

DFC Intelligence

DFC Intelligence
9320 Carmel Mountain Rd
Suite C
San Diego, CA 92129

Phone 858 780-9680
Fax 858-780-9671
www.dfcint.com

The Business of Computer and Video Games

March 2004



Conditions of Purchase

Purchase of this multi-client study is on a nonexclusive basis. This study has not been commissioned or contracted for by any one person or organization. The information contained is confidential to the purchaser, and the purchaser agrees not to circulate or loan the study in whole or in part to: their subsidiaries or divisions, industry trade associations (if not the purchaser), the general public, the media, nor other parties not belonging to their company, agency or organization. Unauthorized reproduction and dissemination which is discovered by DFC Intelligence (the publisher) shall constitute grounds for legal prosecution and damages under U. S. copyright law.

DFC Intelligence has made every attempt to verify the accuracy and completeness of information in this study from sources we believe to be reliable. It is understood, however, that our estimates, forecasts, opinions and recommendations represent the judgment of our analysts, based on the best information available at the time of publication. It is recommended that purchasers also consult other available business sources and not rely solely on this analysis as the basis for major strategic, financial, or management decisions. DFC Intelligence makes no warranty or representation, either expressed or implied, with respect to the information in this report. In no event will DFC Intelligence be liable for direct, indirect or consequential damages resulting from any defect or inaccuracy in this report, even if advised of the possibility of such damages.

Information about specific companies is not intended to be a complete description, nor of their securities, nor is this study an offer to buy or sell such securities. DFC Intelligence's liability, if any, shall not exceed the amount paid for this study.

©2004 DFC Intelligence, a California Corporation. All rights reserved. No part of this report may be sold, reproduced, or transmitted in any form or by any means, including photocopying, recording, or by any information storage and retrieval system, without the written permission of DFC Intelligence. This report is for individual use only. Redistribution requires a site license.

About This Report

The Business of Computer and Video Games 2004 is based on a review of historical trends and opinions of leading members of the video game industry, including analysts, consultants, developers, publishers, retailers and consumers. This report has been prepared by utilizing a variety of primary and secondary research techniques including: telephone and personal interviews; analysis of market surveys, trade journals and company literature; extensive database searches; and DFC Intelligence's original compilations and analysis.

A DFC Intelligence report is more than a collection of raw statistics. We carefully scrutinize and analyze data from a variety of sources. The result is a comprehensive overview that puts facts and figures in context. Anyone who has attempted to collect figures for the game industry knows that is difficult to obtain accurate statistics. We have studied market surveys, investment analyst reports and other sources of industry information. Our statistics and forecasts are based on the careful analysis of the available research, a great deal of which is contradictory. In many cases, we made assumptions based on the best available information. We feel our figures accurately reflect past and future market conditions. At the very least, these numbers track the industry trends and accurately estimate the market share of the various players.

A major challenge in analyzing the interactive entertainment market is imperfect data. There are several services that track software sales for individual markets around the world. These include the NPD Group/NPD Funworld/TRSTS service that tracks U.S. sales (in February 2004 they started covering Canada), NPD Techworld (PC Data) for PC game sales, ELSPA/Chart-Track for the U.K., AC Nielsen Canada, Media Control and GfK in Europe. Japan data is available from several services including Media Create and the magazines Famitsu and Dengeki (owned by Kadokawa Shoten).

The problem in tracking the market on a worldwide basis is that the retail tracking services focus on individual markets and are only obtaining samples from a portion of each market they cover. Thus the services are best used for tracking how well a given title is doing in a given market compared to other titles in that market. Extrapolating retail sales data to obtain an overall market figure is never 100% accurate and always subject to debate. DFC Intelligence has looked at reported sales data for different markets and compared that to with reported sales from individual companies based on talking to company executives and looking at relevant investment information including SEC filings. The end result are numbers that we feel give a fairly accurate picture of trends in the interactive entertainment industry. However, we caution users that actual results may vary. In addition, fluctuations in exchange rates can affect overall results on a worldwide basis.

