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Digital Chocolate

Trip Hawkins, founder and CEO of Digital Chocolate, checked the battery status of his Apple i-Phone as he boarded his plane in Helsinki, Finland. It was July of 2009, and Hawkins was heading back to his company headquarters in San Mateo, California after several days of meetings with game developers at Digital Chocolate's studio in Helsinki. As Hawkins settled into his seat, he scanned through the game icons on his mobile smartphone, excited to spend the next few hours playing several original game prototypes that were scheduled to launch in the fall. Hawkins was particularly intrigued by the new Digital Chocolate games that combined social interaction with the type of game that had traditionally been played solo. This was the kind of social gaming that Hawkins envisioned during his early game development days in the 1970s, and he was thrilled that the newest mobile technology enabled his vision to become a reality. However, Hawkins knew just how hard it was to develop games that resonated with millions of consumers around the world, and it was always difficult to predict which games would become break-out successes.

Hawkins had founded Digital Chocolate in 2003 to "develop outstanding games for mobile devices." Two decades earlier, Hawkins had founded Electronic Arts, which he grew into one of the largest video game publishers in the world. Hawkins' years as CEO of Electronic Arts helped him appreciate the challenges associated with coming up with creative content and making that content available on different platforms. As the CEO of Digital Chocolate, Hawkins put a great deal of thought into how to organize his latest company to foster creativity and innovation, while also maximizing revenue and profits. These collective goals had led Hawkins down a path that involved building a company based in four locations: San Mateo, California; Helsinki, Finland; Bangalore, India; and Barcelona, Spain.

Hawkins valued the unique strengths that were resident in each of these offices, but he also knew that coordination and teamwork among the offices were critical components of the company's success. The pace of change in the mobile device industry, particularly after the introduction of Apple's iPhone, highlighted just how important it was to adapt quickly to market changes. Hawkins worked closely with Digital Chocolate's chief operating officer, Jason Loia, and the president of studios, Ilkka Paananen, to focus on the growing demand for applications on this new platform. Digital Chocolate opted to take a few months to redirect resources towards iPhone games, and once it did, Digital Chocolate had come out with a couple of winners.

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Hawkins was pleased with his company's ability to shift gears in 2008 for the iPhone, and now in 2009 he wondered how he should redirect his team to focus on social gaming. He wondered if Digital Chocolate should do an acquisition in this sector, or if he should have one or more of his studios in Finland, Spain or California ramp up their social gaming development efforts. Hawkins was sensitive to disrupting the creative workflow that had proved successful over the last few years, but he also didn't want to miss out on one of the most exciting new trends in mobile gaming. His intuition told him that the potential for social interaction in mobile games was huge; the question was how to organize his teams to leverage this potential. As Hawkins started a new game on his iPhone, he wondered how to guide his company into this new area without losing any of the tremendous creative momentum the team had built over the previous years.

Company Background

Trip Hawkins started developing board games as a teenager, and he translated his love of games into a custom-designed major at Harvard University called Strategy and Applied Game Theory. Hawkins went on to business school at Stanford and then joined Apple Computer in 1978 as one of the first members of the marketing staff. While at Apple, Hawkins grew increasingly excited about using personal computers as a platform for games, and he left Apple in 1982 to found Electronic Arts (EA). (See **Exhibit 1** for management bios.) Hawkins served as CEO of EA until 1991, during which time the company published over 600 unique titles resulting in tens of millions of game units sold for personal computers and game consoles. EA reached nearly $200 million in revenues by the time Hawkins left to start 3DO, a company that designed devices with video and audio features in addition to gaming functionality. Although 3DO devices offered more than nearly all video game consoles, its $599 price tag was considered expensive for consumers. Hawkins eventually shut down 3DO, but he remained focused on the gaming industry. In the early 2000s Hawkins was intrigued by analyst predictions that over two billion people in the world would be carrying mobile phones within five years. He believed this would create a big opportunity for entertainment applications, and in 2003, Hawkins founded Digital Chocolate to focus on this market. As Hawkins described, "I chose the name Digital Chocolate because I want our customers to think of our games as a delicious snack that offers instant gratification."

Hawkins wrote a business plan and quickly secured funding from top Silicon Valley venture capital firms. By 2006, Digital Chocolate had raised a total of $43.8 million over three rounds of funding, with Sutter Hill Ventures as the lead investor. The company first became profitable in 2006.

Hawkins made some key decisions when he started the company. From the beginning, he decided to focus on developing original game titles rather than licensing names and ideas from entertainment or sports. He believed that game publishers could get squeezed if they didn't own the intellectual property ("IP") behind the game, so nearly all of Digital Chocolate's games were based on original ideas developed in-house. Along those lines, Hawkins was committed to having "lots and lots of creativity on the management team." He added, "Companies with strong, original IP need leaders who can manage the suits and the ponytails. You can't just put 1,000 people in a room and say 'Go create the next hit song.' Fortunately I learned about creativity from my own experiences as a creative person, beginning in childhood. I learned things at Apple and EA but my success in both cases had to do with what I already knew about creative people from my own experiences." At the same time, Hawkins was committed to being a "technology company" that had a strong engineering team to ensure the company's products would work on every kind of mobile device.

Hawkins wanted to establish core values that would permeate the company; they were: Energy, Innovation, Excellence, Integrity and Ownership (referred to internally as E-I-E-I-O from the Old McDonald song). Hawkins elaborated:

> Cultural fit is extremely important to us, and we try to only hire people that share our values. I have learned over the years that it is better to weed out people that don't fit well with the team, rather than keep them on board, even if they have valuable skills. For example, we have an extremely simple performance review. We only ask a manager to answer three questions about their subordinates: First, what is the most important thing that this person contributed in the last year? Second, what is the most important strength that this employee has, and third, how well do they conform to the E-I-E-I-O values. That's it.

Organizational Overview

Hawkins established Digital Chocolate in San Mateo, California because he believed, "It was easy to reach from both San Francisco and Silicon Valley, and it was also near the venture capital firms that liked to invest in companies with headquarters in the area." However, Hawkins knew that the company would ultimately operate out of multiple locations because the cost of building the entire team in the Bay Area would be prohibitive. In addition, Hawkins believed that companies in Silicon Valley "always had to battle for top talent," and they faced higher levels of turnover. Hawkins also believed that an international workforce would help Digital Chocolate create games that appealed to a global customer base.

Global Operations

During the first half of 2004, Hawkins met with gaming developers around the world in order to seek out potential acquisitions to jump start the company. In June 2004 Digital Chocolate announced a deal to acquire Sumea, a three-year old Finnish company that developed mobile games. Hawkins was drawn to Sumea's high quality game titles as well as its existing relationships with leading European cellular phone carriers who had the power to decide which games would come pre-loaded on wireless phones. Hawkins also believed that Sumea's CEO, Illka Paananen, age 26, would serve as an outstanding head of Digital Chocolate's creative studios because he demonstrated the ability to manage creative talent. Communication between the two locations was aided by the Sumea company policy that all employees had to speak English fluently. At the time of the acquisition, Hawkins commented, "Acquiring Sumea provides Digital Chocolate with strong, established partnerships with major global carriers, broad geographic distribution and an entire catalog of top-rated games."[1] According to Paananen, "We were very excited about working with Digital Chocolate and industry veterans like Trip Hawkins toward a common, immediate goal of developing and publishing high quality games that change the way people think about and use their mobile phones. This merger also increased access to new financial and development resources."

