A Framework for Branding Technology Offerings and Technology Companies

By

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ABSTRACT

In the past, technology companies were less concerned about branding than consumer product companies. However, with commodification of technology, more and more hi-tech companies are seeing branding as a means to emotionally connect with customers. This paper offers an integrated approach to technology branding through applying the principles of branding to the specific concerns of the technology domain (addressing technology companies and their products simultaneously). The approach (see figure 1) comprises of 4 stages. The first stage consists of relating important concerns of technology markets to branding. Technology markets are characterized by peculiarities like winner-takes-all paradigm, difficulties in predicting the product life cycle and unit cost effect. The branding implications of these issues are discussed. The second stage deals with technology branding philosophy. The issues in this stage are not very different from the ones encountered in consumer branding. They consist of setting a mission for the product or the company, establishing a brand identity and communicating it. The third stage has two components to it namely a) Technology product branding and b) Technology corporate branding. The first of these components, relates technology product issues like brand pyramid effect, channel complexities etc. to branding. The latter component links issues important for technology companies like fast growth, global reach and intangible assets to branding. Stage 4 consists of working out the relationship between the technology corporate brand and its product brands. The paper spells out the implications of each of these stages for technology branding. In sum, it offers a conceptual basis for branding technology companies and their products. Finally, it also lists seven specific implications of the framework that are of relevance to technology branding.

Key Words: Technology, brand, corporate, marketing, image, communication

1.0 INTRODUCTION

Traditionally branding has been aggressively pursued by fast moving consumer goods (FMCG) companies. Technology companies have been relatively slow at exploiting the potential of branding (Temporal, 2000). Managers in high-tech companies conventionally believe that market success depends primarily on price-performance ratio. Often marketing is seen as a costly but necessary evil whose efficacy is difficult to assess (Ward, Light and Goldstine 1999). However today the situation is that, even in technology markets, it is easy to copy a competitor's products. Thus hi-tech companies are also getting sucked into the commodity trap like FMCG companies. Branding is now being seen as a way of maintaining distinctiveness in a host of similar or identical offerings. Data in the computer industry shows that favorable changes in the buyer's brand attitudes are positively associated with stock return and leading financial performance indicators (Aaker & Jacobson, 2001). Branding technology products and services however is a challenge. The perpetual state of change in technology companies goes against the basic requirement of branding. which is consistency. This paper offers a conceptual framework for the technology branding exercise. It lists out the different aspects of technology that impact branding and suggests an approach that integrates the branding of technology companies and their products.

1.1 OVERVIEW

Figure 1 summarizes the different building blocks of the Technology Branding framework.

Technology branding, as explained in the framework below consists of 4 stages. These stages cover branding implications of i) Technology Marketing ii) Technology branding philosophy iii) Technology product and corporate branding iv) Managing brand architecture. Thus technology branding process starts with the first stage, the distinctive features of technology marketing and their implication for branding. Technology markets are characterized by products (and services) with considerable technological and scientific knowledge embedded in them. There are, of course, some similarities between technology and consumer markets, for instance, in issues like aggressiveness in marketing the concept or the product (Moorthi, 2000). But there are several dissimilarities as well (John, Weiss, & Dutta, 1999). On issues like technology forecasting, single winner effect, standard setting, collaborating with competitors and unit-one cost effect, technology marketing is very different from consumer marketing.

The technology branding philosophy is the next the stage in the process. This philosophy is similar to the one adopted in the domain of consumer products. A technology company starts the branding process with establishing a mission statement for the company (sometimes for the product). This is followed by primary and/or secondary market research that decides the bounds in which the product operates. Then the company endows the product with a brand identity, which includes brand positioning, personality and associations. This is then followed by brand communication that is in line with the brand's identity. For brand communication, technology marketers often use new age tools like internet and users' forums.