This report is divided into six sections. Part I is an executive summary with key bullet point highlights from throughout the report. Part II provides a history of the interactive entertainment industry from its early days in the 1970s. This section includes a detailed look at the events of the past three years. Part III looks at video game and PC game hardware and includes a discussion of the major platforms. Part IV is a look at video game software, game genres and the demographics of consumers that play games. Part V is an in-depth look at how the industry works from development through retail distribution and marketing. The report concludes with part VI, a more subjective discussion of major trends affecting the interactive entertainment industry, including consolidation, licensing of Hollywood properties and digital distribution. There is also a comparison between the interactive entertainment business and the music and movie business. This report can be supplemented by other DFC Intelligence reports focusing on narrower aspects of the industry including *Worldwide Forecasts for the Video Game and Interactive Entertainment Industry*, *The Online Game Market*, *Market Leaders in the Video Game and Interactive Entertainment Industry* and *The State of Game Technology*.

Table of Contents

TABLE OF CONTENTS	4
I. EXECUTIVE SUMMARY	18
II. THE HISTORY OF VIDEO GAMES	35
A. TIMELINE: THE HISTORY OF VIDEO GAMES.....	36
B. HISTORICAL TRENDS	46
1. <i>Reasons For Atari's Failure and 1983 Collapse</i>	47
2. <i>Reasons For Nintendo's Success</i>	47
3. <i>Reasons For Sega Genesis Success</i>	48
4. <i>Reasons for Failure of Sega</i>	48
5. <i>Reasons for Sony's Success</i>	49
6. <i>Reasons for Nintendo's Struggles</i>	49
C. THE HISTORY OF VIDEO GAMES: A DETAILED LOOK	50
1. <i>The Pong Era</i>	51
2. <i>The Atari Era</i>	52
3. <i>The Nintendo Era</i>	54
4. <i>The 16-Bit Era</i>	60
5. <i>32/64-Bit Era</i>	64
6. <i>128-Bit Era</i>	71
D. GAME INDUSTRY HIGHLIGHTS 2001	80
E. GAME INDUSTRY HIGHLIGHTS 2002	88
F. GAME INDUSTRY HIGHLIGHTS 2003	94
III. VIDEO GAME AND PC GAME HARDWARE	100
A. OVERVIEW	100
B. PERSONAL COMPUTERS AND OPEN-END ARCHITECTURE.....	104
1. <i>Advantages of the PC as a Game Machine</i>	106
2. <i>Disadvantages of the PC as a Game Machine</i>	106
3. <i>Windows and Direct X</i>	111
Windows 98.....	113
Windows XP.....	113
4. <i>Games on Apple Platforms</i>	114
C. CONSOLE SYSTEM OVERVIEW.....	115
D. CONSOLE SYSTEMS COMPARISONS	121
E. INDIVIDUAL CONSOLE SYSTEMS: A DETAILED LOOK.....	124
1. <i>Cartridge Based Systems</i>	124
Nintendo NES.....	124
Sega Genesis.....	124
Nintendo SNES	125
Neo-Geo	125
Atari Jaguar	126
Genesis 32X	126
Nintendo 64	127
2. <i>CD Based Systems</i>	128
CD-I (Compact Disc Interactive)	128
Sega CD.....	129
3DO	129
Pioneer LaserActive	130
Sega Saturn.....	130
Sony PlayStation (PSX)	131

