Moving to the Mobile Internet: Analyzing Sedo's Domain Parking Services

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ABSTRACT
In this exploratory case study, we examine Sedo, one of the world's leading domain trading and parking companies in its efforts of going mobile. We introduce domain parking services and investigate the opportunities and challenges resulting from the company's innovation efforts due to the trend towards the mobile Internet. Based on Henderson and Clark [1] and Atuahene-Gima and Ko [2], we find that incremental and architectural innovations mark Sedo's efforts to strengthen its mobile profile and to complement its desktop business. We discuss whether modular or radical innovations, which overturn the existing business could be an alternative recipe for success in mobile parking. Yet, our data lets us conclude that the peculiarities of domain parking limit the transferability of the parking business to the mobile world. This seemingly negative finding helps us to rethink business model contexts and contingencies in the overall hype for the mobile Internet.

Categories and Subject Descriptors

General Terms
Management

Keywords
Mobile Internet, Domain Parking, Innovation Types

1. INTRODUCTION
Mobile Internet refers to accessing the Internet in a location-independent manner with personalized always-on mobile devices through wireless communication infrastructures [3]. Its usage has reached the mass market. The penetration of mobile broadband access increases [4]; lower data plan costs and the increasing diffusion of appropriate devices drive the business. Estimates expect the mobile Internet to outperform desktop Internet with regard to the number of users by 2015 [5, 6].

With the increasing diffusion of the mobile Internet, many industry segments show interest. Mobile commerce and mobile advertising have been in the focus of businesses' efforts [7]. 'Traditional' advertising (product and service promotion) has turned also to mobile devices. Mobile business models become apparent. Companies promote their products and services via their own applications (apps) or pay for banner ads [8]; advertising service providers move to mobile [9].

Mobile business models depend on a company's ability to innovate core products and services. Innovations are crucial for coping with changes in the environment and striving for the competitive edge [10]. They differ among companies in terms of approach and degree [11, 12, 2].

Innovations are subject to a large body of works [12, 13], which also includes studies that address the relationship between a company's product and service design and its competitive positioning [14]. Such studies have emphasized the importance of capabilities with regard to the exploration and exploitation of innovations and adaptive management for a company's performance [2, 15, 16].

In mobile research, equivalent works are scarce. Most mobile related research focuses on mobile business models [9]. Here we position our contribution. Following de Reuver et al. [9], we aim for findings about how an established Internet company can take advantage of the opportunities while at the same time tackling the challenges arising from innovating its product and services for the mobile world.

To this aim, we analyze the case of Sedo and in particular its domain parking business (different from domain trading). With its domain parking activities, Sedo generates revenues through filling unused domain names with pay-per-click ads and design-templates [17]. Sedo collects advertiser payments bound to links on the 'parked' pages, which it typically promotes for sale in its domain trading business line.

The domain parking business is built on Internet users accidentally mistyping a URL and thus unintentionally 'landing' on a parked page. In this regard, the mobile environment sets two major business hurdles for Sedo or parking service providers in general: (1) Internet users type less URLs. With links sent via Twitter and the rise of smartphones with apps, users go more directly to the target page. If they type less URLs, they also mistype less URLs. (2) Many mobile displays are still very small so that selling ad links is complicated, even though click-through-rates have been shown to be higher [7].

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The domain parking segment describes an oligopoly with three dominating players in the Western world, Sedo being one of them. Although domain parking is not a large segment in terms of turnover or number of players, we find it enlightening to study a player in the domain parking segment, where – due to the nature of the business – the generally praised move to mobile may be difficult.

2. RESEARCH FRAMEWORK

In order to analyze the innovations pursued by Sedo for taking its parking business mobile and for assessing Sedo's market and entrepreneurship orientation, we deploy the innovation typology by Henderson and Clark [1] and the 'market / entrepreneurship orientation' typology by Atuahene-Gima and Ko [2].

