

Organisational Integration of Meeting Results

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ABSTRACT

This paper discusses the problem of organisational integration of outputs generated by Electronic Meeting Systems (EMS). The level of organisational integration supported by actual systems is still very weak, especially in what concerns the post-meeting phase. In order to tackle this problem, we developed a framework, composed of three levels of detail (contextual, genre and implementation), specially tailored for meetings supported by EMS. The paper illustrates the application of the model to a specific organization, based on a sample of 214 decisions taken in meeting sessions of a management team.

INTRODUCTION

The escalating complexity of problems faced by organisations, due to lack of information, resources and authority, is taking autonomy from individuals and substituting them with groups of human beings (Simon, 1997). Unfortunately, dissatisfaction with group process and outcomes is a generalised impression. For example, the 3M Meeting Management Team (1994) start their discussion on this subject saying that meetings “can be compared to a funeral.”

From the beginning of the 1980's, Electronic Meeting Systems have been viewed as the Holy Grail to improve group process and outcomes (Fjermestad and Hiltz, 1999). The role of EMS can be broadly defined as supporting work by enhancing group cognition. As such, EMS have tried to enhance communication among group members, provide shared information bases, coordinate individual tasks to assure a coherent result, guide and stimulate collaboration, all this while overcoming limitations of distance, time and memory.

Success using EMS seems to depend on how they are applied (Bostrom et al., 1993). Recent fieldwork has shown a dichotomy between content and process interventions. While content interventions address data modelling (issues, goals, options, beliefs, etc.), process interventions concern software-based decision guidance. Dickson et al. (1996) experimented a specific process in the context of multi-criteria decision-making and concluded that a new and unfamiliar technology such as EMS needs some software-based decision guidance, but there must be some flexibility to avoid decreasing effectiveness. Experiments reported by Miranda and Bostrom (1999) also show that process interventions had positive impact while content interventions had a negative impact on meetings.

Problems with meeting processes are largely discussed in the literature (e.g. Buttler, 1996, Nunamaker et al., 1997), but the focus is typically in the pre-meeting preparation and in-meeting management. Regarding the post-meeting phase, emphasis is generally placed in meeting evaluation. But the post-meeting phase also raises one interesting problem: the lack of integration with other system (Antunes and Guimaraes, 1997). In fact, the results produced by a meeting must flow to other organisational processes, induce the production of goods and services or influence people's opinions.

Meetings produce decisions and those decisions must be communicated. If a decision is a consequence of a question or request, a response must be sent to the ones who made the request. If it was decided that somebody would execute a task, so this person must be informed and instructed. During the meeting, participants may notice that there is not enough information to take a decision. In this situation, information must be requested to other internal or external entities. These are just some of possible purposes of post-meeting activities related to the decisions taken in meeting sessions. Our point is that some communication process is needed to organize, orchestrate and guide these activities, but such functionality is not currently available in EMS.

RELATED WORK

One of the few systems that enhance the post-meeting phase is the “Analyser” or Expert Session Analyser - ESA (Aiken et al., 1990). The Analyser is among a group of systems that proposes the integration of expert systems with EMS components (database, base model, computer network, interface, facilitator and group of users) and whose main tasks are: making summary reports, complement the comments of group

members and impose structure to the meeting outcomes in order that they can be used as input to other systems. Later, Aiken proposed other agents including an automated facilitator (Aiken and Vanjani, 1998), expert session planner (Aiken et al., 1990), data retrieval agent (Aiken and Govindarajulu, 1994; Colon et al., 1994) and a natural language translation agent (Aiken et al., 1994).

Aiken and Carlisle (1992) describe a tool designated idea consolidator, which is an agent that automates the process of idea organisation. The system condenses text, by identifying key words and matching them with comments. This system was tested and it was proved that the level of satisfaction is much better if the tool is used.

