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Kai Riemer

University of Muenster, kai.riemer@sydney.edu.au

Nadine Vehring

University of Muenster, nadine.vehring@ercis.de

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E-Collaboration systems in Virtual Organizations – Recommendations for tool support based on genre analysis

Kai Riemer

University of Muenster

European Research Center for Information systems

kai.riemer@ercis.de

Nadine Vehring

University of Muenster

European Research Center for Information systems

nadine.vehring@ercis.de

ABSTRACT

Advances in ICT have led to the proliferation of new organizational forms such as the virtual organization (VO). While ICT is seen as the key enabler of VO, its notion in the literature remains quite generic. Moreover, the VO itself is not well understood with regards to the work practices at the group level. Using a case study approach we investigate a subsidiary of a large multi-national corporation, which resembles the typical structures associated with a VO: a distinction between a long-term pool of competencies and the flexible configuration of geographically dispersed, short-term projects. The contribution of our study is twofold: first, we provide an empirical account of communication practices (and their differences) in VO pool and projects, based on a genre analysis. Second, we discuss appropriate e-collaboration systems to support these communication practices. We conclude with implications for future research.

Keywords

Virtual Organization, E-Collaboration, Cooperation Systems, Genre Analysis

INTRODUCTION

Driven by recent advances in Information and communication technology (ICT) we witness profound organizational changes in a move towards virtual, ICT-enabled work environments within and across organizational units. Inherently tied to the notion of virtual organization (VO) is the idea of ICT support. ICT is seen as the key enabler of VO by most scholars in the domain, yet it is most often treated quite generically. Those who take a more differentiated view see a need to support collaborative work in VOs with rich media and sophisticated e-collaboration systems (e.g. Shin, 2004; Thorne, 2005). However, VO literature lacks a conceptual understanding of both the actual requirements of supporting work at the group level and the kinds of appropriate e-collaboration systems for doing so; communication practices within VOs have not been sufficiently researched to make qualified recommendations for tool support.

In the existing literature the VO concept is largely discussed on the *organizational level* with structural propositions and intended benefits being in the focus. However, to better understand communication and practices within VOs, research on the *group level* is needed. Using a case study approach we investigate a subsidiary of a large multi-national electronics firm. Our case resembles the typical structures associated with a VO, i.e. the distinction of a long-term *pool of competencies* and the flexible configuration of *short-term projects*. Within the case we identify and analyze the existing communication practices using genre analysis. The identified genre repertoires characterize the communication patterns in VO pool and projects and reveal significant differences. The genres lead us to propose e-collaboration systems that fit the different requirements of communication in pool and project.

Our research stands in the tradition of qualitative research. Consequently, our study does not test existing theory; rather, we aim to improve the theoretical understanding of a phenomenon (*Verstehen*), grounded in a rich social context. Hence, our theoretical contribution lies in deepening the conceptual understanding of the VO on the group level. In doing so, our contribution is twofold. First, we contribute to a better understanding of communication and work practices within the VO pool and project structure. Second, we derive from the case a first empirically grounded concept for supporting VO operations using contemporary e-collaboration systems. We begin by introducing the VO concept (section 2), followed by the case setting (section 3). In section 4 we give a brief overview of the empirical part of the study and the data collection methods. Section 5 introduces the communication practices and points out differences in pool and project, while in section 6 we propose e-collaboration systems to support these practices.

VIRTUAL ORGANIZATIONS

Virtual Organizations (VOs) are regarded an appropriate organizational response to turbulent markets that provides companies with flexibility and agility. However, the term ‘virtual organization’ is somewhat vague; many slightly different interpretations can be found in the literature.

Different types of VOs

Most generally, two approaches to defining the VO can be identified (Franke, 2001; Kasper-Fuehrer and Ashkanasy, 2004): The first one sees the VO as a *type of organizational network*, “as a co-operative partnership (...) of independent economic actors that join forces on a temporary basis in order to achieve a common goal.” (Franke, 2001, 49). A virtual organization thus is a network in which independent firms integrate their specialized expertise (Talukder, 2003). In this paper we focus on the second type of VO, which sees the VO as one *ICT-enabled corporation*, with headquarters in different countries whose employees communicate mainly by electronic means (Shin, 2004) to overcome spatial dispersion (Khalil and Wang, 2002).

