

Transforming an old economy company into a new economy success: the case of NTT DoCoMo

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Keywords

Innovation, Leadership, Strategy, Internet

Abstract

Uses a case study to discuss factors for success in the course of achieving strategic innovation in the mobile Internet business field, specifically in the creation of new markets through the deliberate and strategic maintenance and subsequent integration of paradoxical organizations and strategies under a single corporate umbrella. The corporation accepted a new organizational body imbued with an entrepreneurial spirit supported by different types of personnel and then continuously promoted entrepreneurial strategies based on time pacing. At the same time, with the aim to implement strategic innovation, the company integrated the above strategies with deliberate strategies based on event-based pacing practiced by the existing organizational body. Behind this successful innovation lies the formation of a strategic community with both new and traditional organizations through the leadership of top and middle management and the subsequent integration of paradoxical strategies promoted by knowledge management, which led to the creation of a new market known as the mobile Internet.

Positioning of this research

With respect to innovation and organizational change in big business to date, study groups centered on Tushman, Nadler and Romanelli and others (Tushman and O'Reilly, 1997; Nadler and Tushman, 1989; Nadler *et al.*, 1995; Romanelli and Tushman, 1994) proposed a punctual equilibrium model and mechanisms for innovation in a multitude of fields and business types. Organizational change is divided into incremental and discontinuous change, depending on its content. These groups have shown how incremental change affects stability-oriented organizations and discontinuous change affects change-oriented organizations. The most important issue facing large corporations aiming to achieve discontinuous change is to convert strategy, structure, competencies and processes simultaneously.

Brown and Eisenhardt (1979; 1998) describe a strategy creation and implementation model that can handle competition, especially in leading-edge fields, from the viewpoint of the realization and continuity of change. This is a strategy for change designed continually to create a dominant competitive position in a rapidly changing environment with many competitors.

Companies in businesses such as IT, multimedia and communications, which expect to face a complex and uncertain future, need to find new directions in the twenty-first century in order to dominate the competition. They need to oversee a radical transformation of the basic framework that was used in the past, including existing strategies, structure, culture, competencies and business processes. In order to engineer the large and radical discontinuous transformation discussed by Tushman or

Nadler, the larger and more complex the organization, the more paradoxical the situation faced by the organization will be during the innovation process.

Generally, paradox phenomena can be seen internally at every level of the organization. Various paradoxes exist, not only in the entire company, but also in elements of business units such as divisions and teams. Specifically, we can mention the "management paradox" (Thompson, 1967) of flexibility and certainty, the "organizational culture paradox" (Pascale, 1985; 1990) of autonomy of organization members and socialization, and the "strategic paradox" (Mintzberg, 1987) of deliberate and emergent strategies.

If such paradoxes provide corporations with the chance for radical transformation, the content and quality of radical transformations must be greatly influenced by the nature of the paradox conditions. Therefore, it may become increasingly important to adopt the point of view that the paradox phenomenon is constructively and positively understood as being the driving force for the radical transformation of corporations (Quinn and Cameron, 1988).

For large businesses that are facing reorientation (Nadler *et al.*, 1995), with regard to the formation of radical transformation models for the future, the objective of this paper is to use examples of strategic innovation at traditional big businesses in the extremely competitive field of the mobile Internet in order to explain how differing strategic organizations cause various paradoxes within big businesses and thus achieve radical transformations.

This paper relates to a case study on the mechanism through which NTT DoCoMo, Inc. (hereafter referred to as DoCoMo), the largest mobile communications carrier in Japan, endeavored to achieve its strategic



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innovation. Specifically, in order to establish the leading edge in this market, the top management proposed a major paradox in a strategic and conscious manner by intensively promoting mobile Internet services which are expected to bring about the coming mobile e-commerce revolution. This major paradox was to be built within the company to cope with the fundamental framework that consists of the strategy, organization, culture and competencies of the company that support innovation.

DoCoMo's i-mode revolution: a case study in the creation of a mobile Internet market in Japan

Creating a new mobile market

In Japan, DoCoMo[1] has been evaluated as one of the fastest growing businesses to emerge in the last decade of the twentieth century (*Nikkei Business*, 2000). The company registered an operating income of \$7.3 billion (consolidated) for the financial year that ended in March 2001, becoming a high-return company second only to Toyota. Since 1992 when DoCoMo was spun off from its parent company, NTT, as an independent mobile communications entity, DoCoMo has been endeavoring to open a large door to the mobile phone market in Japan.

Mr Koji Oboshi, who was the president of DoCoMo in 1997 and is currently its chairman, predicted that the growth curve reflecting the increase in the number of mobile phones in terms of voice communications would become saturated in the near future. As a result, he felt a sense of impending crisis over the returns and growth of DoCoMo. Focus was placed on the data communications market, a new market that would eventually take over the voice communications market.

Formation of a new organization directed by top management

To cultivate a market for this new service, Mr Oboshi led the team that would build a new organization for planning new services. In January 1997, Mr Keiichi Enoki, who was serving as corporate business director at the time (currently senior vice president and senior manager of the Gateway Business Department (GBD)), was appointed by Mr Oboshi to develop non-voice communication services over mobile phones targeting general users. Mr Oboshi then assigned Mr Enoki to the task of building a new organization by means of recruiting human resources within or outside the company, and empowered him (with

personnel and financial management) to start up the new service.

With diverse and talented human resources recruited from both inside and outside the company, Mr Enoki started a new project (responsible for Gateway Business) staffed by some ten persons, a unit that by August 1997 had evolved into the GBD staffed by 70 employees. GBD was then at work developing a new service dubbed "i-mode."

Toward GBD's launch of the i-mode service

Positive feedback of the elements through which information providers (IPs) would continuously provide useful content to end-users of i-mode compliant mobile phones was urgently needed for the business model that was planned for successful i-mode service[2]. This model was designed to expand the number of end users as well as enhance the content provided by IPs.

One of the tasks aimed at implementing this business model was to develop easy-to-use i-mode-compliant mobile phones and to develop the network system (i-mode servers and other hardware) that would deliver the content (*NTT DoCoMo Technical Journal*, 1999).

The second task was a software-based effort to obtain IPs with content that would attract end users.

To solve these two hardware and software tasks and implement the new service, Mr Enoki felt that it was essential to integrate the knowledge and competence based on the new concepts and viewpoints of the diverse human resources at GBD, to take advantage of years of experience with existing organizations within DoCoMo other than GBD, to incorporate the intellectual assets inherent in the IPs which were outside customers of DoCoMo, as well as to tap the intellectual assets inherent in the terminal manufacturers and platform vendors which were outside partners of DoCoMo. The integrated knowledge and competence would thus become important elements capable of building a new business model for i-mode service.

Consequently, as a top leader at GBD as well as a community leader, Mr Enoki endeavored to form a strategic business community with DoCoMo's traditional organizations centering around GBD and with IPs and customers of DoCoMo as well as terminal manufacturers and platform vendors as partners. (Hereafter, "strategic business community" is referred to as "community," and the method of business promotion in which communities are formed within or outside the company is referred to as "strategic community management"[3].)

