Sustainable Internet marketing technical framework – concept

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Abstract

Opportunity and threat of the Internet is the new level of market transparency for products and services. Within such an environment a comprehensive strategic concept has to be established to identify market developments and to flexibly adjust to them. This concept has to be supported by systems which are aligned to the Internet marketing strategy and intelligent enough to automatically implement optimizing activities. On the basis of the current Internet marketing environment the Sustainable Internet Marketing Technical Framework describes nine elements to be prepared for future challenges. The consolidated functionalities of the elements of the SIMTF enable sustainable Internet marketing. The nine elements are specified within a first level of maturity to establish a stable basis of the upcoming development. The target group of this paper is experienced Internet marketers and professional Internet Web site developers.

Keywords

Internet Marketing, Sustainable Internet Marketing Technical Framework, Web site marketing, Web design, Online Marketing, Internet Marketing Strategy

1. Introduction

The Internet is both an opportunity and a threat. It creates a new form of market transparency that favors products and services which are professionally promoted within the Internet. During the last years the opportunity to create awareness for companies, brands, products and services via the Internet has turned into an obligation (Heise Website, 2005). Additionally a strong Internet Marketing (IM) channel has developed to a strategic competitive advantage.

This paper primarily introduces the current IM environment and summarizes established implementation approaches. Section 3 describes the objectives of the Sustainable Internet Marketing Technical Framework (SIMTF) and the 9 elements of the concept.

The value proposition of this paper is the specification of elements required for a sustainable Web site concept which ensures transparency and flexibility during the operation. Within this concept all major aspects of Web design and sustainable IM activities are considered.

2. Internet Marketing

Internet based marketing started in the late 90s of the 20th century. During the first years, the environment and approaches of IM concepts continuously changed. Within this section the current environment is described and established IM approaches are illustrated.

2.1. Environment

The Internet enables potential customer to easily access information about products and services. This access is mainly used to leverage the market transparency in order to identify the best offer for a specific demand. To efficiently compare services and prices, the Internet offers several platforms like search engines, portals and product-comparison engines (e.g. www.kelkoo.de or www.froogle.com).

The objectives of IM are usually just vaguely defined. The large impact of technical determinants on IM strategies elaborated technology driven objectives (Figure 1 – Established approaches) instead of primarily formulating business objectives to derive specific IM strategies which have to be implemented (Figure 1 – Optimal approach). The dynamic development and broad spectrum of technologies available enforced this unstructured approach.
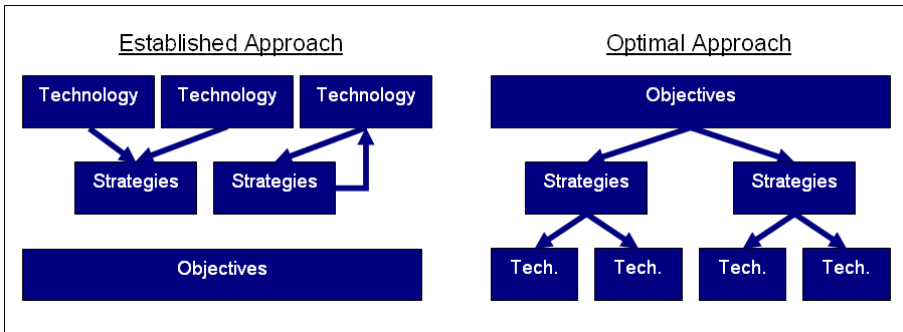

Figure 1 : Established and optimal Internet Marketing Approach

As illustrated with the Sustainable Internet Marketing Concept (SIMC) (AAT Internet Marketing, 2006), profit-organizations generally follow three main objectives within their Internet activities:

- [AAT-O1] Creating awareness for products/services/brands
- [AAT-O2] Initiating attraction by convincing the potential customer of a set of specific messages
- [AAT-O3] Performing online or offline transaction

Currently the implementation for [AAT-O1] is mainly based on search-engine ranking optimization, banner placement and alternative affiliate marketing techniques. For the search-engine ranking optimization it is crucial to identify the

user's search-behavior; for the other techniques relevant Web sites for targeted advertisement have to be identified. This determining knowledge about Internet behavior is the key success indicator for many IM activities; for successful IM this knowledge has to be reassessed continuously. Considering that all behavior underlies certain changes, intelligent systems are required, which steadily provide the company with information about the evolving customers and market participants.

The implementation of [AAT-O2] is mostly determined by the choice of a content or sales management (e.g. online shops) system. Intended messages can raise attraction by illustration, functionality and specific content. The flexibility and spectrum of functionalities available from the used systems further define the possible extend of success.