Two-level VO structure – pool and projects

The VO is typically associated with a two-level organization structure: 1) a pool of competencies and 2) short-term projects configured from the pool (Wehmeyer and Riemer, 2007). The *pool* represents the long-term element of the VO and is interpreted as a portfolio of competencies (Tuma, 1998), from which *projects* are formed to swiftly exploit market opportunities (Pihkala, Varamäki and Vesalainen, 1999). This aspect of VO is called the switching principle (Mowshowitz, 1999); competencies are swiftly recombined to form projects that are decomposed upon achieving their mission (Saabeel, Verduijn, Hagedorn and Kumar, 2002). The result is a high degree of flexibility in fulfilling customer orders (Franke, 2001). The downside however is a high degree of volatility that is challenging for setting up, managing, and working in VO projects (Riemer and Klein, 2008).

The role of ICT in the virtual organization

ICT is at the heart of the VO concept: it is seen as an enabler for bridging space, time and cultural distances (Khalil and Wang, 2002). Most VO authors stress the central role of ICT as a core instrument for communication and collaboration. And yet, many publications in the field remain vague about the type of e-collaboration systems used in the VO. However, they implicitly assume that ICT is extensively used (Kasper-Fuehrer and Ashkanasy, 2004). A virtual organization is seen as a collection of geographically distributed people who rarely meet in person, but who are linked by tools such as email, video-conferencing (Cascio, 1999; Shin, 2004), groupware, electronic messaging and screen sharing systems (Franke, 2001). However, while ICT is claimed to act as an enabler, existing work lacks conceptual understanding of the role of ICTs for the VO. All in all, little knowledge exists as to the requirements of the modes of work on the group level within the VO.

THE CASE COMPANY INCOTEL

InCoTel (*name changed*) is a large multi-national electronics firm based in Europe. Its product portfolio ranges from telecommunications infrastructure over communications solutions (e.g. IP telephony) to various consulting services.

Unit of analysis: the IAM group of security experts

Within InCoTel we focus on one particular business segment – the professional services and individual solutions (PSIS), where customer-specific communications technologies are developed and implemented in project setups that strongly resemble the VO structure. Within PSIS two types of divisions exist: first, a range of divisions focuses on the development of new products (e.g. Unified Communications solutions). Second, several regional divisions are concerned with sales and project-based development of customer-specific solutions. Our unit of analysis is located in the Germany regional division. Internally, this regional division is divided into 1) a sales group, which manages the customer contact, 2) a solution centre, which holds project managers and administration people, and 3) two centers of competence (CoCs) with technical experts in the areas security and customer relationship management. Specifically, we had access to 21 employees, who form the identity and access management (IAM) sub group within the security CoC.

The IAM people are distributed across 9 geographical sites located all over Germany, including the Munich headquarters of InCoTel. While people are assigned to one of the sites as their home base they often travel and work at client sites during project phases. The IAM group resembles a pool of security experts, who bring in their competencies on a case by case basis in projects with customers. In these projects the role of the CoC people is to support the sales personnel by acting as consultants or system integrators.

Pool and project at InCoTel

The way customer projects are organized within PSIS resembles the two-level VO structure: Projects are made up of people from different PSIS divisions including the IAM group. Project initiation follows a stable pattern: The sales unit initiates the project; the account manager is the main contact person for the client. For a small project, sales might directly ask technical experts, e.g. members of the IAM group, to provide a project manager and technical consultants. In larger projects, project managers, accountants (for contractual questions), engineers (for business planning), and system integrators (for technical customizing) are drawn from the solution centre, while the CoCs provide technical experts (as consultants or system integrators). In very large projects personnel from other CoCs and other divisions (e.g. the headquarters) are also integrated into the project, which leads to complex, multi-layered setups. Figure 1 visualizes typical project roles and the way projects are set up. In this structure the sales division together with the solution centers and the CoCs function as a pool of experts with different backgrounds, from which, on a flexible and ad hoc basis, projects are assembled that are dissolved after a duration of few weeks to months.

