This chapter discusses qualitative research as it is relevant for the first research process, then the application of theory for this particular case follows.

2.1 A Brief Summary of Qualitative Research

Although there are vast differences between the qualitative and quantitative research there is no set of factors that allows distinguishing them as mutually exclusive. Before exploring one of them in more detail the difference of the two approaches are outlined. Figure 1 offers insights on the general characteristics and differences of each of them.

A main objective of qualitative research is to gain preliminary insights into decision problems and opportunities. It focuses on the collection of primary data from small samples of respondents by asking questions or observing. Qualitative research is used in exploratory designs. Quantitative research on the other hand places heavy emphasis on the use of formalized standard questions and predetermines response portions in questionnaires or surveys administered to a large number of respondents.

Qualitative researchers have to be well trained in interpersonal communication and have interpretive skills. They frequently use open-ended questions allowing for in-depth probing of the initial responses and specific observation techniques for analysis of behavior.

The non structured format of the questions and the small sample size limit the researcher’s ability to generalize the qualitative data to larger segments of subjects. Nevertheless, qualitative data have important uses in understanding problems in areas of initial discovery and preliminary explanation. This kind of data can provide decision makers with initial ideas about specific problems or opportunities, theories and models or constructs (Hair, Busch et al., 2000, 216). In most explorative research attempts the raw data will be collected through qualitative data collection.
Qualitative research methods for collecting and creating additional information are appropriate when researchers are (Hair, Busch et al., 2000, 217)

- In the process of identifying a business problem or opportunity or establishing information requirements
- Interested in obtaining some preliminary insights
- In the process of building theories and models to explain relationships, between two or more constructs
- Attempting to develop reliable and valid scale measurements for investigating specific market factors, consumer qualities and behavioral outcomes
- Interested in new-product or service development or repositioning current product or service images

In conclusion of above discussion on the main characteristics of qualitative research it can be summarized that: „Qualitative research provides an in-depth insight; it is flexible, small-scale and exploratory and the results obtained are concrete, real-life like and full of ideas.” (Ruyter and Scholl, 1998)
2.1.1 Advantages and Disadvantages of Qualitative Research Methods

Qualitative research methods offer several advantages for today’s researchers. One of the main advantages is the fact that qualitative research is economical and timely because of small samples. An other advantage is the rich and in-depth data about a subjects’ attitudes, beliefs, emotions and perceptions (Hair, Busch et al., 2000). Such data can be invaluable to gaining a preliminary understanding of behaviors. Because of the richness of the qualitative data it can ideally supplement the facts and estimates gathered through other primary data collection methods. The key advantage is that the researcher does not have to rely on just reported behaviors but can accurately investigate and record actual behaviors.

Advantages of some qualitative research methods include that they provide insights into building marketing models, identify marketing problems and opportunities, enable researchers to predict consumer behavior, develop better marketing constructs, and more reliable and valid scale measurements.

Although useful information is gained through qualitative research, there are two major disadvantages. One is the sample size limitation and the other one is the need for well-trained interviewers, observers, and investigators.

Another disadvantage is the fact that small differences often the basis for marketing success and failure can not be detected by this sort of data.

Table 1: Advantages and Disadvantages of Using Qualitative Research Methods (Hair, Busch et al., 2000)

<table>
<thead>
<tr>
<th>Advantages of Qualitative Methods</th>
<th>Disadvantages of Qualitative Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economical and timely data collection</td>
<td>Lack of generalizability</td>
</tr>
<tr>
<td>Richness of the data</td>
<td>Inability to distinguish small differences</td>
</tr>
<tr>
<td>Accuracy of recording marketplace behaviors</td>
<td>Lack of reliability and validity</td>
</tr>
<tr>
<td>Preliminary insights into building models and scale measurements</td>
<td>Difficulty in finding well-trained investigators, interviewers and observers</td>
</tr>
</tbody>
</table>

In order to gain in depth insights into the phenomenon of interest it is essential to go into the field and observe the phenomenon where it is happening, participate to achieve detailed insights or interview people who are members of the group of interest. One form to gain data in qualitative research is the interview. In the following three sub-chapters the questions about what to obey when going into the field, how to do qualitative interviews, and how to analyze them will be discussed and explained.
2.1.2 Preparing for the Field and the Selection of Experts

If the researchers do not know too much about the group or phenomenon of interest they are well advised searching for relevant literature, filling in the knowledge of the subject, and learning about what others have said about it (Babbie, 1998, 289).

