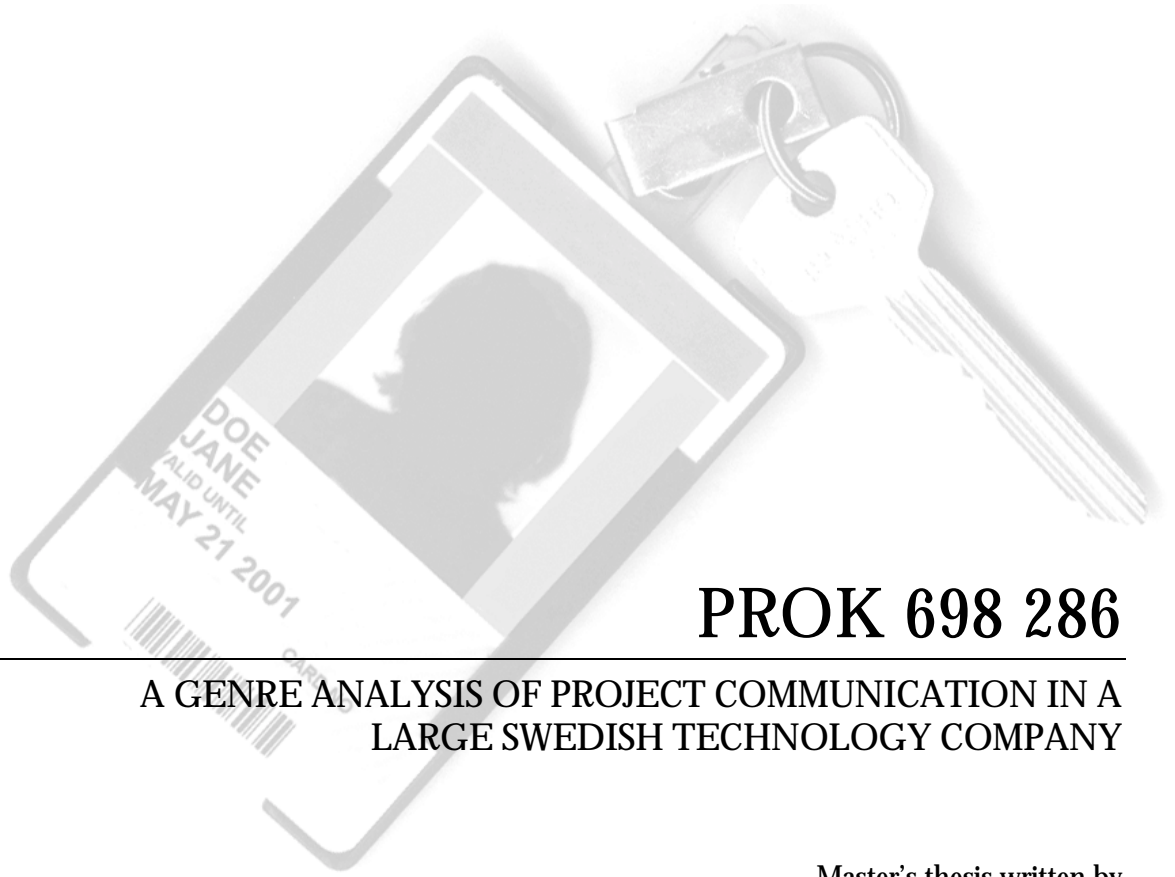




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**A GENRE ANALYSIS OF PROJECT COMMUNICATION IN A  
LARGE SWEDISH TECHNOLOGY COMPANY**

Master's thesis written by  
**Sara Jacobsson**  
and  
**Anneli Nikunen**

**Supervisor:**  
Jan Ljungberg,  
Department of Informatics, Viktoria institute,  
Göteborg, Sweden.



# Abstract

This Master's thesis presents the result of a genre analysis of project communication in a large Swedish company. The purpose was to use genre theory as an analytical tool to find genres common to the company's projects and try out how this analytical framework could be used when designing a technical artefact to facilitate project communication. The study was conducted using an ethnographical approach. Based on literature studies we developed an analytical model named '5W1H' further. The model was used during the empirical study, composed by observations of the company's intranet and project procedure model together with interviews of people involved in project communication. We discovered and analysed several genres of project communication, in order to gain knowledge regarding genres common to projects, and to design a technical support for project communication such as an intranet. The result shows that genre theory and '5W1H' are useful when analysing project communication, that some of the genres found could be appropriate to enact through an intranet, and that genre knowledge is important for projects to be successful.

**Keywords:** project, organisational communication, genre, intranet.



# Preface

This Master's thesis is the result of our work at a large Swedish company. The work has been carried out during the spring of 2001.

We would like to express our gratitude to our supervisors, Ph.D. Jan Ljungberg at the Department of Informatics, Viktoria institute, Göteborg university, and Jan, as well as Ingrid and Marianne, at the company studied for their invaluable guidance and support during the course of the work.

We would also like to thank all the interviewees and projects that willingly have participated hence helped us in our study.

Finally, we would like to thank Robert and Mats, as well as our families for their love and support. Anneli would also like to thank Camilla de Carolis and other friends, for letting her know that the globe still spins, while her reality has been on hold during the months writing this thesis.

Göteborg, May 2001

Sara Jacobsson

Anneli Nikunen



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# Chapter 1

## Introduction

Arranging work tasks as projects, which can be defined as something unique and temporary, is today a common way to organise the human resources of a workplace. This emphasis of change, from ongoing operations to a more dynamic method of working including fast reorganisation over divisional boundaries, may originate from the fact that customers, clients, and competitors create conditions that demand more flexible and specific solutions than before. An ongoing discussion is today held in the scientific community of Informatics whether organisations to an ever-increasing extent will be constituted by its projects, i.e. become project organisations. Nowadays there is a great richness of technical artefacts with solutions that gives us the ability to choose between all sorts of information systems and information technologies whose purposes are to facilitate project management in the area of software development. These tools have become an even more important aid to support information sharing and work co-ordination in a project where the participants are located in different parts of a building or even in different countries of the world. To be able to design and choose the proper tool you need to communicate to create knowledge about circumstances such as which and whose needs to satisfy in a project and why.

## 1.1 Setting

The object of our study, a design company (hereafter named “DesignCompany” or “DC”) within a large Swedish technology enterprise, frequently uses projects when organising work. The project work procedure is especially used when the areas of research and development are involved. Several techniques are being used to support the communication and information sharing within the different project groups. One of these techniques is Web technology used on an intranet. The Web medium is more or less voluntary to use, although most projects use the medium for different kinds of communication. It might be the voluntariness that has led to a lack of standards for design and content when using the Web medium. Today each project webpage has its own unique construction, filing system and purpose. The only restriction and guiding principal while constructing a project website is a template (to uniform the graphical appearance). It could be due to the facts described above that people in the organisation may have problems to find the desired information on the project websites on the intranet.

DC has a need of revising its intranet as a tool for managing information, knowledge and communication within projects. The information stored in project file directories on servers as well as on the intranet constitutes a jungle of information to browse, and this “hidden” information might be something that could be of help for knowledge creation and management of future projects. There is a need to support, preferably by the intranet Web medium, the access to a project’s information not only during a project but also when it has ended. One type of storage is today partially done on a server that is used trough out the enterprise. This server contains special documents that are central to the project. Once a document has been transferred to the server it cannot be changed or deleted.

# 1.2 Problem

A genre is a typified communicative action invoked in response to a recurrent situation (Yates & Orlikowski, 1992). Two typical recurrent situations for a student is the lecture and the seminar. Both these situations are constructed to facilitate learning. When the student enters a lecture he/she has some expectations of the purpose and form for this task. One of these expectations is that the lecture is formed as a monologue conducted by the lecturer. But, if the student enters a seminar other expectations is brought into this communicative event that differentiate from the lecture. Here a dialog rather than monologue is believed to take place. Other typified recurrent communicative situations are the meeting or business letter.

The concept of genres of communication can be used as an analytical tool for studying how knowledgeable actors use media within specific institutionalised contexts (Orlikowski & Yates, 1994). According to Bergquist and Ljungberg (1999, p. 11) genre is “a fruitful concept for analysing how communication enacts organization”. In their study Bergquist and Ljungberg point out an interest in further research of genre in relation to intranets and projects.

In this thesis we would like to study what kind of genres of organisational communication are being used in DC’s projects, how they are used today and might be used on the Web medium.

The questions that this Master’s thesis is supposed to answer are as follows:

- **How could one design a project communication for the intranet using genre theory?**
  - *What genres are used in project communication today, and what media are used?*
  - *Which of the discovered genres are appropriate for an intranet?*

# 1.3 Purpose, goal and expected result

The primary purpose of this thesis is to use genre theory as an analytical tool to find genres of communication that are recurrent within several of the DesignCompany’s projects and interested parties. Another purpose is to try out how an analytical framework of genre theory can be used when designing a technical artefact supposed to facilitate project communication.

The goal is to provide a design proposal for the projects’ websites on the intranet based on the genres found within the organisation. The proposal will hopefully serve as a framework and support for future project websites on the intranet.

The outcome of this Master’s thesis will, if/when implemented, hopefully make it easier and faster for project management, project members and other interested parties, to find what they are searching for due to the framework presented. Whether this is accomplished might be an issue for future research.

# 1.4 Delimitation

Our theoretical and empirical study is delimited by several factors, hence also the result, the implications, and the conclusions we draw. As our study focuses only on the communication of projects using websites on the DesignCompany’s intranet, which is not obligated and done by all projects, we are aware of that this may have an impact on the outcome of our thesis. Projects that have excluded the technology are thus not

represented in this study.

This thesis will result in a paper product proposing a design of a project website. An implementation of the result is out of scope for this Master's thesis and will hopefully be done by DesignCompany. The projects and the interested parties, whom we choose to observe as well as the focus on Web technology, constitute other delimiters. Beside the delimiters mentioned above we have chosen communicational genre theory as our perspective. Furthermore we do not attempt to provide a framework that will predict, limit or fix the genres that might be identified. This will narrow our focus somewhat more.

## 1.5 Target group

This thesis is among other target groups directed to organisations with an interest in facilitating their project communication, and then foremost through a technical artefact such as an intranet. Other target groups are students or researchers in scientific communities with an interest in genre theory, project management, and/or IS/IT (information system / information technology).

## 1.6 Terminology

When we use the words 'Internet' and 'intranet' in this thesis we are referring to the Web technology included in this medium (see 3.3 The network of networks).

In this Master's thesis we have chosen to keep the company, in which the study is performed, anonymous. Therefore assumed names ("DesignCompany" or "DC") are used when referring to the company as well as to other terms specific to the setting.

In Appendix D - Terminology, a glossary of terms used in this thesis, which are specific for the setting will be described.

## 1.7 Disposition

To give a general view of the following parts of this thesis an outline of the disposition follows below.

Chapter 2 includes the method used in this study to collect the material.

Chapter 3 describes the theoretical framework, which is used later on in the discussion.

Chapter 4 shows the result of the empirical study and displays it with help from the theoretical framework.

Chapter 5 includes a discussion comparing the theoretical framework and the result as well as possible recommendations.

Chapter 6 summarise the result of the thesis, providing the conclusions made.



# Chapter 2

## Method

A method is in a traditional sense a planned way, a tool, to define reality and used in order to achieve a result. In the first two sections of this chapter we will discuss scientific approach and choice of methods and techniques. If you are well acquainted with scientific methods we propose that you skip these two sections and focus on the third section. This section contains a description of the working procedure used in order to reach the result comprising how the study has been conducted together with a description of the techniques used.

### 2.1 Scientific approach

According to Easterby-Smith, Thorpe, and Lowe (1991) it is not reasonable to conduct research without being aware of which philosophical issues it is based on. The researcher must decide on a scientific approach by asking the questions why and how a certain approach is chosen depending on what to be studied and how much time there is available for the task. In this phase the problem of the research is defined.

#### 2.1.1 Phenomenological or positivistic

When the area and the nature of the problem have been revealed next decision to make is the one about the scientific approach: *phenomenological* (sometimes referred to as hermeneutic) or *positivistic*. The phenomenological approach is based on the belief that the researcher has own values that are difficult to disregard in the scientific result and the researcher hence takes part of what is observed when trying to understand the insider's viewpoint. Furthermore the researcher will not study the phenomenon isolated, but will try to get an understanding of the surroundings and what might impact the object of study. In contrast an objective study is believed to be possible and fully realistic for a researcher, with the positivistic approach. The researchers can be fully independent from the study, as an observer of the laboratory, as an outsider. In order to conduct positivistic research sublime signals are not to be interpreted, a feature amongst others, which is essential and important in phenomenological research (Easterby-Smith et al., 1991; Braa & Vidgen, 2000).

This thesis will be approached from a phenomenological perspective based on primarily two aspects. The first aspect is based on our personal view that organisations are social systems composed by the members. Both we as researchers, and the individuals in the organisation studied have a subjective view on the organisation, based on cognitive factors like prior experience and knowledge. The second aspect we base our choice of approach on, is that we want to gain a holistic view on the problem area instead of studying isolated situations.

## 2.2 How to choose a method

When the decision has been made whether the researchers role in the result can be fully excluded (positivism) or somewhat included (phenomenology) a method of gathering data are to be chosen. In this section we will describe which kind of method we have chosen to use during our empirical study and why, as well as describe some of the techniques available to use.

### 2.2.1 Qualitative or quantitative

Methods can be divided into either *qualitative* or *quantitative* (Easterby-Smith et al., 1991; Holme & Solvang, 1997) and the choice of method depends on the purpose of the study and which information that is required. Furthermore it is not always necessary to distinguish and only use one of the methods because they in some studies have a complementary function.

Below follows a distinction of the two methods based on Easterby-Smith et al. (1991) and Holme and Solvang (1997).

The main differences between a qualitative and quantitative method is that the former puts great importance in obtaining a profound understanding of the elements studied, while the latter focuses on obtaining a common or average opinion aiming at predicting occurrences. In a qualitative study the researcher put emphasis on finding the causes to and consequences of different choices, and understanding of people's different perceptions of the world. Furthermore the gathering of information is generally conducted in a rather unsystematic and unstructured way compared to the often highly structured quantitative methods, often using techniques such as deep-interviews and observations, which increase the chances of finding information not predicted. A disadvantage of the unstructured approach is the difficulty in comparing the results. On the other hand, quantitative studies have the focus of gathering superficial information, including a great number of study objects in order to achieve the common rather than the unique, which is the purpose of the qualitative method. Systematic and structured techniques such as questionnaires and surveys are often used when gathering information. The fixed alternatives of answers used in quantitative methods, gives positive effects as providing information that is easy to measure and work up and negative such as an inflexible way of gathering information.

Due to that we strive for a phenomenological understanding we have in this essay chosen a qualitative approach. The choice of using qualitative methods can also be motivated by that, as mentioned before, our intention is to get a holistic understanding for the area of research by studying single cases, which is one of the great advantages with a qualitative method, rather than finding data in order to generalise it to larger groups, which would be one of the major advantages of a quantitative method according to Holme and Solvang (1997). Furthermore we believe that we in a qualitative study actually can get an understanding of what people think, and why.

### 2.2.2 Ethnographical study

One qualitative method that has become increasingly popular today, in social research (Hammersley & Atkinson, 1995) as well as in the domains of computer science (Dourish & Button, 1998; Hughes et al., 1994) is the ethnographical method. According to Backman (1998), it is common to use ethnographical studies as well as techniques such as interviews or different sorts of case studies in a qualitative approach. In



this thesis we have chosen to base our method on the ethnographical view on research, and in this section we will briefly describe what ethnography is and give some example of techniques associated.

Ethnography can be described as following, according to Hammersley and Atkinson (1995, p. 1).

*“In its most characteristic form it involves the ethnographer participating, overtly or covertly, in people’s daily lives for an extended period of time, watching what happens, listening to what is said, asking questions – in fact, collecting whatever data are available to through light on the issues that are the focus of the research.”*

Hughes et al. (1994) posits that the primary purpose of ethnography is to give a picture of how the life is viewed by the people that live and work within the domain concerned. This is accomplished by the ability to view activities “as social actions embedded within a socially organised domain and accomplished in and through the day-to-day activities of participants” (p. 430).

Based on the descriptions above, ethnography is usually associated with studies conducted over a long period of time, often several months or years, where the ethnographer studies the object from ‘inside’ on a daily basis being part of all daily activities. Having this apprehension, it is not always clear how ethnography can be used on a much shorter time basis, such as just a couple of weeks. Hughes et al. (1994) has however shown how ethnography can be used in the domains of IS/IT, for example when proposing a new system, or evaluating an existing systems design, and that this can be done using ethnography in just a couple of weeks time.

### **2.2.2.1 Genre and ethnography**

Finally we would, in this section, like to briefly mention that it is common to use an ethnographical approach when studying genres (Bazerman, 1994a; Ljungberg, 1997; Miller, 84/95).

Bazerman mentions (1994a, p. 5) that *“historical and ethnographic studies in many different domains have been pursued using these linguistic, rhetorical, and socio-psychological approaches to genre, including scientific and technical communication”*, and that rather than just identifying different genres in various communicative settings, the focus is to understand the diverse work locations and the interaction within and among them.

Also Ljungberg (1997) mentions the usability of an ethnographical approach when studying genres, due to its emphasis on situations and the ability to be used as a tool in order to clarify practice.

### **2.2.3 Gathering data**

Below follows a brief explanation of the different sources of data used in ethnographical research, such as observations, interviews, and documents.

#### **2.2.3.1 Observations**

The most fundamental technique of collecting data in ethnography is by observation and participation. According to Hammersley and Atkinson (1995) the ethnographer will gain knowledge to use in his/her own research, regarding what, how, and why things happen in the setting that is observed. Observations can be done of the data that have been gathered by interviews, analysing text and documents, as well as from analysing the transcripts from tapes and videos.

Advantages with observations are, according to Andersen (1994), that the researcher him/her self can decide which aspects to record, as well as avoiding problems with lack of cooperation, and being dependent on the participants ability to understand and remember. Disadvantages are for example that it is time consuming, expensive, and that the observer unintentionally might impact the social setting.

### **2.2.3.2 Interviews**

Hammersley and Atkinson (1995) posit that the interview in ethnography is looked upon as a social event in which the interviewer participates as an observer. Interviews can vary, according to the authors, from “spontaneous, informal conversations, in places that are being used for other purposes” (p. 139) to formally arranged “meetings in bounded settings out of earshot of other people” (p. 139). The interview is viewed as a valuable tool that enables the researcher to gain information about how and why the data is shaped in a certain way that would be very difficult to obtain with other methods.

As a result of ethnographers not following a predetermined list of questions, interviews may seem unstructured. But Hammersley and Atkinson (1995) emphasize that an interview simply cannot be determined as structured and unstructured, because the interviews always are somewhat structured by both the researcher and the interviewee. Therefore they always have some degree of structure. The ethnographer commonly uses a list of issues to discuss, as well as using *directive* and *non-directive* questioning. These two types of questions styles differ in that the latter is rather open-ended questions instead of, as in the case with the former type, wanting the interviewee to give specific information. Furthermore the authors posit that these two types of styles are both useful because they make different types of data available.

Hammersley and Atkinson (1995) points out that maybe the most important issue concerning interviews concerns whom to interview, in relation to available time for the research and interviewees.

Negative aspects with the interview technique are, according to Hammersley and Atkinson (1995), that it can be difficult to predict the provided data, and that the data can vary significantly in terms of quality and relevance. Furthermore it is good to keep in mind that the information the interviewees provide does not have to be true or more genuine than information they might provide with other methods. Other issues that can cause problems when using interviews is that the interviewer can influence the interviewee, and that the method is time consuming (Easterby-Smith et al., 1991; Andersen, 1994).

### **2.2.3.3 Documents and text**

Documents are seen as a ‘secondary’ source of data and can be used to get valuable information about for example the setting (Hammersley & Atkinson, 1995). Documents range from *informal*, which gives information about the daily life such as diaries, letters, and mass media products, to *formal* or *official* documents such as organisation charts, annual reports, and staff information. The importance to study documents can be related to that the production of paperwork is one of the main occupations and has a great significance in many social settings.

Hammersley and Atkinson (1995) emphasize the importance of have in mind that since documents, like any kind of data, are produced in a social context by human beings, can not be relied on as giving a single truth.

### **2.2.3.4 Recording and sampling data**

*Field notes* are the traditional way of documenting observations. This technique can be used both in interviews and observations (Hammersley & Atkinson, 1995). Depending on what is regarded as relevant

for the problem area will decide what is being documented, and one should try to identify what is regarded as the most important and appropriate categories of information to collect.

When it comes to the form of the notes it is important to take as accurate notes as possible, but due that not everything can be documented some choices must be made. Problems related with this recording technique are to decide how much of the observation that will be recorded. Taking a wide perspective, trying to capture all being observed is very difficult and time consuming, while a more narrow approach can cause that important issues, that the researcher at the time might not understand or regard as unimportant, are being disregarded.

To avoid problems as described above as well as assure gaining information about how the participants themselves described things, Easterby-Smith et al. (1995) emphasis the importance of applying a predetermined format taking notes.

Negative aspects of taking notes during an interview are that this can disturb and cause the interviewee to focus on what is being written down, as well as that the interviewer will pay more attention on recording than reflect on what is said. To avoid these negative aspects interviews can be *audio-recorded*, which gives a more complete, concrete, and detailed recording than field notes. Field notes are especially useful when interviewing if the interviewee do not want to be audio-recorded. But because non-verbal aspects in the setting will not be recorded by audio it is usual to take additional notes covering these matters. According to Hammersley and Atkinson (1995) the audio-recordings must be transcribed. Due to that transcribing takes much amount of time, the researcher must then decide whether a full transcription is necessary. Although time can be saved only transcribing what is regarded as essential, hence summarise, this may cause that relevant information is being disregarded.

Also visual materials such as films (e.g. video-recording), or images (e.g. photography), can be used to collect data (Hammersley & Atkinson, 1995). Video-recording entail selecting issues such as if the camera should be fixed or mobile, or if a single or shifting focus should be used. Furthermore the authors' emphasis that it is complicated to handle these recordings as data, and that it might become required transcribing the recordings. Photography on the other hand, involve intricate image analysis entailing the same problems as video-recordings concerning how to select and represent motives.

## 2.3 Theory in practice

In this final part of this chapter we will describe how the study has been conducted.

The work procedure that we have followed working on this thesis can be visualised in the following model.

