The Concept of e-Service from a Social Interaction Perspective

Göran Hultgren and Owen Eriksson

VITS Research Network,
Department of Informatics, Dalarna University
Sweden
ghu@du.se

Abstract

Fundamental for e-services is the use of an information system (IS) as a performer in the inter-ation between a service provider and customers. The significance of e-services is an emergent trend in the discipline of Information Systems, but the concept of service is not explicitly described. The significance of e-services is an emergent trend in the discipline of Service Marketing, but the IT perspective is narrow.

The paper discusses the concept of e-service based on Service Marketing Theory and Information Systems Actability Theory. Both theories are in line with a social interaction perspective. A key aspect of the Service Marketing Theory is the service encounter, i.e. the situated and social interaction which takes place when the service provider and the customer meet and produce a service in interaction. A key aspect of the Actability Theory within the discipline of Information Systems is to view IS as action systems. This emphasises that the IS is used by actors to perform communication actions i.e. social interaction through the IS or based on messages from the IS.

By bringing Service Marketing Theory and Information Systems Actability Theory together, a social interaction perspective on the concept of e-service is outlined useful in analysing and designing e-services.

Keywords: E-service, IT-service, social interaction, concept, relationship, use situation.

1   Introduction

Today, much of the world economy is focused on the service sector (Stafford and Saunders, 2004). One of the changes driving service economy growth has been the rapid development in computer technology, mobile technology and the Internet (ibid.). There are e.g. mobile positioning services, traffic information services and banking services on the Internet. With the help of channels such as the Internet and mobile telecommunications, information and functionalities are delivered by service providers, and are used by customers with the help of a computer based information system (IS) and information and communication technology (ICT). There are also services where the service provider renders the possibility for customers to interact with other customers, e.g. e-marketplaces. The characteristics for these types of e-services are that customers can meet and communicate with each other.

The focus of this paper is on services where the service provider and the customer(s) do not meet at the same time, and/or at the same place, i.e. the IS act as a service performer and medium in the service delivery process. This is an exciting new area of study which needs new perspectives and new methods which deal with the design, delivery and impact of these services, because these type of services are likely

to push the limits of software engineering in terms of analysis, design and testing (Chidambaram, 2001). A problem is that there are several terms used in the IS-field to describe these new ways of using IS such as e-services (e.g. Stafford and Saunders, 2004), web-services (e.g. Stern and Davis, 2000) and IT-services (e.g. Rodosek, 2003), and this creates confusion. The problem is both that different terms are used and the confusion about the conceptualisation of this phenomenon within the discipline of Information Systems. We choose the term e-service to talk about this phenomenon and in the paper we will discuss the meaning of this concept.

Looking at IS as a performer for delivering services changes the way we look upon IS and the discipline of Information Systems. The discipline was defined by the use of IS/ICT for administration and based on systems and organisational theory (Dahlbom, 2002). Today we can see the convergence of computers, telephones and media with the Internet, and how IS is developed to support e.g. transport and travel activities and the everyday lives of people. The focus on the use of IS in offices and factories is, due to this convergence, replaced by the need to focus on the use of IS in society and in the market (ibid.). According to Dahlbom (ibid.) service thinking is focused upon individuals, actions, results and support. This implies a shift of context from the use of IS in order to improve the efficiency of routines and work processes of the organisation, to a focus on customers acting in a market using occasional services to be bought, used and consumed in a flexible way.

As a consequence we have to reconceptualise our view of the IS because the IT-artefact has to be understood in the context where it is used (Kaitovaara and Nurminen, 2003). Orlokowski and Iacono (2001) write *"Given the context-specificity of IT artefacts there is no single one-size-fits-all conceptualisation of technology….. As a result, IS researchers need to develop the theoretical apparatus that is appropriate for their particular types of investigations, given their questions, focus, methodology, and units of analysis"*. (ibid. p.131). According to Orlokowski et al. a main problem in IS-research is that the IT-artefact is taken for granted. Due to the change of focus from IS as tools for administrative support to a means for delivering e-services, there is a need for theorising the use of IS in this new context.

An area which could be helpful in order to discuss the concept of e-service is Service Marketing Theory (SMT). According to this theory a service is produced and delivered in the interaction (i.e. in the service encounter) between a service provider and a customer (e.g. Gönroos, 1998) in order to fulfil customer needs. Fundamental for services according to SMT is that they are produced and delivered in a social interaction between the customer and the service provider. In the Social Sciences discipline social interaction is defined as *"the process that takes place when people act in relation to each other"* (Johnsson, 1995). Today there is also a growing interest for e-services within SMT, because many services have the characteristics of being produced and consumed by the customer, with the help of IS, without the need to interact with a human representative from the service provider. However, in SMT the use of IS is mainly considered as a self-service technology (SST) (Meuter et al., 2000) which implies that e-services do not include social interaction. The view of e-services as a SST is also, as we will show in this paper, too narrow.

