CUSTOMER REGAIN MANAGEMENT IN E-BUSINESS -PROCESSES AND MEASURES-

Markus Helfert
School of Computing
Dublin City University
Dublin 9, Ireland
phone: +353-1-700-8727
fax: +353-1-700-5442
e-mail: *markus.helfert@computing.dcu.ie*

Clemens Herrmann
Institute of Information Management
University of St. Gallen
Mueller-Friedberg-Str. 8
CH-9000 St. Gallen, Switzerland
phone: +41-71-224-3776
fax: +41-71-224-2189
e-mail: *clemens.herrmann@unisg.ch*

Gregor Zellner
Institute of Information Management
University of St. Gallen
Mueller-Friedberg-Str. 8
CH-9000 St. Gallen, Switzerland
phone: +41-71-224-3348
fax: +41-71-224-2189
e-mail: *gregor.zellner@unisg.ch*

ABSTRACT

Recent studies show, that due to the rapid technological progress, the growing globalisation of markets and the increasing availability of information long-term and valuable relationships became more important than the permanent acquisition of new customers. As a consequence of this, the focus shifted from a transaction-oriented economy to a relationship-based economy. Concepts like customer relationship management, which involves the attracting and keeping of valuable customers and eliminating 'invaluable', are frequently discussed. But regardless its importance, so far only little attention has been paid on how to regain already 'lost' customers. Recent research often only concentrates on building and maintaining individualized relationships, lacking of integrated management processes and measures particular for regain management. Therefore current article proposes a concept for customer regain management in e-business. Based on a theoretical foundation a process framework and measures for identifying, selecting and reactivating terminated relationships are explained. The concept of web usage mining is introduced and options for supporting customer regain management in the context of an online shop are illustrated.

1. INTRODUCTION

Within the last decade, customer relationship management was widely used to describe a new paradigm of marketing and business. Customer relationship solutions are currently applied in various industries and especially with the growth of e-commerce customer relationship management (CRM) became more and more important for gaining competitive advantage. The benefits from customer relationship management include for example increase in client profitability due to improved cross-selling and higher level of services. In contrast to transaction oriented concepts customer relationship management is characterised by its focus on individual customers and their long-term relationships with companies.

Up to the mid 80s in general a transaction oriented marketing philosophy was predominant and marketing was primarily oriented on increasing the market share by acquiring new customers. Due to recent technological progress, the growing economic pressure and increased competition, relationship marketing and relationship management gain significant importance (Wirtz 2001). Particular in e-commerce environments long-term and profitable relationships become more crucial for the success of business. Higher business revenue can be achieved by increasing the "customer life time" and the profitability of existing relationships. As a consequence of this paradigm the emphasis shifted from the orientation of share in the market to share of customer (Bauer, Göttgens, Grether 2001). Empirical studies have also shown, that the acquisition of new customers is far more expensive in comparison with retaining current customers (Sauerbrey 1999). Recent studies showed moreover, that acquiring new customers need high investments particular in e-commerce, which results in the need for long-term business relations (Reichheld, Schefter 2000; Bauer, Göttgens, Grether 2001; Diller 2001). In addition, research showed a negative correlation between the number of "lost customers" and the business revenue (Reichheld, Sasser 1990). As a consequence of these developments, customer relationship management and particular retain and regain management are crucial for profitable and successful e-business solutions.

So far, most research in relationship management concentrates on building and maintaining individualized relationships. Regardless its importance and compared with other marketing or information system research efforts, there have been only little researches done on detailed system architectures, implementation methodologies and detailed relationship processes (Chiu et al. 2003). But even if such research provides essential knowledge, in general they are lacking of providing detailed processes and measures for customer relationship management. Particular little attention has been paid on retaining and regaining valuable relationships. Considering the discussion above regarding the importance of these phases in customer relationship management, this is even more surprising. In order to address these issues, our paper describes processes and measures for customer retain management especially used for e-business systems. As an example we illustrate customer regain management in an online shop by explaining how web usage mining can be applied to detect and approach lost customers. First we characterise the construct of business relations and provide a definition of the concept of customer relationship management. Based on this theoretical foundation, we specify processes of customer regain management and exemplify measures supporting them.