The third stage in the process is branding technology products and companies. This stage has two parallel branches namely technology product branding and technology corporate branding. Both are broadly governed by the technology branding philosophy described above. However there are specific aspects that need to be borne in mind in technology product branding. These are, the need hierarchy that the product fulfills (brand pyramid effect), the shorter life cycles of technology products, knowledgeable buyers, and channel complexities. Technology corporate branding, on the other hand, addresses the concern of branding the organization. It consists of building a bridge between corporate identity and corporate image through strategic marketing communication (Abratt, 1989). Just as technology corporations are often young and rapidly growing, have global reach, operate on shoestring budget for brand building (though not always) and possess intangible assets like knowledge rather than plant and machinery. Very often the CEO of such company needs to act as the brand manager.

The fourth stage deals with working out the relationship between technology corporate branding and the individual product-brands (technology product branding as applied to different products of the company). In branding literature this is called the brand architecture problem (Aaker and Joachimstahler, 2000). Brand architecture refers to the framework by which the corporate brand and the product brands hold together with specific brand roles assigned to each. If these relationships have been worked out satisfactorily then the organization has completed the technology branding exercise. (This has to be followed up with actions programs to operationalize branding. That is outside the scope of the present paper).

The 4 stages and the implications they have for branding are discussed in the following pages. The implications to branding are tabulated at the end of the discussion for each stage.



Figure 1. Technology branding framework

1.2 TECHNOLOGY MARKETING

Listed below are the issues that hold the key to technology marketing.

Technology Marketing				
•	Technology forecasting			
•	Dominant design and single winner effect			
٠	Standard setting and collaboration with competitors			
•	Role of aggressiveness			
•	Unit-one cost effect			

Figure 0-1: Technology Marketing

1.2.1 Technology Forecasting

Technology markets are basically innovation driven. They offer a small window of opportunity for an innovator to gain commercial benefit. The time to compete in a market is when this 'strategic window' is open (Abell, 1978). Thus the ability to make commercial gains is dependant on the ability to anticipate/ predict technological change. Technological progress typically traces an s-curve which is called technology life cycle (TLC): it has (1) initial fluid phase of product introduction (2) Transitional phase of exponential growth, (3) mature phase of linear growth and finally (4) discontinuities phase of the invention becoming a commodity and a new technology taking over. The ability to forecast technological change depends on how accurately the technology companies can anticipate the inflection points of the S curve. (Betz, 1997; Roberts and Liu, 2001). Since anticipating these inflection points is not easy, predicting the success of a technology or a product is also not easy. Therefore branding individual products is risky since the product's lifespan is difficult to estimate. Branding needs consistent inputs and the unpredictable and short life cycles of technology products do not help consistency in branding. Since predicting technology is difficult it is better to brand an idea rather than product or even technology. (The branding implication, as can be observed, is mentioned for each factor at the end of the discussion in italics.)

1.2.2 Dominant Design And Single Winner Effect

In the initial stages of technology development, several technological options appear in the market. In due course, a dominant design evolves which shapes the future of the industry (Tushman and Anderson, 1990). Dominant design eventually becomes the industry standard. For instance the battle for the VCR standards was fought for 33 years and Matsushita's VHS standard emerged the winner (Hamel and Prahlad, 1994). The dominant design cannot be easily guessed. For instance, though the three competitors Matsushita, Sony and Philips bought the seed VCR technology from Ampex it would have been impossible to guess in 1959 that Matsushita's VHS standard will win the standard war. Thus the brand should try to be a philosophy brand rather than a formula brand (Kapferer, 1992). A philosophy brand stands for an overarching idea while a formula brand has a more restricted meaning. The latter is too tightly focused on the product and hence feature-driven. This reinforces the earlier conclusion that an idea has to be branded (e.g. "connecting people") and not the product or the technology.