We maintain that if we want to understand e-services we have to understand how IS could be used in social interaction, and this can be done using the Actability Theory on Information Systems (ISAT). This theory is of interest because it describes the IS as action systems used in a social action context (Ågerfalk, 2003, Ågerfalk and

Eriksson, 2003). This context consists of actors, social relationships, norms, rules, values and expectations, and where the IS is used for interaction between social actors.

The purpose of the paper is to discuss the concept of e-service based on a social interaction perspective of the service concept and on the use of IS in such a context. The definition is based on theories from the disciplines of Service Marketing and Information Systems and is empirically grounded in several case studies.

The paper is structured as follows: In the next section, basic perspectives on social interaction, services and IS are presented. Thereafter, a social interaction perspective on e-services is described, which in the following section is used to analyse an example on an existing e-service on the Internet. Thereafter, and related to the analysis, three aspects of e-services are discussed from a social interaction perspective. Finally, we conclude the paper.

2   Basic Perspectives

The main idea in the paper is that a social interaction perspective is fundamental in order to understand the concept of e-services. We also maintain that Service Marketing Theory (SMT) and the Actability Theory on Information Systems (ISAT) both are in line with such a perspective, complementing each other and useful in discussion the concept of e-service. In this section we elaborate on the concept of social interaction and present the two theories.

2.1   The Social Interaction Perspective

Social interaction means that people act in relation to each other. In this process communication, i.e. how people use and interpret signs, is of great importance. In a social action context communication is regarded as action, not only as the exchange of information, and such a view can be founded in the theories of speech acts (Austin, 1962; Searle, 1969) and communicative action (Habermas, 1984).

Communication always implies social interaction because a sign (written or oral) is something produced and something interpreted, and as such it is a link between two acts, a communication act and an act of interpretation (Eriksson, 2000).

According to Habermas (1984) social interaction can be described as a process, i.e. a sequence of actions performed in a social context. The actions are performed in order to create results and effects. Social interaction implies that social relationships are established and maintained between the actors involved in the interaction.

Habermas' (1984) Communicative Action Theory is focused upon how communication acts are used for co-ordinating social interaction. This implies that the meaning of speech acts has to be related to a social context of actors, facts, intentions, commitments, norms, rules, social relationships and subsequent actions. In this process communication is of great importance because communication is used to create information, commitments, and expectations which govern the social inter-action. (ibid.) This view of social interaction is the basis for our analyses of e-services.

2.2   The Notion of Service according to Service Marketing Theory (SMT)

In this section the concept of service is described according to SMT (e.g. Grönroos, 1998; Edvardsson et al., 2000). The reason for choosing SMT as one base for our

point of departure is that it represents an internationally well-known and accepted way of looking at the service concept.

Edvardsson et al. (2000, p.32) define the service concept in general as:

"… a chain of (sequential, parallel, overlapping and/or recurrent) value creating activities or events, which form a process. In this process the customer often takes part by performing different elements in interaction with the employees of the service company (other customers or equipment) for the purpose of achieving a particular result."

From the definition we can see that a service consists of a number of value creating activities which are performed in the social interaction between a customer and a service provider (the service company). The customer may also interact with other customers or equipment during the service process. The service concept is delimited in core services which are related to the customer primary needs. To make the service concept more attractive, additional services can be applied to fulfil customer secondary needs.

One important aspect stressed in SMT is that the service concept is described as situated social interaction, i.e. the service is produced and delivered within the actual service encounter when the customer physically meets the actors who represent the service provider. This implies that a service is situated in place and time because the customer and the service provider have to meet and interact.

The description of the notion of service as situated social interaction is based on the fact that the production and consumption of the service is simultaneous, and that the service is co-produced. This implies that both the service provider and the customer perform actions. In this co-production the customer performs activities in the process, e.g. delivering information or some other input into the service process. It is also claimed in SMT that the quality of the service is dependent on the presence and actions of other customers.

The service encounter also implies that actor relationships are created and maintained in the process, and that the interaction is often based on long-term relationships. In this interaction human communication is of great importance. There is also a growing interest in how communicative aspects affect the service delivery process. Several researchers within the service area e.g. (Gummesson, 2002; Grönroos, 1990; 1998; Zeithaml et al., 1990) stress the importance of communication for the service process and service quality. Today there is also a growing interest in how to use IS and ICT in the service sector. However, in SMT the use of IS is mainly considered as a self-service technology (SST) which implies that e-services do not include social interaction. SST is defined, and taken for granted, only as a technology used by the customer to create and consume the service with no human interaction taking place (Meuter et al., 2000; Parasuraman, 2000). Due to this focus on the use of IS as only a SST we address three problems which have emerged as a consequence of this perspective.

The first problem is that the only relationship which is in focus is the service provider-to-customer relationship. We claim that the interaction and the relationships between customers communicating with each other is also an important part of many e-services.

The second problem is the description of the character of the relationships which are created, established and maintained in an e-service context. When the use of IS is discussed as SST the customer-to-service provider relationship is discussed as a

person-to-technology relationship. Gutek and Welsh (2000) for example, regard the relationship between the service provider and the customer as a pseudo-relation. The meaning of a pseudo-relation is that there is no need for face-to-face interaction between the service provider and the customer, which implies that they primarily describe the relationship as a technical one. We claim that if we want to understand, and design, e-services it is important that we realise that the relationship is social to its character.