The [AAT-O3] is currently supported by many different and totally fragmented services. On the one hand most transaction systems are designed and fully integrated in the content or sales management system but on the other hand they remain largely underdeveloped. (The transaction procedures are the processes in which most customers withdraw their decisions.) Additionally, the platforms do not provide sufficient information about the customer, expectations for services or the impact of campaigns. The system has to evaluate how pricing and servicing influences the transactions. Furthermore additional income can be generated via affiliation which is currently not integrated within common sales and content management systems. Besides supporting attractive transaction and follow-up systems, transactions are not limited to sales processes.

Besides the scope and definition of the objectives, the SIMC also stresses the necessity of key performance indicators and a clear overall strategy. Within this understanding especially the aspect of sustainability of the marketing efforts influences a technical implementation.

The situation stresses the exigency of a framework which describes the technical functionality of systems required for sustainable IM. Sustainable IM thereby means to steadily identify market development and to flexibly act accordingly.

2.2. Internet Marketing Approaches

IM is currently determined by a large spectrum of concepts and solutions mainly derived from implementation projects. The approaches are strategically incoherent and mainly focus on pure Internet presence. In the terminology of the SIMC the activities are limited on AAT-O1, raising awareness for products and services among existing and potential customers and partners.

Technical solutions exist on a very fragmented base. The solutions mainly support the basic requirements, but do not automatically adjust the system according to market developments. Established software allows rather static analysis or Web site management, while sustainable concepts require dynamic approaches.

IM approaches differ depending on the area and size of the activities. The existing implementations are mainly based on paid advertisement (on- and offline, e.g. banner advertisement), search engine ranking optimization (SEO) and direct marketing. While the scope of those activities is limited to AAT-O1, their value is limited to a short period of time.

3. SIMTF

This section 3 shortly describes the objectives and elaborates on the nine elements of the SIMTF.

3.1. SIMTF Objectives

The objective of the SIMTF is to specify the required elements for an Internet Web site which can continuously monitor and adjust to the market developments. Establishing the environment to identify changes promptly and providing the flexibility to adjust all implemented elements accordingly are the key challenges of sustainable IM. The elements of the SIMTF have to precisely perform this identification and adjustment of the overall system fully or partially automated. The SIMTF is deducted from the Sustainable Internet Marketing Concept (SIMC), which describes the environment, objectives and processes of Internet marketing (AAT Internet Marketing, 2006).

As this underlying paper is the first publication of the full concept - which covers a broad spectrum of Internet fields - a state of maturity has to be reached by further aligning the elements to the required functionality and existing terminology.

3.2. SIMTF Elements

The SIMTF consists of 9 systems (Figure 2) which describe the elements required for sustainable IM. Each system provides at least one business value as illustrated within the SIMC. The systems are not understood as tools for analysis but as integrated learning engines. The Site Usage Information System [SIMTF-S4] for example describes the functionality to adjust the Web site navigation structure according to utilization patterns; another example is the Online Pricing Information System [SIMTF-S8] which optimizes the product and services illustration.
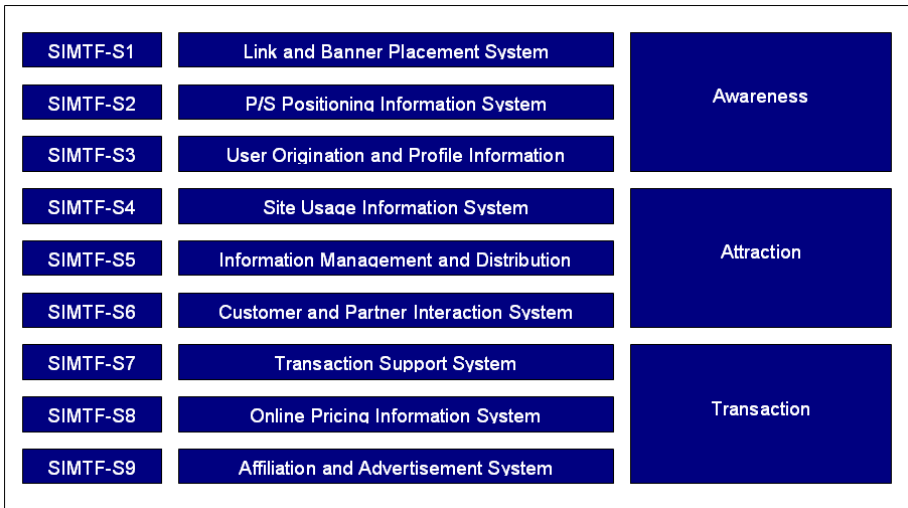
Figure 2 : SIMTF Elements

3.2.1. Link and Banner Placement System

The objective of the link and banner placement system [AAT-SIMTF-S1] is primarily to create awareness [AAT-O1] for products, services or whole brands. The strategy is to provide the technical environment that enables the distribution of specific links and banner on demand. The system network integrates all relevant channels as search-engines (Seda, 2004), directories and partner Web sites.

