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Media Convergence and Business Ecosystems

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Abstract

Because the markets in which Apple, Google and Microsoft compete are characterized by rapid technological advances, their ability to compete successfully is dependent on their strategies to ensure the launch of competitive products, services and technologies. This paper focuses on convergence and links with the reconfiguration of value chains in the “new media” sector and diversification strategies adopted by the three companies. As these organizations are made up of different business units, a question arises to how resources and competencies are to be allocated across these businesses. Performance and profitability are determined by an organization’s resources and competencies. The different modes of growth (strategic alliances, partnerships, mergers & acquisitions) and in particular, the emergence of business ecosystems will be analysed.

Introduction

Since the beginning of the 1990s, the strategies employed by today’s media and telecommunication companies have led to increased concentration within the industry. In part, this concentration can be explained by worldwide deregulation and privatization trends. This, in turn, has contributed to a decrease in so-called natural monopoly structures. The digitalization and convergence of information and communication technologies (ICT) has also had a significant impact on media business strategy. In addition, the development of digital and interactive technologies has accelerated the erosion of the existing frontiers between the media industries (Peltier, 2004) The result has been the creation of an entirely new set of actors (Internet giants, telecommunications service providers etc.) who now compete directly with many of the established players in the field of media and telecommunications.

In this paper, we start with a discussion of convergence. We describe the role of the technological convergence in creating and adding value for such companies as Apple, Google and Microsoft. The goal of this research is to look at how convergence has impacted the business strategy of such companies as Apple, Google and Microsoft. This paper is divided into two parts. Part 1 examines product line strategy. Apple began with the launch of its iPod followed by iTunes (2003) and iPhone in 2007. Microsoft, for its part, entered into the world of videogame technology with the launch of its X-box video game system in 2001. Google is best known for its search engine which has been the catalyst for other technologies and software innovations.

Part 2 focuses on convergence with special consideration given to the importance of value chains, the evolution of the different players’ positioning and their related strategies. The different modes of growth (mergers & acquisitions, partnerships and alliance) are at the heart of complex networks between companies leading to the development of business ecosystems.

BUILDING COMPETITIVE ADVANTAGES IN A CONVERGENT ENVIRONMENT

In this section, I propose an analytical framework for examining the external factors (mainly the drivers of convergence) that have influenced the strategic choices of Apple, Google and Microsoft by enabling them to compete in a global marketplace. These external factors have reshaped Apple, and Microsoft and their successful efforts to compete with the players of the new economy such as Google.

Changes in the information industries

Convergence is a buzz-word (Lind, 2005). Wirth (2006) developed a review of literature underlining the fact that “one of the challenges of studying media convergence is that the concept is so broad that it has multiples meanings” (p. 446). Scholars differ in their opinions on the extent and effect of convergence on industries. The notion of convergence is very broad (Lawson-Borders, 2003; Stipp, 1999; Thielmann & Dowling, 1999) and can

be understood at different levels: policy and regulation, markets, industries, technology developments and demand (Wirtz, 2001). It can be defined as the process of technological integration (Danowski & Choi, 1998). Convergence has led to different content and services provided in various forms via different terminals.

Convergence also means the joining together of different industries in terms of product development (Johnson *et al.*, 2008, p. 67). Fransman (2002) defines convergence as “the blurring of borders between telecoms, computing and media.” (p. 39). In principle, convergence redefines market / industry boundaries and requires an analysis of market and/or industry frameworks. In the information industries, the historic frontiers that once separated broadcasting, cable, telephony and Internet are becoming less distinct (Gershon, 2000, p. 95).

More generally, many authors mention the emergence of the information industries (Chon *et al.*, 2003, p. 142) referring “to activities linked with one of these three processes: content production-related services (e.g., publishing, movies, and broadcasting); content delivery-related services (e.g., telephony and cable) and data processing services (e.g., software and programming).” As interactive multimedia production and delivery of content are increasingly available via networks, instead of the single-media frameworks of the past, opportunities to create value tend to be greatest for firms and change the competitive position of various players.

These expressions of convergence reflect the changing technological realities between broadcasting, computer and telecommunications for the control of future markets.

As the frontiers between media and telecommunications sectors become more flexible, there are two considerations that must be addressed: technology and business. Picard (2000) adds that convergence itself does not produce any revolutionary change in content but creates new economies of scope that permit the existing communication and distribution of content to be faster, more flexible and more responsive to consumer demand. Economies of scope depend also on the specificity of resources and capabilities and their transferability across industry boundaries (Danowski & Choi, 1998).

