IGDA Online Games White Paper
Full Version

Presented at the Game Developers Conference 2002

Created by the IGDA Online Games Committee

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With the rising use of the Internet, the commercial success of certain massively multiplayer games (e.g., *Asheron's Call, EverQuest*, and *Ultima Online*), the ubiquitous availability of parlor and arcade games on "free" game sites, the widespread use of matching services for multiplayer games, and the constant positioning by the console makers for future online play, it is apparent that online games are here to stay and there is a long term opportunity for the industry. What is not so obvious is how the independent developer can take advantage of this opportunity. For the two years prior to starting this project, I had the opportunity to host several roundtables at the GDC discussing the opportunities and future of online games. While the excitement was there, it was hard not to notice an obvious trend. It seemed like four out of five independent developers I met were working on the next great "massively multiplayer" game that they hoped to sell to some lucky publisher. I couldn't help but see the problem with this trend. I knew from talking with folks that these games cost a LOT of money to make, and the reality is that only a few publishers and developers will work on these projects. So where was the opportunity for the rest of the developers? As I spoke to people at the roundtables, it became apparent that there was a void of baseline information in this segment. While high-level research reports predicting massive growth are widely available and larger companies have access to their own data, I found the information available about online games to the average developer to be inconsistent and anecdotal.

There is one more trend that is both exciting and troubling at the same time. With the increased hardware capabilities of the latest consoles, the average price of game development for A-titles is rising. At the time of writing this, I'm hearing between $3 and $5 million for the low end A-console title. With this kind of money riding on a project, combined with marketing costs, publishers are going to invest in both proven developers and less risky projects.   Could segments of the online world provide a lower cost of entry and less risky market? Could it provide a breeding ground for younger developers prior to getting scooped up by the bigger budget projects? Could the online world provide the game market with the equivalent of an independent film market?

With these questions in mind, I sought out game developers and publishers who could help create a white paper on the state of the online game market. This was not meant to replace the well-funded investment banking and research analyst reports, but rather, to supplement the reports, and also provide a resource that would be available at no charge to anyone in the industry that wanted it. I was thrilled and overwhelmed with the response. Over 100 individuals responded, indicating an interest to participate. It became apparent that we needed to create both a steering committee and a pool of writer/contributors to make this happen. At the 2001 GDC, the beginnings of the steering committee met. The group grew the next few months, and then we split up and began to get our respective sections done. Volunteer writers were solicited and collaborated with via email. In this document, you'll see contributions ranging from a paragraph to multiple pages from developers all over the world.   There are so many people to thank for this project. Please take a moment to review the list of committee members and contributors in the credit section that follows. This work was completely written by them, and without them, it would not exist.   A very special thanks to all of these people who took time out of their busy schedules for all of us to help get this done. I'd also like to thank the IGDA Board who also believed in this project and helped give us the reach to get this done so quickly.

I hope this white paper is valuable to you, and I look forward to playing your games online!

Alex

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II. WHITE PAPER INTRODUCTION

A. Presentation of IGDA Online Games White Paper at GDC 2002

The IGDA Online Games Committee discussed the findings of the white paper at the Game Developers Conference 2002 in San Jose, CA. An abbreviated version of the white paper was included in the GDC 2002 proceedings. This white paper is a full version produced by the IGDA Online Games Committee and is electronically available at the International Game Developers Association website, at http://www.igda.org/online_report.htm. The white paper will be available for download at no charge for people who register at the website.

B. Background and Purpose

Background

Online games are an emerging market with many opportunities and challenges for game developers. While developers have expertise in designing and developing game experiences, they require additional knowledge about the business and technology implications of online games in order to maximize their chances for success in a growing and evolving marketplace.

Purpose

The IGDA commissioned an Online Games Committee to address the needs of game developers concerning online games. The purpose of the Online Games White Paper is to provide online games market statistics, business model descriptions, and technology summaries. Additionally, this white paper provides online games examples and reference resources.

C. Audience

The audience of the Online Games White Paper includes independent game developers and development studios without significant business and technology resources, which plan to create online games.

D. Scope

Platforms within scope of white paper

This white paper includes information about online games played through the Internet via PCs, and video game consoles (e.g., Sony PlayStation 2, Microsoft Xbox, Nintendo GameCube and Sega Dreamcast).

Platforms outside scope of white paper

This white paper does not include information about online games played through wireless devices (e.g., mobile phones, PDAs) or interactive television set-top boxes.

III. MARKET OVERVIEW

A. Introduction

After twenty-something years of incubation, online games are emerging as an important and widespread entertainment media. Breaking the stigma that only socially outcast teenage boys play video games, the consumer base has expanded to include girls, children, and adults. Growing consumption – in terms of age, gender, income, educational background, and other metrics – signifies that video games are rapidly becoming a mass-market industry.

Mass-market involves the distribution of a massive amount of product to a massive number of buyers or consumers. Mass-market does not necessarily imply that an individual product must appeal to everyone. More often, it is brands or even an industry that is given this label.

The growth in the games industry is fueling expansion and evolution of existing game brands and product lines. It also heralds opportunity for new products that address the different needs of the larger, more diverse marketplace. Much of the growth is due to advances in online games[1], and many of the opportunities lie therein.

B. Dynamics of Hard-Core Online Games

Although not as sizeable in terms of sheer number of players as the mass-market online games segment of the market, the hard-core online games segment has seen staggering growth in terms of both numbers and dollars. The major driver of this growth is the entry of the large game publishers (e.g., Electronic Arts, Microsoft, Sony, Sega) into the online games market, creating multiplayer and massively multiplayer games. Unlike the pioneers in the online games industry, these companies have *money*. Additionally, the popularity of multiplayer peer-to-peer or server-based games with a lower number of players (two to a few dozen gamers) has grown dramatically with the help of compelling game play, strong community involvement, and free matchmaking services (e.g., *StarCraft*, *Half-Life: Counter-Strike, Unreal Tournament,* etc.).

Development Budgets

High quality hard-core games (usually) cost more and (usually) result in more players. Costs can range dramatically from $2-3 million for multiplayer first-person shooters to well over $10 million for massively multiplayer games that require ongoing development and maintenance.

Marketing Money

While perhaps not as recognizable as Marlboro or Coca-Cola, *Ultima* and *EverQuest* have become powerful brands. The robust communities associated with massively multiplayer games have resulted in low-cost word-of-mouth marketing through their subscribers.

Distribution

Large publishers have retail distribution that enables them to recoup most or all of their development costs upfront by charging for the online game client itself. Historically, the game clients were given away for free and consumers were only charged for the connection time.

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[1] "Online games" refers to browser-based games, downloadable PC games, PC boxed games with online features, and console games with online components. Mobile, hand-held (e.g., PDA), and interactive television games are outside of the scope of this white paper.

C. Emergence of Mass-Market Online Games

The online games industry has a mass-market segment composed of a large and diverse audience. According to Media Metrix, 57% of the total online U.S. population, or approximately 58 million users, visited an online games site during the month of October 2001. The games category was the second largest in growth from September to October with an 11% increase in unique visitors.[2] What caused online games to achieve mass-market status during the last few years? Certainly, the overall video game industry is in a period of growth, but why is the online games industry so much more widespread?

The Internet Audience

The proliferation of the Internet caused an enormous and diverse infusion of new online games consumers, moving well beyond the stereotypical hard-core gamer. The overall games industry, fueled by the next-generation consoles, is seeing growth and diversification as well, but has yet to tap into the mainstream.

Availability

Historically, players had to search diligently to find free games, and most of what could be found offered limited gameplay value. For the average consumer, this was a major impediment to enjoying online games. Now, games can be found through the home pages of all the major portals and Internet Service Providers. Furthermore, many online games sites award prizes for playing games, which has been a strong driver of growth and a valuable retention tool.

Removing the Technology Barrier

In the past, consumers had to be very technically savvy to understand how to download and install an online game, particularly compared to console games which just "work". Now, automatic download, install and launch mechanisms, and in-browser technologies such as Java, Flash, and Shockwave make online games just as simple for users. Indeed, some games require no installation at all; like console games, they just "work".

Consumer-Friendly Business Model

Whereas most retail games cost money to play, Internet content was largely free throughout the late 1990s. Free web games supported by advertising eliminated a serious barrier to entry – cost. Low or no-cost online games offer mass-market consumers a tremendous amount of value compared to the $200-$300 for a next-generation console, with games that cost $40-$50 each.

The recent decline in online advertising revenues has created severe problems for many industries, including the online games industry, which is now scrambling to find new profitable business models.

Games For Dummies

Traditional video games have become increasingly complex over time, as advances in technology have allowed designers to build more sophisticated digital realities. Mass-market online games have typically taken a more simplistic form, one that is much more approachable for non-gamers. This is due in part to the lack of sophisticated tools and limited budgets.

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[2] Key Measures Report from Jupiter Media Metrix, 10/01

D. Online Game Consumers

Only a small percentage of people are what developers in the industry consider a "gamer". While the forms of entertainment consumed differ greatly across age, gender, and income, just about every person is an entertainment consumer. Most of these people are potential gamers, if developers are willing to challenge some of their preconceived notions about people and products. In light of this growing consumer base, IDC forecasts U.S. online games households to grow from 25 million in 2000 to 40 million in 2004.[3] Such growth requires new products for new consumers.

Marketers think of consumers not as individuals, but rather in terms of populations of individuals that exhibit similar demographic or lifestyle patterns. These population segments are influenced by similar trends, and are likely to react to messaging and purchase products for similar reasons. In practice, online game consumers are not broadly generalized into a single, universal category, but are rather grouped into segments (e.g., consumers by genre, brands, or individual products) to help determine their influence on the market.

The Hard Core: Traditional PC CD-ROM

As the most understood segment of the market, hard-core gamers are young, predominantly male consumers. They also represent the smallest group of online gamers. They spend the most time playing games, often spending over 20 hours per month. For many gamers, this represents the largest single form of entertainment consumed. They are the least price-sensitive group, willing to spend money to play games and to play games online. They are mostly composed of hard-core PC gamers that have migrated to online PC games.

The Fringe: Ex-Gamers, Casual Gamers, and Almost-Gamers

Gen-X is turning thirty. People that grew up with pioneering consoles (e.g., Atari 2600, Intellivision) are now thinking about which video games to purchase for their children. They are the "Fringe" – consumers and parents familiar with video game products and love games, but probably do not have much time to devote to them as when they were younger. They spend several hours per week on online games sites. Other casual gamers have no desire to invest the time of several hours per week into building a particular score, but like to logon for a half-hour or so to spend some time playing something similar to Solitaire or the extremely popular PopCap game *Bejeweled*. Finally, some of the people in this group may avoid certain online games not because of a lack of desire to play them, but simply because they don't have the high-end computer system required.

The Resistance: Non-Gamers

People claim many reasons for purchasing computers, but playing games is one of the top uses for home PCs (after email). *Solitaire* and *FreeCell* are enormously popular. Below is a chart from Jupiter Media Metrix showing the top five stand-alone games based on unique visitors for those computer users who are connected to the Internet.

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[3] "Online Gaming Companies are Evolving Their Business Models According to the Changing Gaming Landscape, IDC Says", IDC, 2/7/01

Jupiter Media Metrix Top 5 Computer Game Applications According to Number of Unique Users (000)[4] October 2001 - At Home Only Among Internet-Using PC Users			
Rank	Unique Users (000s)	Reach % Among Total Internet-Using Computer Users	Reach % Among Total Users of PC Game Applications
Total Internet-Using PC Users	96,727	100.0	N/A
Total Users of PC Game Applications	46,699	48.3	100.0
Solitaire (Microsoft)	21,306	22.0	45.6
FreeCell	14,744	15.3	31.6
Hearts Network	6,636	6.9	14.2
Minesweeper	5,424	5.6	11.6
Spider Solitaire	4,641	4.8	9.9

People click cards on the screen without thinking of themselves as gamers, but in reality they are taking a first step down the path to becoming video game consumers. The consumers of non-online games mentioned above represent potential gamers for online distribution and consumption. The challenge is to understand their needs and offer them products supported by attractive pricing models.

E. Online Game Products

Browser-based Games

Browser-based games, also known as web games, are typically less than one megabyte in size. The most successful examples adhere to the notion of point/click/play: they require no complex downloads or installations, and use simple keyboard and/or mouse controls, with no need to read a user manual before playing for the first time.

Action and sports games appeal to Hard Core and Fringe gamers due to their similarity to traditional offline games. Online versions of these games will be one step behind their console and PC counterparts for quite some time. Opportunity lies not in competing in terms of polygons, but rather in delivering a "casualized" experience to the Fringe consumer. Taking a fifty-hour/fifty-dollar experience and compressing it into an easily accessible five-hour/five-dollar package could create a mass-market opportunity.

Card, board, and casino games appeal to Resistance gamers due to familiarity with their non-electronic predecessors. These games usually have no downloads, small-to-no learning curve, and are offered free to consumers.

Puzzle, party, and game show games appeal to Fringe and Resistance gamers because they are not necessarily thought of as being video games, but rather as being traditional forms of

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[4] "Forty-Seven Million People Played PC Games In October 2001, Reports Jupiter Media Metrix," Jupiter Media Metrix, 12/17/01

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entertainment that are now being delivered via online distribution (e.g., browser). These games usually have no downloads, small-to-no learning curve and are offered for free to consumers.

In the MMORPG arena, most games require either a CD-ROM or lengthy download to play, but there is one browser-based client available via the Simutronics play.net website. Their new eScape front end, released in 2001, allows players to access the game without the store purchase or large download that other MMORPGs require. Players can access the game with nothing more than a current version of Internet Explorer. This is unique in the MMORPG market.

Downloadable Single-Player Games

Larger than web games at 3-20MB and almost always requiring an installation step, downloadable games are primarily action, sports, puzzle, and simulation games. These games are targeted at the Hard Core gamers and the more serious Fringe gamers that demand greater game play functionality and better graphics and are willing to wait for the download. Resistance gamers need instant gratification and would likely only get lost in the added complexity. However, browser-based games with downloadable premium versions, such as the blockbuster puzzle games *Diamond Mine* and *Collapse*, have broken this pattern and are pulling Resistance gamers into the fray. This is of special note because 25-50 year-old females are spending money on video games for themselves, and not just for their children.

Downloadable Online Multiplayer Games

These games are similar to their CD-ROM counterparts (see below), but the client software (the part that runs on the player's computer) is distributed online-only with no fixed media component. As a small category of games with a fiercely loyal, hard-core following, these games are generally of the massively multiplayer persistent world variety. As online-only games, player interactivity is a central feature and selling point. For example, some of the Simutronics games offer this type of client software.

PC CD-ROM Games with Online Components

Online PC CD-ROM games come in two forms: (i) games that allow users to play either standalone or with a multiplayer option, generally 2-8 players, in a non-persistent session; and (ii) massively multiplayer games, sometimes referred to as MMORPGs (massively multiplayer online role-playing games), which cannot be played standalone and are persistent even if one leaves the game. Because of the retail box distribution, the websites as destinations are generally of secondary concern but offer an avenue to build communities around the game. When executed properly, the online aspect is a highly integrated experience, handling player matching and version upgrades/compatibility in ways that do not confuse the player (e.g. Blizzard's Battle.net).

Today, few independent matchmaking services (such as GameSpy) remain in existence. This is due to the historical precedent that such services had been provided free of charge. Indeed, games such as *Quake* and *Counter-Strike* allow users to host and advertise their own game servers, making the value-add of third parties tenuous. Complemented by publishers (e.g., Blizzard) integrating site services into the game client itself, there may be limited value in pure matchmaking third parties.

