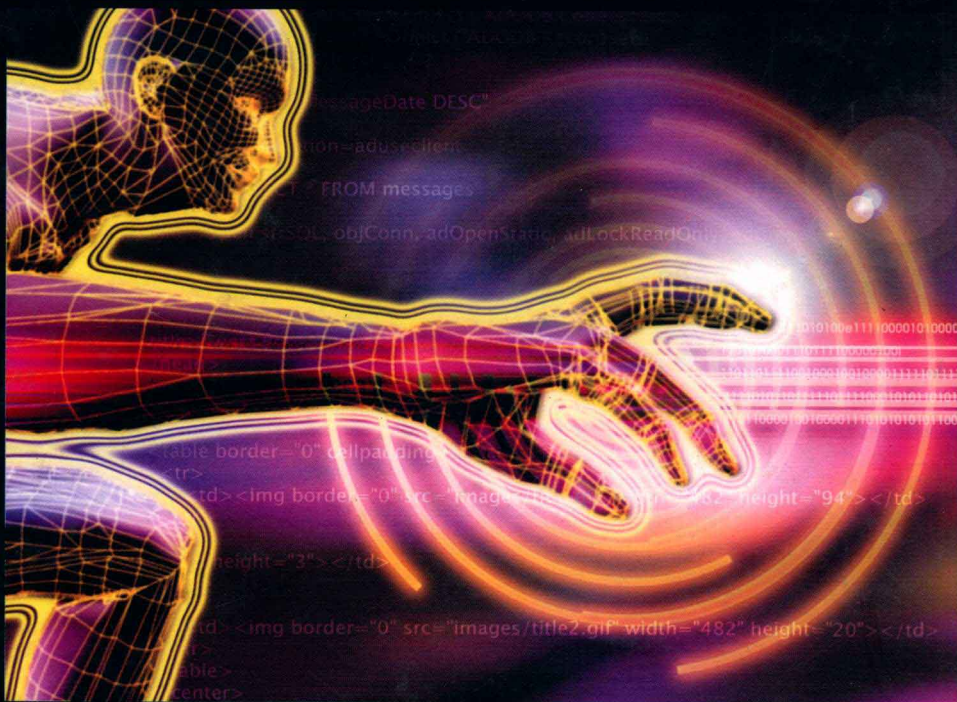


SERIES ON TECHNOLOGY MANAGEMENT – VOL. 14

# INNOVATION AND STRATEGY OF ONLINE GAMES



**Jong H Wi**

Imperial College Press

**SERIES ON TECHNOLOGY MANAGEMENT – VOL. 14**

# **INNOVATION AND STRATEGY OF ONLINE GAMES**

**Jong H Wi**

Chung-Ang University, South Korea



---

Imperial College Press

*Published by*

Imperial College Press  
57 Shelton Street  
Covent Garden  
London WC2H 9HE

*Distributed by*

World Scientific Publi  
5 Toh Tuck Link, Sing

# **INNOVATION AND STRATEGY OF ONLINE GAMES**

## Series on Technology Management\*

Series Editor: J. Tidd (Univ. of Sussex, UK)

ISSN 0219-9823

### *Published*

- Vol. 4 Japanese Cost Management  
edited by Y. Monden (*Univ. of Tsukuba, Japan*)
- Vol. 5 R&D Strategy on Organisation  
*Managing Technical Change in Dynamic Contexts*  
by V. Chiesa (*Univ. degli Studi di Milano, Italy*)
- Vol. 6 Social Interaction and Organisational Change  
*Aston Perspectives on Innovation Networks*  
edited by O. Jones (*Aston Univ., UK*), S. Conway (*Aston Univ., UK*)  
& F. Steward (*Aston Univ., UK*)
- Vol. 7 Innovation Management in the Knowledge Economy  
edited by B. Dankbaar (*Univ. of Nijmegen, The Netherlands*)
- Vol. 8 Digital Innovation  
*Innovation Processes in Virtual Clusters and Digital Regions*  
edited by G. Passiante (*Univ. of Lecce, Italy*), V. Elia (*Univ. of Lecce, Italy*) & T. Massari (*Univ. of Lecce, Italy*)
- Vol. 9 Service Innovation  
*Organisational Responses to Technological Opportunities and Market Imperatives*  
edited by J. Tidd (*Univ. of Sussex, UK*) & F. M. Hull (*Fordham Univ., USA*)
- Vol. 10 Open Source  
*A Multidisciplinary Approach*  
by M. Muffatto (*University of Padua, Italy*)
- Vol. 11 Involving Customers in New Service Development  
edited by B. Edvardsson, A. Gustafsson, P. Kristensson,  
P. Magnusson & J. Matthing (*Karlstad University, Sweden*)
- Vol. 12 Project-Based Organization in the Knowledge-Based Society  
by M. Kodama (*Nihon University, Japan*)
- Vol. 13 Building Innovation Capability in Organizations  
*An International Cross-Case Perspective*  
by M. Terziovski (*University of Melbourne, Australia*)
- Vol. 14 Innovation and Strategy of Online Games  
by Jong H Wi (*Chung-Ang University, South Korea*)