As a result, GBD overcame the hardware and software problems through the integration of new knowledge and competence born out of the formation of these communities, and has created the business model for i-mode service capable of establishing positive feedback of such successful elements. Mr Enoki endeavored to promote strategic community management until the launch of the i-mode service by organically combining these four communities.

Formation of communities with traditional organizations

Coordination among the traditional organizations and the development and technical departments was required to develop i-mode-compliant mobile phones and network systems. At the outset, there was a conflict arising out of differences of concept or opinions between GBD and other departments, or there were some objections to the service voiced from within DoCoMo. To overcome various conflicts arising between the GBD and traditional organizations, Mr Enoki led the team at the forefront of the coordination and consensus building through persistent dialogue and collaboration with the departments concerned[4]. He strove to leverage such conflicts as a catalyst for constructive and productive dialogue and discussions (Robbins, 1974). The strong motivation of professionals assembled at the GBD staking their pride on the success of the i-mode service and the innovative leadership of Mr Enoki to orchestrate the operation of GBD members were the motivating forces leading the traditional organizations.

Mr Enoki exhibited strong leadership in promoting the i-mode service and was successful in obtaining the understanding and agreement of the top leaders of the traditional organizations. He then launched the Mobile Gateway Service Introduction Promotion Committee within DoCoMo. The committee consists of the top leaders of all departments in the traditional organizations, including the president and Mr Enoki. The committee was to become a forum for dialogue and decision making aimed at sharing information and knowledge at the top management level that would eventually result in the launch of the i-mode service and promote this business.

On the other hand, each of the project leaders at GBD, led by Mr Enoki[5], started seven working groups in the form of task forces consisting of GBD middle management and traditional organizations:

- 1 network server WG;
- 2 mobile phone WG;

- 3 facilities building WG;
- 4 facilities maintenance WG;
- 5 system/sales WG;
- 6 content WG; and
- 7 application WG.

These work groups identified and discussed problems and tasks aimed at the launch of the i-mode service. In addition, the task force specializing in i-mode mobile terminal development and system development convened once a week under the name, Gateway Service Specifications Review Committee, where the service specifications and technical specifications were determined in order to implement the i-mode service. To promote dialogue or collaboration within the organization at the GBD, all members of the committee met regularly for the purpose of sharing information and knowledge with all GBD members and also sharing value systems and awareness among all members aiming to promote the i-mode service.

As such, Mr Enoki formed the company community (see community A in Figure 1) at the top and middle management levels, and actively promoted knowledge management within this community. In the community, the coordination of the value system at each management level (Kodama, 2001) was promoted for the major mission of business expansion aimed at DoCoMo's new business, and a new community knowledge (Kodama, 2000a, b) and competence called the i-mode service was created.

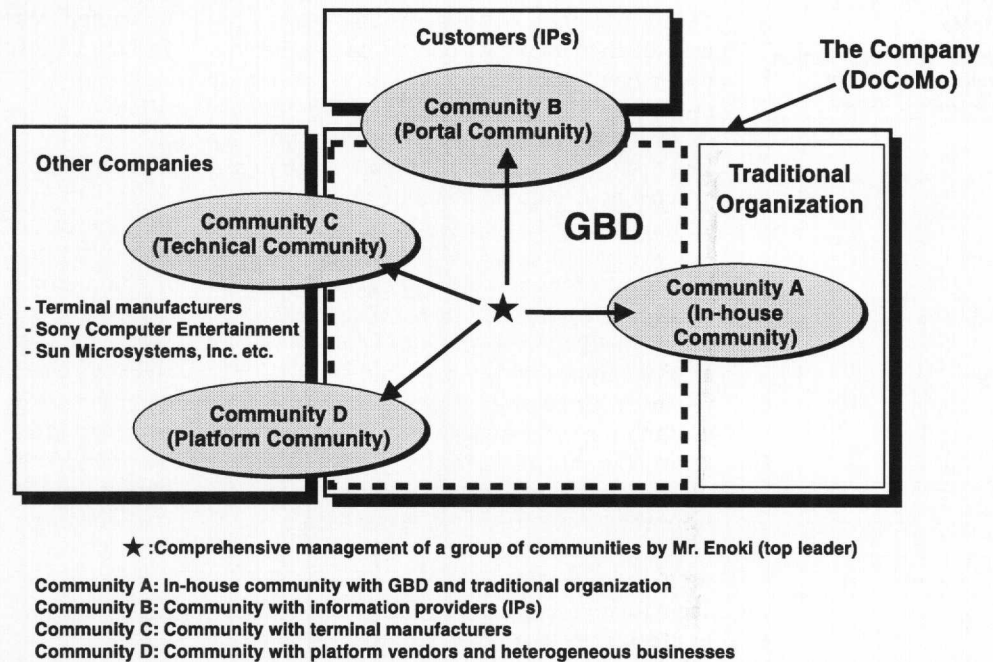
Formation of communities with customers (IPs)

A major task of the GBD content planning project was how to find and establish ties with IPs that could provide useful content. The strategy elaborated by Ms Mari Matsunaga and Mr Takeshi Natsuno, who both led the project, was to establish win-win relationships between DoCoMo and the IPs (Natsuno, 2001).

An important factor in the establishment of win-win relationships was the idea that the IPs and DoCoMo would think and behave in a manner of equal partnership, sharing the risks and profits, instead of DoCoMo simply purchasing content from certain IPs or charging IPs with tenant fees when providing a lineup of i-mode content. As a solution, DoCoMo encouraged IPs to create their own content and provided them with the platform used in establishing a "content service charge collection agency system"[6] to allow users to earn profits from providing their own services.

Ms Matsunaga and Mr Natsuno explained the concept of a win-win relationship to

Figure 1
 Strategic community creation at GBD



many IP personnel and successfully obtained their understanding and aroused sympathy for the concept. As a result, the value systems of both DoCoMo and the IP were unified, and a community aiming to start a new business was formed (see community B in Figure 1).

Mr Enoki endeavored to form an internal corporate community and a community with customers (IPs) until the startup of the i-mode service, and he promoted knowledge management in each community. By organically combining these two communities, the new community knowledge known as “business model construction” was created en route to implementing the i-mode service.

GBD business strategy after the launch of i-mode service (February 1999)

Mr Enoki and Mr Natsuno, who led the business strategy, felt that a number of measures had to be implemented so that end users could enjoy the advantage of subscribing to i-mode to its maximum extent in order to trigger an explosive growth of the i-mode service.

The first measure was the “portal strategy” for developing new, useful content for the i-mode service. The second measure was the “terminal strategy” with the aim of developing new i-mode mobile phone terminals including add-on features. The third measure was the “platform strategy” to break ground for i-mode users using platforms for other than mobile terminals.