1.2.3 Standard Setting and Collaboration with competitors

When the industry is in a state of ferment or technological instability, choosing an industry standard is a techno-political issue. A complicated array of forces like the organizations, strategic alliances, industry associations, regulatory bodies, customers, suppliers and vendors shape the technical standard (Tushman and Andersen, 1990). During this phase, the concept of industry itself is blurred and gets substituted by what is called "activity network". The activity network "is the group of firms struggling to shape and influence the perceived value, nature and technique for carrying out a particular activity" (Munir and Philips, 2002). Organizations, in this phase, tend to collaborate and compete at the same time. They collaborate to set the standard. Sometimes they compete to make commercial gains after setting the standard. This process has been called co-opetition (Brandenburger and Nalebuff, 1997). If the technological platform stabilizes and becomes the industry standard, to cement the organizational linkages further, co-branding can be attempted. A wellknown instance of co-branding is that of Intel with computer manufacturers. Cobranding logically carries forward into branding the cooperation aspect of technology markets. Co-branding helps defray costs, increases the incentive to co-operate and stabilizes the relationships between companies in a market that is traditionally unpredictable. Co-opetition and co-branding are thus useful approaches in technology markets.

1.2.4 Aggressiveness

The short opportunity window and the huge initial investment required, force technology companies to stake out aggressively for market share. Often companies that are quick to act or react, become dominant players. MS explorer came later than Netscape into the browser market. Apple computer's operating system was more user-friendly than DOS. However, it was Microsoft that won the market share battle in both cases because it was the more market savvy and aggressive. Thus brands in technology markets should be high on the dimension of proactiveness. While proactiveness is a pre-requisite in most markets, it is particularly important in technology markets because rapid technological changes lead to high product obselesence.

1.2.5 Unit-one Cost Effect

Technology companies have to make significant investments in R&D, product development, integration and prototype testing. Thus technology products suffer from what is called unit-one cost effect. Owing to this, the cost of producing the first unit is very high, relative to the cost of reproduction. For example, copying software like Adobe Photoshop on a CD-ROM or any other storage media is negligible compared to the development cost of the software – which might run into millions of dollars. Since the first unit is the most important intellectual asset and the subsequent units are merely copies, strong trademarks and patent protection measures are necessary to protect the brand's interests.

1.2.6 TECHNOLOGY MARKETING – BRANDING IMPLICATIONS

The table below has 4 columns. The first column mentions the feature/ item of technology marketing that is under consideration. The second column leads the item to its branding implication. The third column indicates if the branding implication is unique to techno-branding. The fourth column comments on how the branding implication is similar to or different from b2c/ b2b branding.

Feature of technology marketing	Branding Implication	Is this branding implication unique to techno- branding?	Comment
Technology Forecasting	Brand the idea not the product or technology	Y	Consumer products (except in "fads") do not change as fast as technology products
Dominant design	-do-	Y	Consumer product markets are more fragmented. Techno markets display "winner-takes- all" syndrome.
Collaboration with competitors	Co-branding and co-opetition	Y	Co-branding is more apt in techno-space because sharing resources like R&D with competitors is inevitable. In consumer markets there is more competition than co- operation.
Aggressiveness	Brand Proactiveness	N	Consumer products also adopt aggressive marketing postures

Unit-one Cost Protec Effect techno brand patents	logy and through	Y Though in consumer markets brand trademarks are protected, in technology needs to be protected.
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1.3 TECHNOLOGY BRANDING PHILOSOPHY

The technology branding philosophy described below is applicable to technology products as well as corporate brands. It is not very different from the philosophy of branding in the consumer product domain.



Figure 0-2 Technology Branding Philosophy

1.3.1 Create a Mission

The first step of the technology branding process is to develop a clearly defined mission statement for the brand. A company's mission can be defined in terms of three dimensions: who is being satisfied (what customer groups), what is being satisfied (what customer needs) and how customer's are needs being satisfied (Abell, 1980). For example, Sun Micro systems sees its mission as "....solve complex network computing problems for governments, enterprises and service providers" (www.sun.com). IBM's mission statement says "..at IBMwe strive to lead in the creation of....the industry's most advanced information technologies......" (http://www.geocities.com/rkchung/2a.ppt). Mission statement makes the reasons for the existence of the company clear. A mission statement rallies everybody in the organization behind an inspiring idea.

