

Guest Editor's Preface to the Special Issue on Mobile Tagging in Marketing

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New technologies have impacts on marketing and sales activities as well as strategies of companies. Technologies that enable physical mobile interaction (PMI) become more and more popular among companies. PMI is a way of interaction in which the user interacts with a mobile device, and the device interacts with the objects in the real world [1]. Mobile tagging is a way of realizing PMI. It is defined as the process of capturing and decoding 2D barcode images and linking the decoded information with a mobile device (e.g., smart phone) [2]. For instance, by pointing at a QR code on a billboard advertisement with a smart phone, one can instantaneously get the detailed information about the product.

Due to the growing number of mobile devices, especially smart phones owned worldwide, and the developments of the mobile applications, more and more companies are using mobile applications and mobile tagging in their marketing activities. Most of the big companies in the world (e.g., Starbucks and H&M (Hennes & Mauritz)) have conducted campaigns comprising tags [3]. Mobile tagging will probably be an inherent part of many companies' marketing campaigns in the near future.

Marketing managers can use mobile tagging for various purposes. For example, it is essential for marketing managers to offer products that meet customers' needs and wants. In this regard, marketers need a good customer database. They may use mobile tags to provide links to specific mobile sites in which via various tools (e.g., questionnaire, voting) information about the customers' needs and wants is collected. The captured information is then analyzed and used to determine offerings for the target customer [4]. Advertising is a powerful form of communication. Using tags to advertise a product and to link it to a mobile commerce enabled web-site are also examples of mobile tagging in marketing [5].

This special issue of *Management* brings together four articles that discuss the advantages of applying mobile tagging and QR codes in marketing activities of companies. The first article deals with the contribution of QR codes to the Marketing-Mix based on a case study. The second article is a research study that presents a longitudinal study on the application of QR code technology in the 2012 issues of ten top-selling German popular magazines. The third article investigates the role of QR codes for the discoverability and sales of SOA-based services. The last article discusses how the integration of QR codes with social media tools contributes to the marketing activities of 3PL companies.

Klein investigates the influences of QR codes on the marketing mix elements 4P's and 4C's based on a case study that evaluates QR code based mobile marketing activities of B/S/H (Bosch Siemens Hausgeräte) Turkey. According to her, QR codes have influence on the marketing mix element product/customer by enabling collection of customer attributes or opinions, which can be used for product development and by enabling access to customer related services through QR code scanning. Offering unique prices to customers and savings on maintenance costs are the important influences of QR codes on the marketing mix element price/cost. Besides granting access to diverse promotional content such as product and price information, advertisements, marketing campaigns, etc., QR codes have a promotional power in attracting consumers. QR codes, being a novel technology, arise curiosity among consumers. This curiosity leads consumers to scan the codes on ads, catalogues, etc. even though they are not interested in the advertised or introduced products. QR codes enable consumers to access various forms of information (text, pictures, video, audio or combination of them) easily and time independently. They also enable interactive communication. Klein expresses that QR codes influence the element place/convenience by making it possible to buy a product through QR code scanning if the code leads to an online shop which offers the advertised product. Klein examines a business case in her article, in order to investigate the effects of QR codes on marketing mix elements in real life. Because QR codes are not popular in Turkey, B/S/H has not invested much in using QR codes for marketing purposes. These codes are primarily used on product-price brochures/catalogues, stand in exhibitions and ID badges to provide product-related information to consumers or inform them about services. B/S/H plans to use QR codes on product brochures, on price magnets, on online ads to provide the product information, and on product posters in shops to inform consumers about product prices. It has also planned to integrate QR codes into social media channels in order to reach consumers via social media. As B/S/H uses or plans to use QR codes generally related to the marketing mix element promotion/communication; Klein, in her article, suggests B/S/H to use some other QR code applications that enable the use of QR codes in all remaining marketing mix elements.

Böhm and Ruthardt explain that there is a shift in media consumption from print to online media. This leads newspaper and magazine publishers to rethink their existing formats and business models and forces them to integrate gradually online and mobile channels into their business models. One of the applications used for the transition from classic print and offline

worlds to modern online platforms is mobile tagging. It enables publishers to implement cross media publishing strategies. Böhm and Ruthardt state that mobile tagging has been used for quite some time in German magazines and has disseminated increasingly in the print industry over the last few years. They conducted a longitudinal study on the application of QR code technology in German magazines. They analyzed the 2012 issues of the ten top-selling German magazines. The aim of the analysis was to determine the status quo and the trend for QR code integration in German popular magazines, the purpose of QR code integration, the type of content linked with the codes and to determine whether the integration of QR codes complies with common best practices (e.g., the usage of deep links). The results of the study indicated that the usage of QR codes has increased by 140 in 2012 and further growth is expected. QR codes are used widely for commercial purposes such as advertisements. Editorial usage, such as enriching a print article with multimedia contents, is limited to popular news magazines. However, editorial usage seems to have an impact on the usage intensity of commercial tagging. When used for editorial purposes, QR codes were mostly linked to video contents. When used for commercial purposes, they were mostly linked to websites. Subscriptions, in which QR codes were used in order to gain new subscribers and to initiate online contracts, constituted other contents linked with the codes. Video platforms were used on a considerably smaller scale for the editorial use of the codes. Böhm and Ruthardt express that direct links to online shops are available, but only at a low rate. Based on best practices of mobile-optimization of the link targets, usage of deep links as well as the number of characters encoded in QR codes are the requirements whose realization is important for a meaningful and successful use of QR codes. Linked websites and other targets of QR codes should be optimized for mobile devices. Deep links lead directly to relevant content. Using too many characters in codes can unnecessarily complicate and slow down the scanning and decoding process. Encoding up to 60 characters in codes is recommended. Most of the analyzed magazines for the article meet the mentioned requirements. In their article, Böhm and Ruthardt also express that the potential of QR codes to realize new cross publishing strategies has not been completely exploited. This is an area requiring improvement. According to Böhm and Ruthardt, gaining insights on the perception and usage of the QR codes by magazine readers is also a research area for future studies.

Recently, the use of service oriented architecture (SOA) has become a commonplace. As a result, a trend of using SOA-based services exists. In this context, it is important for software architects to obtain information about the required services quickly. This has a positive impact on the decisions of software architects to purchase the searched services. In the article of Herand and Küçükaltan, a solution is proposed to use QR codes for service descriptions so that the discoverability of services can be increased. Increasing discoverability through QR codes contributes essentially in gaining a strong competitive advantage and increasing the sales of SOA-based services.

Küçükaltan and Herand illustrate in their article how QR codes integrated with social media tools can contribute to the marketing activities of 3PL companies. The finding of the article is that through the use of QR codes marketing activities can be managed more effectively; the recognition of companies can be increased; and a growth in sales, profitability, and market share of companies can be realized.

Articles in this special issue give an insight how companies in various sectors benefit or can benefit from QR codes to execute their marketing activities effectively. Knowing the performance of QR code based marketing is as important as knowing the benefits of using QR codes. In this context, studies concerning the evaluation of the performance of QR code based marketing can be executed in future.

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