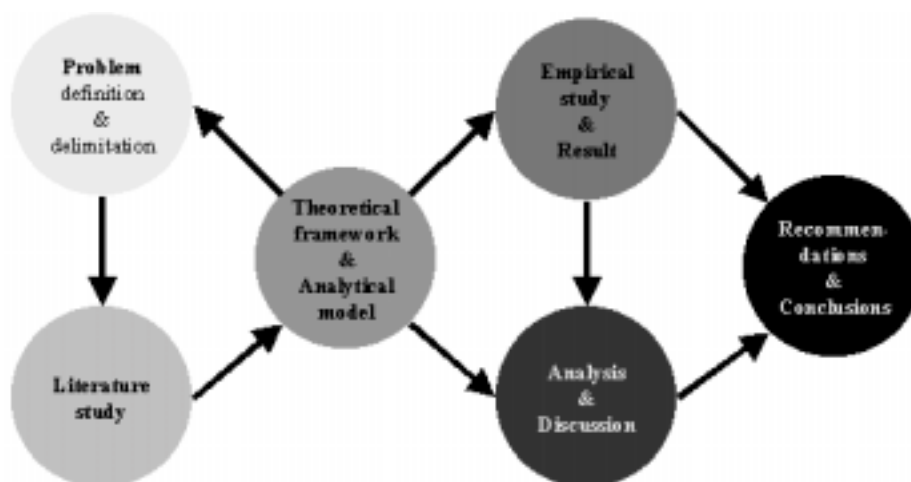


Figure 1 - Working procedure

The first step in the work procedure towards the result where to define and delimit a problem (see 1.2). After this, literature where studied that we believed would guide and help us solve the problems previously defined. This study resulted first in a slight extension of the problem (including genre theory) and later in the theoretical framework and analytical model (see Chapter 3). The theoretical framework and analytical model where used in the empirical study as a lens through which observations where conducted and the findings identified (see Chapter 2). By comparing the findings from the empirical study with the theory, we were able to analyse and discuss the result, as well as give recommendations and draw conclusions.

### 2.3.1 Preliminary study and background

Our study was initiated last autumn by two meetings at the DesignCompany. During these where potential problem areas discussed with two representatives of the company, one of them became also our supervisor at DC. During these initial contacts we gained brief information regarding the background of the company, the intranet as well as the projects. From these gatherings the problem area and purpose of this Master's thesis were outlined.

Almost every day since the beginning of February 2001, we have conducted our research at the setting, where we were provided a room, telephones and computers. By this we were able to explore the atmosphere, the intranet, the company's project procedure from the inside as well as easily get in contact with individuals or groups in the setting either face-to-face, by telephone, or by e-mail. We have been conducting our study in one of the two Swedish towns in which DC is situated.

## 2.3.2 Literature study

After the problem area where determined we conducted a literature study comprising foremost articles, reports, and books, but also various Internet sources. The literature where found in libraries or electronically on databases and homepages on the Internet. We studied mainly literature in the domains of organisational communication, genre theory, project management, intranets, and information management. This study was necessary in order to find background material to the problem area and review eventual previous research. The result of this study became the theoretical framework and analytical model (see Chapter 3 Theory).

## 2.3.3 Empirical study

As described earlier in this chapter, we have in this thesis chose to use a qualitative method with an ethnographic approach when conducting the empirical study and the ethnographical techniques used to gather information. This choice was based on the belief that this was what was needed in order to understand and create a comprehensive picture of the genres used to communicate in projects.

### 2.3.3.1 Selecting the case

There were several objects in the setting that were considered as possible data sources. The choice to focus on a few of the possible sources was based on the belief that perhaps only a few of the possible objects would provide us with a representative picture in the search for project communication. The limited time to conduct this research was of course also an important factor when selecting the case. These are the chosen sources:

1. *The project procedure model* was studied in order to get an understanding of how it explicitly is recommended to manage a project at DC (i.e. which genres that were supposed to enact). What we expected to find out from this source was: “how things should be done”.
2. *Projects*, represented by project members and other parties of interest were studied in order to get an understanding of which genres both were said to, and actually being enacted, in reality – “how it is said to be done as well as how it is actually done”.
3. *The projects websites on the intranet*, were studied to se how genres were enacted through this medium– “how it is actually done”.

Besides the three sources of information mentioned above we also contemplated to observe the organisations system development process, said to be used guiding the progress of work and different tasks in the projects. From this we would probably get an understanding of the different genres concerning more technical issues, compared to the somewhat more project specific genres that the project procedure model were expected to provide. However we choose not to observe this source of data due to the limited amount of time in this research, hence having lower priority than the sources mentioned above.

What we expected to gain through selected sources of data could be viewed in the following figure.

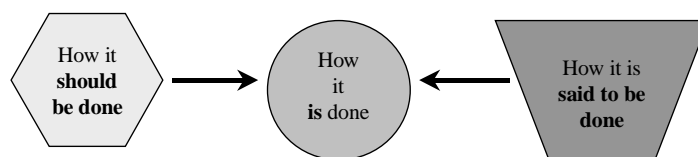


Figure 2 - Expected view on genre

### 2.3.3.2 Method for gathering data

We have used all the three different techniques observations, interviews, and document studies (see 2.2.3 Gathering data), to gather information from the setting about the three topics described in the previous section. Together these techniques provided us with three different perspectives on the same object - communication within projects.

#### 2.3.3.2.1 Participant observations

In order to get a better apprehension of the projects and foremost the genres of organisational communication we decided to participate during activities we believed crucial for projects, such as meetings. We also wanted to participate during an ordinary working day of one or more project members. This technique for gathering information was used as a complement to, and not instead of, using other techniques such as interviews, and document studies. The main purpose for using this tool was to build our own understanding of the activities, giving us the availability to personally decide which information being important or not.

#### 2.3.3.2.2 Interviews

To be able to gather information and get an understanding of the projects, project members, and other parties of interest actual need for and view on communication in projects, we decided to put our primary focus in the empirical study on interviews. Besides using interviews to gain information regarding genres, these were also used as a complementary tool to gather information about the project procedure model as well as the intranet.

#### 2.3.3.2.3 Documents

The final source of information we decided to use were documents. One purpose was to get a general view of the company, by studying different official and formal documents, such as organisation charts, and personal information. Another purpose was to gain an understanding of the genres in projects by studying the project websites on the intranet. Finally we wanted to explore the company's projects procedure model, because we believed this would provide us with an understanding of the model and the project related genres proposed to be used by the model.

### 2.3.3.3 Selection of data sources

Due to the limited time available to perform the study we had already before the empirical study realised the impossible mission of trying to observe all the company's projects. This implies that neither all of the project websites could be studied nor could all the interested parties be interviewed. As a result we had to make a selection concerning which projects to observe and whom to talk to.

Together with our supervisor at the setting, we agreed on trying to spread the projects observed in regard to different divisions within the organisations in order to get as distributed and representative sources of data as possible. Furthermore we tried to study projects different far advanced, hence wanting to observe projects being in earlier, middle, as well as in later stages. This spread of projects impacts both which project websites to observe, which projects to conduct participant observations in, and whom to interview. Spreading the sources as much as possible (i.e. cross divisional borders as well as how far they had come in their process) was made in order to find genres of communication that were in use throughout the development process as well as the company.

Besides the distribution among projects we also aimed at interviewing and observing different parties of interest, including people both external and internal to the project. This was due to that we wanted to get a representative and holistic understanding of the projects, believing not only the project members themselves were the only ones involved in project communication nor being the only parties interested of information from projects. We used the project model to get an idea of which roles and parties of interest the company's projects might include (for an overview of these see Appendix A - Project roles).

### 2.3.3.4 Conducting the study

Below we will in detail show how we worked to gather information in this thesis.

#### 2.3.3.4.1 Interviews

After a preliminary interview with a project manager at the end of February this year, we performed ten additional interviews during one month's time starting from the middle of Mars. Totally we conducted eleven interviews with interviewees from altogether five divisions within the organisation. All interviews were conducted in Swedish. When quoting interviewees in this thesis we have translated the quotations to English. The interviewees have possessed roles as project manager, subproject manager, project administrator/secretary, project team members (verifier and implementer), project sponsor, resource owner (functional management), quality manager, competence coordinator, and system engineer. With this distribution of interviews we have covered the majority of roles involved in the projects. Some roles we know are missing are the customers. Below follows a table showing how the interviews have been distributed in roles and divisions at DC.

Object/Division	A	B	C	D	E
Project manager			CI1	DI1	
Subproject manager	AI1				
Project administrator /secretary		BI3		DI2	
Project member Implementation Verification		BI1	CI2		
Sponsor		BI2			
Resource owner					EI1
Competence coordinator	AI2				
Quality manager	AI3				
System engineer					EI2

A-E = different divisions within DC  
I = interviews

Table 1 - Source of information (interviews).

All the interviews were conducted face-to-face at the company, most often in the interviewee's office. It might seem like a vast of time that we both participated at all interviews except one, but we found a great advantage and support in being two interviewers. By having different focus and manners of questioning we felt that many more aspects were covered than what had been by a single interviewer. We had, before the interviews prepared a list of topics to discuss (see Appendix B - Interview topics). During these sessions we mainly applied a non-directed questioning style (a lesson learnt at the preliminary interview) in order to avoid affecting the interviewee and allowing the person to answer with his/hers own words. Directed questions were often not used until the end of the session. The interviews have in general taken one hour to conduct, which gives a total of approximately 11 hours spent on interviewing.

A minidisc has been used to audio record the interviews digitally, but we also took field notes during some of the interviews, as a complement trying to capture some of the non-verbal activities of the interview that is so difficult, if not impossible, to capture on an audio recording. All interviewees approved the use of audio recording with a minidisc. Later the same day, one of us transcribed the interview, more or less word-for-word using a word processor. It did not take long before we became aware of the great amount of time that it takes to transcribe interviews (for us approximately 5\*1 hour recording, giving a total of 55 hours) in that manner. But, because of the low degree of structure in our interviews, we decided to transcribe the interviews word-for-word, i.e. not summarising or skip transcribing data. The main reason for transcribing the interviews like this was that we did not want to loose any important information that we at the time for the transcription could have classified as unimportant. We did not transcribe the preliminary interview due to the extremely low degree of structure, but have despite this chosen to use the interview in this thesis (we listened to the recording and studied field notes). One of us participated during half a working day of a project secretary. Because we found that the participating observation rather turned out to be a very relaxed interview (without a minidisc recorder), this observation is listed as one of the interviews (BI3).

Being warned by our supervisor at the company that it could be difficult to find people willingly to be interviewed due to busy work schedules, we were quite surprised to find that most of the interviewees were obliging to take part in our study. It was not until we tried to get in contact with the persons, as team members, that it became difficult to get in contact with interviewees. Furthermore we would like to mention that most of the interviewees have been found during the period of interviewing, as we for every interview got a clearer picture of which the different parties of interest were, hence finding new voices that we wanted to 'hear' in our study. We were often also recommended by the interviewees to talk to certain people.

We sent a letter asking the interviewee for a complement if there were anything misunderstood or unclear when the transcription was done.

To keep the interviewees' confidentiality we will not include these transcriptions in the thesis, as the transcribed conversations may reveal the person.



### 2.3.3.4.2 Participant observations

From the end of February this year until the beginning of April, we also participated in five different project meetings, in altogether four different projects. These were all held in the building. The language used during these meetings was Swedish. We were both present at three of the meetings, but in the two others only one of us were participating. We got access to three of the meetings by contacting the project managers personally, and to the other two through one of the interviewees. These contacts were made face-to-face, by telephone, or by e-mail. When participating in the meetings we tried not to disturb taking a seat in a corner. The meetings were recorded by taking field notes during the event following a standard proposed by Hammersley & Atkinson (1995). These notes were worked up and developed later the same day, as they were typed on a computer. This work took totally about 10 hours to complete. Nor will these recordings be included in appendix due to confidentiality.

The table below shows the distribution of the participant observations.

Object/Division	A	B	C	D	E
Project/product meeting (observations)		BO1 BO2 BO3		DO1 DO2	

A-E = different divisions within DC  
 O = observations

Table 2 - Source of information (observations)

As previously mentioned we classified one of the participating observations (BI3) as an interview. We did not attempt to do another participating observation after the one with BI3.

Due to issues of confidentiality the field notes will not be included in this thesis.

### 2.3.3.4.3 Documents

Simultaneously with the interviews and participant observations we also explored the project procedure model both in the form of paperback, and on the intranet. Totally this activity took three days of work for one person. This inventory of genres was transcribed to an Ms Word document.

The final activity not yet mentioned in this section is the observation of the project websites on the intranet. As soon as we had got a computer, in our office at the setting, we began to explore the different project websites to get an understanding of the content, how they looked and which projects' the organisation had. In general we briefly explored the website of the project associated to an interviewee before the interview. Some project websites required a username and password; hence we had to contact a project manager asking to be allowed access to the site of interest. Besides the daily browsing on the intranet exploring the websites, we have more systematically studied five of the company's project webpages. To do this we started out by printing all the content, the webpages, from these sites.

The table below shows an overview of the projects studied on the intranet.

Object/Division	A	B	C	D	E
Website	AW	BW	CW	DW	EW

A-E = different divisions within DC  
W = websites

Table 3 - Source of information (websites)

In our study we have tried to keep our main focus on five projects from five different divisions, hence we have observed all these both on their websites on the intranet and by interviewing different parties of interest. Only three of the observed projects are included in the participant observations. One reason for this is that one of the five projects were ended when our study began and due to this we could not find any project specific activities to observe. Furthermore we had already begun to study one project website before it become obvious that we would not have the time to include this project in interviews or observations. DW is a large sub project within one other project. AW is a subsequent project. BW, EW, and CW are main projects within DesignCompany.

The table below views a short overview of the different projects.

Project	Time	Time left	Man-years	Persons involved
AW	1 yr and 4 months	3 months	30	25
BW	4 yrs	3 yrs 9 months	?	?
CW	1 yr 1 month	Just finished	29	130
DW	4 yrs	1 yr	260	200
EW	2 yrs and 6 months	5 months	180	160

A-E = different divisions within DC  
W = websites

Table 4 - Overview of the different projects.

The intranet medium made it possible for us to quantify genre findings based on how many sites of max (5) that contained certain genres. Language in use on the websites, apart from a couple of exceptions, were the corporate language: English.

# Chapter 3

## Theory

Theories help us to gain orientation in an unknown, near to be discovered, environment. Theories are also supposed to give us a perspective on our actions and thoughts preventing us from only trusting our own narrow cognitive framework. The above-described guidance is what we expect to gain by using the selected theories described in this chapter.

In order to reach the goals of an organisation, communication is the primary tool used to coordinate the members towards these goals. In the first section, of this chapter, we will give an introduction to the concept of organisational communication. We will also try to briefly describe organisational communication in relation to information. The second section aims at describing the context of projects. Project is today a common form of organising work, which enables the ability to rapidly reshape the organisation towards shifting goals. Within projects, communication is central in order to coordinate the work. Intranet is a tool for internal communication. The importance of using this tool in an appropriate way is described in section three. Finally, in order to analyse organisational communication the notion of genres and an analytical model is presented in the last section of this chapter.

### 3.1 Organisational communication

According to Kreps (1990) we all relate to several organisations. In the role of a worker or a supervisor we belong to different business organisations, just as we are related to other organisations through having a membership in a health club or a political group. Furthermore we generally interact with several organisations in our daily life, for instance when we go to a grocery store and buy milk or contact a travel agency for information regarding a trip.

Kreps (1990, p. 5) defines organisations as “*social collectives in which people develop ritualized patterns of interaction in an attempt to coordinate their activities and efforts in the ongoing accomplishment of personal and group goals*”. To coordinate these activities and efforts towards the common goals, people establish and maintain functional relationships to other people through communication. Organisations can be viewed as a network of cooperating individuals constantly adapting to changes in the organisational environment. Examples of changes are developing and introducing new activities, guidelines, and directions. The continuous changes result in a constant review of the organisation members’ different roles and activities. When the members have knowledge about what role they are to fulfil and the organisational goal they may also have the ability to accomplish the different activities and goals of the organisation. Communication is a means to give people in an organisation the knowledge needed to decrease the degree of uncertainty.

Organisational communication serves as a primary function for gathering data and for providing the organisation’s members with valuable information (Kreps, 1990). This is accomplished through people communicating by sending and receiving significant information regarding the organisation and changes

within it. To achieve totally formalised information flow that corresponds to the members' need of qualitative information in organisational communication is a utopia. This utopia implies that information is clear, relevant, timely and complete, regarding changes in constraints, problems and goals. Often redundancy in information is considered negative as it is associated with higher costs in managing information, as well as it can cause poor information architectures (Davenport, 1997). In contrast to this, studies (Bergquist & Ljungberg, 1998) have found that redundancy in information distribution between different communication media sometimes is viewed as positive by the users. One example of a positive redundancy is the Pizza menu distributed to many, such as the pizza baker, the pizza salesman and the potential costumers. It would be awkward if the pizza baker possessed the only copy, since this would imply that all interested parties would have to communicate with the pizza baker every time information about the menu was needed. Redundancy is often most manageable when it comes to information that does not change. In the case described above communication would be complicated if information regarding the menu such as price and range of goods changes often hence the different copies of the menu soon would be out of date. Stock information distributed the same way as the Pizza menu would soon be out of date and not to trust. As the example above has shown, redundancy could be either dependent or independent of time, and this affects the appropriateness of making copies.

According to Kreps (1990) qualitative information will enable an organisation's members to accomplish different tasks, as for instance evaluating possible actions or designing different strategies for the organisation response to the ever-changing conditions. Communication between people is conducted in order to coordinate towards a common goal. Further the author (Kreps, 1990) makes the following distinction between *communication*, *information* and *organisation*:

- *Communication* is the means by which people understand their experiences and the social world they belong to. When communicating they generate and share information that guides them in cooperation and organisation. Communication is the process of gathering, sending, and interpreting messages. Through communication raw data is gathered from the environment. This data is processed to meanings, which are outcomes or results that can be interpreted and hence help to understand different phenomena. This understanding can help to recognise patterns and thereby reduce uncertainty.
- *Information* is an outcome of communication, which is used to limit and coordinate activities of individuals. Information can be viewed as the mediating link between communication and organisation, but also as the data that is processed from the meanings human beings create. Every meaning we create gives us different pieces of information. This information reduces uncertainty and enables individuals to make the necessary choices in the work towards goals.
- The *organisation* reflects the use of communication and information. One aspect of this is that people's ability to coordinate their activities towards mutual goals, as well as individual choices and actions, are dependent on the relevance of the accessible information generated through human communication.

## 3.2 Project and project management

Project and project management is today very common in our society and its organisations. According to Maylor (1999) the nature of project management has recently changed, since it is no longer dominated by the construction industry, but still applicable in all types of organisations. Maylor (1999) as well as Meredith and Mantel (2000) emphasise that organisations use project and project management for achieving goals and meet objectives, hence making the project a “vehicle for the execution of organisational strategy” (Maylor, 1999, p.35).

### 3.2.1 Definition

In this section we will describe what we refer to when using the term project in this thesis.

A project is commonly known as a one-time accomplished task conducted within a limited period of time (Nicholas, 1990; Kliem & Ludin, 1998; Verzuh, 1999; Maylor, 1999; Meredith & Mantel, 2000). According to Meredith and Mantel (2000) there are five features that characterise projects. These are; purpose, life cycle, interdependencies, uniqueness, and conflict.

- 1) *Purpose*. A project, which most often is an activity conducted only once and having a clearly defined desired end product or result, involves according to Nicholas (1990, p. 3) “a single, definable purpose”, which is the end product (the outcome) of the project. The purpose is often defined in terms of time, cost, schedule, and performance requirements.
- 2) *Life cycle*. During the process of working towards the projects goal, it passes through some distinguishable phases, which together form the life cycle of a project (Nicholas, 1990). During the different phases the tasks, personnel, organisations, and other resources changes. Meredith and Mantel (2000) describes the common life cycle of a project as having a rather slow beginning, then build up in size, come to a peak, begin to descend, and finally terminated.
- 3) *Interdependencies*. A part from the interaction with other projects conducted simultaneously in an organisation, a project also interacts with the ongoing operations of the organisation (Meredith & Mantel, 2000), using skills and talents from multiple professions and functions. The interaction often changes and hence varies during the different phases of the life cycle. For example might a manufacturing department be participating during all the phases of the projects life cycle, but the marketing department only involved in the beginning and at the end. The project manager will act as an integrator of the different interacting parties in order to ease the cooperation as well as the relationships. The project could be viewed as a subsystem of a greater system, which is the business (Kliem & Ludin, 1998). The subsystem uses different parts that are related and integrated in the business system as for example processes, participants, and policies.
- 4) *Uniqueness*. A project is unique since it is a one-time activity that might not be conducted exactly in the same way again and “requires doing something different than was done previously” (Nicholas, 1990, p. 4). In contrast to this uniqueness are ongoing operations, which, according to Verzuh (1999), are characterised by having no end and producing resembling or identical products. Verzuh (1999) specify the notion of uniqueness, by posing that it is the result, e.g. the product, of a project that is unique and that the nature of the outcome can vary from tangible to intangible, because it could be a building or software, as well as a guideline, a policy, or a reorganisation of a

company. Further Verzuh points out that although projects are unique, there tend to be close points of similarity between them in some organisations.

- 5) *Conflict*. Meredith and Mantel (2000) emphasis that the project and the project manager operate in an environment characterised by continuous conflicts. The conflicts origin from that there are so many parties of interest competing with the project for the resources as well as wanting to influence the projects priorities. There are four parties of interest in all projects; clients, parent organisation, project team, and the public. Projects compete for resources and personnel with foremost other projects in the organisation, but also with functions and lines in the organisation. Another source for conflict, Meredith and Mantel mentions, is that the individuals in projects often has two superior managers at the same time, both the project manager as well as the functional manager.

### 3.2.2 Complexity and uncertainty

Nicholas (1990) argues that the environments of projects tend to change, be complex, be uncertain, and unpredictable. In projects, for example a wedding, buying a house, or the construction of a building, the level of complexity and uncertainty differs. The complexity relates to the quantity and competence of human resources that is needed to achieve the goal of the project, as well as issues concerning time and resource commitments. Uncertainty on the other hand has to do with the degree of difficulty to predict the result of the project in terms of time, cost and technical performance. Uncertainty can, according to Nicholas (1990), be reduced if projects are “very similar to previous others and about which there is abundant knowledge”(p. 6). This similarity can be of two kinds: (1) the work process resembles one another, or (2) the results, hence the products are related (Verzuh, 1999). This originates from that the more frequently something is conducted, the less uncertainty there will be regarding how and why it is done, e.g. learning by doing “When the uncertainty of a project drops to nearly zero, and when it is repeated a large number of times, then the effort is usually no longer considered a project.” (Nicholas, 1990, p. 7)

### 3.2.3 The project life cycle

According to Meredith and Mantel (2000) projects usually during their lifetime pass through similar stages, with a constant strive to achieve the goals of performance, time, and cost. These stages are defined as the project’s life cycle consisting of the stages *project initiation*, *project implementation*, and *project termination*, as illustrated in Figure 3. The first stage is to initiate the project, by selecting a project and a project manager, as well as planning the project in as much detail as possible. After this comes the implementation stage where the selected plan will be executed and progress, by “actual work” is done. At the last stage, work is completed and the project is evaluated before the project is considered as ended.

