MACINTOSH PLATFORM
Identity sense and competitive strategies

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Abstract: This work intends define some crucial differences between Mac and PC platforms. The company that created the first real personal computer in fact lives of its own capacity to innovate, and it is the first giant to open the source code of the core of its OS. The most powerful and user-friendly interface today combines programmers of *nix and creators of GUIs – two decisive groups for the new economy of computer science. This study proposes to assist in the search for an answer to the following question, among others: Would the enlargement of the market share of that platform generate IT with less relationship conflicts towards the machine and, consequently, more productivity and social well-being?

1. INTRODUCTION

The so called Wintel platform has a market share as big as appear to be the complaints related to it. Most of the people has little experience with alternative products and no “awareness that the personal computer should be easy to use. They also do not know that, if it’s not easy, something is wrong.” (Pinto, 2000a)

This paper is about options and choices. The proposition is to investigate the sense of identity that outlines the Macintosh platform and to organize proposals in the search for an answer to the following question, among others: if Mac platform detains, historically, a quality superiority among PCs, why this superiority does not translate itself in market share? A bigger market share would supposedly enhance the possibility, for the technological society, of having less routine problems in its relationship with the machine - and, consequently, generating more productivity and well-being for its members?

2. THE SEED

In the mid-seventies, a group of young californians, apart from the mainstream, developes a project to institute new bases for computer science. At Silicon Valley, the “electronic bric-a-brac”’s nec plus ultra is to design its own computer – machines with no keyboards, monitors or computer language, with little memory capacity and almost "good for nothing" (Lévy, 1993, p.43). The techie hobbyists control them "with soldering irons and volt meters" (Martellaro, 2000).

In 1975, Steve Jobs, a video game designer, and Steve Wozniak, an engineer, attend meetings at the Homebrew Computer Club about the recovery of state-of-the-art technologies (Enman, 1999). The duo create a new computer with original circuitry, and launch their own company, the Apple Computer, located at Jobs’ home garage.

2.1 The first PC

The assembly of the Apple I - the first concept of interface with the user - brings a new idea: the important now is not to built it, but use it (Lévy, 1993, p.45). Soon Wozniak is able to load the
program language Basic through a tape recorder, creating the second interface. This way the personal computer is created, “progressively, interface by interface, layer upon layer, each new element with a new meaning, allowing connections with other nets increasingly larger, slowly introducing new meanings e uses, following the process of construction of a hypertext itself” (Lévy, 1993, p.46).

The magic The Woz squeezes the second Apple into a plastic case, complete with keyboard, power supply and the capacity to create graphics in color (Enman, 1999). At the same time, his partner launches the company’s first publicity campaign. The Apple II is the biggest success in the computer world, during the late 70s and early 80s. The first Personal Computer in history (Enman, 1999) includes Basic in a ROM memory, allows the use of a color TV monitor as screen and includes a peripherical: the disc unit.

While other companies feed on the market share of Apple, the Palo Alto Research Center develops a interface that emulates an office environment. During a visit to Xerox laboratories in 1979, Jobs envisions the possibilities when he sees, for the first time, a mouse, icons, windows and menus that interact intuitively with the computer. Eventually, Apple's young president would take those ideas and part of that team to his own company (Lévy, 1993, p.49). The debut happens with the Lisa model. When International Business Machines announces its first PC, in 1981, an Apple advertising simply says: “Welcome, IBM. Seriously.” (Schlender, 1991)

2.2 The Macintosh

The Apple Company is expanding beyond any administrative skills. Jobs is removed from the presidency and assigned to “secondary projects, like the Macintosh” (Every, 2000a). “The ‘enfant terrible’ of the computer industry” (Burrows & Greene, 2000) summons his troops and hoists a pirate flag over the company’s building, in Cupertino; inside it, they create “beauty and wonders” (Martellaro, 2000) – that would result in a historical TV commercial.