With their innovation typology (see Figure 1), Henderson and Clark [1] reach beyond the dominating scientific consensus [18, 19, 20], which has concentrated on radical and incremental innovations.

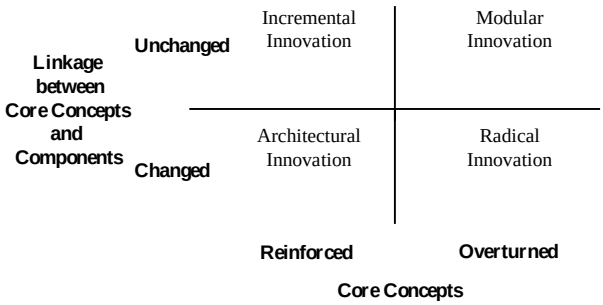

Figure 1. Innovation Typology (Source: [1, p. 12]).

Henderson and Clark [1] differentiate the product as a whole from its components. They define components as "a physically distinct portion of the product that embodies a core design concept […] and performs a well-defined function." (p. 11) Components serve specific purposes within the products and service offerings; they constitute a physical implementation of the core concept. The architecture of the product or service as a whole defines how the components are integrated, linked, and work together to best fulfill the overall purpose of the product and service. The authors further distinguish between core concepts being reinforced and overturned. Reinforced core concepts refer to refined established product and service designs, while overturned core concepts point to completely new product and service designs.

Based on core concepts and components, they propose four innovation types. Those are incremental, modular, architectural, and radical innovations. Incremental innovations describe the reinforcement of established product and service core concepts. Modular innovations change product and service components without affecting product and service architecture; they are characterized by the replacement of existing product and service components instead of their refinement. Architectural innovations denote the connection of existing product and service concepts in new ways. Radical innovations refer to overturning product and service components and the linkages among them; they typically require forming and redefining organizational resources [21].

According to their 'market / entrepreneurship orientation' typology, Atuahene-Gima and Ko [2] link innovation type a company pursues to a company's market and entrepreneurship orientation. Market orientation (high / low) refers to the degree to which a company integrates customer needs into its overall business strategy. Entrepreneurship orientation (high / low) denotes a company's striving for mechanisms that foster researching and risky behavior in innovation development. Based on their market- and entrepreneurship orientation, Atuahene-Gima and Ko [2] distinguish (1) market / entrepreneurship companies, (2) market-oriented companies, (3) entrepreneurship companies, and (4) conservative companies. Market / entrepreneurship companies have a high market and entrepreneurship orientation; they possess the highest degree of innovativeness, and are most efficient in the innovation process. However, they do not differ from other companies in terms of market competition. Market-oriented companies typically employ large R&D units, but do not have large R&D expenditures compared to other companies. They focus on incremental innovations. Entrepreneurship companies tend to count on radical product development. Finally, conservative companies score low on any given innovation dimension. A company's market and entrepreneurship orientation and thus its approach to innovation shape its abilities to cope with any technological evolution [22].

3. RESEARCH METHODOLOGY AND DATA COLLECTION

We conduct an exploratory, holistic case study. An exploratory study appears to be appropriate since the story is rather unique with only three major parking service providers leading the market [23, 24, 25]. A holistic design seems advantageous, since the units embedded within Sedo Holding AG are not accurately separable due to their business conjunctions.

We aim for construct validity [23] through the investigation of a multitude of data sources, including interviews, server data, and company documents, which together combine barely accessible with more easily accessible data sources. We offer data reliability through in-depth case documentation – mostly in German [25].

Between June and November 2010, we carried out interviews with Sedo's top management, Sedo's business unit managers, and external specialists for mobile topics on Sedo's premises in Cologne, Germany. Due to the exploratory nature of the case, we conducted semi-structured face-to-face interviews set up around a number of topics instead of fixed questionnaires. We chose respondents according to their current position in the company and recommendations from senior managers. We suggested that their insights would help to solve the topics addressed. We also analyzed a wide range of server data retrieved from Sedo's internal databases tracking the traffic generated by users accessing websites. We selected the data manually since Sedo's tracking system does not automatically distinguish between desktop and mobile browsers. We categorized the data according to access date, device, country of origin, and generated earnings. Finally, we took advantage of material such as publicly accessible reports and press releases published by Sedo, when our other sources not lead to reliable outcomes.