Furthermore, these three business strategies were interactive with each other, thus capable of triggering a major synergy depending on the strategy concerned. In order to promote these business strategies, an important task was to proceed with the strategic alliance with many outside partners so as to yield practicable results.

After the startup of the i-mode service in February 1999, the GBD formed the communities in succession through strategic alliances with outside partners in order to acquire end users at an early stage of the project. The first step was to form a “portal community” (see community B in Figure 1) to act as the core of the portal strategy and enhance the details of the i-mode portal operated by DoCoMo through which diverse risks and interests would be shared with IPs while enhancing the value of the content so as to provide new values for the end user. In addition, an advertisement delivery service was promoted on the i-mode portal, and a top-flight financial service was also implemented at the birth of the Net-based banking business. This strategy was recognized as an important positioning of services prior to the launch of i-mode sales.

The second step was to form a “technical community” (see community C in Figure 1) linked with terminal manufacturers which would become the core of the terminal strategy. This strategy was intended to trigger new demand for end user terminals and to motivate users to replace their

terminals by periodically adding new features to i-mode mobile phones. For IPs, the development of new mobile phones (such as JAVA-compliant phones) opened the possibility that content could be developed under new applications with the advantage of attracting new end users. DoCoMo could also enjoy an increase of new revenue from increased communications traffic due to a greater penetration of mobile phones equipped with new features.

The third step was to form a “platform community” (see community D in Figure 1) to serve as the core of the platform strategy in order to expand the scope of i-mode availability. Combining i-mode mobile phones with game machines, car navigation systems and other platforms would further expand i-mode availability.

Thanks to the time pacing strategy (Eisenhardt and Brown, 1998) which continuously put forward three strategies on an individual organization basis, the GBD continued to acquire new end users and IPs as customers in quick succession. Figure 2 shows the practicable measures arranged in time series about these three business

strategies proposed by the GBD[7]. In March 2001, the GBD reached the target of acquiring 25 million subscribers (end users) in just two-and-a-half years following the launch of the service (*Asahi Shimbun*, 2001) (Figure 3).

In addition, Mr Enoki continued to promote businesses of the sort that enabled the synergy impact of three business strategies aiming at expansion of i-mode service to be maximized through the organic integration of the four communities shown in Figure 1 following the launch of i-mode sales.

The organization of the GBD that was necessary for deploying novice and complex strategies was a complex, environmentally adaptive system with two distinctive characteristics: the tight-coupling organizational factor strictly coordinated between Mr Enoki, the top leader, and each project leader, and the loose-coupling organizational factor having both flexibility and autonomy reflected in each project.

This i-mode success has raised the status of the GBD as a new division named the i-mode business division in July 2001, and it became vested with greater powers than was given the GBD. Aiming to achieve further

Figure 2
 Main activities in three core GBD business strategies

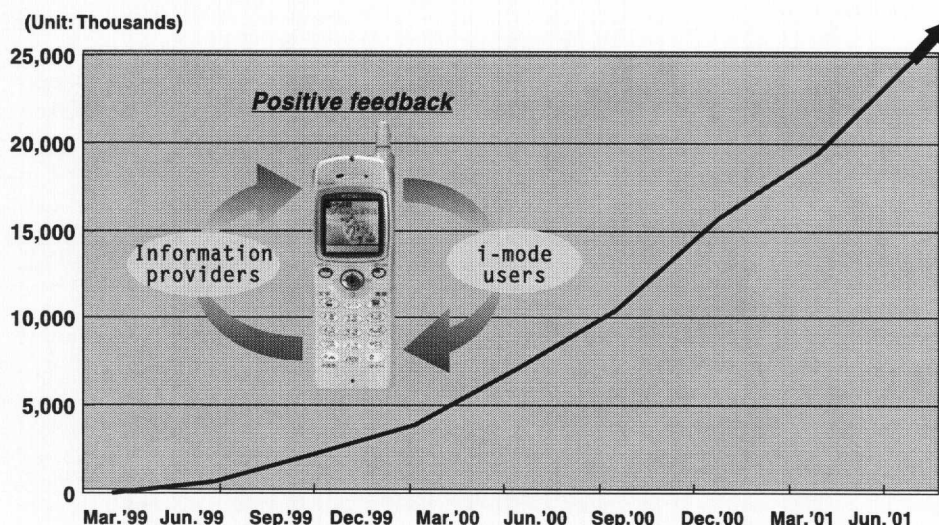
Year	1999	2000	2001
Portal Strategy	<ul style="list-style-type: none"> • Pay content charge/Data warehouse for personalization/Guidance features (February) • Character delivery service started (June) • Regional-based menu list for 9 districts (September) 	<ul style="list-style-type: none"> • Established advertising business “D2 Communications” (June) (to promote i-mode advertising business) • Established JapaNet Bank (September) (Internet-based banking) • Established i-mode content consulting business “DoCoMo.Com” (October) • Started banner advertising (October) 	<ul style="list-style-type: none"> • Alliance with Walt Disney Company on content (March) • Started IMT-2000-based i-mode trial services (May) • Started i-mode map services (i-area services) (June)
Terminal Strategy	<ul style="list-style-type: none"> • Technical alliance with Sun Microsystems (March) • Web server/e-mail compliant i-mode terminal (501i) (February) • Announced JAVA-compliant i-mode terminal prototype (June) • Expanded i-mode mailing function (July) • Ring melody download-compliant i-mode terminal (502i) (December) 	<ul style="list-style-type: none"> • i-mode terminal from NOKIA (April) • i-mode/PHS dual mode i-mode terminal (June) • English-version i-mode terminal trial (June) 	<ul style="list-style-type: none"> • JAVA-compliant i-mode terminal (503i) (February) • IMT-2000-based mobile videophone and high-speed data communication cards (May)
Platform Strategy	<ul style="list-style-type: none"> • Started experiment on car navigation coordination (February) • Jointly developed i-mode-compliant groupware product with US Buma Technology (February) 	<ul style="list-style-type: none"> • Invested in “PlayStation.com.Japan” (April) (working with i-mode and game machine) • Technical alliance with Sony Computer Entertainment (SCEI) (August) • Strategic alliance with AOL (September) • Tie-up with KPN Mobile on mobile Internet business (September) • Established “i Convenience” with Lawson, Matsushita, & Mitsubishi (October) (to promote networking between i-mode and street sites) 	<ul style="list-style-type: none"> • Technical alliance with Sega (working with i-mode and game machine) (February) • Tie-up with Coca Cola, Inc. on trial of i-vending machine (March) • Started integration services of i-mode mail and AOL mail (May)

To be evolving and developed toward IMT-2000

Note: Figure shows some of the measures put forward by GBD as a priming engine for promotion of the i-mode market. Other ongoing challenges include commercialization of diverse terminals or services, investment in a number of multimedia-related businesses, and business collaboration with many IP businesses

Source: Figure was prepared courtesy of DoCoMo pre-release materials and Natsuno (2000)

Figure 3
 Number of i-mode subscribers



Source: Interviews with NTT DoCoMo Inc. and press releases

innovations, the new division began to work hard at preparing for a new i-mode service known as IMT-2000, a third-generation mobile service that will be marketed under the FOMA service[8] brand name. Among the services being planned, high-speed data transmission as a trial i-mode service was launched in March 2001, and the world's first moving picture clipping service for mobile phones is slated to start in November 2001.