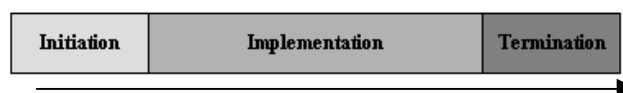


Figure 3 - The project life cycle

As a consequence of the ever-changing levels of resources that are being used throughout the different stages of the projects life cycle, most projects show a similar pattern of progress toward their goal, where the start and end of the project tend to be slow and the middle rapid. Because the degree of activities varies during the project, as explained above, also the resources and parties of interest shift in amount and type. Consequently the need for communication and information will alter in order to coordinate everybody in achieving the predetermined goal of the project.

In the following part of this section we will try to describe the cycles different phases and the tasks that are connected to each phase based on theories foremost presented by Meredith and Mantel (2000).

### 3.2.3.1 Phase 1 - Project initiation

In the initiation phase of the project the idea of the project is born and defined, the planning and organisation of the project is initiated, and the project manager are selected.

#### 3.2.3.1.1 Project selection

The first issue concerns selecting a project that is to be implemented in order to achieve the organisations objectives, by evaluating individual or a set of projects. The purpose of this activity is to select a project. The selection is in general made from an evaluation of a document called the **project proposal**, which is composed by a set of documents. According to Meredith and Mantel (2000) should the proposal in general have four sections including; (1) *a technical approach*, which is a comprehensive description of the project or problem to manage, (2) *the implementation plan* for the project, which includes estimations of the resources needed such as time, cost and material, for subsystems as well as for the project as a whole, (3) *the plan for logistic support and administration*, which explains how the project will be administrated, such as timing of progress-, budgetary reports, audits and evaluation, as well as final documentation, and finally (4) *the past experience* of the proposing group, which includes information concerning key project personnel and their competences.

#### 3.2.3.1.2 Selecting and appointing a project manager

This activity concerns the selection and appointment of a person who should be responsible for planning, implementing, and completing the project. According to Nicholas (1990, p. 172) is the project manager “the hub for project communication, the end of the funnel for all reports, requests, memoranda, and complaints”.

#### 3.2.3.1.3 Deciding on project organisation

This activity has to do with deciding the organisational structure of the project and the formation of project team. Questions such as “Should the project be part of the functional organisation or in contrast organised disparate from the parent organisation only linked by reports?” are to be answered. But not only the projects organisational structure is important. Perhaps the most important are the project manager’s efforts staffing the project with different roles by foretelling the personnel needs during the projects life cycle. Some of the roles could be the project engineer, the manufacturing engineer, the field manager, the contract administrator, the project controller, and the support services manager. The first activity is to prepare a work breakdown structure enabling the determination of the tasks required to complete the project.

It is not only the actual project team and those roles that need to be identified, the project manager must, according to Verzuh (1999), continuously throughout the initial stages of the project clarify different parties of interest and their roles. Common roles except the already mentioned are; *management* (e.g. functional- or line management), which could be different managers and supervisors that are in control over the team members participating in the project, *sponsor*, which has the formal authority and ultimate responsibility for the project, and the *customer*, which contribute with financial support and product requirements.

#### 3.2.3.1.4 Preparation of project planning

The purpose of planning is to facilitate the projects progress and achievement of success. Nicholas (1990) put forward that the planning process is the formalised way to answer what has to be done, how, by whom, in what order, for how much, and by when, and that the answers to the questions results in a **project plan**.

Based on Nicholas (1990) and Meredith and Mantels (2000) ideas, the process of creating the project plan, which sometimes is referred to as the master plan or the baseline plan, is composed by the following steps.

- Step 1 Set the project objectives aligned with the organisations overall mission and requirements, which specify the desired result, time, cost and performance targets.
- Step 2 Break out, define, and list the specific work activities and tasks that are needed to achieve the projects objectives. Tools that can be used to make this task easier is a so called “Work breakdown structure”, and when defining the project organisation, members and their respective responsibilities, a *responsibility matrix* can be used according to Nicholas (1990) or so called “Linear responsibility charts” according to Meredith and Mantel (2000).
- Step 3 Prepare a budget showing the amount and timing of resources and expenditures for work activities and related items.
- Step 4 Prepare a project schedule showing the timing of work activities, deadlines, and milestones.
- Step 5 Create a precise description of all project status reports, when they are to be produced, what they must contain, and to whom they will be sent.
- Step 6 Plans must be developed that deal with project termination, explaining in advance how the project pieces will be redistributed once its purpose has been completed.

According to Maylor (1999) does a project with a low degree of complexity put greater emphasis on action rather on planning, but that the need of a formalised plan increases in proportion with the complexity of the projects.

### **3.2.3.2 Phase 2 - Project implementation**

The second phase, the project implementation, focuses on budgeting, scheduling, resource allocation, and activity monitoring and control. It is in this phase the project is executed according to the plans that were generated during the initiation phase.

#### **3.2.3.2.1 Budget, scheduling, and resource allocation**

A budget is a plan for allocating limited resources to the organisations various activities, with the intent to communicate an organisational policy of goals and priorities. The project budget, which is approved by senior management, gives the project manager the resources needed in order to start the work as well as functioning as a control mechanism.

A schedule functions as an elementary mechanism for monitoring and controlling a project, and is created by the process of transforming the activities composing the project into a working timetable. This is a superior activity in the project, due to the complexity concerning coordination.

There are often several schedules as for instance the master schedule, the development schedule, or the testing schedule, which all usually are based on formerly established plans. According to Nicholas (1990) “events” and “milestones” are used when identifying critical points and major occurrences to the schedule. Furthermore Nicholas posits that “Gantt Charts” are usual to use in order to display the total schedule and detailed task schedules of the project.

The activity of allocating resources seeks to allocate and determine the best trade-offs between available physical resources, in order to use them in individual as well as multiple projects executed simultaneously.



### 3.2.3.2.2 Control and monitoring

The primary elements to be planned, monitored and controlled are aspects of time (schedule), cost (budget), and performance (specifications). Project control is the activity of trying to keep the project according to plans, and monitoring is a means of gathering the information needed. There are two main purposes of control, where the first concerns the control of results by changing the projects activities, and the second is to preserve the physical, human, and financial assets of the organisation. According to Maylor (1999) there are often several parties of interest in controlling the project such as partner organisations in joint ventures, clients, team members, sponsors, legislators and law enforcers, as well as functional- or line organisation.

Meredith and Mantel (2000, p. 410) consider the notion of monitoring as “collecting, recording, and reporting information concerning any and all aspects of project performance that the project manager or others in the organization wish to know”. In the work of monitoring by a project monitor or project controller, which in smaller projects often is the project manager, must the procedures for performance criteria, standards, and data collection be established for every factor that is intended to be measured.

Reports are a frequently used as a tool in the monitoring activity and the reports, whose primary purpose is to control the project plan realisation, should be consistent with the logic of the planning, budgeting, and scheduling systems. Furthermore should the reports be scheduled in the project plan – generally corresponding to the timing of project milestones – and everyone concerned with the project should be connected to the reporting system. There are three types of reports useful in the domains of project management: *routine reports* that are generated regularly but must not be regular in time (e.g. minutes of meeting), *exception reports*, which are used in project management decision making, distributed prior a decision to those team members responsible for making the decision or afterwards used to inform other managers about the decisions made, and finally *special analysis reports*, which are used in order to spread the results of special studies performed in the project or problems arisen during the project. Common problems that occur through out the project when reporting are known to be that there are: *too much details* in the reports causing the receiver problems concerning comprehension of the information, *inadequate communication* between the projects and the organisations reporting system as well as between the planning and monitoring systems.

### 3.2.3.3 Phase 3 - Project termination

The termination phase, which is the final phase in the projects life cycle, involves the final evaluation and completion of the project.

#### 3.2.3.3.1 Audits and evaluation

One of the most elementary parts in a projects termination process is to evaluate the process and results of the project. Meredith and Mantel (2000) emphasis the importance of not conduct the project evaluation only when the project are ended, but rather that it should be performed several times during the projects life cycle. Nicholas (1990) argues that the evaluation, when occurring during the project provides information helping to guide the project as it progresses and take corrective action, and when occurring after the project is completed it assesses the project focusing on the end product and result. One of the fundamental reasons for evaluation, according to Meredith and Mantel (2000) is to aid achieving the project’s goals, hence contribute to the parent organisation’s set of goals. In a project evaluation the projects actual progress and performance is compared to the planned progress and performance or to another comparable project. The tool used when performing an evaluation is the project audit. An audit is a fairly formal inquiry that can focus on examining any aspect of project management for either parts or the total project. Example of areas of interest could be the projects methodology and procedures, records, properties, budgets and expenditures,

as well as the projects degree of completion. The audit result in a formal report which contains information regarding the current as well as expected status in the future, status of task critical for the projects success, risk assessment, to other project relevant information. The formal report should at minimum contain comments on the following points; current status of the project, the expected future status, status of crucial tasks, a risk assessment, information pertinent to other projects, as well as limitations.

### 3.2.3.3.2 Project termination

The actual termination of a project can take various forms and amount of time, but it is common that project end by being phased into organisations ongoing operations. This activity in the project does not generally have much impact on either technical success or failure, but can widely affect how the project afterwards is being thought upon. Furthermore the change and break-up can be experienced as stressful, especially for nonrecurring projects where this to some extent can be compared to a break-up of a family.

### 3.2.3.3.3 The final report

The final report can be viewed as the memory of the project, incorporating the knowledge gained and symbolising the lessons learned of the project. The report should contain information, comments and explanations regarding the projects performance, administrative performance, organisational structure, relations and coordination of project and administrative teams, and finally regarding techniques and project management. The main parts of information needed in the final report, are contributed by the project master plan, but other information required is all eventual audits and evaluation of the project.

## 3.2.4 Communication within projects

According to Verzuh (1999) communication is one of the most critical factors in the success or failure of a project, and it is crucial to have constant and effective communication with everyone that is engaged in the project, e.g. all parties of interest. Verzuh posit that project team members have the following communication needs: every member has to have knowledge of his/hers area of *responsibility*, information is needed for *coordination* of the diverse team members in order to work efficiently, members need to be up to date regarding progress to be able to meet the goals of the project and speed on the *status*, team members need to have knowledge regarding *authorisation*, such as decisions made related to the project and the business environment, to be able keeping these decisions coordinated. Examples of techniques that can facilitate the communication are the proposal, project plan, final report, risk management and detailed planning. These techniques embrace communication within the project team, with management as well as customer and so on.

Also Kliem and Ludin (1998) mentions aspects of communication in projects, claiming that good documentation, such as procedures, flowcharts, forms, reports, memos, project manuals, and newsletters, can and do serve as a brilliant tool for communication. Further the authors give an example of several electronic media to use in the work and communication of a project such as, telecommuting, mobile computing, groupware computing (e.g., e-mail, information sharing, personal and group calendaring and scheduling, electronic meetings, workflows), Web technology (in the form of intranets as well as Internet), and finally videoconference.

A very common way of communicating in projects beside documentation is the *meeting*. According to Kliem and Ludin (1998) there are in total four different forms of meeting, which are used in a project as follows.

- 1) *Checkpoint review* is a meeting with the purpose to agree on what has been accomplished so far in the project, and decide on whether continue the project or cancel, which are held at a specific point in time often associated with a important events such as achieving an important milestone.
- 2) *Status review* is a meeting held on regular basis such as every or every other week, in order to gather information regarding progress in satisfying cost, schedule, and quality criteria.
- 3) Also the *staff meeting* is held regularly, where the project manager informs the team members, as well as receive information regarding different insights and data.
- 4) Finally, there is the irregularly often spontaneously held *ad hoc meeting* with a purpose to resolve problems or communicate information.

It is common that the project manager for all except the last mentioned meeting prepare an agenda for the meeting, announce the meeting, encourage participation, take notes, convert them into minutes and distributes them when finished.

## 3.3 The network of networks

Once upon a time the Internet was a communicational technology mastered and used only by a few chosen ones that was able to master the complex instructions required to manage it. The story of the Internet started with the birth of a US Defence project in the 1960s, ARPAnet, initiated to ensure a secure network where one or several computers could be removed or attacked without affecting the remaining network. It wasn't until the early 1990s that the Internet was cut open for everyone to use. (Barkowski, 1999; Braa et al., 2000) From the days of the 1960s many things has changed. Graphical programs, protocols and not to mention the number of people surfing the Web: an estimation done in November year 2000 shows that 407.1 million people worldwide are connected (Nua Internet, 2000). In Sweden, according to a survey conducted the year 2000 (Statistics Sweden, 2001), at least 3.4 million people are connected to the Internet in their homes.

\*

When people generally talk about the Internet they often refer to webpages; the hypertext documents with for example text, images, and sound, viewed with a browser (like Netscape Navigator and Microsoft Explorer) (Barkowski, 1999). But the Internet is more than just the Web. The Internet is a huge network of networks enabling Web technology and also communicational tools as ICQ, File transfer, Telnet, e-mail, newsgroups, online meeting facilities and etc (Hills, 1997; Braa et al., 2000; Curry & Stancich, 2000). However, the Web has during the past years become the most popular Internet application (Crowston & Williams, 2000).

### 3.3.1 Intranet

Companies can use this communicational technology both by displaying webpages on the public Internet as well as for internal use trough an intranet. An intranet is a private network surrounded by a firewall constructed to keep out unwanted visitors (Bernard, 1996; Curry & Stancich, 2000). The firewall does not imply that authorised are trapped inside their private network; they are still able to cross into the public Internet (Curry & Stancich, 2000). Apart from this distinction of authorization the same wide and varied technological applications for communication can be used on the intranet as on the Internet (Kliem & Ludin, 1998; Tang, 1999; Curry & Stancich, 2000).

An intranet represents a tool of potentially high value to an organisation (Curry & Stancich, 2000). The intranet could be a very good tool to improve project communication through information sharing between the staff (Barkowski, 1999). The technology can also provide a natural and efficient way to distribute organisational information downwards in hierarchies through publishing policy documents and regulations etc. on the intranet (Bergquist & Ljungberg, 1998). Publishing official information (so called brochure ware)

is a very common way to use the medium on the Internet, but some organisations also experiment on the communicative and interactive capabilities of the Web (Crowston & Williams, 2000). There are suggestions that organisations get a significantly higher return of their investments when developing intranet based applications supporting communication within the organisation, than just publishing internal information on the intranet (Curry & Stancich, 2000). Barkowski (1999) believe that an organisation, where staff learn and improve together, is a more intelligent organisation. “When information can be accessed instantly, decision-makers are able to analyse business processes, opportunities, and goals much faster. It then follows that more employees can become decision-makers.” (Barkowski, 1999, p. 36)

### **3.3.1.1 Construction of an intranet**

In order to achieve the benefits of an intranet one has to understand that this technology is not just a fast, cheap and easy collaborative set of tools when comparing with, for example, other groupware solutions as Lotus Notes and Microsoft Exchange (Curry & Stancich, 2000). This devastating narrow way of thinking (e.g. fast, cheap, easy) is presented in several “How do you construct your intranet” books as for example Hills (1997) and Chaffey (1998). Not understanding the impact of introducing the intranet to an organisation is just as bad as using the technology only because you can, i.e. not because of an actual need (Curry & Stancich, 2000).

According to Curry and Stancich (2000) the intranet is very easy to start with but become difficult to sustain beyond a certain size. In order to handle this difficulty both technical and human aspects must be considered when constructing an intranet in order to gain the many benefits. Improved communicational flows, transformation of up-to-date information, knowledge enhancement are all potential benefits of intranets supporting collaboration. Like any other information system it is a necessity that the intranet is exposed to continuous planning, updating and management. This implicates that it is not appropriate to build the intranet little by little, allowing the amount of internal pages to grow without any overall plan or management.

### **3.3.1.2 Strength and weakness**

Information previously designed as paper products (as an internal phonebook and requisition forms) can be converted to digital form and accessed via the intranet (Barkowski, 1999). By doing so there is a clear reduction of redundant information since only one copy is needed for distribution throughout the organisation at the same time as the users get a faster and more direct access to current information (Bernard, 1996; Curry & Stancich, 2000). The intranet can also replace old disk files and filing cabinets and by that expose previously hidden information in a graphical interface (Chaffey, 1998). Intranet prevents the creation of information islands (i.e. information and data is difficult to find since everything is spread out on different sources) but may on the other hand end up as an information mess (spaghetti structure) if not properly maintained (Tang, 2000).

As described above, an intranet may encourage many potential technical solutions, giving people access to information that once was difficult to obtain (Kliem & Ludin, 1997), but one of the most critical factors to consider, whether the intranet is constructed to support distribution of information or communication within the organisation, is that the intranet is always only as good as its content (Curry & Stancich, 2000). By this is meant that information should, at its best, be up-to-date, timely, maintainable and cost-effective. These are all features that must to be maintained by humans. For this an information sharing culture must be fostered containing ingredients as information sharing for the benefit of the organisation amongst the employees, instead of a in some cases, regarding information as a tool for personal power. Users must be encouraged to

access the electronic counterpart of the paper-based system. Information publishers must maintain ownership and responsibility of the published information.

The intranet Web is a very easy medium for information distribution. This may overwhelm people by publishing irrelevant and trivial information. This may lead to information overload. Curry & Stancich (2000) has identified this as a problem, which should be facilitated by training people to summarise and filter important information.

What has been notified in recent research (Bergquist & Ljungberg, 1998; Curry & Stancich, 2000) is that the introduction of an intranet may enforce a change in the structural and behavioural work patterns of an organisation. Curry and Stancich (2000) even point out that it is a necessity to change these patterns in order to give place to this new way of communicating information during the work process. Bergquist and Ljungberg (1998) noticed in their study of a large Swedish company how work practice from the early days of the company was reinforced with the introduction of the intranet, causing traditional hierarchies to 'loosen up' a bit.

According to Crowston and Williams (2000) some of the immediate benefits of an intranet when allowing not just publishing of information but also collaboration are "less time spent travelling, less time in face-to-face meetings and improved research and development" (p. 255).

When we use the expression 'intranet' in this thesis the focus will be on the website created within a project and displayed on the intranet.

## 3.4 Genres of organisational communication

The term genre makes one think of theatre and literature, art, movies and so forth. This is a common occurrence since the term genre has been used for a long time in rhetorical and literary analysis (Bakhtin, 1986; Bauman, 1992; Bazerman, 1997). Genre theory has also been applied in the areas of culture and rhetoric when referring to typified social actions based in response to recurrent situations (Miller, 84/95; Paré & Smart, 1994; Berkenkotter & Huckin, 1995). Over the last ten years genre theory has reached the areas of organisational communication (Yates & Orlikowski, 1992). Genres have proven to be a useful analytic device when studying organisational communication (Yates & Orlikowski, 1992; Bergquist & Ljungberg, 1998; Bergquist & Ljungberg, 1999; Yoshioka & Herman, 1999; Crowston & Williams, 2000) as well as for studying how actors use media within specific institutionalised contexts (Orlikowski & Yates, 1994).

In short, genres of organisational communication can be looked upon, as a way to categorize and typify repeated spoken or written communicational occurrences in an organised group, done in order to better understand and perhaps support the communicative aspects of the studied organisation. One could say that a genre reflects the expectations we as a collective have on different communicative aspects of our surrounding. Bazerman (1997) states that genres are frames for social action, the birthplace for knowledge. Genres reflect the way people have decided to communicate in different recurrent situations. When introduced to something new or different you use your old set of genres to respond to the new situation (Yates & Orlikowski, 1992). One example of a well-known communicational genre is the wedding speech. This genre carries expectations regarding how to speak and when at the wedding dinner. The expectations of the communicative action might differ within different families and mismatches of communicative beliefs, agreed within the two families, could have devastating influence to the relations between the two at future contact. Trying to agree on how to communicate in recurrent and typified situations is of course also valid in other communicative situations such as in organisational activities. An organisational communicative example: If you enter a meeting and expect the form and substance of it to be in one way, like with a certain set of people discussing a given topic, and it does not fulfil your expectations you get confused. If all the expectations you had from previous experiences with the genre were met in the meeting a reinforcement of the assumptions (and the legitimacy of those assumptions) will contribute to a sustainment of the expectations on the genre (Yates & Orlikowski, 1992). Bazerman (1997) states that genres can be viewed as the visible realization of a complex and familiar world that is filled with social and psychological aspects of communicative action. The known genres can and are used as a guidepost to explore the unfamiliar.

Knowing genres tied to a certain organisation implicates an understanding of how things are done in it. Not only shallow characteristics of the organisation will be discovered by an analysis using genres, it also includes interactive and socially embedded perspectives in communicative actions invoked in response to a recurrent situation (Yates & Orlikowski, 1992). Miller (84/95) as well as Bazerman (1997) assert that when we learn, we learn genre, and not just a pattern of forms and methods for doing something. By knowing genres, learning genres, we learn to better understand different situations. To be most effective we have to understand the nature of genres, since by doing that we can support the specific needs of the different genres with a satisfactory solution (Bazerman, 1997).

### 3.4.1 Genre characteristics

Characteristics of an organisational communication genre, according to Orlikowski and Yates (1992), are actions invoked to a recurrent situation with a socially recognized communicative purpose and shared features of form. The recurrence can be described as our understanding of a situation as somehow equivalent or similar to other situations (Miller, 84/95). The actions reflecting genres can be performed verbally as well as textually (Bergquist & Ljungberg, 1998). Examples from the wide variety of previously 'discovered' genres are the business letter, memo, thank you note, resume, project meeting, greeting card, minutes, personal homepage, the dictionary, etc. (Yates & Orlikowski, 1992; Yates et al., 1997; Orlikowski & Yates, 1998; Bergquist & Ljungberg, 1998; Crowston & Williams, 2000; Watters & Shepherd, 1997).

Yates and Orlikowski (1992) write that a recurrent situation includes the history and nature of established practices, social relations, and communication media within organisations. Genres appear and emerge within a specific social context and are reinforced as a situation recurs. A genre can be defined as a repeated social activity with a complex pattern and rhetorical performance (Paré & Smart, 1994). Moreover, a genre is capable of reproduction (Miller, 1995) and changing (Yates & Orlikowski, 1992).

### 3.4.2 Talk and text

Communication may be viewed as central to the organising process (Orlikowski & Yates, 1994). Genres of communicational nature in organisations appear in either conversational or textual form. The organisation as talk is based on telephone calls, meeting, sales talk, corridor conversations, etc. Minutes, policies, project schedules, reports, etc, constitutes the textual part of an organisation. Preceding a written document is talk; hence it is assumed that text is based on talk (Ljungberg, 1997).