A dictator addresses a beaten crowd through video monitors when, suddenly, a woman smashes the screen with a sledgehammer. The text reads: "On January 24th, Apple Computer will introduce Macintosh. And you’ll see why 1984 won’t be like ‘1984’." The reference to George Orwell’s novel is brilliant. “Apple took the common man side against the big guy. And who would he be? IBM, naturally.” (Enman, 1999)

The birth of Mac - a new revolution in the computer world (Lévy, 1993, p. 50) - is “the seminal turning point” in the computing history (Martellaro, 2000). Although no other computer gain so much loyalty from its users (Enman, 1999), Jobs and Woz would soon leave Apple. The Wiz will pursue other interests; and in May 1985, John Sculley, two year president, drives the other Steve away from the company (Every, 2000a).

2.3 NeXT Jobs

Jobs creates NeXT Computer, which first system - NextStep, 1987 - is “uncommonly easy to customize” (Schlender, 1991). Its main points are the video e-mail capabilities, the rewritable optical drive, the freedom from the floppy disk legacy (O’Brien, 2000). In 1996, Apple acquires its competitor and offers Jobs a position as non-profit counselor (Enman, 1999).

Regarded as dead in 1997, the company watches the new consultant “ninbly manages to untangle the mess he inherited from a knot of predecessors” (Swartz, 2001). In September, he becomes interim Chief Executive Officer - or iCEO, in another spectacular marketing move.

From his return as iCEO to the beginning of 2000, Apple’s capitalization grows US$14 billion. The market reacts to nine consecutives profitable quarters and raises the stock price to US$130, the highest in the company’s history (Linzmayer, 1999, p.246).
3. SENSE OF IDENTITY

Why acquire a Macintosh, if a PC is cheaper? The choice of a Mac involves more than logic, technical capabilities or market trend. “It is partly a state of mind and a community of people who share that state of mind.” (Moore, 2000) And that community “is strong. Macheads are ready to help one another, always.” (Munger, 2000) The software library available is “some of the best stuff on earth” because poor program “gets culled out rather quickly on our platform” (Douglass, 2000). And when a Mac crashes “it is so simple to fix. Most of the time I just reboot. (...) Can you put a price on peace of mind? Or stability?”

According to company sources, during 1998-2000, 43% of the bestseller iMac’s sales were to new users - both first-time users and Windows’ migrants. Awaiting the launch of Windows 2000, many PCs manufacturers experience a dropping in sales. Apple, on the other hand, signals with a great demand. The consequence are profits beyond analysts’ predictions – and the growth of the industry as a whole.

The company plans to restore its 10% market share until 2005 (Burrows & Greene, 2000). It is possible. After consulting with 140 mil consumers, the survey entitled “Consumer TechPoll” (Harris Interactive, 2001) concluded (Table I) that Mac users are extremely loyal to Apple. This repurchase loyalty is a key indicator for PC manufacturers: “The easiest buyers to capture should be a brand’s current users. If a company cannot successfully sell to its own customers, it will likely have problems selling to its competitor’s customers.” (Harris Interactive, 2001)

Table 1: Consumer loyalty

<table>
<thead>
<tr>
<th>Brand</th>
<th>Apple</th>
<th>Gateway</th>
<th>Dell</th>
<th>HP</th>
<th>Compaq</th>
<th>IBM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repurchase rate (%)</td>
<td>53%</td>
<td>45%</td>
<td>40%</td>
<td>33%</td>
<td>29%</td>
<td>9%</td>
</tr>
</tbody>
</table>

Font: Harris Interactive (2001)

3.1 Mac e Windows

Based on research of 30,226 media professionals and more than 10,000 firms, a Gistics (1997) technical briefing has examined all major factors related to the ways in which desktop computing platforms affect the productivity of professionals. The main results are seen below (Table 2):

Program Proficiency - Macintosh professionals use an average of six more tools than their Windows counterparts. Installation of a new program in Windows will often disrupt some already installed and the revenue lost due to down time often exceeds the peripheral purchase price.

Productivity - The average Macintosh user spends 302 more hours per year in the computer authoring activity than the Windows user, which spends more hours in non-computer-related efforts.