The third problem is that the typical use situation described is where the IS is used by the customer to perform the service for him/herself, i.e. delivered person-to-technology. The typical case used to describe this in SMT is the automated teller machine (ATM). However we claim that to describe e-services and the use of IS only as SST is too narrow, because the use of IS in an e-service context ought to be discussed, and designed, in a broader sense.

2.3   The Notion of IS according to the IS Actability Theory (ISAT)

One reason for choosing ISAT in discussing the concept of e-service is that the use of IS in ISAT is considered as situated social interaction. In Ågerfalk (2003) ISAT is presented based on the idea that IS is action systems used in a social action context, which include actors, relationships, norms, values and beliefs, and the existence of social and material facts. The social context is what makes the actions performed at the user interface meaningful and is a basis for understanding the use of IS as a whole (Ågerfalk and Eriksson, 2003).

The definition of ISAT is (Ågerfalk, 2003):

"An information system's ability to perform actions and to permit, promote and facilitate users to perform their actions both through the system and based on messages from the system, in some business context".

From the discussion of SMT above we could see that in order to understand the concept of e-service it is important to understand how IS can be used in a social interaction context. According to ISAT it is possible to distinguish three different types of IS use-situations (Ågerfalk, 2003):

- An interactive use situation exists when the IS is used to 'permit, promote and facilitate the performance of actions by users through the system'.

- An automatic use situation exists when dealing with an information system's 'ability to perform actions' on its own on assignment of some human actor.

- A consequential use situation exists when the IS is used to 'permit, promote and facilitate the performance of actions based on information from the system'. We prefer to call this use situation an external use situation (see discussion below).

The three use situations are constituted by two reciprocal acts – a providing act and a receiving act in relation to the user or the IS. A providing act is directed from the user or the IS, and a receiving act is directed to the user or the IS.

2.3.1   *The Interactive Use Situation*

A user interacts with the IS when providing and receiving messages. The user performs a providing act when sending a message to the IS. The user performs a

receiving act (which always includes an interpretation) when receiving a message from the IS. In figure 1 the providing and the receiving acts are viewed from the user perspective.
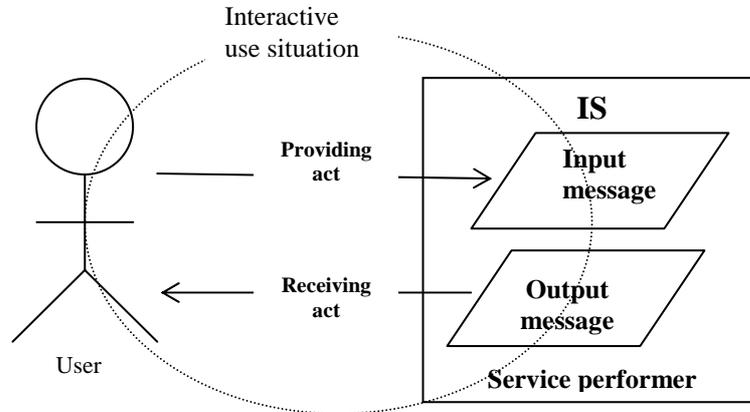

Figure 1. The Genuine Interactive Use Situation

Figure 1 describes the genuine interactive use situation which consists of at least one providing act and one receiving act. However, an interactive use situation can also consist of only one providing act or one receiving act.

2.3.2   The Automatic Use Situation

In the generic automatic use situation the user does not act directly at all, but the IS is acting on his/her behalf (figure 2). The IS can perform providing acts and/or receiving acts on behalf of the user. Therefore the providing/receiving acts are defined from the perspective of the IS. This also implies that the receiving act in this case does not include an interpretation because this presupposes a human being
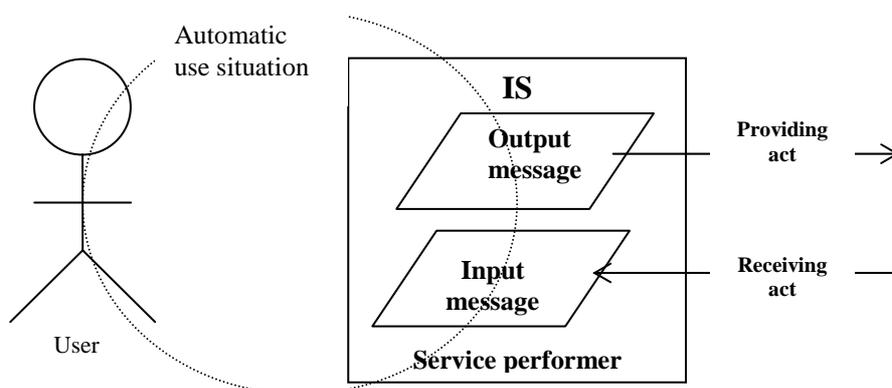

Figure 2. The Generic Automatic Use Situation

2.3.3   The External Use Situation

The generic external use situation consists of one or several external acts, i.e. actions which are not performed through the IS but based on a message from the IS (figure

