MOBILE INNOVATION AND THE MUSIC BUSINESS IN JAPAN: THE CASE OF RINGING TONE MELODY ("CHAKU-MERO") (Research Note)

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IIR Working Paper WP#03-08

May 2003

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MOBILE INNOVATION AND THE MUSIC BUSINESS IN JAPAN: THE CASE OF RINGING TONE MELODY ("CHAKU-MERO") (Research Note)

First Draft: May 1, 2003
Revised: May 8, 2003

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Abstract

This paper examines the development process and successful factors of the ringing tone melody downloading service, or "Chaku-Mero," in Japan. Chaku-Mero is a mobile Internet service in which a subscriber could download from a wide selection of music melodies his/her favorite with some fee to get it ring when the mobile phone receives a call or message.

This service is arguably the most successful m-commerce business in the world. According to three major mobile communication carriers, NTT DoCoMo, KDDI, and J-Phone, Chaku-Mero accounts for 40 to 60% of their paid service sales on the mobile Internet. Industry sources estimate that the annual payment for Chaku-Mero reached approximately 80-90 billion yen in 2002 (currently US$1=120yen). Also, it has been argued that the Japanese Chaku-Mero service is the sole example of Internet cultural content business, be it fixed or mobile, in the world that has successfully overcome complicated conflicts and concerns of copyrights among different parties and created a significant market.

The paper describes the process of how this business has evolved. It traces back the pre-mobile-Internet phase of related services such as the "Sky Melody" service by J-Phone and the wireless Karaoke business, which served as precursors of Chaku-Mero. Then the paper examines the business structure: the parties involved in the business, their relations, and how values are created and distributed among them. Also, the paper analyzes why some content providers have been more successful than others. A leading Chaku-Mero provider, for example, maintains more than 6.5 million subscribers and annual sales of 12 billion yen.

Over all, the paper provides a preliminary study of mobile innovation in the music business, which is a part of a larger study of the history of interactions between technologies to create, record, distribute, and promote music and the music business. It would give some implications for the prospects of mobile Internet businesses for music and other cultural contents.

1. Objectives

The primary purpose of this paper is to examine how the Chaku-Mero business in Japan has been launched and developed successfully to create about 80-90 billion yen (currently US$1=120yen) market within three years. “Chaku-Mero” is abbreviation of “chakusin merodi” in Japanese, which stands for ringing tone melody. A Chaku-Mero service user downloads a digitalized music file through Internet with some fee and has it played as a ringing tone for the mobile phone handset. This download service accounts for the largest market among Japan’s paid mobile Internet services, thus making the world’s largest mobile Internet market and the most successful m-commerce business. Furthermore, the Chaku-Mero business is arguably the sole successful case in the world of paid cultural content business on Internet, be it fixed or mobile.

This paper attempts to give brief answers to following questions. What evolutionary paths has the Chaku-Mero business taken to form the current business model? What has made it possible to create the largest mobile Internet market within a short period of time? How do firms compete in this business?[1] Though this paper still remains preliminary and descriptive, the research results provide some valuable implications for future directions of mobile Internet services not only in Japan but also in other countries. In a broader context, this paper constitutes a part of a larger research plan that will examine interactions between the music business and technological innovations, including the impact of Internet technologies.

2. Overview of Chaku-Mero Service and its Brief History

What is Chaku-Mero Service?

The current Chaku-Mero service is an Internet-mediated content downloading service. A subscriber accesses a content provider’s website by his/her mobile phone with an Internet browser, and downloads a selected music melody file

[1] Data sources for this paper include the published information, industry data on Internet websites, and interviews with mobile communication carriers (NTT DoCoMo, KDDI, and J-Phone) and content providers (Xing and Yamaha). We would like to thank these companies and interviewees for their kind cooperation.

into the handset. The downloaded file is saved and used as handset's receiving tone melody.

