THE RETAIL MODEL IN THE COMPUTER INDUSTRY:

eMACHINES[1]

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Introduction

eMachines has emerged as the ultimate low cost computer company. They provide PCs to the retail market at cheap prices that both consumers and retailers are excited about. Retailers advertise their product to get customers off the couch and into the stores so eMachines incurs very little marketing cost. The company also outsources the production of PCs to contract manufacturers in Asia to reduce costs as well.

eMachines has excelled in its ability to understand the supply chain and find a niche as the low cost PC on the retailers' shelves. They have developed extensive inventory models so that there is never excess inventory in the channel that prevents new products from being introduced or creates costs due to storage or devaluation. It supplements those models not by shipping extra computers, but with EDI links to its retailers so they always know the sales picture of their products. Showing retailers how serious they are about solving the inventory issue, eMachines has stopped offering price protection, forcing the retailer to buy into the model. With the help of new CEO Wayne Inouye, they've developed significant retail reach by understanding the

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retailer's fundamental problems by delivering on a price point that increases sales and an inventory model that reduces costs.[2]

However, the story wasn't always as uplifting as it is now for eMachines. Like many companies over the past few years, they have had to weather the Internet bubble and the downturn in PC demand, not to mention fierce competition from a very familiar company named Dell. Fortunately, eMachines has transformed their business by borrowing the best of Dell's no inventory strategy combined with HP's retail market presence, while understanding retailer and consumer behavior and pitfalls. Essentially, they've solved the problem of excess inventory in the supply chain for the retail market and exploited a niche in low cost PCs that has made them very successful and even more difficult to compete with.

The goal of this paper is to provide an historical overview of eMachines to understand the path they took to become a success and what makes their business model different. Much has been made of their recent acquisition with Gateway, but few people know why this transaction was important for Gateway beyond that they both sell computers. Without delving into an analysis of Gateway, this paper provides insight into the benefits that eMachines brings to the combined company.

Company History

eMachines started in September 1998 as a low cost PC maker backed by Korean companies TriGem and Korea Data Systems (KDS). Then CEO and founder Steven Dukker had arranged for them to provide capital and beneficial rates on monitors and contract manufacturing.

[2] Special thanks to CEO Wayne Inouye for providing an interview to assist the project.

Cofounder and Chairman Lap "John" Hui, who owned the rights to the US distribution of KDS monitors, also played a large role in getting the company off the ground. The combination of Dukker's retailing experience and Hui's access to foreign manufacturers gave the company a substantial advantage in starting a low cost PC maker in the face of fierce competition from Compaq, HP, Packard Bell, and Dell.

Notably they were able to sell a PC at an unheard of price of $499, an amount that no other manufacturer could match in the retail space. Based on his retail experience at Computer City, Dukker noticed that a small decline in price of a PC didn't attract any new customers; it simply cannibalized the profits of the PC that customers were already in the market to buy and waiting to get the best deal.[3] However, when an unbranded PC that fit the needs of a basic consumer was sold at a significant price reduction, new customers who couldn't afford a $1000 PC ran to the stores to get the cheaper computer.

Dukker was confident that he could develop a brand to tap into this underserved niche in the retail PC market. He estimated that 55% of the lower income households didn't own a PC and that eMachines could drive PC penetration to an additional 20%.[4] While some analysts didn't believe that kind of success was possible due to the combination of low margins and the volatility of costs for PC components like memory. eMachines proved they could make the model work in just two months of operations where they sold more than 180,000 PCs. By early

[3] Lach, J. "The price is very right". American Dempgrahics, April 1999.
[4] Crockett, Burrows. "PC Makers Race to the Bottom". Business Week, October 12, 1998.

1999, eMachines had 6% of the retail desktop market share and was in 7 of the top ten PC retailers like Best Buy and Staples.[5]

As the company ramped up to 17% of the retail market in November 1999, CEO Dukker was lauded as one of the up and coming stars of the PC industry. The eMachines brand was gaining more respect among consumers and the company was making an effort to improve the image of the value that their PC provides. "Price alone doesn't get you 17% of the market" explained Dukker, noting that eMachines is using name brand parts from Seagate (hard drive), ATI (graphics card), and Intel (processors) just like many other leading PC makers.[6] The differences were that they used Intel Celeron and AMD chips instead of the latest high priced, ultra fast Pentium processor, and the application suite installed Microsoft's Works and not the more expensive Office suite.