3). This implies that the external act must be preceded by a least one receiving act and includes a human interpretation of the message.
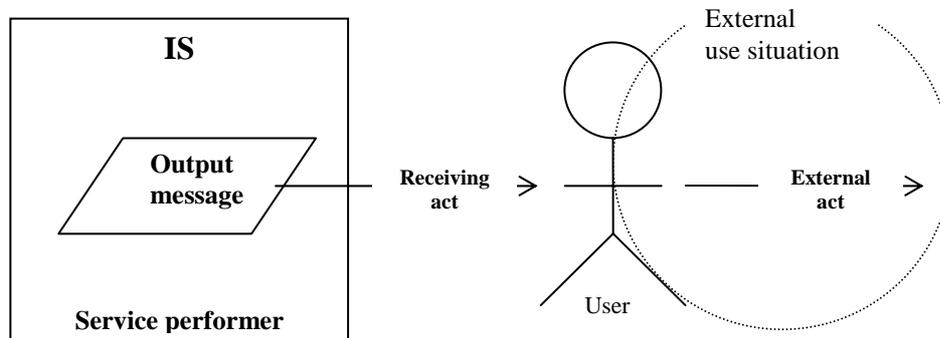

Figure 3. The Generic External Use Situation

The ISAT perspective is based on social-instrumental pragmatism (Goldkuhl, 2002) and speech-act and communicative action theories (e.g. Auramäki et al., 1988; Winograd and Flores, 1986; Habermas, 1984), which implies that the IS is used for performing communication acts with the help of the IS (Eriksson, 2000; Sjöström and Goldkuhl, 2003). This means that users actually use the IS to communicate with each other.

Due to the specific focus in discussion the concept of e-service, ISAT has to be put into an e-service context. We address two problems in ISAT which have to be stressed when applying ISAT into this context.

The first problem is that ISAT does not focus upon the basic relationships and roles such as the customer and the service provider which are important if we want to understand the e-service concept. This implies that we have an external view of the use of the IS, which is a consequence when introducing the new roles. The implicit view within ISAT is otherwise on a user using the IS for intra-organisational intentions. Although ISAT has been used to analyse the use of ATM (c.f. Ågerfalk and Eriksson, 2003) the focus has not been on describing the use of IS in an e-service context. We want to stress that in an e-service context it is the service providers who interact with customers with the IS as a service performer and a medium. We also want to stress that the IS on many occasions are used by the customers to interact with each other with the help of the service provider's IS.

The second problem is also a consequence of using ISAT in an e-service context, where e-services are typically closely related to other services. We said earlier that we prefer to use the notion of external use situation when the user performs actions outside the IS, but based on information from it. Transformed into the context of e-service we use the notion of external use situation when the service provider or the customer perform actions based on information from the IS outside the system but within scope of the actual e-service (i.e. the actual service concept). As a consequence of this we want to use the concept of consequential actions for actions which are out of the scope of the service concept, but are consequences of the produced and delivered e-service.

3   A Social Interaction Perspective on e-Services

In this section we describe how we want to view the use of IS in an e-service context. This perspective is based on the concept of social interaction described above which emphasises three central concepts: results, relationships and processes.

3.1   The Results

The results are produced and delivered by actors involved in the social interaction in order to create a result which is beneficial to the customer. These results are described in the *service concept*, which is the result – a product specification - that the service provider is responsible for. The service concept can be divided into a description of core services and additional services.

3.2   The Relationships

The core of e-services is communication between social actors although it is not face-to-face, but mediated with the help of IS. When communicating *social relationships* are created and maintained between the involved actors. Based on the actor roles, those of the service provider and the customer, we stress the importance of two basic relationships in the e-service context (figure 4):

- the service provider-to-customer relationship;

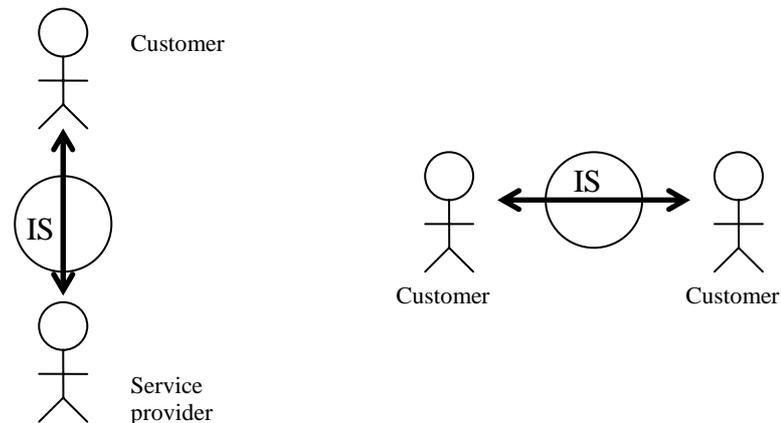- the customer-to-customer relationship.

Figure 4. The Two Basic Relationships in an e-Service Context.