4. SEDO' PARKING BUSINESS GOING MOBILE

4.1 Case Background

As a 'typical' Internet intermediary, Sedo connects buyers and sellers of domain names. Founded in 1999, Sedo is a subsidiary of Sedo Holding AG (www.sedoholding.com) under the United

Internet AG (www.united-internet.de). It operates as a leading global domain marketplace with more than one million member accounts (August 2010). Employing over 150 employees from more than 25 countries at offices located in the United States, Great Britain, and Germany, Sedo has gained gross advertising revenue of € 96 million in 2009.

4.2 Two Main Business Lines

Since 1999, Sedo has provided desktop Internet *domain trading* selling valuable, but unused domain names via an online trading platform similar to electronic auctions. Domain trading is based on the scarcity of good domains concerning navigation, representation, and sustainability [26].

Sedo offers the world's largest domain selection with more than 17 million domains available for sale on its trading platform (15.1 million in '09 after 15.3 million in '08). It generates revenue based on a trading fee per transaction. In 2009, Sedo sold more than 3,500 domains monthly, accounting for € 58 million gross advertising revenue. It transferred its most successful domain in 2009, Fly.com, for USD 1.6 million.

Launched in 2002, Sedo also offered *domain parking* services. Here, Sedo fills unused domain names with pay-per-click ads and design-templates and builds on Internet users, who accidentally 'land' on parked pages. It generates revenues through advertiser payments, which are bound to links on parked pages promoted for sale. In total Sedo markets and monetizes about 6.9 million of such parked pages. Many of the parked pages belong to large domain owners with extensive domain portfolios. In this business line, Sedo controls and shapes three components [1] of parked pages; those are the navigational component, the advertising component, and the virtual wrapping component [27].

- The navigational component refers to the domain name, i.e., the URL of the pages parked. It rarely changes over time and is closely connected to keywords, which are set by domain name owners and optimized by Sedo.
- The advertising component, the 'content' of the parked page, includes text-link and display ads. Sedo connects such ads to the parked pages through a service called Sedo Domain Name Advertising (SedoDNA). Launched in April 2010, it directly connects advertisers, agencies, and domain name owners.
- The virtual wrapping component defines how pages are displayed. It builds upon changing design templates.

4.3 Opportunities and Challenges in Mobile

Sedo has already attracted some mobile Internet traffic through its desktop domain parking service. Considering the growth of the mobile Internet, it considers further moving to mobile and sees the need for balancing the respective opportunities and challenges.

4.3.1 Opportunities

Revenue opportunities from mobile domain parking rely on exploiting mobile user behavior and the diffusion of smartphones.

Mobile user behavior. User statistics show that mobile visitors of parked pages are more click-affine than desktop visitors. They typically do not retype domain names when typed-in incorrectly. Rather, they click on ad links in order to get back to their starting point. Sedo hopes to exploit this mobile user behavior: Four percent of Sedo's domain parking page views stem from mobile handsets, mobile clicks account for nine percent of all ad-clicks on pages parked by Sedo. Those nine percent of clicks generate six percent of Sedo's parking revenues. Across geographical markets, Sedo's mobile click-through-rates are on average more than twice as high as the desktop ones. Since all parked pages are performance-based, higher mobile click-through rates point to revenue opportunities, although mobile ad prices are about 37% lower than desktop ones.

Diffusion of smartphones. With the growing share of smartphones on the global mobile device market [5, 28], Sedo leverages its existing partnerships with service providers who have been offering mobile services in order to generate more mobile traffic.