Following the acquisition, Paananen assumed the title of president of studios, and the Sumea group became the core set of game developers in the organization. The team was responsible for the design and development of games, and the Finnish group collaborated frequently with colleagues in the U.S. through phone and email. Although everyone at the Helsinki office spoke English, Hawkins explained, "The staff was born in 32 different countries, giving us a multicultural and global viewpoint about products and markets. Finland attracts people from other lands who tend to speak English."

By 2006, the Finland team had grown from 25 to 150 employees. Most employees were in their twenties and the office had a global orientation. Hawkins was pleased with the games that were being produced, but he found that the company cost structure remained too high. In particular, the

[1] Digital Chocolate Press Release, June 24, 2004, http://www.digitalchocolate.com/news/press-releases/2004-06-24-dchoc-acquires-sumea.html, accessed July 24, 2009.

company was finding it very expensive to modify each of the completed games to work on every type of mobile phone in the market. Screens, colors, sounds, languages and keypads varied from phone to phone, and the wireless carriers such as Verizon and AT&T wanted games that worked with all of the devices they offered. In addition, Hawkins believed that Digital Chocolate needed to sell more games in order to get the attention of carriers and to enjoy more economies of scale. Hawkins promoted his vice president of operations at the time, Jason Loia (based in San Mateo), to chief operating officer, and together they began looking at ways to increase sales, expand operations and drive down costs.

Hawkins and Loia looked for acquisition candidates around the world, hoping to find a company, potentially in Asia, Russia or Eastern Europe, that would help the company reduce its costs and enhance its engineering capabilities. According to Hawkins, "The vision was to shift U.S. work to Finland, and shift some of the Finland work to a country with a lower wage structure. We planned to develop tools and training that would give us more leverage in our business." After an exhaustive search, Digital Chocolate identified a 25-person company in Bangalore, India called Small Device, led by Dikshant Dave. Hawkins found the India location appealing because the country had more English speaking college graduates with computer and electrical engineering degrees than any other country in the world. Hawkins also found that the founders of Small Device and other developers he met in India had a "mature understanding of capitalism and were culturally experienced and comfortable collaborating with the West." In fact, Hawkins had read articles that suggested that Indians and Finns would work well together, giving him comfort that the integration would go smoothly. Hawkins and Loia also looked at companies in other countries such as China, Hong Kong, Vietnam, Philippines, but in each of these situations they had a difficult time finding a team and location that looked promising. The Small Device acquisition was completed in early 2007, and the India team became the operations center for Digital Chocolate. The developers in Bangalore took over the primary responsibility of adapting games to work on all devices, and the India team reported into Loia.

Around the same time, Digital Chocolate also acquired a small creative development team in Barcelona, Spain run by Gerard Fernandez. Hawkins found Fernandez's 20-person team interesting because of the development talent, low costs and Spanish-speaking developers that could help Digital Chocolate penetrate Latin America, South America and Spain. In addition, the Barcelona company, Microjocs, had a distribution agreement in place with Telefonica, the leading telecommunications operator in Spanish and Portuguese-speaking countries. The acquisition also gave Digital Chocolate a presence in Southern Europe. Hawkins was eager to leverage the relationships that Microjocs and Small Device had in their respective regions to increase the reach of Digital Chocolate games. Paananen described the group in Spain as "energetic, young, creative and passionate."

By 2009, Digital Chocolate had 370 employees: approximately 150 were part of the creative/studio team reporting into Paananen (115 in Helsinki, 25 in Barcelona and 10 in San Mateo); 200 were involved with operations reporting into Loia (140 in Bangalore, 30 in Helsinki and 30 in San Mateo). (See **Exhibit 2a** for a Digital Chocolate executive organizational chart and **Exhibit 2b** for Paananen's creative team.) Loia also managed a 10-person sales team split between Europe (six), United States (three) and one in Asia. There were a handful of other employees in marketing, finance and information technology who worked with the other executives in San Mateo. Digital Chocolate also formed a team of engineers and testers close to the border in Mexico who could port to devices that required U.S. cell network connectivity. The Mexico team performed at significantly lower wages than employees in the U.S. and was able to free up engineers in San Mateo to focus on new platforms and initiatives.

Management Team and Communications

In addition to Hawkins, Loia and Paananen, the executive group included Paul Abbassi, chief technology officer; Mark Richman, chief financial officer; and Mark Metis, vice president of marketing. Abbassi joined the company in April 2007, and Richman and Metis joined in 2008; all three were based out of San Mateo. The company did not have a business development person, so Hawkins and Loia filled in as needed. According to Hawkins, "We are careful with our overhead spending, and we do whatever needs to be done. We can be fluid with our roles when necessary." Although the majority of the executive team was based in San Mateo, Hawkins communicated frequently with Digital Chocolate employees throughout the world. Hawkins travelled to Finland approximately two times each year and Paananen visited the United States about once each quarter. Hawkins also visited Spain and India approximately once each year. He described his communication patterns:

> I probably write and receive at least 100 emails each day with employees at all levels of the company. We also all use texting, phone calls and instant messenger to stay in touch. I use an email distribution list called "DC-Mon" that stemmed from Digital Chocolate's Monday morning staff meetings. This is the primary way I communicate with our senior team of about 40 people. I used to call the list "T-Staff" for "Trip's Staff" but people felt as if it was a status symbol to be on that list, so I changed the name to make it less political. I also use that group to solicit input on decisions. It's important that everyone feels part of the team, and I want every employee to feel that his or her ideas are valued.

Hawkins recalled a time early in the company's history when there was more turnover at the senior level. He elaborated:

> There was a time in 2005 when I was frustrated and disappointed with my ability to hire and retain executives in San Mateo. About 50% of the senior managers were not working out, primarily due to personality issues. In a company like ours, everyone has to play on the same team in order to win. If we have too many solo flyers, the company will not succeed. Perhaps earlier in my career I would have tried to make it work, but I have learned over the years that it is better to cut the ties if there is an issue with cultural fit. I have also learned that I would rather bet on people who have talent, passion and aptitude, rather than focusing on past roles. Today, our turnover is really low throughout all of our offices.

Hawkins hosted staff meetings every three weeks, and all department heads used the following template to present updates: (1) What's going well; (2) What's not going well; (3) Opportunities; (4) Threats; and (5) Asks. Loia believed these meetings provided a great opportunity for the groups to stay informed. Paananen called in from Finland for the meetings, and all of the other participants were based in San Mateo. Paananen noted that the time difference was one of the biggest challenges he faced. He explained, "Sometimes I spend late nights on the phone – when it is 9am in California, it is 7pm in Finland."

