ABSTRACT
The trend of the Internet 'going mobile' is irreversible and proceeding. Many established Internet players are experimenting with extending their business models to the mobile Internet. In this paper, we explore such business development process for the domain parking business of Sedo – a global leader in domain trading and domain parking. With the case study, we show how Sedo on the one hand benefits from its position as market leader in the stationary domain parking business and, on the other hand, faces severe challenges such as the trend to search-based Internet access, performance-based pricing, the proliferation of smart-phones and mobile applications (apps) – all of which are typically appreciated in the mobile Internet. We thereby contribute to our understanding of the multifaceted issues that companies face when they transfer their business models from the stationary to the mobile Internet.

Keywords
Mobile Internet, business model extension, domain parking.

INTRODUCTION
Building on the academic discourse on business models in the disciplines of IS and management, in this paper, we focus on the development of digital business models. We aim to understand how successful eBusiness models in the stationary (non-mobile) Internet can evolve and be adapted in response to the general trend of the Internet 'going mobile' caused by the growing penetration of mobile broadband access, lower data plan costs, and the increasing diffusion of appropriate devices.

So called feature phones have been very important access devices already for more than a decade. Those mobile devices are designed for traditional phone-based activities like placing and receiving calls and text messages. They are less convenient for Internet usage and usually have a manufacturer's proprietary operating system. Further, tablets (essentially small laptop computers without a keyboard, but with a touch screen as an input device) and smart-phones have reached wider popularity more recently. The term 'smart-phone' refers to high-end, multifunctional devices that can send and receive emails, allow for immediate Internet access, include features such as location tracking, and often contain a camera and a large memory.

The mobile Internet already accounts for more users than the non-stationary one (e.g., Mukhopadhyay, Bagchi and Udo, 2009). Catching up with the trend, eBusiness and online advertising have followed the users to the mobile Internet with mobile banner advertisements (ads) and direct product offerings on mobile devices.

The Mobile Marketing Association (2008) defines the mobile Internet (also termed mobile web, wireless Internet, or wireless web) with respect to the content formatted for mobile devices. In contrast, Chae and Kim (2003) build their definition of the mobile Internet on user, environment, and system. Lee, Choi, Kim and Hong (2007) emphasize the importance of personal, identity carrying mobile devices, underline the 'always on' mentality and, consider hardware characteristics, such as screen size, processing capabilities and input facilities. Similarly, in this paper, we define the mobile Internet as the possibility to use Internet contents and services on handheld devices (i.e., feature phones, smart-phones, and tablets) at any time, accessed for certain purposes (use contexts) via mobile or wireless communication networks.

In this paper, we solely focus on the business model of domain parking, which is one specific segment of eCommerce and online advertising. It builds on monetizing unused, but 'parked' web domains via performance-based advertising (Almishari and Yang, 2010) by taking advantage of users' wrong type-ins and outdated back-links. We analyze the case of Sedo, the world's leading provider of domain trading and domain parking services, in its efforts to extend its domain parking business to the mobile world. The remainder of the paper is organized as follows. Next, we provide some conceptual briefs on business models, followed by an introduction to the research context of domain parking and trends in online advertising. We
then present the case of Sedo and its domain parking activities ‘going mobile’. We discuss the case against insights from the business model literature, and conclude by shedding some light on the challenges companies face when extending their business model from the stationary to the mobile Internet.

BUSINESS MODELS: CONCEPTUAL BRIEFS

Research on business models has flourished in the disciplines of information systems and management since the late 1990s, especially with the proliferation of eBusiness. Today, forces such as deregulation, technological change, globalization, and sustainability make business model research again increasingly topical (Casadesus-Masanell and Ricart, 2011). There is still no commonly accepted definition of a business model. Rather, the term has been used to explain different corporate phenomena of interest, such as approaches to value creation or value capture, strategy, competitive advantage, linkages with suppliers and customers, internal processes, technology innovation, and different types of eBusiness (Casadesus-Masanell and Ricart, 2010; Chesbrough and Rosenbloom, 2002; Zott and Amit, 2008; Zott, Amit and Massa, 2011). The semantic confusion is further complicated by consultants and practitioners that often resort to using the term business model to describe any unique aspect of a particular business venture.