The Business Of Computer And Video Games 2004

Apple Pippin@home	131
VM Labs Nuon	132
3DO/Matsushita M2	133
Sega Dreamcast	133
Sony PlayStation 2	134
Nintendo GameCube/ Matsushita GameCube Q.....	134
Microsoft Xbox	135
PSX DVD Recorder	136
3. <i>Upcoming Console Systems</i>	137
Sony PlayStation 3	137
Microsoft Xbox Next/ Xbox 2.....	137
Nintendo GameCube 2/ N5	138
Infinium Labs Phantom	138
DISCover PC Game Console/ ApeXtreme.....	139
F. MORE THAN GAMES: CAN GAME SYSTEMS BECOME MULTIPURPOSE, MULTIMEDIA “EBOX” SYSTEMS	140
G. CARTRIDGE-BASED SYSTEMS VERSUS CD-BASED SYSTEMS.....	143
1. <i>Cartridge Based Console Systems</i>	143
2. <i>CD-Based Console Systems</i>	146
H. PORTABLE SYSTEM OVERVIEW	148
I. INDIVIDUAL PORTABLE SYSTEMS	149
1. <i>Portable Systems on the Market</i>	149
Nintendo Game Boy	149
Sega Game Gear	150
Nintendo Virtual Boy	150
Sega Nomad	151
Tiger game.com.....	151
Neo Geo Pocket Color.....	151
Nintendo Game Boy Advance.....	152
Nokia N-Gage.....	152
2. <i>Upcoming Portable Game Systems</i>	153
Sony PSP	153
Nintendo DS	154
IV. INTERACTIVE ENTERTAINMENT SOFTWARE, GAME GENRES AND CONSUMER DEMOGRAPHICS AND PROFILES.....	155
A. OVERVIEW	155
B. INTERACTIVE ENTERTAINMENT SOFTWARE MARKET	157
1. <i>International Software Market Overview</i>	157
2. <i>Top Game Franchises and Best Selling Games of All Time</i>	163
3. <i>U.S. Market Best Selling Software: 1994-2003</i>	171
Best Selling Console Software: 1994-2003.....	171
Best Selling PC Game Software: 1994-2003	183
4. <i>Japan Top Selling Video Games: 1996-2003</i>	189
C. GAME GENRE OVERVIEW	195
1. <i>Overall Interactive Entertainment Game Genres: 1997-2003</i>	196
2. <i>U.S. Console and Portable Game Genres: 1997-2003</i>	198
3. <i>U.S. Personal Computer Game Genres: 1997-2003</i>	201
4. <i>Game SubGenres</i>	203
D. GAME GENRES: A DETAILED LOOK	206
1. <i>Sports</i>	207
2. <i>Action: Character-Based Platform</i>	211
3. <i>Action: Shooting and First Person</i>	214
4. <i>Racing</i>	217

The Business Of Computer And Video Games 2004

5.	<i>Fighting</i>	219
6.	<i>Role-Playing</i>	221
7.	<i>Adventure/ Interactive Storytelling</i>	223
8.	<i>Strategy/Puzzle/Family Entertainment/ Environmental Simulation</i>	227
9.	<i>War Games, Military and Flight Simulation</i>	230
10.	<i>Education/Edutainment</i>	232
11.	<i>Adult</i>	234
12.	<i>Reference/Productivity/General Interest</i>	234
E.	KEY INGREDIENTS IN A SUCCESSFUL GAME	235
1.	<i>Quality</i>	235
2.	<i>Originality and Cross Genre Titles</i>	237
3.	<i>Big Name License</i>	238
4.	<i>Multi-Player Games</i>	240
5.	<i>Long-Term Play</i>	240
F.	GENRES: MAKING SENSE OF THE TRENDS	241
G.	CONSUMER DEMOGRAPHICS	244
1.	<i>General Video Game User Demographics</i>	245
2.	<i>Sony Demographics</i>	248
3.	<i>Nintendo Demographics</i>	252
4.	<i>Household Penetration</i>	254
5.	<i>Personal Computer Household and Game Player Demographics</i>	256
H.	CONSUMER PROFILES	261
1.	<i>Hard-Core Video Game Players</i>	262
2.	<i>Hard-Core Computer Gamers</i>	263
3.	<i>The Youth Market</i>	264
4.	<i>Casual Video Game Players</i>	265
5.	<i>Casual Computer Game Players</i>	266
I.	REACHING A NEW AUDIENCE	266
1.	<i>Adults</i>	266
2.	<i>Females</i>	268
V.	DEVELOPMENT TO RETAIL	270
A.	OVERVIEW	270
B.	THE FOOD CHAIN	271
1.	<i>Developer</i>	272
2.	<i>Publisher</i>	274
3.	<i>Developer/Publisher</i>	274
	Straight Developer/Publishers	275
	Affiliate Labels	275
4.	<i>Publisher/Distributors</i>	276
5.	<i>National Distributors</i>	280
6.	<i>Retailer</i>	281
7.	<i>Platform Providers</i>	282
8.	<i>Content Providers</i>	282
C.	DEVELOPMENT ISSUES	283
1.	<i>Testing and Customer Support</i>	286
2.	<i>New Technology = Better Games But Higher Development Costs</i>	288
D.	MAJOR BUSINESS CONSIDERATIONS	292
1.	<i>Financing Title Development</i>	292
	Work-For-Hire:	293
	Developer-Originated Project:	293
	Negotiating a Deal	294
	Key Considerations for Developers	295
2.	<i>Distribution Arrangements</i>	297

