

Bringing the Sony Playstation to Japan: A Case of Business Fitting the Technology

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A Decisive Day in Console History:

December 3, 1994 will be remembered as a decisive day in the history of console gaming. It was on this day that Ken Kutaragi's technological brainchild, the Sony Playstation, shown below in Figure 1, stormed Japan, selling 100,000 of its initial 300,000 units in a single day. Hundreds of Japanese lined outside game stores everywhere in Japan, gobbling up the precious machines with no attention given to their price. (Asakura 52) By 1998, the Playstation had sold more than 40 million units worldwide. (Lowood) It effectively dethroned the Nintendo kingdom, at one point prompting Nintendo's proud patriarch, Hiroshi Yamauchi to admit, "Sony is dominating the market, and Nintendo has fallen behind in the race. When I go to Akihabara, I get the



Figure 1: More than one third of the initial 300,000 Playstation units were sold in the first day alone.

impression that the Nintendo 64 is going to be obliterated." (Asakura 139)

The story behind the rise of the Playstation phoenix from the ashes of a humiliating rejection at the hands of Nintendo is indeed complex. To be sure, the technology brought to life by Kutaragi was historically unprecedented in that the

Playstation outperformed every console that had previously existed. And it is true that all successes begin with good technology, but the Playstation had the added advantage of a business model that was well suited to the technology. Developed by Akira Sato, this business model was used by Sony Computer Entertainment Incorporated (SCEI) to thrust the Playstation toward never before seen success.

The Sony Playstation represents a case of game console succeeding because it was technologically superior to its predecessors and because the business practices used to pitch it complemented the technology. In other words, the Playstation is a case of technology succeeding with the help of clever behind-the-scenes maneuvering. This paper will chronicle this chapter in video game history—the rise of the Playstation in Japan.

For the Business to Succeed the Technology Must be There:

The story behind the business side of the Sony Playstation cannot be told without discussing the technological underpinnings on which the business model relied. Most, if not all, of the credit for the development of the Playstation hardware can be attributed to one man—Ken Kutaragi. The son of a tradesman, Kutaragi worked in his father's small printing shop every day after school, helping him to develop an appreciation for business. (Asakura 6) Kutaragi was also fascinated by computer graphics, doing his university thesis on how to apply computer graphics to detecting anomalies in x-ray images. (Asakura 4) It was this combination of business acumen developed as a child and

engineering passion that gave Kutaragi a desire to develop commercially successful technology.

In September of 1984, Kutaragi stumbled onto System G, a 3-D graphics system capable of real-time 3-D texture mapping. In a demonstration, Kutaragi saw a human face whose size and spatial orientation with respect to objects changed with the touch of a controller. (Asakura 3) Needless to say, Kutaragi was impressed, and he decided that if integrated circuit technology scaled down enough, System G could work on a large scale by being implemented in digital technology and revolutionize the world.

It is difficult to overstate the significance of System G, for it potentially represented a new paradigm in console gaming. The gaming world at that time was predominantly two-dimensional, as demonstrated by popular titles such as Donkey Kong. The subsequent dominance of the Super Mario Brothers series in the years to come makes it clear, retrospectively, how entrenched the console industry was in two-dimensional games. System G came just four short years after Battlezone, the revolutionary wireframe tank game shown below in Figure 2, which by today's standards would seem overly crude in its depiction of objects. (Poole 112) To give an idea of the potential System G had, one need only look at the general development of three-dimensional games. It was not until 1992 that Wolfenstein, considered by many to be the first true 3D game, came out. (Poole 123)

Kutaragi knew that the paradigm he envisioned was in fact unrealistic. He guessed that an actual system employing the new paradigm would not be possible for another ten years. In the meantime, Kutaragi honed his digital skills, studying digital signal processing and pushing digital products, such as replacing Nintendo's traditional



Figure 2: The simple wireframe graphics of Battlezone were considered revolutionary at the time.

analog frequency modulation sound generator system with his digital pulse code modulation sound generation system. (Asakura 29)

Death and Rebirth of the Playstation:

By 1992, Nintendo, failing to trounce Sega with the 16-bit Super Famicom system, pushed ever harder for new video game experiences through multimedia. New systems would use CDs instead of traditional RAM cartridges, which could only store 8 to 10 megabytes. (Sheff 368) This would mean movies in games and ever more realistic and engrossing incarnations of Mario. Sony, being a pioneer in the development of CDs and CD hardware, was a good candidate for Nintendo to join forces with in 1988. The two companies made an agreement to produce a game machine called the Playstation that

would use the Super Famicom architecture but would also be capable of playing CDs as well as traditional cartridges. (Sheff 378)

The business implications of this agreement were profound and seemed to mark a shift in Nintendo's traditional business model. Nintendo's model was one of complete control over software through the use of a sophisticated lock-out system, the effect of which was that developers were forced to license their games through Nintendo. The extent of Nintendo's control even prompted a lawsuit from Atari accusing Nintendo of unfairly controlling cartridge supplies and prices. (Sheff 250) The reason that the plan seemed to mark a shift in the Nintendo paradigm was because it allowed SCEI to make, control, and profit from the CD-based games.

Such a deal would have had a tremendous impact on the business of console games. It would have weakened the hold Nintendo had over the software market because it would no longer control all of its hardware. Adding a CD format could let software developers circumvent Nintendo and go instead to SCEI. In this way, Nintendo would no longer profit as much from software, and perhaps it would collapse from an overflowing of the market with bad software from third party sources. In short, the deal was immensely significant because it potentially signaled a shift from the status quo of the console world.

By 1991, Nintendo realized that such a system of allowing Sony to profit from game content did indeed go against Nintendo's traditional strategy of controlling everything that went on their consoles. In addition, it would give Sony the jump on Nintendo in the multimedia market. (Sheff 380) For these reasons, Nintendo announced

publicly at the 1991 Consumer Electronics Show that it would team up with Philips to produce a CD-ROM system, a humiliating blow to Sony and Kutaragi.

The influence of the Nintendo model on the Playstation cannot be overemphasized. Because Nintendo set the standard, the way to do business, it was natural for SCEI to try to enter the market through Nintendo, by agreeing to supplement the SNES with CD support. The Nintendo debacle also demonstrated why the video game industry can be slow to change due to an unwillingness to compromise the existing business model, the result of which in this case was the delayed introduction of multimedia. If SCEI had decided to abandon the Playstation project, it would have been historically significant as an example of a casualty of the status quo. However, this would not be the case, and the Playstation would become historically significant because it would show how to change the status quo and bring next generation technology to the market.

After the Nintendo decision had been handed down, the Playstation project seemed doomed. The fate of the project would be determined in a legendary meeting in which Kutaragi reported to Norio Ogha, the president of Sony, that his team had been “secretly developing a new format using 3-D graphics separately from the Nintendo-compatible machine.” (Asakura 36) This machine would use the System G technology to blow the Super Famicom out of the water. This meeting demonstrated the principle that for there to be a business, the technology must be there. It showed that for a console to really affect the market, it had better live up to its label of next generation technology. When asked by Ogha how many gates it would take to create this machine, Kutaragi answered one million. When Ogha exclaimed that a million was a far cry from the

100,000 gates possible with current technology, Kutaragi promised that the size of transistors would scale down and the technology would be there. To seal the deal, Kutaragi asked Ogha, “Are you going to sit back and accept what Nintendo did to us?” Ogha became uncontrollably furious at Nintendo and gave the famous reply, “DO IT!” (Asakura 37) Thus, the Playstation project really got off the ground.

Selling the Playstation to the Software Developers:

The decision was made to go it alone without Nintendo, and it was clear that Kutaragi’s digital skills could turn System G into a game machine. One of the first challenges was to get software developers to make games for the new platform. It turned out this would not be an easy task, for many developers were unwilling to incur the wrath of Nintendo and especially unwilling to do so on an unproven platform.

SCEI’s attempt to enter the console market through its Playstation project lends itself to a historical comparison with other attempts to enter the console market. It seemed that for a company to successfully launch a console, it would already have to be strong in the software business. Nintendo had its star designer Miyamoto, who had already created the arcade hit Donkey Kong before the release of the Famicom. (Sheff 49) And Sega had an existing arcade business from which to draw games, such as Altered Beast, for its console. (Sheff 353) Sony, on the other hand, had no in-house software whatsoever. If SCEI succeeded, then the Playstation would be historically significant as an example of hardware successfully developed and sold without a strong software base.