Hawkins explained decision-making among his executive team:

> We rarely make key decisions unless all of the executives are in agreement. I believe if I can't get people on board, then it's probably not a good decision. This is particularly important in a distributed organization such as ours where execution is happening in different locations around the world. There are times, however, where Jason and I don't always see eye-to-eye on management practices. Jason has a background with the Coast Guard, so he's more bought into the literal roles about chain of command. Personally, I try to respect the chain of command, but I think you're better off if everybody could talk to everybody because

everybody learns a lot more that way. It's empowering for the lower level people to have contact with higher level people that are not their boss. It frees up information flow.

Loia expanded, "I am a stickler about tasks or projects being commissioned outside of the direct manager's knowledge, as there is the potential for that to create a hidden drain on resources and a clouded view of corporate priorities."

Business Overview

The global gaming industry was estimated at $34 billion for 2009, geographically split almost evenly across Asia, Europe and the United States. Digital Chocolate estimated that gamers were 60% male and 40% female, split among the following age groups: <18 years (25%); 19-49 years (50%); and >50 years (25%). Digital Chocolate perceived a shift in game users from "hard core gamers" who were focused on immersive games on consoles to "omni gamers" who sought out convenient, social experiences across a variety of platforms. Within the broad gaming industry, the mobile gaming sector generated approximately $5.4 billion in revenues worldwide in 2008, and it was predicted to reach $10 billion by 2013.[2] Large players in the mobile gaming sector included: Digital Chocolate, Electronic Arts, Gameloft, Namco, Glu Mobile, and Oberon Media. Digital Chocolate estimated that the ten largest mobile game companies generated at least 70% of the gaming revenue worldwide in 2008.

Game Distribution through Carriers

From 2003 to 2008, the primary sales channel for game content providers was through the big wireless carriers such as Verizon/Alltel, Sprint/Nextel, ATT, Vodafone and TMobile. Content providers such as Digital Chocolate (also referred to as game publishers or game developers) presented new games to wireless carriers a few months before they were completed, and the carriers decided which games they were willing to sell through their phones. Carriers had control over how games were categorized and marketed on their phones, and these decisions played critical roles in the success of each game. Loia explained, "Games that were placed on the first 'page' of game listings were often 1,000 times more likely to be downloaded than games on later pages. Brand recognition often played a key role in the order games were listed." Another factor that influenced placement was the user experience across the many different devices, so content providers had to make their games usable on as many devices as possible. In order to achieve this operability level, content providers worked with handset manufacturers such as Samsung, LG, Motorola, Nokia, Sony, and Ericsson to gather all the specifications of each device that would be coming out in the next several months. In 2009, there were thousands of game-capable devices on the market and Digital Chocolate supported 1,500 of the most popular devices. (See **Exhibit 3** for mock-ups of Digital Chocolate games on various devices.)

Digital Chocolate competed in this channel by developing relationships with all of the major carriers as well as many of the smaller ones; by late 2008, the company had agreements in place with 200 carriers. Digital Chocolate struggled for placement because its own IP was less recognizable than games that used licensed brand names (e.g., Tetris). Digital Chocolate worked to influence carriers by making high quality, award-winning games that worked on all devices, and by building brand recognition through the Internet. Digital Chocolate was compensated for its games by carriers based

[2] Juniper Research, "Press Release: Mobile Games Market to Reach $10bn by 2013, but Growth to be Severely Restricted by Operator Business Models," November 18, 2008. http://www.juniperresearch.com/shop/viewpressrelease.php?id=161&pr=116, accessed July 28, 2009.

on the number of downloads and the negotiated revenue share agreement. Carriers dictated game pricing on this channel, and most games cost $4.99. On average, Digital Chocolate and the carriers split game revenues 50%/50%, and Digital Chocolate received a check from the carrier 30 to 90 days after the games were downloaded. Loia explained:

> One of the challenges with selling our games through carriers is that we don't get any real-time feedback about how our games our doing in the market in terms of downloads. With the exception of a handful of our 200 carrier partners who publish real-time download metrics, it is difficult for us to gauge the success of a title until after the check from the carrier is received, sometimes months later. It was even more difficult getting consumer feedback on our titles since there was no mechanism for that, and we relied mostly on professional game reviews.

Game Distribution through Consumer Marketplaces

In mid-2008, a new distribution channel for mobile games emerged with the introduction of Apple's Application Store (App Store) for its iPhone and iTouch devices. The App Store enabled consumers to search, purchase and download games directly and instantly to their devices. Consumers with Apple iTunes accounts could use the same account to purchase games, enabling impulse purchases. When the iPhone was released, Apple already had tens of millions of iTunes accounts with active credit cards on file. Approximately half of Digital Chocolate's iPhone game users were based in the U.S. Game developers had the flexibility to upload new games, select prices, and adjust the games and prices as they wanted on the App Store. In addition, they could offer free trial versions of their games and cross-sell their games in the App Store. Game prices varied from $0.99 to $9.99, and Digital Chocolate calculated that the average price of the top 25 paid applications was $1.95. Game publishers received 70% of the revenues generated through the App Store with Apple.[3] Many games were free, and the more downloads recorded, the higher the game ranked on the App Store top 100 list. With 65,000 games available in mid-2009, consumers relied on user reviews and the top-downloads list as valuable sources of information about which games to download.[4] An analysis of the top-100 paid games through the U.S. App Store indicated that $0.99 was the most popular price point with 36 of the top-100 games, but the second most popular price point was $4.99.[5] (See **Exhibit 4** for statistics and analysis about the 100 paid games from the U.S. App Store.) Of the 100 top paid games in July 2009, five had been on the chart since July 2008.[6] Pricing above $3.99 was considered "premium pricing," and was typical of companies such as EA that had brand recognition as a company and with its game titles.

Although the App Store was the largest mobile game marketplace, others were being launched by Google (Android Market), RIM/Blackberry (App World) and Nokia (Ovi). Each of these platforms enabled publishers to offer content directly to consumers, similar to the App Store. The biggest difference involved the payment experience, as Google, RIM and Nokia did not have the benefit of leveraging the millions of iTunes accounts that had been previously set up. As a result, many consumers had to go through the tedious process of setting up a credit-card account for the device to

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[3] Gabriel Madway, "Big game publishers muscle in on iPhone's upstarts," Reuters News, July 15, 2009.

[4] Yukari Iwatani Kane, "Seeking Fame in Apple's Sea of Apps," *The Wall Street Journal*, July 15, 2009, page B1.

[5] Stuart Dredge, "Analysing the App Store Paid Games Chart," Pocket-Gamer.Biz, July 9, 2009, http://www.pocketgamer.biz/r/PG.Biz/App+Store/feature.asp?c=14291, accessed July 30, 2009.

[6] Ibid.

buy new applications. The devices that ran these platforms were also different, as most did not have the same touch and swipe features as the Apple iPhone and iTouch. Analysts predicted that some of these other smartphones and corresponding marketplaces would gain traction by 2010.