Evolution of media value chains

The decades of the 1980's and '90s have been dominated by the advent of the transnational media corporations. Such companies as Time Warner, Sony and News Corp demonstrated that complementary assets were key to business survival (Gershon, 2005; Carpenter & Sanders, 2007). In order to secure needed assets (tangible and intangible), these large firms moved “upstream” and “downstream” in the industry value chain. Such companies recognized the importance of vertical integration.

Progressively, the notion of “media” has broadened in parallel to the restructuring of value chains and the emergence of new comers in the media sector. Consequently, since the mid-2000s, Google is now considered as a transnational media corporation in its own right. In its 2004 annual report, Google underlines its multiple activities: “We began as a technology company and have evolved in a software, technology, Internet, advertising and media company all rolled into one” (p. 9). The convergence between ISPs, E-commerce companies and equipment manufacturers is fully illustrated in Table 1.

Table 1.
Towards convergence of ICT and media groups in 2000 & 2012
(Market capitalization ranking)

Group		Market Capitalization (USD billions)	
		2000	2012
1	Apple	8.6	322
2	Google	53.4	252
3	Microsoft	476.4	219
4	IBM	192.4	206
5	Intel	554	130
6	Samsung	21	122
7	Cisco	448.33	96.5
8	Amazon	4	90.3
9	HP	90	89
10	Facebook* - estimate	0	60
11	Baidu	16	48.4
12	Tencent QQ	1,1	41
13	eBay	16.4** (2005)	42.8
14	Nokia	209.8	31.7
15	Sony	23.7	9.8
16	Blackberry	162	23.7

Source: Adapted from *Le Figaro*, June 2011.

THE STRATEGY OF NEW ENTRANTS:

From Product Development to Convergence/Diversification Strategy

The diversification strategies have been motivated by the convergence context. But Microsoft, Google and Apple have adopted different diversification strategies. According to Porter (1980), there are two types of competitive advantage: product differentiation and low cost. Products differentiation is especially important when it comes to innovation in the rapidly changing Business to Business and Business to Consumer E-commerce markets.

Apple: Convergence Strategy Based on Software and Devices

Apple is a major player in the PCs, portable digital music players, and mobile devices. The company also offers servers and related software and services. The company can be described as both a software and hardware company. Since the launch of the personal computer Apple 1 in 1976, Apple has remained consistent in its ability to innovate successfully. At the end of the 1990s (marked by huge losses), Apple reorganized with success its activities to concentrate on its more profitable resources and competencies to enter new markets (music, telecommunications, connected TV), and to adopt a convergence strategy.

Apple entered the mobile phone market in 2007 with the introduction of the iPhone and the digital media industry with the iPod portable music and video players and iTunes online stores. According to Brookey, "Jobs has used technology to actualize a synergistic relationship driven by the integration of hardware, software, and content. This synergy is apparent in the iPod/iTunes business model, where content becomes the lure for hardware products that have a much higher profit margin. The synergistic relationship is then extended when the heat from the iPod helps establish the Apple brand as a purveyor of products that deliver digital media" (2006, p. 116).

Its products are very successful in terms of design, functionality and innovativeness. In addition, Apple has always adopted an "original" Internet pay model (subscription model for content in iTunes) compared to its competitors. Apple innovates in products and services which generate direct revenues to justify the huge investments. More recently, Apple face challenges as it expands in new areas. One of them is directly linked with its mobile platform operating system: iOS.

Google and Nonrelated Diversification Strategy

Google has become the consummate Internet search engine company that has introduced the principle of personalized advertising to the general consumer. Since its creation in 1998, Google has disrupted the market with an Internet-based (royalty-free) product offering. Google is one of the most reliable and accurate search engines available on the web. The company has subsequently introduced a number of related products for both the computer and wireless telephone markets. Google innovates in services and applications that contribute directly and indirectly to its core business. More recently, the group has launched two new products: the Android (the smart-phone platform), and Google Chrome (an Internet search browser). Google has adopted a diversification strategy of nonrelated media products and services by means of several acquisitions. This includes the on-line video service, *You Tube* in 2006 (for \$1.6 billion) and cell phone manufacturer Motorola (for \$12.5 billion) in August 2011. Clearly, hardware and software have become more and more inextricably linked at Google. For most of its products, Google uses a “family” branding approach except for Android and YouTube which remains somewhat individualized.

