

Mobile FeliCa in Japan

*- 5 years of contactless mobile services:
payment, loyalty, transport -*

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• Preface of the Report by Carl Atsushi HIRANO (Extract)



President-CEO of NetStrategy, Inc.,
Guest Professor at Harvard Business School
Former Executive Director and Head of Mobile Wallet and Strategic Alliance of i-mode, NTT DoCoMo

Today when we are on the metro or a train in Japan, we easily pass 2 or 3 passengers on a 7-person bench, who are “looking at” their mobiles. One is playing a video game, and the other is writing or reading his e-mails on his mobile. Many pedestrians cross the street midway or at a pedestrian crossing while looking at their mobile. These scenes of daily life have become commonplace in Japan.

However, no one would have observed such a landscape a mere 10 years ago, that is to say until the launch of i-mode in February 1999 by NTT DoCoMo. I am proud of these phenomena as proof that i-mode gave birth to a “Green Field”, that is, a formidable new industry.

In 2004 we brought to market the first mobile telephones with the function “Osaifu Keitai” (Osaifu = wallet, Keitai = mobile). Mobile telephones equipped with this function quickly spread, and they have already passed the 50 million mark. If I position i-mode as an infrastructure of the virtual world, then Osaifu Keitai service constitutes a real world. The positioning of Osaifu Keitai that I sought to achieve is the link between the virtual world of the Internet and our real world with stores and means of transportation.

The successes of Osaifu Keitai, over the last 5 years, have frankly surprised me, as a strategy (“Mastermind”) of service. Why did this service spread so quickly? The first reason is that I researched the dissatisfactions and inconveniences of daily life. I’m convinced that these “dissatisfactions” and “inconveniences” are the mother and father of every new industry.

Why do I have to have so many loyalty cards or credit cards in my wallet? (NDLR: in Japan, a consumer has on average 12 cards in his wallet). Everything started with this idea. After a theft I would lose all of these cards, but if all of my cards are integrated on my mobile then all I need to do is make one phone call to my telephone operator to stop them. In order to create such a world, I created Osaifu Keitai.

I am certain that there is a demand for such a market the world over, as much in European as in the United States.

The industry is already alive. In the long history of human beings, many industries have been born and have evolved. To understand this dynamism, we need to examine the industry from

the point of view of service, and from the angle of function. For example: the reason consumers use a credit card is the function to quickly pay for their purchases without using cash, and not because it is a plastic card. In other words, if someone can provide this function with more convenience, it does not necessarily need to be a company issuing a credit card.

The classic framework of existing industries is collapsing, due to the spread of these new technologies, high speed Internet, whether via landline or mobile, the decrease in the price of subscription fees, and the introduction of unlimited plans.

Therefore, it is important to construct an ecosystem from which all participants of the value chain – mobile operators, providers of contactless card technology, companies managing the services of the real world, such as retailers, public transit companies or beverage dispensers –, earn a profit. However, to create this ecosystem, we need to solve the hen or egg causality dilemma, as Andrei Hagi (a professor at Harvard Business School) explained in his Multiside Platform Theory, and one of the players has to take the risk to create and coordinate the ecosystem.

Unfortunately, most new services are based on ideas received. But I am sure that the key to success is the fact that these ideas received will be replaced by a vision of “dissatisfactions” and “inconveniences”. Put differently, we have to build a value chain in which every participant can earn a profit, and that these services are conceived from consumer demand.

In Japan, NTT DoCoMo took on the role of the market coordinator taking on a high risk. I wish, from the bottom of my heart, that another company or brave person will give birth to this ecosystem, in Europe and in the United States. I am impatiently waiting for the day when I can buy a *café au lait* and a croissant in a Parisian café with my Japanese mobile.

I hope this Jap’Presse / InnovAsia Research report will contribute to the realization of such a world.

- Postface of the Report by Jean-Yves GRANGER (Extract)



President of the Forum of Contactless Mobile Services (<http://www.forum-smisc.org>).
Former Director of the Prospective, Innovations and Marketing Coordination Division, LaSer

In 10 years, the lightning speed with which the mobile has invaded daily life, both professional and personal, defied all forecasts and analyses. It swiftly struck all of the population regardless of age and social class. A mass-market product, it has become a very personal object. A mobility object it is also used at home or at work. It plays with time and space, and it is not surprising that the most used phrased spoken via telephone is: "where are you?"