Organisational talk both shapes and is shaped by the structure of an organisation. Talk is pure action as situated and local events. If talk can be viewed as action, texts supply structure. Text gives form to the meaning from the spoken event. This way, text in organisations, is closely related to practice (Ljungberg, 1997).

With new media such as intranets and the Internet, talk influences text even more. Concrete influence can be as for example seen in conversations held in chat rooms on the Internet (Yoshioka et al., 2000; Ljungberg, 1997).

### 3.4.3 Medium

A genre is enacted through a medium. A medium could for instance be: a pen and paper, a telephone, or an intranet. The medium used could be described as the tool to conduct a genre. The medium of communication influences the *form* of the genre (Crowston & Williams, 2000). When conducting the meeting genre might one, or a combination, of the communication medium face-to-face, telephone, or videoconference be used, just like the business letter genre might be enacted using the medium pen and paper or a computer.

The medium influences the genre and can cause the genre to change or even new ones to evolve within the medium (Yates et al., 1996, Bergquist & Ljungberg, 1998; Shepherd & Watters, 1998). An example of the influence of the medium on a genre is the evolution of the genre business letter during the last century. Research (Yates & Orlikowski, 1992; Bergquist & Ljungberg, 1998) shows that the genre has evolved, changed, from that time when the medium memo was used as a tool, to today's use of the electronic mail (e-



mail) as the medium to put the genre into practice. Homepage hotlist and personalised news on Internet are both examples of new genres with no real counterpart in another medium (Watters & Shepherd, 1998).

When an existing genre is migrated to a new medium the users initially apply their old habits of enacting the genre and the form of the former medium on the new one (Shepherd & Watters, 1998; Yates et al., 1999). Watters and Shepherd (1997; Shepherd & Watters, 1998) have studied genres previously used in a non-digital medium and how these have changed when entering a digital environment, i.e. the Internet. Their research exemplifies that the digital shape of the genre, when people begin to use new collaborative technologies (such as the medium Internet), often imitate the non digital variant until the point when the genre starts to change; assimilate, exploit the capabilities or functionalities inherent in the new medium. Yoshioka, Yates, and Orlikowski (2000) reinforce the findings of Watters and Shepherd (1997) and also advocate that the imitation of the current knowledge of genre is common when people begin to use new technologies. But, as previously notified; when a person has experienced a new medium he/she sooner or later will reshape the assumptions of *which genres that can be used* within the new tool (Yoshioka et al., 2000).

This evolution, within the context of a known medium to an initially unknown, is believed to proceed in a constructive manner if the design of, as an example, an Internet site starts with an imitation of the progressed paper counterpart. Conducting the migration this way are assumed to give continuity and an intuitive start for the user. The initial genre may even change beyond recognition when backtracking to the original (Watters & Shepherd, 1997).

Another example of change due to new collaborative technology is a study of the communication in an electronic conference system conducted by Yates, Orlikowski, and Okamura (1997). The group found that the arisen “genre systems both resembled as well as departed from those already established in traditional face-to-face and paper media” (p. 83). Erickson (1997) posits that new digital medium such as on-line interaction has a potential to speed up the evolution of genres. This acceleration of the speeded evolution of genres in digital medium is by some (Yates & Sumner, 1997) believed not to lead to a breakdown of the recognizable genres but instead to a democratisation of the genre production.

### 3.4.3.1 Genre rules

Genres are enacted through rules, e.g. genre rules, which combine recurrent situations with the appropriate elements of form and substance (Yates & Orlikowski, 1992). These rules may operate either *tacitly* (Yates & Orlikowski, 1992, p. 303), “through socialized or habitual use of communicative form and substance” or *explicitly* by being “codified by an individual or body into specific standards designed to regulate the form and substance of communication”. By being embedded in a medium, the genre rules may be *standardized*, for instance as with electronic templates or pre-printed paper forms.

### 3.4.4 Purpose and form

The purpose and form answers the questions of why and how a genre exists. The previous sentence requires a clarifying figurative example and we have found it in an electronic article, written by Yates, Orlikowski, and Rennecker (1997). The genre resume is used as an example.

“For example, the *purpose* of a resume -- as widely recognized in organizations operating in industrialized economies -- is to provide information about a person’s work history to aid potential employers in making hiring decisions. A genre also has characteristics of *form*, which are observable aspects of the genre such as

communication medium, as well as structural and linguistic features.” (Note: Italics made by Jacobsson and Nikunen)

However, a genre must not have both a purpose and form; some genres have a more defined purpose than form (as for instance the proposal genre) and vice versa (Yates & Orlikowski, 1992). *Purpose* does not refer to individuals motive for communication but rather to something socially constructed, recognized, and reinforced by the particular community and invoked in typical situations (e.g. proposing a project, meeting to review project status). *Form* refers to readily features of the communication like the medium (e.g. pen and paper, telephone, or face-to-face), structural features (e.g. text formatting devices such as lists and structured fields), and linguistic features (e.g. level of formality, and specialized vocabulary). Research from Miller (84/95) enriches us by stating that the form shapes the response from the reader or the listener by providing an instruction of how to interact. These instructions included in the form provide both semantic as well as syntactic value to the communication.

According to Crowston and Williams (2000), another example of a genre is homepages: personal as well as organisational. The *purpose* of a homepage could be to introduce the object in focus, i.e. a person or an organisation, to the world and to facilitate further contact. The *form* of a homepage includes personal or organisational information and links to other pages reflecting the subject’s interests.

These issues are further discussed under the sections 3.5.1 (Why) and 3.5.3 (How).

### 3.4.5 Genre perspective

The notion of genre system and subgenres provide different perspectives when studying communication in an organisation. Orlikowski and Yates (1994) recognise genre system and subgenres as two different types of interaction - each providing different focus on genre. Subgenres are based on genre overlap, i.e. communicational activity that may contain several subgenres (or variants) of a genre, thus focus is on individual genres. Genre systems are based on genre independence, i.e. one genre follows another in an optional sequence, and hence focus lay on relationship between genres (Orlikowski & Yates, 1994). These two different ways of structuring might be used when discussing the relationship between genres in an abstract level.

#### 3.4.5.1 Subgenre

Either you could look upon genres as separated by the definition from other genres or you could treat some genres as instances of one other genre, as subgenres (Bergquist & Ljungberg, 1998). A subgenre is an instance of a genre. One example is that project meeting, weekly meeting and briefing can be considered as subgenres of the meeting genre. The subgenre that is an instance of one genre could also be a genre by having subgenres, a statement that makes the term subgenre itself quite relative (Yates & Orlikowski, 1992). Sounds difficult? Take a look at the picture below.



Figure 4 - Instances of instances

### 3.4.5.2 Genre system

The scientist who first presented the idea of genre system was Charles Bazerman. He gave a pre glimpse to this new concept in an article from 1994(a). Here Bazerman states that a genre, however small and insignificant it may seem, have some relationship with other genres that might appear in a larger context. He states that interdependent interacting genres that are enacted in some typical sequence in relation to each other, and whose purpose and form typically interlock, compose a highly structured activity (Bazerman, 1994a).

The notion of genre system was made explicit in an example concerning a court ruling: a procedure that requires several types of documents and statements (Bazerman, 1994b). All actions taken within the procedure are closely related to each other. Every action follows by yet another until the verdict has been stated - an action that closes the procedure. All documents and statements involved in this procedure are *in* well-defined genres. These actions within a procedure are what constitute a genre system: “interrelated genres that interact with each other in specific settings” (Bazerman, 1994b, p. 96) enacted by members of a particular community (Yates, et al., 1997) Genre systems are composed by of a coordinated set of communicative actions to accomplish a goal (Yates, et al., 1997). By understanding the system of genres that are accepted within a community we are also able to understand what genres in the relationship scheme that are ‘open’ for us to use in the next sequence (Bazerman, 1994b).

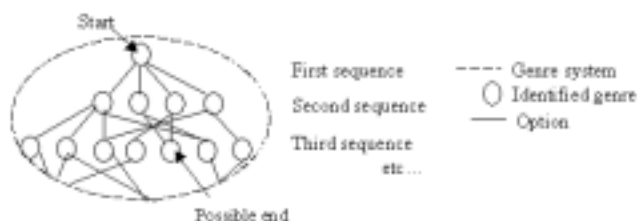


Figure 5 - Genre system

One example of a genre system is that the catalogue, application form and the result letter together constitutes an admission and application process held at a university.

Crowston and Williams (2000) state that genres connected to a genre system might in some cases be held back from evolving in a new medium (such as the Web). The restraint lie in the construction of the system and in order to evolve corresponding changes must be done throughout the genre system. For example, “...changes in citation habits will be necessary before page numbers can be dropped from the technical paper genre” (p. 203).

### 3.4.6 Genre change

Yates and Orlikowski (1992) posit that genres are social institutions in a constant state of evolution through a structuring process. This process includes evolvment and reinforcement of the genre as a situation recurs. As well as genres have an effect on how things are made today, they also shape future responses to similar situations, an aspect that also Paré and Smart (1994) advocate. They declare that there are no two identical occurrences of a genre. This posits an uniqueness of every social communicational situation.

According to Orlikowski and Yates (1994) a new genre has emerged when a composition of form and purpose has been accepted and acknowledged by its community as different from the old. The enactment occurs when the community members draw their tacit or explicit knowledge on the set of genre rules. The

communicative actions reinforce established genres and causes, intentionally or unintentionally, the genres to change. A new or modified genre may be invoked as changes to established genres are repeatedly enacted. As a consequence, when community members invoke new genres or change existing ones, a change will also be forced in the interactions and work practices of the community.

The structuring process of shaping new genres and reshaping existing ones can be divided into two categories: explicit and implicit structuring (Yates et al., 1999). *Implicit structuring* refers to the creation and use of local genres, which are tacitly shaped by members of the own team/group. This is a relatively slow process that leads to a reinforcement of existing genres rather than drastic changes of the genres. *Explicit structuring* refers to actions of planned reproduction, planned change or opportunistic modification of existing genres in the wide genres of a community, deliberately shaped by a group of appointed mediators.

*Explicit structuring* can result in a rapid change in the social interaction. This fact may become an important aspect in a rapidly changing environment in order to assure a faster formation of existing genres in order to make communication easier, in for example teams. Explicit structuring may be performed by people from either the inside or the outside of the community. Insider structuring is more likely, than outsider structuring, to get a result that is supported and accepted within the community. Outsider structuring, performed for example by the MIS department or consultants, often results in a more wide structural design such as implementing of templates and usage procedures.

Research from Bergquist and Ljungberg (1998) uncover four main drivers for new genres to emerge: 1) New technology and medium, 2) new community, 3) new recurrent situations, new problems and 4) institutional changes.

Shepherd and Watters (1998) have made findings that indicate that the introduction of the Internet has resulted in an emergence of a new class of genres, so called cybergenres that are only able to exist in this new medium.

To summarise the discussion regarding change in this chapter it could be said that genres, when identified and understood, can be a subject of deliberate change to support the organisational communication. A new infrastructure of a community can also change genres, either by enacting old ones in a new medium or by introducing new ones 'caused' by the new medium.

### 3.4.7 Genre repertoire

Members of a community rarely depend on one genre for communication but use several diverse genres. The set of genres used can be viewed as a genre repertoire (Orlikowski & Yates, 1994).

Different genres are used, and used with various frequencies, in the communication within different communities. For instance, a community of project members (e.g. a project) can be distinguished by the frequency of use of different meeting and report genres and the use of medium in these. When a community is formed, e.g. a group, project, or organisation, the members draw on their previous experience and knowledge concerning which communication is appropriate under different circumstances, coming to an understanding regarding which genres and media to be used when interacting within the community (Orlikowski & Yates, 1994).

Genre repertoire could be viewed as defining the community's culture, e.g. norms and rules structuring in what way and with what affect the community's members interact to get their work done. There are two aspects of a change of the genre repertoire; (1) changing the composition by introducing new, modify, or delete genres, or (2) changes in the use of genres by enacting different genres over time with different frequencies (Orlikowski & Yates, 1994).

The genre repertoire might differ between different layers of an organisation. Within an organisation genres can be found that are widely recognised through out the organisation as well as local genres appearing in specific tasks or events (Bergquist & Ljungberg, 1998). By examining the genre repertoire of a community, which are the set of genres that are routinely enacted, an understanding of communicative practices can be attained (Orlikowski & Yates, 1994).

Yoshioka, Yates and Orlikowski (2000) stress that people who have knowledge about the various cultures as well as technology and communication genres, may better get along with various participants, since this kind of knowledge helps to avoid cultural misunderstandings and by that facilitate productive interactions.

### **3.4.8 Genres and the Web**

Genre theory has been used as an analytic lens in several research projects when examining a range of electronic communication conducted via the Web (Paré & Smart, 1994; Yoshioka et al., 2000; Crowston & Williams, 2000). This research has shown that genres used previously in traditional medium are reproduced when introduced to the Web medium (e.g. brochure, dictionary), but also, in some cases, an evolution of existing genres (e.g. electronic newspaper) and completely new genres has been identified (e.g. homepage hotlist, search engine, game) on the Web.

Crowston and Williams (2000) point out that Web designers should take notice of the users' expectations of a genre and that it is important to clearly define the community of target and identify already accepted genres that can serve as a base for evolution when constructing a homepage.

## **3.5 Analytical model for genre analysis**

When we create an analytical model we on one hand gain control and on the other exclude some parts of reality (Paré & Smart, 1994). Genres are very complex social actions, whatever analytical model we might choose; some aspect will always be lost. The construction of a model is in this case very delicate. An analytical model sorts items on the basis of some set of similarities, knowing the principle used can tell much about the classification (Miller, 84/95).

The most common theoretical framework used when analysing genres of organisational communication is the one of purpose and form (Crowston & Williams, 2000; Orlikowski & Yates, 1994; Yates et al., 1997; Yates et al., 1999; Yoshioka et al., 2000). In this thesis we will extend the theoretical framework of purpose and form by adding further dimensions proposed by Orlikowski and Yates (1998). They posit that genre systems as well as individual genres are a means of structuring six aspects of communicative interaction within a community and designed a model named '5W1H'. The six aspects are purpose (why), content (what), form (how), participants (who/m), time (when), and place (where).

The choice of using an extended framework or model for analysing genres is based on two aspects. First we believe the '5W1H' will gain a broader and richer picture of the genres than just using a model comprising purpose and form (why and how). The second aspect is based on that we find it interesting to use a model that have not been used, tested and developed to that great extent (as purpose and form have) since '5W1H' was introduced as recently as in 1998 by Orlikowski and Yates.

When first introduced by Orlikowski and Yates (1998) the model was used to find genre systems. In 1999, Yoshioka and Herman extended the model by also including individual genres. In this thesis, based on the findings and research by Yoshioka and Herman, we have developed the model further by using it to

exclusively identify individual genres. This means that we have rebuilt the model by somewhat excluding the genre systems and inserted information about individual genres, which gives a more narrow focus on individual genres.

Below we will describe these six dimensions in relation to genres in more detail.

### 3.5.1 Why

A genre can be identified by a socially recognised *purpose*. This purpose does, as mentioned earlier, refer to the community's socially constructed and appreciated purpose invoked in typical situations, and not to the different individual motives within the community. Example of commonly recognised purposes could be the annual shareholders' meetings purpose to report on the company's past accomplishments and present its future outlook to stockholders, the business letter whose purpose is to communicate and simultaneously document business matters to a party external to the writer's organisation, or finally a curriculum vitae where the purpose is to provide information about an individual's educational qualifications, work history, and accomplishments for use in, for example, search of employment.

### 3.5.2 What

This aspect concerns the fact that genres provide expectations about the *content* of communicative action and refers to the subject areas typically covered in the genres. They also provide expectations concerning the sequence and/or sequences in which the genres of a genre system may appropriately appear. An example could be the decision letter, a genre within the conference paper reviewing genre system, which carry expectation concerning containing information to author/authors of whether a paper has been accepted. Another example would be that the recipient of a thank you note expects some words included representing the sender's appreciation. In a meeting genre one might expect someone to lead the meeting including opening, closing the meeting.

### 3.5.3 How

The "how" refers to the expectations about the typical *form* of the genre, e.g. the communication. The form, as described earlier, includes expectations about medium (e.g. pen and paper, telephone, or face-to-face), structuring devices (e.g. text-formatting devices such as list and fields), and linguistic elements (e.g. formality and the specialized vocabulary of technical or legal jargon). Often there are norms, which can change over time, regarding which medium appropriate and acceptable for different genres. Example of expectations of form could be the expectations of a business letter (for example including length, type and size of font, page and margin sizes, and medium of preparation and submission).

### 3.5.4 Who/m

Genres carry expectations about *roles* and *participants* who communicate (e.g. enact genre) within a particular community. The relevant community identifies who initiates specific genres (sender) and to whom (receiver) they are typically addressed, which means that different genres can naturally belong to different senders and receivers. Research by Paré and Smart (1994) has shown that it does not matter who adopt the role as long as the person follow the expected norms and rules of the task, this means that genre does not depend on the individuals but more on the role the persons adopt. As an example the work as a judge or

social worker does not shift with the possessor and implies that a genre is traditionally enacted the same way in different instances.

### 3.5.5 When

Because genre is invoked in a recurrent situation it relates to, and may raise expectations concerning, a *timing* or *opportunity*. This timing may be that a genre is expected to be used within a period of time of an event or at specific time intervals. The former could for example be the expectations caused by a wedding regarding when in time a thank you note (for wedding gifts) should be sent, and the latter can be exemplified by a daily morning meeting genre which may carry expectations about when it begins and ends (for example 8:00 and 8:30). These assumptions of timing may be tacitly accepted by the initiators of the communication or explicitly used for example as strategic devices of co-ordination.

### 3.5.6 Where

A genre carry expectations concerning *location* and *place*, physical likewise virtual, which are rooted in the culture within the community of the genre. This originates from the fact that the participants of a community identify recurrent situations (e.g. genre) "from the history and nature of established practices, social relations, and communication medium within organizations" (Yoshioka & Herman, 1999, p. 7). An example could be that different genres might carry expectations concerning where they should be enacted on different local newsgroups on the Internet, or that if members of a project are situated near each other a genre, as for example the project meeting, might be expected to be conducted in a certain conference room.

These six dimensions of genre analysis described above will be used as a lens in our empirical study helping us finding and identifying genres.





# Chapter 4

## Result

In this chapter we will start by taking a closer look at the company and its organisational structure. Then we will describe the result of our empirical study, presenting the findings of the observed project procedure model and the intranet, as well as the findings of the interviews and participant observations.

Our intention is to present the result as objectively as possible. An analysis of the result will be made first in the next chapter of this thesis: Chapter 5 - Discussion.

### 4.1 The company and its organisation

Based on information gained primarily from interviews and participant observations as well as from the intranet, the following can be said about DC and its organisational structure.

The company is a result of a joint venture between two large technique oriented Swedish companies. It was founded in 1988, and has its core business in the domains of system development. The company is situated in two Swedish towns. Of the 700 employees 24 % are females and 76 % are men. Approximately 90 % of the employees have a technical competence.

The organisation is by interviewees said to have a so-called matrix structure combining a divisional organisation with a project organisation. On the one hand the organisation has a structure consisting of six different divisions ordered by products, as well a three staff units, but since the work is almost exclusively conducted in projects, the organisational structure has another dimension – the project organisation.

We have during our observations found that the projects in general are conducted within the own division. This means that the projects most often do not need to cooperate with or use resources from other divisions within the company. Cooperation with other subsidiaries in the same product areas within the enterprise is found to be more common. The above described implies that the organisation as a whole does not really have the shape of a matrix organisation, but more pure divisional organisation. Rather the matrix structure could be found in the separate divisions, as their projects use resources from the different departments and sections within, hence stretching all over the line.

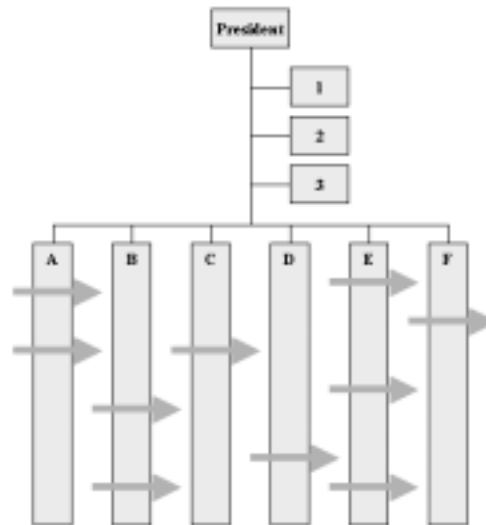


Figure 6 - Organisational structure

Most often projects are conducted in the field of product development, but according to a quality manager we interviewed, the projects could also concern organisational development. It is very common to have subsequent projects, where for example the outcome is a new release of an existing product. The project members are not always paying attention to the fact that a project is continuing the work started in an earlier project. According to a system engineer interviewed this is due to the fact that “the best and hottest is to start a totally new project”, which is based on peoples built in desire to break new ground and resistance to use existing structures.

According to one of the project managers interviewed, “the line tries to think more long-term than the projects are, and they are responsible for having competent personnel available”. During our participant observations we have found that the projects somewhat compete for resources. This was confirmed in several interviews. The resources needed are most often in the shape of humans but also other resources such as hardware are competed for. The project members have two supervisors. A competence coordinator says, “Every employee has in reality two supervisors, the one closest, if it is the sub project manager or project manager or a line manager. And it is built within the system what belongs to the line and what belongs to the project”.

We have found that most of the projects simultaneously follow two linked procedures, where one is being a project management process (i.e. the project procedure model) and the other is a system development process. In the project procedure model (discussed in next section) the stages of the two models are aligned. The project procedure model is foremost directed to and used by different managers such as project managers, sub project managers, sponsors, resource owners and so forth. The system development process is applied on the actual work on the outcome of the project, hence used by all in the project including the project members.

## 4.2 The project procedure model

Below follows a brief introduction to DC’s project procedure model. This information is primarily based on observations of the actual document.

The project procedure model, which is developed within the enterprise, has been used in the organisation since the first release in 1989. Since then two revisions have been released, the latest in year 1999. It is published both as paperback and on the enterprise intranet. The object of study, the DesignCompany, has developed an adapted version, which is published on its intranet. However, in this thesis we have excluded the latter, and have instead focused on the latest revision produced by the enterprise. Besides being used as a guide within the entire enterprise, the model is also offered as a product and is used in some other Swedish companies. The project model is composed of four different phases (i.e. the initiation study phase, the feasibility phase, the execution phase, and the conclusion phase), providing guidelines to project management from four different perspectives: the business, the project organisation, human resources, and the single project flow.

### **4.2.1 Attitudes towards the project procedure model**

We have during our study at DC gained information regarding attitudes of groups and individuals towards the project procedure model. Below we present these different opinions expressed during mainly the interviewees. Some of the information is also based on our participant observations.

The interviewees' general attitude towards the project procedure model have been that, when used it should be used as a framework and not as a strict manual. Within the company the model is applied to all sorts of projects.