Console Games with Online Components

Multiplayer gaming is the core value proposition for online console games. Historically, there has been little to no effort by the console manufacturers to build and grow console multiplayer online connectivity. Sega made a big effort in the online console market with its Dreamcast console and games such as *Phantasy Star Online* and *NFL 2K2*. With the demise of the Dreamcast, Microsoft is trying to aggressively differentiate itself from PlayStation 2 by promoting Xbox's online capabilities. In order for the online console market to grow, console manufacturers will need to bundle a hard drive and modem/Ethernet card with the machine and take the lead to create "killer" content to jump-start the market. Third parties may be cautious in taking the risk to spend precious time and dollars creating online console games unless a market exists. It may be likely that the online console market will not experience true growth until the introduction of the next generation of consoles after PlayStation 2, Xbox, and GameCube.

The installed base of video game consoles in the U.S. is largely due to the low price point, ease of use, and great game selection of games. Jupiter reports that consoles connected to the Internet numbered only 700,000 in 2000, but that number is expected to grow to 12.3 million by 2006.[5] Clearly, breakthroughs in online console gaming will revolutionize the landscape. The Xbox ships with a built-in Ethernet card and a hard drive, and Sony will be making these components available as add-ons for the PlayStation 2. Additionally, Nintendo could add an entirely new segment by bringing youth gamers online with their younger-skewing library and fan base.

F. Issues and Opportunities in Online Games

Design & Feature Implications: Look for a Bigger Pie

Game developers have historically stressed innovation – making games deeper, richer in features, and more visually stunning. These factors are sometimes irrelevant and sometimes dangerous when targeting the mass-market consumer. Continued focus on them may be required to compete in the Hard-Core market, but the Hard-Core market is a highly competitive arena with lower growth potential. There are a many Fringe and Resistance consumers who value stability over bleeding edge technology, and simplicity over complexity. Reaching them profitably requires a new approach to game design. In addition, brand names will play a larger role in attracting Fringe and Resistance gamers who desire familiarity.

Pricing Challenges and Predictions

As a gross generalization, games today are either expensive and solid, or free with a diverse range of quality. The challenge for mass-market online games is generating enough advertising/sponsorship revenue to cover costs and turn a profit, or alternatively getting enough Fringe and Resistance consumers to pay to play. These consumers will pay for entertainment, but the product and business models aren't there yet. Hard core gamers are willing to pay for games, but not every $10/month game can be successful due to the limited number of hard-core gamers. Consolidation and exiting of some online games may be necessary.

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[5] "Nearly Half Of Us Video Game System Owners Plan To Buy A New Console Or Handheld Game Device This Holiday Season, Reports Jupiter," Jupiter Media Metrix, 12/17/01

There is a convergence about to occur in the mass-market space as games grow in quality. As more Fringe and Resistance consumers become gamers, there will be more paying (or ad-clicking) consumers to fuel expansion. Not wanting to be left out, traditional publishers will diversify successful hard-core intellectual property into mass-market product designs with varying pricing models. An opportunity may exist to sell more games at a far lower price. Hollywood feature films cost ten to twenty times as much as the most expensive video games, but they are sold for $9 in the theater and less than $20 on DVD. As the market for video games expands, prices may fall in order to appeal to mass-market consumers.

Changes in Distribution

The evolution of the online games market will someday alter the retail landscape considerably. As broadband penetrates, the Internet will rival and perhaps replace retail as the primary distribution mechanism for video games. Who will rule the new order – divisions of existing retailers, or new players to retail such as game publishers, first parties, or ISPs? When will this occur? Analysts three years ago expected that broadband would be here by now, but clearly it is taking far longer than predicted for mass-market penetration. Will it take two years, five years, or ten years?

Another interesting factor is how companies will continue to exploit their unique advantages to grow their market share and control distribution. How will Microsoft leverage its operating system and browser to drive people to the MSN Gaming Zone? What will the MSN Gaming Zone evolve into as traffic grows and market opportunities evolve? How will the console makers leverage their hardware to drive users to their online destinations, versus allowing equal and fair access to third parties? Real Network and Shockwave.com have built huge audiences leveraging the distribution of media players. They have been successful in selling downloadable games. What will become of them? Will the AOL Time Warner companies leverage the AOL subscriber base? Finally, will there ever be an equivalent to a "console" for online games (e.g. RealArcade, Shockmachine), or will the online market remain fragmented like the PC CD-ROM market?

G. Conclusion

The potential changes and opportunities before developers will continue to evolve as the Internet and the online games industry grow. Whether growth predictions of research analysts become true, online games are some of the "stickiest" applications on the Internet based on frequency of visits and time spent at each site, and they are proving to be one of the strongest drivers of online revenue as well.

Successful game developers and publishers will be those companies that employ successful traditional product marketing techniques in deciding what to build, what features to include, and how to market and price their products. The consumer landscape is growing quickly, and significantly different from the consumer base of the past. These are new types of consumers that require need innovative products, creative business models, and emerging distribution channels.

A. Introduction

This section explores a range of business models available to developers. Business models describe how developers make money through online games as well as the underlying costs required to develop these games. The ability to directly reach consumers, provide frequently updated content, and support multiplayer games allows for creative ways of generating one-time and recurring revenues (e.g., subscriptions). Many developers will continue to rely on traditional publishers and online games sites to provide the necessary development funding and distribution. However, unique fee structures can be tailored to reflect the different ways of monetizing online games consumers, and more favorable distribution terms can be negotiated depending on the experience of the developer. Cost considerations and key success factors, as described below, are also crucial in creating a successful business model.

B. The Developer/Publisher Relationship

When exploring potential business models for online games, developers and publishers may have different goals. While both companies want to create a successful product, success is measured, and more importantly monetized, differently for the developer and publisher. Before beginning any business relationship, both companies should clearly understand how the game will contribute to their success and how they can best work together to build a mutually beneficial business model and relationship. Also, one of the biggest differences in opinion about game development focuses on whether a game is an art form or a business venture. Publishers often focus on game profitability and maximizing their revenue, while many developers create games for creative satisfaction, with profit as a secondary consideration.

As the developer of an online game, it is important that a company cultivate a relationship with a publisher that best suits the strengths of the developer's content. Different types of games are better suited to different types of business models, and therefore different publishing agreements. This relationship between developer, publisher, and content is particularly important when identifying the best fee structure and distribution model for the developer and the game.

C. Fee Structures

There are numerous possible fee structures in developing an online game for a publisher:

- **Flat Fee** – A flat fee is the most common publishing model, particularly for mass-market game content. In this type of relationship, the publisher pays a flat fee for game content, sometimes broken up into milestone payments as development progresses. This model is the best opportunity for a developer when projected usage of the game is low to medium, or when the game's life is deliberately short, as occurs with a sponsored game tied to a specific product launch. An example of this type of limited game is a movie-related flash-based game created for a promotional website.
- **Usage-based Fee** – Publishers may also agree to a usage-based fee. The publisher pays the developer a fee tied to page (or advertising) views, game sessions, users, or other usage metrics. While this fee structure can be very lucrative for high-usage games, it is

riskier than a flat fee structure for developers, and presents challenges in accurate auditing for payments, particularly if a third party generates the usage metrics.

- **Royalty Fees** – This model is similar to usage-based fees, except that publishers compensate developers based on publisher revenues, as opposed to usage metrics. This structure can be very lucrative, but has risks and dependencies on marketing, advertising, and the publisher's ability to monetize the game.
- **Hybrid Fee** – Hybrid fee structures may be a good compromise for some developers. These agreements are based on flat fees for the initial game development with bonuses for reaching specific performance targets. These arrangements are relatively rare, and also pose auditing challenges involved in any usage-based payment structure.

When negotiating a fee structure, both the developer and publisher need accurate, realistic usage projections. Many companies, particularly those new to online games, vastly over- or underestimate the popularity of their product. Developers need to actively research competitors to provide a background for realistic usage estimates; many sites display simultaneous users in each game. Companies should expect that these numbers might be padded or selective. For example, they may be polled only every 15 minutes.

Specific steps for basic demand forecasts are:
- Search for games similar to the one being developed, and preferably provided through the publisher or portal under consideration.
- If possible, track the simultaneous user number during different times of day (morning, afternoon, evening) and on different days of the week.
- Typically, the peak simultaneous user (PSU) count on a given day represents 1-10% of the total monthly unique game players (depending on the type of game). Divide the PSU count by .01 or .1 to have a rough estimate of your predicted range of monthly traffic.

When forecasting demand, developers should also carefully analyze their competition. If a game is too similar to other content currently offered a risk of product cannibalization exists as both games may draw on the same existing pool of potential users, and therefore both games may experience weaker usage.

If usage estimates vary greatly from the competition's usage, the assumptions for the estimate need to be realistically reviewed and challenged. In other words, what expertise does the developer have that would allow it to significantly outperform established companies with significant online expertise? Or, alternatively, why would the developer's projected usage be so much less than a competitive product? If the closest existing competition does not display their PSU numbers, or if it is a game concept that has no comparable titles, developers should, at a minimum, be familiar with the PSU count and Media Metrix information for the major web sites that offer online games, and for the leading online titles in the industry. For example, Microsoft's Zone, Sony's Station, and EA.com provide some current traffic data on their sites.

Intellectual property (IP) ownership is another important topic to discuss in relation to fee structures. Publishers typically expect to own the IP if they pay for the game as a flat fee or work-for-hire model. If a publisher doesn't own the IP outright, they still may expect some amount of control and/or derivative rights if the publisher invests in the online marketing and distribution of the title, as they have significant opportunity costs to recoup.

D. Online Game Distribution Models

Game content and target audiences dictate the best form of distribution for the game. Because of the importance of picking the most potentially profitable distribution model, it is necessary to have an accurate, realistic picture of your audience and game, as well as an understanding of the strengths and weaknesses of potential distribution partners, before entering into an agreement. The success of mass-market content targeted for a large demographic, for example, depends largely on the traffic generated by a major website. However, a game that is designed to appeal to experienced game players may not do as well on a general web site as it would on a site dedicated to online games.

Developers must understand the reality of developing a profitable (or even just viable) online game business. For mass-market consumers, viral ad campaigns may be successful in driving initial traffic but they may not elicit repeat plays or purchases that deeper game experiences attract. A new puzzle game could be successful with players, but sponsors may expect more flashy graphics and be less interested in gameplay. Online game distribution model decisions must take these consumer and sponsor/publisher dynamics into consideration.

There are multiple types of distribution available for online games:

- **Internet Service Provider (ISP) or Portal** – An ISP such as AOL or MSN or a major portal such as Yahoo! generally provides the greatest possible distribution, particularly for mass-market content, by showcasing the game on their service. Deals tend to be more difficult to arrange with ISPs and portals, and also more restrictive. ISPs may specify technologies or clients supported, and may require specific server use or hosting arrangements. ISPs and portals also generally have greater sensitivity to the content supplied through their service or site. However, besides offering the greatest possible exposure, these services can be very valuable in supporting secondary business functions such as online advertising sales and marketing, and can share significant expertise in online technical development.
- **Dedicated Online Game Site** – A dedicated online game site, such as EA.com, Sony Station, Shockwave.com, Play.Net, or Flipside offers some of the advantages of the ISP or portal as well. These sites tend to generate substantial traffic, often as a result of their agreements with portals, ISPs, or other sites. Additionally, dedicated online game sites provide more targeted marketing. These sites often deliberately seek advanced online users who are more likely to be interested in games. A major online game site can often offer consultation or licensing services.
- **Independent Site** – Partnering with a major ISP, portal, or game site is not necessarily a requirement to develop a successful online game. For example, while *Dark Age of Camelot* is distributed by Vivendi Universal, neither Vivendi nor the game's developer, Mythic Entertainment, has partnered with a portal to drive traffic to the game website. Generally, when the purchase of a CD is required in order to play an online game, the importance of an online distribution partner decreases significantly, while a traditional boxed-product publisher becomes a very valuable partner through their ability to secure distribution in traditional retail channels.
- **Other Forms of Distribution** – Depending on the game, other distribution may also be appropriate. If a game is developed for specific promotional opportunities or campaigns, as may happen with a movie-related or otherwise sponsored game, distribution should be driven through the marketing opportunities dictated by the product being promoted. Examples of this type of distribution are the games available on www.harrypotter.com; the games are tied to specific content, and are promoted through interest in that content.

There is often a tradeoff between distribution and fee structure, and a developer should consider whether greater distribution is worth accepting a lower fee. The answer to this question varies by individual circumstance, and depends on the business purpose of the game. For example, small and unproven game developers may consider taking a cut in initial revenue or development fees in order to build credibility and branding in the industry. After a number of successful games, the game developer will be in a better bargaining position for future publishing deals. Established developers and game brands can often command up to a 20% premium on prior or comparable publishing deals.

E. Revenue Models for Online Games

The revenue models for online games appear to be deceptively simple; games are either free, or are structured around a "pay for play" system that charges people, in some way, to play the game. Other types of revenue can also be generated through methods unique to the online environment. However, the method of revenue generation for each of these categories is much more complex than is first apparent.

- **Free Model** – Free games generally rely on some sort of sponsorship or advertising.
  - **Sponsorship** – Some games may be created and sponsored for a specific purpose, generally the promotion of an individual product or brand. These games derive their revenue from the sponsoring company, which pays for the development of the game and recognizes value in the retention and messaging provided by games.
  - **Advertising** – Other games may be supported through general advertising; revenue is generated through sales of banner ads, interstitial advertisements, rotating sponsorships, or other types of online advertising. These games are somewhat risky in that they are very susceptible to the advertising climate in general, and also require a talented advertising sales force in order to maximize revenue opportunities. Advertising sales are an area where an experienced distribution partner can add significant value to the online game business model.

When developing a free game that depends on advertising to generate revenues, developers must be very conscious of building saleable advertising opportunities both in and out of the game. Advertising opportunities in games are quickly moving beyond banner ads; companies favor targeted advertising that presents their product or brand in a memorable, compelling context instead. Developers of advertising-supported content should research, on an ongoing basis, the most common and most profitable trends in online advertising. Additionally, a good game design for advertising-supported content should enable the easy rotation of art, sponsorships, and advertising so as to minimize the cost associated with supporting advertisements. For example, a card game should have art on the back of cards that can be easily rotated in and out in order to accommodate art supplied by a game sponsor.

- **Pay for Play Revenue Model** – Games that require payment for play may use a number of different variations on this model.
  - **Subscriptions** – Subscription pricing is by far the most common variant; players generally pay a monthly fee that entitles them to unlimited usage during that month. The online role-playing games *EverQuest* and *Asheron's Call* are examples of this pricing model. Subscriptions are required to support new game content creation and the underlying game infrastructure, such as large back-end server requirements.

- **Hourly** – Games may also use an hourly pricing plan, in which players pay an hourly fee for usage. This model, though the most common a decade ago, is rare today and has generally been supplanted by monthly subscription fees. This model has largely been abandoned in order to reach a broader market, which may be sensitive to hourly pricing and also in response to competitive pressures.   In some cases, a game's host network determined the pricing of the game by changing from an hourly model to a flat rate for the entire service.
  - **Flat-Fee Pricing** – Another variant of the "pay for play" model is flat-fee pricing, in which players pay one fee for a download and unlimited usage. This model is most similar to the traditional boxed-product sales, and is not generally found in online games because of the high marginal costs of providing online service. Some major online games sites, including Shockwave.com and Real.com, are employing this model as an alternate form of retail game distribution.
  - **Boxed Product Sales** – There are significant revenues associated with successful boxed products that are played online, such as *EverQuest* and *Ultima Online.* Also, the marginal revenue generated by their expansion software is particularly lucrative because of the relatively low incremental development costs.