1.3.2 Brand Research and Information gathering

The next step in the technology branding process is to conduct primary and secondary market research to find out gaps in the market for the company's brands. Floathe Johnson, the brand consultants who have coined the word "technobranding" observe, "Many companies ignore this step, assuming that they know the marketplace sufficiently...but we found that the company's internal view of the market almost never coincides with the real world" (Pettis, 1995, p63). Techno companies thus tend to build software that is more sophisticated than functional. The marketing department is then asked to create a need for the product (Williams vanRooij, 2000). A more prudent course would be to research the market, identify a gap and then launch a product. For marketing research both internal (e.g. sales call data) and external sources (e.g. technology and trade journals, Gartner reports) should be exploited. *Marketing research should therefore enable the company to identify a positioning gap for itself and its products.* (This is discussed in some detail in the following paragraph.)

1.3.3 Brand Identity

A strong brand should have a clear brand identity - i.e. a set of unique associations that help the brand stand out (Aaker and Joachimstahler, 2001; Kapferer, 1994). There are 3 elements of brand identity that are particularly important for technology brands: brand positioning, brand personality and brand associations (Williams vanRooij 2000; Pettis, 1995 p63). Positioning is the act of designing the company's offering and image to occupy a distinctive place in the target customer's mind (Kotler, 2000). For example, IBM ThinkPad defines its positioning as "highperformance desktop alternatives with exceptional versatility". In Compaq's case it is "We deliver useful innovation, as opposed to innovation for innovation's sake". Brand personality can be defined as a set of human characteristics - like gender, age, physique, socio-economic class, passion, sentiments, likes and dislikes - all associated with a given brand (Aaker and Joachimstahler, 2000). A strong brand personality develops an emotional connect with the customer. Brand associations are the links with which customers sequence the brand attributes when they hear or see the brand name. A symbol like the Java coffee cup or a slogan like "intel inside" develops positive associations for the brand. Unless the 3 elements of brand identity, namely positioning, personality and associations are distinct, the brand does not stand out in the market clutter. Therefore, the brand's identity (whether corporate or product) should be unique.

1.3.4 Brand Communication

A strong brand image can be achieved only through consistent communication. Companies like Microsoft, HP or Intel have well defined guidelines for their communication programs. The macro (e.g. style and tone) and micro (e.g. typesetting and design) features of their communication programs are consistent. Besides passive communication through advertisements, they also pursue active communication through products and people. Thus the personnel of an organization are often seen as the ambassadors of the brand. *Hence brand communication, whether active or passive, should be unique in structure and content. So should be the vehicles*

chosen for communication.

1.3.5 Reliance on new technology tools in branding

Immersed as they are in technology themselves, technology companies are best positioned to exploit the power of new technology tools for brand building. Internet, mobile media and e-mail are some of the tools that can be used for reaching the target audience. Besides these options, technologies like voice-xml, interactive fax, automatic call routing, interactive voice/ multimedia, automatic e-mailer can personalize the content of communication. These methods are particularly effective in building a cyberbrand (Breakenridge 2001, p51). In 1996, Kinetix, a San Francisco based multimedia company was marketing an animation software package. The demo package had a cute dancing baby character. This animated picture got circulated as mail attachment to thousands of users all over the world. In a couple of months, it started appearing as a cult icon on web sites. When the product finally was launched, Kinetix already had a well-established brand name (Winkler 1999). Similarly Netscape distributed its internet browser free to capture a large installed base for Netscape products. New technology tools are more useful in techno-branding because, both the buyers and sellers are more conversant with them.

1.3.6 TECHNOLOGY BRANDING PHILOSOPHY – BRANDING IMPLICATIONS

Features of technology branding philosophy	Branding Implication	Is this branding Implication unique	Comment
		To techno- branding?	
Create a mission	Brand should be able to communicate the larger idea behind the enterprise to internal audience	N	B2c and b2b brands also need this
Brand research and information gathering	Marketing research should identify the unique technological capabilities of the company	N	Whether in b2c or b2b branding, unique capabilities of the brand have to be identified

Brand Identity	Brand positioning, personality and associations should be unique	N	Distinct brand positioning, personality and associations are not exclusive requirements of techno-brands. They are required for b2c / b2b brands as well.
Brand communication	Distinctiveness of brand communication	N	Distinctiveness of brand communication is not specific to techno domain
Reliance on new technology tools	Cyber-branding – using technology to quickly reach techno- customers	Y	Technology consumers are more conversant with new age technology tools. They will be more receptive to communication using these tools.