Mr Keiji Tachikawa, president of DoCoMo, gathered, combined, and integrated the knowledge and core competencies of partners such as terminal manufacturers and content providers with the technical expertise and marketing savvy of DoCoMo to launch the world's first IMT-2000 service in Japan on October 1, 2001. A variety of multimedia services aimed mainly at i-mode, in such fields as mobile e-commerce, video streaming, and location information, is being worked out, and plans to obtain six million subscribers for FOMA services by March 2004 have already been announced (*Nihon Keizai Shimbun*, 2001) (see Figure 4).

Entrepreneurial, time pacing, and strategic community management

One of the features of the GBD strategy was a strong attitude toward emergent process through strategic learning. Although the proposed individual measures in details and orientation were emergent, however, the details of the emergent process were always monitored and controlled by Mr Enoki, and as a whole, carefully projected and made feasible as a business through decision making by Mr Enoki. This process is close in

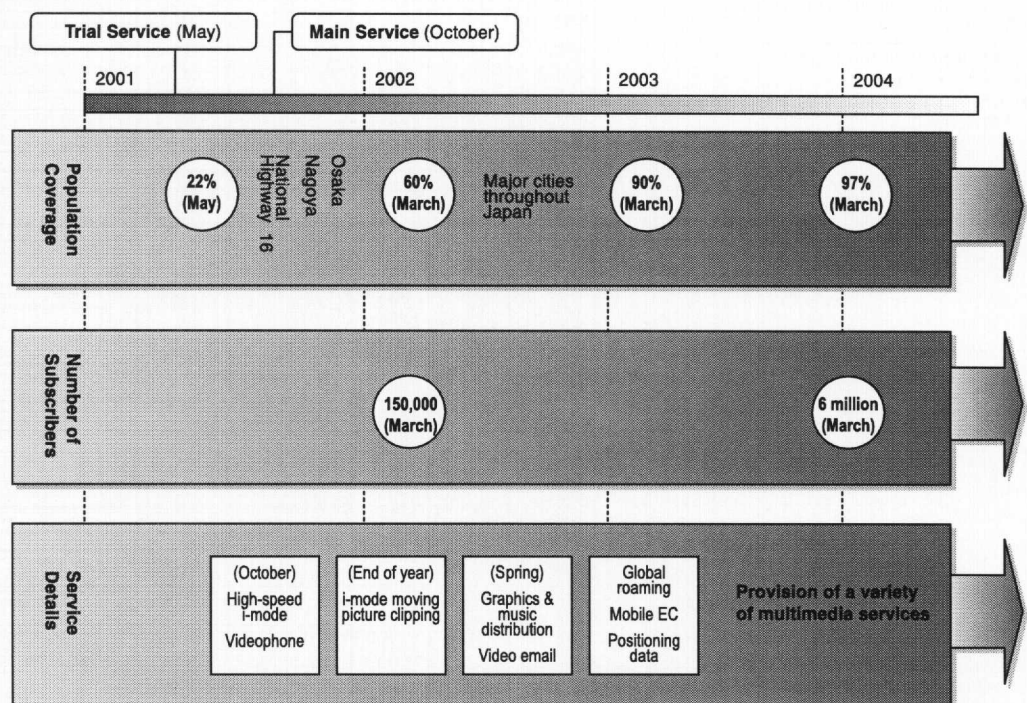
meaning to the entrepreneurial strategy advocated by Minzberg and Walters (1985).

The second feature of the GBD strategy is the strategy based on time pacing. While the GBD continuously proposed creative measures against the background of continuous changes, improvisation was required on the whole for the sake of the entire organization, causing tension among all GBD members. Specifically, the target was the number of monthly sales of i-mode services or the number of commercialized mobile phones sold, and in line with the sales target, each project in the GBD was rhythmically working to promote its individual business on schedule.

The third feature of the strategy is strategic community management, i.e. the formation of a group of communities linked with outside partners, including IPs, as customers. These communities were flexible and autonomous in nature, and all community members, including outside partners, came to share the vision, purpose, and value system for i-mode business. They also continued to propose emergent strategies and tactics and pave the way for new markets through trial and error.

It is not imaginable, however, to trigger an explosive diffusion of the i-mode service shown in Figure 3 only with the action carried out by no more than 70 members of the GBD organization alone. The reason behind the success was that the GBD and the traditional organizations combined to form the corporate community and initiated a deliberate strategy based on business process management intended to stimulate the

Figure 4
 Trends in FOMA service



expansion of i-mode services by virtue of the traditional organizations. With these two different strategies and management styles integrated by two different organizations, a radical and discontinuous transformation was fulfilled throughout the entire GBD organization.

Promotion of knowledge management fulfilled by the corporate community linked with the GBD and the traditional organization: enhancing the motivation of all organizations and employees toward the expansion of i-mode

Various communities (with respect to development, technology, facilities, marketing, and content) operated by the task force organized within the company prior to the launch of i-mode sales were continuously maintained and vitalized, and diverse information and knowledge about feedback from end users, ongoing sales of mobile phones and services, usability and troubleshooting were shared among the personnel involved. Top managers themselves strove to enhance the motivation of many employees within individual organizations toward the company-wide challenge aimed at the nationwide penetration and growth of i-mode service and to stimulate a revolution in the awareness of employees.

As one of the commitments addressed by the knowledge management, the

community that links the GBD and the content team of the nationwide traditional organizations allowed information and knowledge about the IP acquisition strategy, tactics and guidelines to be shared among community members, and the motivation for inducing IPs was increasingly strengthened. For steady and explosive growth of the i-mode service, imminently required was the nationwide inducement campaign directed to IPs that could provide useful content. To cope with the impending need, the GBD periodically held editorial meetings attended by personnel in charge of content scattered across the country. The GBD instructed these personnel responsible for content to interpret uniform content editing standards proposed by the GBD according to the i-mode, enabling the same information and knowledge to be shared among all community members, thus allowing members involved to proceed with the IP inducement strategy. An understanding of the i-mode service concept by personnel concerned plus a sharing of the value system was subsequently concentrated on the motivational power of the positive cycle of increasing returns that evolved from an increase of attractive IPs to an increase in end users, and further to increase the number of IPs offering more useful content.