- **Other Revenue Models** – While subscription or usage fees may make up the bulk of the pay-for-play revenue model, incremental revenue may be generated in numerous other ways as well. For example, subscription content may be combined with additional payment for special services, such as participation in an event or in-game ownership of a specific object. Some games, such as those at www.play.net, employ tiered membership levels that entitle people to different amounts of play or in-game privileges for different prices. Also, hybrid structures exist where the free version of a game is supported by advertising and sponsorship revenues, and also acts as an upsell to a pay-to-download game.

The following chart depicts the cash and revenue relationships between the developer, publisher, consumer, online sites, and advertisers:
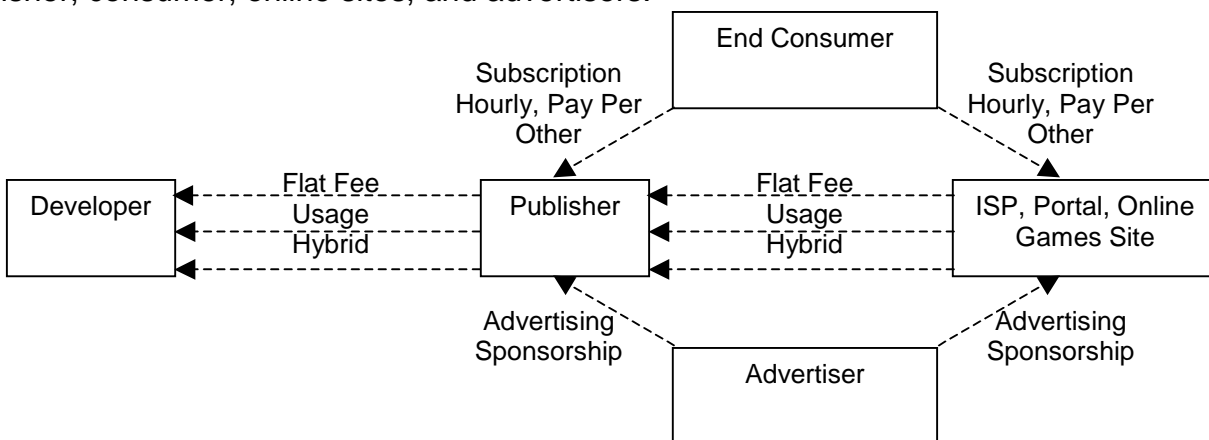
F. Cost Centers for Online Games

An online game requires resources to be spent on traditional game development expenses like software development and marketing. However, online games differ from the traditional game business model in that they have two additional substantial cost centers: hardware and ongoing support.

- **Software Development** – The cost of the software development of a game varies tremendously based on type of game, projected usage, supported platforms, and game lifecycle. For example, the cost of a java version of *Solitaire* would be a fraction of the resources required to develop a massively multiplayer online universe like *Dark Age of Camelot.* The platforms supported are simpler, the functionality of the game itself is far less, and the game lifecycle for a title like *Solitaire* is potentially forever, while a game targeted to appeal to an experienced game player generally requires frequent updates and expansions. The more complex the game, the more likely that there is an ongoing software development cost.
- **Marketing** – Marketing expenses vary depending on both the type of game and the publisher. If a game is available through a major portal or online games service, the portal or service will generally handle the majority of marketing and promotions of your game; however, if a game is self-published or available through a small independent site, marketing expenses may be larger because developers will need to spend more money to raise product awareness.
- **Hardware** – Hardware costs can vary depending on game architecture; projected usage is also a key variable because more hardware is required to support more online users. Developers must be conscious of hardware constraints when designing and architecting a game, as hardware costs may add significant expense to the development and ongoing support of an online game. While potentially a large cost center, hardware also provides a good opportunity for distribution partners to add value through covering costs of associated hardware and networks. Hardware-conscious game design and publishing deals limit the "risk of popularity" (and resulting increased hardware requirements and costs) for the savvy game developer.
- **Bandwidth/Networking Costs** – The costs of networking access, hosting, co-location, and other bandwidth-related activities are significant components for online games, particularly for MMORPGs, which can typically reach two to four times the original hardware costs on a monthly basis. Again, distribution partners may add significant value through covering part or all of this cost.
- **Ongoing Product Support** – The cost center that most frequently surprises online game developers with experience in traditional game publishing is the requirement for ongoing product support. Even experienced online developers often do not pay enough attention to ongoing game support and enhancements; both elements are critical to extend the product life cycle of the game and to retain players. Traditional boxed-product games have limited product support. Online developers, on the other hand, must plan for significant technical and community support. Because technology (including operating systems, browsers, other software, and connection methods) changes so frequently, ongoing technical support requires substantial resources. Additionally, community support is a critical feature that distinguishes online and offline play, and online game players expect greater levels of support than traditional boxed-product players do, particularly for products or game services that are premium products and require subscriptions or other pay-for-play. It is also important for developers to note that community support may also generate incremental revenue in limited cases, depending on pricing. Ongoing product support is typically the largest variable cost in online game development and is well worth close attention.

Although community and technical support is a cost center, these functions also present a tremendous opportunity for developers and publishers to maximize their revenue. Player support is an online developer's most important source of member feedback on the game

experience and technical problems. By fixing player-reported problems quickly, developers not only improve retention for existing titles but also make future titles more successful and less expensive by leveraging the gathered feedback from players and focus group testing for future products.

G. Path to Profitability

In developing a successful online game experience, developers will need to consider the following success factors beyond simply creating a compelling game. While the game content is important, the overall player experience, from initial awareness of the game through the motivation to continue (or abandon) play, will ultimately determine the success of the game.

1. **Build Awareness**: Generate traffic and game usage through appropriately segmented marketing and promotions or locate your game at a highly trafficked site or portal. Understand who your potential player is, and target him/her appropriately.
2. **Encourage Trial**: Out of all the entertainment experiences on the Internet, why should people choose to play this online game?
3. **Drive Purchases/Plays**: Focus on ease of subscription for premium products, ease of download and entry for free products, reduced or eliminated registration barriers, and a quick start for those who wish to play the game. Provide a good experience as quickly and easily as possible.
4. **Develop Community**: While strategies depend on type of content in question and demands of players, all online games can benefit from community, whether this is manifested through elements like leader boards for free, single-player puzzle games or active guilds in massively-multiplayer universes.
5. **Focus on Retention**: Develop affinity programs, make it easy to subscribe but difficult to cancel, update content through use of expansion disks or new and improved features, and use community support to convert new visitors to loyal players.

V. TECHNOLOGY OVERVIEW

A. Introduction

The technology overview section provides a high level overview of some tools available in developing online games. The main emphasis of this section is not technology from an engineering standpoint, but a review of technology from a business standpoint. Sophisticated projects, such as large-scale massively multiplayer client/server games, require large investments. Developers need to be realistic about their financial bandwidth. By understanding the range of technology tools available and the range of investments required, this section provides a framework for understanding what type of game that developers can afford to make.

B. Native Games: In-House Code

Introduction

Most of the boxed games that can be purchased are written for a given platform in native code. This means that these games are written to take full advantage of the machine that they are running on, along with the available resources, and therefore obtain much higher performance because they use C/C++ and even assembly language as opposed to an interpreted script which is what most cross-platform Internet games use. Most developers of boxed games also develop their own production pipelines, tools and 3D exporters in an effort to squeeze out as much performance as possible. Most of these games, while playable over the Internet, have very little else to do with it. But this does not always have to be the case.

There are numerous books, papers and magazine articles on how to implement multiplayer games over the Internet. These papers discuss the pitfalls and problems with peer-to-peer and client/server architectures as well as provide solutions for technical problems such as differing connection speeds, lost packets, lost connections, dead reckoning, etc.

Networking Game Development

In the typical development team at least one member is solely responsible for implementing a games network layer, although sometimes a mini-team of engineers is responsible. These engineers typically use these references in designing their layer. The majority of boxed multiplayer games do implement their own networking, as the information that needs to be communicated is very game-specific – what works well for one game may not work at all for another. Thus, there are no hard and fast rules of what needs to be sent, but typically the less data that is sent, the better performance will be.

Some games use off-the-shelf products, such as DirectPlay, which is part of DirectX on the PC. The downside is that this limits developers to the PC; however, this is not a problem for most games. These libraries take away the work of managing the physical connection, as well as provide server support and lobbies for finding and handling new players as they appear. These libraries do not remove the need for the game engine to be network-aware, and the information to be sent over the network still needs to be obtained from the engine and is still game-specific. Due to the complexity of network game development, a multiplayer native PC game requires engineers with network experience.

With the advent of ActiveX it is possible to make native games that are installed from the web and played in a web browser. An ActiveX control within the Internet Explorer browser has the same performance and level of control over the machine as an executable program that was downloaded and installed separately. It also has access to the same services and thus the exact same games are possible. One problem with this approach is code and data size: typical game executables can be many megabytes in size, and the data they require could be hundreds of megabytes. Current connections cannot provide this amount of data in a reasonable amount of time.

For example, you can imagine the scenario of the *Quake* engine in an ActiveX control. Gamers could simply go to a website and play a new level without having to do anything, as all the updating of components and installing is done by the system. After the initial download, the system keeps in cache the downloaded ActiveX controls and does not download one again until it is updated. For the end user, the experience is as simple as going to a web page. All the difficulties of installing and configuring PC games are removed. If a game developer wants a very high performance web-based game that is written in native code, then this is the recommended approach.

C. Large-Scale Massively Multiplayer Client/Server Games

Introduction

Commercial large-scale massively multiplayer persistent world online games are one area of the Internet that can be profitable. But barriers to entry are significant and include the technology and infrastructure required. A typical game of this type is about three times larger in scope than a major PC game, but about 10 times more difficult to complete. This section provides an overview of these technologies and some of the issues involved.

Technology and Platforms

All the major massively multiplayer games (e.g., *Ultima Online, EverQuest, Asheron's Call*, and *Dark Age of Camelot*) use a C++ Windows Client and a C++ Unix or Windows NT server. Unix-based servers seem to be more popular with most developers in this area. Most of these games also use an Oracle or Access database system. The listed games are all based on custom programming. In addition to the game servers, these services require a login/authorization capability, a billing system, a patching system, and significant web presence (with varying levels of integration with the game). A partial list of systems for this type of game includes:
- Billing system (to bill credit cards)
- Login/Authorization system (to authorize players to the game servers)
- Patching system (to automatically patch clients)
- Underlying client/server packet transport services
- Underlying database system for the game servers
- Actual custom game code for the client and server
- Backup systems
- Firewall/Security systems
- Web servers (possible links to the game data for integrated websites)

Third-Party Engines

Several third-party products have been announced which claim to address some or all of the problems in creating a massively multiplayer game. Developers should consider investigating these products to see if they could address any development problems or issues. The following is an incomplete list of companies with tools and third-party engines:

GameSpy	http://developer.gamespy.net/toolkits/
Nevrax	http://www.nevrax.com/
Ngame	http://www.ngame.com/corporate/technology.html
Quazal	http://www.quazal.com/
Simutronics	http://platform.play.net
Terazona	http://www.terazona.com/tech2.htm
Turbine Games	http://www.turbinegames.com/tech.htm
VR1	http://www.vr1.com/about_us/index.html#conductor

Licensing Costs and Distribution

Licensing costs would be limited to those required by any third-party production included in a custom programmed solution for a massively multiplayer game. The holy grail of this type of game would be electronic distribution of the client in some viral fashion, but to date the most successful games have depended on retail box distribution of the client, followed by charging the consumer for the game on a monthly basis.

Costs to Develop

To date, no first time development group has built a commercially successful massively multiplayer game in less than 3 years. Most teams are at least 30 people in size and can exceed 50 people. *Dark Age of Camelot* was built with a smaller team, but it was a team that had built several online games previously, and was using proven technologies. Massively multiplayer games are extremely expensive to build, starting at the $10 million range, though it is easy to see these costs double. When they are successful, the return on investment comes over several years, not during the initial 3-6 months as with the majority of packaged goods games. For example, it is clear that both *Ultima Online* and *EverQuest* have exceeded $100 million in total revenue, something only a handful of stand-alone games have achieved.

Costs to Maintain

Unlike most game development, developers are building a service business, not just a game. Having the game be entertaining is not enough, it has to be maintainable and built to reduce ongoing service costs. Costs include the Live Development Team and associated QA team. The better the quality of the game, the smaller this team can be, and the more they can concentrate on adding new content. Developers need a networking and enterprise systems staff to run the business systems such as the billing system, patching and login servers, along with all the routing and connectivity work these services require. Also, the service needs community, customer service, and marketing support in its continued operation. Games with over 100,000 subscribers rarely operate with less than 100 people on staff to provide this ongoing service and maintenance.

Summary

Developers planning to enter the massively multiplayer game development arena are strongly advised to obtain experienced staff, particularly the team leadership, in order to avoid the many pitfalls associated with this complex development effort. Development strategies that

are adequate for standalone games can lead to online disasters. Failing to fully appreciate the importance of quality, reliability, and scalability have limited the success of all current massively multiplayer titles. This is still an embryonic medium and market, and the second-generation massively multiplayer products have yet to emerge. Companies that can gather experienced people, learn from the past, and bring mainstream properties to market will be well rewarded. As massively multiplayer products are launched that attract a million individual subscribers, this medium will become even more interesting to major game publishers.

D. Production Differences Between Large-Scale Massively Multiplayer Games and Traditional Retail Games

Introduction
Massively multiplayer games beckon developers seasoned by traditional retail games. One of the few survivors of the dot-com blowout, massively multiplayer games appear to be a safe harbor of steady earnings and with lifespans extending several years. However, this harbor hides perilous reefs. The following summary may help developers turn their retail-game expertise into massively multiplayer prowess without sinking the ship.

Sheer Complexity
Massively multiplayer games will tend to be among the more complex and labor-intensive games that developers could make. Developers should apply any general advice they can get about tackling large productions. The basic core of the game should be playable as soon as possible. Developers should also beware of "analysis paralysis" in which developers obsess over every fine detail in every spec at the cost of getting the core game up and playable soon. As early as possible, the biggest technical risks should be tackled, such as the network code's scalability.

Guaranteed Patching/Updating
Since massively multiplayer games must be played online, developers need to ensure that all players get game patches and updates as soon as they are available. However, this is a curse as much as a blessing. Players will expect problems to be fixed instantly. Developers will be greatly tempted to let flaws slide since "it can be fixed after we ship". Unfortunately, on top of all the problems known by developers, there will be a whole new raft of problems the day gamers start playing a developer's game.

Problems of Poor Legacy Code and Content
Because a good massively multiplayer game will be built over at least a few years, developers must avoid the perils of "legacy" code and content made by engineers and artists who were the only ones who really understood their work… before they left the project. Using strong code practices, documentation, archiving, and asset organization may slow developers down a bit in the short term but can save weeks of lost time later when developers have to build upon, change, or fix old work.

Careful Metering of Players Rate Consumption
Most of the money developers make in the typical massively multiplayer game is through monthly subscriptions. With high rates of technical support and high costs of advertisement, each new player does not bring in a lot of profit immediately; it may even incur a loss. However, a player will often stay subscribed for more than a year, creating profit over time. If

the typical player sees everything there is to see in just a few months of play (which would be fine for a retail game), it is unlikely that the massively multiplayer game will retain subscribers for long enough to make a good profit. Therefore developers must find ways to feed out new experiences to players slowly enough so that most of them do not burn through the content too fast, but quickly enough so that they do not feel under-rewarded for their time. This is an art form all its own: a confection of psychology, anthropology, math, and aesthetics.