Most positive towards the project procedure model were interviewees with higher positions within the company, e.g. a quality manager, a competence coordinator, and a system engineer. Two of these interviewees have used the model since its introduction within the enterprise. The model is considered very useful and as the system engineer puts it: "it is a good way for the project managers to work". According to the system engineer, project members are not keen on using working procedures according to models such as the project procedure model. These project members main focus are on the individual tasks such as building code and they are not keen on administrative tasks, such as documenting code and procedures. One example of this could be to prepare progress reports. People tend to have a narrow focus, not taking a holistic view on how their work relates to others. It is first when someone expresses an actual need for information that the necessity to document work progress becomes obvious.

The opinions of the two project managers interviewed somewhat agree with the opinions expressed above, since they consider the model to be held in the back of the mind as a nomenclature. This nomenclature gives a framework, support, and guidance to projects. One of the project managers mentioned that templates from the project procedure model, such as the progress report and the project specification, are used.

One of the interviewed project managers has taken a course in project management where the model was used. Both project members interviewed have not been educated in using the model. The interviewed sub project manager has taken a course in project management held outside the company, so he/she has not been trained in using the project procedure model. The competence coordinator interviewed thinks it is necessary not only to give courses in the project procedure model, but foremost that employees are introduced to how projects are conducted at DesignCompany, which means telling them which model to use, how things are done, and what is regarded most important. According to the system engineer we interviewed, project members in his/her division are not invited to participate in such courses. This person believes this is due to that the project schedule is so busy that there is no time for the members to attend courses.

During our participant observations and interviews we have found that the DC Checkpoints described in the model (see 4.4 Genres in the project procedure model) seem to be interpreted in different ways. One example we in our observations have discovered is that a DC Checkpoint sometimes is made when the project has been executed for such a long time that it at that point in reality already has "passed" the DC Checkpoint. Another example, according to a system engineer interviewed, is that exceptions sometimes are

made at a DC Checkpoint. A project is sometimes allowed to pass a DC Checkpoint, even though documents required at that DC Checkpoint are not finished or approved. When asked if it is required to have produced some administrative documents in order to pass the DC Checkpoints, the system engineer says, “Yes, but one can always make an exception. *‘But we have it under control; we keep working in the meantime until we have finished the other’*. It is very easy to ‘trick’ people. Furthermore we could always show up code working moderate ... which often is enough to pass the DC Checkpoint.”

One of the project managers said that there is no difference between the project procedure model and other models used in large companies in Sweden. “If one works with product development, you go through the same phases” (CI1). The major difference lies in what things are being named.

As a final comment to the project procedure model, we have during our observations found that although most interviewees’ claim not using the model, they are actually applying it in practice.

## 4.3 The intranet

Below we will present information gained about the intranet, which foremost is based on observations of the intranet, but also based on interviews.

The intranet has been for use in the company since the early 1990s. Today the intranet is the primary system used when distributing official written internal information. The intranet is used for information about the organisation, the personnel, the building, procedures for development and work, computer support, the lunch menu, health care, and so forth. Available on the site is also services such as time report, and document registration, as well as manuals and different forms. Everyone in the organisation have a connection to the intranet. The intranet has been developed within the company with the help of consultants, and has expanded profoundly in size and use since its first introduction. In the beginning of year 2000, an overhaul of the intranet was made. The result was a standardisation of the interface, - a layout template that should be applied by the different company units (e.g. sections and departments) websites on the intranet. The projects have frequently used the intranet and a list of most of them is easily accessed via a navigation bar in the header of the higher-level pages of the intranet. By ‘pulling the mouse’ over the topic ‘Product & Projects’ in the bar, a dropdown list containing several projects is shown, or one could through a simple ‘click on the mouse’ view a webpage presenting a list of projects, as well as some general news. Some of the persons interviewed have complained that not all projects are represented on either the list or the webpage. There are also difficulties to be able to see if the projects are up and running or closed down, i.e. to tell the status of the projects.

Because the projects have been somewhat excluded from the layout interface standardisation, some project pages, which most often are older pages, do not follow the proposed layout, hence differ sometimes in form but more often in substance. The intranet has a connection to the Internet and to all other subsidiary websites within the enterprise.

### 4.3.1 Attitudes towards the intranet

In this section an overview of foremost the different interviewees’ opinions regarding the project websites will be presented.

We have during our study at DC gained information regarding attitudes of groups and individuals towards the project procedure model. Below we present these different opinions expressed during mainly the interviewees. Some of the information is also based on our participant observations.

It appears to be so that managers believe that the internal project websites are used for the project members while these in their turn depend on more up to date information than what is available on the internal Web. Information sharing is often made through other media such as meetings and informal distributions. Although, many of those interviewed, have lots of ideas of how to make the internal project websites more handy and up to date.

There are no official requirements that a project should construct and keep up a website. Still, it is custom to construct a website when initiating a project. A project manager tells us that people within the company would consider it to be strange if a project of the interviewee's size (approximately 130 people have been involved in the project) would not have an internal website. The same project manager says that one cannot take for granted that people enter the site. If there is a communicative action the project manager interviewed and his/her project members generally pick up the phone or such to get in contact. The Web is more for a person who wants to search for something specific. A project member, in another project, that was interviewed states that the Web is used more as an archive, than as a place where the project members are obligated to enter in order to keep themselves updated.

The same project member does not know where on the project websites information of interest might be found. The project member says: "they take in too much information that I am not interested of". Instead the project member uses bookmarks of links provided via e-mail.

During our study we found that not all projects are published on the intranet, and that this might be due to that the projects either are too small (implying that the cost would exceed the benefits gained), or it may also be due to aspects of confidentiality. A project sponsor interviewed explains this: "We have some projects that on the whole never will be put on the intranet. ... Because they are too small, there might not be a general interest in spreading that information. We do not want to get that overhead cost. It might be so that we do not want to spread it in the building. Mere issue of secrecy." The sponsor tells us that they have several projects, initiation studies and such in their division, with no website. The project sponsor also tells us that what is shown on the project internal websites is mainly internal information of the different projects. Most interviewees could not figure out anything that could be too sensitive to be put on the internal Web. Some information as DC Checkpoint assessment reports is considered by a quality manager interviewed to be too sensitive to be published on the intranet. One solution, presented by interviewees', to solve the problem with information considered as sensitive, is that these documents could be restricted with a password.

Most often information is distributed via e-mail, but a project sponsor told us that he/she most often was provided with a printed copy physically in the hand. Also a resource owner interviewed says to be provided information needed in a very informal way. A quality manager we interviewed enters the internal websites sometimes to browse for information. He/she states that this is not always needed, since the required information often is supplied from some other source. The interviewee gets hold of the information anyway, but when browsing the Web searching for something specific unable to find the quality manager gets 'very irritated' and tries to get hold of someone that might know where to find the required information. A project secretary we interviewed never browses the project website for needed information. Instead the project file directory connected to the project is used. As newly employed (just some months ago) the project secretary used the Web to search for lists of persons, but got stopped constantly due to requirements of entering a valid username and password. But since this person gained knowledge about the project file directory the project website has not been used, since the project file directory was used instead as a source of information. The secretary says that it is probably from the project file structure that all the projects website information comes from. When asked the direct question: "Why is the project intranet website in use? You have a project file directory..." the project secretary answers "Hmmm. I do not know why they make an effort in having intranet pages at all." Thereafter the secretary says that it probably would have been easier if the internal Web had contained the information stored in the project file structure too. It is very common to

turn to other information channels than the internal webpages when the medium has proven not to contain the information needed. Several interviewees tell us that there are a number of other information sources than the internal project websites that they can and do use.

Some of the interviewees that are responsible for constructing and maintaining the project website tell us that they used to peek on other webpages that seemed good in order to get ideas of contents and construction for their websites. Once in a while, one of the interviewed project managers 'clean up' the project website. This project manager thinks it would have been an advantage to do this on a regular basis but yet this is not done that way. A system engineer we interviewed is very critical towards that project managers in general consider information on the project websites as temporary, hence throwing the information away when removing it from the pages without storing it on some other media for reuse. There is a belief that websites contain valuable information and experiences for future projects as well as information that would be valuable when backtracking to get an idea why a certain decision was made. The system engineer states that people are very good at adding new things to the website at the same time as old things tend to not be removed. A project secretary proposes a searchable Web containing out of date material from the project, since it would be a waste just throwing all the information away when the project is closed down. The importance of up-to-date information is uttered by many of our interviewees. If a page is dated too many days/months back in time a lack of confidence in the information presented occurs. This causes the information searchers to find other ways than using the internal websites to find the information wanted. People outside the project, such as other companies within the enterprise, searching for information, often contact one of the interviewees, a resource owner. The resource owner states a wish in the interview "When they contact me for information I would rather like to send them a link to the requested document. Not explicitly attach the whole document. That's how I have to do today and that's not a good way." The same person would like to see documents in progress as well as current documents and old documents on the internal webpages.

One project member interviewed tells us that an e-mail usually is received when the project webpages have been updated. The other project member states that there seldom is anything highly prioritised published on the project Website, the information there has most often been distributed by e-mail long before it turns up on the project homepage. If interested in some old information the interviewee usually searches for it in the e-mail mailbox.

One of the interviewees is a member of a project whose intranet website contains an application, a calendar. The comment on this is: "I have a calendar in Outlook and everything turns up there, and if everything is put in correctly all meetings also pops up as a reminder. So, the question is, who uses this application anyway? And what is it intended for? But it is here for everyone to see. What if something important pops up in this calendar that does not show up in my own?". What the project member would like to see on the site is 'useful links' to other pages both inside the internal Web as well as on the Internet that informs about the different techniques and hardware used in the project. Till this point the interviewee has asked and gained information, such as literature and links to websites, from people nearby in the setting.

The competence coordinator we interviewed would like to see some kind of conformity in the different project websites so that the appearance is somewhat the same. "Those involved in the project learn how to use the pages. But we, who go there seldom, have a threshold to pass each time. I have really tried to find information there. But things are such that... I think the internal websites contain information for the project and are mostly used by them as well... I think. But I really do not know. Those are the ones who need to use the Web most..." The competence coordinator gives an impression of being left outside the project's Web information flow "one cannot publish all information desired by everyone, one publishes what is needed by the most needing and some will then have to go the lengthy way, which I have to do." At the same time the competence coordinator is convinced that the pages are constructed for the project members. Some of the information the interviewee is interested in from the projects is up-to-date names of the different roles and

sometimes also information about project deadlines in order to not disturb the different members in the projects at a hectic time, as well as whether the project is up and running or has been closed down. The resource owner interviewed is also very interested in information about which people are involved in a project and which roles these possess, this person also points out the importance of a common structure within the projects, so that the main projects and the subproject pages are constructed the same way to facilitate familiarity. The project sponsor interviewed would like to use the intranet to facilitate an overview of resource allocation between different projects, in order to see if the allocation matches with the projects ranking in order of priority.

Some of the interviewees came up with spontaneous suggestions on how to construct a better intranet websites. All suggestions concerned how to keep the information on the project websites up to date, there is a need to know which information is current or not. "The problem today is that you can put up information today; tomorrow there are more recent but not uploaded, which one of them is the correct one to trust? Is it the one I have today or the one I put up yesterday? I'm just one person, but in a project of three -four hundred persons, this is insane!" (EI2). The system engineer has the opinion that the websites are too expensive, since the information put there does more harm than good because the quality of the information is very poor. In order to get a 'good' website one must have discipline or perhaps use an automatically updated Web system that mirrors existing file structures. One suggested improvement could be to not construct the project site too large, so that one could cope with the task of updating the site. One other suggestion is to dedicate more time for managing the websites. Simplicity to maintain the site is also pointed out as an important factor to keep the site up to date. One person suggested more intuitive and interactive websites using images animations more.

A general opinion about the internal websites is that the relation between the project, product and customer has been lost. The interviewee mentioning this, claims that it is difficult to find information about which product the project relates to on the project websites (each project has a name and number that are not the same as the product name/number), and to find information about whom the customer (the orderer) of the product is.

## 4.4 Genres in the project procedure model

In this section we will present the genres found in the project procedure model through observation of the actual document.

When studying the project procedure model we found genres of organisational communication that generally shows what to be done rather than describe how it should be performed. We have found in total 17 genres such as different documents and plans of the project to be prepared and approved at different phases of the project. Examples are 'Agreement specifications', 'Budget', 'Project specification', 'Project plan', 'Time schedule', 'DC Checkpoint', and 'Progress report'. Table 5 below presents a list of the found genres and a short description. The project procedure plan is very vague in proposing media. The genres are listed in alphabetical order. A genre listed underneath a genre is considered as a subgenre.

<b>Genre:</b>	<b>Short description:</b>	<b>Media</b>
<b>Agreement specification</b>	Document that initiates an assignment in a project.	E-mail.
<b>Budget</b>	A time-plan where the actual use of resources is measured.	-
<b>Final report</b>	Summarises the project in terms of time, costs and outcome.	-
<b>Milestone</b>	Defines an important and measurable event in a project.	-
Milestone reviews	Verify that the milestone criteria are fulfilled at each project milestone.	-
<b>Progress report</b>	A document with status of project to ensure that action is taken whenever needed, at the appropriate management level, in order to keep control over the project.	-
<b>Project specification</b>	Business agreement defined and described.	-
<b>Project plan</b>	Overall descriptions of the project including activities and events.	-
<b>Time schedule</b>	Includes main activities in the project, as well as the DC Checkpoints and project milestones.	-
<b>DC Checkpoint</b>	Decision whether to continue or not with project.	-
DC Checkpoint 0	Decision point at which the decision to start an initiation study is made.	-
DC Checkpoint 1	Decision point to start a feasibility study is made.	-
DC Checkpoint 2	Decision to start project execution is made.	-
DC Checkpoint 3	Decision is made to continue project execution according to the original or revised plan.	-
DC Checkpoint 4	Decision is made to start the hand-over of project outcome to the receiver and to the customer for acceptance.	-
DC Checkpoint 5	Decision is made to start project conclusion, based on a confirmed acceptance of the project outcome.	-
<b>DC Checkpoint Assessment</b>	The project is evaluated from a business perspective before DC Checkpoint decision.	-

Table 5 - Genres in project procedure model



## 4.4.1 Full description of the project procedure model

In this section we will give a full description of the genres found in the project procedure model through observation of the actual document, using the '5W1H' model. The genres are sorted in alphabetical order.

<b>Agreement specification</b>	
Why?	Purpose to order an assignment and to ensure that the assignment is clearly understood and agreed on by all.
What?	This is a document that initiates an assignment in a project, such as a initiation study, feasibility study, subproject or other tasks. The expected outcome of the assignment, and its time and cost limits, should be defined, and the relevant background information and constraints on the assignment should be included in the document. Should give a brief background to the assignment, describe the business situation, and refer to the business agreements made with the customer or other external stakeholders.
How?	Should be kept brief and clear. The document should include: a specification of the expected outcome of the assignment, the relevant background information, and related constraints and legal aspects related. The time and cost limits for the assignment, and how and to whom the outcome will be handed over, should be specified. A personal meeting between the parties involved is recommended, at which the assignment is discussed and formally initiated. In small projects an e-mail or a written note can replace this document. There is a template that can be used in the project procedure model.
Who/m?	The sponsor is responsible for preparation of, and approving the document, during the initiation study- or feasibility study phase. The project manager should prepare and approve this for subprojects or team tasks. The orderer of the assignment should approve this document. The document is always directed to the resource owners in that phase.
When?	Assignments are made after both DC Checkpoint 0 and 1.
Where?	-

<b>Budget</b>	
Why?	It creates a common point of reference in the project for measuring and analysing progress, for forecasting and for reporting. Is used as a baseline when the actual use of resources is measured, and as a reference for reporting, analyses and forecasting.
What?	A time-plan for resource usage and expenditures. Should include costs for resource usage in the project, other costs, such as costs for material, training, travel, and equipment, other expenditures in the project, such as payments to subcontractors, project income, such as payments from the customer. The project budget will provide a summary of what resources will be used, how much they will cost and when they will be used.
How?	In the project budget, the estimated costs for project resources, as well as other project costs, are distributed on a time axis. To ensure efficient routines for budget control, the budget should be designed with tools according to the standards of the organisation.
Who/m?	Should be approved by the project sponsor.
When?	Should be approved at DC Checkpoint 2.
Where?	The project budget should be included in the Project specification.

## Result

<b>Final report</b>	
Why?	Purpose to transfer the experiences made in the project and to ensure continuous improvement of the organisation's performance.
What?	A document that presents a summary of experiences, observations and suggestions for improvements made in the project. Summarises the project in terms of time, costs and outcome, and discusses reasons for non-conformance to the project plans and requirements.
How?	Information to the report could be gathered from a project diary used by the project manager during the projects execution. Describe the project's background and specific situation. For small projects there is a template to be used in the project procedure model. Sometimes being presented on meetings.
Who/m?	All managers involved in the project are responsible for acting on the information in the Final report. The project manager is responsible for preparing and presenting it to the target group (the project sponsor, the project steering group, the resource owners, the receivers of the project outcome, the project team members, project sponsors and project managers for ongoing and future projects). All project members are responsible for contributing with observation and experiences to the report. This will be used by future project managers. Everyone involved in the project must be given access to it.
When?	During the conclusion phase it is prepared.
Where?	-

<b>Progress report</b>	
Why?	Purpose to ensure that action is taken whenever needed, at the appropriate management level, in order to keep control over the project. Will keep all project stakeholders in the organisation informed about the status of the project and its prospects. To be able to foresee if the project will reach its goal on time and within budget.
What?	A document that shows the status of the project at a specific point in time. Contains forecasts and risks for remainder of the project, and suggested activities to maintain the project's progress and direction. Focus on projects status in terms of time, cost and resource expenditure, and on results, risks and opportunities.
How?	The document should be kept brief and informative, focusing on results – not on activities. The form is determined in the project specification. Enclose a time-schedule showing the baseline, the actual situation and a forecast, and an overview of the project status, preferable use a balanced scorecard or a project survey. For small projects there is a template to be used in the project procedure model. Sometimes being presented on meetings.
Who/m?	The project manager prepares and distributes the document. Project members create input to the report. The subproject manager reports progress of own subproject. The report is distributed to the project sponsor, the project steering group and to the project team. Following need the information: the project stakeholders in the organisation, all involved in the project, managers (use the information as an input to actions). External stakeholders should not get the report.
When?	Used through out the project. Should be regularly distributed. Should be reported during the initiation study phase, the feasibility phase, and the execution phase (if required by the sponsor). Progress of subprojects should be reported during the execution phase (if required by the project manager).
Where?	Preferably be presented in meetings.

## Result

<b>Milestone</b>	
Why?	A number of project milestones should be defined in the project, to ensure an efficient control and tracking of the project work.
What?	This is an intermediate objective that defines an important and measurable event in a project, and represents a result that must be achieved at a given point in the project flow. Could be used for making project forecasts if they are budgeted and positioned in the time-schedule.
How?	There are a number of techniques in which project milestones are used for tracking project progress, such as Project survey and Earned value
Who/m?	-
When?	Should be reached at certain, predefined points in the project flow. After milestone review.
Where?	It is suggested to link the entry and exit criteria of critical work packages to the project milestones, and to include the project milestones in the project's time-schedule.

<b>Milestone reviews</b>	
Why?	Purpose to verify that the milestone criteria are fulfilled at each project milestone.
What?	Decide on relevant actions. The status and the quality level of the results achieved are checked against the criteria for the project milestone.
How?	-
Who/m?	The project manager decides when the review should be held and executes the review.
When?	The review is performed before each project milestone at a time decided by the project manager.
Where?	-

<b>Project specification</b>	
Why?	To ensure that the business agreement between the project manager and the project sponsor is clearly defined and described.
What?	A document that specifies the project outcome in terms of time, costs and deliverables, providing a complete description of the project and serves as a foundation for the project work. It is the results of the feasibility study that is documented. Describes agreement between the project sponsor and the project manager on how to execute the project. Should include information of subprojects. Used both for projects and subprojects. Should include information about the when, how and for whom the Progress Reports should be made.
How?	Should be brief enough to provide a clear overview of the project and detailed enough to serve as a basis for project follow-up and control. It must be possible to read the Project Specification as a stand-alone document. Include or enclose documents such as the time-schedule, the project organisation overview, quality plan and configuration plan. For small projects there is a template to be used in the project procedure model. Should be signed.
Who/m?	The project sponsor is responsible for approving it. The project manager is responsible for preparing the document and approving the subprojects specifications. The subproject managers are responsible for preparing subprojects specifications. Resource owners and receivers are responsible for supporting the project manager when describing the project quality system and ensuring that it is formally reviewed and agrees on by all organisations and units involved in the project. The document is internal, not intended for external stakeholders, such as customer and suppliers. It is directed to: the project sponsor, the project steering group, project team members, the managers involved, such as resource owners, receivers, and the multiproject manager.
When?	It is made after the Agreement specification from the Feasibility study phase. Should be approved after DC Checkpoint 2, during the feasibility study phase.
Where?	-

## Result

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<b>Project plan</b>	
Why?	-
What?	Project plans refer to overall descriptions of the project that include activities and events that are distributed along the time axis representing the entire lifetime of the project. Examples of project plans are the project time-schedule, the project budget, the milestone plan and the delivery plan.
How?	-
Who/m?	-
When?	Use the Agreement specification from the Feasibility study phase as input.
Where?	-

<b>Time schedule</b>	
Why?	It should be used for communicating the project's progress and serve as a basis for detailed planning and control at all levels of the project.
What?	The time-schedule should include the main activities in the project, as well as the DC Checkpoints and the project milestones.
How?	A graphical representation of all project activities or work packages distributed along a time axis, showing the estimated start and finish date of the project.
Who/m?	In large projects should there also be time-schedules also for subprojects and/or teams. Teams and individuals should also prepare their own time-schedules about when they expect deliveries.
When?	Time-schedules are prepared at different levels of detail in the project. During the feasibility study phase time is scheduled. In each phase start-up should more detailed time-schedules be prepared.
Where?	Should be attached to all progress reports, and included in the project specification.