Thus branding philosophy is similar in consumer and technology product domains. However, the manner in which customers are reached (using high technology tools) is different in technology markets.

1.4 BRANDING TECHNOLOGY PRODUCTS

Technology product branding follows the technology branding philosophy described above. Some of the salient issues that have bearing on technology product branding are:

Т	Technology Product Branding				
Brand pyramid effect					
	Shorter life cycle				
•	Knowledgeable buyers				
•	Channel complexities				

Figure 0-3

Technology Product Branding

1.4.1 Brand Pyramid Effect

Ward and colleagues (1999) opine that technology products are better

branded through a hierarchical process called "Brand Pyramid". Brand pyramid shows the hierarchy of benefits ranging from functional features at the bottom of the ladder to emotional benefits at its top. The benefits in their ascending order are i) tangible/ verifiable features ii) the benefits derived from these features iii) the emotional rewards from using the brand iv) the "values" seen in the brand and finally v) the essence or character (personality) of the brand. Thus, unlike what is commonly believed, non-rational benefits are as important in technology products as they are in consumer products. For instance, the well known quote "Nobody was fired for buying an IBM" is a classic demonstration of the importance of non-functional benefits in technology products (Moorthi, 2000). Thus, technology brands like consumer brands should pay attention to intangible benefits besides tangible benefits.

1.4.2 Shorter Life Cycles

Consumer products have a relatively long and stable life cycle. By contrast, there is a relentless decline in the product life cycles of technology products. In the face of rapid product changes, brands are literally the only entities that represent stability in techno-markets. In fact, there is increasing realization amongst technology companies that brands can last indefinitely when carefully managed (Temporal, 2000). Thus, as mentioned earlier, if an idea is branded instead of the product, the organization can reap the benefits of branding, as long as the products launched are broadly in line with the branding effort. Branding in techno-space should be able to handle product evanescence.

1.4.3 Knowledgeable Buyers

In technology markets early adopters can decide the fate of the product. The followers exhibit risk-averse clustering behavior and mimic the first adopters. This is called Penguin Effect (Choi, 1997). So technology companies have to create positive opinion among early adopters to gain rapid acceptance. Early branding efforts should therefore be directed towards mobilizing positive response from opinion leaders. This will be more helpful than other means of communication like aggressive advertising. Branding effort will also have to be subtle in techno-markets because the buyer is knowledgeable.

1.4.4 Channel Complexities

The complexity of high-tech products requires distributors and retailers to do more than just reselling. Intermediaries have to add components, install, upgrade, service the product, train customers and integrate new products into the existing system. That is why most of the techno products like PCs are sold through VARs (Value-added retailers). VARs should understand the product as much as the manufacturer does, since some value addition takes place at their end as well. That is why in complex technologies, marketing communications target not only the final buyers and customers, but also the intermediaries and channels (Pettis, 1995, p 47). The VARs have a significant impact on the technology buyers' decisions. *Channel partners should therefore be a target as well as a component of the branding exercise*.

1.4.5 TECHNOLOGY PRODUCT BRANDING -- BRANDING IMPLICATIONS

1. N. M.

Features of technology product branding	Branding Implication	Is this branding Implication unique to techno- branding?	Comment
Brand Pyramid Effect	Brand should offer a ladder of benefits stretching from the tangible to intangible	N	Consumer brands follow a similar approach
Shorter life cycle	Brand should outlive product evanescence	Y	Usually consumer brands have longer life cycles
Knowledgeable buyers	Branding effort should be subtle	N	The situation is almost identical in b2b buying
Channel complexities	Brand communication should target the VAR as well as the consumer	Y	Usually the target of communication in consumer products is the end-consumer

Contd.,

1.5 TECHNOLOGY CORPORATE BRANDING

The role of corporate branding in technology markets is described in the following sections. There are two aspects to technology corporate branding: 1) the key elements of corporate branding and 2) properties of the technology companies that affect corporate branding decisions.