Game Development Process

Digital Chocolate developed games in six genres: puzzle & word, action & adventure, sports & racing, simulation, social entertainment, and cards & casino. (See **Exhibit 5** for a list of Digital Chocolate games introduced through carriers in 2008-2009.) Nearly all of the games produced through July 2009 were standalone games designed for solo users, internally referred to as "cookies." These games tended to challenge users to progress individually through levels. In contrast, some of the company's newer games being developed for multiple users were referred to as "cakes," representing products that could be shared and consumed over time. Cakes tended to evolve based on how friends interacted together within the game.

Digital Chocolate published its games on mobile phones and the App Store, and a portion were also available on the Internet through the company's website and through Facebook, a leading social networking site with over 200 million users worldwide. The company's goal was to publish two to three new games each month, so the team was continuously generating new ideas. Everyone in the company was encouraged to submit ideas through a company blog that was reviewed by a product management team in Finland. The product management team also spent time analyzing the characteristics of top games in multiple categories in order to define common themes that permeated winning titles. Paananen explained, "For every game we make, we probably filter through 300 ideas. We have a group that pulls ideas from the blog and thinks about factors such as: target market, competitive offerings, cost of production and follow-on ideas."

The most promising ideas were fleshed out in PowerPoint presentations with simple graphics demonstrating the game objective and as well as marketing and production considerations. These presentations, internally referred to as "Why Should this be a Digital Chocolate Product?" or "YDC?" pitches, were shared with Paananen and then later run by the executives based in San Mateo. Loia explained, "Our team in Finland has become very good at creating traditional mobile games, and the executive team tends to give the go-ahead to most of the traditional games presented." However, discussion was encouraged. Hawkins expanded, "We validate every idea because we don't want to discourage creativity by throwing wet blankets over everything, and we also encourage people to express passion and criticize constructively. All of our games require a great deal of collaboration to reach consensus, and we try to have that happen at the lowest level possible." Paananen described his leadership style as someone who "enables others to be successful." He explained, "Our team is self-motivated and I make sure they have the right resources."

Once the product group received the greenlight from the executive team, a sales team member shared the game proposal with carriers to ensure the carrier would accept the game. Assuming everything looked promising on that front, the game developers spent the next two to three months creating the designs, graphics, sounds, languages and engineering code that formed the basis of the game. Paananen's team developed a product "road map" that looked out six to eight months, and game developers were separated into "tracks" that worked on a series of games. Each track tended to include a producer who served as a team lead/project manager, along with several artists, developers and designers. Some games had particularly intensive artistic requirements such as 3-D graphics. Every Friday afternoon, all teams were required to post their interim game "builds" on an internal company website so that anyone in the company could play with them and provide feedback. This also allowed the various tracks to see what other teams were working on.

All Digital Chocolate games were developed using a custom-designed engineering platform that allowed the same game to be deployed on a wide variety of devices in multiple languages. This platform enabled the operations team in India to modify the games in a cost-effective manner so customers around the world could enjoy the games. Hawkins noted:

> We believe our technology platform gives us a tremendous amount of leverage. We are one of the few creative companies that is also a technology company, and it has been a real competitive advantage for us. Initially we thought we might be able to get outside developers to develop games for us and port them to our platform, but it is said that working with developers is like herding cats, and it's even harder when they are outside developers that are not in your office as your own employees. Developers have their own tools and software code libraries and tricks and it was hard for us to get everyone to conform to our restrictions and rules. It was easier to make it work internally with employees so we became vertically integrated.

The studio teams in Finland and Spain communicated frequently with the operations team in India to ensure a smooth transition from development to deployment. Loia explained, "Our developers and operations teams often function like a baseball team. Each function specializes in their area of expertise and as a result there is a high level of teamwork and efficiency." Hawkins elaborated, "Communication is key during every step of the process. Our commercial success involves thousands of creative decisions and many execution decisions. It's not about each decision; it's the combination that matters." On average, each game took approximately six months to develop from the "YDC?" document until it was available on a phone. Digital Chocolate did not reveal its game development costs; however, one of its competitors, Glu Mobile, disclosed that is spent $200,000 - $300,000 to develop a game.[7]

Paananen believed that Digital Chocolate had "some of the best game developers in the world," which he viewed as the primary reason for the company's success. Hawkins shared his perspective on what makes a great game developer:

> Great game developers grew up playing and studying games and realized that they personally knew how to make the games better. Then they got an education that taught them the tools to do so. Great game developers have the creativity and market sensibility to think of new ideas that are practical, as well as the courage to fight for their ideas and make them into reality. They also have the passion to stick with their projects no matter how hard it gets. In addition, great game developers have the humility to respect and study the competition.

Paananen explained, "We have great, talented, passionate people who have experience making award-winning games; however, it is still very hard to predict which games will be commercially successful. We approach game development with a portfolio strategy. On the iPhone platform, about 20% of our games make up 80% of our revenues, but we don't know in advance which games will be in that top 20%." Paananen believed the creative team enjoyed working in an environment where they had the freedom to propose ideas and turn them into a product. In addition, he believed, "The creative teams in Finland and Spain were motivated by press reviews and winning gaming awards, while the creative group in San Mateo tended to be more focused on user metrics." (See **Exhibit 6** for sample game reviews.)

[7] Gabriel Madway, "Big game publishers muscle in on iPhone's upstarts," Reuters News, July 15, 2009.

Embracing the iPhone

For the first five years of the company's life, Digital Chocolate focused primarily on games that were played solo with a standard mobile phone keypad. Some of the games were also available through the Internet, but most of the developers' time was spent building games for mobile devices. When Apple introduced its iPhone in early 2008, Hawkins was curious and hopeful, but also a bit skeptical. Hawkins explained, "Over the 12 years I was at EA, there were over 300 unique computing platforms. We chose not to work with most of them, and some of them that we embraced lost money. There were very few big winners, and they were hard to predict." Hawkins also noted that, "For the first three decades of Apple's life, Apple did not promote games, and when the iPhone launched in 2007 Apple didn't have a store." The App Store opened in July 2008, but Hawkins recalled, "Apple gave more air time to applications other than games." In addition, Hawkins remarked, "We saw similarities between the iPhone and the web and social networks – where discovery and monetization were challenging because there were tens of thousands of applications as well as billing challenges." Given all these reasons, Hawkins was not sure if the iPhone would be a great game business, and Hawkins wanted Digital Chocolate to work on some projects but wait before scaling up. However, by August 2008 Hawkins heard that consumers were downloading a substantial volume of games. At that time, Hawkins decided that Digital Chocolate should "attack the iPhone with scale" and convert some of its top selling games into iPhone applications, with the goal of having the first few available by the end of 2008.

Hawkins, Loia and Paananen discussed the various ways they could redirect resources to the iPhone, and they ultimately concluded that Loia would drive the development process by working with the Operations engineering teams in India, San Mateo, and Helsinki. Hawkins explained:

> Jason had the engineering background, the operations experience, and the entrepreneurial energy to lead this effort. In addition, we didn't want to distract the studios in Finland and Spain, as they were in the process of inventing new games and keeping them flowing into the market. We had some concern that the game developers would get caught up in the romance of the new platform before we knew how our games would do on it. Jason's work on the iPhone represents one of the fundamental elements of our management team: we can also be a basketball team when the situation calls for it. We realize that we may have to play different positions – a point guard may have to drive to the hoop or get a rebound.