Common to most business model definitions is the need for a plausible revenue logic. A business model typically describes how a company interacts and transacts with its customers and stakeholders and generates value from resource investments (Osterwalder, Pigneur and Tucci, 2005). It typically focuses on cost and revenue aspects (Demil and Lecocq, 2010) and the ability to absorb ICT resources (Al-Debei and Avison, 2010; Chesbrough and Rosenbloom, 2002; Hedman and Kalling, 2003). A flexible business model allows for new processes to be added or removed in response to environmental changes, without jeopardizing existing core processes (Cavalcante, Kesting and Ulhoi, 2011) or established sustainability (Demil and Lecocq, 2010).

Alternatively, a business model is seen as a conceptual tool or a structural template that contains a set of elements and their relationships and allows expressing the business logic of a specific firm, translating the strategic issues, such as strategic positioning and strategic goals into a conceptual model that explicitly states how the business functions (Osterwalder, Pigneur and Tucci, 2005; Zott and Amit, 2008).

DOMAIN PARKING AND TRENDS IN ONLINE ADVERTISING

Domain parking describes the generation of revenue through advertising on unused, but parked domain names (Almishari and Yang, 2010). If a parked domain is accessed due to users’ wrong type-ins or outdated back-links, a website is displayed that is automatically filled with ads. A user's click on any of the ads generates revenue that is typically shared between the domain owner and the parking platform provider, similar to any performance-based advertising. By linking the users to landing pages they did not look for originally, the business model of domain parking contrasts the concept of permission marketing, which has also gained attention in the literature (Kavassalis, Spyropoulou, Drossos, Mitrokostas, Gikas and Hatzistamatiou 2003).

Conceptually, mobile parking is a variation of stationary domain parking with users accessing parked domains via mobile devices. However, the business model of domain parking going mobile faces three main challenges:

**Advertising going online and becoming mobile.** The growth of the mobile Internet draws advertisers from the stationary to the mobile world. Mobile ads and their stationary pendants are conceptually identical (McCoy, Everard, Polak and Galletta, 2007; Xu, Liao and Li, 2008), as they both employ formats like banners, pop-ups, search-based ads, or innovative interactive ad concepts. The relevant change lies in the adjustments to the mobile context in matters of size, shape, presentation, or content of the links specifically optimized for mobile devices (Billус, Brunk, Evans, Gladish and Pazzani, 2002).

**Performance-based advertising complementing and possibly substituting fixed-price advertising.** Performance-based advertising has become possible with the bidirectional information flows on the Internet (Chatterjee, Hoffman and Novak, 2003). It implies (1) the direct measurement of user responses on ads (Hoffman and Novak, 2000) and (2) payments based upon online consumer behavior (different from fixed-price advertising). Consumer behavior is typically measured in conversion rates (proportion of clicks translating into a final purchase) or in click-through rates (the number of clicks per thousand views). Click-through rates are more widely used as they lead to higher payments, even if measurements are imprecise (Ghose and Yang, 2009). The success of both, conversion rates and click-through rates, depends on the quality of

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1 For extensive reviews of academic research on and definitions of business models see Straub (2004), Osterwalder and Pigneur (2005) and Al-Debei and Avison (2010) in the field of IS or Zott et al. (2011) in the field of management.
the landing pages – measured by page relevance, transparency, and navigability (Gofman, Moskowitz and Metz, 2009; Goldfarb and Tucker, 2011). In contrast, in the case of fixed-price advertising, payments depend on the number of consumers.