\*For the complete list of titles in this series, please write to the Publisher.

*To my Mother, my wife Pilsun and two daughters,  
Yokyoung and Yomin*

# Preface

In the late 1990s, when the online game industry first began to expand in Korea, I had some opportunities to talk with a few Japanese console game developers. I explained to them the attributes and business model of the online game, which was a new upcoming trend. Unfortunately, however, their reaction was contrary to what I expected. They didn't understand 'What online game is' and I was surprised by their response.

Even in the past 10 years, the attitudes of console game developers to the online game have not changed much. It seems impossible for orthodox console and PC game developers not only to understand the online game, but also to design and develop online games.

Generally speaking, the console game and the online game seem similar in terms of games. Playing styles are very similar. Controlling characters, background game graphics and sounds, and solving quests are similar elements in both. Nevertheless, why can't console game developers grab the essence of the online game? The reason can be found in this term, 'disruptive innovation'.

Online gaming is a new industry derived from the PC and console game through disruptive innovation. Considering the technical aspect, for instance, offline games like the PC and console game are launched in the form of the game package consisting of just a client program; on the other hand, online games comprise not only a client program but also a server program which can hold a lot of access users concurrently. Roles of game servers consist of a number of users ranging from dozens to millions, allowing many users to play the same game

at the same time. In this context, as offline game developers do not have any knowledge about server programming, they are not able to construct a game server system. In view of online game business, offline game developers only have 'half capability'.

Furthermore, one of the critical techniques in managing game servers is security. Once online game servers are hacked, cyber assets accumulated by users can be stolen, or free servers managed by unauthorized subjects can result in a leak of essential game source codes. Problems that offline game developers could never have imagined may happen in the online game industry.

Moreover, product attributes between online games and offline games are fundamentally different. In offline games, game quality itself is the most important barometer. In online games, however, besides game contents, community identity creates a new product attribute added to the online game. Community identity refers to a process whereby users evolve game contents while playing an online game. This process shows that users have taken one step into the game developing process, and it can be interpreted in terms of *Democratizing Innovation* by von Hippel.

Therefore, accepting various requirements from users and adapting them into game contents are very important for online game development. However, for offline game developers, users' penetration into game development process is not easy to accept. In the eyes of offline game developers, users are not companions constructing game contents together, but passive consumers just playing games made by them. There are also huge differences in the business model and the distribution channel between both of them.

Having considered these reasons, it is not difficult to understand why offline game developers cannot understand online gaming to the extent that they sometimes feel hostile towards it. Online gaming became a 'service', not just a game, through disruptive innovation.

Explanations about the online game industry based on the innovation theory suggest sound reasons why the online game was first industrialized in Korea instead of in Japan or the USA, two big powers in the game industry. It also explains how Korea came to acquire the best



online game development technologies in the world. Compared to comics, animation and the console game business for which Korea was the original equipment manufacturer (OEM) of Japan or the USA, the online game business was conceptualized in Korea, based on strong information technology (IT) infrastructure. It swept the Asian market and has now expanded to the rest of the world. Moreover, diverse businesses such as the game community, Avatar service and the item-based model have gained the interest of global game and Internet companies.