A next step is to make use of informants who have already studied the group of interest or with someone who is familiar with it. The relationship with the informant is a key indicator of the quality of the findings. Ideally the relationship goes beyond the researchers’ research role.

The way the informants are approached and the role of the researcher influence the type of information gathered. Informants’ knowledge is a mixture of facts and personal point of view (Babbie, 1998, 289).

Normally a researcher wants informants that are typical of the group studied. Otherwise their views and opinions might be misleading. However, researchers need to be cautious since simply because someone is willing to work with investigators makes him/her somewhat atypical within their group. The status of an informant might limit their access to the different sectors of the group under study as they might be “marginal” members.

In the underlying survey the view of experts - or to use a different terminology, the information of executives involved in the mobile industry - is of relevance. To get a coherent picture of the mobile commerce and mobile marketing industry various experts at all stages of the m-commerce value chain should be included in the interviewing process. This will involve interviews with executives holding positions in the industry of question. But what is an expert, or an executive that can be regarded as an expert? According to Rubin (1995) an expert is a person with in depth knowledge about the research topic. This knowledge can derive from working in that specific industry or by doing research in that field. The experts should be prepared to share their knowledge and talk about it. Above that the different experts’ views should reflect the different aspects and opinions of the whole industry. Due to the fact that the knowledge of the individual expert is of critical relevance for the survey, the selection of the sample is crucial. Thus, it is appropriate to choose the sample on basis of your own knowledge about the group. This is called ‘purposive sampling’ (Shaw, 1999).

An executive interview often takes place in the surrounding the interviewee is used to and comfortable, which is his office or a conference room in the office building. According to Shaw (1999) it is important that the interview takes place in a surrounding the interviewee
knows and is comfortable in. The interview should take place in a relaxed atmosphere to support the willingness of the interviewee to share his information (Kepper, 1996, 35).

Often it is very expensive to conduct executive interviews and getting an appointment can be time consuming (Hair, Busch et al., 2000, 257).

The number of interviews is depending on the complexity and the quality of data obtained in each interview. In case of ‘theoretical saturation’ – nothing new can be explored and there is no need for more interviews (Rubin and Rubin, 1995, 72). Due to the fact that in qualitative research not the number of equal statements is counted but the quality, richness, and content of the information provided is of relevance this procedure is feasible.

2.1.3 Qualitative Interviewing

As opposed to surveys with rigidly structured questionnaires, qualitative interview design is flexible, iterative and continuous. This indicates that the questionnaire is redesigned throughout the project. Iterative implies that in the process of gathering information, testing and analyzing it the researcher comes closer to a model of the phenomenon studied. A general plan in form of an interview guideline with open ended questions is frequently used to support the interviewer (Rubin and Rubin, 1995, 43 - 47). The role of the interviewer is the one of an interested listener who wants to obtain as much information as possible. Generally, no closed questions should be used but for avoiding misunderstandings closed questions can be included to probe.

The interviewer has to be a good listener and subtly direct the flow of the conversation. The advantage of using a guide line is that the answers can be easily compared when analyzed; the open questions secure that the interviewee talks most and shares his knowledge and that the relevant topics are covered throughout the interview.

One of the main problems in qualitative interviewing is the influence of the interviewer on the interviewee. Depending on interests, personality, experience, and knowledge of the interviewers they will interpret the answers of the respondent. Statements that are wrong, statements in accordance with the interviewers' views or completely the opposite will stick more in the interviewers' memory (Tema-Lyn, 1999). The interviewers can solve this problem by making themselves aware of his attitudes and interpretation patterns (Maxwell, 1996, 90). A certain degree of sympathy should exist between interviewer and interviewee but should not result in not detecting or realizing wrong statements (Rubin and Rubin, 1995, 12).

The complete interviewing process includes seven stages. 1 thematizing (clarifying the purpose of the interviews), 2 designing the proc-
ness through which the purpose is accomplished, 3 interviewing, 4 transcribing (creating a written text of the interviews), 5 analyzing (determining the meaning of the gathered material), 6 verifying (checking the reliability and validity of the material) and finally 7 reporting.

The steps following the actual interview, being transcribing, analyzing, verifying and reporting will be explained in the following sections.