Promoting knowledge management at all levels of management

In July 2001, Mr Tachikawa, DoCoMo's president, revised part of the DoCoMo organization to facilitate the further promotion of i-mode in Japan and the launch of i-mode applications for the new FOMA service. The main changes were to upgrade the GBD to become the i-mode business division, an independent division, and to expand the division's authority in both the strategic and tactical aspects of the i-mode business. At the same time, knowledge management within the company, that includes traditional organizations, was promoted by the leadership of top management, while the promotion of knowledge management aimed at middle management, the levels at which those with practical experience in business operate, was allowed to continue.

Top management promptly made final decisions on vital matters after conducting dialogues and discussions through groups such as the Management Strategies Committee and the Basic Issues Liaison Committee responsible for management strategies and business operations, the R&D Strategies Committee concerning new services and R&D, and the Sales Information Liaison Committee related to company-wide sales strategies. Middle management, on the other hand, is actively engaged in the operation of the Service Planning Subcommittee and the Terminal Planning Subcommittee, which are responsible for discussing the development of new services and new mobile phone terminals respectively. Middle management forms all types of taskforces and working groups whenever required, to handle specific problems or issues.

Thus, a large number of strategic communities were formed in top management and the various levels of middle management where both new and traditional organizations existed side-by-side within DoCoMo, all engaged in the work of i-mode services. These communities all gave birth to a variety of new knowledge (see Figure 5).

Linkage between a time pacing strategy and event-based pacing strategies

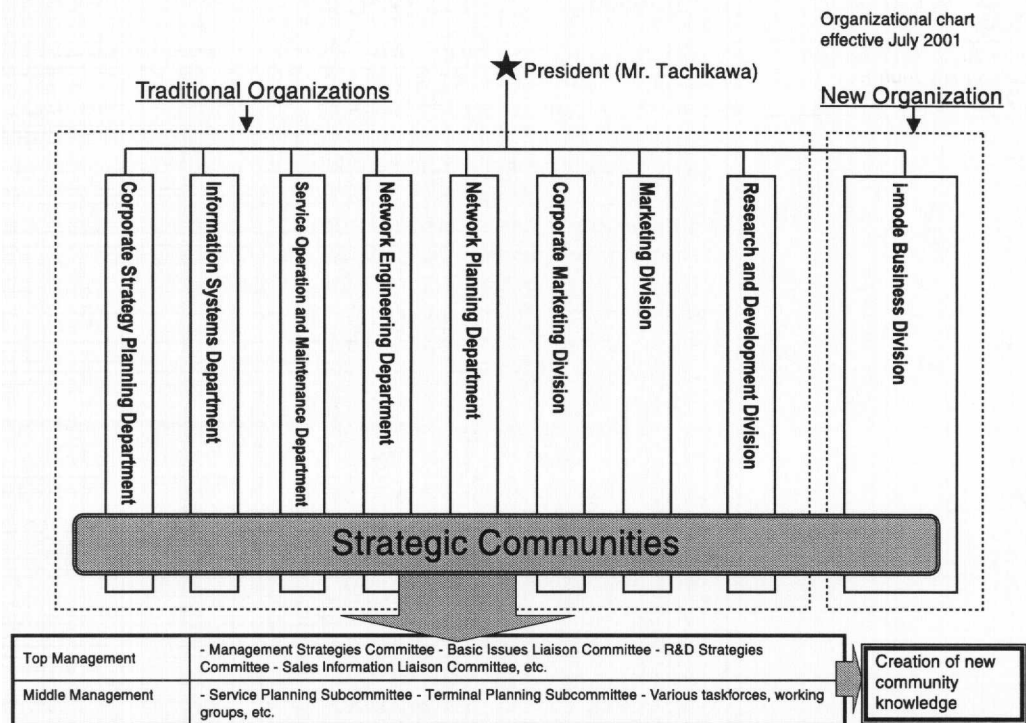
In response to the time pacing strategy proposed by the GBD, the traditional organizations began to launch a series of actions supported by company-wide manpower to acquire more end users and IPs, accelerated by the trend of steadily increasing i-mode users. First, the content team of the traditional organizations steadily

continued to acquire more IPs based on the IP strategy proposed by the GBD with a view to conducting a nationwide IP inducement campaign. Second, upon upgrading i-mode mobile phones and releasing new products, the terminal development departments of the traditional organizations determined the terminal specifications step by step against the functional requirements requested by the GBD, and carried out the guidance and coordination for the terminal manufacturers in accordance with the schedule for the sale of terminals. Third, the sales departments of the traditional organizations (including the terminal sales branches at the forefront of marketing efforts) identified sales objectives to cope with the move of a nationwide sales offensive for i-mode mobile phones and were committed to sales activity. Finally, to cope with the increasing numbers of end users associated with various network facilities typically represented by the i-mode server, the facility and maintenance departments of the traditional organizations fulfilled prompt and precise measures taken for failures and troubles arising in connection with subscribers' equipment.

Based on the time pacing strategy proposed by the GBD, the traditional organizations endeavored to steadily carry out the business process such as IP inducement, terminal development, terminal sales, and the measures taken for facilities and maintenance by virtue of the event-based pacing strategy. Although such organizational behavior entails incremental changes, it constituted a major contribution, together with the strategies and tactics continuously put forward by the GBD, to an impressive growth of the i-mode market. Particularly important for traditional organizations was the time pacing strategy put forward by the GBD, and the other strategy fulfilled by event-based pacing was designed to be a timely response to the demands of i-mode customers (Gersick, 1994).

The advantage of event-based pacing, which is one of the formal management strategies, is that the possibility for environmental adaptability is strong, and once a measure is chosen, it can continue and remain unchanged until the expected event becomes successful. Such a strategy exhibits its advantage in the course of incremental change within an orderly top-down management organization in which the stability found in a traditional organization is established. Conversely, an unstable strategy is prone to miss the timing due to delays in action against a trigger (Eisenhardt and Brown, 1998), although the attempt to link with the GBD's time pacing strategy was

Figure 5
 Organizational structure of DoCoMo and internal strategic communities



useful for constantly monitoring market performance for the sake of the entire business operation, thus making it possible to take prompt action against potential changes.

Under a scenario in which a certain result is reached within a certain period of time from startup of the i-mode service to its proliferation, the GBD believed that the time constraints and the result were of equally important positioning. They consciously continued to follow the methodology in which they integrated their own organization's time pacing strategy with the event-based pacing strategy of the traditional organization.

Linkage between the continuous change loop and the incremental change loop

Figure 6 shows the process for the integration of these strategies. The GBD continuously promoted the entrepreneurial strategy based on time pacing, induced the interest of many end users and IPs in the i-mode business and stimulated the i-mode market. Henceforth, to accelerate further proliferation of the i-mode business, the GBD searched for and created new business concepts and ideas, and triggered a spiral change loop of the entrepreneurial strategy. (This GBD strategic process is referred to as the "continuous change loop.")