One of the main ideas in ISAT is that the users of the system use the system to communicate with each other. In the service provider-to-customer relationship the IS is used for communication between the service provider and the customer. This communication is performed with the help of the IS either automatically or interactively.

In the customer-to-customer relationship the IS is used for communication between customers in order to interact with each other. In the context of e-services this basic relationship is common and important. Many of these e-services can be discussed in terms of network externalities (Liebowitz and Margolis, 2004). Network

externality implies the change in the benefit, or surplus, which a customer derives from a product (service or goods) when the number of other customers of the same kind of product changes. As an e-service increases in popularity it becomes increasingly valuable since you will have greater use of it.

It is also important to stress that these relationships are not only technical in character as described in SMT. These relationships are also social, because they are based on the performance and interpretation of communication acts performed in a social context. The communication acts are used to create relationships based on information, commitments and expectations, and the actors involved are responsible for this content. This interaction is also governed by the social norms and rules which are valid in the social context of the e-service.

3.3 The Processes

The situated production and delivery of the e-service can be described as a number of activities where actions are performed through the system and based on information from the system by the service provider, the IS and the customer(s). A fundamental base for these chains of activities, or processes, is a combination of the three *use situations* described above when the service concepts are performed.

4 The Internet Based Marketplace

In this section we illustrate how the social interaction perspective on e-services presented above can help us to understand and analyse an existing e-service on the Internet. The e-service is a marketplace for 'advertisers' of used goods such as cars, toys etc. (to expose "for sale" or "want to buy" items) searchable by potential 'readers'. The aim of the e-service is to let 'advertisers' and 'readers' meet. The 'advertiser' provides a textual message and, as an option a picture of the goods for sale or they wish to buy via the Internet. The web based marketplace as the 'service provider' charges a fee for this service but this fee cannot be paid on-line, instead the customer (the 'advertiser') gets a password and a telephone number to dial and pay. After this payment and after a manual check of the advertisement by staff at the 'service provider' the advertisement is published on the Internet. The 'reader' can then be made aware of the advertisement in two ways: either interactively by searching, or automatically via a previously defined alert. If a 'reader' is interested in buying or selling the goods, he can contact the 'advertiser' by e-mail filling in a form at the website or phone the advertiser. The 'reader' does not have to pay for the e-service.

The analysis below is structured according to the three characteristics of social interaction (result, social relationships and processes), but transformed into an e-service context, i.e. the service concept, social relationships and the use situations.

4.1 The Service Concept

The service concept for the e-marketplace has 'advertisers' and 'readers' of the advertisements as customers. The core service for the 'advertiser' is to publish advertisements of goods that he wants to buy or sell and to make contact with interested 'readers' of the advertisement. The core service for the 'reader' is to search for and present goods that are of interest for him and to make contact with the

'advertisers'. The possibility for the 'reader' to be alerted when a previous defined good appears is an additional service for the 'reader'.

4.2 The Social Relationships

There are three important actor roles that have to be considered – the 'advertiser', the 'reader' and the 'service provider'. The social interaction performed through the IS between those actors creates and maintains three basic social relationships (figure 5):

- a relationship between the 'service provider' and the 'advertiser' (a service provider-to-customer relationship);

- a relationship between the 'service provider' and the 'reader' (a service provider-to-customer relationship);

- a relationship between the 'advertiser' and the 'reader' (a customer-to-customer relationship).
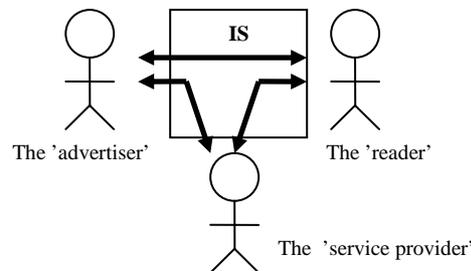
Figur 5. Relationships within the Marketplace

The relationship between the 'service provider' (i.e. the company of the 'service provider') and the 'advertiser' is based on information, social commitments and expectations created with the help of communication acts. The 'advertiser' commits himself to what he has written in the advertisement and to pay in advance for the service. This relationship is governed by a number of social rules. Some of these rules are implemented in the IS, and are followed when the 'advertiser' uses the functionality and the forms on the screen. Other rules are communicated by the 'service provider' to the 'advertiser' as text on the website. These rules regulate which kind of objects can be advertised and how the 'advertiser' should behave, e.g. to behave in a sincere way. The 'service provider' checks manually if the 'advertiser' is complying with the rules before the advertisement is published. The 'advertiser' expects that the 'service provider' publishes the advertisement if the rules are followed and the fee is paid, because this is the commitment made from the service provider. The 'advertiser' also expects that it is possible to get in contact with potential 'readers' with the help of the e-service. If the 'advertiser' needs help or if there is a breakdown, the 'advertiser' will expect that it is possible to contact the 'service provider' customer service for help.