Microsoft and Diversification Strategy

All during the 1990’s, Microsoft was trying to position itself for the future by moving beyond the PC into other areas of information and entertainment technology. Microsoft’s huge financial resources have allowed the company to compete aggressively in new markets: video game consoles and more recently cloud computing. Throughout the decade of the 1990s, Microsoft was the market leader in business operating software. The firm has maintained its dominance in both operating systems and software applications and products (such as Windows 95, Windows 98, Windows NT, Windows XP, and Vista). Since 2000, Microsoft has increasingly become more proactive in integrating Internet services evidenced by its Internet browser (Internet Explorer) as well as early attempts at Web TV in 1998. Of particular importance was the attention given to its MSN Internet portal (Wirtz, 2001, p. 498).

While enjoying a virtual monopoly in PC operating systems, the company decided to enter the video game market in 2001 with the Xbox videogame system (and peripherals) with goal of breaking the Japanese videogame monopoly. Videogames represented a new area for Microsoft. The company suffered from a lack of experience and a fairly negative image linked to its monopoly status and past business practices (Daidj & Isckia, 2009). Since its entry, Microsoft has considered the Xbox a long-term strategic investment. With the Xbox, its objective is to create a new entry point in households: a “media centre” defined as a central storage and distribution unit for digital content in the Home.

Videogames are the sort of product which is based on multiple-purpose hardware and which should grow to its full extent once broadband is widely available. As early as 2002, Microsoft decided to be the first mover in the promising online game sector. In addition, Microsoft has managed to apply its software engineering know-how (competence) to develop a specific OS for the Xbox 360. Finally, this strategy of diversification can be considered as a real success based on a powerful console, several strong games franchises and an impressive online-gaming service, Xbox Live leading to a prominent position in the marketplace. More importantly, it speaks to the importance of diversification strategy.

There is another illustration of the diversification of Microsoft in the consumer electronics sector with the DVD standard (Daidj *et al.*, 2010). In January 2002, Toshiba started the race by presenting a specification proposal of the dual-layer DVD-9 disc (HD-DVD) at the DVD Forum. HD DVD’s main supporters were Toshiba, NEC and Microsoft. In parallel, nine electronics manufacturers (among them: Sony) and studios delivering the content established a consortium to promote the Blu-Ray Disc format. The Blu-Ray / HD DVD rivalry was also a battle for open software and markets. Microsoft wanted to push its own proprietary standards using Windows and to expand its proprietary control over video codecs and embedded interactivity development. Finally, Sony won the battle in 2008 and the Toshiba announcement of format HD DVD defeat occurred even if two large studios (Paramount and Dream Works) were members of Toshiba consortium.

The previous analysis of Apple, Google and Microsoft suggests one important finding; namely, that convergence and diversification strategies are closely linked (Table 2). The three new entrants are engaged in nearly the same strategic activities even if their core business are quite different.

Table 2.
Apple, Google and Microsoft: Convergence Strategy

Strategic business units (Main activities & products lines)	Apple	Google	Microsoft
Online services	Internet offerings	Google online advertising	Online services business (online advertising including search, display and advertiser and publisher tools)
Web browser & OS	Mac OS X and iOS operating systems	Chrome (OS & web browser)	Client (OS & web browser)
Server and tools		Server and tools	Server and tools (Windows Server, Microsoft SQL Server)
Cloud computing	iCloud	Cloud Computing applications (GG docs)	Microsoft Business Division (Microsoft Office system)
Entertainment	Third-party Digital content (music, movies, games, podcasts)	Entertainment	Entertainment and Devices Division (Xbox 360, Zune platform, PC games...)
Digital devices	iPods, iPhones, iPads, laptops and desktops		
Other revenues		Other revenues	Other revenues

Source: Company Report

The success of convergence/diversification strategies can be explained by an organizations' distinctive resources and core competencies. Since the beginning of the 2000s, Apple, Google and Microsoft have been expanding out of their own and specific core business into other media and communications markets (Table 3).