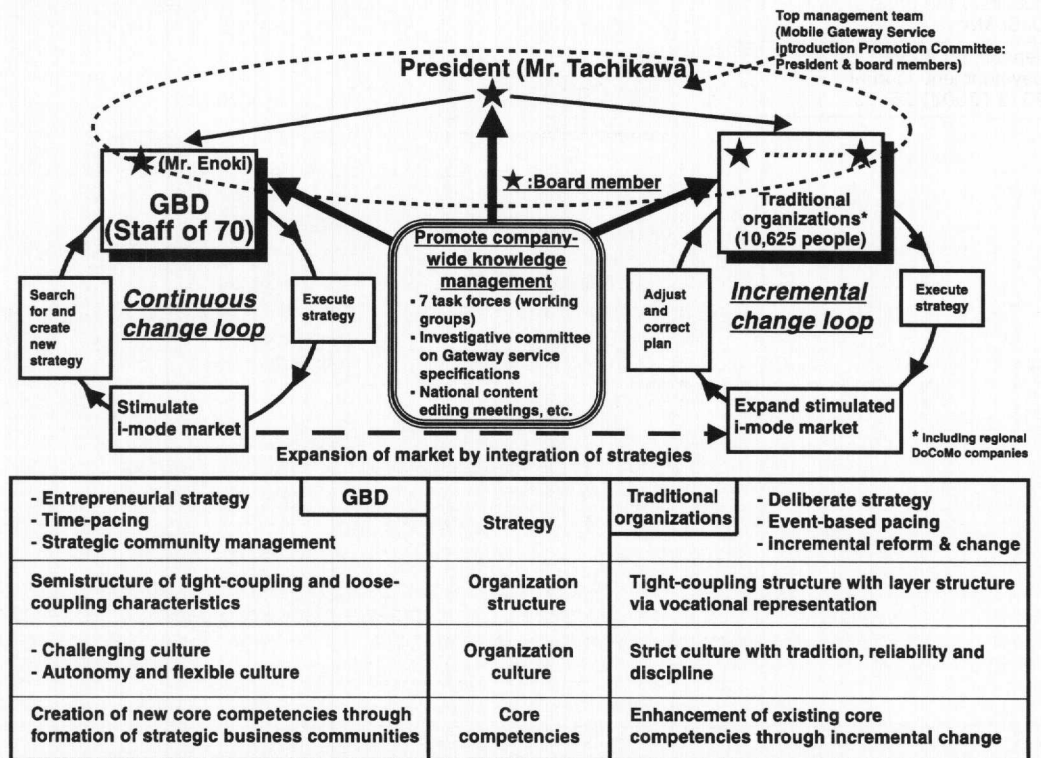
In conjunction with the foregoing strategy, the GBD formed corporate communities with traditional organizations to promote

knowledge management, while at the same time establishing the arena as a communication medium for all employees on the basis of sharing the same vision and value system with the top management. The event-based pacing which leveraged nationwide organizational manpower provided the basis for the full-scale startup of the deliberate strategy as a major contribution to an explosive growth of the i-mode market, continuously induced by the entrepreneurial strategy. In the incremental change process induced by this deliberate strategy, planning was always adjusted and modified in a spiral manner. (This strategic process of traditional organizations is referred to as an "incremental change loop.") Linkage and integration of each link under these two strategies enabled DoCoMo to acquire a solid leading edge in the emergent market that is the mobile Internet market and fulfill a major discontinuous transformation.

The GBD created a new core competence through the formation of diverse outside communities amid the challenging organizational culture, and continuously put forward the emergent and creative measures targeted at long-term innovations. In the traditional organizations, on the other hand, by improving and building core competencies built over years of performance, the GBD continued to carry out the planned measures aiming at a short-term

Figure 6

Linkage between the continuous change loop and incremental change loop



efficiency with an emphasis placed on the stability and control maintained through a traditional and consistent organizational culture. The top management team at DoCoMo consciously caused internally inconsistent paradoxical organizations, strategies, culture, and competence to be indwelled within the company, and let these different systems be concurrently activated and integrated at a time so as to allow company-wide output to be enhanced. This concept is similar to the concept of “ambidextrous organization” described by Tushman and O’Reilly (1997).

The mission of top management teams toward permanent change and innovation

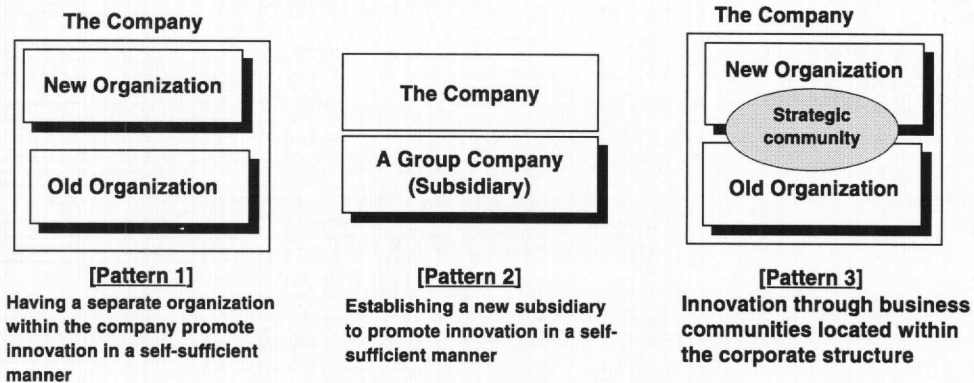
To effect a radical change in the organizational culture, it is important that the “new organization culture” at an organization of a different nature drives wedges into the “old organization culture”, which was influenced by inertia from the large corporation, and destroys it completely. Conventionally, in corporate strategic innovation, a highly motivated new organization is established as a different organization within the company or as a subsidiary, and is separated from the

existing organization both physically and through their means of communication. The new organization promotes innovation at its own pace so that it can protect its activities aimed at innovation from being killed off by the traditional organization (Tushman and O’Reilly, 1997; Nonaka and Takeuchi, 1995) (see patterns 1 and 2 in Figure 7).

Although this manner of creating a new organization is very effective for new strategic innovation, it is not free of problems. The problem of pursuing innovation is an issue related to fusion and harmony between the cultures at the old and new organizations (Markides, 1998). Even though the new organization might change its corporate culture and achieve innovation, for the company as a whole, the issue of innovation in the consciousness of employees who retain the old values still remains.

As this case shows, one method that can be used to overcome this obstacle is to bring the new organization and the existing organization into contact with one another by intentionally creating paradoxes in the corporation (see pattern 3 in Figure 7). Although conflicts are unavoidable, it is possible to turn conflicts into constructive and productive opportunities for change through the promotion of large-scale knowledge management between both organizations and by providing a

Figure 7
 Forms of strategic innovation in large companies



communications arena for all employees, including the top management team, via knowledge management.

To this end, it is vital for the top management team, including the president, to collaborate closely and encourage all employees to resonate their values aimed at change and innovation (Kodama, 2001). This is an important part of the leadership that is required of top management at large corporations. It is an essential component for change and innovation to become permanent.