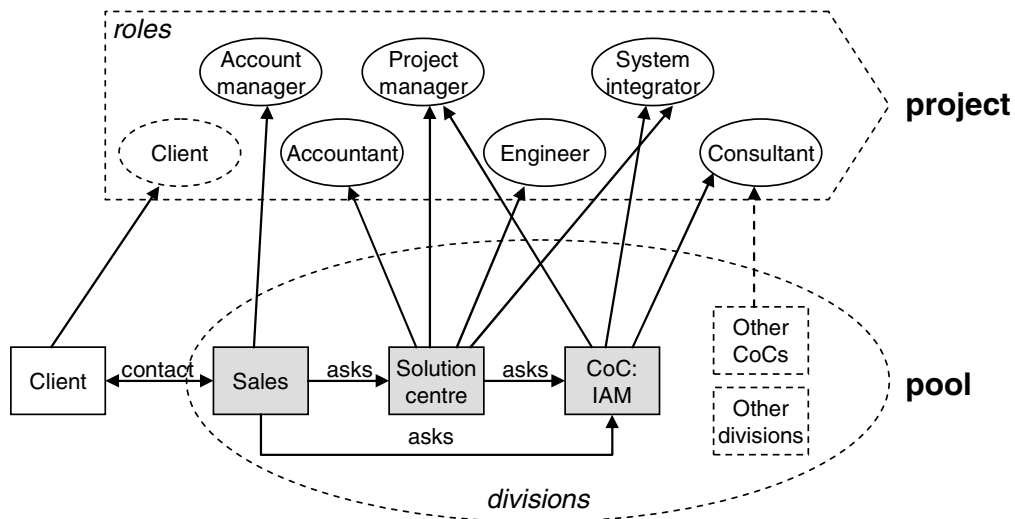


Figure 1. Configuration of customer-specific project from InCoTel pool of experts

STUDY OVERVIEW

This paper reports on results of a study of communication practices in distributed work within InCoTel. More specifically, the data presented here was derived from a communication analysis that aimed at documenting the communication genres and practices of the IAM group.

Data collection

In the first step of our study, which is reported here, we analyzed existing communication practices independent of the current media usage behavior. The reason was to derive propositions for tool support that are solely based on the requirements of communication practices (as represented by the identified genres), and not biased by available systems and their specific use in the case. Hence, we do not present a detailed list of systems as would be recommended for the specific case, but reason about suitable types of e-collaboration systems to support VO communication practices in more general, taking the case as a model.

The IAM group was recommended by PSIS management because of its representativeness for distributed groups within InCoTel. Method-wise, we used *field observations* to get an in-depth understanding of the communication behavior of the IAM team members. In doing so, we spent time with a sub group of five team members located at one office site. While this proved to be invaluable to gain an understanding of the context and certain parts of the members' communication, it quickly became clear that due to the flexible work arrangements this had to be accompanied by *semi-structured interviews* to gain a complete picture of the communication practices. The data collected in the field was used to identify communication genres.

Genre analysis

Genre analysis is suitable for structuring and describing communication practices. Genres are “socially recognized types of communicative actions [...] habitually enacted by members of a community to realize particular social purposes.” (Yates, Orlikowski and Okamura, 1999, 84) Communication genres emerge from social practices and in turn shape social activity by providing socially agreed upon templates that structure communication (Kwasnik and Crowston, 2005). A limited set of genres can describe the communication practices of a group; it acts as a form of repertoire on which group members routinely draw when communicating (Orlikowski and Yates, 1994). Hence, genres can serve as an analytical tool to understand the communication practices of a group, because “in identifying and labeling genres we try to capture the gestalt of the various components of the communicative act.” (Kwasnik and Crowston, 2005, 80).