Revenue Opportunity - Macintosh-based enterprises earn $12.22 more per hour of labor than their Windows counterparts and can afford to pay their workers $5.01 more per hour than their Windows counterparts.

Cost-of-Ownership - Macintoshes have a 14.8 percentage cost-of-ownership advantage. Windows users pay three times higher support and learning costs per program.

Profit Enhancement - Mac users produce, on average, $14,488 more net profit than Windows users working on similar projects.

Return-On-Investment - The typical Macintosh user will recoup her/his investment in 5.42 months. The typical Windows user will recoup her/his investment in 12.26 months.

Table 2: Trade-off analysis
New technologies requires that users have more experience and proficiency with more tools. That Macintosh professionals use almost twice as many tools “reflects their greater ease of cross-program operation”. As a consequence of Mac users gaining greater proficiency in a greater numbers of authoring tools, “they have pushed the professional community into a more interdisciplinary approach” (Gistics, 1997).

Preliminary economic trend analysis indicates that the revenue differential between firms relying on Mac and Windows will continue to widen: “The productivity growth of Mac users (and their firms) will continue to grow faster than that of Windows users.” Mac-based firms will initiate, complete, and bill for incrementally more work per person than Windows-based firms, generating more revenue and profit well into the future. This also suggests why earnings of Mac users “will continue to grow faster than those of Windows users” (Gistics, 1997).

As an example of revenue loss for PC users, machines running Windows are still non-secure, requiring constant diligence to prevent “ghastly breaches, malfunctions, and data compromise” (Janssen, 2000). By December 2000, there are thousands of viruses for Windows and less than a hundred of them for Macintosh. PC users worry about virus “even when reading e-mail” (Gonzalvez, 2000).

The result is loss of time and productivity, which require maintenance performed by specialists and not by the user himself (Pinto, 2000b). Therefore, the cost of PC compatible - other than the price of the purchase - isn’t justified: “The question is if the money saved in hardware is worth the cost of experts and time loss.”

Janssen (2000) is a 30 year veteran in systems - most of those on mainframes, minis and PCs with Windows: “I have intimate, first-hand knowledge of the vagaries of PCs, their high maintenance costs, their unnecessary complexity, and general user unfriendliness.” When he discovered Macs, he was “forced to admit they were better in every respect”.

### 4. COMPETITIVE STRATEGIES

Apple lives by its historic capacity to innovate and, thus, to surprise customers and investors alike with technological breakthroughs and “really cool” products (Vicente, 2001). Unlike other computer makers, the company develops much of the the underlying technology, both hardware and software. And exploits this advantage “to rush innovations to market quicker than rivals who must rely on software from Microsoft” (Burrows & Greene, 2000).

Apple is responsible for the arising of Desktop Publishing (1985); SCSI (1986), serial (1986) and FireWire (1999) ports; 800k (1986) and 1,4MB (1988) disk drives; multitasking (1987); QuickTime (1991) technology; CD-ROM drive (1991); laptop trackball (1991) and trackpad (1994); Personal Digital Assistant (1993); digital camera (1994); color plastic computer case (1998); wireless Internet (1999); desktop home video editing (1999); 15” and 17" laptop widescreen (2001). And the company is used to have its own novelties “inevitably all copied by other companies" (Guillory, 2001).
The saga of the PCs’ pioneer enters a new chapter of greater opportunity and monumental challenges with the Mac OS X (Burrows & Greene, 2000), that brings a number of technological breakthroughs:
- it is the first real multi-user OS to achieve a mainstream public;
- offers support to industrial standard technologies as Open GL for 3D, PDF for graphics and text, and Java 2 (it’s the first OS non-Sun to support it);
- the Aqua interface is a new way to operate a computer;
- it is the first commercial operating system based on open-source development. (Kahney, 2001)

Open source softwares constitute one of the movements most capables of changing the Information Technology’s global environment. The open source is a way of collective innovation that support thousands of industries and developers that create, use and improve the software itself, consequently saving costs (Carlson, 2003).