Smartphones, currently accounting for 35% of Sedo's mobile traffic, are personalized high-end mobile devices supporting location-based services, email functionalities and instant-on features. They differ from feature phones, which are telephony oriented mobile devices mainly used for voice and text-based communication via SMS. Compared to those feature phones, smartphones provide larger screens, faster processors, faster Internet connections, and support HTML5 and JavaScript. They typically run on manufacturers' closed operating systems (e.g., iOS 4, Symbian OS, Windows Phone 7).

The increasing use of smartphones and the resulting mobile data traffic increase may or may not outweigh the fact that smartphones are mainly applied for search and apps whereby consumers less often actively mistype URLs.

4.3.2 Challenges

The growth of the mobile Internet also confronts Sedo with various challenges:

- *Shift from mass advertising to search-based advertising.* The general shift from mass advertising to search-based advertising [26, 29] points to the search-affinity of mobile Internet users and the increasing importance of apps as device-specific advertising instruments [8]. Typing URLs, which is central to Sedo's domain parking service, becomes increasingly obsolete.
- *Need for adequate mobile device detection and handling.* Sedo's current device detection routine for traffic on parked pages is eighteen months old and limited to standard feature- and smartphones. However, Sedo needs to know from which device mobile traffic is coming. It has to cope with hardware limitations such as differences in functionalities, screen size, and content support (Flash). It does not want to provide a mere scale-down of page designs for desktop Internet on mobile screens; readability would be limited (Figure 2). Therefore, Sedo needs to identify mobile devices adequately and develop corresponding design templates in order to customize content to the different mobile phones.
- *Spread of JavaScript.* In September 2010, Google, provider of 94% of ad feeds on desktop domains parked by Sedo, changed from XML to JavaScript. This forbids Sedo to display Google ads on feature phones with browsers that lack full JavaScript support. Such feature phones account for 65% of Sedo's mobile parking traffic. Hence, Google's shift to JavaScript and the resulting failure to display ads necessarily leads to revenue losses in spite of an increasing diffusion of smartphones.

- *Shift of mobile traffic away from established desktop parking markets.* In desktop domain parking, Sedo generates 60% of its revenues (USD 8.515 mill.) in North America and Europe. Yet, most of the mobile traffic (67% of views and 70% of clicks) stems from Asia (including Russia), the Middle East, South America, and Africa. Sedo needs to invest in developing new domain parking markets and its position in it.