In order to identify a genre, we need to specify how it can be recognized. What can be observed in a social context is the communication events people engage in during their daily routines. What “turns a collection of communicative events into a genre is some shared set of communicative purpose” (Swales, 1990, 46). Hence, purpose is the primary criterion by which to identify genres (Askehave and Swales, 2001). This purpose is recognizable for members of the discourse community (Swales, 1990). Consequently, while communication events can be observed, genres can be discussed and reflected on in open-ended interviews. Thus, we followed a two step approach: First we observed and recorded communication events; from the resulting data we identified two sets of genres for pool and project-related communication. Second, these genre sets were discussed in interviews to arrive at agreed upon sets of genres. By comparing genre repertoires on pool and project level we are able to pinpoint differences in communication practices and derive propositions for tool support.

COMMUNICATION PRACTICES

In the following we characterize communication on the pool and project level using the repertoires of genres identified as result of the above described analysis

Communication genres to describe pool-level communication

Communication on the pool-level comprises communication among the IAM group members; it can be characterized by a total of eight communication genres, which content-wise can be assigned to four different areas: First, we find a significant proportion of communication to be related to projects, in which group IAM members are involved. Here, two genres can be distinguished: The first genre subsumes communication regarding the *distribution of project tasks*: the IAM manager assigns tasks, people ask for resources/help in ongoing projects, or people with free capacities ask for new assignments. The second genre is concerned with conflicts or unfortunate developments in projects that require an *escalation* to the IAM management; this communication happens between IAM members and the group manager.

Second, most of the internal communication of the IAM group is technical communication aiming at sharing knowledge and solving project-related problems. The third genre, the *discussion of technical questions*, is the most frequent and important one: members, who are involved in projects, need information from one of the group members or ask a technical question. The fourth genre describes communication that happens when people *search for an information source*, i.e. when they do not know who can provide a certain piece of information. Here, people are being asked to refer the group member to someone else. The fifth genre *general knowledge exchange* subsumes all communication aimed at sharing developments in the security domain, e.g. latest technological news etc.

Third, most of the remaining communication relates to general IAM group organization. The sixth genre *exchange of organizational information* is concerned with distributing general information regarding InCoTel organizational processes, e.g. on filling in forms. Subsumed under the seventh genre, some communication events aim at *group coordination*, e.g. in regards to meetings with other IAM members or the quarterly jour fixes. Finally, *social, informal talk* accounts for the rest of communication events and is subsumed under the eighth genre.

Communication genres to describe project-level communication

Communication on the project level extends IAM boundaries. These communication events happen between IAM group members and other InCoTel people who are part of the above described project setups. Communication on the project level can be structured by a total of ten genres in five areas:

First, two genres have to do with general project organization. The first genre subsumes all communication related to *project initiation*, which happens at the beginning of projects between IAM members and people from the regional sales division and the solution centre. The second genre can be observed more regularly and comprises all *time coordination* in regards to appointments and meetings.

Second, the majority of communication is task-related. The third genre comprises communication related to the *distribution of work packages*, which happens between project manager and the various project members. The fourth genre is concerned with *joint project planning* and subsumes communication in regards to formulating a project plan, the negotiations of milestones etc. A fifth communication genre subsumes all communication in regards to the *joint work on text documents*, mostly longer and more complex interactions in which people discuss and jointly formulate text documents such as technical specifications. The sixth genre is concerned with *communication regarding technical customizing*, e.g. the customizing of technologies to customer specifications. Seventh, the last genre in this area has to do with *coordination of task interdependencies*. Whenever people work on related tasks they have to communicate to align their work with others.

Third, one genre is concerned with the *sharing of general project information*. Examples are the distribution of project reports and communication thereon. Fourth, the ninth genre describes communication related to *escalation* in cases of serious problems, where project members escalate by reporting to the project manager. Fifth, the tenth genre again subsumes all *social talk*, e.g. informal communication and small talk.