The Business Of Computer And Video Games 2004

Developer Self-Publishing.....	297
Affiliate Label Programs	298
Co-Publishing	300
3. <i>Platform Considerations</i>	301
New System Trends.....	314
4. <i>Licensing and Acquiring Content</i>	320
What a Licensed Property Can Add	323
Types of Licensed Properties	324
5. <i>Employment Concerns: Salaries, Unions and Agents</i>	328
Unions and Guilds	329
Agents.....	331
E. ECONOMIC MODELS	333
1. <i>Unit Models</i>	335
Assumptions: All Models	336
Assumptions: Cartridge Models	336
Assumptions: PC Game Models.....	337
Assumptions: CD Console Models	337
Assumptions: Portable Models.....	338
2. <i>Cartridge Titles: Revenue Breakdown: Major Hit</i>	341
3. <i>Cartridge Titles: Revenue Breakdown: Major Hit</i>	342
4. <i>Cartridge Titles: Revenue Breakdown: Modest Success</i>	343
5. <i>Cartridge Titles: Revenue Breakdown: Modest Success</i>	344
6. <i>PC Title Revenue Breakdown: Modest Budget, Modest Success</i>	347
7. <i>PC Title Revenue Breakdown: Large Budget, Best Seller</i>	348
8. <i>PC Title Revenue Breakdown: Large Budget, Modest Success</i>	349
9. <i>Console CD Titles: Revenue Breakdown, Best Seller</i>	352
10. <i>Console CD Titles: Revenue Breakdown, Modest Success</i>	353
11. <i>Portable Titles: Revenue Breakdown, Solid Hit</i>	354
12. <i>Portable Titles: Revenue Breakdown, Modest Success</i>	355
F. THE RETAIL MARKET	356
1. <i>Overview</i>	356
2. <i>Retail Channels</i>	357
Toy Stores.....	360
Mass Merchants.....	361
Game Specialty Stores.....	362
Consumer Electronics.....	363
Computer Hardware/ Office Supply Stores.....	363
Music, Video and Book Stores	364
Entertainment Superstores.....	365
Online Retailers.....	366
Game Rental Business	369
Used Game Market.....	373
3. <i>Individual Retail Chains</i>	375
Amazon.com/toysrus.com	380
Best Buy	382
Blockbuster.....	384
Circuit City	385
CompUSA	387
Costco.....	390
Electronics Boutique/EBGames	392
Fry's Electronics.....	395
Game Crazy	397
GameStop	398
Hastings Entertainment	401

The Business Of Computer And Video Games 2004

KB Toys	402
Kmart.....	404
Musicland	406
Sears	407
Staples	409
Target.....	411
Tower Records	413
Toys R Us.....	414
Trans World Entertainment	416
Wal-Mart/Sam's Club	417
4. <i>Retail Price Points</i>	420
Price Points: 128-Bit Systems	422
Price Points 32/64 Bit Systems.....	423
Retail Price Points: Portable Systems.....	426
Retail Price Points: PC Games	427
5. <i>DFC Retail Surveys: 1995-2003</i>	429
Retail Survey Pricing: 128-Bit Titles	430
Retail Survey Pricing: PC Software	431
Retail Survey Pricing: Portable Titles	433
Retail Survey Pricing: 32/64 Bit Titles.....	435
Retail Survey Pricing: 16-Bit Titles	438
Retail Survey Pricing: Miscellaneous Systems	440
6. <i>DFC Retail Survey: Full Results December 2003</i>	442
7. <i>Challenges at Retail</i>	447
8. <i>Alternate Distribution Channels: Electronic Commerce, Shareware, Catalogs, Direct Mail and Bundling</i>	454
9. <i>Budget Software</i>	461
G. MARKETING	463
1. <i>Overview</i>	463
2. <i>Marketing Made the Giants</i>	467
3. <i>Changing Attitudes Towards Marketing</i>	469
4. <i>Marketing Elements and Costs</i>	470
Total Marketing Costs	470
Packaging	471
Public Relations.....	471
Shows and Conferences.....	472
Advertising Costs	472
Merchandising/Channel Marketing	473
Co-Op/Market Development Funds (MDF)	473
Sales Support.....	474
Special Promotions.....	474
Direct Mail	474
Online Marketing.....	475
Customer Support.....	475
5. <i>Leveraging Marketing Dollars</i>	475
Branding	476
Sequels and Add-Ons	478
Repackaging and Lifecycle Pricing.....	480
Preview Mechanisms: Arcades, Rentals, CD Samples, In-store Displays and Online Downloads.....	483
Opinion Leaders and Game Magazines.....	488
6. <i>Marketing Online</i>	492
Advertising Online	494
(1) Advantages of Online Advertising	494