The relationship between the 'service provider' and the 'reader' of the advertisements is based on the 'service provider's' commitment to only publish

advertisements which comply with the rules declared in the context of the e-service. The relationship is also based on the presumption that the core service is free for the 'reader' because no information is presented to the 'reader' that says that he has to pay for the e-service. However the additional service, that the reader is alerted with the help of a SMS, the customer has to pay for. The relationship is also based on the expectations from the 'reader' that there will be a lot of advertisements to search and to read. If the 'reader' needs help or if there is a breakdown, the 'reader' will expect that it is possible to contact the 'service provider' customer service for help.

The relationship between the 'advertisers' and the 'readers' is important because the real value of the e-service is that it is a meeting place for the customers. This is a relationship which can be described in the context of a business transaction on two levels: a market and a dyadic level (Goldkuhl and Lind, 2004). At the market level potential 'buyers' and 'sellers' interacts through advertisements with the help of the e-service offering and requesting goods. At the dyadic level a specific 'buyer' and 'seller' relationship is established. The relationship on the market level is based on the commitment made by the 'advertiser' and is regulated by the e-service. The relationship on the dyadic level is only partly regulated with the help of the e-service. There are e.g. rules for how the 'reader' of the advertisement can contact the 'advertiser' by e-mail or telephone, and an e-mail address is mandatory in the advertisement. However how the 'advertiser' and the 'reader' should interact as a 'buyer' or a 'seller' in the business transaction on the dyadic level is not regulated or supported by the e-service, and is something that the service provider does not take any responsibility for.

4.3   The Use Situations

The e-service includes a number of use situations (figure 6), which are important activities of the service process. Social interaction is based on a number of actions which form a process. In this case the process can be described as a number of inter-related use-situations where the 'service provider', the 'advertiser' and the 'reader' of the advertisement interact.

From the 'service provider' point-of-view the use of the IS is based on an interactive use situation checking new advertisements and publishing them. The search and the presentation of advertisements for the 'reader', and the mediation of contact between the customers is automatic use situations because the 'service provider' does not have to do anything; the customers and the IS do all the work.

From the 'advertiser's' point-of-view there is first an interactive use situation when registering the advertisement. The payment action made by telephone is an external use situation. The offering and requesting of the goods on the Internet is an automatic use situation for the 'advertiser'. When a contact is initiated via an e-message from a 'reader' of the advertisement the 'advertiser' can use this information in an external use situation to contact the 'reader' via the telephone or by sending an ordinary email. Further activities performed on the dyadic level of the business transaction, e.g. to negotiate, visit and make contracts is out of the scope of this e-service, and are considered as consequential in relation to the e-service.

From the 'reader's' point-of-view there is an interactive use situation when searching for goods. If the 'reader' sends a contact message via the e-service, there is an interactive use situation. The additional alert-service is defined in an interactive use situation, but is used in an automatic use situation when the system monitors

incoming advertisements. This automatic use situation is turned into an interactive use situation when the 'reader' is alerted and interprets the message.
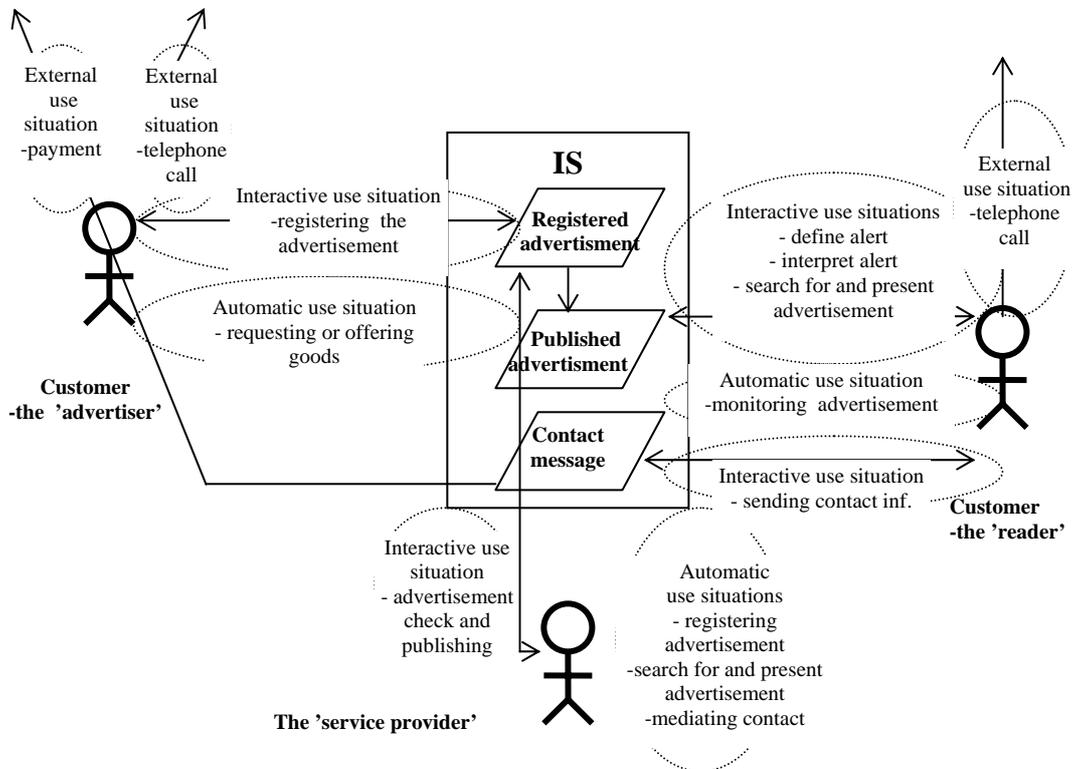
Figure 6. The Use Situations in the e-Marketplace.