We now know that the mobile is much more than only a simple telephone! It opens up a multitude of opportunities in many domains. And it is here that the exchanges with NTT DoCoMo and the meeting with Carl Atsushi Hirano not only made us dream but he also quickly convinced us that we also have to make way for this new universe in France.

We thought that we were also moving forward quickly, but he deflated our enthusiasm! After the first test conducted in 1999 and 2000, we realized that we were not in Japan, far from it!

The preface by Carl HIRANO and the totality of this report effectively explain the differences and the factors that favoured the development of all these applications in his country. Besides the fact that contactless is very developed, it is obvious that transportation companies and the high installation of convenience stores (the famous Convini) had a driving force. It is interesting to see the speed at which the power of loyalty marketing, promotional campaigns and coupons have increased.

For cultural reasons, the Japanese adopt electronic media very quickly, and this proves it! But we can find this phenomenon in a part of the French population and so we should now see an acceleration of the applications described in this report. Up to date, if we compare our reality with the history of Mobile Felica, we have to note that we are only at the beginning in terms of use for these services, marketing, m-payment, advertising... But projects, tests and pilots are increasing, in France and everywhere in Europe, in particular with contactless and NFC which will favour the development of services that we find in Japan, other than payment by mobile.

Broadband and the convergence with the Internet, context portals, geolocalisation, without counting new types of tactile screens, there are so many factors that can only energize and ever quite certainly rattle the markets which are opening with the mobile. The rise in power of the mobile has been put in place and is irreversible, just as was the case with cards 30 years ago; the big difference is that it will be faster since everyone already has a mobile.

Consumers are ready if we bring them simple services that will facilitate their daily lives. We mustn't forget that if we do not fulfil their expectations, they have the remote control in hand and can say yes or no.

To thank Carl and Felica for allowing us to discover the new universe of "Osaifu Keitai", I hope that in a few months, as he has dreamt, we will be able to buy a *café au lait* and a croissant in a Parisian café using a mobile.

I hope that you will be enthused reading this report and that it will lead to many new initiatives and projects.

• Executive Summary

FeliCa Contactless smart chip technology, developed by Sony, was launched in July 2004 by NTT DoCoMo on mobile telephones in Japan, under the name Mobile FeliCa. In 2010, the European equivalent of this technology, christened NFC (Near Field Communication), should finally have its first commercial launches in Europe. With the aim of allowing European operators and service providers to benefit from 5 years of experience with contactless mobile services in Japan, Jap'Presse / InnovAsia Research, an agency specialized in industry monitoring and studies on NTIC in Asia-Pacific, has published this report.

Quick spread of Mobile FeliCa and its uses in Japan

The services developed on Mobile FeliCa were greatly inspired by those which had already existed on FeliCa plastic cards notably Suica by JR East and Edy by BitWallet. NTT DoCoMo then devised services such as a transit pass, an electronic wallet, or even loyalty programmes on the mobile, which relied on contactless infrastructures and uses that already existed.

The commercial name of this service in Japan, "OsaiFu Keitai", has become a standard on the Japanese market, and is used in every communication campaign conducted by the mobile operators NTT DoCoMo, KDDI and Softbank Mobile. Today almost all mobiles launched on the Japanese market are equipped with a contactless smart chip and many players provide a large range of services.

Total of Mobile FeliCa Handset in circulation in Japan (Oct.09)	60 million
Of which are i-mode FeliCa by NTT DoCoMo (May 09)	35 million
EZ FeliCa by KDDI (Nov 07)	10 million
S !FeliCa by Softbank Mobile (Feb 09)	10 million

These figures do not correspond to the exact number of users, for they are only the exact number of handsets equipped with a FeliCa smart chip. The data in terms of usage varies according to the service providers, because each Mobile FeliCa service requires a subscription.

A vast range of contactless services on the mobile

Since the beginnings of Mobile FeliCa in 2004, a great number of contactless mobile services have appeared on the Japanese market. These have mainly concerned 4 domains – contactless mobile payment, transit passes, contactless marketing applications, and other services that we can qualify as "various" (access, security, etc) -, but some services overlap several domains. For example, ANA plane tickets on Mobile FeliCa are coupled with its Mileage plan, and these

Miles can be exchanged for Edy money (the most used electronic wallet service in Japan).