<b>DC Checkpoint</b>	
Why?	-
What?	A DC Checkpoint is a super ordinate decision point at which formal decisions are made concerning the aims and execution of a project. The project sponsor makes a decision on how to continue the project (pass, not pass until further information or result is provided, or terminate the project).
How?	-
Who/m?	The project sponsor is responsible for making the DC Checkpoint decisions and for assessing the risks at each DC Checkpoint (related to project progress).
When?	-
Where?	-

## Result

<b>DC Checkpoint 0</b>	
Why?	Purpose to ensure that the project initiation study is based on an idea for a business opportunity that is assessed to be aligned with the organisation's business direction, and that it is initiated and procured in a business-oriented manner.
What?	An optional decision point at which the decision to start a initiation study is made. The business idea should be assessed from the business situation, use of resources, confidence and commitment. The decision is made to pass the DC Checkpoint, not pass the DC Checkpoint, or reject the business idea.
How?	The decision should be recorded.
Who/m?	Someone with authority to order the initiation study (e.g. the sponsor) work and is prepared to pay for it makes the decision. Should be communicated to all those affected by it.
When?	Should be made as soon as a business idea proves interesting enough to motivate the use of resources for the initiation study.
Where?	-

<b>DC Checkpoint 1</b>	
Why?	Purpose to ensure that the feasibility study is aligned with the organisation's business direction, that it is initiated and procured in a business-oriented manner, and that the benefits for the customer are considered.
What?	The decision to start a feasibility study is made. The business opportunity should be assessed from the business situation, use of resources, project status, confidence and commitment. A decision is made that the DC Checkpoint is passed, cannot be passed, or that the initiation study is terminated.
How?	The decision should be recorded.
Who/m?	The project sponsor makes the decision. Should be communicated to all those affected by it.
When?	It is pre-defined. Should be made as soon as the initiation study analysis provides sufficient information for a decision to start a feasibility study. This marks the end of the initiation study-, and beginning of the feasibility study phase.
Where?	-

<b>DC Checkpoint 2</b>	
Why?	Purpose to ensure that the project execution is based on a business case aligned with the organisation's business direction, that it is initiated and procured in a business-oriented manner, and that the benefits for the customer are considered.
What?	The decision to start project execution is made. The project and its outcome should be assessed from the business situation, use of resources, project status, and confidence and commitment. A decision is made that the DC Checkpoint is passed, cannot be passed, or that the project will be terminated.
How?	The decision should be recorded.
Who/m?	The project sponsor makes the decision. Should be communicated to all those affected by it. The project manager is delivers input information (project status and progress) to the DC Checkpoint decision.
When?	Pre-defined. This decision should be made when the feasibility study work gives sufficient information for a decision to start project execution. DC Checkpoint 2 marks the end of the feasibility study phase and the beginning of the execution phase.
Where?	-

## Result

<b>DC Checkpoint 3</b>	
Why?	Purpose to minimise technical and commercial risks before major investments have been made in the project, by verifying that it is still aligned with the organisation's business direction, and that it will fulfil the customer's requirements.
What?	The decision is made to continue project execution according to the original or revised plan. The project and its outcome should be assessed from the business situation, use of resources, project status, and confidence and commitment. The decision is that the DC Checkpoint is passed, cannot be passed, or to terminate the project.
How?	The decision should be recorded.
Who/m?	The project sponsor is makes the decision. Should be communicated to all those affected by it. The project manager is delivers input information (project status and progress) to the DC Checkpoint decision.
When?	Should be made at a point in the project when enough experience has been gained from project execution to allow for a verification of the project goal, strategy and plans, and a decision on continued project execution.
Where?	-

<b>DC Checkpoint 4</b>	
Why?	Purpose to ensure that the quality and scope of the project outcome is confirmed, that is aligned with the organisation's business direction, and that the customer will benefit from it.
What?	The decision is made to start the hand-over of project outcome to the receiver and to the customer for acceptance. The project and its outcome should be assessed from the business situation, use of resources, project status, and confidence and commitment. A decision is made that the DC Checkpoint is passed, cannot be passed, or the project is terminated.
How?	The decision should be recorded.
Who/m?	The project sponsor is responsible for making the decision. Should be communicated to all those affected by it. The project manager is delivers input information (project status and progress) to the DC Checkpoint decision.
When?	A pre-defined decision point. The DC Checkpoint 4 should be made at a point in the project when the project outcome is ready for hand-over to the customer, in accordance with the agreements made earlier in the project.
Where?	-

<b>DC Checkpoint 5</b>	
Why?	Purpose to ensure that project conclusion is based on the customer's acceptance of the project outcome, and that the quality of its future handling is confirmed.
What?	The decision is made to start project conclusion, based on a confirmed acceptance of the project outcome. The project and its outcome should be assessed from the business situation, project status, and confidence and commitment. A decision is made that the DC Checkpoint is passed, cannot be passed, or the project will be terminated.
How?	The decision should be recorded.
Who/m?	The project sponsor makes the decision. Should be communicated to all those affected by it. The project manager is delivers input information (project status and progress) to the DC Checkpoint decision.
When?	A pre-defined decision point, initiates conclusion of the project. Before this should acceptance procedures and requirement verifications have been performed and the customer has accepted the project outcome.
Where?	-

## Result

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<b>DC Checkpoint Assessment</b>	
Why?	-
What?	The project is evaluated from a business perspective. Is an objective evaluation of (1) the business situation of the project and its outcome, (2) the use of resources in the organisation and in the project, (3) the present project status, and (4) the level of confidence and commitment among the project stakeholders.
How?	Minutes are taken.
Who/m?	-
When?	Before DC Checkpoint decision
Where?	-

## 4.5 Genres on the intranet

Below the genres found on the five project websites observed will be described.

On the intranet we found 20 genres in the studied project webpages. These genres are foremost informative genres but also genres specific to the media. Examples of identified genres were the 'Archive', 'Manual', 'Action points', and 'Minutes of meeting'. Table 6 below presents a list of the found genres and a short description. Media used for the genres are in a great extent the intranet medium but also other media have been found. Genres using techniques provided by the intranet medium are listed as HTML. The genres are listed in alphabetical order. A genre listed underneath a genre is considered as a subgenre.

<b>Genre:</b>	<b>Short description:</b>	<b>Media</b>
<b>Action points</b>	Lists and describes problems to solve or things to find out.	HTML
<b>Archive</b>	Shows a collection of related topics.	HTML
Document archive	Presentations of links to available documents.	HTML
External link archive	Presentations of external links.	HTML
Mailing archive	Presentation of available mailing groups.	HTML
Project member archive	Presentation of members and roles of the project.	HTML, Adobe Acrobat, Ms Word
Release mail archive	Presentations of links to mail correspondence.	HTML
Subproject archive	Presentations of links to sub-projects within the main project.	HTML
<b>Manual</b>	Guidelines of a topic describing custom practice in a project.	HTML, Ms Word, Ms PowerPoint, Adobe Acrobat
Web manual	Guide users how to make changes to website.	HTML.
<b>Minutes of meeting</b>	To record what has been decided on a meeting in a written document.	HTML, Ms Word, Adobe Acrobat
<b>Organisation chart</b>	Visualisation of roles and the structure between them.	Ms PowerPoint
<b>Progress report</b>	A document viewing how things are going within the project.	Ms Word, HTML, Image
<b>Project narratives</b>	Give an overall description of the project.	Ms Power Point, HTML
<b>Project specification</b>	Official document that specifies purpose, goals, and background of a project.	Ms Word
<b>Release mail</b>	Show releases and patches to software.	HTML
<b>Time reporting table</b>	A table of codes and explaining text.	HTML, Ms PowerPoint
<b>Time schedule</b>	Show critical dates and estimated time for different tasks within a project.	Adobe Acrobat, Ms Project, Ms PowerPoint
<b>Website</b>	To introduce the project and its interests.	Intranet Web

Table 6 - Genres on the intranet



## 4.5.1 Full description of the intranet

In this section we will give a full description of the genres found on the project websites through observation of the intranet, using the '5W1H' model. The genres are divided in four areas; archives, documents, manuals, and others, as well as sorted in alphabetical order. The remarks following the genre title describe the number of pages containing the genre.

### 4.5.1.1 Archives

<b>Archive (5/5)</b>	
Why?	Show a collection of related topics.
What?	Different content (topics).
How?	A list of active links describing content underneath. (HTML)
Who/m?	-
When?	-
Where?	At several places at the websites.
<b>Document archive (4/5)</b>	
Why?	Presentations of available documents.
What?	Displays links, dates and an icon/text reviling document type hiding under link.
How?	A list. Active Links. (HTML)
Who/m?	-
When?	-
Where?	Different topics correlating the content of the links in the document list.
Has been observed as: Progress Report List, Integration Anatomy Plan list, Minutes list. Also documents that we have not been able to classify as genres have been found under a list. In two cases the list has been graphical with boxes – as a structural diagram.	
<b>External link archive (2/5)</b>	
Why?	-
What?	Link to external websites.
How?	A list with active links.
Who/m?	-
When?	-
Where?	List at the main page under link “useful links/links”. (AW, CW)
Single link at BW linking to Syspro. EW camouflaged external links by spreading them all over the website. CW had also an external link list under ‘development’ to Syspro, Hyspro and Enterhyspro.	
<b>Mailing archive (4/5)</b>	
Why?	Presentation of available mailing groups.
What?	A list of mailing groups.
How?	A list. Somewhat descriptive mailto links in HTML document.
Who/m?	A person responsible for each mailing group in the list is available at the CW and AW website.
When?	-
Where?	This page is mainly linked from a “mail groups/mailling lists/mail list” link at the main page. (CW, EW, AW)
The genre is presented at all websites but one (DW). In two cases, also names of the members of a mailing list are listed: EW and BW. At the same page as the mailing list genre can be viewed at BW are the Project member list genre present. EW had three occurrences of the mailing list genre. One with a list of members of three mailing list groups with specified members listed with names, and one listing seven others where a short description of the involved members where added, the third just one list. Also AW had a short general description of the expected members of the presented mail groups.	

## Result

<b>Project member archive (5/5)</b>	
Why?	Presentation of members and roles of the project.
What?	A list of names and roles involved and connected to the project. Names are activated with link to either e-mail address or a link to another Web application showing personnel information. Also telephone numbers are viewed (CW, DW, AW, EW) or can easily be reached (BW) through the linked Web application mentioned above.
How?	A table viewed in HTML (CW, AW, BW), Adobe Acrobat (DW) and Ms Word (EW)
Who/m?	-
When?	-
Where?	This page is mainly linked from a "Project members and roles/Project members" link at the main page. (CW, DW, AW)
<b>Release mail archive (2/5)</b>	
Why?	-
What?	List of mail correspondence. Active links. Archive for release mail.
How?	The list views the title of the release mail and the name and e-mail of the person who has sent it, active links leading to the mail. HTML.
Who/m?	The sender of the release mail is listed.
When?	-
Where?	List at the main page under link "release mail". (CW, BW)
<b>Subproject archive (4/5)</b>	
Why?	-
What?	Displays links to sub projects of the main project.
How?	A list. Active Links. (HTML)
Who/m?	-
When?	-
Where?	List at the main page under link "sub projects".
AW has a related project link list to subsequent projects.	

### 4.5.1.2 Documents

<b>Minutes of meeting (4/5)</b>	
Why?	To record what has been decided on a meeting.
What?	A document containing persons present at the meeting, agenda of the meeting, next meeting date, what topics discussed and decisions made. Sometimes also a "For Your Information list" is included containing names of people not present.
How?	Using company header. HTML, Ms Word. Adobe Acrobat.
Who/m?	-
When?	-
Where?	Under link list named "Minutes of meeting" is common. Also spread all over site, usually DC Checkpoints minutes, than repeated project minutes.
Seems to be using company template for documents.	

## Result

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<b>Progress report (4/5)</b>	
Why?	Show how things are going within the project.
What?	A document containing results since last report, expected result for next period, time schedule and budget, risks.
How?	An Ms Word document or in HTML. Pictures might be included.
Who/m?	-
When?	Periodically. (One a month / once a week.)
Where?	-
This document type was found both at management level and as sub project level. The difference was that the Progress Report on managerial level was more all embracing. AW had just a list indicating that they had progress reports. Seems to be using company template (with header) when used at management level.	

<b>Release mail (2/5)</b>	
Why?	Show releases and patches to software.
What?	
How?	Subject of mail, from sender X, date sent, Who to reply and what mail list that has received the mail. Also a textual content. Sometimes including links. HTML.
Who/m?	Displays information from one person to a mail list.
When?	-
Where?	Appears when clicking at a post at 'release mail list'.
CW and BW.	

### 4.5.1.3 Manual

<b>Manual (4/5)</b>	
Why?	Describes the custom practice in the project.
What?	Guidelines of a specific topic
How?	Text and images. HTML, Ms Word documents, Ms PowerPoint, Adobe Acrobat.
Who/m?	-
When?	-
Where?	-
This could be coding guidelines, how to use certain methods in the project. Also how to get started with some systems.	

<b>Web manual (2/5)</b>	
Why?	Guide users how to make changes to website.
What?	General site information, descriptions how to change the content of the website, contact person if there would be a problem.
How?	Describing text in HTML
Who/m?	-
When?	-
Where?	Link at page. Different link names.
CW, EW	

### 4.5.1.4 Others

<b>Action points (3/5)</b>	
Why?	Lists and describes problems to solve or things to find out.
What?	Text in a table.
How?	Each row/problem has a number, a person as responsible and a short description. Also status is signalled either by numbers or/and clarifying text and colours. (Colours of green, yellow and red is used to visualize status.) Pure HTML.
Who/m?	-
When?	-
Where?	List at the main page under link "Action/action points". (BW, AW,)
Not DW and CW. This could also be a genre to list possible risks in the same manner (EW).	

<b>Organisation chart (3/5)</b>	
Why?	Visually show the project roles (and its possessors) and how these are connected (as an organisational structure).
What?	Presentation of project members and roles and their relation.
How?	Organisational charts with boxes or ellipses. Ms PowerPoint (AW, DW, CW)
Who/m?	-
When?	-
Where?	The page is linked from an "Organisational chart/Project organisation" link at the main page.

<b>Project narratives (3/5)</b>	
Why?	Give an overall description of the project.
What?	A text with pictures describing issues like the outcome of the project and with that resources used (differs).
How?	Ms Power Point or HTML.
Who/m?	-
When?	-
Where?	Either a short presentation directly at first page (welcome page) (AW) or/and a bigger presentation as Power Point found deeper in the website (DW, AW, CW).
DW had also, apart from the thick presentation also a page only presenting the product in pictures ('the outcome').	

<b>Project specification (3/5)</b>	
Why?	Specifies purpose, goals, and background of a project.
What?	An official document. Contain document number and references to other documents. Contains information regarding how, why, what, when, where and by whom the project will be executed.
How?	Using company header. Ms Word document.
Who/m?	Project leader (responsible for document)
When?	-
Where?	List at the main page under link "project specification". (CW, AW, DW)
AW had also a "light version" of the document when looking under the link Sponsor (main page). AW has also published a glossary specified in project specification as individual document. Seems to be using company template for documents (AW, DW, CW).	

<b>Time reporting table (2/5)</b>	
Why?	-
What?	A table of codes and explaining text.
How?	A table in HTML or Ms PowerPoint.
Who/m?	-
When?	-
Where?	Under link 'time reporting' at main page.
Found at AW and CW.	

<b>Time schedule (5/5)</b>	
Why?	Show time schedule for different tasks within the project.
What?	Defining critical dates (milestones) and estimated time for different tasks within a project. CW displays also dependencies between related (other) projects.
How?	Presented as a Gantt Chart. Adobe Acrobat (BW, AW), Ms Project (DW, EW), Ms PowerPoint (CW)
Who/m?	-
When?	-
Where?	The page is liked from a "Time schedule/Time plan" link at the main page.

<b>Website (5/5)</b>	
Why?	To introduce the project on the internal Web.
What?	Organisational information and links to other pages reflecting topics of interest to the project.
How?	A project website based on HTML but also including other techniques.
Who/m?	Project manager is publisher of the page (BW, EW, CW)
When?	-
Where?	-
Also external consults (AW) and project secretary (BW) are reported as Who responsible for website.	

### 4.5.1.5 Possible genres

Possible findings of genres on the intranet pages are observed documents and singular occurrences that we believed might be genres but was not able to classify as such. This could be due to that we could not find enough information about the document, we were unable to see a clear pattern, or missing content in prepared documents. Although, suspicions about found genres remained. Instead of publishing these uncertain genres in tables above we decided to describe them here beneath.

- *News*: Three of five websites contained a news headline at first page but had no visible news underneath. The same image used for the news headline can also be seen at the DC's first page, where current news concerning the company is displayed.
- We found a "*vacations and absence*" list at one website showing planned vacations and absence among the members of the project.
- One project had an application: a *calendar*. This was apparently not in use (almost empty). Our suspicion is that this application competes with the booking capabilities in Microsoft Outlook (application used throughout the company).
- One website had a "*name contest*", a contest where project members can win a prize for the best name suggestion. We have observed at other websites, not included in this study, when surfing around on the internal project sites that some pages are more "familiar" than others, which means containing "fun to read and do" documents, applications and links.

- *Web filing applications*: CW and EW had “openings” to project local discs or information systems such as D2. Either displaying content (CW) of given folders in a local drive or giving the users the capability to search for themselves in D2 and the local disks (EW). We did not have the availability to examine the functions of the applications at EW webpage since password was required.
- A *DC Checkpoint 2 agreement* document was found.
- Something named ‘*Integration Anatomy Plan*’ was found but we could not figure out what it was used for and in what context. It is a drawing of boxes, arrows and lines showing how some components are related. Media used: Acrobat Reader (AW), PowerPoint (CW, DW). Perhaps connected to a verification process?
- One of the pages studies contained a *budget*, as well as published budget follow-ups that seems to be done on a regularly basis.

### 4.5.1.6 General findings

The facilities of the Web medium are in use. Links both within the page but also to pages at the internal Web and Internet has been found to a great extent. Also a couple of “close window buttons” has been observed. Three websites had all several “dead” links – links that lead either nowhere or to a previously prepared document with no content.

All pages except one (DW) are accessible from computers inside DesignCompany. This website is stored outside DC’s intranet on a server shared by the different subprojects of the main project.

We have found occurrences of pages containing and combining two or several genres. One mailing list and a project member list were found combined at the same page, making it available to understand which project members that are members of which mailing list at the same time as the both lists would have functioned independent from one another. By combining the two something more, an extended understanding, was gained. One of the websites studied had gathered links containing ‘Agenda’ – ‘Input Documents’ – ‘Minutes of meeting’ – ‘Output documents’ in one table functioning as a document archive.

It appears to be common praxis to set a date stamp, i.e. a footer telling when the loaded page was last changed (year-moth-date). We observed that many of these had not been changed for months.

## 4.6 Genres from interviews and observations

In this section the result of genre findings from the interviews and participant observations will be presented.

From the interviews and observations we mainly found genres related to practical activities. The most significant genre is the 'Meeting' genre and genres related to this such as 'Meeting request', 'Minutes of meeting', as well as a variety of document genres. Table 7 below presents a list of the found genres and a short description. The genres are listed in alphabetical order. A genre listed underneath a genre is considered as a subgenre.

<b>Genre:</b>	<b>Short description:</b>	<b>Media</b>
<b>Action points</b>	Used in order to check that different actions have been taken (are in progress).	-
<b>Agenda</b>	To guide the sequence and content of communication in a meeting.	E-mail
<b>Information posting</b>	E-mail containing information from managers.	E-mail
<b>Meeting</b>	A gathering to talk about a certain topic.	Face-to-face, videoconference, telephone, etc.
Line meeting	A gathering to discuss section specific topics.	-
Project meeting	A gathering to check project status and coordinate.	Face-to-face, videoconference, telephone conf.
Technical meeting	A gathering to solve and discuss technical issues.	-
DC Checkpoint meeting	A gathering with executives to decide whether to go or not go on with the project.	Face-to-face. Ms PowerPoint
<b>Meeting request</b>	E-mail, sometimes containing attachment, with an invitation to a meeting.	E-mail
<b>Product document</b>	Most often technical information about a product.	Framemaker, Ms Word
<b>Progress report</b>	Report with brief view of the project situation.	Ms Word, Ms PowerPoint
<b>Project document</b>	To document project related information and plans.	Ms Word, Ms PowerPoint
Budget	An estimation of expenses during the project.	Ms Excel
Project specification	Contains info about how and when things should be done within the project.	-
<b>Minutes of meeting</b>	A protocol to document decisions made at a meeting.	Ms Word
DC Checkpoint assessment report	Documentation from DC Checkpoint assessment.	E-mail.
<b>Project member list</b>	Contains information about functions and roles in the project.	The internal Web. (HTML)
<b>Website</b>	Used for distributing information.	Frontpage, R2, D2

Table 7 - Genres from interviews and observations

## 4.6.1 Full description of interviews and participations

In this section we will give a full description of the genres found through interviews and participant observations, using the '5W1H' model. The genres are divided in four areas; meeting, documents, lists, and others, as well as sorted in alphabetical order.

### 4.6.1.1 Meetings

<b>Meeting</b>	
Why?	People meet and discuss topics.
What?	-
How?	People talk, but the media can differ, if its face-to-face, by videoconference, telephone etc.
Who/m?	Most often people with an interest or knowledge about a certain topic.
When?	-
Where?	-
<b>Line meeting</b>	
Why?	-
What?	In this meeting are issues of concern for the line organisation discussed, such as for instance regarding the projects in the line, and then foremost issues regarding resources. Section meeting
How?	Notes are made in one of the two meetings found.
Who/m?	Amongst others, the project managers of the projects within the line, and different section managers participates. In one of the two found instances also a project administrator have participated taking notes.
When?	One of the meetings is held every other week.
Where?	-
We have only gained information from three persons (a project administrator, a sponsor, and a resource owner) regarding this genre, whom have talked shortly about two types of meetings (section and line meeting) together forming this genre.	
<b>Project meeting</b>	
Why?	General purpose is to check project status and coordinate interested parties of the project.
What?	Most often in these meetings are current status and progress of the project discussed, spread information from different parties of interest, and problems tried to solve.
How?	The meeting is usually held, face-to-face, sometimes with people participating by video (videoconference), and also telephone conference has said to be used by some. It is common that someone hold the meeting using an agenda, including actions points. Notes are often taken, during the more formal meetings. Sometimes the participants should to the prepare documents (Ms Word or Ms PowerPoint) to report on the meeting.
Who/m?	Almost always held by the project manager. Different people participate in the meetings due to the content of the meeting. When a project administrator participates this person often takes notes. In one instance we found that the note taking shifted between the participants from time to time.
When?	All project meetings, except spontaneous, are held regularly, shifting from daily, weekly, every other week, or monthly, on a predetermined amount of time, which can differ from 10 minutes until a whole day.
Where?	In general, the meetings are held in the building at the setting, and sometimes also in the very same room from time to time.
Examples of project meetings found in the setting are: (1) meetings held to coordinate a project with sub projects (e.g. "Sub project manger meetings"), (2) meetings within the own project, or within a team (examples are "Breakfast meetings", and "Sub project meetings"), (3) meetings which focus on coordinate the project with parties of interest outside the project, and with foremost the business (such as the "Project steering meeting").	