High Stakes to Fix Exploits, Bugs, and Imbalances

This section applies to massively multiplayer games with a persistent component, such as online role-playing games that have a persistent character database. This persistence can create severe effects. A bug or loophole could be fixed within a few days, but the effects of the bug or loophole may last forever, as players revel in their ill-gotten gains or resent a persistent stain. A "killer strategy" for rapid advancement, left unchecked, can lead many players to advance through all the game content much more quickly than anticipated, and make them feel that the normal advancement developers impose later is glacially slow. Lastly, developers need to fear bugs that permanently damage the persistent database, forcing developers to go to a backup. To meet these high stakes, it's especially important to freeze the code and content for many weeks before being shipped, and use that time to test the game relentlessly.

VI. WEB-BASED GAME TECHNOLOGY PROVIDERS

A. Introduction

Several companies provide web-based game technology that allows developers to create games for the Internet, including The Groove Alliance, RealArcade, and Shockwave.

B. The Groove Alliance

Introduction

The Groove Alliance provides interactive 3D content for the web, with this content being based on their technology. Initially the Groove Engine was an 'Xtra' plug-in for Shockwave but has been revamped, upgraded and made independent of Macromedia or Shockwave.

The Groove 3D Engine supports interactive 3D content with zero setup on all platforms and browsers, utilizing a high-performance rendering engine in addition to supporting DirectX7 and OpenGL.

Technology and Platforms

The Groove Engine is targeted at the Internet and was written from the ground up for this purpose. The authoring of content is currently performed on the PC but there is a strong possibility that a Macintosh version will be provided. Playback is possible on both PC and Macintosh utilizing Internet Explorer or Netscape.

The performance of the Groove 3D engine is comparable to the performance of a commercial CD-ROM game. The major obstacle for all online content when being compared to CD-ROM is the download bandwidth of the content. Groove addresses this problem with state of the art in house proprietary compression technology which typically gets 50%-100% better than zip on

general data and thus allowing more content to be downloaded in a given time. Additionally Groove provides specific compression for audio, graphics and movies.

The Groove engine is comprised of numerous components and a game only needs to download the components it requires. Thus, if multi-player is not required then it is not downloaded and will not be downloaded until a particular game requires it. These same components are only downloaded when required.

Games and content written for Groove utilize the Groove Platform, which is an abstraction of the underlying OS and hardware allowing Groove content to run seamlessly on any modern computer. The code is written in the GrooveScript language. The language is relatively easy to learn and is somewhat similar to Java or Visual basic. It is a fully functional object orientated language that is compiled to byte code and executed from a virtual machine. The security and integrity of the host machine is ensured by the virtual machine, which ensures that no intentional damage to the host machine can occur. The Groove engine supports downloading and streaming of the majority of common graphic and audio formats in addition to providing its own proprietary solutions that are heavily compressed but maintains high quality.

Once content has been authored it is packed into a single downloadable file and signed. This same file is used on all current and future platforms so when a new platform is supported all existing content automatically works.

Third Parties and Extensions

Being completely component based, the Groove architecture is flexible and new extension components can be added at any time. Currently, Groove provides components for the main engine, software rendering, DirectX rendering, Audio playback and streaming, network/multiplayer support and numerous media codecs.

These components/extensions are typically written in C++ by Groove or authorized Groove component developers. To prevent unauthorized components being loaded, which could potentially do malicious damage, every component is signature checked to ensure it is valid and not been tampered with.

Plug-ins and Downloads

For a new user who does not have any component of Groove installed on their machine it will be automatically downloaded and installed before any Groove file can be played. The size of the download depends on what the particular Groove file requires but typically the download time on a 56K modem will be only 2 or 3 minutes.

Licensing, Costs and Distribution

Groove has content distribution channels on the majority of games content web sites, including RealNetworks and Shockwave. In addition, it has provided games to numerous companies including Nickelodeon, Microsoft and Intel.

Licensing costs of Groove varies depending on particular needs. In addition Groove has in-house developers and a 3rd party developer network that can develop games. The latest information on obtaining or using Groove can be found at www.3DGroove.com.

Types of Games

Groove is typically used to create small and medium high quality 3D games for web sites. Groove games can be found throughout Internet with about 30 million downloads to date. The Groove engine has also been utilized in boxed CD-ROM products showing that given the required content the engine is extremely capable.

C. RealArcade

Introduction

RealArcade creates a relationship between RealNetworks and games players. RealArcade is presented to games players as a downloadable utility called GameGuide that allows them to keep track of the games on their PC, both those downloaded via RealArcade as well as those obtained elsewhere. It also provides a user interface for downloading, installing/uninstalling, maintaining/updating, and launching these games. With ready online access to a continually updated catalogue of over 200 games from RealNetworks, the user can utilize the facility for evaluating and purchasing games. Most games have demonstrations that can be downloaded free of charge, and subsequent to this the user can purchase the game, and unlock or download the full version. Importantly, RealArcade improves the user's download experience by enhancing the download performance, e.g. improved compression of transmitted game components.

RealArcade essentially turns the user's PC into a moneymaking arcade machine that RealNetworks has an interest in helping the user maintain, both in terms of the reliability and quality of the games, as well as in providing online support and help. Moreover, RealNetworks is also keen to source games for delivery via RealArcade and to this extent it is encouraging developers and publishers to utilize this channel. It has arranged favorable terms for developers to use Monolith's LithTech game engine for games delivered via RealArcade.

Technology and Platforms

RealArcade developers are able to access the full range of RealNetworks' technology, including their audio and video streaming technologies. The RealArcade client-side component requires Windows 95/98/ME/2K/XP and Internet Explorer 4 or greater, with a minimum PC spec of 266MHz Pentium or equivalent, 32MB RAM, and 35M free disk space. An Internet connection of at least 56Kbps is also required.

The following facilities are provided free of charge to developers:
- The RealArcade software development kit (SDK) for seamless integration into the consumer service and automatic game patching.
- The RealArcade game packager for creating smaller files, integrating into the download and installation manager and providing contextual information.
- The RealArcade Development System from LithTech, for the rapid development of 3D games with highly compressed audio, textures and geometry and the seamless integration of RealAudio and RealVideo.

Third Parties and Extensions

Monolith's LithTech game engine is supplied free of charge when developers sign up with LithTech for exclusive distribution of games via RealArcade. The LithTech development

system comes with various tools including exporters for Alias-Wavefront Maya and Discreet Max. GameSpy Industries provides various multiplayer facilities for RealArcade games that require them. These include networking, matchmaking, chat, competition, and anti-piracy detection.

Plug-Ins and Downloads

The RealArcade downloadable component is 5MB in size.

Licensing, Costs, and Distribution

The RealArcade SDK and LithTech game engine may be obtained without charge, but subject to respective license and NDA agreements.

Types of Games

Small games designed for a broader more mainstream or casual gamer are most appropriate. However, this does not preclude the use of RealArcade for the more hard-core gaming audience. The following genres obtain the most purchases: card (most), casino, puzzle, action, diversion/arcade, strategy, and adventure (least). The main consideration for revenue generation is obtaining the correct balance between the demo and the full version of the game, i.e. providing enough material in the demo to persuade the gamer to purchase the full version, but not so much that they've obtained sufficient satisfaction that the full version is devalued.

D. Shockwave

Introduction

Macromedia is a leading software company that empowers web professionals to create compelling user experiences through an open, integrated web development platform. Macromedia Rich-Media Products include Macromedia Flash and Macromedia Flash Player, Director and Macromedia Shockwave Player, Freehand, and Authorware.

Macromedia has two products that are targeted towards web-based content delivery. While neither is specifically designed for games, both are very well suited to do so. Shockwave files are created with Macromedia Director. Director has its roots in CD-ROM publishing, and helped lead the multi-media revolution. In late 1995, the first beta version of Shockwave was released, which allowed Director authors to post their content on the web. Director's power can be extended through the use of 3rd party "Xtras." Originally Director/Shockwave only supported 2D graphics, however several Xtras were developed which allowed 3d creation, the most notable one being 3D Groove. In April of 2001, Macromedia released Director 8.5, which gave built-in support for 3D hardware acceleration in Shockwave. Macromedia's other main web product is Flash. Macromedia purchased the product FutureSplash Animator in December of 1996. This was then renamed to Flash, and in the past 5 years has become the de facto standard for animation. Recent Flash improvements have given Flash a much more powerful programming language, and as a result, Flash games will become increasingly available on the web. The other main differentiator between Flash and Shockwave is that Flash is available on a much greater variety of platforms.

Technology and Platforms

Director is the integrated authoring tool used to create content that will be played back with Shockwave the distributable playback engine. Director and Shockwave are available for both

PC and Macintosh and both versions are compatible allowing developers to author content on the platform they are most familiar with without reducing their potential market. This cross-platform development and playback is achieved through the use of Lingo, an interpreted object-orientated programming language that is independent of any system and a preset collection of hundreds of commands/APIs. Anybody familiar with Visual Basic or JavaScript will be able to quickly master it. If developers have any issues there is a huge amount of reference material available via the help files, web tutorials and regular books which span from the basic to the most advanced.

Using existing media within a Director project is trivial. The Lingo API provides support for loading and processing the majority of standard 2D and 3D file formats as well as support for streaming and real-time transforming of AVI, QuickTime and Real Networks audio and video streams. A basic example of this would be having a video texture used within a 3D world.

Finished content is compressed and saved as a single file ready for distribution via the web. This file can be played back on in a web browser on PC and Macintosh with Internet Explorer or Netscape.

Third Parties and Extensions

Shockwave has an open extension system which third parties can use to add new functionality to the system. These extensions are known as "Xtras" and currently are provided by numerous third parties as well as individuals. The services provided by these Xtras range from basic joystick support to multi-player support to full-blown rendering engines.

Xtra's are typically written in C++ and can be complicated to create and certainly complicate the installation. To make matters even worse, using a custom extension within a Shockwave game can make that game dependent on a particular platform because the required extension may not be available on all platforms. This takes away some of the benefits of using Shockwave so it is recommended that only extensions that are provided for all Shockwave platforms are used.

Macromedia and Intel recently joined forces to create Shockwave 3D, or Tron as it was known before release. This product enables 3D games to be created in Shockwave and played back using DirectX, OpenGL or the built-in software renderer. The technology uses a lot of the Intel 3D technologies such as Multi-Resolution meshes, Sub division surfaces and scene management.

Built into Shockwave and Director is the ability to communicate with other users, via the Macromedia Multiuser Server. The server supports up to 2000 simultaneous connections, and runs on PC and Mac. It allows for communication between Shockwave movies, or Projectors (Director projects created as an executable instead of a Shockwave file). This server supports full server side programming, grouping, and a user database. Additionally, the server supports TCP/IP and UDP communication. While it is not solely intended for multi-player games, it can definitely be used for this purpose, and should be adequate for nearly everything but "twitch" games. For individuals running Unix servers, the company Tabuleiro has created a Unix version of the Multiuser server called Nebulae.

One example of an 'Xtra' is the Groove Alliance engine '3D Groove', this is a 3D engine with both software and hardware rendering that is provided for both PC and Mac.

To access an extension from within Shockwave is pretty trivial. Most extensions add new keywords to the script language that can be executed from the script programs along with all other Lingo code that makes the game. In this way the same Lingo code executes on all platforms and the use of extensions is transparent even over different systems.

Plug-ins and Downloads

For a new user who does not have Shockwave on their machine it will be automatically downloaded and installed before any Director file can be played. This is approximately a 3.5MB download and will take around 4 minutes with a 56K modem. If any third party extensions are used, then these will also be downloaded and installed. Fortunately this download rarely occurs and is only repeated when a newer version is required.

Licensing, Costs and Distribution

Director Shockwave Studio is the only product required to create and distribute content, the full version retails for $1199, this includes PC and Macintosh authoring tools as well as other Macromedia web products such as Fireworks. Also included are sound authoring and processing packages, and the previously mentioned Multiuser Server.

There are no royalty or other costs associated with the playback engine and you are free to distribute Shockwave with your product on both the Internet and fixed media. In addition ISPs, OEMs and other enterprises can distribute the playback engines without charge.

Macromedia have their own portal website at www.shockwave.com which primarily distributes Shockwave and Flash games. Getting a popular game onto this website can secure a small revenue stream as royalties from advertising is paid to developers on a hit basis, therefore the more popular the game the higher potential revenue.

Currently there are in excess of 200 million installed playback engines and upwards of 1 million a week of new installations.

Types of Games

Typically games developed with Director are not commercial games of commercial game quality or scope. There are some notable exceptions such as Myst, which was developed in Director and was distributed on CD-ROM. Director games are typically developed by individuals or small teams looking to get a start in the games industry. Also, numerous older 2D games have been remade for distribution via the web.

Most games developed with Director are small and not as complex as commercial games because Director itself encourages broad market and cross platform development, which invariably means the games are running on machines with wildly varying performance characteristics. New versions of the product do support the latest hardware features, however developers are still learning how to take advantage of these features. Over the next year, 3D content distributed via Shockwave will become much more widespread.

VII.   ONLINE PUBLISHERS

A. Introduction

The online publishers section provides a high-level overview of selected traditional publishers and online game sites. In addition to the company background, information is provided regarding announced plans or strategies for online games. The companies include the top 20 game publishers and some top online-only game publishers. The information provided was compiled from publicly available information and includes sources such as company websites, annual reports, SEC filings, online news sites for the games industry, and game industry publications. A review of the publisher's announced investments should highlight for developers the opportunities available for working with the publishers based upon their strategies. Finally, as corporate information is constantly changing, readers are suggested to visit online publishers' websites to obtain the latest information.

B. 3DO

Website Address

http://www.3DO.com

Address

The 3DO Company
100 Cardinal Way
Redwood City, CA 94063
(650) 385-3000

Publisher Overview

Founded: September 1991
Ownership: Public
Employees: Unknown
Subsidiaries: 3DO Europe, Ltd.

Description

3DO is a developer and publisher of branded interactive entertainment software. The company was incorporated in California in September 1991 and commenced operations in October 1991. Founder, chairman, and CEO Trip Hawkins owns about 39% of the company. 3DO acquired Cyclone Studios in November 1995, Archetype Interactive Corporation in May 1996 and certain assets of New World Computing, Inc. in June 1996. 3DO currently has an active subsidiary in the United Kingdom, 3DO Europe, Ltd. Key brands and licenses include *Might and Magic, High Heat Major League Baseball, Army Men and Cubix™.* 3DO's software products are available on a variety of platforms including PCs, the PlayStation game console, the PlayStation 2 computer entertainment system, the Nintendo 64 game system, and the Nintendo Game Boy Color and Game Boy Advance hand-held game systems.

Online Strategy

At this point in time, 3D0 has not made public any strategic plans for pushing its game franchises and key licenses into the Internet, except for multi-player functionality in some titles. Per the company, if Internet-based game play becomes popular, it may opt to develop

products and establish a viable Internet business model to remain competitive. Presently, 3D0 operates its own online store, through which customers can purchase select boxed games via their fulfillment service.

Source
Hoovers.com and 3DO.com

C. AOL Time Warner

Website Address
http://www.aoltimewarner.com

Address
Corporate Headquarters
AOL Time Warner
75 Rockefeller Plaza
New York, NY 10019
Phone: (212) 484-8000

Publisher Overview

Date of Establishment:	2001 (Date of merger between AOL and Time Warner)
Number of Employees:	88,500 (as of December 31, 2000)
Total Sales (as of December 31, 2000):	Net Sales US$36.2 billion

Description
AOL Time Warner Inc. is the world's first fully integrated, Internet-powered media and communications company. The Company was formed in connection with the merger of America Online, Inc. and Time Warner Inc., which was consummated on January 11, 2001. It includes more than 130 million subscriptions, 266 million Web users, 268 million magazine readers, 1.4 billion monthly primetime television viewers and 50 million monthly home video viewers. In total, AOL Time Warner touches consumers more than 2.5 billion times each month.