Cire (Romano et al., 1999) is a collaborative information retrieval environment dedicated to support cooperative information seeking and retrieving. Although the major purpose is to support the meeting process, this system constructs a shared memory that includes lists of visited pages, executed queries, comments and relevancy evaluations.

Raikundalia and Rees (1995) proposed a system named LoganWeb, which is an electronic meeting document manager for the World Wide Web. Logan meetings are composed of five phases and occur in multiple, concurrent chains. LoganWeb tools provide meeting transcripts in various applicable, readable and navigable forms. These tools enhance meeting discussions by allowing participants to analyse logs during meetings. LoganWeb also provides a *secretarius* that moderates contributions to the meeting.

MODEL

In order to describe the problem of organisational integration we defined the model that is illustrated in

Figure 1. It was designated PROFS (from Participant, Reporter, Outcome committed, Facilitator, and Sponsor). As illustrated in the figure, the communication process has to identify and retrieve relevant data from the meeting, identifying sources and indexing data for future reference. The information must then be categorised, summarised and stored. For data distribution, the relevant receivers and subsequent tasks must be identified. Furthermore, data must be available according to the particular needs and interests of the receivers.

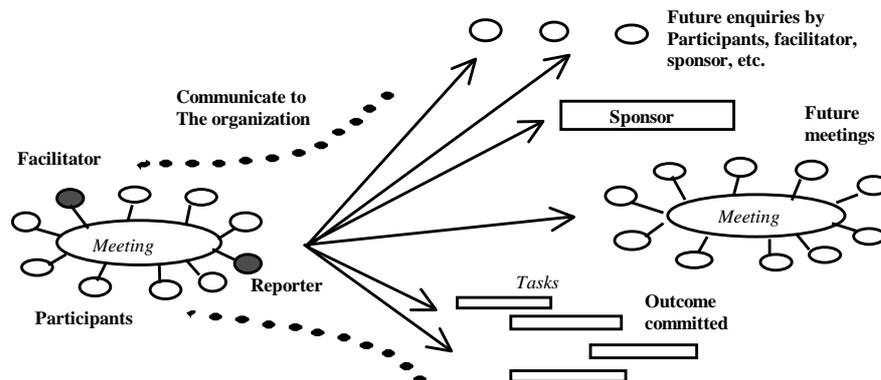


Figure 1 - PROFS Model /context level

We can identify five types of agents (or roles) that take part in the communication process: participant, reporter, outcome committed, facilitator and sponsor. Sponsor is the owner of the meeting. Facilitator (or chairman) is a person that manages a meeting. This person plans the meeting according to the sponsor instructions, directs and closes the meeting. Participants are those who attend a meeting and contribute by making comments, giving opinions, voting, etc. Reporter (or *secretarius*) is the agent that produces the final report of the meeting and distributes it to the other agents. Outcome committed are those agents that find their actions affected by the results of the meeting.

Other elements considered by the model concern the activities performed by agents. Facilitators manage meetings. Meeting participants share complex structures composed of agendas, processes and rules. The sponsors own meetings. As consequence of meeting results, outcome committed have to perform tasks.

The meeting results may be spread to participants, facilitator and sponsor of the actual meeting, but also to other agents, like sponsor, facilitator and participants of future meetings. The results may also be sent or made available to an operator of a task or an organisational agent. To each one of them, a message (or a document) may be sent. Consequently, the results produced by a meeting can be divided into: (1) meeting minutes, directed to outcome committed; (2) working memory, used in a near future meeting; (3)

a report to the meeting sponsor; and (4) long term memory, with information that will be incorporated in the organisational *repositorium*.

FRAMEWORK

In order to contribute to the organisational integration of EMS, based on the support to the post-meeting communication process, we developed a framework with three levels:

- The first level describes the context of the problem, including the main agents and activities. It is at this level that we define the PROFS model.
- The second level is what we call the genre level, because it is supported in the concept of genre, intended to categorise the results produced by meetings.
- The third level is the implementation level, where the concept of genre and the PROFS model give origin to a working system that integrates meeting results into the organization.

