Functional Modelling and Analysis of IDM E-Tailer Platforms

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ABSTRACT

The research described in this article is motivated by the need to provide models and frameworks that would guide online web-stores in their platform provisioning and customer retention. The authors propose the e-tailer Platform Functionality Model (ePFM) for modelling the requirements of business-to-consumer (B2C) online stores for Interactive Digital Media (IDM). Encompassing e-tailer strategy formulation and functional requirements of the web-store, a variation of the Empathic Design (ED) methodology was used in the field research for investigating the efficacy of the ePFM. The research suggests that incorporating multiple perspectives - namely transaction, marketing, and revenue functionalities - for an online business is a critical success factor. Secondly, development of an online business platform requires design that is aligned with customers’ expectations of each of the three functionalities. Finally, e-business managers and platform architects may need to pay special attention to strategies that advance value creation in order to retain competitive advantage. From the empirical results, the authors may conclude that while all three types of functionalities are required for market impact, there are also differences between hygiene and competitive factors that eventually differentiate between success and mediocrity.

Keywords: Book Stores, E-Service Modeling, E-Tailing, Interactive Digital Media, MMORPG, Music Stores, Online Entertainment, Web Platforms

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INTRODUCTION

The market for Internet content and applications has emerged with increased market size of consumers and products from the late 1990s – when the dot.com era had nearly collapsed. It is one of the most competitive markets in the Networked Digital Industry, in terms of content production, such as music, movies, games, and social networking platforms. Today’s service platforms allow the creation, syndication, aggregation and distribution of content in multiple profitable streams. Music, books and games content are produced, consumed, repackaged and traded at the heart of the Broadband Internet. Targeted devices are as diverse as the content and the consumer themselves, consisting of Home Theatre (HT) systems, electronic books, hand-held games consoles, smart phones, tablet computers, embedded MP3 players and many others.

The emergence of the ubiquitous Internet has disrupted the underlying business models of IDM industries. Meisel (2007) highlighted two disruptions that the technology and platforms have given to these industries. Firstly, the growth in broadband penetration has made the Internet a viable alternative distribution platform. Secondly, the convergence of technology that allows the transfer of all types of data, video, audio, images and text among different physical platforms has led to media syndication and aggregation. These disruptions had opened up the playing fields in these new industries for new entrants which are able to capitalize on the technological advancement.

In short, an IDM web-store or e-tailer requires a platform for syndication, aggregation and distribution tasks while being open for content producers, consumers and intermediaries such as social networks, advertisers and payment brokers. Research on e-tailing has gone beyond the fundamental psyche of trust and having at least a secure platform (cf. Ba & Pavlou, 2002; Battacharjee et al., 2003; Davis, 2001; Gefen et al., 2003; Samuelson, 2003). A steady stream of research has also investigated many of the required functionalities for success in the IDM marketplace. For example, Bhagarva and Choudhary (2004) investigated aggregation; Cenfetelli et al., (2008) investigated service support quality; Chang et al., (2005) and Hsia et al., (2008) derived reference models for adoption; Liang and Lai (2002) and Ranganathan and Ganapathy (2002) investigated store design; Yang and Papazoglog (2000) investigated interoperability support; and Brynjolfsson and Smith (2000), Kim and Xu (2007) and Oh and Lucas (2006) are among others who suggested that e-tailing is dependent on branding, pricing, partnerships and market positioning.

Although much progress has been made through the convergence of Internet technologies and new media content, business models are only beginning to evolve and adapt to this particular change (Sharma & Wildman, 2008). According to De Reuver et al., (2011), the importance of digital platforms and ecosystems is not adequately captured in the top Information Systems (IS) journals. In fact, the study of digital eco-systems in general and emerging mobile platforms are largely underrepresented in the top IS journals. They point out that while conceptual models and terminology have been introduced onto the Information Systems literature recently (citing Ballon, Bouwman, & Yuan, 2011; Basole & Karla, 2011), there is no agreement on definitions, conceptualizations and empirical methods.

As such, this paper explores and provides further understanding of some of the key factors which can provide useful insights to IDM e-tailers in the (re-)design of their web-stores. The research objective was to formulate a framework for analysis of the IDM business eco-system, derive some useful functionalities of web-stores and affirm the strategic alignment of an e-tailer with market conditions. More specifically, we model the requirements of a service platform that can provide a competitive advantage to the e-tailers of digital content. These requirements are validated with an experimental method that uses the principle of Empathic Design. The remainder of the paper is thus organized as follows. The next section provides a literature review from six top electronic business journals.
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