Preface

UNDERSTANDING THE INTERACTIVE DIGITAL MEDIA MARKETPLACE: FRAMEWORKS, PLATFORMS, COMMUNITIES, AND ISSUES

This book is targeted at an audience of researchers in the area of Interactive Digital Media (IDM), which includes a wide range of applications using multimedia content, delivered over a broadband network such as the Internet. Examples are software as a service, music, movies, news-on-demand, online games, archived digital art and books, sharable educational material, e-government services, electronic health records, and so on. The book is the result of an on-going research programme at the Special Interest Group on Interactive Digital Enterprise (SIGIDE) funded by Singapore’s National Research Foundation.

The primary objective of SIGIDE is to serve as “intellectual venture capitalists” to IDM incubators and start-ups in Singapore as they take the necessary steps “to reach the next billion” users. The first phase was a 3 year project which began in December 2007, hosted within the Nanyang Technological University. In its anticipated 2nd phase SIGIDE will take a more international and industry facing dimension.

Through its industry-oriented, action-research programme, and leveraging on its network of international and industry partners, SIGIDE has developed expertise and capabilities that covered the four pillars of the IDM marketplace – (I) Business Frameworks; (II) Technology Platforms; (III) Digital Communities; and (IV) Regulatory & Policy Issues. Key outcomes were research publications, industry whitepapers, manuals and workshops, capability development, and advisory services.

This book outlines some of the research findings of SIGIDE’s work in IDM. As an overview, the 34 chapters are organized as follows: there is an introductory chapter on the ADVISOR framework and about 5-7 specialised chapters for each pillar. Each chapter has been written by different authors coming from a wide ranging set of perspectives. As a whole, this book seeks to uncover usable business models, market strategies, and policy frameworks for the emerging global digital economy. It will be a useful read for graduate students and other researchers exploring the area as well as entrepreneurs considering their strategic and tactical options.

This first section of the book overviews the business frameworks necessary to start and grow an IDM firm. By business framework, we mean a model that encompasses the structures, relationships, and resources in order to determine an optimal and sustaining method of revenue generation. El-Sawy & Pereira begin the discussion of business frameworks in Chapter 1 with a description of the ADVISOR model (an extension of their earlier work) for what they term as networked digital industries. This model serves to predict what the parameters of success could be and therefore guide IDM businesses in the design of business models. Chapter 2 is a review of pricing strategies by Lei, Shi, & Iqbal, leading to a summary of their understanding in the form of a case study of online music. In Chapter 3, Bansal,
Manoher, & Shantani focus on variable pricing and conclude that adverse reaction of consumers to unfair price discrimination is the greatest hindrance to the effective application of variable pricing schemes. Verma, Gupta, & Keshav continue the discussion on more specific pricing schemes in Chapter 4 with an analysis of how the pricing decision of bundling vs. à la carte is resolved using the case of cable television. Chapter 5 by Budi, Wang, & Wang is a comparative analysis of digital products and services studied from the perspective of key marketing processes such as promotion, sale, and distribution. Ng, Arias, & Koh discuss the concept, nature, and implications of freemium content and consider the problems caused by the rise of this phenomenon in an otherwise flourishing digital marketplace in Chapter 6. In Chapter 7, Goh, Tan, & Wang consider the question of whether to bundle or unbundle an IDM service offer and conclude after case studies of two leading players that the most effect option depends on market conditions more than other factors. Chapter 8 by Nizam, Kumar, & Jayaraman focuses on how enterprises can profit from radical and incremental innovations in the IDM marketplace by factor- ing the roles played, importance, and impact of the two types of innovations. Completing this part of the book is Chapter 9 by Tan, Ge, & Rajkumar, which considers the strategic issue of fragmentation in mobile platforms and the current on-going industry solutions that address the problems associated with this, such as non-compliance and niche segments. The above chapters may not have comprehensively covered all IDM business issues but suggest that while pricing is critical, other factors such as strategic marketing tactics contribute significantly to business modeling.