The Business Of Computer And Video Games 2004

(2)	Types of Online Advertising	496
(3)	Online Advertising Measurements	499
(4)	Leading Online Game Sites	501
7.	<i>Advertising and Product Placement in Interactive Entertainment</i>	503
VI.	TRENDS IN INTERACTIVE ENTERTAINMENT	506
A.	OVERVIEW	506
B.	MAJOR TRENDS	507
1.	<i>Macro Trends</i>	507
	Expanding Entertainment Choices/ Rising Personal Income/Limited Leisure Time	507
	Global Consolidation of Media Companies	510
	Mass-Market Consumers to Niche Consumers	510
2.	<i>Hardware Trends</i>	511
3.	<i>Software Trends</i>	514
4.	<i>Distribution Trends</i>	518
C.	MUSIC, MOVIES, AND BOOKS: LESSONS FROM OTHER INDUSTRIES	524
1.	<i>The Music Industry</i>	524
	Music Industry History	524
	Music Industry Organization	530
2.	<i>The Movie Industry</i>	532
	History of the Movie Industry	532
	Movie Industry Organization	537
3.	<i>The Book and Publishing Industry</i>	539
4.	<i>Comparing Entertainment Industries</i>	540
D.	CONSOLIDATION	545
1.	<i>Overview</i>	545
2.	<i>Reasons for Consolidation</i>	554
3.	<i>The Role of Hollywood and Potential Problems</i>	557
	Hollywood Phase One: 1976-1984	558
	Hollywood Phase Two: 1994-2000	558
	Hollywood Phase Three: The Present	559
	The Licensing Craze	560
	Interactive Storytelling: Does It Work?	567
E.	NEW DISTRIBUTION CHANNELS: PROBLEMS AND OPPORTUNITIES	569
1.	<i>Overview</i>	569
2.	<i>Product Delivery</i>	571
3.	<i>Online Distribution and Shareware (ESD)</i>	578
	RealNetworks/RealArcade	580
	TryMedia Systems	581
	Arush Entertainment/Game Capsule	582
4.	<i>On Demand Distribution</i>	583
	Yahoo and Games On Demand	585
5.	<i>E-Commerce</i>	587
6.	<i>Electronic Distribution at Retail</i>	588

LIST OF TABLES

Table 1 U.S. Market for Video Games: 1978-1993.....	51
Table 2 U.S. Sales for 8-Bit Hardware: 1986-1993.....	57
Table 3 U.S. Sales for 8-Bit Software: 1986-1993	58
Table 4 U.S. Sales for 8-Bit and 16-Bit Hardware and Software: 1989-1995	59
Table 5 Nintendo and Sega Battling for Market Share: 1991-1995	61
Table 6 U.S. Sales for 16-Bit Hardware: 1989-1995.....	62
Table 7 U.S. Sales for 16-Bit Software: 1989-1995	63
Table 8 U.S. Sales for 16-bit and 32/64-Bit Hardware and Software (in millions)	67
Table 9 U.S. Sales for 32/64-Bit Hardware: 1994-2002.....	68
Table 10 U.S. Sales for 32/64-Bit Software: 1994-2002	69
Table 11 U.S. Sales for 128-Bit Hardware: 1999-2002.....	77
Table 12 U.S. Sales for 128-Bit Software: 1999-2002	78
Table 13 U.S. Sales for 32/64-Bit and 128-Bit Hardware and Software: 1994-2002	79
Table 14 Worldwide Hardware Sales for Console and Portable Systems: 2001-2003	101
Table 15 The Vicious Upgrade Cycle: Cost of PC Hardware: 1993-2003	107
Table 16 Sample PC Hardware Costs: 1996-2004.....	108
Table 17 U.S. Hardware Prices: 2000-2003	117
Table 18 Europe Hardware Prices: 2000-2003	117
Table 19 U.K. Hardware Prices: 2000-2003.....	117
Table 20 Japan Hardware Prices: 2000-2003	118
Table 21 Worldwide Total Hardware Sales: 1996-2002 ...	119
Table 22 Worldwide Hardware Sales Sony versus Nintendo: 1995-2003	120
Table 23 Console System Comparisons	121
Table 24 Key Features for Future Game Systems	143
Table 25 U.S. Sales for Cartridge vs CD Game Systems: 1994-2001	145