By the end of 1999, eMachines began to stray from its business model and tout the Internet as the future of the company. The Internet was booming and everyone was rushing to cash in on the hysteria. Building on Dukker's latest idea of supporting PC sales with revenue from Internet service and advertisements, eMachines purchased Free-PC.[7] The small company offered basic Compaq PCs for free in exchange for the customer's personal data and viewing habits on the PC. From the standpoint that it eliminated a low cost competitor in the market it was good acquisition, but Free-PC never had the capital to execute their business plan so it may have been wasted money. Soon after the acquisition, eMachines stopped giving away the "Free-PC" and halted their operations.

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[5] Lach, op. cit.
[6] Pepe, M. "20 to watch 1999". Computer Reseller News, November 8, 1999.
[7] Tran, K. "eMachines to buy Free-PC in Stock Deal". Wall Street Journal, November 30, 1999.

The Internet ideas surfaced again after the March 25, 2000 IPO of eMachines, at the peak of the dotcom boom. eMachines lost 8% of its price on the first day of trading, apparently due to doubts about profitability although few other companies were being held to the same standards. For the year eMachines had lost $84.5 million due to marketing and acquisition costs on $815 million in sales as the 4th largest PC retailer. To combat the questions of profitability and make good on their Internet promise, Dukker claimed that investors are weary of low margin investments so eMachines will focus on Internet business and less on PCs even though the Internet business accounts for only $3.4 million in revenue at the time.[8] eMachines went on to replace the head of their Internet division who was the former CEO of the acquired Free-PC.[9]

During eMachines' Internet push, much focus was lost on the main operations of the company. Inventory levels had risen to a 6 week supply, a terribly high level for a limited product line. Compared to competitors in the industry, eMachines was more than twice that of Gateway and no where near Dell's level of 3 days. For the year ending December, 2000, eMachines announced a $219 million loss on $684 million in revenue, more than $130 million off the previous year's revenue.[10] These inventory problems likely contributed to this annual loss due to costs associated with storing and disposing of that stock. eMachines was also advised by the SEC that their stock would be delisted in March 2001 because it had been trading under $1.[11]

[8] Fields, R. "eMachines IPO takes 8% dip in the market". Los Angeles Times, March 25, 2000.
[9] "eMachines names Dickinson Senior VP". Los Angeles Times, July 18, 2000.
[10] Ballon, M and Fields, R. "eMachines Shares Keep Plunging" Los Angeles Times, Orange County Edition, May 31, 2000.
[11] Alexander, K. "Struggling eMachines Replaces CEO". Los Angeles Times, Home Edition, February 27, 2001.

At the end of February 2001, fed up with the company's CEO and founder, Stephen Dukker was fired in favor of Best Buy executive Wayne Inouye. Inouye was quick to show his value for the company, hiring several key senior managers to navigate the turnaround of the company. The new CEO also laid off 16%, or 21 employees, of its workforce and eliminated some of their Internet products to cut costs. Continuing on the slide initiated by the previous CEO, eMachines fell to only a 2.7% share of the retail PC market which was 7th behind Apple.[12] By November 2001, eMachines was talking to investment banks regarding their options for the struggling company to be sold.[13,14] Founder John Hui's EM Holdings had offered 78 cents per share, and subsequently purchased eMachines on December 28, 2001 for $1.06 per share for a total of $161 million. The stock had traded on bulletin boards in July 2001 for a mere 17 cents a share.[15] Needless to say, he paid a premium.

Inouye accepted the position of CEO at eMachines because he wanted a chance to apply a new idea to an already broken company. Customers were returning their PCs and there were excess inventory problems. Based on research by a company then known as Andersen Consulting, Inouye discovered while at Best Buy that every PC returned cost the manufacturer over $230.[16] Armed with this knowledge, Inouye took to the customer service lines to understand the problems customers were having with their PCs and worked to solve them. Inouye hired Gary Elsasser as Vice President of Platform Development to solve some of these problems before the PCs went out the door.[17] Inouye instituted new programs, ideas, and most important focused the

[12] Alexander, K. "eMachines to cut staff 16%". Los Angeles Times, Orange County Edition, March 30, 2001.
[13] Alexander, K. "eMachines might be looking for a buyer". Los Angeles Times, May 9, 2001.
[14] Hesseldahl, A. "The Gateway that could have been". Forbes, March 23, 2004.
[15] Hesseldahl, A. "The McDonalds of Computers". Forbes, November 24, 2003.
[16] Ibid.
[17] Ibid.

company on being the volume provider of low cost PCs in the retail market, or as he has been quoted, "The McDonalds of computers."