SIMTF-S1 has several quality aspects which determine the effectiveness of the system; examples are illustration type, location quality or timing. The system is mainly used for campaign implementations. The maturity of the system is determined by its level of automation to optimize the marketing activities.

The key-functions of the SIMTF-S1 are the banner and link specification, the campaign specification, the partner generation and the partner evaluation. Information maintained by the system is channel and meta-information to illustrate links and banners within the network.

3.2.2. Product and Services Positioning Information System

The product and services positioning information system [AAT-SIMTF-S2] is required to evaluate the level of awareness [AAT-O1] which can be leveraged via the Internet. SIMTF-S2 provides information about the positioning of specific products and services as well as the overall Web site within the Internet. The information system finally joins channels and target group specifications.

Examples of quality characteristics of this system are the degree of channel details, the possibility of development tracking, and the impact and time sensitivity analysis. The system is mainly used for search engine optimization and for the general

evaluation of the Web presence (performance monitoring). The data maintained can be utilized to automatically optimize advertisement strategies (SIMTF-S1).

The key-functions of the SIMTF-S2 are the channel analysis, target-group analysis, development-tracking and quality analysis. The system manages information about channel utilization schemes and the positioning within those channels.

3.2.3. User Origination and Profile Information System

The objective of the user origination and profile information system [AAT-SIMTF-S3] is to provide the data source to analyze the awareness structure of the products and services. The SIMTF-S3 provides information about existing and potential customers, partners and multipliers using the IM elements. Within this system, origination data (Bayne, 2000) is matched with profile information. This information is used to analyze the clustered target group and to customize the products and services as well as the overall IM strategies.

Quality aspects are the level of detail and the integration with the other elements of the SIMTF. User origination and profile information can be automatically translated into optimizing the on- and off-site marketing activities or the scope of the illustration and distribution system.

The key functionalities of the SIMTF-S3 are the user origination identification and the user profile analysis. The SIMTF-S3 maintains information about user behavior, user characteristics and user navigation.

3.2.4. Site Usage Information System

The primary objective of the site usage information system [AAT-SIMTF-S4] is to provide a data source to analyze how attractive [AAT-O2] the Web site is for potential customers. The SIMTF-S4 provides information about the Web site's elements usage by existing and potential customers. It is used for product/services and Web design analysis. Additionally a combination with the information from SIMTF-S3 provides an interesting insight on the different Web site components' appeal on the different user cluster. The quality of this system is determined by the complexity of data which can be stored and the possible analysis which can be performed with this element. The site usage information can be automatically utilized in adjusting the navigation structure favoring specific products or services.

The key functionality of the SIMTF-S4 is the utilization analysis and the generation of a link-structure according to the utilization schemes. The core data is traffic information matched to identifiers of the Web site's elements.

3.2.5. Information Management and Distribution System

The objective of the information management and distribution system [AAT-SIMTF-S5] is to create awareness [AAT-O1] and attraction [AAT-O2]. The SIMTF-S5 provides the technical environment to manage and illustrate information on- and off-

site. The system includes a professional content management system (CMS) as well as possibilities to distribute the content via a set of data-distribution formats (e.g. XML).

The CMS has to provide supporting functionality to create attractive (content and design) information. The system has to be highly integrated with the other systems of the SIMTF.

The key functionalities of the SIMTF-S5 are the content creation, content illustration and content distribution. The illustration and distribution of information are continuously optimized according to utilization statistics that focus on the Internet marketing strategy. The system maintains the core information of the Web site and meta-data to structure and distribute the content.

3.2.6. Customer and Partner Interaction System

The customer and partner interaction system [AAT-SIMTF-S6] is a major element to continuously remain attractive [AAT-O2] for potential and existing customers, partners and multipliers even after the first visit or purchase. Additionally the system provides a platform to promote its own and other specific products and services. SIMTF-S6 provides the technical environment to enable B2B, B2C or C2C interaction and has to be integrated comprehensively with SIMTF-S5. The customer and partner interaction leverages the opportunities of the Internet of establishing a brand and network as well as a community (Hanson, 2000). While the significance of a brand is broadly elaborated, a virtual network or community allows to identify customer's and partner's needs, to steer product and services feedback, to lower support and maintenance costs and to secure new customer within their purchase decision (Cox and Koelzer, 2003).

The key functionalities of the SIMTF-S6 are the discussion management, newsletter management, FAQ management and feedback management. The system has to be designed to maintain and develop itself, e.g. to generate FAQ-pages automatically from helpdesk requests or structure the discussion platform upon the existing discussion threads. The system provides customer, partner and multiplier data as well as specific meta-data for the described functionalities.