2.1.4 Qualitative Data Processing and Analyzing

It is vital to make full and accurate notes of the interview and what went on. Even tape recorders and cameras cannot capture all that happened. If possible, one should take notes during the interview which is not always easy. When this is not possible the interviewer should write down the notes as soon as possible. The notes should include the information and an interpretation. A tape recorder can be used to support the transcription of the interview but the interviewer should always ask if the interviewee agrees with taping the conversation. The interviewer should never trust his memory more than necessary (Babbie, 1998, 293). The tape can help to avoid misinterpretation and errors in the notes, wrong memories can be detected (Maxwell, 1996, 89).

Some of the information can be anticipated before the study. Thus, it is possible to support the note making with standardized forms (Babbie, 1998, 294). The notes should be transcribed and typed on the same day they were taken. By doing so as many details as possible can be included and ideally be double checked with the tape that was recorded earlier.

All the answers have to be interpreted regarding who said it and in what context it was mentioned (Kepper, 1996, 58). There are various approaches for the interpretation of qualitative data. Most of those are used in sociology and are not applicable for market research. In the following paragraphs only the ones relevant for market research are discussed (Kepper, 1996, 59).

When making a summary the text is repeated in a shorter form that still includes the important statements. Through paraphrasing the unnecessary words are deleted and the text is paraphrased. This enables the researcher to compare the various statements and delete the ones that are repeated. In the last step the statements are bundled to reduce the data and facilitate interpretation (Weinhold-Stünzi, 1994).

When coding, the same ideas and statements of the different interviewees are put into groups and categories. The target is to find a coding guideline that allows for systemizing and structuring the data (Kepper, 1996, 61). The first step is to find some categories in order to
code the text according to those. A statement can end up in more than one category. Factors that are identified as most important throughout the interviews can serve as categories. Those deal with important issues of the survey which cannot be made up prior to the survey. Irrelevant text can be deleted (Rubin and Rubin, 1995, 239). In some cases it makes sense to reduce the data within one category by summarizing it.

A comparison of statements within the categories and between categories is a good start for the interpretation of the data. Inconsistencies do not need to be consolidated but explanations for the different answers should be found. To summarize above discussion one can state that making categories and coding the data enables the researcher to focus on the relevant information.

Evaluation of qualitative research using measures like reliability, validity and objectivity as in quantitative research is only applicable with some restrictions.

Objectivity involves the reduction of subjective influence on the data. Every researcher should come to the same findings doing the same research. In the case of qualitative interviewing it is impossible to conclude with the same findings as the interviewer influences the results due to his personality and interpretation. Additionally, the interviewee will behave differently facing different interviewers.

Reliability demands stable measurement and a certain pattern, using the same design. Details can be found in Ruyter and Scholl (1998). Validity provides that the findings are representing what really was measured. This can be reached by an open, flexible and communicative survey (Kepper, 1996, 214). Among other measures are transparency and consistency. "Transparency means that a reader of a qualitative research report is able to see the basic processes of data collection." (Rubin and Rubin, 1995, 85)

To stay within the scope of the survey the interested reader is referred to Rubin and Rubin (1995, 85;87) for more details on transparency and consistency (Rubin and Rubin, 1995, 85) and the next chapter discusses how the theoretical background on qualitative research was applied in this research project.

2.2 Carrying out the Qualitative Research

Potential experts were identified and contacted via e-mail in October 2003. Nearly all the interviews took place in the interviewees' premises in October and November 2003 and took between 30-45 minutes.

The interviewees were experts in the mobile industry, in research, and consulting. The aim was to receive information from all players and researchers along the m-commerce value chain. Thus, researchers
were identified through their primary field of research and managers due to their positions in companies dealing with mobile services. Employees from network operators, consulting companies, advertising agencies, mobile marketing companies, location-based services companies, Universities, the International Telecommunication Union, etc. were among the respondents. Due to the fact that the interviewees came from various cultural backgrounds insights into the European, Asian and Northern American industry was gained.

The following table shows the companies and Universities involved in the interviews, the interviewees' position, the geographical background, and the competencies covered on the m-commerce value chain (see Chapter 3. for details on the m-commerce value chain).