The music data of Chaku-Mero is coded in a simplified Musical Instrument Digital Interface (MIDI) format, which is a digital format designed for music replaying. MIDI file is basically signal data that orchestrates musical tones and controls their volume and length. MIDI file is smaller in memory capacity than other recorded music files on the MP3 or WAVE digital format. Chaku-Mero's file format is a simplified version of the MIDI format specially tailored for mobile handset's small memory capacity. The two dominant mobile formats currently used are Compact MIDI (adopted by NTT DoCoMo, KDDI) developed by Faith, and SMAF (Synthetic Music Application Format) (adopted by J-Phone, KDDI) developed by Yamaha. Content providers prepare a Chaku-Mero file by (1) creating a music melody file in MIDI format, (2) transforming it into a mobile MIDI file by an authoring tool, and (3) uploading it to the Internet servers. Authoring tools are available for each format and provided by the file format developers such as Yamaha and Faith.

Users download a melody file through the Internet browsing mobile phones, and the music synthesizing processor chip in the handset reads the file and replays the melody when a phone call or E-mail message arrives. Major manufacturers of mobile music synthesizing chips include Yamaha, Rohm, and Qualcomm (installed in its CPUs). They supply chips to handset manufacturers.

Downloading service is charged in various ways. Some providers charge monthly subscription fee for limited, or unlimited melody downloads, while others collect transaction-based fee for each download, depending on marketing and competitive strategies of service providers. For instances, users could download 11 melodies at 300 yen in a month, or could download unlimitedly at 100 yen in a month but only from most popular 100 melodies. The discrete payment for every download purchase is also available (except for providers for NTT DoCoMo), paying, for example, 10 yen for each melody. Moreover, free download services are also widely diffused as effective marketing means for advertisement and promotion.

A Brief History of the Chaku-Mero Service

It was in December 1999 that the current model of Internet-mediated ringing tone melody download service was first commercialized on NTT DoCoMo's i-mode

platform. However, the creation of Chaku-Mero was not an overnight incident. Previous experiences and resource accumulations both in related markets and technologies had existed as precursors of the Chaku-Mero service. Particularly critical are (1) the fact that many users had already enjoyed Chaku-Mero in different ways before the mobile Internet got available, and (2) the fact that related technologies, data, and know-how had already been accumulated in the Karaoke business.

The earliest version of Chaku-Mero was “hand-made” by individual users as they directly set music tone by pushing their handset’s dial buttons. A variety of Chaku-Mero guidebooks were published and a growing number of mobile phone users came to enjoy Chaku-Mero by themselves. The first guidebook of this kind was published in July 1998 and a million copies were reportedly sold. In those days, a substantial number of users manually input their favorite melodies by pushing handset buttons following the instructions of Chaku-Mero guidebooks and magazines. The instructions were tailored for each handset’s different technological specifications.

To give customers melody files, rather than let them push buttons tediously by themselves, J-phone introduced a first version of melody download service named “Sky Melody” in November 1998, one year before today’s internet-mediated download service started (a service similar to the Sky Melody was also provided at that time by Astel, the PHS (Personal Handy Phone System) mobile service carrier). In the Sky Melody service, which is currently still in operation, a subscriber calls up the carrier’s automatic responding system and selects a favorite melody following the system’s operation guidance. The selected melody in binary code is sent to the handset as a form of short message after the user hangs up the phone. In this model, J-phone provides the automatic responding system as well as music data, and could make revenue by increasing subscriber’s communication time to call and select the melody. This system was realized by modifying the short massage service system to handle the melody download service. Sharing the basic infrastructure with the existing short message system, the business was very successful and brought profits to J-phone.