Most of the initial work involved adapting games to take advantage of the swiping motion and touch screen, and by March 2009, Digital Chocolate had launched five games on the AppStore. The company was able to leverage its game library and technology platform to convert games at a relatively low cost. The games did extremely well, right from the start. Within 100 days, Digital Chocolate had over 10 million downloads of its titles. During a media interview in mid-April 2009, Hawkins admitted:

> The iPhone for us was a spectacularly pleasant surprise. We had no idea it was going to be as good for us as it turned out to be. There are 35,000 iPhone applications and thousands are free. To get to number one is pretty rare. [Three of] our first four games all made it to number one on the download charts, which is a mathematical freak…The iPhone is by far our most

> effective platform. We make as much money with these games as we do putting a game on 100 different cell phone platforms. [8]

Once the platform's potential became apparent, Hawkins announced internally that Digital Chocolate's biggest area of focus would be "Conquer the iPhone." He explained, "It may have taken us a little while to see the value of the iPhone platform, but as a company, we have a cultural willingness to identify a theme and commit. We have learned the value of agility, and we are willing to turn the rudder hard, even if we all get wet. I interview almost everyone that we hire and I'm always focused on finding people that are comfortable with change." By the end of April 2009, Hawkins, Loia and Paananen agreed it was time to get the Studios more involved in building for the iPhone platform, and the creative teams in Finland and Spain were asked to integrate iPhone functionality into all new games. Hawkins explained, "At the time we spent a lot of time redefining the boundaries between studio and operations, and we're still doing that." Loia elaborated, "Initially, the operations team did most of the work in adapting our existing games into the iPhone format, but we realized that we could make much better games if our studio was involved at the beginning, designing specifically for the iPhone." The creative team was excited to tackle this new challenge. As Paananen described:

> Game developers are excited to work with the coolest hardware, and once we distributed some iPhones to the team, everyone realized the potential. However, we did have to develop some new skills in terms of adjusting to the bigger screen and leveraging the user interface. One of our bigger challenges involved keeping our developers interested in carrier projects. Even though the iPhone is sexier, we still have a good business selling titles through standard mobile phones that we don't want to give up.

By July 2009, nearly all of Digital Chocolate's games were being made for both the iPhone and the standard carrier platform, and the team in India had modified its publishing platform to make it possible to deploy games through both channels without a great deal of incremental costs.

Social Gaming on the Horizon

As the teams ramped up their iPhone capabilities, Hawkins became increasingly focused on the potential for multi-player, interactive games ("social gaming") that could be played on multiple platforms (e.g, mobile phones, iPhone, Internet) simultaneously. Hawkins' interest in social gaming dated back to his childhood. He explained, "I had an awareness of both the social and intellectual value of board games when I was less than 10 years old, and I became a serious fan of card/chart/dice-based pre-computer sports simulation games in which my friends and I could draft players and manage our own teams and stats." His interest continued, and when Hawkins was running 3DO he filed a patent in the mid-1990s that covered the way users could buy and use packets of digital characters that could persist across multiple social platforms, internally referred to as the "DNA patent." Hawkins explained, "I've been thinking about the social power of media for a long time, and it was part of the founding business plan that I wrote for Digital Chocolate. We were going to be a social media company built on mobile phones." However, when Hawkins tried to launch social games at 3DO and his early days at Digital Chocolate, he found that the hardware, software and payment systems were not ready to support his vision. He explained:

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[8] Dean Takahasi, "Late to the iPhone, Trip Hawkins' Digital Chocolate Falls in Love with it," VentureBeat, April 14, 2009, http://games.venturebeat.com/2009/04/14/late-to-the-iphone-trip-hawkins-digital-chocolate-falls-in-love-with-it/, accessed August 18, 2009.

> We had a series of misadventures because the platforms wouldn't do what we wanted, or the consumers wouldn't behave the way we wanted on those early mobile platforms. We found some success with our games on the Web when we engineered in viral spread and added features such as point rankings ("leader boards") among friends. That worked great for *TowerBloxx* on Facebook. Several months after launch we had 100 million free downloads. But we had no way to monetize our success with that game.

Digital Chocolate tried introducing a few social games through the carrier channel, one of which was called *AvaPeeps* that involved creating avatars [digital characters] that dated other avatars. The game didn't take off as hoped, which Paananen attributed to the limitations of standard mobile phones. In addition, Hawkins noted, "We know more about making good games than we know about the dating marketplace." Paananen commented, "We have had some misses in social gaming, but we have learned along the way. Digital Chocolate has a learning culture. In fact, sometimes Trip even gives the management team books he wants us all to read. "

There were several U.S. based companies that started to demonstrate the potential for a broader set of users engaging in revenue-generating social games in 2008 and 2009. Most of these companies were run by developers in their early twenties that focused exclusively on social games available through a variety of networks (e.g., Facebook, MySpace). (See **Exhibit 7** for profiles of the top social-gaming companies.) One of the leading companies, Zynga, had two big hits available during the summer of 2009. Launched in June of 2009, *FarmVille* allowed users to set up virtual plots of land and interact with friends through buying, selling and borrowing farm equipment, animals and farm products. Zynga announced that *FarmVille* had 11 million daily users as of August of 2009,[9] and the game had over 1 million "fans" on Facebook. Another popular Zynga game was *Mafia Wars*, which attracted 4 million users a day in July of 2009.[10] This game enabled users to build a mafia family and invite friends to join through Facebook or other social networking sites. The game was initially free, but as participants built out their crime businesses, they could use micropayments (purchases under $1.00 that could be aggregated) to buy property and resources. Users could also buy items in the game by responding to offers (i.e., free trial at Netflix), enabling a new form of payment and currency known as "offer completion." Hawkins explained, "We are learning that offer completion is a great litmus test of whether or not we are making the right kind of social game. In a great game, a customer will be motivated enough to fill out a form for a free trial or offer in order to get points, purchase virtual goods, or increase levels."

Hawkins expanded:

> We have aspirations to build games that leverage social networks and engage users so that we can monetize our offerings. It's not rocket science; it involves studying the competition, figuring out how the models work, identifying the principles of engagement, selecting the kind of themes and content you have to make, and then building products according to that rule set. We've done this again and again because we are a creative organization that also has a nice combination of empirical and analytical skills. We don't have a bunch of divas who are only caught up in themselves. Instead, we have the discipline to study and analyze opportunities, and then provide the creative mojo to go with it.

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[9] Zynga, "Zynga's FarmVille Becomes Largest and Fastest Growing Social Game Ever," Company Blog, August 27, 2009. http://zblog.zynga.com/?p=1008, accessed September 24, 2009.

[10] Gamasutra, "Social Game *Mafia Wars* Hits 4 Million Daily Users," http://www.gamasutra.com/php-bin/news_index.php?story=24307, accessed August 25, 2009.