The Business Of Computer And Video Games 2004

Table 26 Worldwide Game Software Sales by Country/Region: 2002	158
Table 27 Top Worldwide Game Franchises	163
Table 28 Top 15 U.S. Titles in Revenue of the 32/64-Bit Era	164
Table 29 Top 10 U.S. Titles in Revenue for the 128-Bit Systems	164
Table 30 Top U.S. Video Games by Platform: 1995-2003	164
Table 31 Top U.S. Video Games by Publisher: 1995-2003	165
Table 32 Top 100 U.S. Video Games Unit Sales 1995-2003	165
Table 33 Top Japan Video Games by Platform	168
Table 34 Top Japan Video Games by Publisher	168
Table 35 Top 100 Japan Video Games Unit Sales 1985-2003	168
Table 36 U.S. 16-Bit SNES January 1993	171
Table 37 U.S. 16-Bit Genesis January 1993	172
Table 38 U.S. 16-Bit SNES August 1993	172
Table 39 U.S. 16-Bit Genesis August 1993	172
Table 40 U.S. 16-Bit Genesis: December 1993	173
Table 41 U.S. 16-Bit SNES December 1993	173
Table 42 U.S. 16-Bit SNES August 1994	173
Table 43 U.S. 16-Bit Genesis August 1994	174
Table 44 U.S. 16-Bit SNES December 1994	174
Table 45 U.S. 16-Bit Genesis December 1994	174
Table 46 U.S. All Console Titles December 1995	175
Table 47 U.S. All Console Titles September 1996	175
Table 48 U.S. PC and Console Titles Jan-Sept 1996	175
Table 49 U.S. All Console Titles Full Year 1996	176
Table 50 U.S. All Console Titles June 1997	176
Table 51 U.S. All Console Titles December 1997	176
Table 52 U.S. All Console Titles Full Year 1997	177
Table 53 U.S. All Console Titles 4th Quarter 1998	177

The Business Of Computer And Video Games 2004

Table 54 U.S. All Console Titles Full Year 1998.....	178
Table 55 U.S. All Console Titles Full Year 1999.....	178
Table 56 U.S. All Console Titles First Half 2000.....	179
Table 57 U.S. All Console Titles Full Year 2000.....	179
Table 58 U.S. All Console Titles First Nine Months 2001	180
Table 59 U.S. All Console Titles Full Year 2001.....	181
Table 60 U.S. All Console Titles Full Year 2002.....	181
Table 61 U.S. All Console Titles December 2003.....	182
Table 62 U.S. All Console Titles Full Year 2003.....	182
Table 63 U.S. Top PC Game Titles: January 1993-April 1998	183
Table 64 U.S. Top Entertainment CD-ROM Titles for 1994	183
Table 65 Top U.S. PC Games: 1995.....	183
Table 66 U.S. Top PC Games: First Half 1996.....	184
Table 67 U.S. Top PC Games: First Half 1998.....	184
Table 68 U.S. Top PC Games: 1998.....	185
Table 69 U.S. PC Games Full Year 1999.....	185
Table 70 U.S. PC Games First Half 2000.....	186
Table 71 U.S. PC Games Full Year 2000.....	186
Table 72 U.S. PC Games First Nine Months 2001.....	187
Table 73 U.S. PC Games Full Year 2001.....	187
Table 74 U.S. PC Games Full Year 2002.....	188
Table 75 U.S. PC Games Full Year 2003.....	188
Table 76 Japan Top Video Games 1996.....	189
Table 77 Japan Top Video Games 1997.....	190
Table 78 Japan Top Video Games 1998.....	190
Table 79 Japan Top Video Games 1999.....	191
Table 80 Japan Top Video Games 2000.....	191
Table 81 Japan Top Video Games 2001.....	192