Fast forward through 9 straight quarters of profitability for the private company which now claims over one billion dollars in revenue with just a staff of 140 employees working out of its quiet warehouse in Irvine, California (Table 1).[18] The company was sold to Gateway, a PC maker in Poway near San Diego, California, in January 2004. However, unlike a typical acquisition, the leadership of Gateway has been handed over to eMachines' CEO Inouye and many of his senior officers. In essence, they are being challenged to take the eMachines case study and apply it to Gateway which at the time of the merger had around 7,000 employees.[19]

The Turnaround

Inouye's success at eMachines has been driven by one thing, reducing cost. Overall, eMachines is a very frugal company. A tour of their facility will result in your business card being put in a plastic name badge for ID, a CEO's office that doesn't contain any grandiose wood or marble, and no temporary business cards for a CEO of a now $5 billion combined company. A refreshing observation compared to the corporate and executive extravagance at the expense of shareholder value.

Two of the company's main areas of improvement have been customer service, which is the most noticeable, and downstream supply chain optimization. To the everyday customer, eMachines has had several initiatives to improve their quality and support. First, VP of

[18] Ibid.
[19] Bhavnani, S., DuBoise, T., and Domis, A. "Gateway and Emachines, the Next Frontier". ARS, 2004.

Platforms Elsasser has fixed several nagging quality issues. One of the most frequent problems with the PC was the CD tray door breaking off. On a broader scale, he and Inouye borrowed from the Japanese automakers by utilizing common infrastructure building blocks for all of their PCs.[20] With a chassis, power supply, and a couple of motherboards eMachines created an entire line of PCs. By reducing the complexity of the configuration efforts, only a few people were needed to handle the task that in most companies required significantly more staff. To remove even further "conflicts," in layman's terms anything wrong with the computer, eMachines reduced almost all of the trial software included with the computer. These programs slowed down the startup of the PC and often led to issues between the software programs that crashed a perfectly good eMachines PC. A comparable HP PC at the time had 22 trial programs and took twice as long as the eMachines' PC to start up. Other design improvements included better case design for customer maintenance access, using a different fan for a quieter noise profile, and color coded cables for easy setup.

Second, as mentioned before, Inouye took to the customer service phones to find out why 18% of their PCs were being returned.[21] Inouye knew that every return cost him over $200 in handling and devaluation costs, so he figured that he could spend a significant amount on extensive support and still breakeven. He proceeded to change eMachines to a higher competency level of call center staff, so those which answered the phone could handle almost any question about the computer without having to transfer the caller. In addition, first call resolution became the metric for eMachines to make sure the customer had a good support experience. A few other items came from Inouye's phone calls, including listing the phone, model, and serial numbers on

[20] Hesseldahl, "McDonalds", op. cit.
[21] Ibid.

the front of the PC where they were easily viewed. Previously, customers often had to pull the PC from the cabinet where it was located to view these items which resulted in a second phone call to tech support, adding frustration to an already stressful experience for the customer.

Building on these quality successes, eMachines' average calls per PC dropped to .5 while the rest of the industry experienced 2 calls per PC. For those customers that they couldn't assist through communication, eMachines again borrowed from industry research. Compaq's market research showed that 70% of customers would fix their own PCs if they were given the parts, so eMachines used that program to combat returns as well. In the end user replacement parts scenario, the repairs are done by the customer with components and instructions provided by the company.