Online Strategy
Under a five-year agreement with America Online, Inc. (AOL), EA.com, the world's leading interactive services company, is exclusively responsible for content on the AOL Games channel and for all game content on AOL.com, Netscape, ICQ and CompuServe. The relationship between EA.com and AOL provides several services, including the ability to download and play games, find online opponents, obtain game-related information, purchase EA games and be a part of communities based around the games. EA.com provides an assortment of new and current EA games, as well as a number of original online products developed exclusively for the 30 million AOL members and visitors to America Online, Inc. Web-based brands.

Source
AOL Website

D. Activision

Website Address

http://www.activision.com

Address

Activision Inc.
3100 Ocean Park Boulevard
Santa Monica, California 90405

Publisher Overview

Date of Establishment:	Founded in 1979
Number of Employees (Parent Company):	Not Available
Total Sales:	Revenues of $ 620 million for the fiscal year ended 3/31/01

Key Brands

- **Activision O2**: *Kelly Slater's Pro Surfer, Matt Hoffman's Pro BMX, Shaun Palmer's Pro Snowboarder, Tony Hawk's Pro Skater*
- **Cabela's**: *Cabela's Big Game Hunter, Cabela's Grand Slam Hunting: North America, Cabela's Outdoor Trivia Challenge, Cabela's Sportsman's Challenge, Open Season - BGH2 Expansion Pack, Special Permit - BGH1 Expansion Pack*
- **Classics**: *Intellivision Classics*
- **Disney**: *A Bug's Life, Buzz Lightyear of Star Command, Tarzan, Toy Story 2, Toy Story Racer*
- **Marvel**: *Blade,Spider-Man, Spider-Man 2: Enter Electro, Spider-Man 2: The Sinister Six, Spider-Man: Mysterio's Menace, Spider-Man: The Movie Game, X-Men: Mutant Academy, X-Men: Mutant Wars, X-Men: Wolverine's Rage*
- **Quake**: *Quake II, Quake II: Ground Zero, Quake II: The Reckoning, Quake III Arena, Quake III: Team Arena, Quake: Dissolution of Eternity, Quake: Scourge of Armagon*
- **Star Trek**: *Star Trek Armada, Star Trek Away Team, Star Trek Bridge Commander, Star Trek Hidden Evil, Star Trek Invasion, Star Trek: Armada II, Star Trek: ConQuest Online, Star Trek: Voyager - Elite Force*
- **Value**: *Asteroids, Battlezone II, Cabela's Big Game Hunter I, Cabela's Big Game Hunter II, Cabela's Big Game Hunter III, Cabela's Grand Slam Hunting: North America 29, Cabela's Outdoor Trivia Challenge, Dark Reign 2, Heavy Gear II, Quake II, Space Invaders*
- **Wolfenstein**: *Return to Castle Wolfenstein, Wolfenstein 3D*

Description

Activision, Inc. is a leading international publisher of interactive entertainment software products. The company maintains a diverse portfolio of products that span a wide range of categories and target markets and can be used on a variety of game hardware platforms and operating systems. The company has created, licensed and acquired a group of highly recognizable brands that it markets to a growing variety of consumer demographics.

Activision's products cover the action, adventure, action sports, racing, role-playing, simulation and strategy game categories. The company offers its products in versions that operate on the PlayStation 2 computer entertainment system and PlayStation game console from Sony Computer Entertainment, Xbox video game system from Microsoft, Nintendo GameCube, the Nintendo Game Boy Color and Game Boy Advance, as well as on personal computers. At present, the company has 153 different titles in various stages of production, development and planning, 80 of which are in production and development and 73 of which are in various planning stages. Driven partly by the enhanced capabilities of the next-generation of platforms, the company believes that in the next few years there will be significant growth in the market for interactive entertainment software and it plans to leverage its skills and resources to extend its leading position in the industry.

Activision's publishing business involves the development, marketing and sale of products, either directly, by license or through its affiliate label program with third-party publishers. In addition to publishing, it maintains distribution operations in Europe that provide logistical and sales services to third-party publishers of interactive entertainment software, its own publishing operations and manufacturers of interactive entertainment hardware.

Source

http://www.activision.com.

E. Acclaim Entertainment, Inc.

Website Address

www.acclaim.com

Address

One Acclaim Plaza
Glen Cove, NY 11542
(516) 656-5000

Publisher Overview

- Publisher of in-house and third party titles for consoles and PC
- 4 in-house development studios in US and UK
- Motion capture studio
- Publisher of strategy guides
- Direct software distribution in US, UK, Germany, France, Spain and Australia
- Net revenue for year ending 31st August 2000 - $188.6 million

Key Brands

Burnout, Turok, ShadowMan, Fur Fighters, Dave Mirra BMX, Mary Kate and Ashley Olsen

Description

Acclaim Entertainment is a leading worldwide developer and publisher of software for current and next-generation games platforms, including the PlayStation 2 computer entertainment system, Nintendo GameCube, and Microsoft Xbox.

The company has implemented a brand strategy around six key brand categories including:
- Acclaim Sports (*NFL Quarterback Club, All-Star Baseball*)
- Acclaim Max Sports (*Dave Mirra Freestyle BMX, McGrath vs. Pastrana, Jeremy McGrath Supercross*)
- Club Acclaim (*Dualstar Entertainment's Mary Kate and Ashley, Bust-A-Move*)
- Acclaim Racing (*Ferrari, Vanishing Point, ATV: Quad Power Racing*)
- Action (*Turok, Fur Fighters, ShadowMan*)
- Acclaim Ring Sports (*HBO Boxing, Extreme Championship Wrestling*)

Regarding software distribution, Acclaim has a competitive advantage over other software publishers because it directly distributes to more than 50,000 stores in more than 50 countries worldwide. With its excellent reputation as a distributor, Acclaim is frequently rewarded distribution rights to a variety of entertainment software from major publishers worldwide.

Looking ahead to the future, Acclaim will continue to capitalize on its creative and technological resources and the Company's highly regarded marketing and distribution capabilities to become a leading third party developer and publisher of interactive content for next generation systems.

Online Strategy

In addition to supporting dedicated consoles, portables and PC games, Acclaim is looking ahead to the growing popularity of Internet games by establishing its own online division, Acclaim Online. Acclaim Online is committed to creating a new form of games by 1) enhancing the company's core brands, giving them Internet connectivity; 2) building online communities, and; 3) delivering exciting new multiplayer game play over the Internet using Acclaim's exclusive NetSpine technology.

Source

www.acclaim.com

F. ARUSH Entertainment / Web Corp

Website Address

www.arushentertainment.com

Address

ARUSH Entertainment
13951 N. Scottsdale Rd.,
Suite 233
Scottsdale, AZ 85254

Publisher Overview
- Founded in September 1999 by video game industry veteran Jim Perkins
- 5 titles published
- Provides direct-to-consumer, online distribution of video games in episodic fashion

Key Brands

Feedn' Chloe, Hunting Unlimited, Monkey Brains, Primal Prey, RC Daredevil

Description

Based in Scottsdale, Ariz., ARUSH Entertainment is dedicated to digitally delivering high-quality, compelling entertainment to consumers via the Internet. As a division of World Entertainment Broadcasting Corporation (WEB Corp.), the company is a global entertainment software publisher for PCs, game consoles, next-generation interactive entertainment platforms, personal digital assistants and cell phones.

The company's Webisodic distribution model allows consumers to play video games the same way they watch television – in episodes. Players can download the demo for free, try it out and pay a small fee for additional installments. This try-before-you-buy method will provide mainstream gamers the ease of access and delivery that traditional retail video game distribution doesn't provide.

Online Strategy

ARUSH Entertainment has a game delivery system called GameCapsule. The downloadable GameCapsule is like a "digital box" for digitally delivered content. It simplifies the download and install process, as well as manages transaction processing. It also contains game information, episode descriptions and details of other games to download and play, and safeguards the intellectual property of the game developers. The GameCapsule is offered as a private-labeled, turnkey solution to portals and entertainment Web sites that wish to monetize premium content and create a new revenue stream.

Partners

Real Networks, Sunstorm Interactive, Yo Bro, Gigex, The Groove Alliance

Source

www.arushentertainment.com

G. Capcom

Website Address

http://www.capcom.com

Address

N/A

Publisher Overview

Founded: 1979
Ownership: Public
Employees: Unknown
Subsidiaries and divisions: Capcom USA, Inc; Capcom Entertainment; Capcom Digital Studios; Capcom Coin-Op; Capcom's Nickel City; Flagship

Description

With offices in Tokyo and Osaka, Japan; Sunnyvale, California; London, England; and Hong Kong, China,
Capcom Co. Ltd. is a global leader in the interactive entertainment industry. Established in Japan in 1979, its business encompasses consumer video games for the Nintendo, Sony and Sega game machines and coin-operated video games and arcades. Key franchises include *Resident Evil, Street Fighter, Breath of Fire* and the *Mega Man* series of games.

Online Strategy

Capcom has recently announced that it will participate with other companies in distributing content over the Internet via Xsido's soon to be launched ESD service. Xsido has announced that it is building out an e-commerce system and Content Delivery Network to market to ISPs and multiple service operators (MSOs). Thereafter, tentatively slated for the second quarter of 2002, it will launch its content delivery service, and will also be launching products such as connectivity hardware and emulators which will allow users to play Dreamcast software on the PC and set top boxes. Xsido intends to first implement ESD of Dreamcast games for Sega products, and will subsequently enable download sales for Capcom and other game developers and publishers, such as Namco. Because the Softbank group has invested in the startup, it is thought that the new service will first be deployed in Japan via Yahoo Broadband, but both Yahoo and Xsido have refused to comment.

Source

www.capcom.com
www.xsido.co.jp

H. CleverMedia

Website Address

http://www.clevermedia.com

Address

Corporate Headquarters
Denver, Colorado
Phone: (303) 534-0548

Publisher Overview

Date of Establishment: 1995
Number of Employees: 9 (as of December 31, 2001)
Total Sales: Not available

Description

CleverMedia is a multimedia and game development company specializing in making Shockwave and Flash games for websites. More than 100 of their games can be seen at The CleverMedia Shockwave Arcade, Flash Arcade, and GameScene. CleverMedia licenses games to other sites, builds custom games for sites, and consults on Macromedia Director and Flash projects.

I. *Eidos Interactive*

Website Address

www.eidos.com

Publisher Overview

- Founded: 1990
- Ownership: Public (FTSE: EID and Nasdaq: EIDSY)
- Employees: 499 employees worldwide (200 in development) together with access to a further 420 development staff at partly-owned or external studios. Overall Eidos has a development resource of over 620 staff in internal and external studios
- Turnover: Year ended 31 March 2001 £160.4 million (approximately 233,173,489.07 USD)

Key Brands

Soul Reaver and *Tomb Raider*

Description

Eidos moved into the entertainment software market in October 1995 with the acquisition of Domark, as well as obtaining a full listing on the London Stock Exchange. In April 1996, Eidos strengthened its position in the industry with acquisition of CentreGold plc, which included Core Design and US Gold. Eidos develops and publishes a diverse mix of titles for the PC, Sony PlayStation and PlayStation 2, Sega Dreamcast, Nintendo Game Boy Color and the Xbox video game console from Microsoft.

Online Strategy

Eidos has not announced a strategic online games distribution initiative. Instead, it has teamed up with GameSpy to use that company's GameSpy Arcade to handle the online services to support those of its products with an online component. Users can go to www.eidosgames.com, and click on a link to join the Eidos online service. This, in turn, launches a GameSpy arcade download page. After installing GameSpy Arcade, users can then find and play other individuals who have also purchased the same game at retail.

Eidos is also focused on the WAP market, having announced in recent weeks (October, 2001) the launch of "Thief: Constantine's Sword," an original title for WAP-enabled mobile phones.

Source

www.eidos.com

J. Electronic Arts

Website Address

www.ea.com

Address

Corporate Headquarters
209 Redwood Shores Parkway
Redwood City, CA-94065 United States
Phone: (650) 628-1500
Fax: (650) 628-1414

Publisher Overview

- Nasdaq: ERTS
- Date of establishment: 1982
- Number of Employees: 3,400
- Sales (TTM): $1.35 billion

Key Brands

SimCity, The Sims, Command & Conquer, Ultima, Harry Potter, Lord of the Rings (movie rights), NBA Live, FIFA Soccer, Need for Speed

Description

Electronic Arts (EA) is the world's leading independent developer and publisher of interactive entertainment software for personal computers and advanced entertainment systems such as PlayStation2, PlayStation, Xbox, GameCube and the Game Boy Advance. Since its inception, EA has garnered more than 700 awards for outstanding software in the U.S. and Europe. By creating strong franchise properties, and expanding their global distribution, EA increased revenues and profits in a challenging market environment. EA's goals include to be the market leader on the next generation of video game consoles and to be the leading publisher worldwide on the PC platform, which they are in Europe and Asia Pacific. The company has a strong portfolio of titles that includes The Sims, Command & Conquer: Red Alert 2, American McGee's Alice, Black & White, The World Is Not Enough, and a full line up of EA SPORTS products.

Online Strategy

AOL has a significant commitment to online games. In August of 1999, EA founded EA.com, a wholly owned subsidiary with 377 employees. In December 1999, EA.com paid America Online $81 million for the rights to operate AOL's game site. Like a television network, EA.com will offer an array of constantly evolving programs that suit almost every taste from simple, easy to play card games to more immersive sports and adventure games that allow consumers to enter various fantastic interactive worlds.

EA.com provides exclusive programming on its home site that will be available to all Internet users. In addition, under a five-year agreement with America Online, Inc. (AOL), the world's leading interactive services company, EA.com is exclusively responsible for content on the AOL Games channel and for all game content on AOL.com, Netscape, and ICQ. It is also available on CompuServe. The relationship between EA.com and AOL provides several

services, including the ability to download and play games, find online opponents, obtain game-related information and join chat rooms to discuss games.   EA also bought pogo.com, which it incorporated into its EA.com site.

Source

2000 EA Annual Report
EA Website
The Standard Company Index

K. Infogrames

Website Address

http://www.infogrames.com

Address

Head Office (North America)
Infogrames, Inc.
417 Fifth Ave.
New York, NY 10016

Head Office (Europe and International)
Infogrames Entertainment
1 Place Verazzano
69252 Lyon Cedex 09
France

Publisher Overview

Date of Establishment: Founded in 1983
Number of Employees (Parent Company):   Not Available
Total Sales: Revenues of $ 674 million (Euro) for the
fiscal year 2001

Key Brands

- **Franchises:** *Alone in the Dark, Backyard Sports, Big Price, Civilization, Deer Hunter, Driver, Freddi Fish, Independence War, Oddworld, Pajama Sam, Putt Putt, RollerCoaster Tycoon, Test Drive, Unreal Tournament, V-Rally*
- **Licenses:** *Asterix, Digimon, Dragon Ball Z, Le Mans 24 Hours, Looney Tunes, Lucky Luke, Men In Black, Mission: Impossible, NASCAR, Smurfs, Superman, Survivor, Terminator, Tintin, Dungeons & Dragons*

Description

Infogrames Entertainment is one of the world's leading publishers and distributors of video games for all consoles (Microsoft, Nintendo, Sega and Sony), personal computers (PCs), and Macintosh hardware, as well as all available interactive platforms. With its acquisition of the former Hasbro Interactive (now Infogrames Interactive, Inc.), which is managed by its publicly traded U.S. subsidiary Infogrames, Inc. (Nasdaq: IFGM), Infogrames Entertainment has

become the second largest publisher of interactive entertainment software in the U.S. and one of the top five publishers in the world.