Table 3.
The Main Resources and Competencies of Apple, Google and Microsoft

	Apple	Google	Microsoft
Core business	Designing and manufacturing consumer electronics, PCs and related software and peripheral products and networking solutions.	Development of a very powerful search engine: "matching Internet users with advertisers looking for leads"	Development, manufacturing, licensing and supporting software products (operating systems, server & business solution applications...)
Threshold resources (tangible and intangible)	<ul style="list-style-type: none"> - Organizational culture promoting entrepreneurial behaviour - Significant brand equity - Customer service 	<ul style="list-style-type: none"> - Sophisticated search technology - Strong Brand Image 	<ul style="list-style-type: none"> - R&D resources focused on cloud computing services - Technology - Brand image - Patents licences
Threshold competencies	<ul style="list-style-type: none"> - know how in designing small, power-efficient consumer electronic devices - alliances with recording companies (iTunes (24x7) online commercial platform) 	<ul style="list-style-type: none"> - Capability to solve both software engineering and hardware engineering issues to make Google Search viable and the most widely search tool 	<ul style="list-style-type: none"> - Expertise in many IT-based innovations and technologies - Implementing knowledge competencies in an online system
Unique resources and/or core	<ul style="list-style-type: none"> - World's number one brand name - Provide innovative products 	<ul style="list-style-type: none"> - Scaling systems to handle traffic and monetizing it resulting in the development of the most 	<ul style="list-style-type: none"> - Financial resources (high performances)

competencies	and solutions via design and development of hardware and software	widely used search engine	
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Source: Company Reports.

THE ROLE OF COMPETITIVE STRATEGY

In the world of converged services, (voice, data, video and applications), Microsoft, Google and Apple have adopted different strategies mainly diversification as analysed in the previous part. We'll present the main links between their global strategies based mainly on diversification and the different ways in which these growth strategies can be achieved. This includes mergers and acquisitions, strategic alliances and business ecosystems.

Reconfiguration of Value Chains, Diversification and RBV

Special attention will be paid here to the changes in the value chain and the diversification strategy in the light of the analytical framework: the resource-based view (RBV) which has become an influential framework for analyzing corporate strategy (Prahalad & Hamel 1990; Barney, 1991; Chatterjee & Wernerfelt, 1991; Peteraf, 1993; Hoopes et al., 2003; Wernerfelt, 1984, 1989).

Since the new media industries are the result of the union of several ICT sectors, they naturally involve numerous participants in value chains which were once independent. This is no longer the case today since traditional barriers between these different industries have collapsed (Gershon, 2000) leading to the adoption of new patterns of behaviour by various participants (in the form of mergers & acquisitions, alliances and partnerships) in an attempt to pool resources and competencies.

The reorganization of value chain (Wirtz, 2001) in telecom and media assigns new roles to players contributing to the chain, in the creation of value along the chain of telecom-media convergence services. The RBV is very useful to complete the value chain approach. The value chain provides some ways in which strategic capabilities can be diagnosed. Strategic capabilities can be defined as the resources and competencies of an organization needed for it to survive and to prosper (Johnson et al., 2008, p. 95). The resources represent inputs into a firm's production process. They can be tangible or intangible.

The RBV approach considers the firm as a "collection" of resources which are tied to the firm's management: firms are heterogeneous with respect to their resources and capabilities. The concept of resources is often associated with the idea of competencies, and more precisely with organizational competencies (i.e. the routines, know-how and processes that are specific to the company). Following the RBV, Prahalad and Hamel (1990) define the core competencies as "the collective learning in the organization, especially how to coordinate diverse production skills and integrate multiple streams of technologies" (1990, p. 82).

As resources and competencies are rare, valuable, specialized, hard to access and difficult to imitate, non-substitutable, they often constitute strategic assets from which the company's competitive advantage stems over its rivals. In the case of "new media" industries, Cardoso (1996) explains that a multimedia company must control four main core competencies: creation of content, exclusive access of content, experience with marketing and access to distribution channels. Peltier (2004) considers also that the content access control is a key issue. Content represents a scarce resource and a source of value for both traditional (books, newspapers, TV channels) and new (Internet, video games) media. This fear of a shortage in content has motivated several M&A (among them AOL Time Warner, Vivendi) and upstream vertical integration operations. Access to distribution networks for content constitutes also a resource but Internet favours media content owners rather than media content distributors: media companies can sell directly to consumers over the Web, bypassing the cable, telecom or satellite middleman (Hindery, 2006).

Diversification and Competitive Advantage

The RBV perspective puts also both vertical integration and diversification into a new strategic light. The three basic motivations for diversification are growth, risk optimization and profitability. Diversification is driven by the possibility of developing synergies from operating in different product/service markets. Consequently, the benefits of diversification are very often associated with economies of scale, and/or of scope and revenue-enhancement opportunities, often referred to as synergy (Carpenter & Sanders, 2007, p. 191).

Economies of scope can arise basically from eliminating duplication between activities by creating a single shared facility. It can be relevant especially for groups belonging to sectors characterized by high fixed costs. In the case of media and telecommunications, the motivation for cable TV companies to propose telephone services, and for telecoms operators to offer cable TV, can be explained by the huge costs of networks and billing systems that must be spread over the highest number of subscribers (Grant, 2005).