This book is the first study to survey innovations and the industrial formation process of online game business, and global strategies of major Korean online game companies. I have examined diverse aspects of the online game business over a ten-year period. Beginning from the innovation of online games, this book contains many topics broadly related to online gaming, including the main factors stimulating online game business in Korea, comparisons of users' attributes in various countries, differences between online and offline game users, and virtual business created by online games. Research on user attributes and market investigation were conducted over a five-year period in China, Japan, USA and Southeast Asian countries as well.

Chapter 5 focuses especially on an analysis of relevant government policies. Government policies toward businesses always attract controversy. Far from the general opinion reported by the foreign media, the Korean Internet contents industry has not developed as a whole due to support from government IT industry policies. To a creativity-based business like Internet contents, government support can be a double-edged sword. This book clarifies the actual role of the Korean government at the beginning and at the developmental period of the online gaming business.

I sincerely hope that this book will be helpful to readers who have an interest in innovative and creative businesses like the Internet contents business.

*Jong H. Wi*

*Digital Media City, Seoul, Korea  
8 January 2009*

## Acknowledgements

I was fortunate to have an opportunity to be involved first-hand in the online gaming industry. I say this because online gaming is basically a knowledge-based industry. In addition, this industry has huge potential to influence various related industries. Above all, most people who are engaged in this industry are young and energetic, with enthusiasm in pursuing the future. Therefore, it was a pleasant and exciting experience to have talks with scholars, businessmen, government officials and the media from Korea and other countries while I did research in this field. Once again, I would like to thank all the people whom I have met since I began the study on the online gaming industry.

First of all, I am deeply grateful to Dr. Joseph Tidd (University of Sussex) and Dr. Jonathan Sapsed (University of Brighton). They gave me a lot of advice and support for publishing this book. Without their help, the book could not have been made available to Western readers. Junjiro Shintaku (University of Tokyo), Chaisung Lim (Kunkuk University) and Akira Baba (University of Tokyo) always gave me good comments and ideas in my research. Kiyoshi Shin (IGDA Japan Coordinator) and Kenji Matsubara (CEO, KOEI), who are my good friends, inspired me through discussions on various subjects related to the game industry. I also want to express my gratitude for their friendship.

As for people from the industry, I wish to thank Chris Whang and Joshua Hong (CEO, K2 Network), II Sung Baik and Yangshin Kim (CEO, JC Entertainment), Tony Park (Vice President, The Nine), and Jake Song (CEO, XLgames). Also, Arts Won, Sol Yi, Insoo

Song (Research Managers of Contents Management Institute) and other CMI researchers who have supported my surveys and research around the world with the utmost commitment. I will not forget their dedication to my work.

*Jong H. Wi*  
*8 January 2009*

## About the Author

Jong H. Wi (Ph.D. in Strategic Management, University of Tokyo) is an Associate Professor at Chung-Ang University and President of Game Contents Research Center at Chung-Ang University, Korea. He is also President of the Contents Management Institute, Vice President of Japanese Online Game Focused Association, advisory member of the Korean government and National Assembly, and consultant to many Korean and foreign game companies and governments. He is an expert and well-known researcher on the Asian online game industry, and has published numerous books, academic papers, white papers and business reports.

He has written several books on the gaming and virtual business industry from the perspective of innovation such as *Industrial Development Strategy of Online Games* (Tsinghua University Press, 2008, in Chinese), *Culture Marketing* (Hankyungsa, 2008, in Korean), *Business Strategy of Second Life* (Joong-Ang Books, 2007, in Korean), *Innovation Strategy of Japanese Firms* (Jipmundang, 2007, in Korean), *The Research of Korean Online Game Business* (Toyokeizaishinposha, 2006, in Japanese), *The History of Korean Online Game Industry Development* (Seoul National University Press, 2006, in Korean), and *Economic Analysis on Game Industry — Structure and Business Strategy on Game Software Industry* (Toyokeizaishinposha, 2003, in Japanese).

He was also written many academic papers such as *The influence of social self-efficacy on online game satisfaction* (2007), *Organizational behavior of established firms to a disruptive innovation* (2006), and *The*

*comparative study of online game user's attribute through path dependency* (2004). His paper entitled *Organizational design for new product architecture development* (2006) earned the best paper award from The Korea Society for Innovation Management & Economics, while another paper of his titled *The analysis of learning effects using online game community* (2005) won the best paper award from Korea Academic Society of Gaming.