The first melody download service on the mobile Internet was introduced on NTT DoCoMo’s i-mode service platform. However, it took some time for the service to start after DoCoMo launched i-mode in February 1999. A related service that first appeared on i-mode was a web-site where Chaku-Mero instructions were exhibited for subscribers, an Internet version of Chaku-Mero guidebooks. The site, named “Club

GIGA," was provided by GIGA Networks for free. Initially, NTT DoCoMo's staff were skeptical about the demand for such service. However, consumer reaction betrayed the initial skepticism when Club GIGA attracted more than 3.5 million page views in a month, and such popularity never ceased even after the site started charging for the service. In September 1999, the number of service subscribers reached 100,000 and 9.13 million page views were recoded.

Users' strong interests in Chaku-Mero had thus been well indicated by the success of Sky Melody and Club GIGA, when the current model of Chaku-Mero download service through the Internet was launched in December 1999. At this point, another precursor joined to contribute to the development of Chaku-Mero business: the Karaoke business[2].

At the beginning, there were three i-mode Chaku-Melo service sites, and all of them were provided by Karaoke service companies: GIGA, which was mentioned above, XING, and SEGA. These providers and many other early entrants in the Chaku-Mero business were leading firms in the wired Karaoke service industry. The wired Karaoke service is a service to provide Karaoke music online to Karaoke places where users enjoy Karaoke. Musical data files are provided through fixed lines and played in the terminal (sing-along machine) installed in Karaoke places. Through the direct channels, these companies distribute newly released popular songs very efficiently and quickly to a large number of Karaoke places around Japan. After the first wired Karaoke technology was introduced in 1992, this online system gradually became dominant and diffused widely in the Karaoke business. In the growth process, wired Karaoke service companies accumulated a huge stock of digitalized music files on the MIDI format. Indeed, NTT DoCoMo adopted a simplified MIDI format for the i-mode Chaku-Mero service because accumulated MIDI music data in Karaoke could be readily used for the Chaku-Mero service. It should be also noted that Japan has lead the world in MIDI technologies, driven by long-term development efforts by Yamaha and other companies.

To summarize, the internet-mediated Chaku-Mero download business was founded on the two critical bases, one on ample digital music data resources and

[2] Karaoke is the activity of singing to specially recorded music for fun. Originated in Japan, Karaoke built up popularity since the 1980s among Japanese people.

related technologies, which had been accumulated in the Karaoke industry, and the other on the established needs of mobile phone subscribers to enjoy Chaku-Mero in the pre-mobile-internet era.

Initially Chaku-Mero was composed in just two or three musical chords because of technological limitations. Now, due to the technological advances in handset music processing chips, driven by the so-called "Wa-on Sensou (chord war)," 40 chords music replays have come to be realized for most advanced handsets. Stimulated by such improvement in sound quality (more chords), a growing number and variety of service providers and melodies available, and fierce market competition among providers, the market has grown rapidly.

As of December 2002, total number of official sites for the three carriers (NTT DoCoMo, KDDI, and J-Phone) reached 244, and Chaku-Mero commanded the largest sales in every carrier's mobile Internet services. Chaku-Mero claimed about 40-60% of the whole mobile Internet sales for each carrier. It was estimated that in 2002 the three carriers' total revenue from (that is, subscribers' total payment for) paid mobile Internet services was approximately 150 billion yen, and the revenue from Chaku-Mero sites was 80-90 billion yen, a very rapid growth from zero within three years.

Profile of Chaku-Mero Users

Chaku-Mero is the most popular and widely used among various mobile Internet services, regardless of age and sex.

Table 1 shows the survey results (about 1,000 respondents) on mobile Internet usage patterns in 2002. Similar to other mobile Internet services, young consumers were more active in using Chaku-Mero downloading. Yet, in all ages and both sexes, Chaku-Mero was the most popular mobile Internet service, with the exception of the group aged between 40 and 69, who preferred weather forecast and news to Chaku-Mero. When users were grouped by frequencies of mobile Internet usage, there was no difference; for both heavy and light users Chaku-Mero was the most popular.