## Result

<b>Technical meeting</b>	
Why?	As one of the interviewees (a resource owner) said, the purpose of this meeting is to discuss “technical issues that are not discussed during any of the project specific meetings or that are not either discussed on reviews of technical documents”.
What?	Discussion about technical issues and how to solve problems related.
How?	It is common that a person hold the meeting, using an agenda, often including action points.
Who/m?	Different persons attend, who have expertise or interest in the issues discussed.
When?	These are in general held regularly, such as every second week, and on a predetermined period of time.
Where?	-
The only information we have gained about the location (where) of these meetings and media used (how), where revealed during one observation where we participated in a meeting. This meeting where held regularly face-to-face in a conference room in the building. During these meetings it was common that some people participated by telephone.	
<b>DC Checkpoint meeting</b>	
Why?	The purpose of a DC Checkpoint meeting is commonly known to be deciding whether if the project can pass the DC Checkpoint and continue executing, cannot pass the DC Checkpoint before some adjustments or additional work have been made, or if the project will be terminated. An additional purpose for having this meeting could be, that it is a way to get support for a decision from the participants. A quality manager said, “the decision will have an automatic support of the project steering groups”.
What?	In general the project status is checked and discussed to see if the criteria (e.g. financial matters, and if the project is aligned with the business goals) is fulfilled needed to pass the DC Checkpoint. Based on the discussion during the meeting the project steering group recommends to either take a DC Checkpoint decision or not. Based on the recommendation the sponsor takes a decision. During an observation of one DC Checkpoint 2 meeting, we found that the sponsor signing a paper as well as giving an oral statement declared that the DC Checkpoint was passed. Sometimes the meeting only consists of an assessment leading to a recommendation of decision. The decision is then taken during another DC Checkpoint meeting.
How?	According to the interviews and observations the meeting is held face-to-face. An agenda and overhead slides (made in Ms PowerPoint) are used. It is common to provide the participants with papers containing relevant information. Notes are taken.
Who/m?	Either the project manager or another person (for example a quality manager) holds the meeting. Participating is a project administrator, the project sponsor (who takes the decision), the project steering group (who makes a recommendation to the sponsor), and sometimes also other parties of interest such as design owners, supply support and system management.
When?	If the assessment and decision is made in two different meetings, the assessment meeting is prior to the decision meeting. A quality manager also mentioned that a pre-assessment meeting could be held, then prior to the assessment.
Where?	The meeting is held face-to-face in a room, most often in the building at the setting.
One interviewee mentioned that an assessment never is made at DC Checkpoint 0, and most often not at DC Checkpoint 1.	

### 4.6.1.2 Documents

<b>Information posting</b>	
Why?	To satisfy a need of informing people.
What?	Information that the project manager consider important for the project members to get, for example about daily activities, decisions made, or coordination.
How?	This is distributed by e-mail. Sometimes it could include a link to a homepage containing further information.
Who/m?	Sent from the project manager, or sub project manager, to project members.
When?	Some are sent regularly every day, while some are sent spontaneous after an event has occurred.
Where?	The posting is made in an e-mail.
<p>One project manager said the following about where the information should be published: "If it is something that one would like people to gain knowledge about, it is not published on the web. Then a mail is sent". This project manager would however like to in the future publish daily news on the website.</p> <p>We have also found an instance of an 'information posting' of more technical nature, a so-called "Release mail", which was mentioned by an implementer.</p>	

<b>Meeting request</b>	
Why?	To invite people to a meeting. Sometimes also to distribute information needed by the participants prior the meeting.
What?	Contains information about what shall be discussed or decided on the meeting.
How?	Is sent by an e-mail, sometimes attaching a document with information.
Who/m?	This is sent to the people who are wanted to participate.
When?	It is sent before a meeting.
Where?	Always sent by e-mail.
<p>One person (resource owner) mentioned during an interview that it would be preferred to get a link instead of an attached document.</p>	

<b>Product document</b>	
Why?	To document information regarding the products.
What?	Common for these documents are that they are technical, focusing on information regarding the product, such as information about analysis, development, code, build code, and manufacture the product at the factory.
How?	According to one project manager these documents are often made in Framemaker (software). One interviewee also mentioned using Ms Word.
Who/m?	-
When?	-
Where?	According to the interviewees documents regarding the product should generally be stored in the system D2. Also other storing places where mentioned such as a database where technical documents are stored, as well as the project disks. Some of the documents are also published on the project Websites.
<p>Examples of this genre are; 'Implementation proposal', 'Technical drawings', 'Functional specification', 'Product information', 'Product version', 'Hardware specification', 'Trouble Report', 'System verification', 'Test specification', and 'Test record'.</p>	

## Result

<b>Progress report</b>	
Why?	Only one interviewee – a project sponsor – has stated the purpose of this report is to give a brief view of the project situation.”
What?	In general this is said to give information about what has happened in the project, the sub project, the team, or for the individual, and what is thought to happen during next period. Often it includes aspects of time, risk, and budget.
How?	Most often a template (with certain header and headlines) for the document is used (either from the project procedure model, or made by a project member). The document is often made in Ms Word or Ms PowerPoint.
Who/m?	The document have been found to be made either by project members who gives it to their sub project manager, or by the sub project manager who gives it to the project manager, or finally by the project manager who put the sub projects reports together in a single report that are given to the project sponsor. A project manager also said that there could be other parties of interest of the document, such as product/system management, customers, line managers, and senior management, and resource owners (having staff working in the project). Sometimes a project administrator helps make the document.
When?	These are made and distributed regularly during the projects execution, such as weekly or monthly. It is made before a meeting where the information is to be reported.
Where?	In many cases the reports are published on the project Web. Most often the document is distributed to the receiver/-s by in an e-mail, where it is attached.
This document has been called “Progress report”, “Monthly report”, “Mini report”, “Project status”, “Sub project manager report” or “Status report”, by the different interviewees.	

<b>Project document</b>	
Why?	To document plans and information regarding the project.
What?	These are different documents such as project specification, resource plan, final report, time schedule, budget, organisation plan, and increment plan.
How?	These can be made in different formats, but often they are made in Ms Word or Ms PowerPoint. In general these documents should have a document number starting with the letters ‘PROK’. There are templates for some of them to be found in the project procedure model.
Who/m?	Most often the project manager is responsible for the preparing and updating the document.
When?	-
Where?	According to several interviewees these documents should be stored in the system D2. They are often published on the project website as well.

We have not gained enough information regarding some of the different types of documents, as stated above (What), to describe them as individual genres. But it is most likely that all of them constitute separate genres.

<b>Budget</b>	
Why?	Budget is commonly known as to estimate costs of resources needed during the project, including human resources.
What?	Information about the projects and eventual sub projects estimated costs.
How?	Sometimes is the document made in Ms Excel.
Who/m?	Often the sub project manager and project manager uses these documents. Most often the budget is not considered as confidential, hence available on the project homepage, only one interviewee did want to keep it confidential.
When?	The budget is made in the beginning of the project. According to two interviewees (resource owner and projects secretary) the budget is followed-up at regularly, at least every quarter.
Where?	Two of the interviewees (project manager and resource owner) say that the budget is published on the project homepage. In the project that wants to keep it confidential the document is stored on a project file directory.

## Result

<b>Project specification</b>	
Why?	-
What?	Amongst other information, this document, according to a project sponsor, should contain information of how often the project steering group meeting should be held, and which documents to be produced during the project. One system engineer informs that information regarding sub project managers, and project managers also should be included.
How?	Two interviewees mention that there is a template to be used in the project procedure model for this document. According to a system engineer this document should have a number starting with the letters 'PROK.
Who/m?	-
When?	One project manager says that the document "is only of interest during the project execution and then no one is interested of it anymore".
Where?	According to one project manager this document is published on the web. Two interviewees (E11, E12) say that the document is stored in the system D2.

<b>Minutes of meeting</b>	
Why?	To document decisions made during a meeting.
What?	This protocol containing information about decisions made during a project meeting.
How?	It is based on minutes/notes from a project meeting. Some are more formal, made in Ms Word, having document numbers in a company header, while some are kept short in an e-mail.
Who/m?	The person who makes the protocol could sometimes be a project administrator, a project manager, or different participants of the meeting. All participants get a copy of the protocol. In some cases the receivers are listed on mailing lists.
When?	Made after the meeting.
Where?	Most often the protocol is distributed by e-mail. Often a protocol is attached to the e-mail, but sometimes the e-mail instead contains a link to a location on the internal Web where the document is stored. One interviewee also mentions that after one meeting, the protocol is made in the actual e-mail.

<b>DC Checkpoint assessment report</b>	
Why?	To document the DC Checkpoint assessment.
What?	Contains the findings of the assessment, and the recommendation.
How?	Is made from notes taken during the assessment meeting. In the project procedure model there are templates to use. Sometimes Ms PowerPoint is used. From the notes taken by usually a secretary during the meeting, the person who held the meeting (the assessor) makes a report. First AI3 makes an overhead slide which will be the beginning of the report. After that follows basic data. There are templates in the project procedure model to be used.
Who/m?	The person who held the meeting makes this report, and distributes it to the participants of the meeting (project steering group) by e-mail. It is the sponsor that requires the report.
When?	The report is made after the assessment meeting.
Where?	Sent by e-mail, not put on homepage because the material could be sensitive. Only the summary might be put on the internal Web.
One interviewee – a quality manager, has described this activity.	

### 4.6.1.3 Lists

<b>Action points</b>	
Why?	Used in order to control that people are solving the actions they have been assigned to do.
What?	Contains information of actions to take and by whom.
How?	Structured in a list, often listed in a meeting protocol. In one project different colors where used to signal what status the different action points have (such as 'not done', 'in progress', 'done').
Who/m?	Often used by attendants at a meeting, or receivers of meeting protocols. Sometimes the project administrator is the one that updates this list.
When?	The action points are discussed and determined during meetings. Sometimes they should be performed until a date (such as next meeting). BI1: During meetings these are determined. Should be performed probably until the next meeting.
Where?	Commonly listed in a meeting protocol. Sometimes on the project websites.
<b>Project member list</b>	
Why?	Purpose to give people knowledge of whom to contact in different issues.
What?	Contains information about functions and roles in the project, and information about who possess the different roles, and belongs to functions.
How?	Sometimes sorted by which area of technique people work in. Is made in HTML-format.
Who/m?	According to a project manager this information is used both by project members and people external to the project.
When?	-
Where?	In general this is published on the intranet.

### 4.6.1.4 Others

<b>Agenda</b>	
Why?	Is used to guide the sequence and content of communication in a meeting
What?	Contains information of which issues are to be discussed as well as the documents used as input.
How?	In some cases written on a white board or shown by overhead projector during the meeting. Sometimes sent by e-mail prior to the meeting.
Who/m?	Used by the person who holds the meeting.
When?	Is commonly used during meetings. Sometimes it is sent by e-mail to participants of a meeting, then prior to the event.
Where?	Is used in meetings, sometimes sent by e-mail. One agenda are also published on the project homepage, according to a sub project manager.

Website	
Why?	A website “is used for distributing information that are to be used by many” according to a resource owner. But we have found that the purpose of having a project website is not always clear, and a general opinion seems to be simply that “it is probably custom practice to have one” (told by a project manager).
What?	Some projects display information that is stored on the local disks of the project. One has been found to display information fetched from systems such as R2 and D2. It is common to publish information about the project, as well as different documents, such as project documents (e.g. time schedule, organisation plan, minutes of meetings, or guidelines) project status).
How?	Most of the interviewees have said to be using the software Frontpage for editing the pages on the website. Almost every project in one division (B) use colours to show status on different events and documents etc. (yellow, red, green). One project automatically publishes information fetched from other systems (R2 and D2). Sometimes are existing project websites used as a template when creating new websites.
Who/m?	In general the project administrator and/or the project manager update the main project website. Project members can update information on the sub project pages. Consultants are sometimes hired, most often to create more complicated applications or scripts on the website, or to create the initial website. Many of the websites are only accessible for people connected to the DC’s intranet, hence password protected for external users.
When?	-
Where?	The homepages are published on the DesignCompany’s internal Web. Some publish information on the website that is stored on the projects local disks. One project publishes information stored in the systems R2 and D2.
Only one website have been told to update information regularly. It is the project website that fetches information automatically every 24 hours from mainly two systems (R2 and D2). Many of the project pages do not seem to update information on the pages very often.	

#### 4.6.1.5 Possible genres

- One possible genre could be the ‘*Review meeting*’, with different instances such as ‘Product reviews’, ‘Milestone review’, and ‘Work-improvement-reviews’. Since we during the interviews and observations did not gain enough information, we have not been able to classify this as a genre.
- Another finding we made through the interviews where that something called a ‘*Product structure*’ where used in one division (E). This is a structure diagram showing a product and its components. We have viewed such documents on one projects homepage (EW) and on posters put up on walls in the building at the setting. Since only two interviewees (EI1, and EI2) have mentioned this eventual genre, we have chosen not to classify it as a genre above.
- ‘*Mailing list*’ could be another possible genre. But since it where referred by only two interviewees (a sub project manager and a verifier) and not given very much information as well as to different views on the object, we have chosen not to describe it as a genre above. The only common information given is that is used when sending information by e-mail to a group of people.
- ‘*Document list*’ is another potential genre, but which have been mentioned only by one interviewee (resource owner). According to this person it is a list of different documents (what), showing information about product-and project document as well as containing links to the documents (how). Furthermore they previously used to publish (where) these by the internal Web, but today it is only stored in the system D2.

- ‘*Project presentation*’ is another instance of communication, but which has only been mentioned by one interviewee (a project manager). The content (what) is information about what the project is about, and it is published on the project homepage.
- ‘*Financial documents*’ have also been mentioned in relation to communication within projects, but only by one person (a project administrator). This includes invoices, orders, and financial reports that contain information about “the ledger”, “profit and loss account”, or “resource use per project”.
- Finally, could one possible genre be the ‘*Manual*’, which is published on the project homepage, to be used by the members of the project, and contains information about which rules and guidelines that are to be used when working in the project. This information where only gained from one interviewee – a resource owner.

## 4.7 Summary

Table 8 on the next page, summarise the found genres, showing the relation (similarity) between genres found in the project procedure model, the intranet, and through the interviews and participant observations. Genres in the table that are marked with a *darker colour* are the ones that we have classified as genres and that are listed in Table 5, Table 6, and Table 7 as described earlier.

When observing the project procedure model, the intranet, and analysing the information from the interviews and participant observations, we have found several cases that probably could constitute different genres. The inability to classify the cases as genres where basically due to that we did not have enough instances of the same possible genre, which meant that we could not find a pattern between different instances, such as having similar form (how), purpose (why), content (what), and so forth. These genres that we have not been able to classify as separate genres, is marked with a *light colour* in the table below.

The genres are listed in alphabetical order. A genre listed underneath a genre is considered as a subgenre.

## Result

Genres	P	W	I & O	Media
Action points				HTML
Agenda				E-mail
Agreement specification				E-mail
Archive				HTML
Document archive				HTML
External link archive				HTML
Mailing archive				HTML
Release mail archive				HTML
Sub project archive				HTML, Adobe Acrobat, Ms Word
Project member archive/list				HTML
DC Checkpoint				-
DC Checkpoint 0				-
DC Checkpoint 1				-
DC Checkpoint 2				-
DC Checkpoint 3				-
DC Checkpoint 4				-
DC Checkpoint 5				-
DC Checkpoint assessment				-
Information posting				E-mail
Release mail				HTML
Manual				HTML, Ms Word, Ms PowerPoint, Adobe Acrobat
Web manual				HTML
Meeting				Face-to-face, videoconference, telephone
Line meeting				-
Project meeting				Face-to-face, videoconference, telephone conference
Technical meeting				-
DC Checkpoint meeting				Face-to-face, Ms PowerPoint
Meeting request				E-mail
Milestone				-
Milestone reviews				-
Minutes of meeting				HTML, Ms Word, Adobe Acrobat
DC Checkpoint assessment report				E-mail
Progress report				Ms Word, HTML, Image, Ms PowerPoint
Product document				Framemaker, Ms Word
Project document				Ms Word, Ms PowerPoint
Budget				Ms Excel
Final report				-
Organisation chart				Ms PowerPoint
Project plan				-
Project specification				Ms Word
Time schedule				Adobe Acrobat, Ms Project, Ms PowerPoint
Project narratives				Ms PowerPoint, HTML
Time reporting table				HTML, Ms PowerPoint
Website				Intranet Web, Frontpage, R2, D2

Classified established genres

Not completely classified genres

P= project procedure model  
W = internal websites  
I & O = interviews & observations

Table 8 - Summary of genres found



# Chapter 5

## Discussion

In this chapter we will compare the result of our empirical study with the theoretical framework and analytical model. First we will discuss the genres found during our study, amongst other by comparing the result with the genre theory. Second, a discussion will be held to see if the genres found could be said to be common to projects in general. Third, the intranet and genres appropriate on this medium will be discussed, based foremost on the intranet theory being applied on the result. In the fourth part of this chapter we will discuss the result from a higher level using organisational communication theory together with some of the project theory described in this thesis. Fifth, we will briefly discuss aspects regarding the method used in the study including both the ethnographical approach and the analytical model. Finally, we will give some recommendations to the company and to future research.

### 5.1 The genres found

In the enquiry we have found genres and media used in project communication within DC today. These findings are presented in Table 8.

At the start of our study we had an idea that the three different sources of data, the project procedure model, the project websites, and the interviews and participant observations would provide us with different types of information regarding genres (see Figure 2 in Chapter 2).

The project procedure model was thought upon as a rulebook of genres, providing information about how things should be done, the interviews should give information about how things are said to be done, and finally should the intranet and participant observations gain information about how things actually were conducted. Using this as an analytical framework, different patterns are to be found when taking a closer look at the genres that are described in Table 8.

Only genres regarding documents such as the 'Project document' could be explicitly found in all three sources, and we have found that this type of genre is conducted much the same way in reality as recommended by the project procedure model. Some genres are specific to the different sources, such as the 'Archive' genre only found on the websites, and the 'Meeting' genre only found by interviews and participant observations. The main conclusion of analysing the table is that there are many genres enacted by the projects, but which we have either not found in the project procedure model or simply have not been able to classify as genres.

If comparing the genres found in the three sources, one can see that the genres found on the intranet could be classified as textual, the genres found through interviews and observations could be classified either as talk or text, and that although it is difficult to classify the genres found in the project procedure model, they probably are textual. In this study we have not seen any crossing of text and talk as described by Ljungberg (1997).

The genres found constitute a genre repertoire of the community that DC's projects constitute. Our result is based on the genres found to be general to all projects studied, thus we cannot ascertain genre repertoires tied to specific projects.

The setting has been observed within a finite time of in total three months. This is probably the reason why we have not been able to perceive any of those genre changes that are mentioned in the literature (Yates & Orlikowski, 1992; Paré & Smart, 1994; Orlikowski & Yates, 1994). Based on research emphasising that genres tend to change when applied on a new medium (Shepherd & Watters, 1998; Bergquist & Ljungberg, 1998; Yates et al., 1996), such as a paper genre being put on the Internet, genre change might have been expected to be found on the project websites, but traces of this have not been found. Genres discovered on the project websites are much the same as those found through the two other sources of information.

When classifying the genres presented in the result we saw connections between several of them, constituting both subgenres as well as genre systems. Orlikowski and Yates (1994) posit that subgenres originate from genre overlap. When comparing the genres described in the result many of them resemble one another at the same time as they slightly differ in some characteristics. One example is the different genres 'Line meeting', 'Project meeting', 'Technical meeting', and 'DC Checkpoint meeting'. These all have strong similarities in features of form (e.g. face-to-face, using an agenda, etc.) while features such as the purpose, and aspects of time can differ. The similarities propose they all relate, and that this relation is realised through one genre – the 'Meeting'. Bazerman (1994b) as well as Orlikowski and Yates (1994) refer to a genre system being genres that follow one another in a somewhat optional sequence. The result indicates the presence of one primary genre system, which is used in all DC's projects. This genre system is composed by the genres: 'Meeting request', 'Agenda', 'Meeting', and 'Minutes of meeting'. Another aspect worth mentioning is that this genre system not only is enacted outside the intranet medium but parts of the genre system are also enacted through the intranet. An example of the latter is a website found to have several archives containing 'Agenda', 'Input Documents', 'Minutes of meeting', and 'Output documents' combined within one page.

Also differences in how genre rules operate can be found in the result. According to Yates and Orlikowski (1992) genres are enacted through rules that either operates tacit or implicit. Due to that DC's websites do not seem to have an expressed and explicit purpose, but rather is something that just is done, indicates that this genre is enacted by tacit genre rules. Examples of explicit rules are templates, used when enacting genres such as the 'Project specification' and the 'Progress report'. Maybe the most prominent explicit rule are the project procedure model it self. If and when it is used it provides explicit guidelines to several of the discovered genres.

## 5.2 Genres used in project communication

When comparing the findings with the project theory described in this thesis, it appears that projects within DC are conducted much the same way as projects in general. Similar to Meredith and Mantels (2000) point of view, that organisations are using projects and project management in order to achieve goals, we have found that DesignCompany use projects and project management as their primary work form when conducting business. The life cycle of the project procedure model is similar to the project life cycle proposed by Meredith and Mantel (2000). We have found that the projects included in this study follow the life cycle that is recommended by the project procedure model. The major difference between project management, in literature and the result of the empirical study, has been that the literature emphasises the evaluation included in the final stage of the life cycle more than what we have found is done at the setting.

This is based on not having found as many genres at the setting concerning this last phase than what would be expected using the theoretical literature as a framework in the search for genres. There could be several reasons why we have not found these kinds of genres. One reason could be that our scientific method is failing in identifying such genres. Another reason could be that all projects studied except one was in the execution phase. A final reason could be that DC does not enact the genres.

The genres discovered correspond very well with the contents of the two first phases of the life cycle model presented by Meredith and Mantel (2000). By their term and description the many roles found in project literature (Verzuh, 1999) correspond with roles discovered at DC. Apart from these similarities, the major difference when comparing the project theory and the findings were the terms used to describe genres such as different documents and meetings. For example could what Meredith and Mantel (2000) identified as checkpoints be compared with the genre 'DC Checkpoints'.

The emphasis on monitoring and controlling the project during the implementation phase seems to correlate in a great extent to the studied literature (Meredith & Mantel, 2000). More than half of the genres found deals with functions as monitoring and controlling the different aspects of a project. We discovered, that genres related to these functions are enacted on several hierarchical levels in the project (also mentioned by Meredith and Mantel, 2000). For example could reports and follow-ups be conducted on an individual level (such as by project members) and on a management level (e.g. by project managers).

Another aspect worth mentioning regarding the initiation phase is the role of the project manager. By comparing the contents of what is described under the heading 'Who' in the genre tables presented in the result, it becomes obvious that the project managers at the setting generally are involved in distributing information. The found genres imply that the project manager often is the one both distributing and controlling the formal communication of a project. This finding fits well with the thoughts of Nicholas (1990) that the project manager is the hub in the project communication.

In the discussion so far we consider us have answered the following question of this thesis (see section 1.2 Problem, Chapter 1).