From Diversification Strategy to Alternative Modes of Growth

Over the last two decades, mergers and acquisitions (M&A) and strategic alliances have become the most preferred strategic tool of firms especially in the entertainment industry. These vertical and horizontal operations have occurred mainly in the United States and in Europe. All groups, including new entrants (from telecommunications, Internet, IT, or software sectors), and those that have been present for some time such as the major media groups, have carried out these strategies by means of external growth operations and alliances.

The Development of Strategic Alliances

Definitions of alliances are numerous. In general, strategic alliances can be considered as “agreements characterized by the commitment of two or more firms to reach a common goal entailing the pooling of their resources and activities” (Teece, 1992, p. 19). The partnerships allow in general both players to take advantage of each other's strengths. These relationships could enhance the effectiveness of the competitive strategies of the participating firms by the trading of mutually beneficial resources such as technologies, skills, etc.

A substantial number of theoretical and empirical studies, both in economics and strategic management, have focused on co-operation (in the form of agreements or alliances) between companies. These studies are based on a variety of theories including the theory of the firm (theory of transaction costs, agency theory, and property rights theory), the RBV, the Knowledge-based view (KBV), the evolutionary theory and game theory.

Many authors distinguish strategic alliances between rival companies (with the aim of developing a sustainable competitive advantage) from other forms of co-operation which are more traditionally regarded as ‘tactical’ (Porter & Fuller, 1986), in other words, responding to a specific and isolated problem. This classification is important because of the different implications it has on the management of the alliance. Alliances with competing firms impose the protection of the company from losing its distinctive resources and core competencies (such as knowledge).

One must therefore exclude partnerships between clients and suppliers, subcontractors and manufacturers within the same economic sector, from strategic alliances, because these relationships do not deal with the issue of rivalry between allies (Dussauge & Garrette, 1991). Therefore, strategic alliances do not only have an impact outside the coalition, but also within it on the partners themselves, because the partners, while developing close collaborations in certain fields, find themselves in competition in others.

Strategic alliances are considered as an efficient means to combine the distinctive resources and the core competencies of organisations to achieve a sustainable competitive advantage. Central to this strategy is the ability to create knowledge (Gehani, 2002; Grant, 1996; Nonaka & Takeuchi, 1995) and the contribution of tacit knowledge and valuable knowledge resources difficult to imitate (Darroch, 2003; Lundvall & Nielsen, 2007). Knowledge has become a strategic competence. Consequently, the need to form knowledge alliances is the most frequent factor in the rise of inter-firm alliances and joint-ventures (Badaracco, 1991; Inkpen, 1997; Tiemessen *et al.*, 1997; Powell, 1998). In addition, in the first stages of knowledge creation, knowledge tends to be tacit. The market is not an efficient transfer mechanism for tacit and/or dense knowledge (Liebeskind *et al.*, 1996).

Valuable Mergers and Acquisitions

Mergers and acquisitions (M&A) are not classified as strategic alliances, since they do not involve independent firms with separate goals or call for continuous contribution of participating firms such as transfer of technology or skills between partners. The strategic motivations for M&A are nearly the same than the objectives of strategic alliances: to achieve growth by opening up to market opportunities; to have a better access to capital, to intangible assets of other firms such as managerial skills and knowledge of markets and customers etc. Mergers and acquisitions have advantages as well as disadvantages in comparison to strategic alliances. In short term, strategic alliances may create more problems (risks) in control and implementation while M&As can provide a merged firm with a more integrated decision-making structure.

Apple, Google and Microsoft have signed agreements with different partners belonging to the ICT sector but also to the automotive, banking industry. These partnerships concern research, production, marketing activities and knowledge sharing. Partnerships between large companies seem to be the norm. The acquisitions involve different categories of players (big and small). In addition, they are more and more involved in different networks and business ecosystems.

These ties are often strengthened by the presence of managers from one company on the board of directors of another company leading to “cooperative” strategies (see below).

It was the case of Apple and Google: Steve Jobs (Apple) sits on the Disney board of directors, and Eric Schmidt (Google) sits on the Apple board until 2009. In August 2009, Apple® announced the resignation of Eric Schmidt, chief executive officer of Google from Apple’s Board of Directors, a position he has held since August 2006. As explained by Steve Jobs, Apple’s CEO. “Unfortunately, as Google enters more of Apple’s core businesses, with Android and now Chrome OS, Eric’s effectiveness as an Apple Board member will be significantly diminished, since he will have to recuse himself from even larger portions of our meetings due to potential conflicts of interest. Therefore, we have mutually decided that now is the right time for Eric to resign his position on Apple’s Board.”