On the supply chain front, Inouye and eMachines implemented a new business strategy for avoiding the pitfalls of many other PC retailers (Table 2). Excess inventory in the channel has been a problem for many years, and has given a company like Dell with their make-to-order strategy a huge advantage in the PC industry.[22] eMachines has learned from this lesson and worked to reduce inventory between themselves and the retailer. This was important because at the same time it was developing a formula to minimize inventory, it dictated to its retail partners that it wouldn't be offering price protection on their PCs. This was a major concern for retailers who were familiar with the eMachines PC of the past made with poor quality and constant price competition in the industry. The company believed that price protection was an unnecessary burden in the retail industry because retailers would inflate orders for a safety cushion if they knew the excess inventory could be returned to the manufacturer at the end of the season. By

[22] Fried, I. "eMachines aims for empty shelves". CNET News.com, January 24, 2002.

limiting those returns, the demand formula created by a couple of out of work rocket scientists worked very well. They developed a model to account for promotional cycles and the sales lift to get the right quantity to the right place at the right time. With actual orders in hand, eMachines then builds enough units to satisfy that demand and no more, with the goal of having no inventory on the books at the end of each quarter. By managing inventory to out of stock levels, eMachines likely saved millions of dollars by not being caught with inventory that was out of date in the quickly evolving PC industry.[23]

With the front and back end enhancements made by Inouye, eMachines became a major player in the retail PC industry with 26% of the retail market. Returns on PCs dropped to 6% and SG&A for the company was 5.8%, far below that of HP (16%), Gateway (26%), or Dell (8.4%).[24] For 2003, eMachines reported revenue of $1.1 billion, which calculates to an amazing eight million dollars per employee, although Mr. Inouye's goal was ten (Tables 3 and 4).

Conclusion

Now leading the combined company, Inouye is trying to disassemble the bureaucracy of Gateway and transform it into a bigger version of eMachines. While Gateway has been broken, posting 11 straight quarterly losses and attempting many new business ideas, they are still a large company with an established corporate culture. eMachines was easy to change because the employees knew they were selling low cost machines, but Gateway has been dealing in higher end electronics such as plasma TVs.

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[23] Ibid.
[24] Hesseldahl, "McDonalds", op. cit.

Overall, eMachines has been a success story. Starting with a “bang” by undercutting all the big players in the retail PC market, they were profitable within months. Through the dotcom boom and bust, eMachines’ leadership led the company down a questionable path that left it with little to show for several years of effort. With the privatization and new CEO, eMachines again began to show life and capitalize on its new ideas for simplification and focus of the retail market. Now they begin their next challenge, showing big brother Gateway how to do it the cheap way. Only time will tell if they continue to succeed.

Table 1. eMachines financial performance

Year	Revenue ($ mil.)	Net Income ($ mil.)	Employees	Revenue/employee
Dec 03	1,000.0	**	130	7,692,307
Dec 02	700.0	**	150	4,666,666
Dec 01	540.0	**	150	3,600,000
Dec 00	684.1	(219.1)	134	5,105,223
Dec 99	814.3	(5.7)	61	13,349,180
Dec 98	58.3	(2.8)	49	1,189,795

Source: Hoover's Online
** Private - financials not released, eMachines claims profitable Q1 2001 – Q2 2004

Table 2. Comparison of PC firm value chain activities

Activity	eMachines	Dell	Traditional model
Demand planning	Retailer orders	Direct, build-to-order	Forecast
Inventory	None	None	Variable
Design	X & contract manufacturers	X & contract manufacturers	X
Production	Outsourced to TriGem, Korea	X & outsourced to various Taiwanese firms	X
Distribution	X	X	X
Sales & Marketing	Retailer (eg., Best Buy)	X	X
Support	Outsourced	Outsourced	X

Sources: Interviews with companies.
"Traditional" refers to the classic PC firm when companies were more or less vertically integrated. Hewlett-Packard probably comes closest today, but it involves a mix of forecast and build to order approaches and production is nearly all outsourced.

Table 3. Comparative performance of selected PC firms

Performance	eMachines	Gateway	Dell	HP
Inventory turns	70	20.6	102.4	9.2
SG&A (% Sales)	5.8%	26%	8.4%	15%
Unit Sales (thousands)	356	343	2810	
Average PC price	$511	$1632	$1775	
Revenue per Employee	$79,710,144	$459,349	$900,956	$514,514

Sources: Hoover's Online Competitive Landscape – June 2004; Interview with CEO Wayne Inouye - May 2004; "The McDonald's of Computers", Forbes - November 2003; HP 10-K – January 2004.
* Data is most recent available, but not necessarily all from the same date.

Table 4. eMachines, selected retail market share

Date	Share	Rank
April 1999	6%	
November 1999	17%	3rd
March 2000		4th
May 2000		3rd
May 2001	2.7%	7th
July 2001	<10%	
August 2003	27%	3rd

Sources: Various news articles.

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