Paananen noted that developing social games would require some different skills than those his team had cultivated to date. For example, the social games needed to be thought of as an ongoing service, not a project that got "completed" and "handed over" to another team. Developers iterated on social games after launch, and new features were continuously added, requiring developers to stay engaged. In addition, the visual quality in the early social gaming hits was often seen as secondary to the viral quality. Nevertheless, Paananen believed, "Digital Chocolate has the ability to increase customers' expectations of the visual experience within social games, as we have the ability to create better graphics than most social game developers." Loia recruited an experienced social game producer, Saurin Shah, to join Digital Chocolate in early 2009 as director of product management to help teach the organization about developing compelling online social environments. Shah had been a product manager at Gaia Online, an online hangout that attracted millions of teens. Loia explained, "Saurin had extensive experience with developing online social games and he understood the principles of engagement, viral spread, and monetization. We were looking to bring someone on board with that background." Shah reported directly to Hawkins, which Paananen described as "a logical decision given the importance of social gaming right now, and they are both in San Mateo."

Hawkins wanted to see the organization moving "fast in the direction of social gaming," with the goal of having 18 new social games launched by the middle of 2010. Hawkins had high expectations, but he also expressed some concerns:

> The problem is that we have many parts of the organization that are accustomed to doing what they're already doing, and the games they come up with would not be suitable as a social game. I think the most challenging thing right now is to get everybody to understand that there are different genres of games that you would want to make if you're going to make proper use of virtual items, plus we have a patented concept for a more advanced platform for virtual items, and I'm still struggling to explain that to people. I want to be involved in all games before they go into production, and I'm looking for games that can generate revenue from offer completion on a social network; perform well on the iPhone; and can be packaged in the old school carrier deck. For the first game using the DNA patent, NanoVerse Castles, I'll be the creative director and executive producer demonstrating how these games can be made with our new virtual goods platform. I want to do this so the team can actually see it, instead of trying to explain a concept and then having them build it.

Although this level of CEO involvement was new to the organization, Paananen believed that members of his team would appreciate the time Hawkins was spending with them. Paananen explained, "Our game developers would find it motivating to work with Trip. He is known as a gaming legend." Loia was also pleased that Hawkins was devoting so much time to social games. Loia explained, "Who better than the CEO to drive the most important initiative of the future?"

Conclusion

As Hawkins continued playing games on his iPhone during his flight home from Helsinki, he thought about all of the opportunities and challenges that lay ahead. Hawkins was prepared to produce the first social game, but he was eager to talk with his executive team about the best way to structure the organization going forward to be successful in this new area. The team had shared several ideas through email, and they hoped to make an organizational decision within a few weeks. One option involved buying a start-up that already had several winning social gaming titles. While this option seemed appealing as a quick way to enter the category, Hawkins found that the social gaming start-ups were optimistic about their futures based on some early wins, so "they were not for sale, or they were out of our price range." If Digital Chocolate was to merge with one of these

companies, Digital Chocolate might find itself with less equity, even though its revenues were higher. In addition, Hawkins was also sensitive to doing an acquisition in which the cultures didn't blend well. Nevertheless, Hawkins had been successful with acquisitions in the past, so it was worth considering this path.

Another option was specifying one office location as the "social gaming" office to avoid distracting the rest of the organization that was generating revenues and profits for the company. For example, San Mateo could play this role given its geographical proximity to the cutting edge developers in this genre. Or perhaps Spain, where there was a young, energetic creative team that could focus on this type of game. Loia liked the idea of a self-contained, dedicated team, but he was concerned that certain functional areas such as the platform engineering might not get done correctly without the group in San Mateo getting involved. Paananen expressed concern about the developer morale among the core creative team in Finland if they were not selected to work on the "hottest" new projects.

A third option involved designating a group of employees from each location to form tracks of social gaming teams. These employees could volunteer themselves because of personal interest in social games, or the lead developers and producers from the studios in Helsinki, Barcelona and San Mateo could hand-pick their own teams to focus on this genre. Paananen and Loia liked the idea of including employees from multiple locations, but they were concerned about conducting many simultaneous experiments around the world with developers who were just starting to learn about the potential in this category. They were also concerned about decoupled knowledge transfer across locations as each team came up to speed.

This decision was further complicated by Hawkins' desire to have a portfolio of new social games in just a couple of months. Loia explained, "When we met with the leading social game companies, we found there were four to five 20-year olds who were producing new games every four weeks. The games didn't have the same high-quality graphics that we produce during our six-month development cycle, but they were attracting millions of users. It gives us confidence to speed up our development process." The creative teams would need to adjust to the shorter development times, figuring out where they could cut out production steps. There was also work to do with the engineering teams in India and San Mateo to determine the operational backbone of the social games.

Hawkins recognized that he was asking a lot of his team, yet he was optimistic about Digital Chocolate's ability to leverage its strengths to help define the next big trend in mobile gaming. He explained, "We are involved in a dynamic industry, and we all need to be comfortable living with change. We hire people that can adapt. Digital Chocolate has the creative magic, the engineering and the business acumen to win. We are the Pixar of mobile."

Exhibit 1 Management Bios

Trip Hawkins, founder and CEO. Early in his career, Hawkins played a key role in defining the personal computer at Apple. He went on to found Electronic Arts and built the company into the industry leader. Hawkins also founded 3DO, a pioneer in digital video, network gaming, and social communities. The author of three patents, Hawkins introduced the use of celebrities and athletes in video games, and his design credits include award-winning best-sellers such as John Madden Football, Army Men, M.U.L.E., Doctor J and Larry Bird Go One on One, and High Heat Baseball. Hawkins received an MBA from Stanford University and developed his own major at Harvard University, where he graduated magna cum laude with a degree in Strategy and Applied Game Theory. He was the first business executive to be inducted into the Hall of Fame by the Academy of Interactive Arts and Sciences.

Jason Loia, chief operating officer. Loia was responsible for successfully bringing Digital Chocolate software to life across multiple platforms, carriers, and handsets. Loia joined the company after serving as vice president of product development and executive producer at Lavastorm, a mobile game developer for Disney, Sega, and other media companies. Jason received a BSEE from the U.S. Coast Guard Academy, a MSEE from Stanford University, and an MBA from Harvard Business School.

Ilkka Paananen, president, studios. Ilkka was responsible for the global publishing operations of Digital Chocolate. Paananen joined Sumea in 2000 and served as the CEO as it grew into one of the top developers and publishers of mobile games with a distribution network of over 100 channels that included every major European carrier. Paananen and the company's founders sold Sumea to Digital Chocolate in 2004, and Paananen became the managing director of the European operations for two years before being promoted to president of studios. Paananen graduated from the Department of Industrial Management at Helsinki University of Technology.

Paul Abbassi, chief technology officer. Abbassi joined Digital Chocolate after serving as the chief technology officer at Limelife and the chief executive officer at Lavastorm Engineering. In his previous roles Abbassi gained significant experience in massively scaling server architecture. Abbassi holds a MS in electrical engineering from Stanford University and San Jose State University as well as a BS in mechanical engineering from University of California, Berkeley.