2. CUSTOMER RELATIONSHIP MANAGEMENT IN E-BUSINESS

2.1. Relationship Management

Many companies frequently use the term relationship management (and particular CRM), claiming to have a relationship oriented business strategy. But however, even if many companies claiming of having such a strategy, most lack of understand and implement consistent and integrated processes, measures and adequate systems for relationship management. Most companies assuming CRM is something similar to purchasing and implementing a customer database, collecting as many information as possible and using this information for marketing purposes. But relationship

management is far more; it is a management principle and a different way of doing business. This means that all processes, systems and the business strategy have to be oriented on relationships.

One reason for the insufficient relation orientation is founded in the lack of a precise and generally accepted definition of the construct of business relations (e.g. O'Malley, Tynan 2000) and the insufficient description of relationship management concepts (e.g. Wirtz 2001). Second and far more important, detailed processes and measures for relationship management are still missing. Most authors describe relationship management very vague or focussing on technical details. As a foundation for further research, first a clarification of the term 'relationship management' from the authors's point of view is given.

Business relations are discussed in literature for some time, resulting in a set of definition approaches and characteristics. Based on essential characteristics forming a relationship, there are two major views (Eggert 2001). Activity-oriented views focus on transactions and refer to relations as a series of interrelated exchanges between parties. Several authors state such a series of transaction as an essential criterion for relationships (e.g. Grönroos 1999; Plinke 1997; Rust, Oliver 1994). In addition to this activity-oriented view, the state-oriented view base relationship on its perception and take into account that a relation is something more than just a series of transactions. For example (Eriksson, Fjeldstad 2001) describe relationship as a result of the social exchange between buyer and seller and contains dimensions like power, cooperation, commitment, and trust. Other authors focus on economic objectives and investments in relationships (Diller 1996). Changing partners cause the lost of these investments and result in "switching costs" or "sunk costs".

For structuring and understanding interactions between business partners, we find it useful to apply a holistic view of relationships comprising different interaction components. Based on the general theory for social relations by (Homans 1964), we suggest a model of four interrelated levels (see also Diller, Kusterer 1988):

- Business transaction level regulates the exchange of products and services as well as information, ideas and know-how. At this level agreements of transactions are made. A balanced relationship between the business partners is important, whereas technical usability and the fitness for solving problems are crucial for accomplishing interactions.
- Organizational level regulates the formal and informal interaction rules and thus the processes for handling business relations.
- Power level: If there are conflicts arising, which are not solvable with adequate business transactions, another mechanism takes place; power.
- Human-emotional level: Values like appreciation, trust, affection and sympathy, openness, or self-identification are often difficult to identify and understand. Such value-oriented interactions between business partners are assigned to the human-emotional level.

Having this model, business relationships are characterised on a long-term perspective and comprise interactions on all these levels. For this reason business relations are far more than only a series of transactions. Business relations involve regulations for business transactions and processes as well as power and values. Having the two idealistic interaction types - business relations and single transactions - real world interactions are in general something between them. They can, depending on their interaction intensity, be characterised between business relations and single transactions.

Having described the concept of relationship, next the concept of relationship management is characterised. In literature there are many definitions for relationship marketing and relationship management (e.g. Berry 1983; Evans, Laskin 1994; Morgan, Hunt 1994; Sheth, Parvatiyar 1995; Grönroos 1996; Gummesson 1996; Wirtz 2001). Most definitions emphasises the design of business relationships and enfold establishing, development, maintenance and dissolution of relations. Some definitions limit relationship management primarily to customer relations. Whereas earlier definitions focus on the operational level and relationship management activities, recent definitions include

objectives and business revenue. Extending this view a definition given by (Diller 1997) comprises also long-term oriented and integrated principles and guidelines of relationship management on a strategic level. Following his approach, we define relationship management as a business strategy aiming to optimize the lifetime value of business relations. On an operational level relationship management comprises a set of single measures for analysing, selecting, designing, creating and terminating as well as controlling business relations. It utilises well-founded techniques and methods. Core of relationship management is the building and maintaining of individualized relationships to profitable customers and business partners through defined processes and an adequate application of information and communication technologies (e.g. Hippner et al. 2001).