3.2.7. Transaction Support System

The objective of the transaction support system [AAT-SIMTF-S7] is to enable potential customers and business partners to perform transactions [AAT-O3] on the Web site. The SIMTF-S7 provides the technical environment to support the whole transaction process including registrations, operations, payments and deliveries. Transactions highly determine the usability of a Web site (Roberts, 2002); they have to be comprehensible, effective, efficient and secure.

The key functionalities of the SIMTF-S7 are the transaction operation and the transaction supervision. The support of operative activities by automatic processes has to continuously adjust to the tracked performance of the activities. The system includes customer and partner data as well as transaction and source information.

3.2.8. Online Pricing Information System

The online pricing information system [AAT-SIMTF-S8] is a back office system required to analyze the market situation. The system establishes the information base to identify the right pricing strategy to insure an optimum of transactions [AAT-O3]. The SIMTF-S8 provides the technical functionalities to assess pricing information about the products and services within the Internet environment. The pricing information refers to all equivalent or comparable products and services in consideration of the whole service package (add-ons, shipping, warranties, and other benefits).

The key functionalities of the AAT-SIMTF-S8 are the price and the scenario analysis. The system has to be able to adjust the pricing and bundling of products and services on the Web site according to the performed analysis. The more data that are maintained by the system are pricing information, channel query logic and service package specifications.

3.2.9. Affiliation and Advertisement System

The objective of the affiliation and advertisement system [AAT-SIMTF-S9] is to generate (a) more awareness for the Web site [AAT-O1: Awareness] and (b) additionally revenues via the Web site [AAT-O3: Transaction]. The SIMTF-S9 provides the technical instruments to integrate affiliate and alternative advertisement elements seemingly within the existing environment. The system can (a) manage the established affiliate marketing programs (e.g. integrate Google AdSense or Amazon partner programs) and (b) initiate an own affiliate/advertising concept that provides all technical requirements to manage the own external advertising network.

The efficiency of this SIMTF-S9 depends on the simplicity with which attractive external affiliate marketing systems (or partner programs) can be managed and on the flexibility to enable selected advertisers to connect to the provided advertisement platform.

The key functionalities of the SIMTF-S9 are the advertisement management and the affiliate management. The SIMTF-S9 has to independently adjust the advertising activities according to the performance of specific key performance indicators. The system maintains the data required to identify the accounts for the partner programs and the partner program specific source code. The system has to store details about advertisers and their advertisement activities.

3.3. Possible Implementation of the framework

The SIMTF is structured in clearly separated elements or nine systems; an implementation of the concept has to follow a highly integrated approach. While some elements can work on a stand-alone basis, most of them require information from the other systems.

Existing Web site solutions (mainly CMS or portal software) cover parts of the SIMTF-S5. Available online shop software focuses on aspects of SIMTF-S5 and SIMTF-S7. Certain tools, plug-ins and applications enable services of the other systems as specified above. Those tools and applications are a) not integrated and b) not aligned to a common concept which focuses on the profit organization's success.

Even though the AAT-SIMTF requires further specifications of its services in order to reach a certain degree of maturity that will allow implementing possible solutions, a next step can be the first design of a data-model to reach a future integrated implementation. The SIMTF will help to design comprehensive application architectures and to define minimum requirements and structures for the system. The framework is based on a service oriented design and each implemented service will provide a certain value to the organization using it.

4. Next steps of maturity of the framework

The opportunity and threat of the Internet is the new level of market transparency. Within such an environment, a comprehensive system has to be established to flexibly identify and adjust to market developments. The organization and processes for a sustainable IM have to utilize an integrated application landscape and data-pool.

The elements of the SIMTF have been specified on a high level within this paper. The illustration of different back- and front-office functionalities as one integrated system is conceptual. The technical implementation has to certainly consider the different target or user groups of the demarcated elements.

The next steps of the SIMTF will be to focus on enriching the maturity of the specified concept by further aligning it to a comprehensive strategy of sustainable Internet marketing. The final specification will have to describe pertinently the objectives, services and data of each element. Based on future revisions additional elements or service might be added or deleted.

5. Conclusion

The paper specified the nine elements required for a sustainable Web site concept which ensures transparency and flexibility during the operation. Within this concept, all major aspects of Web design and sustainable IM activities were considered.

The nine systems cover the broad range of creating awareness, raising attraction to supporting transactions via the platform. These elements are the Link and Banner Placement System, Product and Services Positioning Information System, User origination and Profile Information System, Site Usage Information System Information Management and Distribution System, Customer and partner interaction System Transaction Support System, Online Pricing Information System Affiliation and Advertisement System. Each of these has to analyze market developments and adjust the Web site accordingly.

The next step of the framework is to develop a comprehensive application architecture. This architecture has to focus on the functional integration of the 9 elements without compromising a professional service oriented architecture.

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