The lack of in-house software placed added urgency on recruiting software developers to make games for the Playstation. These appeals to software developers relied on the merits of the technology. Kutaragi pitched the virtues of 3-D technology to developers such as Namco, but met with replies to the effect that 3-D technology would not be realistic or cost-effective for quite some time. (Asakura 62) The turning point came with the release of Sega Virtua Fighter, shown below in Figure 3. The fortuitous release of the 3-D fighting game by rival Sega showed to developers that 3-D games were possible. From this point on, Sony would be in a position to credibly pitch its 3-D system to software developers. In October of 1993, Kutaragi set up a demonstration involving a life-like moving Tyrannosaurus rex and invited engineers from various software houses. (Asakura 66) The representatives that attended this demonstration were thoroughly impressed. After individual demonstrations to individual software companies, SCEI saw many developers agree to take on the new platform.

The eventual success of SCEI in attracting developers invites a comparison with Sega's wooing of developers for its Genesis console. Part of the Genesis' success can be attributed to the fact that it was a 16-bit system, whereas the NES was an 8-bit system. In other words, Sega had the more advanced technology, and developers were excited to explore the potentials it had to offer in spite of having to go against Nintendo. (Sheff 353) Similarly, the Playstation, after the release of Virtua Fighter, garnered developers through superior technology. The case of the Playstation reiterates the historical power of superior technology to attract software. At the same time, the Playstation serves as a historical case and lesson on the importance of in-house software. If SCEI had created some amazing 3-D games on its own, it would not have had to wait until Virtua Fighter for the



Figure 3: Sega's Virtua Fighter proved the feasibility of programming 3-D games.

Playstation console to be accepted by developers and could have saved valuable time in the fight to get the console to market.

In any case, the decision to pitch the Playstation on the merits of its 3-D technology rather than on, say, the Sony name, was the right one and can be counted as one of the many ways in which SCEI tailored business practices to suit the technology.

Sato's Unorthodox Distribution Scheme:

The technological superiority of the Playstation by itself would not be enough to compete with Nintendo. There would have to be a business edge over Nintendo, whose Super Famicom remained the leader in Japan. This edge would come from examining

Nintendo's mask ROM cartridges, which offered fast data access but were expensive and took a long time to manufacture.

Basically, using mask ROM meant that repeat production of a game would take months, and by that time a game's popularity might have declined to the point where repeat production was not required. Making the initial batch just large enough to satisfy demand was crucial because making too much would lead to a huge inventory and losses, and making not enough would lead to a shortage, which would lead to price inflation and consumer loss of interest. (Asakura 94) Shoshinkai wholesalers would decide how many mask ROM cartridges to purchase and then sell those to retailers. Because the Shoshinkai wholesalers risked huge inventories and losses, they took a considerable cut of the profit, driving up the price of games. In addition, Nintendo had a close working relationship with the Shoshinkai wholesalers, so SCEI could not expect favorable terms from an ally of Nintendo. (Swartz)

If the Playstation had entered the console market and competed against Nintendo using this traditional business model, it would not have enjoyed nearly as much success. The price of making expensive mask ROMs and the use of wholesalers might have made the Playstation too expensive to be extremely successful. The mask ROM and wholesaler analysis reveals the obstacles inherent to introduction of a new console to the Japanese market. The Playstation was a case of yet another console facing these traditional obstacles. As will soon be apparent, the Playstation would also be a case of a console overcoming these obstacles through a business strategy tailored to the technology of the console.

Akira Sato decided that a new business model was the only way the Playstation could hope to take on Nintendo. Once again, as with wooing the software developers, the key to success lay in the Playstation's technological strength. This time it would be the CD-ROM that would lead Sato to his unorthodox business model. Sato realized that CD-ROMS were much cheaper to manufacture, \$9 a copy versus \$30 for mask ROMS. (Asakura 100) In addition, they had the key property that new batches of CD-ROM games could be produced within a few days, thus eliminating the need for a wholesaler to hold a large stock to sell to retailers. In other words, games could be sold directly to retailers, who would just ask for more copies if supplies ever ran low. Sato also decided that Sony should do the selling of games to retailers. That way, Sony could monitor which titles were popular and quickly manufacture more of those. In other words, Sony would take over the role of wholesaler, eliminating the middleman. (Asakura 103)