Differences in communication practices between pool and projects

When comparing communication genres on the pool and project level some important differences come to the fore. These differences become most obvious when characterizing the genres by the nature of the underlying group processes: communication, coordination, and collaboration (Bhatt, Gupta and Kitchens, 2005; Fouss and Chang, 2000). Communication describes inter-personal information exchanges; coordination refers to aligning group activities in projects and processes, while collaboration describes joint work on shared objects. As is visualized in the following table, interaction on the pool level is to a large extent concerned with information sharing and, to a lesser extent, coordination, but does not comprise any collaboration. To the contrary, most interactions on the project level are task-oriented and concerned with “doing something together”, i.e. working on joint documents or technical artifacts. Coordination also accounts for a large amount of communication events. These differences have implications for the tools that are appropriate for the two contexts.

Group process / Genres in...	...pool	...projects
Information sharing	3) Discussion of technical questions 4) Search for an information source 5) General knowledge exchange 6) Exchange of organizational information	8) Sharing of general project information
Coordination	1) Distribution of project tasks 7) Group coordination	1) Project initiation 2) Time coordination 3) Distribution of work packages 7) Coordination of task interdependencies
Collaboration		4) Joint project planning 5) Joint work on text documents 6) Technical customizing
Conflict resolution	2) Escalation	9) Escalation
Social communication	8) Social talk	10) Social talk

Table 1. Comparison of communication genres in pool and projects

RECOMMENDATIONS FOR TOOL SUPPORT

In our observations of the IAM group we learned that the predominant modes of interaction are (mobile) phone conversations, sending email or meeting face to face. Obviously, these media types can be regarded essential for any work in modern organizations. The idea of this paper is not to elaborate on these basic modes of communication, but to derive recommendations regarding application of more advanced e-collaboration technologies; we begin by discussing pool-level requirements.

E-collaboration systems to support group-level interactions in the pool

Pool-level communication is to a large extent concerned with information sharing and, to a lesser extent, coordination. Hence, we concentrate on tool support for these two groups of genres (acc. to table 1).

One predominant mode of interaction is the search for technical information with regards to immediate project needs and the related discussions. Working as technical consultants in customer projects, IAM team members often have to get access to a specific piece of information or to discuss technical problems. This information need can either be satisfied by finding the information stored in some form of document or by reaching another group member, who might or might not be known beforehand to hold this information or to be an expert in the required technical domain. From this, two areas for applying e-collaboration systems can be identified: managing and exchanging information within the group and improving the accessibility of knowledge bearers. E-collaboration systems can improve the collection and exchanging of group knowledge. For example, *shared storages spaces* can hold documents and allow categorizing information according to a set of semantic information relevant to the group. A *wiki system* could be used to jointly document solutions to typical problems or information regarding past projects; it can also be used to collect general information related to group processes (genre 3). In order to get timely answers to technical questions, in situations when the right experts are not known, a *group mailing list* might be used to distribute questions to all group members (genres 1, 2). Moreover, when people need to reach other people in tight situations (genre 2), presence-based communication such as *instant messaging* or integrated *real-time collaboration (RTC) systems* might be useful (Riemer and Fröbner, 2007). Such systems allow people to see, through a status feature, the availability of people; in combination with a *competence database*, which holds group members' profiles, such systems can improve accessibility of experts and information flow.

A second area of communication on the pool level is concerned with the coordination of both project-related and general group matters. With regard to projects, group members frequently need to either find someone for carrying out a task or they have free capacity on offer. In both cases the above mentioned *mailing list* might support coordination. In cases where experts are needed but unknown, the *competence database* can again be drawn on. General group coordination with regards to meetings can further be supported using a *group calendar*.

In summary, based on the set of genres identified, the systems we propose support the capturing and joint creation of knowledge (document spaces, wikis), the finding of experts (competence base, mailing list), improving time coordination (calendar) and a better accessibility of people (instant messaging, RTC).

E-collaboration systems to support distributed work in VO projects

Most interactions on the project level are task-oriented and concerned with collaborating on joint documents or technical artifacts; coordination also accounts for a large amount of communication. Consequently, we concentrate on tool support for coordination and collaboration processes.