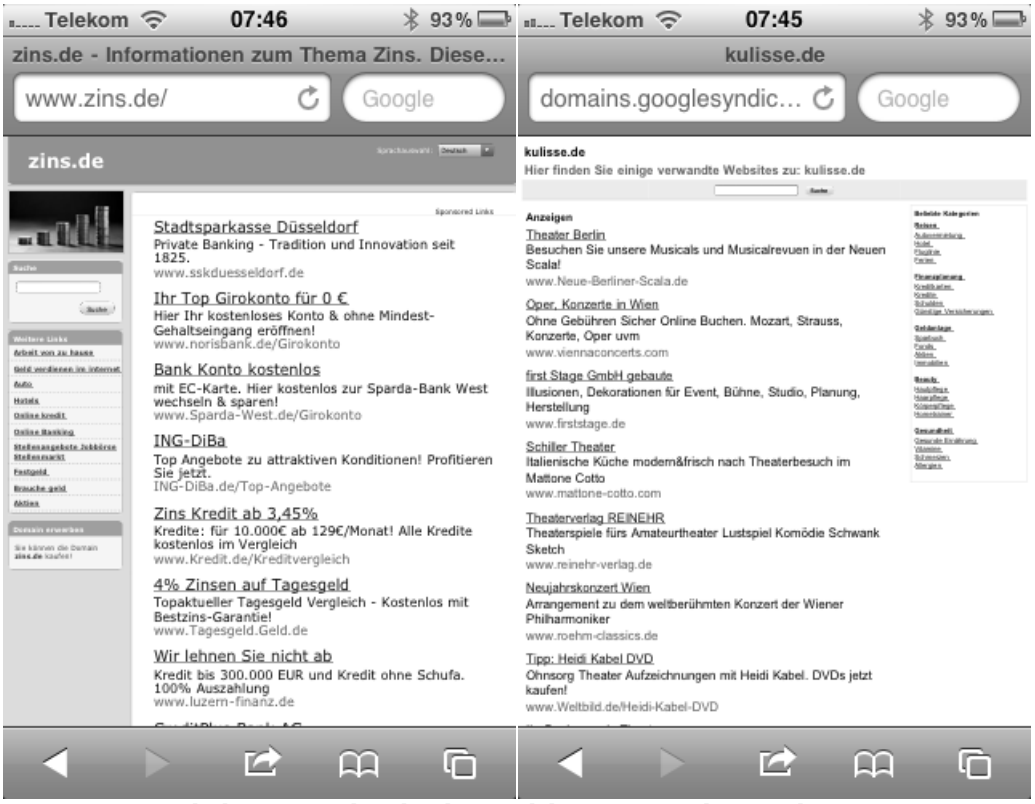

Figure 2. Parked Domain with and without Mobile Design Template on iPhone (June 2011).

4.4 Innovations

Sedo has pursued several innovations to take advantage of the opportunities and to tackle the challenges of extending its domain parking business into the mobile world.

- *Changing design templates.* The design templates let parked pages appear like real websites. Sedo has innovated its design templates in order to continuously match the various mobile devices in order to attract ad-clicks. All design templates have the same framing; they differ in optics and they are available in multiple versions for different domain name owners.

- *Display ads as new advertising means.* With display advertising introduced in April 2010, Sedo enhances its text-link ad-based service.

- *Sedo Domain Name Advertising (SedoDNA).* With SedoDNA, Sedo can directly negotiate with advertisers – at least when allowed by its contract with Google. SedoDNA builds a bridge from advertisers to domain name owners and improves the coordination between the different players. The launch of SedoDNA allows Sedo to further strengthen its partnerships with advertisers and participate in the resulting revenue opportunities.

5. CASE ANALYSIS

In the case, we find Sedo pursuing incremental and architectural innovations (see Figure 3) as defined by Henderson and Clark [1]. The new design templates with different optics and customized for a variety of mobile devices are an incremental innovation. The templates are the embodiment of the advertising component; they reflect a development step for the previous simpler versions, which have existed in the desktop world. The new design templates reinforce Sedo's desktop core concept of domain parking. The launch of SedoDNA and the corresponding integration of display advertisements on parked pages depict an architectural innovation. Sedo connects existing product and service concepts in new ways, as SedoDNA changes the linkage between the advertising and virtual wrapping component and fosters new inter-component relations through the integration of display- and text-link ads. Hence, we see Sedo focusing on its existing asset base and trying to exploit its achievements of the past [30, 31]. Obviously, Sedo needs to reduce the risk of a potential misalignment of its incremental and architectural mobile innovations with its existing desktop service. At the same time, it has to balance the expectations of stakeholders such as the domain name owners and the advertisers, in the desktop and the mobile world [13, 14].

Linkage between Core Concepts and Components	Reinforced	Overturned
Unchanged	Incremental Innovation *New Design Template*	Modular Innovation *None*
Changed	Architectural Innovation *SedoDNA*	Radical Innovation *None*

Core Concepts

Figure 3. Sedo's Domain Parking Innovation [After: 1, p. 12].

The introduction of SedoDNA lets us conclude that Sedo mainly adapts its existing products and services instead of proactively creating new products and services that would change the market [32, 33]. Also with regard to components, we see only adaptive changes. When considering how Sedo adapted the navigational, advertising, and virtual wrapping components of its parking business for going mobile, we doubt that such innovations will be sufficient for more than just keeping the foot in the door. We expect the navigational and advertising components to lose ground. The search- and app-orientation of smartphone users threatens the traffic on parked pages. Also, we foresee the virtual wrapping component stumbling due to Sedo's aged device detection routine.