Mark Richman, chief financial officer. Richman previously served as CFO and Senior VP of Finance and Administration at Terayon until the company was acquired by Motorola. Prior to Terayon, he served as CFO and Senior VP of Covad Communication Systems, Inc. Prior to Covad, Richman served as CFO of Main Street Networks and VP of Finance at Adecco. He holds a B.S. degree in Managerial Economics from the University of California, Davis and an MBA from the University of California, Los Angeles.

Marc Metis, vice president, marketing. Prior to joining Digital Chocolate, Metis was senior vice president, marketing at Atari. Before Atari, Metis was senior vice president, brand management at Acclaim Entertainment where he restructured the company's brand portfolio and oversaw domestic marketing. Previously, Metis held roles in Digital Market Strategy and Product Management at Cablevision. Earlier in his career, Metis was the vice president of global brand management at Activision. He began his career at McKinsey & Company in 1989, working with Fortune 500 media, telecommunications and consumer products companies. Metis received his MBA from Harvard Business School in 1993 and graduated Phi Beta Kappa from Dartmouth College.

Source: Casewriters research based on published bios.

Exhibit 2a Digital Chocolate Executive Team

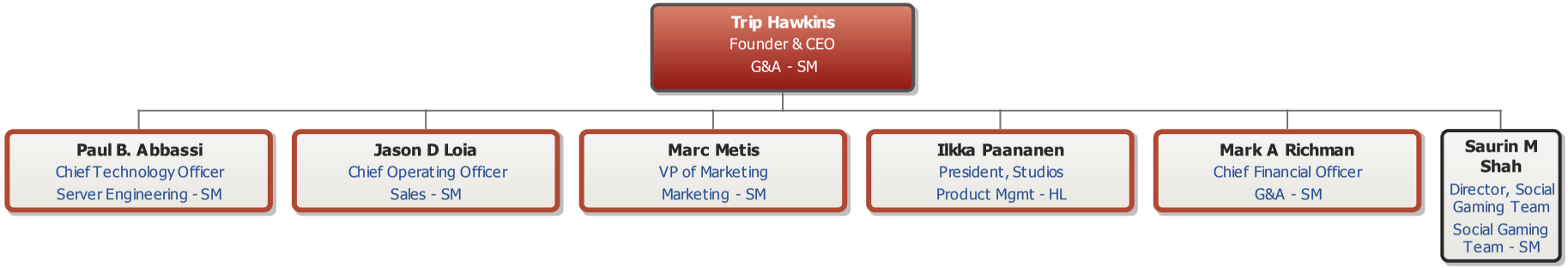
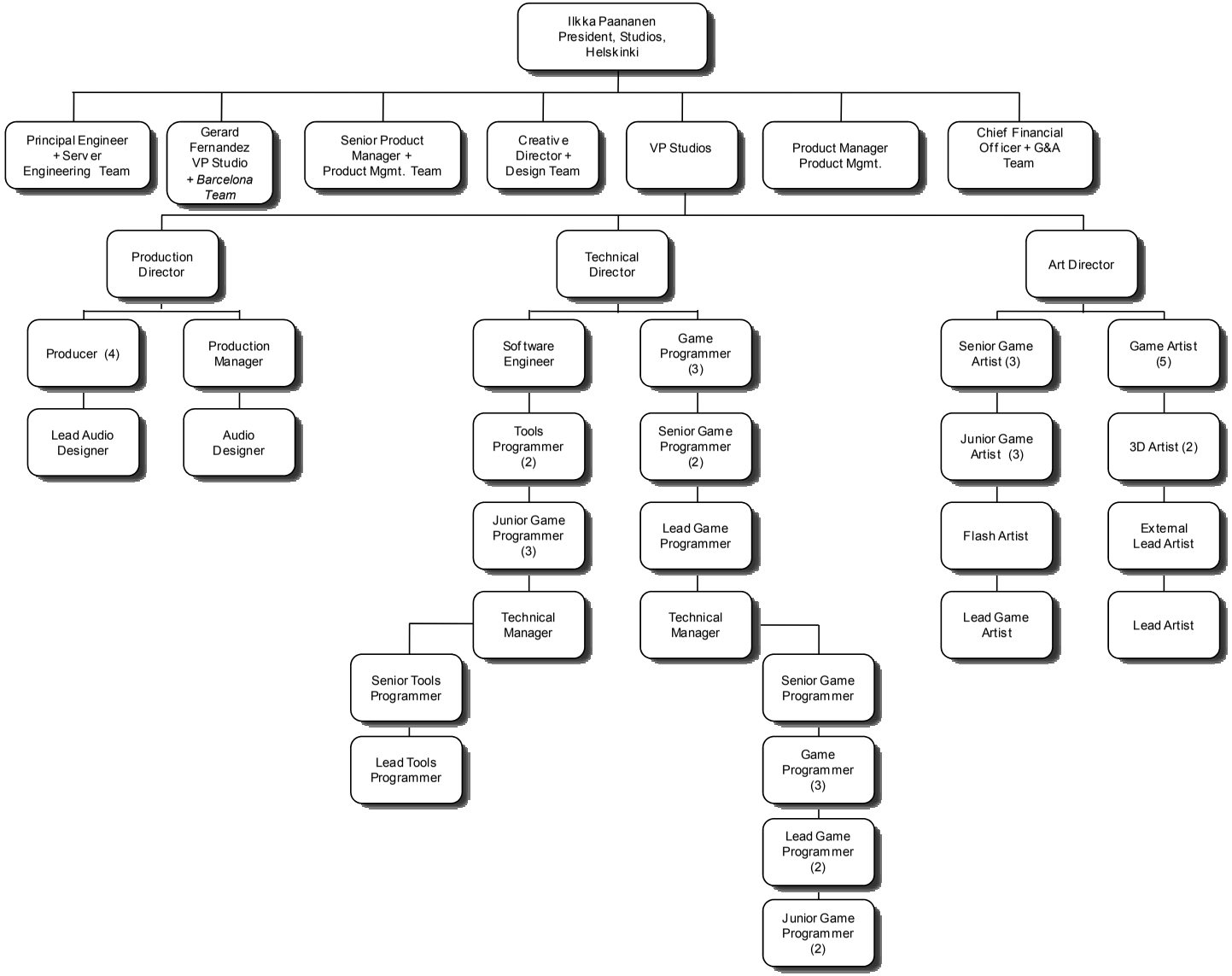
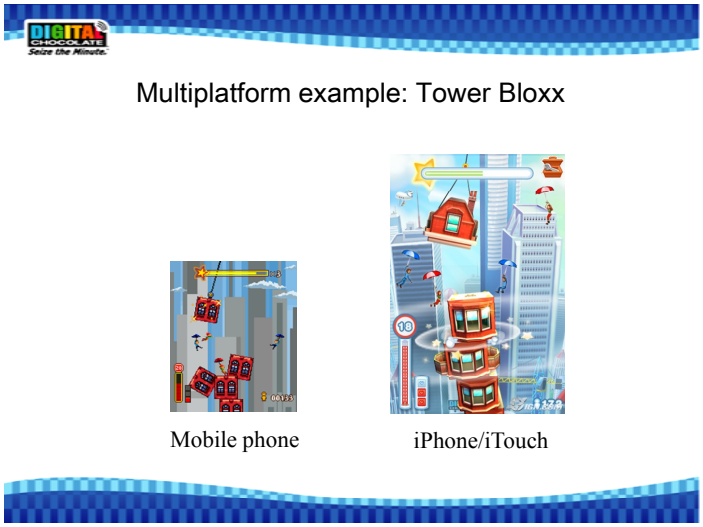


Exhibit 2b Digital Chocolate Creative Organization Chart (Paananen's Team)



Source: Digital Chocolate.