According to (Kalakota, Whinston 1996) relations can be differed in customer and business relationships. Since e-commerce offers novel perspectives for business and has significant implications particular on customer relationships (Wirtz 2001), this article focuses primarily on customer relationship management. Based on the evolutions of relationships, in following major processes of customer relationship management are structured.

2.2. Evolutions of Relationships

Reflecting the evolution of relationships and underlying a life cycle concept, relationship management is often described by different stages (Bauer, Göttgens, Grether 2001). For example (Dwayer et al. 1987) identify five phases of general business relationships: Awareness, Exploration, Expansion, Commitment and Dissolution. Application of such models shows that relations in e-business environments have in principle the same evolution phases, like for example described by (Diller et al. 1992; Diller 1995). They develop an evolution model for e-business relationships describing following six phases:

(1) *Preparation phase* as first step where no business transactions are made and only information is exchanged. This establishes a base of trust for the relationship.

(2) *Initialisation phase*, first purchases are made and confidence is developed.

(3) *Penetration phase* in which positive customer contributions are achieved, but at the same time the growth rate in share of customer decreases. In this phase business becomes increasingly routine with a reduced number of contacts. This phase also opens potentials for cross selling.

(4) When routine increases and the number of contacts decreases the relationship becomes more mature. In this *maturity phase*, customer satisfaction, commitment and trust is very high and the relationship is stable. The partners are willing to endow in specific investments, resulting in higher switching barriers. But however, this phase increases the probability of stagnation and erosion of the relationship.

(5) Stagnation and erosion of share in customer leads to the fifths phase, *crises*: In general the number of contacts increases for a short period of time, but the share in customer however constantly decreases.

(6) In a final phase, the *dissolution phase*, the relationship is terminated.

Such concepts typically comprise a complete cycle of a business relation from the initialisation to its termination. As shown in Figure 1, relationship management core processes can be structured according to the evolution of relationships and should in general comprise at least the processes of acquisition, intensification, retaining and regaining. Because of the lack of research so far for regaining customers, we propose in following processes and measures for customer regain management in e-business.

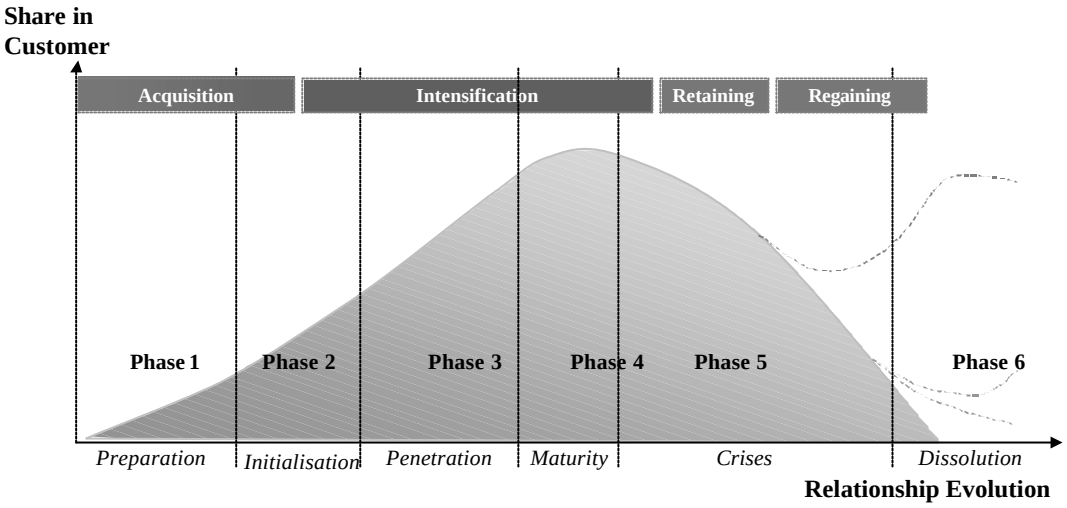

Figure 1: Relationship evolution and relationship management (According to Diller 1995b)