Technology Corporate Branding			
Key elements	Properties		
Corporate Identity	Fast Growth		
↓ Î	Global Reach		
Marketing Communication	Shoestring Budget		
↓ ↑	Intangible Assets		
Corporate Image	CEO as Brand Manager		

Figure 0-4 Technology Corporate Branding

1.5.1.1 Corporate identity

Corporate branding hinges on i) creating a positive corporate identity ii) formulating a strategy for internal and external communication iii) evoking a favorable corporate image of the organization among stakeholders (Abratt, 1989). Corporate branding should ensure that the identity and image are in constant adaptation without compromising the core values of the organization (Ind, 1997; Balmer 1995). Corporate identity encompasses corporate mission, philosophy, values and culture. Corporate identity issues are similar across product categories. Whether the corporate brand is a b2b brand like ABB or b2c brand like Coke or a techno-brand like Microsoft the concerns related to corporate identity are similar. The corporate brand should stand for quality, assurance and signal "peace of mind" to the customer. *Above all the corporate brand must be unique*.

1.5.1.2 Marketing Communication

Marketing communication is concerned with meeting the communication objectives of the corporate brand. External communication is effected through advertising, sales promotion, personal selling, direct marketing, public relations and internet marketing. Internal communication is channeled through company newsletters, newsgroups, business update meetings, CEO's mail, open feedback forums and dashboards. The media used for internal and external communication are thus different. They serve the widely different needs of the target audience. *Marketing Communication should present a coherent picture of the corporate*

brand by synergizing different communication inputs.

1.5.1.3 Corporate Image

Brand image is the impression formed about the brand in the receivers of corporate communication. Receivers of corporate communication are stakeholders such as customers, governments, local communities, financial communities, suppliers, buyers, media and influential groups (Abratt, 1989). The sum total of the impression of these groups configures the corporate image. *Brand communication, as mentioned earlier, should address the concerns of all the stakeholders*.

Thus technology corporate branding is not very different from b2b or b2c corporate branding. The concerns of corporate identity and communication strategy are similar across domains. Over and above these guidelines on corporate branding, there are specific features of technology companies that need to be taken into consideration while branding. These are described below.

1.5.2 Fast Growth

Technology companies are often characterized by rapid growth. Conventional view of branding holds that it takes several years to build a strong brand. This is truer for corporate brands because they rest on the trust and reputation. However, it is possible to reap the benefits of branding by even relatively young companies in the technology space, provided they are agile. Amazon.com, founded in 1995, became the leading web commerce site and arguably the best-known web brand in two years. Other powerful corporate brands built within a short span of time include Yahoo!, Netscape and Palm computer (Breakenridge 2001, p4; Winkler 1999). Word-of-mouth communication, effective public relations, programs to influence opinion leaders, innovative design and web site content can be creatively configured to rapidly build a techno brand. Cyber branding techniques can help rapid brand building in technology products.

1.5.3. Global Reach

Technology companies, with few or no exceptions are global market players. Global branding is complex because of barriers of language, customs, cultures, host country policies and alien market forces. Developing a single brand that caters to the needs of such a wide variety of customers is not easy. However technology companies, of necessity, need a single global brand because their clients operate worldwide. Firms using IBM or Bull in London would see no sense in having the same equipment in their Bogota or Kuala Lampur offices under a different name (Kapferer 1994, p211). Thus a technology brand will have to communicate to a global audience right from the outset. Further, since people in different countries are culturally different, branding should be able to find a common denominator (This is a particularly important concern in consumer branding). *Branding should be global and cut across national boundaries*.