Project work requires a lot of ad hoc coordination in regards to distribution of (day-to-day) work (genre 3), scheduling of meetings and conference calls (genre 2) or the coordination of task interdependencies (genre 7). In this context, a text-based system such as *instant messaging* can be very helpful, because it enables unobtrusive ad-hoc communication (Riemer, Fröbner and Klein, 2007). Of course, time coordination can also be supported with *group calendars*. In the project initiation phase (genre 1) two aspects require consideration; first, team members need to get to know each other. Considering the distributed nature of work, *video conferencing* might provide a rich channel for team members in situations where face to face meetings are not feasible. Second, project planning can be supported with *project management platforms*, which also support some form of ongoing project coordination later on (genre 4).

In stark contrast to pool-level interactions, projects require VO team members to collaborate on joint tasks spanning organizational and geographical boundaries. Joint work in these situations, e.g. writing text documents (genre 5) and customizing technical artifacts (genre 6), is often carried out synchronously. Hence, e-collaboration systems to support joint work sessions are needed: the system class *session and meeting systems* integrates features such as audio/video communication with *application sharing* and discussion features. Considering the recommendation to use instant messaging (IM) for coordination (see above), *real-time collaboration systems* might again be useful, because they integrate IM features with web conferencing/application sharing.

To sum up, we recommend instant messaging, group calendars and some form of project planning to support project coordination as well as video/web conferencing features, as part of meeting systems or RTC, to facilitate distributed work on shared objects. Besides the more sophisticated e-collaboration systems discussed here, people in the VO, of course, need access to essential media such as email, phones or phone conferences and some opportunities for meeting face to face for team building and the more complex, workshop-type interactions. Table 2 summarizes our tool recommendations.

Group process / Tools for...	...pool	...projects
Information sharing	Document spaces Wiki systems Group mailing lists Instant Messaging, real-time collaboration Competence database (profiles)	
Coordination	Competence database Group mailing lists Group calendar	Instant messaging Group calendars Project platforms Video conference
Collaboration		Session & meeting systems (video conferencing, application sharing) Real-time collaboration systems

Table 2. Recommendation of e-collaboration systems to support pool and project interactions

CONCLUSION

The predominant view in the VO literature sees modern ICTs at the heart of virtual work. In doing so, however, ICT is treated rather generic. The types of ICT used and their actual usage are generally not considered. In this study we analyzed in detail the communication practices in a VO case example. The structures found at InCoTel resemble the VO concept featuring a two level structure of pool and project. The first contribution of our study is to provide an account of (typical) communication practices (and their differences) within this two-level structure. In doing so, we contribute to a better understanding of work within the VO concept, which in the literature is mostly discussed on a rather abstract level. The second contribution is the identification of two sets of e-collaboration systems in correspondence with the identified genre repertoires. In doing so, we aim to substantiate the notion of ICT in the VO concept.

Our study has certain limitations. First of all, we only looked at one, albeit quite typical VO setting. Replication in another context is needed to corroborate and contrast our results and to further ground our propositions. Moreover, we learned that genre analysis is a demanding tool when applied in context. One shortcoming of our data collection approach was that, while genre analysis is supposed to rely on rich data (e.g. derived from team observation), for large parts we had to rely on interviews, since people used to travel a lot (due to the virtual work settings) rendering observations impossible. Also, we learned that genre analysis requires close collaboration with the team under observation, in order to constantly discuss and refine the emerging genre repertoire. We consider our tool recommendations (table 2) only a first step in a research process to explore work practices and ICT use within existing VOs. Possible next steps are case studies to contrast and understand variations in tool usage. Also, processes of ICT adoption in the flexible and distributed structures, created by the VO setup, require consideration. When people come together swiftly in VO projects, they might not work long enough together in stable structures (i.e. a shared social context) to build out joint practices of using e-collaboration systems such as instant messaging. At this early stage of enquiries to the VO group level, case study research seems most appropriate. Only after gaining a better understanding of the contingencies of tool adoption and usage can cross-sectional, survey-based studies be used to test new theories of ICT support and adoption in complex environments such as the VO.