Infogrames has an extensive catalog of video games to reach players of all ages, interests and regions of the world. Included in its more than 1,000-title catalog are some of the industry's most popular franchises, including *Alone in the Dark, Civilization, Deer Hunter, Driver, Independence War, RollerCoaster Tycoon, Test Drive, Unreal Tournament, and V-Rally,* among many others. In addition, Infogrames has exclusive rights to some of the world's most popular and recognizable licenses, including Warner. Bros.' *Looney Tunes,* Paramount Pictures' *Mission: Impossible, Monopoly, Survivor, Le Mans 24 Hours, NASCAR, and Major League Baseball*, among others.

Infogrames distributes its games to more than 60 countries worldwide, with a particularly strong presence in Europe and the U.S. In Europe, the Company's distribution network encompasses more than 30,000 retail outlets spanning all territories; in North America, the Company's distribution network reaches more than 22,000 retail outlets, including mass merchants and superstores (e.g. Wal-Mart, Kmart, Toys 'R' Us, etc.), specialty retailers and online outlets.

Source

Corporate website

L. Interplay Entertainment

Website Address

www.interplay.com

Address

Corporate Headquarters
16815 Von Karman Avenue
Irvine, CA 92606
(949) 553-6655

Publisher Overview

- Date of Establishment: 1983
- Number of Employees: 250 (as of 2001)
- Total sales (as of December 31, 2000):   Net sales $104 million

Key Brands

Baldur's Gate, Fallout, Descent, MDK2, Earthworm Jim

Description

Interplay is a developer, publisher and distributor of interactive entertainment software for both core gamers and the mass market. The company currently develops and publishes products compatible with multiple variations of the PC platform including Microsoft Windows, and for video game consoles such as the Sony PlayStation and PlayStation 2. The company also develops and has plans to publish products for the Microsoft Xbox and Nintendo GameCube

video game consoles, which are scheduled for release in 2002. Interplay releases products through Interplay, Shiny Entertainment, Digital Mayhem, Black Isle Studios, 14 Degrees East, its distribution partners and its wholly owned subsidiary Interplay OEM, Inc.

Interplay focus in 2001 was on brand building, brand extension, further reducing overhead structure, prudent spending and focusing on the console market. This focus on console came in face of the fact that the PC business has predominately evolved into a lower margin mass-market business. As Interplay's core audience moves primarily onto the console formats like Sony and Nintendo, they have adjusted their development and distribution efforts to maximize that market.

Online Strategy

Interplay's only venture in the online world is a partnership with Stream Theory to rent full version games directly to consumers. With this move, Interplay has the competitive advantage to expand their product reach and generate a larger share of online software revenue.

Source

2000 Interplay Annual Report
Interplay Website
Hoovers.com
Yahoo! Finance

M. Konami Co., Ltd.

Website Address

Japan Website
www.konami.co.jp

US Website
www.konami.com

Address

Japan Corporate Headquarters
3-1, Toranomon 4-chome, Minato-ku
Tokyo 105-6021, Japan
Phone: (03) 3578-0573
Fax: (03) 3432-5679

US Corporate Headquarters
Konami of America, Inc.
1400 Bridge Parkway, Suite 101
Redwood City, California, 94065-1567 USA
Phone: (888) 212-0573
Fax: (650) 654-5690

Publisher Overview

- Date of establishment: 1969

- Number of Employees: 3,517
- Sales (TTM): $1,38 billion

Key Brands

Frogger, YU-GI-OH! Duel Monsters, Metal Gear Solid, Silent Hill, Dance Dance Revolution, ESPN

Description

Originally named Konami Industry Co., Ltd., the company began manufacturing amusement machines in 1973, and in the following years, successively produced video game machines based on microcomputers, as well as video game software for personal computers, combining hardware and software technologies to create leading-edge amusement scenarios.

Konami's principal businesses are Amusement Machines (production, manufacture, and sale of video game machines for amusement centers), Consumer-Use Software (production, manufacturing and sales of consumer-use software; production and distribution of contents for cellular telephones, operation of online game, purchase and supply of consumer-use software and DVD software), Games Machines (production, manufacturing and sales of games equipment and token-operated games), Pachinko Systems (production, manufacture, and sale of software with liquid crystal displays for pachinko machine manufacturers and production, manufacture, and sale of pachinko slot machines), Creative Products (production and sales of card games, character goods and handheld games, and application of intellectual property), Health Entertainment (Production, manufacturing and sales of health entertainment-related products, entertainment fitness equipment, home fitness games and health network games, and management of sports.

Online Strategy

Konami expects online games to have the potential to become a core element of the home video game industry, and thus began operation at Konami Online.com in April 2001, offering service for PlayStation 2 and the Xbox, with potential for other systems. Their online service offers downloadable game data and music, among other things. Future plans also include several online capable games, including *Age of Empires 2* for the PS2, which is already under way.

In the future, Konami plans to expand their focus to provide broadband access and network services for Japan. Word on English support and services has yet to be announced, but expect more news to come. They intend to keep strengthening their stance as regards online games with the target of establishing a position of leadership in this field.

Source

2000 Konami Annual Report
Konami Website
Famitsu Online

N. Microsoft Corp.

Website Address

http://www.microsoft.com

Address

US Corporate Headquarters
One Microsoft Way
Redmond, WA 98052-6399 USA
Phone: (425) 882-8080
Fax: (425) 706-7329

Publisher Overview

- Date of establishment: 1975
- Number of Employees: 48,958
- Sales (TTM) (as of June 30, 2001): $25.3 billion (entire business)

Key Brands

Age of Empires, Flight Simulator, Asheron's Call, MechWarrior, Links

Description

Over the last five years, Microsoft went from being basically not in the games business at all to being a very serious player in the games market today. In 1999, they had two of the top-five sellers worldwide. *Age of Empires II* was a best-selling game in the US, UK, and Germany at the same time. *Links* is the no.1 golf title in the US. Microsoft also has taken great strides in the console market, with the November 15th 2001 launch of the Xbox, a high-end console designed to penetrate the marketplace and drive them to more success in games through that marketplace. It's also designed to bring them another anchor tenant in the home, besides MSN and WebTV.

Online Strategy

MSN Gaming Zone is an Internet web site where you can play classic, retail, and premium games with other players. It also provides forums where individuals can chat and find other people interested in playing a wide variety of computer games. The site has games such as Asheron's Call, an online role-playing game that sold 12,000 units in the first week from only two software chains.

Xbox is the only video game system designed from the beginning to be a great platform for online games. Xbox ships with a hard disk drive for episodic content delivery, an Ethernet port for diverse broadband connectivity, a high-speed digital interface to the controller and voice slots for real-time communication. Xbox online games will be introduced next summer with five titles out of the gate and more than 20 by the end of 2002. Microsoft has also formed a strategic alliance with NTT Communications to deliver online games service for Xbox in Japan.

Source

Microsoft Website
Xbox Website

O. Midway

Website Address

http://www.midway.com

Address

Corporate Headquarters:
Midway Games
3401 N. California Avenue
Chicago, IL 60618
Business Phone: 773-961-2222

Publisher Overview

- Fiscal 2000 Revenues: $333.8 Million Dollars

Description

Midway Games Inc. is a leading developer, publisher and marketer of interactive entertainment software. Midway videogames are available for play or scheduled for release on all major videogame platforms including the PlayStation 2 computer entertainment system, Xbox video game system from Microsoft, Nintendo, GameCube and Game Boy Advance. Midway has been a leader in the industry since the dawn of the video game revolution, with early breakthrough titles including *Pong, Defender* and *Spy Hunter*. Recent blockbuster titles include *Ready 2 Rumble Boxing, Hydro Thunder, NFL Blitz* and the *Mortal Kombat* series.

Midway has announced that it is exiting the coin-operated games business to focus on advanced technology consoles including PlayStation 2, GameCube and Xbox. Midway now has over 45 next-generation console products scheduled for release between September 2001 and December 2002.

Online Strategy

Midway's online play at this point in time is focused on a content syndication strategy. The goal is to provide browser-based versions of classic Midway titles to major consumer websites for a syndication fee. Midway launched this strategy via a partnership with Shockwave.com wherein the companies initiated development of several browser compatible games, including *Joust, Defender, Spy Hunter* and *Rampage*. Midway indicates that similar syndication deals are being negotiated with other websites, and that the company hopes this will result in significant penetration of Midway titles online.

Source

SEC filings
http://www.midway.com

P. Namco

Website Address

Japan (Japanese and English information):
http://www.namco.co.jp/

US (English):
http://www.namco.com/usa_index.html

Address

Corporate Headquarters:
NAMCO LIMITED
2-1-21 Yaguchi,
Ota-ku, Tokyo 146-8655
Japan

Publisher Overview

- Date of Establishment: June 1, 1955
- Number of Employees (Parent Company):   2,387 (As of June 30, 2000)
- Net Sales by Segment (Consolidated):   Total sales: $1,437 million (As of March 31, 2000)

Description

In 1974 Namco entered the coin-operated videogame market through the acquisition of Atari (Japan) Corp. from the US parent Atari Corporation. Namco America, Inc., which publishes and occasionally develops Namco content in the US, was established in 1978, and *Galaxian*, Namco's first big hit was introduced in 1979. Namco went public in 1988, when it began trading on the second section of the Tokyo Stock Exchange. Business operations include restaurants, coin-op game machines, home videogame software and amusement facility operations.

Online Strategy

Namco Ltd. (Japan) has announced that it will create and distribute entertainment software, centering on games, for the "DoCoMo 503i Series" of cellular phones to be released by NTT DoCoMo Inc. in 2001. Namco has not publicly announced an online game strategy for console or PC products, but various reports indicate it may be delving into this area with six online titles for next generation hardware platforms, three of which are said to be for Xbox.

Source

Namco corporate website

Q. Nintendo

Website Address

US Website
http://www.nintendo.com

Japan Corporate Website
http://www.nintendo.co.jp

Address

Corporate Headquarters
11-1 Hokotate-cho

Kamitoba, Minami-ku, Kyoto 601-8501
Japan

Nintendo of America Corporate Headquarters
4820 150th Avenue NE
Redmond, WA, 98052
USA

Publisher Overview

- Date of Establishment: 1889
- Number of Employees: 1,002 (as of March 31, 2000)
- Net Sales by Segment (Consolidated): Net sales 530.3 billion yen (US$5 billion) as of March 31, 2000

Key Brands

Pokémon, Mario, Donkey Kong, Zelda

Description

Nintendo Co., Ltd., of Kyoto, Japan, is the acknowledged worldwide leader in the creation of interactive entertainment. The company's objective is to make qualitative changes in game play by optimizing the use of new technologies to realize the fusion of hardware and software and provide new and exciting game experiences for players. To date, Nintendo has sold more than one billion video games worldwide, created such industry icons as *Mario* and *Donkey Kong*, and launched franchises like *The Legend of Zelda* and *Pokémon*. Nintendo manufactures and markets hardware and software for its popular home video game systems, including the GameCube (its next-generation console), Nintendo 64 and Game Boy - the world's best-selling video game system. As a wholly owned subsidiary, Nintendo of America Inc., based in Redmond, Washington, serves as headquarters for Nintendo's operations in the Western Hemisphere, where more than 40 percent of American households own a Nintendo game system. Specifically, with respect to Game Boy, the *Pokémon* software series boosted worldwide sales. Game Boy Color hardware sales soared in every market in Fiscal 2000 with support from *Pokémon*. Within 4 minutes of going live, Amazon.com / Toys R Us.com had sold out the first round of pre-orders of the GameCube (on Monday, October 8, 2001).

Online Strategy

Nintendo apparently has handed the development of the online capabilities of Game Boy Advance over to Konami. It has also been uncharacteristically vocal regarding the company's online plans for the GameCube: Nintendo plans to release a 56K modem and a network adapter in early 2002, and *Phantasy Star Online* has been officially confirmed as one of the first online titles. Additionally, Nintendo plans to release a first party title sometime in the Spring of 2002 to support its online network. It is expected that Nintendo will allocate more resources to the online initiative once it finds a profitable way to market the content.

Source

2000 Nintendo Annual Report
Nintendo Website
The Standard Company Index

R. Sega Corporation

Website Address

US Website
http://www.sega.com/

Japan Corporate website
http://www.sega.co.jp

Address

Corporate Headquarters
Sega Enterprises, Ltd.
2-12, Haneda 1-chome, Ohta-ku
Tokyo 144-8531, Japan

Publisher Overview

- Date of Establishment: Founded in 1951 and incorporated in 1960
- Number of Employees (Parent Company): 2,733 (as of March 31, 2001)
- Net Sales by Segment (Consolidated): Total sales: net sales $1,960 million (As of March 2001)

Key Brands

Sonic the Hedgehog, Phantasy Star Online, Chu Chu Rocket, Virtua series

Description

Sega has historically been known for console games platforms and arcade games. Sega is responsible for a string of consoles including the Master System, Game Gear, Genesis/Megadrive, Saturn and Dreamcast. The most successful of these was the Genesis/Megadrive which during the late 1980s and early 1990s was one of the two major games platforms - the other being Nintendo's SNES. Sega is a major player in the arcade games space, but this market has been in decline for the last 10 years, due largely to the power and pervasiveness of home entertainment consoles. In early 2000, Sega's goal was to become a key player in the Internet economy with Dreamcast, the first console to have Internet connectivity. The system did not reach the company's expectations and ceased production in mid-2001. Sega's objective now is to become a world-class software publisher. Sega's biggest brand is *Sonic the Hedgehog* which first appeared on the Megadrive.

Online Strategy

Sega has been focusing on the online business for some time now. Many of the later Dreamcast games had online features. Now that Sega is a multi-platform publisher, it is using its brands, technology and knowledge in the online space. Two key Sega titles are multiplayer - *Chu Chu Rocket* and *Phantasy Star Online* (PSO). PSO is likely to figure largely in Sega's online plans as the company announced its release on GameCube, Xbox, and PC. Sega has arguably had more experience than any other company on delivering online experiences on console platforms. In the arcade space Sega is involved with an initiative to link up arcade centers with high-speed cable networks allowing players at different locations to play against

one another. Finally Sega is involved with content on DoCoMo's iMode platform by leveraging its strong brands such as *Chu Chu Rocket* and *VirtuaFighter*.

Source

2000 Sega Annual Report
Sega Website
The Standard Company Index

S. Shockwave.com

Website Address

www.shockwave.com; Corporate Web site: www.atomshockwave.com

Address

600 Townsend Street, Ste 125W
San Francisco, CA 94103
Developer contact: games@shockwave.com

Publisher Overview

- Employees: 50, offices in San Francisco, New York, Tokyo, London

Key Brands

Key games brands: *Tamale Loco, DJ Fu Wax Attack,* and *Loop*.
Licensed properties: PopCap's *Diamond Mine*, WildTangent's *Dark Orbit*, Midway Classics.

Description

AtomShockwave Corp. was formed in January 2001 by the merger of Shockwave.com and AtomFilms. The company operates two principal sites: www.atomfilms.com, an online distributor of short films, animations
and shows, and www.shockwave.com, an entertainment site that highlights a selection of games and interactive content.

Shockwave.com was previously a standalone company, spun out of Macromedia (Nasdaq: MACR) with hopes of a public offering. Originally as a showcase for entertainment authored with Macromedia tools, Shockwave.com changed focus to games after pursuing costly deals for celebrity cartoons and other Hollywood content. Following the merger with AtomFilms there were significant layoffs, including the internal game development teams.

The company now partners with independent developers, offering the opportunity to reach their significant audience of over 15 million monthly visitors, up to 850,000 daily, who primarily visit the site to play games. Shockwave.com has a database of over 65 million registered members, of whom almost 40 million can be emailed.

Shockwave.com supports all popular online platforms, including Macromedia Shockwave Player, Macromedia Flash Player, Java, and the WildTangent WebDriver. Note that Shockwave.com does not own, nor have any responsibility for Macromedia's Shockwave and Shockwave Flash technology.