3. CUSTOMER REGAIN MANAGEMENT

Goal of customer regain management is to reinitiate valuable customer relationships, which have been already terminated. Regain management has to detect such 'lost' customers, select valuable relationships and attempt to regain them in an effective and efficient way, for which a systematic process is necessary. Based on Michalski (2002) Figure 2 shows such a process and illustrates major sub processes of customer regain management. These sub processes are described in following. Addition to this process structure, there is an information base needed, which enables the exchange of collected information along the customer regain process.

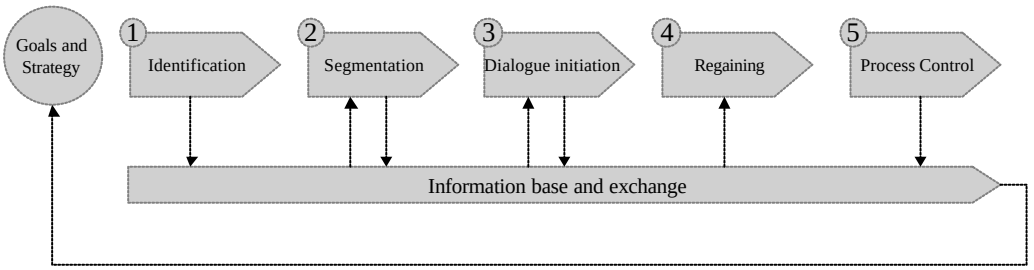

Figure 2: Sup processes of customer regain management (According to Michalski 2002)

3.1. Customers regain goals and strategy development

Strategies and goals for regaining customers are defined on a top level and then broken down giving measurable goals and objectives for single processes. Customer regain management extends and reactivates terminated customer relations and pursuit in most cases a profitability goal. In addition, other objectives for customer regain management are possible like for example communication and information goals. Communication goals aim to avoid negative image spread by lost customers, while information goals pursue the enrichment of the information basis by collecting termination reasons and patterns. This information can be used to develop early warning systems and improve customer regain management.

Having identified goals, attempts for regaining customers can be done by one of four basic regaining strategies (Michalski 2002). Applying a suitable strategy depends on the cause of termination and the particular customer type.

- An *incentive strategy* tempts to regain business relations by offering customers some form of incentives like for example tickets for events, gifts and discounts.
- A *compensation strategy* aims to compensate some (real or perceived) disservices, which was the motive for termination. For example the company could offer some form of vouchers.
- A *dialogue strategy* tries to regain trust through a dialog (e.g. personal call).
- A *convincing strategy* aims to persuade customers by means of use argumentations and explanation of some product advantage.

3.2. Identification

In order to regain 'lost' customers, first terminated relationships have to be identified. This may not be an easy task. Customers can either directly express the termination (external termination) or they can terminate the relations without expressing it externally (internal termination). In the case of internal termination it may be challenging to detect them, because in general customers do not obviously signal their intention. Experiences show, that in the majority of cases customers do simply terminate the relation (instead of complaining). External termination is likely easier to detect, particular in contract based and membership-like relations (e.g. banking, insurance or telecommunication). Such relations are based on a formal agreement and customers have to terminate this relation by giving an explicit notice. In other cases mechanisms for detecting the termination have to be implemented.