Table 2: Group of Interviewees and their Background

<table>
<thead>
<tr>
<th>Company</th>
<th>m-commerce Value Chain Competencies</th>
<th>Position of Interviewee</th>
<th>HQ of Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>WigeoGis</td>
<td>CP, MS</td>
<td>CEO</td>
<td>Austria</td>
</tr>
<tr>
<td>A.D. Little</td>
<td>All</td>
<td>Manager</td>
<td>France</td>
</tr>
<tr>
<td>Waseda University Japan</td>
<td>All</td>
<td>Professor</td>
<td>Japan</td>
</tr>
<tr>
<td>University of California Berkeley</td>
<td>All</td>
<td>Professor</td>
<td>USA</td>
</tr>
<tr>
<td>International Telecommunication Union</td>
<td>All</td>
<td>Policy Analyst</td>
<td>Switzerland</td>
</tr>
<tr>
<td>MobileMemoir LLC</td>
<td>CP, MS, MM</td>
<td>President</td>
<td>USA</td>
</tr>
<tr>
<td>12Snap</td>
<td>All</td>
<td>Senior Consultant</td>
<td>Germany</td>
</tr>
<tr>
<td>Metronet</td>
<td>MT, MS, MM, MI</td>
<td>CEO</td>
<td>Austria</td>
</tr>
<tr>
<td>t-systems</td>
<td>MS, MI</td>
<td>Member of Executive Board</td>
<td>Germany</td>
</tr>
<tr>
<td>Mobilkom</td>
<td>All</td>
<td>m-commerce Head of Dep.</td>
<td>Austria</td>
</tr>
<tr>
<td>IT Verlag</td>
<td>All</td>
<td>Editor</td>
<td>Austria</td>
</tr>
<tr>
<td>t-mobile</td>
<td>MM, MT, MS, MI</td>
<td>Executive Vice President</td>
<td>Germany</td>
</tr>
<tr>
<td>Saachi Saachi</td>
<td>CC, CP, CM</td>
<td>Chief Executive Officer</td>
<td>Each Country with rep.</td>
</tr>
<tr>
<td>One Connect</td>
<td>CP, MM, MT, MS, MI</td>
<td>Head of e-Business Development</td>
<td>Austria</td>
</tr>
<tr>
<td>Octane Access</td>
<td>MS, MI</td>
<td>Marketing Director Research &amp; Development</td>
<td>USA</td>
</tr>
<tr>
<td>NTT DoCoMo</td>
<td>All</td>
<td>Senior Manager</td>
<td>USA</td>
</tr>
<tr>
<td>Booz Allen Hamilton</td>
<td>All</td>
<td>CEO Research Laboratories</td>
<td>Japan</td>
</tr>
<tr>
<td>University of Western Australia</td>
<td>All</td>
<td>Principal</td>
<td>France</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Professor</td>
<td>Australia</td>
</tr>
</tbody>
</table>

HQ=Head Quarter, CC=Content Creation, CP=Content Packaging, MM=Market Making, MT=Mobile Transport, MS=Mobile Services and Delivery Support, MI=Mobile Interface & Applications

After 20 interviews no more new findings were generated, a stage of 'theoretical saturation' was reached. Thus, no more interviews were
conducted. In a qualitative survey not the number of equal answers but the richness of data generated is of relevance, therefore, the termination of the interview process was feasible.

A flexible guideline was used for the interview. The questions included in the guideline covered the areas that needed exploration according to the research problem and the deducted research questions. The guideline allowed the interviewer to go into more detail where necessary and receive high quality information from the interviewees. The guideline was adapted during the course of the qualitative research phase and included the following questions:

- Which factors lead to end-user adoption of mobile services?
- Which are the drivers of mobile service quality?
- What do you consider to be the most successful mobile services? Why?
- Is it possible to create value for the customer through mobile services?
- What could be determinants for perceived value in this context?
- What makes a loyal mobile service customer?
- What is the profile of a typical mobile service user?
- What trends can you identify in Europe, Asia and the USA?

Nearly all the interviews were conducted in a face to face interview; some, though, were completed through sending the guideline via e-mail and discussing the questions on the phone. The guideline should provide that all the relevant topics were covered in the interviews.

The interview was held by one interviewer, taped with the interviewees’ permission and transcribed on the same day. The interviewer encouraged the interviewee to respond freely in form of an open conversation. Thus, yes/no answers could be avoided and open answers provide that the interviewee talks a lot. Generally there was a willingness to give away a lot of information. Some of the experts offered assistance in case questions occurred at a later time. The interviewees recommended some literature and Web sites containing additional information for the survey.

The following chapters present the findings of the explorative research starting with an introduction to m-commerce, the m-commerce value chain, m-commerce in different regions and a taxonomy of applications. The arguments are based on both literature review and the expert interviews.