy of use how to make it be perceived as a benevolent environment.

Anonymity vs identification or using pseudonyms to enable reputation building, but keep people anonymous.

Avatar can be different or people can have multiple identities

Individual vs team contributions people can represent groups

Trust in anonymity offered by the system might be misplaced

How to deal with minority view points?