Game developers objected to Sony's proposed total control over game production, but they eventually agreed to this scheme because profit margins were favorable and superior Playstation graphics technology was worth the trouble. In addition, many talented small developers favored the repeat production model because they knew a big wholesaler would not take a risk buying many mask ROMs for one of their games, but that their games would become popular quickly and take advantage of repeat production. (Asakura 120)

Sato's distribution scheme, both in theory and practice, was solid. SCEI's distribution strategy was significant because it was unconventional and successful. It served to show how a new business model, tailored to the technological strengths of a console, could wedge that console into the Japanese market. In the case of the

Playstation, the technological strength lay in the CD-ROM format, as well as the 3-D graphics technology. The CD-ROM format when compared with Nintendo's mask ROM highlighted an area of weakness in Nintendo and therefore prompted a business strategy to exploit that weakness, a perfect case of business practices working in conjunction with a technological advantage.

The Final Touches: Marketing the Playstation:

The final touch to the Playstation effort was the marketing campaign. Initially, the campaign was aimed at core game players. Masatsuka Saeki, the man in charge of promotions, decided to employ a teaser campaign similar to the one he used for Sony's CCD-TR55, a passport-sized video camera. The technological superiority of the Playstation was hyped up in video game magazines, and the 1-2-3 campaign, in which the numbers 1-2-3 stood for the release date of December 3, hammered into core gamers' minds the console name and the release date. (Asakura 128)

The decision to target core game players always makes sense when trying to sell a new console because core gamers are the ones who will be most willing to buy new hardware. The decision was particularly wise for SCEI because of the technological nature of the Playstation. Essentially, the Playstation was a powerful 3-D graphics machine whose sole function was to be a platform for graphically superior games. It had no other purposes beyond that of a game machine, hence the name Playstation, and a marketing campaign to emphasize this trait demonstrates once again how SCEI tailored business to the technology. The key to a successful teaser campaign lay in the product.

Saeki knew that a teaser campaign would only work if the product was a good one, for consumers would quickly lose interest in a poor product, as demonstrated by Sony's later campaign to promote the RPG game *Beyond the Beyond*, which used a similar teaser strategy and sold well until gamers realized it was a boring and repetitive game. (Asakura 139) With regard to the Playstation, Saeki had confidence in Kutaragi's product and was convinced the console would appeal to core gamers. Saeki believed that the sheer technological superiority of the Playstation made it a good candidate for a teaser campaign.

The result was hundreds of customers lined up outside video game stores everywhere in Japan, in eager anticipation of the new console. SCEI sold 100,000 of its first 300,000 Playstation units in the first day. (Asakura 52) Consumers were hooked by the Playstation's superior graphics as utilized in such hits as Namco's *Ridge Racer*. The Playstation soon sold two million units, solidifying its status as a successful console and securing its place in the Japanese market.

And the rest is history. In short, SCEI soon broadened its customer base by lowering prices, creating collections of greatest hits, and creating alternative games such as *Parappa the Rapper*, which sold more than 500,000 units. (Asakura 143) The Playstation phenomenon snowballed, storming the United States and later Europe, reaching, as mentioned earlier, total worldwide sales in excess of 40 million units by 1998. And thus the story of the Playstation ends on a lucrative note.

The Legacy and Lesson of the Playstation:

Technology, as is the case with the development of all consoles, was crucial to the story of the Playstation. Yet, there was more to the Playstation than technology alone, more to it than the digital workings of Ken Kutaragi. The case of the Playstation is significant because of the myriad ways in which business dealings shaped the course of the Playstation. A failed venture with Nintendo pushed the Playstation away from Super Famicom technology and forced it to embrace Kutaragi's 3-D graphics system. The 3-D graphics system was the key to wooing software developers. The CD format was the crucial factor that motivated Akira Sato's unorthodox distribution scheme. And the revolutionary nature of the Playstation's 3-D graphics gave Masatsuka Saeki the faith to believe in his teaser campaign. All of these factors show that the Playstation was a case of business practices tailored to fit the technology. The Playstation model of superior technology and an unconventional business model to match the superior technology has had a significant impact on console history. The story of how and why the Playstation succeeded will influence consoles many generations down the line, showing that much can be learned from the story of rise of the Playstation.

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