_**Search-based advertising gaining over mass advertising.**_ The shift is evident in the numbers of Internet search engine visits (Telang, Boatwright and Mukhopadhyay, 2004), Google's impressive financial figures, and shifting marketing budgets. Nevertheless, studies on the effects of search-based advertising on users' responses are still scarce (Chatterjee, 2008; Manchanda, Dube, Goh and Chintagunta, 2006).

**METHODOLOGY AND DATA COLLECTION**

Investigating Sedo's efforts to extend its domain parking business to the mobile world, we conducted a single case study (Benbasat, Goldstein and Mead, 1987; Yin, 2009). We organized eight in-depth face-to-face interviews with Sedo representatives between June and November 2010 during regular in-house stays (usually five times a week) at Sedo's company headquarters in Cologne, Germany (verbatim reports are excluded from the paper due to length limitation). Interviewees were nominated based on their position in the company and on recommendations from senior managers. Owing to the exploratory nature of this research, semi-structured face-to-face interviews were deemed to be the best data collection method. They were designed flexible and did not just follow a fixed set of questions. Some interviews took place more than once (some subsequent sessions via email). As knowledge acquisition is an iterative and non-linear process, this helped to gather as much information as possible.

We also gathered server data from more than 1.6 billion views and more than 100 million clicks. This data was retrieved from large, company internal databases that track the traffic generated by users accessing a website. We sorted the data according to the country of origin, the web browser used (stationary and mobile), the earnings, and the access date. Finally, we investigated printed and website-based information including publicly accessible reports and press releases. They allowed us to validate findings derived from other sources or were used when no other sources were available.

**CASE STUDY: SEDO**

Founded in 1999 as a search engine for domain offers, Sedo today operates as the world's only global domain marketplace with more than one million member accounts from around the world. Sedo is a subsidiary of Sedo Holding AG under the United Internet AG. With more than 150 employees, Sedo has offices in the United States, Great Britain, and Germany.

With domain trading (since 1999) and domain parking (since 2002), Sedo connects buyers and sellers providing individuals and companies with the opportunity to acquire the domain names, which they need for their online presence. Sedo offers all tools needed to buy, sell, and monetize domains, achieving total gross revenues of about €100 million and net revenues of about €20 million (2010). Domain trading accounts for about 60% of Sedo's gross revenues and 35% of its net revenues. Domain parking generates roughly 40% of gross revenues and 65% of net revenues.

**Sedo's Business of Domain Parking**

Owners of unused domains use Sedo's parking service to earn revenue while promoting the domains for sale. When a parked domain on Sedo's domain trading platform is accessed, it is automatically filled with pay-per-click text-link ads and a predetermined design-template to purport that it is a real website. Whereas the domain owner sets keywords and domain topics in his or her Sedo account, Sedo's task is to optimize keywords and ad placements according to the topic of the domain and certain keywords to ensure that the ads fit to the expectations of domain visitors. This is different from sponsored advertising, where advertisers submit their product information in the form of specific keyword listings to search engines, bidding for promising listing on the search engine results page. When a user searches for a term on the search engine, the advertisers' website appears as a sponsored link next to the organic search results (e.g., Bradlow and Schmittlein, 2000). In brief, advertising on domains parked on Sedo's servers is performance-based so that advertisers only pay the assigned price when users actually click on the ad. Sedo then shares the per-click payment with the domain owner. The business model of domain parking is based on the assumption that every domain name naturally generates traffic derived from its unique name. The traffic originates either from entering a domain name in the address bar of a web browser or from old back-links coming from prior use of a (expired) domain.

Domain parking is a volatile business as parked domains generate parking revenue only until they are sold, and as the domain owners can easily change their parking provider. To stabilize the domain parking business, in 2005 Sedo launched SedoPro.

Loebbeke and Weiss (2011) provide an alternative analysis of Sedo's parking activities.
with exclusive traffic quality rank systems, auto-configuration of page elements, advanced statistical analysis tools, and dedicated account support for customers with large domain portfolios.