We have shown that Sedo strives to compete on well-known, predictable battlefields. Following Chandy and Tellis [16], we find this risk averseness and avoidance of cannibalization leading to short-term success in the still dominating desktop part of the parking business. In line with Ellis [34] and Atuahene-Gima [35], we doubt that such market-orientation will be sufficient to become similarly successful in mobile parking. However, we acknowledge that milking the desktop cow is strategically appropriate and efficient [36] if for Sedo a competitive advantage in mobile parking is not in sight. Having and maintaining a competitive advantage requires barriers to entry. Trying to set-up entry barriers, we find Sedo building on SedoDNA to lock-in players along the value chain. However, especially in domain parking, barriers to entry are difficult to build and maintain. Scale effects are minor as parking is not a fix cost business; customer captivity barely plays a role, and there are hardly any proprietary technologies or patents that guarantee cost advantages [36].

Following Knee et al. [36] and Teece [30], our analysis supports Sedo's way out via long-term contracts with business partners and approved business routines. Such a strategic move is typical for many, even young, incumbents, who strive for some kind of barriers [37, 38, 39]. However, it constrains product and service overturn and limits achievement to improvements in existing services.

Any strategic move must take into account its limited resources and competences [40]; 'one cannot have it all'. For the time being, Sedo takes funds away from the profitable desktop service to support the mobile segment. This negatively impacts not only the successful desktop parking, but also the even more successful domain trading. Hence the case suggests a clear decision between increasing the efficiency of the desktop business and investing in building the mobile parking business.

Due to the nature of the parking segment, we do not see any modular or radical innovation at the horizon that could ease the main 'mobile' challenges – the smartphone diffusion and the raise of search and app based traffic. Hence we think that room for successful innovations in mobile parking is limited and thus – in this particular case – stand against the general notion of protecting the existing business "as it is" and complementing it with founding a subsidiary as home for more radical innovations [16, 41, 42].

6. SUMMARY AND OUTLOOK

In this paper, we presented the case of Sedo, an established, market-oriented Internet service provider that aims to take advantage of the opportunities and tackle the challenges arising from innovating its domain parking service towards the mobile Internet. We emphasized that Sedo's incremental and architectural innovations are sufficient for initially entering the mobile world and for complementing its desktop domain parking business. Modular and radical innovations would be needed for a successful, more substantial shift of domain parking into the mobile world. However, we found that characteristics of the domain parking business may be incompatible with technological trends in the mobile world.

As a single case study, the data is rather thin and forbids generalizability. Yet, it allows us to raise the following more general discussion issues regarding the context and the 'how' of established Internet players extending or shifting their business activities into the mobile world.

- The shift from mass advertising to search-based advertising [26] undermines conversion and click-through rates known from the traditional Internet.
- Established data points / market signals such as ad prices lose information value as they – at least for the time being – are outweighed by click-through rates in the mobile context.
- The diffusion of smartphones on the one hand increases mobile Internet traffic and thus improves reach. On the other hand – due to apps and search-based browsing – it changes data flows and thus demolishes the business foundation of some business models (here it reduces the traffic on parked pages).
- Incremental and architectural innovations [1] are not sufficient for extending a business model from the traditional to the mobile Internet.
- Becoming a market / entrepreneurship company [2] requires at least modular, if not radical innovations and thereby risks the sustainability of profitable established business activities.

Further research may want to investigate other established Internet companies going mobile. Analyzing the effects of innovations on organizational boundaries and vertical structures [43, 44] may lead to insights which established Internet business segments are ready to go mobile, and how to organize traditional and mobile Internet business activities within one company structure. To this end, longitudinal data would allow for evaluating the actual market performance of different business components [45] against alternative explanations such as innovation-related strategic management theories.

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