# Contents

<b>Preface</b>	<b>vii</b>
<b>Acknowledgements</b>	<b>xvii</b>
<b>About the Author</b>	<b>xix</b>
<b>Chapter 1 Innovations in the Game Industry: Online Games Versus Offline Games</b>	<b>1</b>
1. The impact of online games: Turnover of Korean game industry against American and Japanese competition	1
2. The potential of online games	3
3. Innovations of online games	7
1) Revenue model	8
2) Product attributes	12
3) Development process	14
4) Distribution channel	20
5) Communication	23
6) Game style	26
7) Immersion	29
<b>Chapter 2 Business Models and Corporate Strategy</b>	<b>33</b>
1. Revenue models of online games	33
1) Individual Set-Amount plan (①)	34
2) Individual Set-Volume plan (②)	35

3) Partial pay plan (③)	35
4) Set-Amount plan for Internet cafés (④)	36
5) Set-Volume plan for Internet cafés (⑤)	37
(1) World of Warcraft	38
(2) NCsoft (Lineage/Lineage 2/Guild Wars)	38
(3) Nexon (including Kart Rider, Maple Story and Mabinogi)	39
6) Combined price plans	41
2. Pricing plans of various online games	41
1) ROSE Online	41
2) Lineage, Lineage 2	44
3) Mabinogi (Nexon)	44
4) World of Warcraft (WoW)	47
5) Kart Rider	48
6) Freestyle	48
7) Goonzu	50
3. The feasibility of item sales in the U.S.	50
1) Gender	51
2) Ethnicity	52
3) Type of Internet connection	53
4) Primary purpose of Internet use	53
5) Preferred game genres	54
6) Game selection criteria	54
7) Information channels	56
8) Primary times of Gameplay	56
9) Reason for playing online games	57
10) MMORPG genres played	58
11) Degree of LAN party participation	59
12) Payment status	59

<b>Chapter 3 Virtual Societies and Economies of Online Games</b>	<b>61</b>
1. Generation of online economic activity	62
2. Development and evolution of the item trade industry	63
3. Degree of item trades and player conception of Korean users	70
4. Cyber economy growth model	75
5. Issues to be considered in item transactions	77
1) Item ownership	77
2) Credibility in item trades	79
3) Game system and item trade	80
6. Conclusion	81
<b>Chapter 4 The Formation Process of the Korean Online Game Industry</b>	<b>83</b>
1. The precursor to the modern online game: Text MUDs	84
2. MUG (Multi User Graphic) game development and the spread of users	92
3. The emergence of Lineage and industry expansion	94
4. The emergence of game portals	98
5. The emergence of casual games	102
6. Formation of the innovative human resources: Online game development workforce	106
<b>Chapter 5 Factors Promoting Growth of the Online Game Industry</b>	<b>111</b>
1. User's path dependency: Absence of the console game market	112
2. Software piracy	115
3. Supporting infrastructure	117



1) Spread of Internet cafés	120
2) Spread of ADSL	124
3) Mobile small-amount billing system	127
4. The support of governmental policy	131
(1) High-speed communication network policy (Ministry of Information and Communication)	133
(2) Adapted military service system (Ministry of Culture and Tourism)	134
<b>Chapter 6 Global Development and Marketing Strategies of Korean Online Games</b>	<b>139</b>
1. Factors affecting global online gaming growth	140
1) Server operations	143
2) Publishing method	144
3) Distribution method	145
2. The Chinese market and its distinguishing characteristics	147
1) Growth potential	147
2) Risk factors	148
3) Internet cafés as online gaming strongholds	151
4) The expansion of Korean gaming in China	152
5) Cases of Korean expansion into China	154
3. The Japanese market and its distinguishing characteristics	156
1) Distinguishing attributes of the Japanese online game market	159
2) Development efforts of Japanese game firms	161
3) The strategies of Japanese game developers	163
4) Strategies for approaching the Japanese market	165
5) The Japanese market and its distinguishing characteristics	170