5   Discussion

The aim of the paper is to discuss e-services from a social interaction perspective. In section 4 above we have showed how an e-service could be analysed with the help of the social interaction perspective presented in section 3. In this section we will further discuss the perspective.

5.1   The Service Concept

The example in section 4 shows how the service concept can be described for the e-marketplace. The service concept, which is a product specification, has to be related to the needs of different customer. It is important to describe the service concept in an explicit way because it is used in the service offering which implies that the service concept is communicated in the service provider-to-customer relationships creating commitments and expectations in these relationships. This is also emphasised in SMT. For example Grönroos (1990) emphasises the importance of the "Augmented Service Offering" and that the service provider should make correct promises and fulfil the promises and commitments made in the offer.

   Another reason why it is important to be explicit in the product specification is because e-services are typically closely related to other services. We claim therefore

that it is important to make good delimitations when designing and describing the service concept. It is important to define a concept which really contributes to customer needs and to define what the service provider takes responsibility for, and can control. Results and consequences beyond the service provider's responsibility do not usually belong to the service. In the example above the business transaction after the contact has been established is not supported by the IS and is therefore not a part of the e-service.

5.2 The relationships

In section 2 we criticised the SST view of e-services due to three problems that we have identified. The first two of these problems concern relationships.

1. The SST view covers only the service provider-to-customer relationship (not the customer-to-customer relationship).

2. The character of this relationship is only described as personal-to-technology.

We claim that in many e-services it is important to recognise the customer-to-customer relationships. For example, it is not hard to find a number of different e-services on the Internet where the interaction between the customers of the e-service is fundamental for the production of the e-service. In order to understand these e-services it is important to analyse the customer-to-customer relationships as well as the service provider-to-customer relationships.

We also claim that it is important to recognise that these relationships are social to their character although they are created with the help of technology. The reason why they have to be considered as social are that they are created and maintained by communication acts which creates information, commitments and expectations governed by social rules. To recognise the relationships as social (and not only as technical) focuses attention on the importance of social rules. This is important to understand because the social rules are important bases for the functionality and the use of the IS which provides the e-service. Due to this it is important to be clear about the meaning of the relationships and under which conditions they are created.

5.3 The Use Situations

The example in section 4 illustrates that the 'service provider', the 'advertiser' and the 'reader' have to handle several use situations in relation to the IS in order to produce and deliver the e-service.

We claim that it is important to recognise the use situations in order to understand the e-services because the use situations are fundamental when designing the service process. The example in section 4 also shows that the service process is composed by a combination of the three generic use situations described in section 2. The example also shows that the phenomenon of e-service cannot only be understood as a SST because this view only covers the automatic use situation from the service provider point of view and the interactive use situation from the customer point of view (figure 6 depicts use situations for the e-service example). Another problem with the SST-view is that the focus will be on how to automate the service provider's use situation making the customer do all the work. In order to understand, analyse and design e-services a much broader view on the use of IS has to be considered. For example how IS can be used to automate the work of the customers.

It is also important to realise that some of the use situations cannot be automated because of the social rules governing the relationships. For example the interactive use situation where the 'service provider' is checking new advertisements before publishing them, is hard to automate because it is based on rules for social behaviour that are hard to transform into a computer program.

The use situations (see figure 6) together with the service concept and the relationships are important in order to analyse the scope of the e-service in a more detailed way. The use situations can also be used to discuss how one type of use situation could be transformed into another. For example if an external use situation could be transformed into an interactive use situation, or if an interactive use situation could be transformed into an automatic, and thereby be more value-adding for the customer or more efficient for the service provider.

6   Conclusions

In the paper we have presented a social interaction perspective on e-services. Fundamental for e-services is that the IS acts as a service performer in the social interaction between a service provider and customers. The perspective is based on three cornerstones - the service concept, the social relationships and the use situations, where:

- the service concept describes the result which should meet customer needs and defines what the service provider is responsible for;

- the social relationships which are of interest, both the service provider-to-customer relationship and the customer-to-customer relationship;

- the use situations which describe the service process as a combination of the three generic use situations (the automatic, the interactive and the external use situation);

An important characteristic of the e-service phenomenon is that it is both IS and service. As a consequence neither ISAT, nor SMT can solely explain the phenomenon. However, both theories are in line with a social interaction perspective and complement each other. The social interaction perspective on e-services that we have presented benefits from SMT in order to understand and emphasise:

- the roles of the customer and the service provider;

- the customer perspective on services;

- the view of services as situated interactions produced in co-operation with the customer.