3.3. Segmentation

Having identified terminated relations, it is important to select valuable customers. Depending on their attractiveness, customers can either be segmented according to their profitability potential (profitability-oriented customer segmentation) or in terms of their regaining probability (success-oriented customer segmentation). Methods for analysing the profitability of customers are for examples ABC analyses (e.g. classification of customer segments in order of their contribution), scoring models (evaluation by means of several weighted criteria) or customer-lifetime-value calculations (considerations of future contributions). Success-oriented segmentation is based on probability analyses for the success of regaining similar customers. A regain portfolio, like in Figure 3, summarises the profitability-oriented and the success-oriented customer segmentation. For each identified segment, promising regaining strategies can be assigned. In the case of unattractive customers no regain action should be taken.

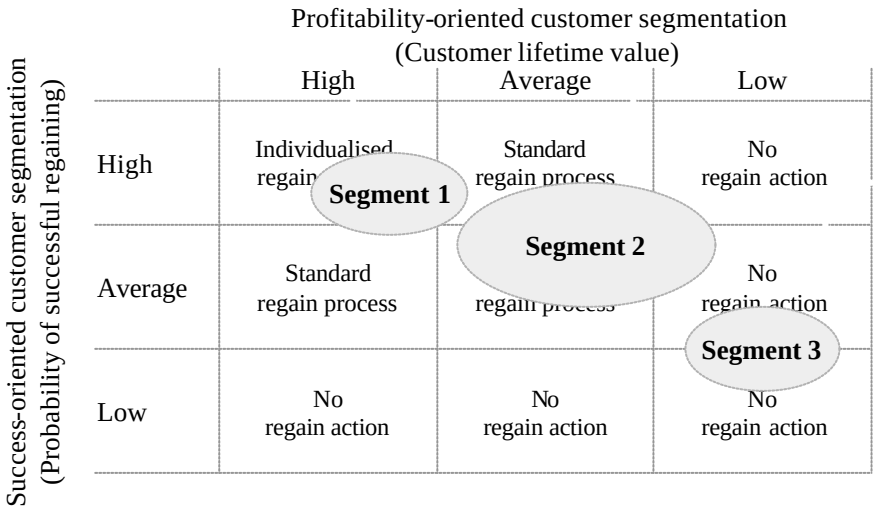

Figure 3: Example of a regain portfolio

Customers with either a low regaining probability or a low lifetime value can be – depending on the firm's strategies – considered as not "worth to regain". In case of a high regaining probability and a high lifetime value, individualised regaining procedures will be engaged. This could be a personal call from the customer consultant or a one-on-one interview with the consultant. In all other cases of profitability-lifetime-value-combinations, a standard regaining process (e.g. mailing, call from a call-centre agent etc.) can be initiated.

3.4. Dialogue initiation

So far, targeted customers segments and their assigned regaining strategies are identified. Next, the customers have to be contacted and a dialogue has to be initiated. Some regaining offers, according to the regain strategy is then made and regaining measures are used. As mentioned above the dialogue can take place in a personal or written form or via phone (e.g. call centre). Which dialogue form is to be chosen, depends basically on the targeted customer segment and the available information about that segment. The more information (e.g. termination reasons) is available about the customer the better the regaining offers can be adjusted to their needs and the more efficient the regaining efforts will be.

3.5. Regaining

In this phase, the actual customer regaining takes place by finalising the regaining offers and reinitiating the relationship. Former faults that were made in the relationship must be avoided and it must be signalised, that the customers' expectations on the future relationship can be satisfied by the cooperation partner. Only if the customers assume an enhancement of the relationship they will be willing to reinitiate the former relationship.

3.6. Process control

In a final step the efficiency and effectiveness of the regain management is evaluated. Efficiency measures the relation between input and output, whereas effectiveness measures the regaining success. Effectiveness for example could be measured by the ratio between the number of re-activated relationships and the targeted or contacted customers. Efficiency could be calculated as the ratio of regaining costs (costs of identification, segmenting, dialogue initiation, progress control and regaining offers) and the actual regaining benefits (actual customer value, quantified communication and information benefits).

4. WEB USAGE MINING SUPPORTING CUSTOMER REGAIN MANAGEMENT

The following sections will examine the potentials of web usage mining for customer regain management in the context of an online shop. Web usage mining offers the advantage to automate certain steps of the regaining process thus regaining can be conducted in a very efficient way. Other more costly measures for customer regaining which can not be automated like the deployment of call center agents shall not be considered here.