Over 70% of AtomShockwave revenues reportedly come from advertising and sponsorship deals. Their focus has expanded to include paid downloads of offline games, played on either a stand-alone basis or using the 'Shockmachine' games playback device. Complementing games are creativity tools: 'PhotoJam', for creating online musical slideshows, and 'Groove Blender', for making music.

In addition to Macromedia, which owns less than 30% of AtomShockwave, other investors include Sequoia Capital and Intel Capital. The company's last round of financing was for $22m in March 2001.

Source

Corporate website

T. Simutronics

Website Address

www.play.net
Corporate site: www.play.net/corporate/

Address

211 Perry Parkway
Suite 4-A
Gaithersburg, MD 20877
301-670-7935

Publisher Overview

- Founded: 1987
- Revenues in 1998: $5 million

Key Brands

GemStone III, DragonRealms, Hercules & Xena: Alliance of Heroes, Modus Operandi, CyberStrike 2, Hero's Journey

Description

Simutronics is one of the most venerable companies in the online games business, founded in 1987 by David Whatley, who remains President and CEO. EVP Neil Harris is responsible for business development.

Simutronics operated successfully for many years in partnerships with online services, especially GEnie and AOL. With the growth of the Internet and the change in AOL's pricing, Simutronics moved to the web in 1997, taking many of their players with them. Traffic partnerships were established with Lycos, ATT Worldnet, and Microsoft's Internet Gaming Zone, the latter of which is still in place.

Simutronics' business is still firmly based on text-based MUDs, primarily its key products *GemStone III* and *DragonRealms*. Subscribers pay a $10 monthly fee to play each game, with

Premium and Platinum subscriptions available for $30 and $40 per month. Premium subscribers enjoy in-game benefits such as a private room, and Platinum subscribers enjoy a private game world. Simutronics has also been very successful in selling 'ticketed' online events run by customer service representatives, such as special weekend quests.

Simutronics produced one of the early graphical online multiplayer games, *CyberStrike*, which was upgraded and released at retail by Sony as *CyberStrike 2*. Subsequently they announced *Hero's Journey,* a graphical massively multi-player game competitive with *EverQuest* etc. *Hero's Journey* is thought to be in back-burner development while the company has focused its resources on upgrading and enhancing current titles, including expanding *GemStone III* with the 'Elven Nations' area.

Simutronics has considerable revenues from its established games, and it is profitable. In an extensive profile in Inc. magazine in 1999, in which Simutronics was featured as one of the 500 fastest growing companies in the country, Simutronics quoted 40,000 subscribers and $5 million sales for 1998, estimating $10 million revenues for 2000.

Simutronics pioneered and refined the use of volunteer staff to support their games, including a well developed Mentor system to foster new players.

Online Strategy

Simutronics provides important technologies and services for those looking to target the online market. These include a sophisticated and proven platform, billing and customer service infrastructure, hosting of the server farm and distribution through their play.net web site.

Source

Simutronics website

U. Sony Online Entertainment

Website Address

US Website
http://www.sonyonline.com/

The Station
http://www.station.sony.com/

Address

Sony Online Entertainment
8928 Terman Court
San Diego, California 92121

Publisher Overview

Date of Establishment: Summer of 1995
Number of Employees (Parent Company):   Not Available
Total Sales: Not Available

Key Brands

EverQuest, Star Wars Galaxies, PlanetSide, JEOPARDY! ONLINE, The Dating Game Online, Wheel of Fortune Online, Infantry, Casual Games, Cosmic Rift Online

Description

Sony Online Entertainment (SOE) is an online entertainment network, which creates, develops and provides online entertainment for the personal computer and online markets. Sony Online Entertainment is a worldwide leader in providing massively multiplayer online entertainment and produces an array of games from simple card and trivia games to more strategic, tactical and role-playing persistent interactive worlds. With more than 10 million registered users, SOE's award-winning website, The Station (www.station.com) is poised as the premier Internet gaming destination.

SOE began operations in Summer of 1995 as the online division of Sony Pictures Digital Entertainment under Sony Corporation of America. In May of 2000, SOE acquired and fully integrated Verant Interactive to further strengthen Sony's position in multiplayer online gaming. SOE provides premier online services allowing game enthusiasts to play games, find online teammates and opponents, attend organized fan events both in game and in real life, join communities, forums, chat rooms and message boards and more.

Based in San Diego, California, with additional development studios in Austin, Texas and St. Louis, Missouri, SOE strives to push the envelope of online entertainment quality, innovation and delivery, thus maintaining a leading position on the cutting-edge of technology.

V. Square

Website Address

www.square.co.jp(Japanese)
www.squaresoft.com
www.playonline.com

Address

Arco Tower, 1-8-1, Shimomeguro, Meguro-ku
Tokyo 153-8688 Japan

Publisher Overview

- Founded: September 1986
- Ownership: Public
- Employees: 1,200 employees worldwide
- Subsidiaries: Solid KK, Square Sounds KK, Square USA, Inc., Square Soft, Inc., Square Electronic Arts L.L.C., Square Europe Ltd.

Key Brands

Final Fantasy

Description

Established in 1986, Square Co., Ltd. is the leading third party developer and publisher of interactive entertainment software for the PlayStation game console, and the PlayStation 2 computer entertainment system, with annual sales of more than $687 million dollars. Based in Japan, Square's success was founded with the 1987 release of the first title in the acclaimed Final Fantasy role-playing game (RPG) series. The entire Final Fantasy series has sold more than 30 million units worldwide to date. Square USA's Honolulu studio created the feature film, *Final Fantasy*, the first computer-generated animation featuring photo-real characters. Columbia Pictures released the film in summer, 2001.

Online Strategy

In early 2000, Square announced its plans for "PlayOnline," a comprehensive network entertainment and game community service that would supply online games, and provide e-distribution and e-commerce services. The site launched in September 2001 with the limited beta test of the upcoming online game, *Final Fantasy XI*. Full support *for Final Fantasy XI* is planned to begin in March of 2002, when FFXI is scheduled for release in Japan for PlayStation 2. E-com services are slated to begin a month later, in April 2002.

Computer users can log onto PlayOnline.com via Internet Explorer or Netscape browsers. PlayStation 2 users will log on via Square's "PlayOnline Viewer," which provides the functionality of a browser. Major services include: general information and site navigation, access to games, digital comics and magazines, game and site support and options for browsing the site. PlayOnline is designed to be a one-stop entertainment and community service, providing game access and content, communication (friend lists, e-mail capability, chat, user profiles) and various forms of other entertainment such as digital comic books and magazines.

Source

www.playonline.com
Square corporate website
"Login" magazine, Nov. 2001, volume 20, number 308

W. Take-Two Interactive

Website Address

www.take2games.com

Address

United States Offices
Take-Two Interactive Software
Inc. 575 Broadway
New York, NY 10012

UK Offices
Take Two UK
Saxon House
4 Victoria Street

Windsor
Berkshire SL4 1EN
England

Publisher Overview

- Net sales in year to 31 October, 2000 - $7,006,290
- Net income in year to 31 October, 2000 - $963,132
- Key subsidiaries: Rockstar Games, Gathering of Developers, TalonSoft, Joytech, DMA Design, PopTop, GlobalStar

Key Brands

Max Payne, Duke Nukem, Grand Theft Auto, Smuggler's Run, Hidden & Dangerous

Description

Take-Two Interactive Software, Inc. is a leading worldwide publisher, developer and distributor of interactive software games. Take-Two's product offerings include titles for the leading hardware platforms, such as PlayStation, PlayStation 2, Dreamcast, Nintendo 64 and Nintendo Color Gameboy, as well as for PCs. Games are published under the Take-Two, Rockstar Games, Gathering of Developers, Talonsoft and Pop-Top labels.

Take-Two has aggressively pursued software opportunities for next-generation console platforms. The Company recently shipped PlayStation 2 titles: *Smuggler's Run, Midnight Club, Oni, 4x4 EVO, Q-Ball: Billiards Master* and *Surfing H30*, and plans to release additional titles for PlayStation 2 by Fall 2001, including titles such as *Duke Nukem, Grand Theft Auto 3,* and *Max Payne*.

Midnight Club: Street Racing and *Smuggler's Run* have remained on the list of top- selling PlayStation 2 games since their launch. Take-Two achieved its highest sell-through ranking as a leading publisher in the company's history, with its products continuing to rank in the PlayStation 2 top ten selling charts. Oni continues to have good success across all platforms, including PlayStation 2, PC and Apple's Macintosh. The company also plans to develop titles for Microsoft's Xbox.

The company's Jack of All Games subsidiary, which is the number one domestic console game distributor, has become one of the industry's leading worldwide distributors with operations in nine countries on three continents and a customer-base including Wal-Mart, Toy's R Us, Target, Kmart, Kay Bee, Electronics Boutique, Blockbuster, Amazon.com, and other national and regional retailers, discount store chains, and specialty retailers.

Online Strategy

No specific strategy/presence at the time of writing, although Grand Theft Auto has been made available as an episodic downloadable game for the Freeloader service.

Source

www.take2games.com

Website Address

http://www.terralycos.com

Address

Corporate Headquarters
Terra Lycos
Calle Nicaragua, 54
Barcelona, Spain
Phone: (34) 91452-3000

US Headquarters
Terra Lycos
400-2 Totten Pond Road
Waltham, MA 02451 U.S.A.
Phone: (781) 370-2700
Fax: (781) 370-3412

Publisher Overview

- Date of Establishment: 2000
- Number of Employees: 3,023 (as of December 31, 2000)
- Total sales (as of December 31, 2000):   net sales $51.1 million pesetas
                                                                      (US$273.9 million)

Key Brands

Gamesville.com

Description

Terra Lycos is a global Internet network operating in 43 countries in 20 languages with 109 million unique monthly visitors worldwide. Created by the combination of Terra Networks, S.A., and Lycos, Inc., in October 2000, Terra Lycos is one of the most popular Internet networks in the U.S., Europe, Asia and Latin America, and is the third largest Internet access provider in the world. Terra Lycos is the most visited Web destination in Latin America with a local presence in 16 countries in the region.

Online Strategy

Gamesville.com offers several free games, some of them with cash prizes. During intermission (commercial breaks) on Gamesville, Terra Lycos works with advertisers to insert games (such as The Gamesville BMG Music Match Game) that offer promotions in a fun, innovative way. These games are designed to present the advertiser's message in a fun and unique way.

Source

TerraLycos Website
2000 TerraLycos Annual Report

Website address

US Website
http://www.thq.com

Address

Corporate Headquarters
THQ Inc.
27001 Agoura Road, Ste 325
Calabasas Hills, CA 91301
(818) 871-5000

Publisher Overview

Number of Employees: 410 (as of December 31, 2000)
Total sales (as of December 31, 2000):   net sales $340 million

Key Brands

World Wrestling Federation (WWF), Rugrats, Power Rangers, Scooby-Doo!, Tetris, Red Faction

Description

THQ Inc. develops and publishes interactive entertainment software for a variety of hardware platforms including PC CD-ROM, wireless devices and those manufactured by Sony, Microsoft and Nintendo across puzzle, kids, wrestling, action, sports and adventure genres. THQ aims to identify and develop titles based upon entertainment projects (such as movies and television programs), sports and entertainment personalities, popular sports and trends or concepts that have high public visibility or recognition or that reflect the trends of popular culture. THQ was the only company in 2000 that delivered a top 10 title on every major console platform. THQ has built close relationships with the world's biggest retailers, including Toys'R'Us, Wal-Mart, Electronics Boutique and Best Buy. Globally, THQ sells its products direct to retailers in approximately 70 percent of the world console market. World Wrestling Federation products have sold millions of copies in the US and have topped the charts in Europe as well. In the last two years, THQ has invested heavily in its own studio system, now with close to 150 staff members creating and producing games at five different studios.

Online Strategy

In 2001, THQ is seeking to leverage its leadership position in handheld game development in the emerging wireless games market via the establishment of THQ Wireless, a new division dedicated to the development of content for mobile devices. THQ has also established a strategic relationship with Siemens, a leading mobile phone manufacturer and wireless infrastructure provider. They are also looking to develop other key partnerships within the wireless industry, marketing products and services to wireless network operators (carriers), mobile portal operators and other handset manufacturers.

Source

2000 THQ Annual Report
THQ Website

Z. Ubi Soft

Website Address

www.ubisoft.com

Address

France
Ubi Soft Entertainment S.A.
28, rue Armand Carrel
93108 Montreuil Cedex

US
Ubi Soft Entertainment Inc.
625 Third Street, 3rd floor
San Francisco, CA 94107

Publisher Overview

- 3rd biggest European Publisher, 10th World Rank
- 2.5% Market Share in the US
- 4 million-selling titles in 2000-2001
- 1800 staff worldwide
- Development team 1300 dedicated staff, including 300 engineers
- Direct distribution in 19 countries, worldwide network
- €260 million turnover in 2000-2001
- €3.6 million net profit in 2000-2001

Key Brands

Rayman, Tom Clancy's *Rainbow Six*, *Rogue Spear*, *Myst* Series, *Batman*, *The Settlers, F1 Racing Championship*

Description

Ubi Soft Entertainment is an international producer and publisher of interactive entertainment software. Ubi Soft develops its own products and also works in co-operation with well-known developers. Created in 1986, Ubi Soft has a presence in 18 countries, including the United States, Canada, Germany and China. The group distributes its own products and those of third-party producers in 52 countries.

Since 1994, the turnover of Ubi Soft increased from €35.36 million to €260 million, witnessing the growth of the activity of the Group and the success of the launch of new games.

In 2000-2001 Ubi Soft acquired major development studios as well as strong and international brands:
- Sinister Games (United States) - *Dukes of Hazzard*™, *Shadow Company*.

- Red Storm Entertainment (USA) - games include the hits Tom Clancy's *Rainbow Six*™ and Tom Clancy's *Rogue Spear*, which have sold a total of more than 5 million copies around the world.
- Blue Byte Software, a major video game company in Germany - behind two of the most popular series in the history of video games in Germany: The *Settlers* Series® and The *Battle Isle* Series™.
- The Entertainment division of The Learning Company, publisher of the *Myst*® series, which has sold more than 10 million units sold worldwide, and other internationally-known games such as *Pool of Radiance*™, *Prince of Persia, Chessmaster*®, and *Harpoon*.

The Group's strategy can be summarized as follows:
- Acquisition of leading brands;
- Internal growth;
- Establishment of a global distribution network; and
- Early positioning on new platforms.

Online Strategy

ubi.com (beta stage) is a forthcoming portal offering downloads, community, news, exclusive promotions, and online connections to multiplayer Ubi Soft games such as *Ghost Recon, Conquest* and *Conflict Zone*, and to buy/pre-order new Ubi Soft titles.

Shadowbane (2002) is a massively multiplayer online role-playing/strategy hybrid, currently in development and to be published by Ubi Soft. The game is being developed by Wolfpack Studios, based in Austin, Texas, and Ubi Soft expects it to attract several hundred thousand players and to generate in excess of 40 million dollars over the first 2 years of operations. According to Ubi Soft, the MMO market is a fast-growing sector in which current games have pulled in $40 to $50 million dollars annually, with 350,000+ subscribers playing an average of 20 hours a week per person.