    ISAT is helpful in order to understand and emphasise:

- the fact that the IS is used for communication between the users of the IS;

- that the character of the relationship created with the help of IS can be described as a social relationship although it is technically mediated;

- the role of the IS as a service performer acting on behalf of human actors;

- the three generic use situations.

We claim that the social interaction perspective on e-services presented in the paper is useful in order to analyse and understand e-services. The perspective have been evolved and used in case studies where a number of e-services have been analysed and designed.

References

ÅGERFALK PJ (2003) Information Systems Actability: Understanding Information Technology as a Tool for Business Action and Communication. Doctoral dissertation, Department of Computer and Information Science, Linköping University, Sweden.

ÅGERFALK PJ and ERIKSSON O (2003) Usability in Social Action: Reinterpreting Effectiveness, Efficiency and Satisfaction , Accepted to ECIS 2003 The 11th European Conference on Information System, Naples, Italy, June 19-21, 2003,

AURAMÄKI E, LEHTINEN E and LYYTINEN K (1988) A Speech Act Based Office Modelling Approach. ACM Transactions on Office Information Systems, 6(2), 126-152.

AUSTIN JL (1962) How to do things with words. Oxford: Oxford University Press.

CHIDAMBARAM L (2001) The editor's column. E-Service Journal, 1(1), http://www.e-sj.org.

DAHLBOM B (2002) From systems to services. [www document] http://www.viktoria.se/~dahlbom/.

EDVARDSSON B, GUSTAFSSON A, JOHNSON MD and SANDÉN B (2000) New service development and innovation in the new economy. Studentlitteratur, Lund, Sweden.

ERIKSSON O (2000) Communication Quality in the Context of Information Systems and Business processes, Accepted to: The Third International workshop on Organisational Semiotics, Stafford, UK, July 4, 2000.

GOLDKUHL G (2002) Anchoring scientific abstractions: ontological and linguistic determination following socio-instrumental pragmatism. European Conference on Research Methods in Business and Management, Reading, 29-30 April 2002.

GOLDKUHL G and LIND M (2004) Developing e-interactions – a framework for business capabilities and exchanges, Accepted to the 12th European Conference on information systems (ECIS2004), Turku.

GUMMESSON E (2002) Total relationship marketing : marketing strategy moving from the 4Ps - product, price, promotion, place - of traditional marketing management to the 30Rs - the thirty relationships of a new marketing paradigm, Butterworth-Heinemann, Oxford, UK.

GUTEK B and WELSH T (2000) The brave new service strategy: aligning customer relationships, market strategies, and business structures. AMACOM, New York.

GRÖNROOS C (1990) Service Management and Marketing. Lexington Books, Lexington, MA.

GRÖNROOS C (1998) Service marketing theory – back to basics. Swedish School of Economics and Business Administration, Helsingfors, Finland.

HABERMAS J (1984) The theory of communicative action. Volume One. Reason and the Rationalization of Society. Boston: Beacon Press.

JOHNSSON AG (1995) The Blackwell dictionary of sociology: a user's guide to sociological language, Oxford: Blackwell.

KAITOVAARA P and NURMINEN MI (2003) IT Artefacts in IT Services: Toward a Taxonomy, In Goldkuhl, Lind, Ågerfalk (Eds.) Proceedings of the Action in Language, Organisations and Information Systems, Linköing, Sweden, pp. 71-84.

LIEBOWITZ SJ and MARGOLIS SE (2004) Network Externalities (Effects), http://www.utdallas.edu/~liebowit/palgrave/network.html

MEUTER ML, OSTROM L, ROUNDTREE RI and BITNER MJ (2000) Self-Service Technologies: Understanding Customer Satisfaction with Technology-Based Service Encounters. Journal of Marketing, 64(July 2000), 50-64.

ORLIKOWSKI WJ and IACONO C S (2001) Research Commentary: Desperately Seeking the 'IT' in IT Research--A Call to Theorizing the IT Artifact, Information Systems Research (12:2), pp. 121-135.

PARASURAMAN A (2000) Technology readiness index (TRI): A multiple-item scale to measure readiness to embrace technologies. Journal of Service Research, 2(4), 307-320.

RODOSEK GD (2003) A generic model for IT services and service management. Integrated Network Management, 2003. IFIP/IEEE Eight International Symposium.

SEARLE JR (1969) Speech acts – an essay in t6he philosophy of language. London: Cambridge University Press.

SJÖSTRÖM J and GOLDKUHL G (2003) The semiotics of user interfaces – a socio-pragmatic perspective, Accepted to: The Sixth International workshop on Organisational Semiotics, Reading, UK, July 11-12, 2003.

STAFFORD TF and SAUNDERS C (2004) Introduction. E-Service Journal, 3(1), http://www.e-sj.org.

STERN A and DAVIS J (2004) Extending the Web Service modell to IT services. Proceedings of the IEEE International Conference on Web Services (ICWS'04).

WINOGRAD T and FLORES F (1986) Understanding Computers and Cognition: A New Foundation for Design. Addisson-Wesley, Reading.

ZEITHAML V, PARASURAMAN A and BERRY L (1990) Delivering quality service: balancing customer perceptions and expectations. Free Press, New York.