Downloading Chaku-Mero into the handset has been established as the first action of a typical consumer when he or she gets a new mobile phone handset with browser. A growing and strong demand for the Chaku-Merso service seems to reflect subscribers' needs to customize their own handset and to satisfy the desire of appealing to friends and surrounding people with their own characteristic ringing

melody. Also, many users download a number of their favorite melodies every month, saving them and building up their own collections. The Chaku-Mero service not only satisfies the functional needs to have customized ringing tone but also fulfills the desire to enjoy music and to boast about new melodies to friends.

Many new usages of Chaku-Mero have also been explored. For example, you can send a melody with an E-mail message to your friend to celebrate his/her birthday. Or, as it has recently become possible to download human voices, you can use the voice of your favorite celebrity as a morning call.

3. Structure and Competition of the Chaku-Mero Business

Structure of the Chaku-Mero Business

The basic structure of the Chaku-Mero business could be depicted as Figure 1. The official content provider sites, which are approved by each carrier and listed on the carrier's official menu pages, provide melody download service. Users subscribe to their favorite sites, and download music melodies on monthly fee base or by discrete payment on each download (NTT DoCoMo allows only monthly paid content subscription). Each month, on the monthly bill, carriers charge and collect the service fees from subscribers on behalf of the service providers. Carriers gain their own business revenue by charging (1) data communication time (the packet communication fee, for instance, costs around 6-7 yen for a Chaku-Mero download) to subscribers for their site access, and (2) a fixed rate of handling fee to content providers (Docomo and KDDI charge 9% and J-phone 12% as the handling fee of the collected revenue for the provider). And, the service providers pay the copyright fees to the Japanese Society for Rights of Authors, Composers, and Publishers (JASRAC). 5 yen per melody is charged for melodies shorter than 45 seconds, and 7.7 yen for melodies longer than 45 seconds.

It is important to point out that the music copyrights for Chaku-Mero are collectively and solely managed by JASRAC in Japan. As JASRAC has taken charge of copyright procedures for most of ringing tone melodies, Chaku-Mero service providers could use most of popular musical tunes rather freely as far as they pay the fees to JASRAC. A historical background of such smooth copyright coordination for Chaku-

Melo could be traced back to institutional arrangements made for the Karaoke business and the Sky Melody service. For the Chaku-Mero service, the copyright negotiations with JASRAC were conducted by the Association of Musical Electronics Industry (AMEI) with the leadership of Yamaha, Faith, and major service providers. They agreed on the current copyright rule in late 2000, about one year after the first Chaku-Mero download service was introduced.

In the beginning, as Chaku-Mero got wide popularity, a large number of general sites (or unofficial sites not approved by the career) for Chaku-Mero sprung into existence, offering a wide variety of free melody download services. To counter this undesirable trend, JASRAC vigorously monitored and charged copyright violations, and eventually cooled down the movement. JASRAC thus made an important contribution to the Chaku-Melo business by preventing the spread of improper free services, in addition to the provision of smooth copyright coordination. This evolution pattern contrasts with the U.S. situation in which an earlier wide spread of free music download services like NAPSAR on the fixed Internet has disturbed the creation of paid online music download services, having established the first image of "free music on the web."

When we look at other countries, we find that the situations are more problematic. As shown in Table 2, for example, in some countries copyrights are managed in a more complicated manner with different rules, and/or there is no institution that could manage necessary copyrights all together for one-stop shopping, thus causing high costs of copyright coordination or allowing the spread of illegal sites. Japanese service providers often complain about the absence of efficient copyright procedures as a major obstacle for their business overseas. This fact, in effect, indicates that smooth copyright coordination has substantially contributed to the success of Japan's Chaku-Mero business.

Competition Surrounding Chaku-Mero Business

Table 3 lists major Chaku-Mero sites and their sponsoring companies. Largest content providers in the market include Xing, GIGA Networks, and Daiichikosho, SEGA, Yamaha, and Dwango. The largest service provider is Xing, which has about 6.5 million subscribers and had revenue of 12 billion yen in fiscal 2001. The second largest provider is GIGA with 5 million members and revenue of 6 billion yen in fiscal 2001.