Source

Ubi Soft corporate website

AA.   *Vivendi Universal Publishing*

Website Address

http://www.vivendiuniversalpublishing.com/english_version/index.html

Address

Corporate Headquarters
Vivendi Universal Publishing
31 rue du Colisée
75383 Paris Cedex 08 - France

Games Corporate Headquarters
Vivendi Universal Interactive Publishing
6080 Center Drive 10th Floor
Los Angeles, CA 90045

Publisher Overview

- Date of Establishment: December 31, 2000 (Date of merger between Vivendi, Canal+ and Seagram)

- Number of Employees: 22,000 (as of December 31, 2000)
- Total Sales (as of December 31, 2000): Net sales €3,60 billion euros (US$3.26 billion)

- Games net sales: €405 million euros (US$ 368 million)

Key Brands

Diablo, StarCraft, WarCraft, Half-Life, Spyro the Dragon, Crash Bandicoot, Lord of the Rings (book rights), Dark Age of Camelot

Description

Vivendi Universal Publishing (VUP) is a subsidiary of Vivendi Universal, the world's second largest communications group. It is currently a global publisher in the games, education, literature, health and information (consumer, B2B, and local transactions) markets. The Games division (No. 2 worldwide in PC and Mac games) is organized around 3 studios: Sierra, Blizzard Entertainment and Universal Interactive. Blizzard Entertainment's *Diablo* series (with *Diablo, Diablo II and Diablo II: Lord of Destruction*) has since its launch in 1997 sold more than 7 million copies throughout the world. *Lord of Destruction*, its latest extension, launched on June 29, 2001, was already hitting the 1 million mark in games sold just one month after its launch, and as a result became the No. 1 best-selling game for PC & Mac in the USA, Europe and Asia. VUP's objectives for 2001 include worldwide leadership and strengthening of key positions in the Education and Games markets.

Online Strategy

Vivendi Universal Publishing is also present in the growing online games market with the Flipside Network, a family of interactive entertainment sites. In March 2001, the company reinforced its leadership with the acquisition of Uproar Inc., a leading American interactive entertainment company, boosting its position to the No. 1 spot in free online games on PC and smart phone. It gives players free access to more than 100 games covering the entire range of interactive online entertainment. Players can earn Flips and redeem them for prizes. With a combined total of 13 million unique users each month, Flipside ranks among the top 10 web sites in the US. Flipside.com was launched in the United States in September 2000, and in France, the U.K. and Germany one month later. VUP sees the Internet as a natural extension of its activities, and has as objectives for 2001 to generate new revenue (through new market (E-Learning) and services), to focus on Internet business models that lead to profitability, and to drive print assets into the electronic era with a "first mover" attitude.

Source

2000 Vivendi Universal Annual Report
Vivendi Universal Website
Vivendi Universal Publishing Website

Website Address

www.wildtangent.com

Address

WildTangent Inc.
Redmond East Business Campus
18578 NE 67th Court, Building 5
Redmond, WA 98052

Company Overview

Founded by DirectX Pioneer, Alex St. John, and Mathematician/Computer Systems Expert, Jeremy Kenyon in July '98, WildTangent offers unique compression technology creating "virtual bandwidth" to view multimedia applications through a web browser over the Internet. The technology significantly reduces development time of 3D applications/games from an average of 2 years and 10-20 person teams to 2-3 persons over 3-4 months maximum. Additionally, content can be distributed episodically allowing for user feedback and positive cash flow in the early stages.

Key Brands

Web Driver platform, *Evilution: The Legend of Helnaar, Dark Orbit, SabreWing 2, Blasterball Wild, Atomic Pop* and others.

Description

Founded in 1998, WildTangent is a privately-held company located in Redmond, Washington and pursues the vision of building a richer, more communicative Internet experience through the use of 3D graphics, sound, animation, and interactivity.

WildTangent has strategic alliances with Sony Pictures Digital Entertainment, Microsoft, AMD, ATI, Hewlett-Packard Company, AOL Music/Winamp, TBS Superstation, FOX, FXnetworks, Gameloft.com, ESRI and others.

Online Strategy

The Web Driver's unique compression technology creates "virtual bandwidth" by allowing interactive multimedia content to be streamed and cached on a user's machine with minimal wait. It integrates seamlessly into the Web environment through Java, JavaScript, Visual Basic, VB Script, C and C++, allowing Web developers to use their existing skills for creating interactive multimedia content for both the Internet and standalone applications. Graphical content can be created using popular authoring tools such as 3D Studio Max, Photoshop and Fireworks.

Source

www.wildtangent.com

CC. Yahoo! Games

Website Address

US Website
http://games.yahoo.com

Address

Corporate Headquarters
701 First Avenue
Sunnyvale, CA 94089 USA
Phone:(408) 731-3300

Publisher Overview

- Date of Establishment: 1994
- Number of Employees: 3,259 (as of December 31, 2000)
- Total sales (as of March 31, 2000): Net sales US$1.1 billion

Key Brands

In addition to offering a constant, worldwide audience of potential competitors for more than 30 free, Java-based classic board, card, and word games, Yahoo! Games also provides computer and console videogame fans with downloadable demos, comprehensive strategy guides, and the latest games news and reviews. Yahoo! Games features an automated system that allows players to instantly determine their ranking as compared to others playing the same game. With scores of thousands of gamers playing at any one time, the rankings make it easy to compete against friends, co-workers, or strangers from around the world. Yahoo! Games is available on a variety of wireless devices including Web-enabled phones, and PDAs. Also, close integration with Yahoo! Messenger (http://messenger.yahoo.com) allows gamers to instantly find friends online, join them in the games action and communicate during play. In 2001 Yahoo! started adding additional premium services in the areas of digital entertainment.

Source

Yahoo! Website
2000 Yahoo! Annual Report

A. Online Games Committee

IGDA Online Games Committee Chairman

- ***Alex Jarett, President, Internet Executives Club***
  Alex Jarett is the Chairman Emeritus of the International Game Developers Association (IGDA) and is the founder and Chairman of the IGDA's Online Games Committee. He is the President and founder of The Technology Executives Club (www.technologyexecutivesclub.com), the Midwest's largest professional education and networking association for technology and ebusiness executives. At this year's GDC, Alex is announcing the formation of Broadband Entertainment Group, Ltd., a business development company specializing in online and digital entertainment. The first project for the group is the development of an online game developer for the mass-market audience. Prior, Alex was Vice President and co-founder of Real Sports, LLC, where he successfully developed relationships with major publishers such as GT Interactive, ABC Sports Interactive/Disney Interactive, Ubi Soft, Hasbro, Infogrames and Microsoft, and major licensors such as IMS and Games Workshop. Alex has 22 years of business development and marketing management experience in the software and new technologies markets. He can be reached at: ajarett@technologyexecutivesclub.com or jarart@msn.com.

IGDA Online Games Committee Vice-Chairman

- ***Jon Estanislao, Manager, Media & Entertainment Strategy, Accenture***
  Jon Estanislao is a strategy manager in the Communications, Media and Entertainment Industry practice of Accenture LLP. Based in Los Angeles, he specializes in the interactive entertainment industry and has assisted clients with online strategies, competitive analysis, market entry, financial analysis, and customer registration. His clients have included leading console manufacturers and software publishers, such as Microsoft, Nintendo, and Sega. Jon has an MBA from the Anderson School at the University of California, Los Angeles (UCLA), a BS in Business Administration from Georgetown University, and a CPA in the State of California. Jon can be contacted at jon.r.estanislao@accenture.com or jre3@georgetown.edu

IGDA Online Games Steering Committee Members

- ***Elonka Dunin, General Manager, Online Community, Simutronics***
  Elonka Dunin is General Manager of Online Community at Simutronics Corporation (www.play.net), where she has been working since 1990. Born in Los Angeles, Elonka studied Astronomy at UCLA, and then joined the United States Air Force.   She is a world-traveler who speaks several languages, and has visited every continent, including Antarctica, which she traveled to in 1999. An amateur cryptographer, she has also won considerable acclaim with the cracking of "uncrackable" codes. Elonka is a longtime member of the IGDA and has been attending the Game Developers Conference for more years than she can remember.

- ***Matthew Ford, Microsoft Program Manager, Asheron's Call***

Matthew Ford started off programming shareware computer games, and sold his card games on the streets of New Orleans. Starting in 1994, he worked as an arcade game designer and producer at Atari Games. He then moved to Accolade to design and produce multiplayer PC game titles. Matthew now works in the Games division at Microsoft, where he is Lead Program Manager for the *Asheron's Call* franchise of PC online role-playing games, overseeing their production, design, and community. He also helps scheme multiplayer strategy and design for both the PC and Xbox.

- ***Jennifer MacLean, Programming Director, America Online Games***
After beginning her career at Microprose, Jen MacLean joined America Online in 1996. During her time there, she has held numerous positions in the AOL Games Channel, including Senior Product Manager and Programming Director. Jen has worked in multiple capacities on many of the most successful online entertainment titles, and currently manages AOL's product marketing strategy for games.

- ***Greg Mills, Senior Analyst, America Online Games***
Greg Mills is responsible for analyzing and assessing current game usage for AOL. In addition, he is responsible for all industry and competitor analysis in the online gaming industry and helps define overall games strategy. Before joining AOL Time Warner, Greg worked at WorldPlay Entertainment as Director of Product Marketing and previously worked at The 3DO Company in a variety of product management and business development positions. Greg earned his MBA from Santa Clara University and a BA in Economics from Pomona College.

- ***Jonathan Small, Chief Executive Officer, Small Rockets***
Jonathan Small is the Managing Director for Small Rockets. Small Rockets is a company focused on producing high quality games content designed specifically for digital distribution. Currently Small Rockets have 17 games designed for digital distribution which are available from the Small Rockets website as well as other high profile sites such as RealNetworks. Prior to this Jonathan ran the 50 strong development group Criterion Studios, a division of Criterion Software. During that time the company developed a string of successful PC and console titles, including *RedLine Racer* (PC/Ubi Soft), *Suzuki Alstare Racing* (Dreamcast/Ubi Soft) and the hit Dreamcast title, *Trickstyle* (Acclaim). Jonathan can be contacted at:

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  Email: corporate@smallrockets.com

- ***John Smedley, Chief Operating Officer, Sony Online Entertainment***
John Smedley's career in games began in 1989 when he worked as a games programmer for ATG. Shortly after developing his first game for the Apple IIe, he founded and formed his own company, Knight Technologies, where he developed games such as *Double Dragon, Dirty Larry Renegade Cop, Qix, Keys to Maramon* and *Kawasaki Carribean Challenge*. Five years later he moved to 989 Studios (later Verant Interactive), where he

served as Director of Development, developing first *Tanarus* and then the MMORPG *EverQuest*. He oversees development, customer service, and operations.

- **John Vechey, Chief Operating Officer, PopCap Games**
  As well as being a co-founder, John Vechey handles the business and marketing for two-year-old company PopCap Games. PopCap creates simple, fun, and addictive web and windows games and is the developer of *Bejeweled, Diamond Mine, Atomica* and *Alchemy*. PopCap Games can be found on such sites as Yahoo, MSN, Pogo, Shockwave, iWon, and Uproar. Before starting PopCap John worked as a producer and engineer for Sierra's WON.net. He can be reached at john@popcap.com or by going to www.popcap.com.

- **Gordon Walton, Vice President, Maxis**
  Gordon Walton has been authoring games and managing game development since 1977. He has personally developed over two-dozen games and managed the development of hundreds of games. Gordon has spoken at every GDC since it began on topics ranging from game design to programming to business. He has had his own development company (twice), been Development Manager for Three-Sixty Pacific and Konami America, VP of Development for GameTek, Sr. VP and General Manager of Kesmai Studios, VP Online Services for Origin Systems, *Ultima Online*, and is current VP and Executive Producer of *The Sims Online* at Maxis.

- **John Welch, Vice President, Games & Product Development, AtomShockwave Corp.**
  John Welch, Vice President of Games and Product Development at AtomShockwave Corp., is responsible for acquiring, developing and promoting interactive games and entertainment for the Shockwave.com brand. John is driven by the purpose of raising online gaming to greater mass-market appeal and commercial success. He has been with Shockwave.com since 1999. Prior to Shockwave.com, John spent time at Sega and with a consulting company that he co-founded. He holds Bachelor's and Masters degrees in Computer Science, the former from MIT and the latter from the University of Massachusetts.

- **Ted Woolsey, Director, Business Development, Games Group, Real Networks**
  Ted Woolsey entered the games industry when he joined Squaresoft, Inc. in 1991, as the main translator and US Producer of their SNES and Gameboy titles. As translator and Director of Marketing, he worked on and helped launch 9 titles through 1996, including *Final Fantasy Mystic Quest, Final Fantasy III, Chrono Trigger, Mario RPG* and *Secret of Mana*. Subsequently, he was one of the founders of Big Rain, Inc. (1996), a Seattle videogame startup, which became part of Crave Entertainment in 1997 (shipped *Shadow Madness*, an RPG for the PSX). He worked as VP Internal Development for Crave Entertainment's Seattle development studio through 1999, which at its peak housed 60+ developers and artists. Presently, Ted has been working for the last two years as Director of Business Development at RealNetworks, Inc. in the new Games Group, focusing on Internet distribution of game content through the company's game client, RealArcade.

B. Contributors

- **Daniel James, Designer, CEO, Three Rings Design**

Daniel is the founder and CEO of Three Rings, a San Francisco developer of subscription online games. Prior to Three Rings Daniel was designer on Sierra's *Middle-earth,* cofounder of Sense Internet, a UK web house, and cofounder of *Avalon*, a pioneering commercial MUD. He can be reached at d@djames.org.

- **Brian Robbins, Senior Software Engineer, CleverMedia**
  Brian Robbins is the Senior Software Engineer, and Director of Client Relations for CleverMedia, a leading Shockwave and Flash game developer. He has programmed over 30 titles for the company's four web-based game sites, in addition to marketing and promotional games for corporate clients. He has spoken at numerous industry conferences, including GDC, WebDevCon, and Macromedia's UCON. Brian can be contacted at brian@clevermedia.com.

- **Randy Shepherd, President, Werd Interactive**
  Randy Shepherd is currently Founder/President of Werd Interactive Inc. Randy oversees and helps out with the development of projects at the company. Currently, he is working on projects for cell phones, handhelds, and PDA's. Randy is also a videogame evangelist talking with people about videogames in general. Randy also started and co-coordinates the local IGDA Chapter in his town. Previously, Randy worked as a contractor during the Dot Com heyday. Randy also was the Internet/Multimedia Coordinator for the Office of Public Affairs at NASA Marshall Space Flight Center. Randy Shepherd can be reached at randys@werdinteractive.com or http://www.werdinteractive.com.

- **Jeferson Valadares, Jynx Playware**
  Jeferson Valadares is one of the founders of Jynx Playware, a 13-person game development company in Brazil. He is Lead Game Designer and Lead AI Programmer for *FutSim*, a massive online soccer management game due later this year. Jeff does research in Artificial Intelligence for Computer Games, and has earned a B.S. in Computer Science from the Universidade Federal de Pernabuco, Brazil. He is also finishing his M.Sc. in Computer Science in March 2002. Amazingly, he still has time for his favorite non-game related activity, reading. Jeferson can be contacted at:

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- **Rob Wyatt, Technical Director, The Groove Alliance**
  Rob Wyatt is a leading game developer and has been involved in games since 1985, working on nearly 40 games on nearly every platform. Currently he is the technical director at the Groove Alliance where he is responsible for their online game technology and rendering engine. Prior to Groove he was at Microsoft where he worked on DirectX and was one of the architects and founding team members of Xbox. When Rob is not working he can be found working on his house in Los Angeles, walking his dog, or flying his plane.

IX. FEEDBACK

Do you have feedback on this white paper that you would like to share? Would you like to get involved in the online games committee for 2002 and help contribute to next year's version?

Send an email with "Online Games White Paper" in the subject to the following individuals:

- Alex Jarett, President, Broadband Entertainment Group, at ajarett@technologyexecutivesclub.com or jarart@msn.com
- Jon Estanislao, Manager, Media & Entertainment Strategy, Accenture, at jon.r.estanislao@accenture.com or jre3@georgetown.edu

Thank you!