In this case, chaos and fluctuation were first caused in the corporation through the thinking and actions of an organization with a different nature. A certain order in the entire company was then created through innovation in the consciousness of all employees and strategic integration. This process is equivalent to the process of urging self-organization between components of a company, i.e. organizations of a different nature and traditional organizations (Probst and Gilbert, 1984). On the other hand, if there is a continuing excess of the "chaotic status," a company could lose its balance, in which case it could be difficult to obtain organizational achievements. Large companies that can establish the elements of strategy, organizational structure, culture and core competencies, and maintain congruence between each element become able to control two different paradoxical organizations and finally achieve strategic innovation, though this only viable if self-organization is achieved.

New, practical viewpoints gleaned from the case study

This section explains new, practical viewpoints obtained from this case study concerning the success in discontinuous transformation.

Creation of an organization of a different nature

Top management members created an organization within the company for discontinuous transformation that was different in nature. This organization, consisting of different and capable members, was placed within the head office organization with the support of top management, and it was granted significant power with regard to strategic corporate planning for the future. The requirements of the leaders of this organization were innovative leadership, and the members of the organization were granted flexibility and autonomy. Strategic communities with outside partners, including customers, emergently created strategies for the future and promoted business. Based on thinking and action designed to break with previous creative thinking and networking (Nutt and Backoff, 1997), they promoted entrepreneurial and time pacing strategies based on strategic community management. When a large corporation faces discontinuous transformation, revolutions in personnel, such as the bold selection of staff, is necessary to create an organization with a different nature. The key to success is the leadership provided by the top management team.

Integration of strategies

What we need to do in parallel with a revolution in employee consciousness is to integrate the paradoxical strategies in the two organizations. The new organization with a different nature and entrepreneurial spirit pursues the feasibility of future business through creative and innovative-oriented business model based on new core competencies using inside/outside core skills and technologies.

On the other hand, at the same time, based on accumulated core competencies, the

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traditional organization with an occupation ability-based tight-coupling structure executes the current business using deliberate strategies that are well planned in terms of efficiency and certainty. This means that while the traditional organization is harvesting the blooming flowers all at once, the organization with a different nature is planting the seeds of flowers that will bloom in the future. The linkage between time pacing and event-based pacing is an important element with regard to capturing both time restrictions and expected results within a defined range. Through integration of these two strategies, the organization is able to pay close attention to time linkages and is thus able simultaneously to address the needs of the business today and the nature of the business in the future.

Leadership

In addition to the top management, leadership is required in each layer of the two organizations, both the organization with the different nature and within the traditional organization. It is important that all layers of each organization (the top and middle layers) play their part and elevate leaders who demonstrate innovative thinking, who take action and execute strategies and tactics within their own organization, and who promote knowledge management and construct a management system within which many community leaders can demonstrate achievement. A large corporation cannot achieve discontinuous transformation solely through the existence of a charismatic leader or the leadership of a team consisting of top management.

The project leaders of the organization with a different nature who continuously hammer out creative and emergent strategies that can form the basis for future corporate strategies require leadership abilities necessary to the construction of new core competencies through the formation of strategic business communities with outside partners, including potential customers. It is vital that the company nurture many such project leaders who can then create new businesses in new markets and thus help maintain the company's advantageous competitive position. Tichy and Cohen (1997) call this concept a leadership engine and explain that the mechanism of raising leaders one after another in an organization not only establishes a continuous advantageous position in competition, but is a practical element necessary for discontinuous change. The way of thinking

about leadership in this case study is similar to this idea.

Implications for management

Based on the new perspectives obtained from the case study, the following points are noteworthy in terms of the impact of innovation in other large companies as well:

- *The creation of a trigger for innovation – creating a new organization with an entrepreneurial spirit.* Paradoxical elements inside the company are essential for a large corporation to continue growing. Its business needs a stable section characterized by incremental growth juxtaposed against another section of emergent, even radical, thinkers who “think outside the box” in terms of identifying possible new avenues for business development and further expansion. To this end, top management must form and grant significant operational latitude to a new organization within the organization that is made up of personnel whose entrepreneurial spirit is understood to be an important asset for the development and creation of future opportunities for further business growth. Following this step, it is important that this new organization be charged with planning the overarching strategic design for future business creation and also understand the need to execute quickly the specific actions detailed within that grand plan.
- *The creation of a foundation for innovation – creating new core competencies.* Leaders of the new entrepreneurial spirit-driven organization should not be biased by existing conceptions and structures but should instead, while embracing this new point of view, take into consideration the future environment that the company may face; actively absorb knowledge generated through its partnerships outside the organization, including customers; create new core competencies that will serve as the foundation for new business opportunities (products or services); and understand and act on the need to build on the foundation for innovation.
- *The acceleration of innovation – promoting overall company knowledge management.* To ensure that the new business opportunities created by the new organization are given the chance to blossom into full-fledged businesses and business opportunities, it is imperative for both the traditional and new elements of the organization that knowledge

management be promoted to the extent that the sense of value and success that accompanies innovation inherently resonates throughout the collective employee consciousness. This promotion of knowledge management by and across the entire organization serves as the impetus for business growth and expansion and also accelerates the pace of innovation itself.

- *Strong leadership from the top management team.* It is highly likely that there will be conflicts between the new and traditional organizations with regard to the promotion of knowledge management by and across the entire organization. Knowing this, however, in providing strong leadership, the top management team must understand the need to create a mechanism based on close inter-employee communication that serves as a platform by which the entire organization and its employees can convert conflict into constructive dialogue and action. By acting as the steward overseeing both paradoxical strategies and paradoxical organizations within the company, the top management team encourages the growth and development of innovation.

Conclusion

Using past research results, this paper discusses a new, practical viewpoint exhibited during the process of radical change within DoCoMo. Future research themes include whether or not the practical aspect of discontinuous transformation of this case can be applied to other large corporations. It goes without saying that the actual discontinuous transformation method used by a specific large corporation depends on the environment, business type/form and the existing organizational culture, as well as the sense of values exhibited by top management, and the leadership style, etc. In this paper, the introduction of paradoxes is constructively understood to be the motivating power behind organizational change and indicates one practical method for discontinuous transformation that uses paradoxes. Here, top management members intentionally introduced paradoxes within the corporation in terms of strategies, organization, culture, and competencies and the like, and achieved strategic innovation by using knowledge management across the entire organization to control these paradoxes.