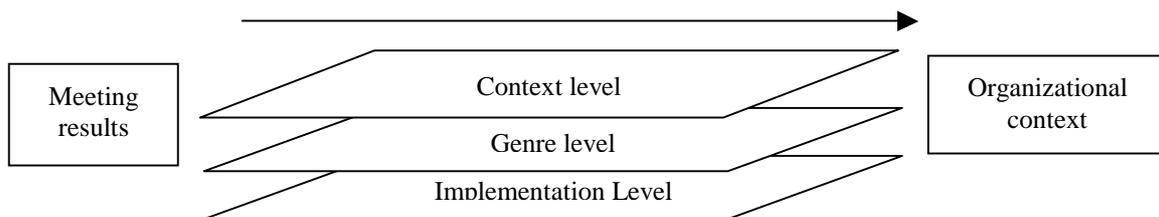


Figure 2 – Three levels of integration between EMS and the organization

The following paragraphs broadly explain the genre and implementation levels.

The concept of genre was imported from the literature (Yates and Orlikowski, 1992), but its use was generalised to the organisational context (see, for example, Crowston and Williams, 1999). A genre of organisational communication is a socially recognised type of communicative actions (e.g. memos, reports, resumes, enquiries, letter, meetings, announcements, expense forms, training seminars) that are habitually enacted by members of a community to realise particular social purposes. A genre established within a particular community serves as an institutionalised template for social action – an organising structure – that shapes the ongoing communicative actions of community members through their use. A genre of organisational communication is a typified communicative action invoked in response to a recurrent situation (Yates and Orlikowski, 1992).

The purpose of a genre is not an individual's private motive for communicating, but a purpose socially constructed and recognised by the relevant organisational community and invoked in typical situations. In a empirical study examining the communication exchanged by a group of distributed knowledge work in a multiyear project, conducted primarily through electronic mail, Orlikowski and Yates (1994) identified the following categories of purposes: informational message; comment on group process or use of medium (meta comment); proposed rule, feature or conventions (proposal); request for information, clarification or elaboration (questions); reply to previous message or messages (reports); and residual category (e.g. thanks, apologies, ballots).

Besides the purpose, a form also characterizes a genre. Form refers to observable aspects of the communication, such as medium, structural features and linguistic features. In the same study by Orlikowski and Yates (1994), several categories of forms were identified, such as embedded message, graphical elements, heading, informal, opening, sign-off, sub-headings, subject line and word or phase emphasis.

Occasionally, genres are linked or networked together in a way that constitutes a more coordinated communicative process. Such a genre system consists of interdependent genres that are enacted in some typical sequence (or limited set of acceptable sequence) in relation to each other, and whose purposes and forms typically inter-link.

The difference between the genre and implementation levels can be explained by the use of a metaphor. Like in a literary work, a novel is a novel, whatever its support. But, to produce a novel, it is necessary to decide if it will be published in a book, newspaper, or web page. Consequently, all the attributes necessary to implement genres, making the communicative process possible, must be identified.

Those attributes were identified mainly based in the work of Orlikowski and Yates (1998, 1992) and include the sender, receiver, feedback agent, time, place and sequence. The sender is implicitly identified as the group holding the meeting, while the receivers and feedback agents must be explicitly identified.

Time is the moment when the genre can be instantiated, and also the lag time in which feedback can take place. Place is the real or virtual location where the communication of the genre is meaningful. A genre may also identify what genre follows another (sequence) in the context of an organisational process or genre system. This sequence also echoes any coordination mechanisms adopted by the communication process.

USING THE FRAMEWORK

We started using this framework to study the communication process between the meeting and outcome committed. A specific organization, comprising directive members of a public organisation was the object of analysis.

This organization produced 214 decisions taken in 30 meeting sessions, which took place during a period of 4 year (from 1996 to 1999). With this list we were able to identify the typical results in terms of documents and communications delivered to outcome committed. Nine main genres were identified this way. Figure 3 lists the obtained genres.