The Business Of Computer And Video Games 2004

Table 82 Japan Top Video Games 2002	193
Table 83 Japan Top Video Games 2003	194
Table 84 U.S. Console Unit Sales by Game Genre: 1997-2003*	198
Table 85 U.S. Console Unit Sales by Game Genre: 2002-2003	199
Table 86 U.S. PC Unit Sales by Game Genre: 1997-2002*201	
Table 87 1999 U.S. Console Unit Sales by Top 10 Subgenre*	204
Table 88 2000 U.S. Console Unit Sales by Top 10 Subgenre*	204
Table 89 1999 U.S. PC Unit Sales by Top 10 Subgenre *	205
Table 90 2000 U.S. PC Unit Sales by Top 10 Subgenre* .	205
Table 91 Critical Rating of Top Selling Titles: 2003.....	236
Table 92 2003 U.S. Game User Demographics	245
Table 93 Japan 2002 Estimated Video Game Population by Age	245
Table 94 Cross Ownership of Other Products Among Video Game Households: 1996-1999.....	246
Table 95 U.S. Video Game Demographics 1999.....	246
Table 96 U.S. 16-Bit vs. 32/64/128-Bit Demographics 1995 and 2001	247
Table 97 U.S. Nintendo Owner Demographics 1995 and 2001	247
Table 98 PlayStation User Demographics: 1998	248
Table 99 PlayStation User Demographics: 2003	248
Table 100 PlayStation vs PSOne Demographics: 2003	249
Table 101 Cumulative Average Age PlayStation and PS2: 1998-2003	249
Table 102 Initial PlayStation 2 North American Owner Demographics	250
Table 103 PlayStation 2 North American Owner Demographics: 2003	250
Table 104 PlayStation 2 European Owner Demographics: 2003	251
Table 105 Nintendo SNES U.S. Player Demographics: 1995	252
Table 106 Nintendo Gender Demographics by Platform: 1998	252
Table 107 U.S. Nintendo Users Demographics 1993-2000	252
Table 108 U.S. Video Game Household Penetration Estimates: 1994-2003	254
Table 109 1994 Household Penetration of Video Game Systems	255

The Business Of Computer And Video Games 2004

Table 110 1996 Household Penetration of Video Game Systems	255
Table 111 Multiple Ownership of 128-Bit Systems	255
Table 112 U.S. PC game household estimates.....	256
Table 113 PC Penetration by Income	256
Table 114 PC Household and Video Game Household Demographic Comparisons	258
Table 115 Changing Demographics of PC Buyers: 1996-1998	258
Table 116 1998 Demographics of First Time PC Buyers ..	259
Table 117 Demographics of Sub-\$1,000 PC Buyers	259
Table 118 Home PC Activities by Income Group 1998	260
Table 119 Hard-Core Video Gamer Profile.....	262
Table 120 Hard-Core PC Gamer Profile.....	263
Table 121 Triple AAA Game Development Costs: 1988-2003	291
Table 122 Anticipated Development Costs for Different Genres	291
Table 123 Distribution Terms.....	299
Table 124 Tips on Choosing a Distributor.....	299
Table 125 U.S. Average Unit Sales by Platform 2003	302
Table 126 Platform Considerations for 2004.....	303
Table 127 U.S. PS2 Titles Full Year 2003.....	303
Table 128 U.S. Xbox Titles Full Year 2003	304
Table 129 U.S. GameCube Titles Full Year 2003	304
Table 130 U.S. Portable Titles Full Year 2003.....	304
Table 131 U.S. Average Unit Sales by Platform: 1997-2000	305
Table 132 Top 40 Titles as a Percent of Total Sales (All Platforms)	306
Table 133 Top Selling Games as a Percent of Total Dollar Volume: 1993-1996	306
Table 134 Title Unit Sales (All Platforms 1997-2000).....	307
Table 135 First Year Software Sales PlayStation versus PlayStation 2	315
Table 136 Lifecycle Comparison: Sony PlayStation versus PlayStation 2	316