Section 2 of the book overviews the technology platforms necessary for the launch and delivery of IDM products and services. In a digital eco-system, technology platforms refer to the servers, devices, networks, as well as the management services (for production, delivery, payment, access security, digital rights, etc.). Designing the platform or configuring one that brings about a strategic advantage for the business is the theme of this section. Arguably, the most fundamental of these strategic platform considerations concerns whether to deploy an open platform or closed one. Wu, Khan, & Serraf discuss this in Chapter 10 with the proviso that each is more effective than the other under certain market conditions. Chapter 11 on the same key question takes a contrary view with Alexander, Ho, & Arasu conclude that it is more than market conditions such as new entrants vs. dominant incumbents, presence and significance of complementors, et cetera, that give competitive advantage with an open or closed platform superiority. Another popular topic in IDM technology is the ubiquitous IPTV platform. Yang, Chua, & Li discuss in Chapter 12 how value emerges from the platform characteristics of IPTV in order to compete in a crowded market. Following this, Chapter 13 by Huang, Tan, & Buyi considers the broader notion of interactive TV platforms as disruptive innovation and how the chasm (of user adoption) may be crossed. Peer-to-Peer (P2P) networks are clearly a post-modernist platform for a myriad of IDM applications. However they are fraught with controversies relating to digital rights and their protection. Chapter 14 by Mansukhani, He, & Ma show how digital rights management may be enforced on P2P networks. In Chapter 15, Morales-Arroyo, Foo, Lim, & Kwek configure, use and evaluate eight web-scraping spiders for their functionality in order to determine their suitability for IDM competitive intelligence. The deployment of such a technology, they suggest, should be a vital component of the platforms of start-ups and established firms alike. Shwe, Gao, & Chia, in Chapter 16, describe the general architecture and specific design features of mobile operating systems and their connection to value creation. Chapter 17 by Yeo, Jing, Khin, & Fan explores and discuss the issues and opportunities centered around the centralization and integration of platforms in order to secure dominant market share. Chapter 18 by Tan, Chua, & Kaung closes the section with an analysis of social networks and their impact on the marketing of (particularly) digital goods where word-of-mouth prevails over conventional advertising.
and promotion. Whereas we may conjecture that the technology platform is a tactical play centered on efficiency objects, the set of chapters in this part of the book seem to suggest that the platform is equally a strategic component of the IDM business.

Section 3 of the book covers user communities and markets for IDM services and applications. Continuing from where Section 2 left off, and delving deeper into the notion of e-Word-of-Mouth, Chapter 19 by Bhatt, Chang, & Wang makes a case for the effect use of social networks in viral marketing. Next, Azharie reviews virtual worlds and their economies using Second Life as an exemplar in Chapter 20. Machill, Gerstner, & Class, in Chapter 21, describe the results of an empirical study in Germany which revealed the use of online videos and other content by the community of journalists who participated in the study. Chapter 22 by Stephanie, Srinivasan, & Lawale reviews the use of IDM in healthcare, the first of three communities covered in this book, and suggest that it is very much in its infancy despite the longstanding activities. In a reflective, personal account, Jones in Chapter 23 narrates his use of blended learning in the context of university education and concludes that its success very much depends of the effect mix of technology and face-to-face teaching. Chapter 24 by Li, Shen, & Tan describe the third of the IDM communities covered, with a description of online games for children and how such services may be exploited by users. In Chapter 25, Lai & Lee evaluate several models and frameworks for the assessment of e-government services using case-studies of Iraq, Zambia, Malaysia, and Canada in order to validate their findings. A macro level perspective of eWord-of-Mouth is that such messages combine into a “wisdom of the crowds,” which in turn influences collective behavior; this is the subject of Zhang & Yang’s Chapter 26 which is the last of section 3. With these chapters, we may concede that the theme of community is too vast to bottle into a comprehensive set of frameworks. Nevertheless, it is useful to consider such systemic studies of such communities so as to better serve them and draw some lessons for IDM in general.

The final section of the book comprises chapters which discuss regulatory and policy issues that ostensibly promote the growth of the IDM sector(s) and safeguard the interests of the public. But as the chapters in the section reveal, this is no easy matter and involves trade-offs that affect both segments negatively. In Chapter 27, Mahizhnan captures one aspect of this policy dilemma of balancing between the inevitable need for some kind of regulation with the essentially uncontrollable nature of the architecture and function of new media, concluding that self-control of the user communities seems more critical to the outcome than externally imposed control regimes. More specifically, Chapter 28 by Lim, Lu, & Tan attempts to show that the game industry, parents, and society at large should be more participative in influencing the direction of game content development and regulating violence in massively multiplayer online role playing games. In Chapter 29, Balgayev, Phng, & Kaung ask whether DRM is the great spoiler in the IDM marketplace and show that the advantages brought by DRM to firms go beyond what would be needed for the efficient distribution of digital goods. Chapter 30, by Wildman & Chew, describes current trends in the internet television market and traditional television industry players’ efforts to respond to the opportunities and threats posed by new media. Again on Internet television, Wong, Chow, & Chua propose a modified product life cycle for radio and TV broadcasting in Chapter 31 in which its decline phase is replaced by an evolution phase due to disruptions from the Internet. Chapter 32, by Xu, Xu, & Zeng, ponders over the future of television (and audiences) using a myriad of frameworks to determine how television in the future may create value, seize value, and add value into the interactive services and products they provide. Lee, Ismail, & Ma examine the future of the printed book in Chapter 33 and note that shift of physical books into digital form has resulted in a significant change in perspectives of business models within the publishing and affected players in its eco-system. Ending Section 4 and the
book is Chapter 34 by Kurniawan, Kok, & Zhang, which similarly examines the future of newspapers and prescribes key areas and conceptual models of future newspapers’ strategy framework and supply chain management. The sum total of takeaways from the chapters in this section of the book suggest that IDM regulatory policy ought to take greater economic than political tones in order to be effective. Both the industry and regulatory agencies would better serve consumers with such an agenda.

Therefore, in a nutshell, we posit that understanding the IDM marketplace requires first in-depth studies on business frameworks, technology platforms, user communities, and regulatory policies. This book is an attempt to do just this.

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