Web usage mining is a sub category of the generic term 'web mining'. This is again a special form of data mining. Web mining only uses data related to the World Wide Web (WWW) to extract rules and patterns. WWW-related data can be separated in the content of the WWW and data that originate from the utilisation of the WWW. Accordingly, the term web usage mining stands for mining data that result from the use of the WWW (Cooley, Mobasher, Srivastava 1997a). According to the data mining definition of Fayyad et al. (1996) web usage mining is the process of identifying patterns from data that emerges from the utilisation of the WWW. A special form of web usage mining is called web log mining, which uses only the web server log file as a data basis. In contrast to web usage mining the term web content mining refers to the contents of the WWW (Zaïane 1999).

The next paragraphs will focus on web usage mining supporting customer regain management. First data originating from the use of an online shop will be described in detail. Then cluster analysis as a special data mining technique will be explained and its potential in supporting the regaining process will be described.

4.1. Data Basis for Web Usage Mining

The data basis for web usage mining is limited to data which are created by using the web site. Additionally data can be generated out of this raw data. The following two sections describe what kinds of data are typical for an online shop and in which ways raw data can be enriched to create some more useful information for web usage mining.

4.1.1. Raw Data

The web server log file and data in the operational systems connected to the web site are created by using the online shop. The web server log file records all interactions between the client and the web server. When a client accesses resources of the web server the transactions are stored in the log file. Not only page requests, but also embedded objects, like pictures cause an entry in the log file. A common and standardized format with an adaptable structure is the extended log file format (ELF). Thus it is possible to log only relevant data depending upon the information requirements. Table 1 shows a selection of relevant attributes of ELF (Hallam-Baker, Behlendorf 1996; Luotonen 1995).

Attribute	Description
Remotehost	remote hostname (or IP number if DNS hostname is not available)
RFC931	remote logname of the user (RFC931)
Authuser	username as which the user has authenticated himself
Date	date and local time of the request
Request	request line exactly as it came from the client
Status	HTTP status code
Bytes	content-length of the document transferred in bytes
Time-Taken	time taken for transaction to complete in seconds
Cookie	identification of cookie (Cookie ID)
Referrer	address of the resource from which the request was obtained
User Agent	information about the user agent (e.g. browser)

Table 1: Selected attributes of a web server log file

The log file is one of the main data sources for web usage mining but data quality of the log file is impaired by the caching of documents. Caching generally buffers documents in a temporary storage, so that a request of an already stored document does not require an access to the server but is served by the cache. On the one hand most browsers possess a local cache, on the other hand proxy servers with caching function exist between the client and the web server (Tanenbaum 2002). Because some client requests are not served by the web server, but by the cache, the log file does not contain these requests and is therefore incomplete.

Not only caching, but also the use of the proxy server reduces the data quality of the server log files. When a proxy server forwards a request of a client, then this always happens under the IP address of the proxy server and not of the client. Since a proxy server can serve several clients, it is no longer possible to determine on the basis of the IP address which individual client sent the page request. The reverse case can arise, if dynamic IP addresses are assigned. Then a client possesses several IP addresses, since with each dial-up usually a new address is assigned, i.e. by means of the IP address it

is not possible to identify a client exactly (Davison 1999). Measures for better identification comprise cookies, user registration or session identifiers.

Cookies are information transferred by the web server when a client visits a web site. These information are stored permanently on the client. At each succeeding visit of the web site the contents of the cookies are sent back to the web server (Kristol, Montulli 1997). It is possible to identify certain clients and reconstruct their behaviour by storing unique customer numbers in the cookies. Disadvantages of this method are that the identification only relates to a specific browser and not to a certain user and that the browsers can deny storage of cookies depending on the agreement of the user (Guba, Gebert 1998).