The common characteristic of leading companies like Xing, GIGA, Daiichikosho, and SEGA, as mentioned before, is that they all have diversified into the Chaku-Mero business from the wired Karaoke industry. In the late 1990s, these companies were eagerly searching for new businesses to compensate for their saturated Karaoke market. Their abundant stock of MIDI files prepared for the Karaoke business leveraged their venture into the Chaku-Mero business. These former Karaoke service providers had already built up capability to swiftly arrange and make MIDI files for the newly released songs and lost no time in griping the new chances with briskly prepared melody menus in the early rapid growth period of Chaku-Mero business. They succeeded, as a first mover, in capturing a large number of users. A larger size of subscribers would give the provider some competitive advantages. First, there are some switching costs for customers; once accustomed to a particular site they don't frequently change to another. Second, the carrier's official menu lists the service sites in the order of the number of accesses/subscription. Being at the top on the first page of the list would bring the provider more accesses than being at the bottom on the subsequent pages.

Another feature of two top-ranked Chaku-Mero providers, Xing and GIGA, is that they have focused their business on the services with NTT DoCoMo. By launching very early Chaku-Mero sites for NTT DoCoMo, which first created the mobile Internet market, they have built up large subscriber basis and gained competitive advantages. On the other hand, some of leading Chaku-Mero service companies for KDDI and J-Phone provide their services to multiple carriers' platforms. In other words, the relationships between service providers and carriers are mixed, including both open and closed ones. However, the general trend moves toward to more open structure, and recently the DoCoMo-only service providers have begun to establish their services for other carriers.

One key factor in the Chaku-Mero competition is the scope and quality of the service menu. All the leading service companies offer a wide variety of melodies in their menu. For instance, Xing, the market leader, provided 12,000 melodies as of March, 2003, while adding 200 new melodies every month. Differentiated from these "full-line" service providers, some providers are specialized into unique music genres (for instance, theme songs of popular TV programs and animations, guitar sounds, and jazz arrangements, to name a few).

Another critical competitive dimension in the Chaku-Mero business is the ability to arrange melodies fine-tuned for different carriers and different mobile phone handset models. First of all, service providers need to arrange the melody files to cope with each carrier's different format of Chaku-Mero files such as Compact MIDI and SMAF, each of which has a couple of versions. What makes the situation further complicated is that each handset model has a different synthesizer chip and speaker. Older handsets could play only three chords, while latest ones 40 chords, for instance. To maintain the sound quality of Chaku-Mero and satisfy the users, each melody should be rearranged and tuned according to the file format and handset specifications, a condition which significantly increases the variations of music files needed for optimal sound. Therefore, the same melody often needs to be encoded on 20-30 different file formats. The capability to efficiently and quickly provide melody files fine-tuned for individual handset models to play better musical sound would significantly affect competitive positions in the Chaku-Mero business.

Other critical competitive factors include: the number of chords available; cheap pricing; and a better web-site design to allow subscribers to find favorite melodies quickly and thus economize on time and communication fees.

4. Future of the Chaku-Mero Business: The Music Business and Mobile Innovation -

Today and Tomorrow of the Chaku-Mero Business

The Chaku-Mero business took a head start and has been growing very rapidly until now. About four years have passed since NTT DoCoMo launched the first mobile Internet service. During this period the Chaku-Mero service, as the largest business, has driven the development and growth of the mobile Internet. Although its share in the mobile Internet market tends to gradually decrease because new services such as games have been introduced, the Chaku-Mero market has so far kept expanding and still maintained the top position.