*What genres are used in project communication today, and what media are used?*

We consider us have shown which genres are used in DC's project communication today together with media used, in Table 8. This was discussed in the former section. In this section we have further answered the question by showing that the genres found in DC are common to project communication in general. Explicitly this means that the genres and media summarised in Table 8 are the genres used in project communication today at the setting.

## 5.3 The intranet

DesignCompany is today using the intranet medium to distribute organisational information downwards. This is exemplified by for instance the website genre which often is used by the project manager distributing information to for example the project members. Also genres enacted through the Web medium such as different documents being published are often made and published by the project manager.

The result indicates that the medium intranet is used by the projects because of that the technique is available for the projects to use, rather than a greater thought has been made about the purpose of publishing information through this medium. We have not found a common opinion why and which opportunities this communicational medium convey. The usage appears to originate from some sort of unpronounced rule

within the setting. This lack of management is, according to Curry and Stancich (2000), not a good way to use the intranet technology.

A community brings, according to Orlikowski and Yates (1994), the understanding of how to enact the different genres by a specific group of people. Both the genre repertoire, as well as how individual genres are enacted, differs from one community to another. While people within projects use the project websites very little, if not at all, interested parties outside the projects are often interested in using the websites for finding information. Partly as a result of being outside the projects, feeling excluded from the community and partly because of the lack of consistent structure among the different project websites, these 'outsiders' have difficulties to find relevant information.

Curry and Stancich points out the necessity to have some kind of master plan of issues such as planning, maintaining and how and when to update websites in general. This is something we have not found in this study. The intranet websites studied appears to grow without any solid master plan. If there are any master plans these exist in the project managers minds.

If analysing the usage of the project intranet websites, from the four aspects presented by Curry and Stancich (2000), that information on the intranet ought to be up-to date, timely, maintainable, and cost effective we cannot find any general findings in the result that states that the project websites at DC fulfil these requirements to a greater extent.

This communicational medium is not that highly prioritised within the projects. As a result, published information is out-of-date and the needs of the users are not given the attention they might have gotten if the intranet websites would have been prioritised. In other words, if the appropriate resources and time were spent on this medium. Only one project website included in our study has been found to update some information displayed on the webpages often and regularly (e.g. every 24 hours). Some projects might even, according to the interviews, due to the cost; choose not to use the intranet medium as a communicational tool at all. The result shows several ideas from the interviewees of how one could manage the project websites, all somehow related to increase the availability of up to date information.

The users of the project websites have problem to find the information searched for. Curry and Stancich (2000) points out that it could be viewed as negative if too much irrelevant information is published on the project intranet websites. Symptoms of this have been discovered in the interviews where people say that they have made personal collections of links as well as other ways not including the intranet medium at all, to obtain the wanted information.

We have not found indications that the intranet websites have created new ways to communicate or changed work patterns within the organisation, as one might expect as an impact of the intranet according to Curry and Stancich (2000) and Bergquist and Ljungberg (1998). What we have seen is that people in general use other media than the intranet to get hold of needed information. The impact of the project intranet in the organisational communication constitutes a spaghetti structure, as described by Tang (2000). Several researches have shown that genres previously enacted through a traditional medium are reproduced when introduced to the Web medium, but also, in some cases, an evolution of existing genres and completely new genres have been identified on the Web (Paré & Smart, 1994; Yoshioka et al., 2000; Crowston & Williams, 2000). The only genres found in this study concerning the project websites have been reproduced genres from other media. We have not found any evolution of old ones or any cybergenres, which has been described by Shepherd and Watters (1998).

Many projects have a website up and running despite there are no requirements for the projects to have one. The content might not be the best for all interested parties and several other media (such as project file directories, e-mail, etc.) are competing with this one, but there appears to be a *will* within DC to have project

websites. All interviewees use the internal project websites in one way or another. If used right, an internal website can improve internal communication in a various ways pointed out by Curry and Stancich (2000), Kliem and Ludin (1997), and Barkowski (1999). One of these is that applications in other media, such as other information systems in DC, easily could be incorporated to the internal Web medium (Chaffey, 1998). We have found such implementations on project websites with connections to the systems R2 and D2. By incorporating these media into the intranet only one medium could be used to fetch all textual information.

Because of the inherent strive in DC for using the intranet medium we have made an effort trying to pick a minimum of appropriate genres found in the analysis, genres that are widely discussed by interested parties both within as well as outside the projects, and construct a design proposal for the project websites. But if this framework is to be practiced it brings a responsibility to the person in charge for the project website to make sure that the content is up-to date, timely, maintainable, and cost effective. These four factors are nothing we can influence by a description of a basic framework of genres used in DC's project communication today.

We consider all the found genres (see Table 8) of the study as candidates for genres to be put on the project websites. Although it is particularly genres classified in interviews in combination with discovered genres from the observed websites that we consider as a foundation for communication through the intranet medium and has based our design proposal on.

In our proposal we have excluded genres that only have been found in the project procedure model. This is based on our opinion that if these genres are not found on the intranet or by participant observations, they are not used in reality. It would have been rather simple to create a design proposal for the websites based solely on the project procedure model, but it is our belief that this would gain a proposal comprising formalised communication. If genres proposed by the model are not actually enacted they would probably not be used if we propose them in a website design. Putting them on the websites will then only result in people experiencing the websites to contain irrelevant information. If these are vital and obligated to use in projects we would suggest that before being put on the intranet, efforts must be made in making people understand why and how these should be enacted.

Another reason for our choice of which genres to include in the proposal, is based on research by Yoshioka, Yates, and Orlikowski (2000) and Watters and Shepherd (1997). They have showed that imitating and applying already existing genres from one medium to another are more intuitive to, and accepted by, the users. Based on this, our recommendation is that the project websites, to start with, only should include genres actually used by the projects and that these genres should be enacted through the Web medium as similar to how they are used according to our result. We do not include the meeting genre in this proposal. This is partly based on our belief that it could be technical difficulties trying to resemble how meetings are enacted, according to the result, through the Web. However the main reason for excluding meetings is that we find them to be that critical in project communication that we do not dare take the risk of proposing this kind of change in the form of the meeting genre. See Appendix C - Design proposal, for a proposal of genres to be communicated through the Web.

We regard the discussion that has been held in this section to answer the following question of this thesis (see section 1.2 Problem, Chapter 1).

*Which of the discovered genres are appropriate for an intranet?*

Also the design proposal it self (Appendix C - Design proposal) could be said to answer the question by showing which genres we consider appropriate for an intranet.

## 5.4 Impact

According to Kreps (1990) organisations are social systems composed of people working towards common goals. In order to achieve these goals the members of the organisation need to know what the goals are and how their individual roles and tasks relate to these. It is through communication this knowledge is gained. Knowing genres is a way to understand how a community, for example an organisation, communicate.

One of the primary reasons for working in projects is the need to adapt the organisation to a competitive, fast changing and unstable environment. The degree of uncertainty and complexity that often characterise projects could vary according to Nicholas (1990). Nicholas posits that executing similar projects could reduce the uncertainty in projects, which originate from the difficulty of predicting the project result. These similarities could either be created by using similar work processes in the projects or by working towards a similar result (Verzuh, 1999). Kreps (1990) clarifies the discussion by posing that it is the communication that primarily influences the level of uncertainty, because communication is the means by which people create the knowledge needed to reduce uncertainty.

Through out our study we have repeatedly found our selves discussing the relation between project theory and genre theory. This discussion has lead to us creating the model as shown in Figure 7.

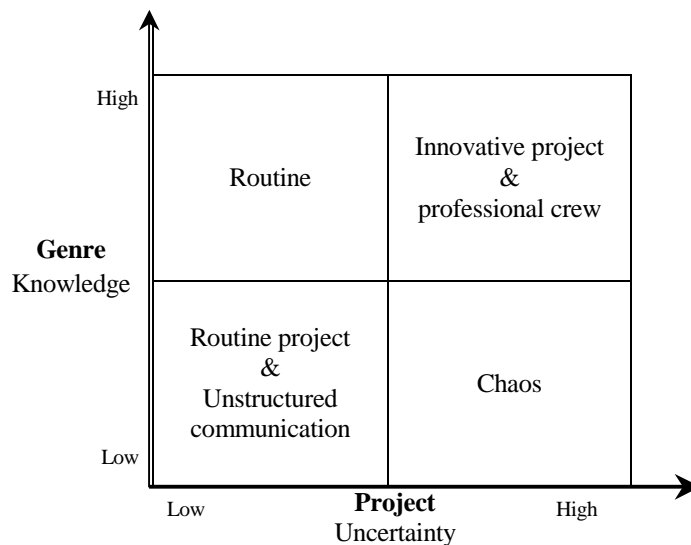


Figure 7 - Projects and genres

This model might be used in various contexts to discuss the impact of genre knowledge, for example, on an individual, project, or an organisational level. In the discussion below we choose to focus on the impact of genre knowledge at the project level.

The figure implies that increased knowledge about genres may have an impact of lowering the projects degree of uncertainty related to communication. If projects are conducted in relatively unknown or unfamiliar areas, knowledge is needed regarding how to communicate in order to work innovative, while a lack of communication knowledge in combination with an unfamiliar product (area) could create chaos. If

the genre knowledge is high among the participants of the project and the project at the same time is conducted in a familiar area the work of the projects may become more of a routine nature.

By studying the project communication in DC today and mapping the genres common to projects, we have made the genre repertoire of this “community” explicit. An impact of our result could be increased knowledge about the project communication, and from this it follows that uncertainty of projects could decrease. If this increased knowledge is combined with projects conducted in somewhat unfamiliar areas, for instance in the frontier of system development, innovative projects could be gained. If the genre knowledge is used to formalise communication in combination with developing familiar products in the projects, it might end up as an ongoing operation, something according to Nicholas (1990) that cannot be classified as a project.

We think that formalising project communication likewise any other communication is risky, because then the benefits of informal communication could be lost. Just as the result has shown, that attempts in some cases are made to circumvent recommendations or guidelines that are interpreted as rules, there is a saying that ‘rules are to be broken’. By this we imply that when individual goals disagree people will not bother to communicate the recommended way, and attempts probably will be made to circumvent rules, which will result in disorder and inefficacious rules. If a formalised communication is to function, minimum is getting people to understand why this is done, and what the benefits would be.

## 5.5 Reflections upon the method

At this setting we have been outsiders but taking an ethnographical approach have hopefully gained us an insiders insight. According to Yates et al. (1999) a structuring process made by an insider is more likely to be accepted within the community.

Negative aspects we have found regarding genre theory is the difficulty to understand what a genre is. A genre could be very abstract as well as it could be very fundamental. Genres could be everything or nothing. By using an ethnographical method we believe to gain a deeper understanding of the organisational communication. Perhaps an ethnographical approach is the only way for an outsider to understand the genres of a setting.

The combination of taking ethnography and genre theory as perspective when looking at project communication rather than just focusing on technical aspects such as the intranet technologies available has made us believe that we have found a wide spectrum of the formal communication available. Our method has led to that genres of communication have been found that until today has been excluded from the intranet. From this rich material we have been able to design a proposal that is based on the communication actually practiced in DC today.

When we have used our analytical model named ‘5WIH’ we have searched in the different information sources, for different types of communication and similarities of the genre characteristics that Orlikowski and Yates (1992) stress. It has been difficult to separate the different aspects of an identified genre but we think it has been useful with so many aspects, since this forced us to analyse the genres from different angles. Just using the genre characteristics purpose and form, as many researchers have (e.g. Orlikowski & Yates, 1994; Crowston & Williams, 2000), would probably not have gained us such detailed descriptions of the genres, but it might have been easier to classify genres. To enhance the analytical model one might add a seventh aspect concerning the terms used in a separate community when referring to the genres. We have found that the genres often have been referred to with similar names all over the setting. But one have to be

attentive not be blinded by this, since similarities in names do not have to imply that it actually is the same communicational activity intended.

By applying genre theory on an organisation one gets a new perspective on basic recurrent situations known by the majority of a community, and an update of the individual mind maps could be gained. The terminology of genre theory and the result together create a basis for discussions regarding topics that today might be considered as trivial.

In our empirical study we were surprised to find that the opinions of the interviewees regarding the project websites were so negative. Although trying to get the interviewees to come up with positive aspects of the intranet where in great minority compared to the negative opinions. Due to lack of time we could not include as many interviewees, such as some more project members, or project websites as we would have liked to. Although we believe to have gained a very rich view of the project communication within DC with the scope obtained.

## 5.6 Future

Besides already mentioned recommendations and proposals in the discussion and that could be found in Appendix C, we have some further ideas of the use of the result of this thesis.

One idea would be to use the genres to construct a technical artefact, such as a project website on the intranet. The '5W1H' could be used as a mind map to assure that the content of this information system is constructed for the appropriate target group. As we have noticed similarities between the genre characteristics and object-oriented modelling, another idea is that '5W1H' could be used in an object-oriented approach to construct a specific communicational context.

We have found the following issues for further research.

- We experienced that the time set for this study was very short. It might be interesting to conduct a similar research study but during a longer period of time that includes active participation within the daily work of a project. Would a more deep digging research result in finding other genres, genres concerning the informal communication or the system development process?
- Another idea is to conduct a follow up of our study, with the purpose to see if there has been any genre change.
- Also further exploration of the 'projects and genre' model (as described above under 5.4 Impact) would, from our point of view, be an interesting issue for additional research.
- Finally, we wonder how these genres proposed could be implemented technically through an intranet or some other media?



# Chapter 6

## Conclusions

We used genre theory as a guideline to identify individual genres of organisational communication in an ethnographical study of project communication. A total amount of 44 common genres practiced within the setting were discovered. Also different media, where genres are practiced, were found during this process, as for example HTML, telephone, videoconference, and Ms Word. Among the found genres at least four ('Meeting request', 'Project meeting', 'Technical meeting', and 'DC Checkpoint') constitute a genre system. A genre system consists of genres that are interrelated and connected to a common communicational context.

Genre theory turned out to be a useful and practical way to identify building bricks of communication in use within the object of study. Even though we applied the genre theory in the area of project communication we are convinced that the theory could be applied in any communicational context. When comparing genres found with the theory of organisational communication a broad likeness was discovered.

It is possible to design project communication for the internal project websites (an intranet) using genre theory (see appendix C for a design proposal). The genres chosen to be included in the design proposal were those already enacted within the setting, i.e. generally genres enacted through the intranet web medium and also described at the interviews, as recommended by Crowston and Williams (2000).



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# Appendices





## **Appendix A - Project roles**

### **Project Sponsor**

The Project Sponsor is the manager and internal orderer of the project, who is financially and commercially responsible for the project and its outcome. The project sponsor is responsible for making the business decisions in the project, including making DC Checkpoint decisions. The project sponsor chairs the project steering group. The project sponsor is the primary risk taker for the project and takes the DC Checkpoint decisions, based on an assessment of the project's alignment with the organisation's business direction. The purpose of the project sponsor role is to ensure that the manager who is the financial risk taker for the project has defined responsibilities and tasks in the project.

### **Multiproject Manager**

The multiproject manager is the manager who is responsible for controlling the organisation's total project portfolio, for the organisation's use of resources in projects, and for prioritising between the projects in the project portfolio. The multiproject manager is the most important bearer of the project culture within the organisation.

The purpose of the multiproject manager role is to ensure that the manager who has been given the authority to manage the organisation's project portfolio has defined responsibilities and tasks in the project.

### **Project Steering Group**

The project steering group consists of managers in the organisation who have the authority to take an active part in decisions concerning the steering of the project, and who can provide the project with the necessary management support.

The purpose of the project steering group is to ensure that the organisation's support to the project manager in executing the project is coordinated, and that the project has access to people with the authority to provide the project with resources.

### **Project Steering Group Member**

In order to promote clear and uniform decisions, managers affecting the project should exercise their influence together in a Project Steering Group.

### **Project Manager**

The project manager is the person who has been given the authority from the project sponsor to carry out the project. The project manager is responsible to ensure that the project goal is reached and that the customer's requirements are fulfilled.

The purpose of the project manager role is also to ensure that the responsibility for the project is assigned to someone who has been given the authority to manage the project toward its goal.

### **Project Staff**

The staffing of the project management function depends on the type, complexity and size of the project, and the competence of the project manager.

In large and complex projects, or in projects where special competence is needed, the project manager can delegate project management responsibilities to one or more functions. Examples of such functions are:

- Quality coordination
- Technical coordination
- Project administration
- Configuration management
- Business coordination
- Project finances

### **Project Management Team**

In projects where sub projects are needed, the project manager delegates the management of the sub projects to sub project managers. Creating a project management team consisting of the project manager, the project staff and the sub project managers, will support the project manager, increase alignment within the project and prevent sub optimisation.

### **Sub project**

A sub project is a segment of a project with a clearly defined objective and defined time and cost limits. The purpose of dividing a large and complex project into sub projects is to create conditions that help the project manager to manage and control the project in a better way, and to give all project members a manager in the project they can be in touch with in their daily work.

### **Resource Owner**

The Resource Owner is responsible for who should work in the project and how the work should be performed. A resource owner is a manager who provides the project with human resources, equipment, premises, methods, tools and the competence needed. The resource owner is also responsible for delivering results to the project in accordance with the agreements made with the project manager.

The purpose of the resource owner role is to ensure that managers who provide the project with resources have defined responsibilities and tasks in the project.

### **Receiver**

The Receiver is responsible for seeing to it that the project outcome is manageable and formally accepted by the receiving unit. The receiver is a manager in the organisation that takes over the responsibility for the project outcome after project conclusion. The receiver is responsible for work related to the management of the project outcome regarding, for instance, manufacturing, maintenance, support or sales.

The purpose of the receiver role is to ensure that the managers who will manage the project outcome after project conclusion are identified and have defined responsibilities and tasks in the project.

### **Sub project Manager**

The sub project manager is the person who has been given the authority from the project manager to execute a sub project. The sub project manager is responsible for seeing to it that the sub project goal is reached and for supporting the project manager.

The purpose of the sub project manager role is to ensure that the responsibility for a sub project is assigned to someone with the authority and the competence needed to control the sub project work within the limits set by the project manager.

### **Team Leader**

Team leaders are responsible for managing their teams and delivering results in accordance with the agreements made with the project manager.

### **Subcontractor**

Subcontractors are responsible for delivering results in accordance with the agreements made with the project manager or with other managers within the organisation.

### **Customer**

### **Reference groups**

**Individuals and organisations, other projects, end-users, suppliers, partners...**

### **Different Roles Given to Project Team Members**

Depending on the project type, and its size and complexity, different roles in the project executing function should be specified.

Suggestions for such roles can be found in the complete project models for internal projects, product provisioning projects and customer order projects.



## Appendix B - Interview topics

- Personal particulars.
- Relations to project?
- Interest in projects?
- Activities in projects?  
(meeting etc)
  - Which do you have?
  - Why - purpose?
  - Where – predetermined place?
  - When – limits of time or regular?
  - Who/m – which?
  - What – content – what is treated?
  - How – Form, medium, structure (formal / informal / obligatory), jargon?
- Documentation  
Obligatory? Who creates, receives, media, time limits?
- Observe the web
  - Roles within project, responsibilities?
  - Thoughts regarding construction, structure, function, content. Why/why not. Good/bad.
  - Who uses what information?
  - Qualification requirements.
  - What is put on the Web and not. Why?
  - Which information are you interested in?
- Do you distribute information to projects? How? E-mail, directory structure, paper, face-to-face, intranet?
- Attitude towards the project procedure model.



# Appendix C - Design proposal

## Design proposal for internal project websites at DC

This suggestion of design for the internal project websites is based on the common genres found in our study. By this suggestion we do not attempt to provide a framework that will predict, limit or fix the genres that have been identified. Instead this suggestion consists of the lowest common denominator found in the study. This is a structural proposal and thus no technical aspects, such as how to implement the proposal, are included. Besides this, project specific genres for individual projects are not included, and therefore we suggest that the individual projects add these themselves. This design proposal can only be expanded.

These are the five headings that could be used on a high level:

### Project official documents

Here one could expect to find project specific genres such as the Budget, Time reporting table, Project specification, Time schedule, Final report, and Agreement specification.

### Meeting documents

Under 'meeting documents' genres tied to the different meetings ought to be presented. This means Meeting request, Agenda, Minutes of meeting, DC Checkpoint assessment report, and Action points. As a suggestion this could be done using the genre Document archive.

### Project internal documents

Here the project members might expect to find headings to genres like the Manual, Release mail, Product document, Progress report, and Product documents. These might all be presented by appropriate archive genre.

### Project communication

Under this heading one might expect to find genres for contacting the project. Genres such as project Member archive/list, the Mailing archive and the Organisation chart might be found here.

### Links

External link archive  
Sub project archive

Apart from the topics suggested above one should also when constructing a project website include genres specific for the Web medium. By this we imply genres that indicate that it is a website, i.e. genres introducing the project to the internal web. This means that the genre project narratives should be presented in some way. One suggestion is to place a somewhat short text on the first page that describes what the project does etc. If there is any instructions that ought to be given the project members concerning the website this is suggested to, for example, also be placed on the first page.

Other features that would be appropriate to consider when designing the project websites is to give the user an overview of the project status and the eventual relation between the project and the product. Also information regarding the customers might be useful. This could be to show if a customer has been distributed with project information, which information it was and also when the information was distributed.














Based on what have been described above, an example follows below showing how the project websites could be designed. The most important issue regarding the construction of the websites is that at least the names of the different headings concerning the identified critical genres are used with the same terminology whatever project constructing it.

**PROJECT FLEXFILES – status: finished**

- +Project official**
  - project specification
  - budget
  - time schedule
  - agreement specification
  - final report
- +Contact**
  - project members
  - mailing lists
  - organisation chart
- +Project internal**
  - manuals
  - release mail
  - product document
  - progress report
  - project documents
- +Meeting**
  - meeting archive
  - action point archive
  - DC checkpoint assessment reports
- +Links**
  - sub projects
  - external link

## Meeting archive

Sub project manager meeting | Breakfast meeting | Technical meeting | etc...

Date	Meeting request	Agenda	Minutes of meeting
2001-01-01			Link
2001-01-08	Link		
2001-01-15	Link		Link
2001-01-22	Link		
2001-01-29			Link
2001-02-05		Link	Link
2001-02-12			

Previous archives: [1999](#) [2000](#)

Last updated: 2001-05-21

Figure 8 - Project website design proposal



## Appendix D - Terminology

Term	Meaning
D2	The database shared within the entire enterprise, where the documents regarding the products (and the projects) are stored.
DC	The company in which the study is conducted.
DesignCompany	The company in which the study is conducted.
Enterhyspro	The hardware development process for the entire enterprise.
Hyspro	The hardware development model developed and used within DC.
R2	The administrative system where information is stored regarding existing products and how they interrelate.
Syspro	The system development procedure developed and used within DC.