If a user has to register himself explicitly when entering the web this person can be identified definitely. The user name is then stored in the log file either in the attribute 'RFC931' or 'Authuser' depending upon used authentication technique. At the same time however the anonymity of the user is waived, which can partly encounter the resistance of the users.

The use of session identifiers is the weakest method for identifying clients. During the entire web site visit a unique combination of characters (session ID) between client and server is exchanged, so that the clear identification of a client is possible but only for each session (Wasmeier 1997). By the use of cookies or user registration several consecutive visits of clients can be identified.

Beside the web server log file additional data originate indirectly from the use of the web site and reside in the operational systems. For example the purchase of a product in the online shop creates data in the financial accounting and distribution systems. It covers product, customer and transaction data. Depending upon the information system data is stored in different structure and different level of detail (Büchner, Mulvenna 1998). Further relevant data may be the registration data of the customers from master data up to the interest areas of the customers. A complete overview of relevant data in the operational systems for web usage mining cannot be given here, since it depends on both the installed information systems and the kind of web site.

4.1.2. Data Enrichment

From the already available data further data relevant for web usage mining can be derived. So sessions and transactions of the individual users can be determined from the log file. A so-called session or visit is a coherent attendance of a web site of only one specific user. Via the identification of sessions the entries in the web server log file can be assigned to individual users and the exact navigation behaviour will be traceable. Depending on the underlying data several methods exist to identify sessions (e.g. Pitkow 1997; Wu, Yu, Ballman 1998).

Based on the information about sessions further fragmentations are possible into so-called transactions. These transactions are based on the assumption that the pages of a web site fulfil certain functions for individual users. Auxiliary pages, which facilitate the navigation in the web site and refer to pages with certain information, and content pages, which contain these looked for information, can be differentiated. Two different definitions for transactions exist. The first transaction type consists of a sequence of navigation pages and one following content page (auxiliary content transaction). The second definition covers only the content pages of a user session. The navigation pages are not considered here (content only transaction) (Cooley, Mobasher, Srivastava 1997b; Cooley, Mobasher, Srivastava 1999). Transactions represent the navigation behaviour in detail and reflect the user's interest areas.

From the data of the operational systems new data can be constructed. Usually economical numbers are calculated, which possess relevance for regain management. The new data can be both a summary of several attributes and a representation of temporal connections, in order to facilitate the identification of patterns in the data analysis (Berry, Linoff 1997). For example it is conceivable to calculate the total revenue or the number of purchases of customers on the basis of the individual purchase transactions and then get an insight into the profitability of each customer.

4.2. Cluster Analysis

Different data mining techniques can be applied to the data basis described above. Here exemplary the cluster analysis as a suitable technique for supporting customer regain management shall be explained in detail.

The term cluster analysis comprises a number of mathematical and statistical procedures with the goal of discovering homogeneous classes of similar objects in a given set of objects (Hartigan 1975). A premise for the application of the cluster analysis is the existence of a structure of classes in the set of objects, i.e. it is assumed that the objects already form groups and are not evenly distributed. The cluster analysis ranks among the methods of unsupervised learning, i.e. no a-priori knowledge about the data exists. In particular the classes and class affiliations are not known in advance. This fact distinguishes cluster analysis from classification, which has the goal of producing a classification function for new objects whereby the number and the kind of classes is known in advance (Nakhaeizadeh, Reinartz, Wirth 1998). The results of the cluster analysis can be used as a starting point for cluster-specific measures, since the objects of a group possess similar characteristics and can be treated uniformly.

So far research in the area of web usage mining is centred on other kinds of methods like association or path analysis. Up to now cluster analysis was used in web usage mining only in few cases (e.g. Shahabi et al. 1997; Nasraoui et al. 1999; Perkowitz, Etzioni 1998; Yan et al. 1996). Research is focussed on the evaluation of the log file of the web server for optimizing and personalizing the web site. The research is technically driven, not process oriented and neglects how to transform web usage mining results into business value. Therefore the following sections point out how cluster analysis can support customer regain management by means of the data basis described in chapter 4.1. The focus of the elaboration is thereby on the two sub processes identification and dialogue initiation. An underlying mix of regaining strategies is assumed, in particular incentive and dialogue strategy (see chapter 3.1).