Exhibit 3 Digital Chocolate Games on Standard Cell Phone and iPhone



Source: Digital Chocolate.

Exhibit 4 Top Paid iPhone Applications

App Store Top 100 Games - Price Points

Price	No. of Games
0.99	36
1.99	10
2.99	18
3.99	3
4.99	20
5.99	5
6.99	3
7.99	1
9.99	4

Source: Apple / PocketGamer.biz

App Store Top 100 Games - Price by Rank

Position	Avg Price
1 to 10	$1.89
11 to 20	$1.19
21 to 40	$4.34
41 to 60	$2.79
61 to 80	$3.24
81 to 100	$4.09

Source: Apple / PocketGamer.biz

App Store Top 100 Games - Publishers

Publisher	No. of Games	Avg Price
Gameloft	12	$3.57
Electronic Arts	10	$5.49
Digital Chocolate	5	$2.99
ngmoco	3	$3.99
PopCap Games	3	$4.32

Source: Apple / PocketGamer.biz

Source: PocketGamer.biz, http://www.pocketgamer.biz/r/PG.Biz/App+Store/feature.asp?c=14291, accessed September 14, 2009.

Exhibit 5 Digital Chocolate Games (January 2008-September 2009)

Digital Chocolate
Carrier Games Released
January 2008 - September 2009

First Shipment Month	Game Titles	First Shipment Month	Game Titles
Jan-08	24: Special Ops	Jan-09	Bubble Ducky 3 in 1
	Café Hearts		Bully Fight
	Café Spades		Jungle Twister
	Mini Golf 99 Holes		Pirate Ship Battles
Feb-08	Cafe Crosswords	Feb-09	Cleopatra's Treasures
	Club K-OS	Mar-09	Diamond Tumble
	Café Dominoes		Mafia Wars New York
	My Pet Store		Smash Kart Racing
	Tower Bloxx Deluxe	Apr-09	Brain Tester 24-pack Vol. 2
Mar-08	Diamond Islands	May-09	California Gold Rush
	20Q: Mind Reader		Crazy Monkey Spin
Apr-08	Bikini Jump	Jun-09	Beach Games 12-Pack
	Brain Tester 24-Pack	Jul-09	Diamond Islands 2
	Café Sea Battleship		Night Club Fever
	Carnival Games 12-Pack		Party Island Solitaire 16-Pack
	Chocolate Shop Frenzy	Aug-09	Captain Galactic : Super Space Hero
May-08	Bubble Popper Deluxe		Jurassic 3D Rollercoaster Rush
	20Q: Sports Quiz	Sep-09	Snake Revolution
Jun-08	20Q: Celebrity Quiz		Halloween RollerCoaster
Jul-08	Cafe Hangman 1001: Fashion Edition		
	Shopping Madness		
Aug-08	FotoQuest Bikini		
	Pictoplay Plus		
	Bikini Paparazzi Parade		
Sep-08	Ghost Train Ride		
	Pary Island: Pool 2-in-1		
Oct-08	Hawaii Tiki 100 Quests		
	High School Party Crashers		
Nov-08	Party Island: Bowling		
	Santa's Challenge		
	Stuntcar Racing 99 Tracks		
	Brick Breaker Revolution 3D		
Dec-08	Bull Run Fever		
	Super Water Bomber		
	Mini Golf 99 Holes: Theme Park		
	Rollercoaster Revolution 99 Tracks		
	Party Island Trivia		

Source: Digital Chocolate.

Exhibit 6 Sample Digital Chocolate Critic Game Review and Game Review Chart

Sample Game Critic Review from Touch Arcade:

Mobile developer Digital Chocolate has brought an iPhone version of its mobile handset title *Brick Breaker Revolution 3D* to the App Store. *Brick Breaker* is an *Arkanoid* style game with a bit more depth than most.

It's a 3D, touch-controlled affair that presents a colorful array of blocks set at an angle. In Classic Mode, the game plays pretty much like the typical *Arkanoid* clone–use the paddle destroy bricks with a ball, collecting power-ups along the way. In this mode you move through 99 levels and then face a final boss. It's well done and fun, but it's the Revolution Mode that sets this game apart.

In Revolution Mode, each level contains one key brick. When that brick is destroyed the top and bottom walls vanish and a paddle appears at the top of the screen, mirroring the one on the bottom. You can continue destroying bricks by keeping the ball on the screen with the paddles, but letting the ball pass out of the playfield slides the action upwards or downwards to the neighboring level. You can move freely up or down from any level once its key brick is destroyed, and at the top of each series of levels lies an animated brick boss that must be defeated. There's also a Time Trail mode where it's a race against the clock to destroy the most bricks.

Brick Breaker Revolution 3D is a clever twist on the formula that's actually a lot of fun. Revolution Mode is truly unique and the in-game power-ups are some of the most interesting I've seen in a title of this sort. The following gameplay video of the mobile version gives a feel for the action, but with less polish than the superior iPhone offering.

Source: Adapted from reviewer posting at http://toucharcade.com/2009/02/28/a-quick-look-at-brick-breaker-revolution-3d/, accessed October 5, 2009.

Pocket Gamer Quality Index based on reviews from users of Java mobile phone games (does not include games for the iPhone)

PocketGamer.biz Quality Index, Q2 2009 - Publishers

Rank	Publisher	Reviews	Avg. Score	YoY Change
1	Digital Chocolate	24	8.00	0.45
2	I-play	13	7.82	0.49
3	HeroCraft	13	7.54	0.44
4	Connect2Media	12	7.50	1.49
5	GlobalFun	14	7.46	-
6	HandyGames	12	7.43	0.00
7	RealArcade	8	7.38	-0.69
8	EA Mobile	29	7.32	-0.30
9	Glu Mobile	24	7.30	-0.38
10	Disney Mobile	10	7.26	-0.17
11	Gameloft	27	7.04	-0.95

Source: PocketGamer.biz

Source: PocketGamer.biz, http://www.pocketgamer.biz/r/PG.Biz/PG.biz+Quality+Index/feature.asp?c=14600, accessed October 5, 2009.

Exhibit 7 Social Gaming Company Profiles

Company Name	Company Location	Top Titles	Primary Platforms
Playfish	London, England; San Francisco, CA	Restaurant City, Country Story	Facebook, MySpace
Playdom	Mountain View, CA	Mobsters, Sorority Life	MySpace
Zynga	San Francisco, CA	FarmVille, Mafia Wars, Texas Hold 'Em	Facebook, MySpace, Bebo

Source: Casewriter research.