However, it is also true that the pace of market growth has slowed down and the business does not appeal as much as before. An important revenue source for Chaku-Mero is those subscribers who have just purchased new handsets for the first time or for replacement. The market for mobile communication subscribers, however,

has entered to the maturation phase and keeping a high pace of growth as in the past will be infeasible. The annual growth rate of JASRAC's copyright fee revenue from the Chaku-Mero service recorded 102 % in 2000, 72% in 2001, and 30% in 2002, indicating the market saturation. The number of new entrants in the business increases and intensified competition leads to price cuts, making the business less profitable. The "chord war," which has stimulated the demand for better quality of melodies, now likely comes to end, after 40 chord processors have become available in the market. The shared industrial recognition is that the subsequent advances in this dimension would not significantly raise the current consumer satisfaction level.

As mobile technologies advance into the Third Generation (3G), new services related to Chaku-Mero have become available, such as "Chaku-Koe" service (providing voices of people, including celebrity, as a ringing tone), "Karaoke" service (providing melody, words, and graphical image of a song to enjoy Karaoko with mobile phones), and "Chaku-Uta" service (providing a piece of song as a ringing tone). Future of the Chaku-Mero business would depend on how attractive these new services are and how much they create new market demand.

Among these new services, we are particularly interested in the Chaku-Uta service, which was introduced in December 2002 for KDDI's 3G mobile Internet platform (au). Whereas in the Chaku-Mero service people download melodies, in the Chaku-Uta service people can download a part of original songs with vocals and full instruments. It is still too early to make any fair evaluation of the new service, because only four months have passed since the first Chaku-Uta service was introduced. However, four companies have already opened five service sites as of mid-April 2003, and user responses are affable. This new service seems to have made a good start.

Until now, no service has been realized for downloading music, rather than melody, by way of the mobile Internet channel (Though DoCoMo provides a music distribution service on its PHS platform (M-stage), it dose not operate by way of Internet and the demand has not been strong). The music download service on the mobile Internet has not been realized because voluminous file size necessary for full music demands larger download and playing capacity, longer time, and high costs. Furthermore, music download services need to handle complicated copyright concerns of various parties.

However, since Chaku-Uta uses just a small part of music, it could overcome

the problems with capacity, download speed, and consumer cost (nevertheless downloading a Chaku-Uta still costs ten times as much as Chaku-Mero, including communication fees. Typically, to download a Chaku-Mero costs 15-20 yen, while Chaku-Uta costs 150-200 yen). In addition, the Chaku-Uta service simplified copyright problems by limiting the scope of the music usage. Only a short part of the whole song is used, and the downloaded file, which is made in the format called "ez-movie," is protected for subsequent copies and not removable from the mobile handset.

Another characteristic feature of Chaku-Uta is that the service has been provided by recording companies, which have not been successful in the Chaku-Mero business. A download service of original music involves matters and concerns that go beyond what JASRAC could cover and manage. Thus, while leading Chaku-Mero service providers (mostly Karaoke companies) have not entered the market, Labelmobile, a company that has been jointly established by Japan's major recording companies and maintains necessary copyrights of many popular songs, became the first Chaku-Uta service provider. This is different from what has happened in the Chaku-Mero business.

Ironically, the recording companies have not been able to receive benefits from the lucrative Chaku-Mero business. They have watched a rapid growth of the market and business with envy. In the Chaku-Mero business, the copyrights and attached fee revenue go only to music composers as the business uses just a short melody of music. This business structure has frustrated recording companies, which have risked huge financial commitments to make hit-songs to be used for Chaku-Mero. To them, Chaku-Mero providers are free riders, who just enjoy the delicious fruits yielded by recording companies without committing any investment and risk to create popular songs. To make their own presence in the Chaku-Mero business, recording companies jointly launched a Chaku-Mero site, "Reco-Choku," operated by Labelmobile, in addition to other sites provided by individual record companies. However, their business performance has not been notable. Chaku-Mero is a melody just arranged for ringing tone and quite different from the original songs. Recording companies do not have distinctive capability to prepare a simplified MIDI files fine-tuned for individual handset models and compete against leading service providers. Actually, recording companies have experienced the same frustration when the Karaoke businesses was created and developed.