4.2.1. Identification Process

A challenging task in customer regain management is to identify terminated relationships as soon as possible if customers do not explicitly terminate it. A very easy method is to specify a length of time since the customer's last visit or purchase and classify those relationships as terminated which exceed the specified duration. But this method does not deliver results in time. A more sophisticated and timely method is to use cluster analysis on data of already lost customers. Data like the number of products purchased, content pages visited, number of sessions, and time spend in the online shop may be of interest for such an analysis. Cluster analysis will group those lost customers with similar data characteristics. Analysing the clusters in more detail will result in classification criteria for terminated customer relationships. Then discriminant analysis for example can be used to specify a classification function for lost customers on the basis of the cluster analysis results. Using this function on data of not yet lost customers the similarities to all identified clusters can be measured. If this similarity exceeds a certain level then the probability that this relationship is already terminated or will be terminated in the near future is very high. So these customers should be included in the regaining process. As shown above the cluster analysis provides a very easy and fast method for identifying terminated relationships and most of the steps can be automated. A very timely identification is an inevitable premise for applying regaining measures especially in domains without external termination like most online shops.

4.2.2. Dialogue Initiation Process

In the dialogue initiation process all lost customers with certain levels of profitability and regaining probability will be addressed. In order to ensure a high regaining rate a personalized approach should

be used. Cluster analysis can support the dialogue initiation in an effective and efficient manner by providing information about groups of lost customers with specific characteristics.

In the context of an online shop personalized e-mails represent a fast and low-cost way to approach lost customers. Such e-mails are characterised by means of customer group-specific contents. The results of the cluster analysis from the web usage mining form an appropriate information basis, since the persons of each group constitute a homogeneous set and can therefore be addressed segment-specifically. For regain management different contents are conceivable, e.g. segment-specific products can be offered and priced according to the profitability of the customers or relevant changes in the online shop can be communicated. Electronic newsletters with information about special campaigns and new products concerning the areas of interest of each customer group can be established. Additionally the customer can be supplied with topic-specific information from external data sources. If customers are grouped on the basis of their navigation behaviour in the online shop, then user segments with similar page requests are formed and these groups can be supplied with information about changes in the visited pages. Another way of grouping customers can be according to their purchase history. Then precise product advertisement or subsequent offers are possible contents of the target group-specific e-mails. The process can run off from the acquisition of data to the message dispatching almost automatically. A visit of the online shop is facilitated by the embedding of hyperlinks in the body of the e-mail.

Beside e-mails also virtual communities for the different customer groups are an instrument for regaining customers. Segment-specific communities can be formed, since the customers of a segment have strong similarities to each other. If grouping is done on the basis of the purchase history or the navigation behaviour of the customers, then communities of interest for each segment can be established and so an incentive for revisiting the shop is created. In the community an exchange of experiences and information about products or interest areas takes place. Further measures to increase the exclusivity and personalization of the communities can be applied, e.g. access may be restricted to premium customers or special after-sales services can be offered to community members. In addition valuable information about termination reasons and customer dissatisfaction can be collected by analysing the content of the communities.

5. CONCLUSION

In the last years customer relationship management has been one of the popular research topics. None the less, customer regain management as part of customer relationship management is not yet widely covered. Therefore the paper presented a framework for customer regain management in e-business comprising a process model and appropriate measures. Besides the five main processes identification, segmentation, dialogue initiation, regaining, and process control it is also important to specify goals and strategies for regain management and to establish a suitable IT support. In the context of online shops the concept of web usage mining can support customer regaining in an effective and efficient manner. In particular the sub processes identification and dialogue initiation can be facilitated by the use of cluster analysis. Further research includes evaluating other statistical methods suitable for customer regaining, realizing the proposed concept by means of a prototype and complementing web usage mining with other regaining measures.

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