Sedo's Domain Parking going Mobile

The First Wave – Riding on Feature Phones. To get started in the mobile world, Sedo investigated the origins of its mobile traffic. At the end of 2010, 65% of its mobile traffic originated from feature phones and only 35% came from smartphones. The traffic from feature phones came from a highly fragmented selection of devices, making it difficult for Sedo to use device-specific design templates optimized for mobile views. Early routines for classifying devices barely covered the spectrum of devices, while particularly third-party browsers and Android-based devices created problems. Optimizing the design 'on the fly' was challenging. Sometimes a routine (wrongly) simply scaled down the page design for the stationary Internet to the mobile screen. Ads on parked pages appeared smaller than wanted, which negatively influenced the number of clicks and resulting revenues.

Sedo's mobile click-through rate was almost 2.5 times higher than the stationary one, implying business opportunities in mobile domain parking. As Sedo used the same text-link ads for mobile and stationary traffic, ad relevancy could not be the differentiator. Instead, page presentations or different user behaviors had to explain the figure. The presentation of parked pages on the smaller mobile screens without related but distracting links may have played a role. Nonetheless, mediocre displays on feature phones marginalized the effect.

Apparently, Sedo's mobile Internet users were more click-affine on parking sites than users on stationary devices. With 65% of Sedo's mobile traffic coming from feature phones, most users typed the web address of the page they wanted to visit into the browser. In case of a typo, they noticed the error only after the wrong page had loaded. When they found among the ads a link that allegedly redirected them to the location they had been initially looking for, they rather clicked on it than retyped.

The Second Wave – Sedo's 'Love-and-Hate' Relationship with Smart-Phones. The rise of smart-phones as primary devices to access the mobile Internet somehow softened the issue of device fragmentation from a technical point of view. A few mobile operating systems and browsers that all support similar technologies dominated the market. Smartphone screens more easily displayed parked pages and the corresponding ads. However, smart-phones increasingly led Internet traffic to mobile apps and thereby threaten a business model based on direct domain type-ins and old back-links. More sophisticated monetization means, such as mobile coupons for shops and restaurants in the user's vicinity or other location-based services, were barely sufficient to tackle the issue.

The profitability of Sedo’s mobile domain parking business points to a mixed picture. Only about 4% of the views on Sedo’s parked domains originated from mobile sources. Those 4% generated 8% of all ad-clicks and drove about 6% of Sedo’s total gross parking revenues. The revenue-per-thousand-views, which resulted from the click-through rate and the revenue-per-click and controls for differences in traffic volume, was on average lower than the one from stationary parking. In contrast to the higher click-through rates, the revenue-per-click (i.e., the ad price) was significantly lower in the mobile world. This was mostly beyond Sedo’s control as Google provided 94% of text-ads displayed on pages parked on Sedo’s platform. To make the best of the situation, Sedo teamed up with Affilinet, the market-leading German affiliate network.

DISCUSSION

Sedo started domain parking as a complement to domain trading in the stationary Internet. Monetizing unused domains was a logical addition to its business model. By combining its available resources (e.g., more than 18 million domains for trade on its platform) and its competences of technically linking its domain trading with domain parking, Sedo was able to leverage synergies and create economic value. When extending domain parking to the mobile world, the basic business model remained largely unchanged. However, even though Sedo appreciated click-through rates which were higher in the mobile than in the stationary Internet, the mid-term profitability had become questionable due to exogenously reduced mobile traffic on parking sites:

• With the trend towards search-based Internet access, people who search for terms and then click on links found, do not (incorrectly) type in URLs and hence do not get forwarded to pages parked on Sedo’s servers.
• With the shift to performance-based pricing, accidental visitors do not only have to land on a parked page, but would have to click on the advertisement in order to contribute to Sedo’s revenue stream.
• With the trend to smart-phones and tablets, users increasingly use apps and closed systems, such as Twitter, to get access to the Internet and thereby avoid mistyping web addresses.
As market leader, Sedo tried making its two business models – the established one on stationary and the emergent one on mobile Internet – coexist. It wanted to avoid any cannibalization of its traditional stationary Internet domain parking business. This is more or less in line with Markides and Oyon (2010), who suggest that such two business models should be kept separate enough to avoid conflicts but leverage potential synergies. It also finds support in Lyytinen and Rose (2003) who investigate the constant struggle to balance radical innovations and incremental improvements in organizations.