REFERENCES

1. Askehave, I. and Swales, J.M. (2001) Genre identification and communicative purpose: a problem and a possible solution, *Applied Linguistics*, 22, 2, 195-212.
2. Bhatt, G., Gupta, J.N.D. and Kitchens, F. (2005) An exploratory study of groupware use in the knowledge management process, *Journal of Enterprise Information Management*, 18, 1/2, 2846.
3. Cascio, W.F. (1999) Virtual Workplaces: Implications for Organizational Behavior, in C. L. Cooper and D. M. Rousseau (eds.), *Trends in Organizational Behavior - Volume 6: The Virtual Organization*, John Wiley & Sons, Chichester et al., 1-14.
4. Fouss, J.D. and Chang, K.H. (2000) Classifying Groupware, in *Proceedings of the ACM Southeast Regional Conference*, Clemson, South Carolina, 117-124.
5. Franke, U. (2001) The Concept of Virtual Web Organisations and its Implications on Changing Market Conditions, *eJoV - the Journal for Networks and Virtual Organizations*, 3, 4, 43-64.
6. Kasper-Fuehrer, E.C. and Ashkanasy, N.M. (2004) The Interorganizational Virtual Organization, *International Studies of Management & Organization*, 33, 4, 34-64.
7. Khalil, O. and Wang, S. (2002) Information technology enabled meta-management for virtual organizations, *International Journal of Production Economics*, 75, 1/2, 127-134.
8. Kwasnik, B.H. and Crowston, K. (2005) Introduction to special issue: Genres of digital documents, *Information Technology & People*, 18, 2, 76-88.
9. Mowshowitz, A. (1999) The Switching Principle in Virtual Organization, *eJoV - the Journal for Networks and Virtual Organizations*, 1, 6-18.
10. Orlikowski, W.J. and Yates, Y. (1994) Genre Repertoire: The Structuring of Communicative Practices in Organizations, *Administrative Science Quarterly*, 39, 541-574.
11. Pihkala, T., Varamäki, E. and Vesalainen, J. (1999) Virtual organization and the SMEs: a review and model development, *Entrepreneurship & Regional Development*, 11, 4, 335-349.
12. Riemer, K. and Fröblier, F. (2007) Introducing Real-Time Collaboration Systems: Development of a Conceptual Scheme and Research Directions, *Communications of the Association for Information Systems (CAIS)*, 20, 204-225.
13. Riemer, K., Fröblier, F. and Klein, S. (2007) Real Time Communication - Modes of Use in Distributed Teams, *15th European Conference on Information Systems (ECIS 2007)*, St.Gallen (CH), 07-09 June 2007, 286-297.
14. Riemer, K., Klein, S. (2008) Is the V-form the next generation organisation? An Analysis of Challenges, Pitfalls and Remedies of ICT-enabled Virtual Organisations based on Social Capital Theory, *Journal of Information Technology (JIT)*, 23, 3, accepted for publication.
15. Saabeel, W., Verduijn, T., Hagdorn, L. and Kumar, K. (2002) A model of virtual organisation: a structure and process perspective, *eJoV - the Journal for Networks and Virtual Organizations*, 4, 1, 1-17.
16. Shin, Y. (2004) A Person-Environment Fit Model for Virtual Organizations, *Journal of Management*, 30, 5, 725-743.
17. Swales, J.M. (1990) *Genre Analysis: English in academic and research settings*, Cambridge et al.
18. Talukder, M.I. (2003) The Perception of Professionals and Management Personnel on the Virtual Organization, *The Journal of Computer Information Systems*, 43, 3, 92-99.
19. Thorne, K. (2005) Designing virtual organizations? Themes and trends in political and organizational discourses, *Journal of Management Development*, 24, 7, 580-607.
20. Tuma, A. (1998) Configuration and coordination of virtual production networks, *International Journal of Production Economics*, 56/57, 641-648.
21. Wehmeyer, K. and Riemer, K. (2007) Trust-Building Potential of Coordination Roles in Virtual Organizations, *Electronic Journal for Virtual Organizations and Networks (eJOV)*, 8, 102-123.
22. Yates, Y., Orlikowski, W.J. and Okamura, K. (1999) Explicit and Implicit Structuring of Genres: Electronic Communication in a Japanese R&D Organization, *Organization Science*, 10, 1, 83-103.