Apple was the first company to establish the opening of its source code as a key factor in its software strategy (Prabhakar, 2003). Besides being an alternative for an open source platform, it is the only company that makes “affordable, quality” hardware and software (Swartz, 2000).

### 4.1 Unix

The reliable kernel is an open source based in Unixviii. By offering the most powerful interface ever, Apple once more uses its state-of-the-art hardware to give real power to the final user. X’s biggest advantage is its BSD Unix underpinnings which are available to knowledgeable users, but hidden from beginners. Power of Unix when one want it; the newly-designed ease-of-use when one don’t; elegance of Mac OS all the time.

Combining the development environments of the two central worker groups for the New Economy – “developers who love *nix and creative staff who love GUIs” (O’Brien, 2000) -, even the Apple-Intel price-performance differential would becomes irrelevant: “If a Macintosh can make you significantly more effective, who cares if the hardware costs a little more?”

OS X also attracts developers in the corporate-oriented side of the open source community, which could help Apple gain some market share in the server market. “Apple will benefit from an ongoing trend to use the Internet itself as a platform to develop applications.” (Vicente, 2001) At which point, “it becomes all about strong marketing, strong branding, and product design, and Apple is very solid in all those areas” (Wells, 2001 apud Vicente, 2001). To protect user’s data in transit during access Internet-based services, for example, the Massachusetts Institute of Technology, in a joint effort with Apple, brings to Mac OS X a full implementation of Kerberos, its network security system (MIT News, 2000).

### 4.2 Influence

O X exerts a massive influence on the rest of the industry, just as the original Mac OS did back in 1984. “Windows XP has obviously been influenced by Aqua” (Colaiuta, 2001 apud Kahney, 2001). The Microsoft’s programmers “are having panic attacks” (Thurrott, 2001) about new Aqua UI. The people that once copied Apple’s GUI realize now the company’s enormous potential to increase the distance from Microsoft, in terms of OS’ modernity and ease-of-use. Which makes Microsoft tempted to commit the same sin again (Carlson, 2003). They are “is suddenly playing catch-up-with-the-Mac again” (Thurrott, 2001).

Once developers transfer the core from Mac OS X to the Intel, the system becomes the first mainstream to run on both PowerPC and that platform (Kahney, 2001). The popularization is in the right track - but let's achieve it on Apple hardware: “A Mac costing so little that Windows users buy it as a novelty may be just the vehicle.” (Rogers, 2001)
5. FINAL CONSIDERATIONS

Of all CEO breeds, the rarest (Hanft, 2001) is of the truly visionaries: those who can see a world that doesn't exist. For example, Jobs imagining a personal computer on every lap. Since then, people who believed in the end of Apple lost their bet. The plan is still the same: to take the personal computer where it has never gone before (Burrows & Greene, 2000). Could Jobs do it? If not, very few people could - if there is anyone (Carlo, 2001). He is the company’s “past, present and future” (Swartz, 2000) and seems to comprehend where the technology is going. “Sometimes it takes years for technology to catch up with his vision, and he sometimes pushes a little too hard, too soon. But (...) long term he is usually right.” (Every, 2000b) What leads to Swartz (2000) conclusion: “With Jobs, there is a future - and possibly a bright one at that”.

But rarely has a company been more “the product of one man” (Burrows & Greene, 2000), and so much future resting on the power - and instincts - of one person makes any company vulnerable. “What if Jobs gets distracted or falls off his game?” (Burrows & Greene, 2000) “What’s the follow-up? (...) Where is his successor?” (Furchgott, 2001)

6. REFERENCES


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1 Percent of brand owners that bought the same brand when they purchased a new home PC in the first three quarters of 2000. (Harris Interactive, 2001)

2 Average number of authoring tools (used by average users).

3 Comparison of work hours spent annually per person (in computer authoring).

4 Overall average corporate billing rates (in dollars per hour).

5 Spending three-year total (in computer, peripherals, software, learning and support).

6 Net profit before taxes (U.S. Dollars) per person by practice.

7 Averages (in months to break-even).

8 OS X is based onNeXTStep e FreeBSD (O’Brien, 2000).