Facing down-sliding CD sales, recording companies have recently been in a slump. Japanese CD production peaked at 600 billion yen in 1998 (the second largest in the world next to the U.S.), and then decreased to 500 billion yen in 2001. In the meantime, the Karaoke business has 900 billion yen market, though matured, and the Chaku-Mero business has 80-90 billion yen market, still growing. It is a critical issue for leading recording companies how to establish their presence in wired and wireless online Internet music businesses. In this context, the Chaku-Uta service is regarded as an important business opportunity, where they could have some competitive advantage. The new service is also expected to serve as a new promotion means for newly released songs.

How much does the Chaku-Uta service to download music, instead of melody, create market demand? What business could recording companies command in this field? Answers to these questions surrounding Chaku-Uta would cast critical implications to future of the music business on the Internet.

Music Business and Mobile Innovation

Technological innovations in music creation, production, recording, playing, distribution, promotion, and advertising change the structure of the music business and industry, and give birth to new popular music genres and styles of performance. The history of the music business has repeatedly witnessed such patterns of interactions between technological changes, business structure, and music itself. What would be the impacts of the mobile Internet innovations on the music business and music itself? To think about this question, the case of Chaku-Mero in Japan would be of great interest as the sole example of successful music content download business on Internet.

This paper has briefly examined how the Chaku-Mero business has been developed, and provides some findings and implications. First, the Japanese Chaku-Mero business was made possible by some favorable conditions:

1) needs for Chaku-Mero were already established among mobile phone users;
2) technological know-how and digitalized music resources were accumulated in the wired Karaoke business; and
3) institutional foundation was established for smooth and efficient coordination of

copyright issues.

It is often argued that the success of the Japanese mobile Internet business could be explained by young people's unique market needs peculiar to Japan, or by delayed diffusion of fixed Internet networks. However, our observation in this paper shows that such argument would lose explanatory bases. Chaku-Mero enjoys popularity across generations as shown before. Also, the Chaku-Mero service occupies the top rank in popularity among mobile Internet services in the foreign countries where mobile Internet services have been launched recently. Chaku-Mero seems to have a firm market potentiality in many countries. The Chaku-Mero service is a mobile-only business to use melodies as ringing tones, and should be distinguished, thought related, from music download on the fixed Internet. Thus whether customers have experiences in fixed Internet or not has little to do with the success of the Chaku-Mero business in Japan. Rather, the major industrial success factors of Japanese Chaku-Melo seems to be the long accumulated music data resources and technological competence (in the Karaoke business and MIDI technologies) and institutional arrangements (JASRAC).

The question still defies a quick answer if the success of Chaku-Mero would lead to another success story in Internet music download services. Copyright management and control for original music pieces are much more complicated than for Chaku-Mero. The whole music file is still too heavy to be downloaded even in the 3G mobile networks. Positioned in the "middle" of simple melody and full song, the outcome of the Chaku-Uta service seems interesting and suggestive for the future. Yet, it is still questionable if the experiences in Chaku-Uta could be applied to full music download services on Internet both fixed and mobile. Expectations for music and graphical content services grow high as 3G and 4G mobile technologies come to be realized, but we still must jump over many high huddles to reach the goals of success.