Sedo found itself in a situation similar to an incumbent facing new competition from providers of disruptive technologies (Christensen, 1997; Christensen and Overdorf, 2000). In contrast, Wheeler (2002) demands such disruptive technological forces of digital networks and computer hardware and software to be understood as the normal state of the external technical environment rather than as an anomalous and transitory disruption. In the case of Sedo, however, different from the classic scenario of disruptive competitive offerings, the company encountered a business model interruption resulting from the Internet going mobile.

To a certain degree, the relatively low imitatibility of Sedo’s resources helped the company to sustain its uniqueness established on the stationary Internet (Nevo and Wade, 2010; Wade and Hulland, 2004). Nevertheless, given the Internet’s ubiquitous digital service provision and access, the concept of imperfectly mobile resources decreases in significance. Facing a potentially shrinking stationary domain parking business, Sedo concentrated on its scalable domain parking resources, although the domain parking business was inevitably interlaced with its global, barely scalable domain trading activities. In line with Laamanen (2007) and Puranam and Srikanth (2007), Sedo found acquisitions and alliances most helpful to quickly develop resources and capabilities (e.g., acquisition of ‘GreatDomains’ from VeriSign in June 2007 and alliances within the Sedo Holding via Affilinet). Corresponding to Teece (2007), Sedo developed its dynamic resources and capabilities by investing in understanding its customer needs. It focused on device specific and individualized services in order to precisely identify the needs by device or, at least by operating system. Still, Sedo hesitated to compromise its core business by reallocating resources towards a mobile parking business.

The case of Sedo extending its domain parking business to the mobile world illustrates an example of an existing business model which does not fit the circumstances of external changes (Chesbrough and Rosenbloom, 2002). General insights from the business literature barely hold: According to Zahra and George (2002), a company’s ability to recognize and identify new market spaces strengthens a company’s position in dynamic markets. Chesbrough (2010), Demil and Lecocq (2010) and Zott et al. (2011) all suggest that business model development and extension are vehicles for corporate transformation and renewal. In the case of Sedo, the company’s efforts to extend its domain parking business to the mobile Internet, neither the recognition of new market spaces nor its business model development and extensions are likely to be sufficient. Is domain parking not made for benefiting from the generally appreciated trend of ‘going mobile’?

SUMMARY AND CONCLUSIONS

The case of Sedo extending its business model of domain parking to the mobile Internet balances an established player’s competitive advantages against the constraints imposed by the growth of mobile Internet, with the corresponding diffusion of smart-phones for Internet access, search- and performance-based advertising, and app-driven browsing. It shows that not every successful eBusiness model can be routinely replicated into the mobile environment with favorable results and analyzes the underlying context factors. Sedo needs to reconsider its business model portfolio in light of its dynamically changing business context. For Sedo as the leading provider of domain trading and domain parking services, it is still unclear how severely the technological developments in the era of ‘going mobile’ will challenge its parking business model, per se. The case of Sedo helps us understand the challenges resulting from established Internet players ‘going mobile’. It may require two different business models to make the best of two technological environments.

Securing the publication opportunity for a case study with findings that are rather critical for the company under investigation has posed some constraints in terms of data release. However, hopefully this study can serve as an effective eye-opener and promote further investigations into the opportunities and challenges of overwhelming technological developments, such as the growth of the mobile Internet with its ubiquitous and smart access devices.

REFERENCES