The most remarkable service using Mobile FeliCa is McDonald's "Kazasu Coupon" (kazasu = go over), launched in May 2008. For this restaurant chain, the introduction of "Tokusuru Appli" (tokusuru = advantageous) is the extension of its loyalty programme. This service consists of distributing mobile discount coupons, but with the assistance of the contactless smart chip, in order to speed up the flux at the counter. The Kazasu Coupon reader has also become a reader for the contactless modes of payment; iD, Edy, and Waon. This service has been very successful since its launch. At the end of August 2009, 4.5 million mobile users had already subscribed to this loyalty programme, to the point that this service was no longer available in 22 out of 47 departments.

The rapid spread of Mobile FeliCa in Japan is hard to understand if we do not take into account the prior existence of plastic FeliCa cards. Practically all Mobile FeliCa services providers issue a plastic FeliCa card, and Mobile FeliCa is an option for them. However, NTT DoCoMo strongly pushed for the installation of FeliCa readers in retail stores, by investing 10 billion yens (73 million euros) during the launch of Mobile FeliCa, in order to subsidize the purchase of readers by partner retailers. This strategy allowed the fast diffusion of the use of Mobile FeliCa.

Over the last five years, the existence of many service platforms for Mobile FeliCa services has created competition for FeliCa readers, which has led to some confusion for retailers, which then required several readers. This problem is in the process of being resolved, notably by some agreements signed between the main service platform providers, especially in terms of payment. These agreements foresee the development of the distribution of shared FeliCa readers. Some have already been put into use.

- Mode of Payment (prepaid electronic money)
- Mode of Payment (post-paid credit cards)
- Transportation
- Marketing and Loyalty Programme
- Security

The reasons for its success:

On average, about a third of those with a Mobile FeliCa handset in Japan use it regularly, according to different studies. The uses vary depending on the population group, but two areas are noteworthy: firstly, the satisfaction rate of Mobile FeliCa users is very high, insuring a progressive spread, and secondly, payment using a contactless mobile has generated a higher than average basket purchase in stores than with traditional modes of payment. This advantage for businesses, in addition to a faster time at the checkout thanks to contactless payment, has motivated retailers to adopt this new mode of payment, despite the fairly high

commissions often charged by the issuers of these payment platforms.

Japanese tradition dictates that a loyal customer should benefit from a return on the part of the retailer, and this arrangement packs Japanese wallets with loyalty cards: on average 12 cards per consumer on the archipelago. One of the first ideas for i-mode FeliCa by NTT DoCoMo was to unify all of these loyalty cards on the mobile. What's more, the dominant position of retailers in Japan after a few agreements, has allowed for the installation of Mobile FeliCa readers in thousands of points of sale. For example, one of the main chains of Convini, Seven-Eleven, equipped all its stores (11,847 points of sale) with nanaco readers, in the span of 5 months.

Other than for payment, retailers quickly realized the potential of Mobile FeliCa regarding marketing: promotional information and coupons are sent to mobiles at the time of payment, interactive signs in stores, the compilation of information on consumer behaviour, etc. Many initiatives have been undertaken in this direction, like the creation of a joint venture between NTT DoCoMo and McDonald's Japan, in order to develop Mobile FeliCa services in the latter's restaurants.

The high presence of chain retailers in Japan, the strong traditional use of loyalty cards by the same companies, the inter-company collaboration (greater

than in Europe), have also largely contributed to the development of Mobile FeliCa.

Towards a 3rd phase in the history of mobility?

In July 2004, during the launch of its contactless mobile service, the operator NTT DoCoMo heralded the beginning of a third phase in the history of mobility, which would have led to periods where operator revenue growth would first come from voice than from the data transfer. However, at the beginning of 2008, this report indicated that the operator did not really succeed in generating high revenue from payment and contactless services, despite a certain level of public support.

The Japanese experience is nonetheless very instructive for future European players on the NFC market – in terms of uses, the variety of current services, devised business models -, under the condition that the context and motivation of the players are understood.

The authors of this report are convinced that the experience of Mobile FeliCa in Japan can fuel useful reflection on contactless mobile services adapted to the needs and habits of Europeans and the NFC value chain, the method and pace of the spread of such technology in society.

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