1.5.4 Shoestring branding Budget

Most high tech companies are start-ups (with the exception of big names like Microsoft, Intel or IBM. These companies were built over a period of time). Start-ups are usually funded by venture capitalists. They have limited budget for brand building. However, it is possible to create a strong brand identity for a technology brand with a small budget. High tech markets are often focused and finely segmented. So promoting high tech brands might in fact cost much less than promoting consumer brands (Ward et al, 1999). Technology Solutions, the public relation agency for IBM, was responsible for setting up the Deep Blue vs. Gary Kasparov chess matches in 1996-97. Deep Blue defeated Kasparov in some games and this was a public relations victory for IBM. The IBM Deep Blue website received 74 million hits during this 9day event and IBM's stock had reached an all time high of 177 1/8 thanks to huge media coverage of the event (Winkler, 1999). Thus it is important to identify promotional avenues that are not necessarily expensive but effective. Branding should use focused promotion, direct marketing, public relations, referrals, sponsoring user groups etc rather than advertising because the former set of tools are more effective in techno-products.

1.5.5 Intangible Assets

Technology companies possess intangible assets – mainly in the form of intellectual property like patents, know-how and trade secrets compared to the old economy companies. Also they have a pool of knowledge workers with a tacit knowledge base. In high-tech firms, (Intellectual Property) IP management stretches from licensing the residual technology to gaining revenue from complete technology transfer. Further, technology is too complex and expensive for a single firm to develop. So firms generate value from their innovations not only by embedding them in their product and processes, but also by licensing, sub-licensing and cross licensing (Grindley and Teece, 1997). In consumer products the brand needs trademark protection. In technology space the brand as well as the product need protection because of the technology aspect of the latter. *Patent protection should thus include the product as well as the brand*.

1.5.6 CEO as brand manager

Typically in consumer product companies, a brand manager is responsible for the brand promise, marketing mix and positioning for the brand. But the issues tied up with a technology corporate brand (e.g. globalization, alliances, co-opetition) are too large to be handled by a brand manager. The person whose attention span covers these divergent issues is the CEO. In several successful technology companies the CEO has been the brand ambassador for the company (Bill Gates of Microsoft, Larry Ellison of Oracle, Andy Grove of Intel, Steve Jobs of Apple and Narayana Murthy of Infosys). His or her name is often used interchangeably with the organization. The CEO not only communicates the brand to the external world but also plays a significant role in communicating the brand essence to internal audience. The CEO should directly spend time and energy in corporate and product branding.

1.5.7 TECHNOLOGY CORPORATE BRANDING – BRANDING IMPLICATIONS

Features of technology product branding	Branding Implication	Is this branding Implication unique to techno- branding?	Comment
Corporate Identity	Corporate identity should stand out	N	Corporate identity should be unique for any brand, not just technology brands
Marketing Communication	Marketing communication should have a long term game plan coordinating communication aimed at different types of audience	N	Corporate brands in b2c as well b2b domains share similar concerns
Corporate image	Corporate branding should echo /reflect the aspirations of all stake holders	N	This is not restricted to techno brands
Fast Growth	Cyber branding techniques to be used for rapid brand propagation	Y	Non-technological brands typically do not grow so rapidly.
Global Reach	Branding should cut across cultural/ national boundaries	N	The same problem is faced by FMCG products when they move from one country to another.
Shoestring budget	Use focused promotion techniques rather than conventional mass media	N	b2b brands need to do the same because their customer base is also narrow though there may be no budget constraints

CEO as brand manager	The CEO should take personal interest in branding	N	This is not restricted to techno brands
Intangible assets	Patent protection should be a part of the branding process	Y	Patent protection is a more acute problem in technology companies because a lot of knowledge is tacit.