Genres	Purpose	Form	Receiver	Examples
Response	Answer	Decision Value: Y/N	Who request the response: - users of the service - workers - external entities - other services	- expense acceptance
Instruction	Order/Instruct	Task definition	Explicitly defined (workers or department)	- "pay employee X"
Document approval	Approve	Decision Value: Y/N	Not explicitly defined (only in the content)	- budget approval
Agenda setting	Schedule later Postpone	Agenda	Meeting manager	- decide to decide next meeting
Rule, regulation, explanation	Define Rule		Not explicitly defined (only in the content)	
Document transference	Transfer document (approve transf.)	Attached Doc	Explicitly defined	- publishing the annual report
Information request	Ask Information		Explicitly defined	- ask information to law consultant about contract
Delegation	Delegate power to a person or a commission	Must indicate the objective of the position as well the name of the commission or person	People involved	- creation of a committee to evaluate a proposition
Information	Inform		Explicitly defined	

Figure 3 – Genres taxonomy

After identifying the main genres used by this organization, we identified the percentage of communications that used each genre and also the percentage of decision that correspond to each genre. The results are shown in Figure 4.

Genre	Percentage of communications that used this genre	Percentage of decisions that correspond to this genre
Response	7%	13%
Instruction	33%	63%
Document approval	2%	5%
Feedback	1%	3%
Rule, regulation, explanation	11%	21%
Request for information	3%	6%
Document transfer	0%	1%
Information	33%	62%
Delegation	8%	15%
Other	0%	0%

Figure 4 – Communication genres observed

The process of classification and the final results showed us some characteristics of genres:

- There is a need of a relatively reduced number of genres; and a large percentage of decisions correspond to instructions given by the meeting participants to other departments, like accounting and administrative, equipment, secretary or parking services.
- Each decision may produce more than one genre. For instance, there are several decisions that have as consequence an instruction to a department and information to others departments or external organizations.

- Each genre can be divided in sub-genres with slight differences (receivers, form). For instance, responses can be sent either to users, employees or external entities.

We also noticed some reactions to this classification that seem to be useful for future work:

- The explicit use of genres allows the creation of templates and use of computer systems for automation that may reduce lack of communication (e.g. reduction of forgetfulness), improve awareness of communication or reduce workload.
- The explicit use of genres is a good opportunity to identify communication problems. For instance, it was found that sometimes the requesters were not informed of the decision they requested.

Some characteristics of genres still have to be analysed, specially its form and linking between genre and the building of genre systems.

DISCUSSION

The framework proposed in this paper is useful because it allows meeting participants to have a general environment where everybody involved shares concepts. By definition, genres result from the interaction of the community of users and, consequently, are understood by involved people. With those genres, meeting participants do not need to identify or define specific components of genres, because they have already been identified before.

The main disadvantage of this approach is the fact that it emphasises pre-existent genres. This can be overtaken with meetings which main purpose is the creation of new genres.

CONCLUSION

The problem analysed in this paper is the organisational integration of meeting results produced by EMS. In order to solve the problem, we use a model that is useful in the process of clarifying the agents and type of activities involved in meetings (contextual level) and where the concept of genre is a central one (genre level). In the implementation level, genres may be explored in detail, allowing the creation of communication processes that improve the impact of meeting outcomes.

The great advantage of this framework is that it is supported in the concept of genres. In fact, because users understand genres, this approach allows an adequate process of choice during the meeting process. So, during the meeting, participants choose a concrete type of communication, defined by them, instead of discussing the philosophy of communication. On the other hand, those genres must be adequately and clearly defined, in order to correctly establish the communication with the receiver. We found out that a relatively reduced number of genres is necessary to describe meeting outputs in organisations.

This framework also proved to be useful in the analysis of lack of integration from the decisions taken in meeting sessions into the organization. For instance, it was observed that in some situations, requests did not have responses because such response was not institutionalised for a number of situations.

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