From Cooperation to “Coopetition” and Business Ecosystems

If the 1990s have seen significant growth in international strategic alliances, paralleling the increase in cross-border mergers and acquisitions (M&As), the 2000s have been characterized by the emergence of a “new form” of network organization: the business ecosystem (based on the ecological metaphor). This network crosses a variety of industries. Moore (1996) defines the business ecosystem as a coalition which brings together actively involved people who belong to different sectors, but share the same interests, values and common goals.

One of the main features of business ecosystems is related to the notion of platforms. Several industries are characterised by platforms which lead to the coordination between players and create value (Daidj, 2011 *forthcoming*; Daidj & Isckia, 2009). Platforms are based on technologies that provide support and interact with products and services of other firms. Gawer and Cusumano highlight the critical role played by “platforms” (Gawer & Cusumano, 2002 and 2008; Baldwin & Clark, 2000). Electronic platforms play a strategic role in enhancing value creation within the ecosystem by sustaining input from various stakeholders. Successful platform builders include Google (with Android and Google Chrome OS), Microsoft (with its Windows operating system). Even if the platform needs a leader, firms are embedded within business ecosystems, the performance of which influences the success and survival of all their member firms. “In general becoming a platform leader requires a compelling vision of the future as well as the ability to create a vibrant ecosystem by evangelizing a business model that works both for the platform-leader wannabe and potential partners” (Gawer & Cusumano, 2008, p. 35). The same idea is developed by Iansiti and Levien: “Keystones *must* manage the health of their ecosystems as a key business priority” (2004, p. 220).

In business ecosystems, firms turn to greater openness in innovation (some platforms are free and open) and at the same time develop “cooperative” strategies. Co-opetition is more and more associated with the notion of business ecosystems. Co-opetition has its theoretical foundations in game theory (Brandenburger & Nalebuff, 1996).

The notion of co-opetition is relatively complex and multifaceted (Luo, 2007). Coopetition is often considered as an “extension” of co-operation (in the form of agreements, alliances, strategic

alliances) between companies. Coopetition is a situation in which rival companies (two or more) simultaneously compete and co-operate with each other (Bengtsson & Kock, 2003). Cooperation and competition occur during the same period. The nature of coopetition is dynamic: cooperative and competitive strategies do not remain constant over time (Luo, 2007). Moore (1993) emphasises the phenomenon of co-opetition which is inherent in ecosystems. "Members of a business ecosystem work co-operatively and competitively to support new products, satisfy customer needs, and eventually incorporate the next round of innovations" (Moore, 1993, p. 76).

The Mobile Business Ecosystem

The current and future mobile landscape is characterised by the emergence of business ecosystems. As the real battle is to become the dominant OS (OSs are not interoperable), device manufacturers, Internet giants, developers and mobile operators are involved. The best example of business ecosystem in the mobile industry is the open-source mobile software platform Android. In 2007, Google along with an alliance of leading technology and wireless companies including T-Mobile, HTC, Qualcomm, Motorola and others announced the development of Android, a first complete, open, and free mobile platform. The strategic objective of Google with this platform is less to control the business ecosystem than to be a strategic competitor to other firms such as Apple. RIM and Apple have chosen to develop a "closed" OS leading to a reduction of the potential in terms of scale and reach of smart phones employing their OS. By 2012, the Google Android mobile operating platform is forecast to be ahead of Apple's iPhone, Windows Mobile and RIM's BlackBerry platforms at the international level. The acquisition of Motorola by Google shows its willingness to become market leader.

Conclusion

Convergence initiates change processes in competition, business networks and economic models. Companies that specialised in one or more of ICT markets are moving into new sectors. Many new comers on the media market belong to several different business areas. It is the case of Apple, Google and Microsoft who progressively have adopted a convergence strategy based on diversification of their activities.

The objective of a future research is to analyze the impact of the convergence (technological, industrial, and organizational) and of the fast development of social networks on the strategy of three major players engaged in a "technology race" and conquest of the markets: Apple, Google and Microsoft. How do social networks affect the roles and positions of actors such as Microsoft, Google and Apple and their relational strategies? The moves towards cloud computing will strengthen social networking activities. As media sharing needs huge data storage infrastructure, most of "convergent" players have started to build cloud infrastructure for all the media and cloud-computing services.

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