1.6 MANAGING BRAND ARCHITECTURE

Brand architecture is the relationship between the corporatc brand and the brands associated with it. Architecture encompasses brand portfolio roles, product-market context roles, structuring the portfolio and the portfolio graphics (Aaker and Joachimstahler, 2000, p 135). For a technology firm, the relationship between the corporate brand and the product brand can be one of the following three types i.e. i) Brand Dominance ii) Equal Dominance and iii) Corporate Dominance (Balmer, 1995). At times a powerful technical concept, framework or phenomenon can also be branded in conjunction with the corporate brand. At others, the corporate and product brand names can both be important (Pettis, 1995, p 174). But, by and large, in technology brands, there is a pronounced tilt in favor of corporate dominance. If the company is branded appropriately, its equity can be leveraged and extended to products (Winkler, 1999). Also in technology markets, customers are reassured by knowing who stands behind the brand. Big technology companies therefore tend to have the corporate brand as the parent and the product as the sub brand. Examples of such branding are "Microsoft Windows", " IBM Thinkpad", "Intel Pentium" etc. where the company plays the role of the driver brand. The corporate brand should therefore be the driver and the endorser. Products can be made sub brands. While products change with time, the corporate brand's continuity is a guarantee of performance and delivery.

Brand Architecture	Branding Implication	Is this branding Implication unique to techno- branding?	Comment
A variant of corporate dominance model	Corporate brand is the driver and endorser, sub- brands are developed in important product categories	Y	Though suitable to b2b markets this model is not often adopted there. B2b branding is almost synonymous with corporate branding. In technology markets by contrast there are often brands like Microsoft- Windows and Intel-Pentium.

1.7 SEVEN IMPLICATIONS FOR TECHNO BRANDING

The important implications for techno-branding that arise from the above discussion can be summarized as follows

1. Brand an idea

In techno branding it is better to brand an idea rather than a product, market or segment. This is because products and technologies change rapidly. Branding on the other hand needs to be anchored in moorings that are relatively stable. Thus branding a vision or an idea rather than a product should be the broad thrust of technology branding.

2. Co-brand when possible

Competing companies often co-operate in technology markets. This is because an organization, all by itself, does not possess the wherewithal for ushering in a new technology. Also since standard setting is a techno-political process, it is preferable to have as many companies on board as possible. Thus if the technology stabilizes in a segment or market it might be desirable to co-brand (e.g. Intel Inside).

3. Patent the brand and the technology

Trademarks and intellectual properties are much bigger questions in technology markets than in others. Often if the technology edge is lost the market is lost. Therefore the technology associated with the brand / sub-brand as well as the brand itself need to be protected through an IP protection regime.

4. Branding effort should be subtle

Techno buyers are knowledgeable buyers. It is therefore important to persuade them through providing the right kind of rational and emotional benefits. Since the buyer is knowledgeable communication should be subtle.

5. Channel is part of the branding effort

The channel partner in technology markets is called VAR (value added reseller). The VAR tailors the product or the service to suit the requirements of the consumer. Thus he is a target as well as a component of the branding exercise. He should be a target of branding communication because he needs to realize his importance for the branding effort. So also he should be an integral part of the branding effort because his communication to the consumer should be in sync with that of the company.

6. Use tools of new age technology

Technology companies have greater access to and knowledge of technology than other organizations. Thus they also have a greater propensity to use new age tools. So do their customers who are often technology companies themselves. Thus technology brands are ideal candidates for "cyber branding". This would mean effective use of the web site, user groups, interest forums, email and other internet based tools for brand communication.

7. Organization is the brand, product is the sub-brand

A technology brand's architecture should be in line with the requirements of the technology market. Thus the corporate brand should be the driver. This is because the corporate brand offers the customer the assurance of a relatively permanent association. Products (e.g. DOS/ Windows) are sub brands and can change depending on market requirement. But the parent (e.g. Microsoft) remains unchanged. With the corporate brand as the driver and the product sub brand as the follower, technology companies can balance the conflicting demands of permanence in branding and evanescence in products.

2.0 LIMITATIONS OF THE FRAMEWORK/PAPER

The approach described in this paper is based on conceptual understanding. It needs to be tested. Besides the focus of the paper was the info-tech industry. Other high-tech domains like biotechnology, precision instruments, semi-conductor industry were not a part of the present study. These industries might throw up different perspectives on the role of branding in technology markets. Further, this paper is strategic in its focus. Micro level details like brand name, logo, visual, tag line and promotional plan have therefore not been exhaustively discussed. Discussion on operational details of advertising and communication plan has been kept at a minimum. The study therefore limits itself to offering a conceptual framework for technology branding.

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