Notes

- 1 This case study was compiled as a result of interviews or hearings from 12 managers at DoCoMo, and is based on a survey of excerpts from materials internal or external to DoCoMo and articles presented in a number of publications, newspapers, and magazines.
- 2 i-mode mobile phones are mobile phones available over networks and which are capable of accessing diverse information content via e-mail or Web browsers.
- 3 Thanks to strategic tie-ups with customers and businesses within or external to the company, the strategic business community provides an arena in which the knowledge and competencies of individual organizations are integrated with the counterparts of other organizations, and the creation of new knowledge or competencies is accelerated in terms of the assets of the community (Kodama, 1999; 2000a, b). Strategic community management represents a practical methodology intended to create a new framework, new business models, new products or services, and break ground for a new market based on newly-created knowledge or competencies.
- 4 The following are some of the episodic stories in which Mr Enoki stood at the forefront of the GBD to undertake the objections or disbeliefs within or external to the company single-handed, and to win company-wide understanding and consent to the ongoing business (Matsunaga, 2000). One day, an objection was raised at a meeting attended by the company's executive officers when an attendant complained, "This LCD is too small to provide good visibility." Then Mr Enoki remarked, "The mobile phone we are working to develop is not targeted at such people sitting around the table here. It is targeted at your children." While many arguments were heard by GBD members, Mr Enoki came to the fore to manage a variety of conflicts.
- 5 The project ongoing within the GBD roughly consists of the business promotion project, the content planning project, the system planning project, the terminal planning project, the application planning project, and some others.
- 6 DoCoMo collects the content usage charge (\$1-\$3 per month) from the end user together with the communication fee. The usage fee is paid by DoCoMo to the IPs that provided the content. In this charge collection system, the revenue of DoCoMo accounts for 9 per cent of the usage fee. Although the collected fee is small for each end user, the greater the number of end users, the larger the amount of revenue will be accrued to the IP. Anticipating large revenues, IPs are motivated to provide the i-mode service with more content for a larger number of end users. Synergistic effects triggered by this positive feedback are a major driving force of the i-mode. Many IP vendors

provide their i-mode content with monthly revenues of \$10 million.

7 Figure 2 shows some of the measures put forward by the GBD as a priming engine stimulating the i-mode market. Other ongoing challenges include commercialization of diverse terminals or services, investment in a number of multimedia-related businesses, and business collaboration with many IP businesses. (Figure 2 was prepared by courtesy of DoCoMo pre-release materials and Natsuno (2000).)

8 Although current mobile phones and portable terminals are capable of high-speed transmission, these are next-generation mobile and portable video terminals that can interactively transmit video as well as voice and text. W-CDMA and cdma2000 are next-generation mobile telephone systems (IMT-2000) proposed by the Swedish company Ericsson and the US company Qualcomm respectively.

References

- Asahi Shimbun* (2001) "i-mode rises above 20 million users", *Asahi Shimbun*, 5 March.
- Brown, S.L. and Eisenhardt, K.M. (1979), "The art of continuous change: linking complexity theory and time-paced evolution in relentless shifting organizations", *Administrative Science Quarterly*, Vol. 42, pp. 1-34.
- Brown, S.L. and Eisenhardt, K.M. (1998), *Competing on the Edge: Strategy as Structured Chaos*, Harvard Business School Press, Boston, MA.
- Eisenhardt, K.M. and Brown, S.L. (1998), "Time pacing: competing in markets that won't stand still", *Harvard Business Review*, March-April, pp. 59-69.
- Gersick, C.J. (1994), "Pacing strategic change: the case of a new venture", *Academy of Management Journal*, Vol. 37, pp. 9-45.
- Kodama, M. (1999), "Strategic innovation at large companies through strategic community management: an NTT multimedia revolution case study", *European Journal of Innovation Management*, Vol. 2 No. 3, pp. 95-108.
- Kodama, M. (2000a), "Business innovation through customer value creation: case study of a virtual education business in Japan", *Journal of Management Development*, Vol. 19 No. 1, pp. 49-70.
- Kodama, M. (2000b), "Innovation through strategic community management regional electronic networking promotion in Japan: a case study", *Creativity and Innovation Management*, Vol. 9 No. 2, pp. 321-31.
- Kodama, M. (2001), "New business through strategic community management: a case study of the multimedia business field", *International Journal of Human Resource Management*, Vol. 12 No. 6, pp. 1065-87.
- Markides, C. (1998), "Strategic innovation in established companies," *Sloan Management Review*, Vol. 39 No. 3, pp. 31-42.
- Matsunaga, M. (2000), *i-mode Affair* (in Japanese), Kadokawa Bookstore, Tokyo.
- Mintzberg, H. (1987), "The strategy concepts I: five Ps for strategy", in Carroll, G.R. and Vogel, D. (Eds), *Organizational Approaches to Strategy*, Ballinger, Cambridge, MA.
- Mintzberg, H. and Walters, J. (1985), "Of strategies deliberate and emergent", *Strategic Management Journal*, Vol. 6, pp. 357-72.
- Nadler, D.A. and Tushman, M.L. (1989), "Organizational frame bending: principles for managing reorientation", *Academy of Management Executive*, Vol. 3, pp. 194-202.
- Nadler, D.A., Shaw, R.B., and Walton, A.E. (Eds) (1995), *Discontinuous Change: Leading Organizational Transformation*, Jossey-Bass, San Francisco, CA.
- Natsuno (2000), *i-mode Strategy*, (in Japanese), Nikkei BP, Tokyo.
- Nihon Keizai Shimbun* (2001), "DoCoMo's IMT-2000 (in Japanese)", 29 September, p. 6.
- Nikkei Business* (2000), "Feature article of DoCoMo", (in Japanese), No. 12-18.25, pp. 26-39.
- Nonaka, I. and Takeuchi, H. (1995), *The Knowledge Creating Company*, Oxford University Press, Oxford.
- NTT DoCoMo Technical Journal* (1999), "Feature article of i-mode service", (in Japanese), Vol. 7 No. 2.
- Nutt, P.C. and Backoff, R.W. (1997), "Organizational transformation", *Journal of Management Inquiry*, Vol. 6, pp. 235-54.
- Pascale, R.T. (1985), "The paradox of corporate culture: reconciling ourselves to socialization", *California Management Review*, Vol. 27, pp. 26-40.
- Pascale, R.T. (1990), *Managing on the Edge: How the Smartest Companies Use Conflict to Stay Ahead*, Simon and Schuster, New York, NY.
- Probst, H.U. and Gilbert, J.B. (1984), *Self-organization and Management Social Systems*, Springer Verlag, Berlin.
- Quinn, R.E. and Cameron, K.S. (Eds) (1988), *Paradox and Transformation: Toward a Theory of Change in Organization and Management*, Ballinger, Cambridge, MA.
- Robbins, S.P. (1974), *Managing Organizational Conflict: A Nontraditional Approach*, Prentice-Hall, Englewood Cliffs, NJ.
- Romanelli, E. and Tushman, M.L. (1994), "Organizational transformation as punctuated equilibrium: an empirical test", *Academy of Management Journal*, Vol. 3, pp. 1141-66.
- Thompson, J.D. (1967), *Organizations in Action*, McGraw-Hill, New York, NY.
- Tichy, N.M. and Cohen, E. (1997), *The Leadership Engine: How Winning Companies Build Leaders at Every Level*, Harper Collins, New York, NY.
- Tushman, M.L. and O'Reilly, C.A. (1997), *Winning through Innovation*, Harvard Business School Press, Cambridge, MA.