The Business Of Computer And Video Games 2004

Table 137 Lifecycle Comparison: Nintendo 64 versus Nintendo GameCube	317
Table 138 PlayStation Five-Year Lifecycle Trends.....	318
Table 139 Nintendo 64 Five-Year Lifecycle Trends	319
Table 140 Licensing Deals: A Case Study of Enter the Matrix	320
Table 141 Average Annual Development Salaries: 2003 ..	328
Table 142 Average Annual Development Salaries: 2001 ..	329
Table 143 Game Developer Years of Experience.....	329
Table 144 Publisher AAA Title Breakeven Analysis	333
Table 145 U.S. Video Game Sales by Type of Retail Channel	357
Table 146 U.S. PC Game Sales by Type of Retail Channel	358
Table 147 U.S. Game Rental Market.....	370
Table 148 Top 20 Online Video Game Rentals 2003	370
Table 149 U.S. Game Rentals by Platform: 2002.....	370
Table 150 Top U.S. Game Rentals 2002	371
Table 151 Top Game Rentals 2001	372
Table 152 U.S. Sales for Used Video Game Software: 1996-2002	374
Table 153 U.S. Video Game Sales by Individual Retail Chain	375
Table 154 U.S. PC Game Sales by Individual Retail Chain	376
Table 155 Titles Available by Chain: December 2003 Survey	377
Table 156 Titles Available by Chain: 2001 Survey	378
Table 157 Titles Available by Chain: 2000 Survey	378
Table 158 Titles Available by Chain: 2000-2003	379
Table 159 U.S. Retail Price Points by Platform 2003.....	421
Table 160 U.S. Retail Price Points by Platform: 1993 – 2001	421
Table 161 PlayStation 2 Price Points.....	422
Table 162 Xbox and GameCube Price Points.....	422
Table 163 Dreamcast Price Points	423
Table 164 Nintendo 64 Price Points	423

The Business Of Computer And Video Games 2004

Table 165 PlayStation Price Points.....	424
Table 166 Game Boy Price Points.....	426
Table 167 PC Game Price Points.....	427
Table 168 December 2003 Retail Survey: Availability by Platform	429
Table 169 PlayStation 2 Software Pricing: December 2003 Retail Survey	442
Table 170 Xbox Software Pricing: December 2003 Retail Survey	443
Table 171 GameCube Software Pricing: December 2003 Retail Survey	444
Table 172 Game Boy Advance Software Pricing: December 2003 Retail Survey	445
Table 173 PC Games Software Pricing: December 2003 Retail Survey	446
Table 174 Games as Loss Leaders.....	450
Table 175 Sales of Video Game Software by Season: 1995-2000	464
Table 176 Sales of PC Game Software by Season: 1998-2000	465
Table 177 Cost of Some High Profile Marketing Campaigns: 1993-2003	465
Table 178 LifeCycle Pricing: A Case Study of Final Fantasy VII	481
Table 179 Circulation of Leading U.S. and U.K. Game Magazines	489
Table 180 Game Magazine 2002 Advertising Revenue	490
Table 181 Game Magazine 2001 Advertising Revenue	490
Table 182 Game Magazine 2000 Advertising Revenue	491
Table 183 Game Magazine 1999 Advertising Revenue	491
Table 184 Online Advertising Formats 2000-2003	497
Table 185 CPM of Various Media.....	500
Table 186 Advertising/Usage Share of Various Media	500
Table 187 Top Online Game Sites: July 2003	502
Table 188 Overall U.S. Consumer Household Spending...507	
Table 189 U.S. Income Spent on Entertainment: 1958-1998	508
Table 190 U.S. Household Entertainment Expenditures 1990-2000	508
Table 191 Hours Per Person Per Year Using Consumer Media: 1998-2002	509

The Business Of Computer And Video Games 2004

Table 192 Consumer Spending Per Person Per Year Using Consumer Media: 1995-2000.....	509
Table 193 U.S. Record Sales: 1946-1962.....	526
Table 194 U.S. Record Sales: 1963-1983.....	527
Table 195 U.S. Record Sales: 1983-2002.....	529
Table 196 U.S. Record Sales by Genre: 1990-2002.....	529
Table 197 U.S. Record Sales by Age: 1989-2002.....	530
Table 198 Sales Channels for Music: 1990-2002.....	531
Table 199 U.S Per Capita Box Office Spending: 1942-1970	533
Table 200 U.S Per Capita Box Office Spending: 1970-1988	535
Table 201 Movie Industry Revenue Figures: 1980-2002 ..	536
Table 202 U.S. Expenditures on Filmed Entertainment: 1993-2002	538
Table 203 Public Access to Entertainment Products	540
Table 204 Developing/Financing Entertainment Products	541
Table 205 Main Distribution Channels for Entertainment Products	542
Table 206 Demographic Appeal of Entertainment Products	542
Table 207 Marketing/Preview Mechanisms for Entertainment Products	543
Table 208 Life Cycle for Entertainment Products	544
Table 209 Revenue of Leading Companies in the Interactive Entertainment Industry	546
Table 210 Major Game Industry Acquisitions: 1993-2003	548
Table 211 Major Licensing Deals for the Game Industry	561
Table 212 Forecasts for Online Distribution of Game Software: 2002-2009	570