Table 1 Mobile Internet Site Genre Usually Used by Customers （%）

		Chaku-Mero DL	Weather Forecast	Screen Savers DL	Traffic Information	General News	Sports Information	Game DL	Restaurant Information
Total		54.1	32.5	31.7	27.2	20.8	17.0	12.7	11.7
Man	Total	48.2	33.7	27.6	25.1	22.6	25.6	12.6	9.5
	age 12-19	84.4	15.6	56.3	3.1	3.1	9.4	34.4	0.0
	20-29	58.6	25.7	34.3	27.1	27.1	30.0	12.9	7.1
	30-39	37.0	37.0	19.6	21.7	23.9	30.4	8.7	17.4
	40-69	21.6	52.9	7.8	39.2	27.5	25.5	2.0	11.8
Woman	Total	60.0	31.3	35.9	29.2	19.0	8.2	12.8	13.8
	age 12-19	88.9	14.8	59.3	7.4	11.1	7.4	25.9	3.7
	20-29	63.4	37.8	41.5	42.7	15.9	9.8	13.4	15.9
	30-39	47.3	29.1	25.5	25.5	23.6	3.6	7.3	16.4
	40-69	48.4	32.3	19.4	19.4	25.8	12.9	9.7	12.9
Heavy User		51.7	38.1	30.5	32.2	30.5	21.2	12.7	11.0
Intermediate User		57.8	32.5	35.5	25.9	19.3	14.5	15.7	10.2
Light User		50.9	26.4	27.3	23.5	12.7	16.4	8.2	14.5

Note：Survey conducted in July 2002 (with 1039 respondents)
% of the respondents who usually use the site genre.
Heavy, Intermediate, and Light indicate the frequency level of mobile internet service usage.
Source：Video Research, Mobile Phone Usage Situation.

Table 2 Institutions for Chaku-Mero-Related Copyrights in Some Countries

Country	Institutions for Copyrights Coordination	Characteristics, Problems, etc
Japan	JASRAC	As JASRAC collectively controls almost all the copyrights, it could efficiently coordinate copyrights for Chaku-Mero providers.
U.S.A	ASCAP,BMI, etc	Because of multiple numbers of copy right institutions, copy right coordination process is complex.
Germany	GEMA, etc	The copyright rule requires Chaku-Mero service providers to pay 0.2 Euro for the composer as they transform the original music into Chaku-Mero, the distribution cost is high.
Singapore	COMPASS	Because there is no effective collective copyright institutions, coordination procedurals are difficult.
Korea	KOMCO	As there is almost no collective copyright institutions, inappropriate Chaku-Mero business is wide spread.

Source: Nihon Keizi Shinbun, 2003/02/08

Figure 3 Major Chaku-Mero Sites

Carrier	Major Chaku-Mero Site	Content Provider	Parent/Related Company
NTT DoCoMo（87）	PokeMeroJOYSOUND	Xing （Wired Karaoke）	Brother（Machinery）
	Chaku-Mero GIGA	GIGA Networks（Wired Karaoke）	Richo（OA Equipment）
	Mero DAM&Karaoke DAM	Daiichikosho（Wired Karaoke）	Daiichikosho
	SEGAKara	SEGA Music Networks	SEGA（Game Software）
	Yamaha MerocCha!	Yamaha （Music Equipment）	Yamaha
	40MeroMix	Dwango (GameSoftware)	Dwango
KDDI（108）	Meropa	MTI（Mobile Contents）	Music.Co.Jp （Digital Music Distribution）
	Mero-Chaku Club	Infocom（IT Solution）	Infocom
	N-Melody Town	NEC（Electronics）	NEC
	Mero DAM&Karaoke DAM	Daiichikosho（Wired Karaoke）	Daiichikosho
	Oricon Super Sound	Oricon Entertainment	Oricon (Music Information)
	Ymaha MerocCha!	Yamaha （Music Equipment）	Yamaha
J-Phone（49）	40MeroMix	Composit（IT Solution）	Dwango (Game Software)
	N-Melody Town	NEC（Electricity Equipment）	NEC
	MecchaMero	Infocom（IT Solution）	Infocom
	Oricon Super Sound	Oricon Entertainment	Oricon (Music Information)
	SEGA Kara☆Melody	SEGA Music Networks	SEGA（Game Software）
	Taito Sky-On Rakuen	Taito (Game Software)	Taito

Note: Number in () with the carrier shows the number of official Chaku-Mero sites as of December 2002
Source: Carriers' web-sites and an interview with Yamaha.

Figure 1 Basic Structure of Chaku-Mero