

Telecommunication Numbers Committee  
Telecommunications Business Subcommittee, Telecommunications Council  
Summary of Minutes (3rd meeting)

Date: Tuesday, November 14, 2006, 10 to 11:40 a.m.

Location: Conference Room 401, Ministry of Internal Affairs and Communications

Attendees

Telecommunication Numbers Committee Members

Sakai (Chair), Aida (Vice-Chair), Ichii, Kawamura, Mitomo, Mukuda

MIC representatives

Sakurai (Director-General, Telecommunications Business Department), Suzuki (Director, Telecommunications Policy Division), Watanabe (Director, Telecommunication Systems Division), Miyamoto (General Manager, Number Planning Office), Uematsu (Deputy Director, Number Planning Office)

Presenters

VoIP Deployment Consortium of the Telecom Services Association, Fusion Communications Corp., NTT Communications, NTT East Corporation, NTT West Corporation, Jupiter Telecommunications Co., Ltd.

Main Proceedings

1. State of examinations into FMC services introduction (presentations from telecom businesses)

- Chair Sakai proposed that today's proceedings be made public. The members gave their consent.
- The telecom businesses and other presenters (VoIP Deployment Consortium of the Telecom Services Association, Fusion Communications Corp., NTT Communications, NTT East Corporation, NTT West Corporation, Jupiter Telecommunications Co., Ltd.)

in attendance announced the state of their examinations into their respective FMC services. A question-and-answer session was held following the presentations.

#### Main Statements

1. State of examinations on the introduction of FMC services (presentations from telecom businesses)

Sakai (*Study Group Chair*) — Because today's proceedings concern the state of examinations by telecom businesses into the introduction of FMC [fixed-mobile convergence] services, I feel it is reasonable to make these proceedings public, as we plan to hear from telecom businesses. Is this acceptable to all the members?

Members — We agree.

(VoIP Deployment Consortium of the Telecom Services Association, Fusion Communications Corp., NTT Communications, NTT East Corporation, NTT West Corporation, and Jupiter Telecommunications Co., Ltd. gave presentations backed by material references on the state of their examinations into FMC services.)

#### *Statements from the question-and-answer session*

Aida (*Vice-Chair*) — First, one brief confirmation. Have the businesses that made presentations today considered routing calls to so-called “numberless” lines, that is, to lines without existing telephone numbers?

Next, although Jupiter Telecommunications seemed to go into quite a bit of detail about household services, the other companies appear to be mainly focused on corporate users. I'd like to know if any firm other than Jupiter Telecommunications is seriously considering household services.

NTT East — If it's a question about household or corporate services, we are talking about concentrating on household services.

Aida (*Vice-Chair*) — How will these services work when used in the home context?

When several people in the household, the parents and the children, have their own mobile phones and these phones are divided from 060 numbers and calls are received on a 0AB-J number, in the end, which person in the house should the dial-in function call? Moreover, what happens when one person is on the phone and a call comes for a second person? Does the other end get a busy signal or are they connected through a mobile phone? You probably haven't completely finalized these areas, but I'd like to know what you imagine will happen in these situations.

NTT East — I was perhaps a bit hasty when I said household services just now. In our examinations, we were imagining users in more singular units, like SOHO users. However, the situation you have indicated — how will the family phone be connected to the individuals' phones — needs a little more investigation. One solution, for example, might be to assign two or three numbers to the family number. But at the present time, we have not made a specific examination of this, including the idea of individuals.

Aida (*Vice-Chair*) — NTT Communications spoke about not wanting to change the numbers of its corporate users, which already add up to well over 3 million numbers. Normally the 0AB-J dial-in numbers are, on the whole, assigned to departments and sections within a company so that even when personnel are transferred the caller still connects to the same department. So if you call to that number and ask for Mr. So and So, even if he has moved to another section, you still get through to the section with which presumably you have business. But 050 dial-in numbers are assigned to individuals, and when they are transferred, the calls are still routed to them. Is my understanding correct?

NTT Communications — That's right. That's the trend we are seeing.

Aida (*Vice-Chair*) — So when personnel are transferred within a company, they will have to transfer calls to the department which can deal with issue. Is that correct?

NTT Communications — That's right, since 050 numbers are bound to individuals. But in addition to these numbers are fixed-line or other telephones that act like switchboard numbers for the section. So when you are calling an organization rather than a specific individual, you would call one of these switchboard numbers.

Aida (*Vice-Chair*) — But with FMC, does it not become more difficult to transfer the called number to these switchboard numbers?

NTT Communications — Most internal calls or even calls from outside a company are directed toward individuals, so that's perfectly fine in my estimation. But when it isn't, when the call comes from somewhere that isn't internal or that isn't a business partner, then some arrangements are needed, such as having a separate customer-support number that connects to a fixed-line telephone or what have you.

Aida (*Vice-Chair*) — That's something like the so-called "call pick-up" function, where calls to a switchboard number can be taken at the nearest phone.

NTT Communications — That may very well be a possibility.

Aida (*Vice-Chair*) — Your current services have yet to reach this point?

NTT Communications — When I said that we have 3.3 million users, I was referring to our total number of users, not just corporate users. As to whether call pick-up is possible, yes, it is currently possible with our corporate services.

Ichii (*Study Group member*) — I believe that none of our presenters today are businesses that currently provide mobile-phone services. Nevertheless, from a naïve point of view, when users make a call from a mobile handset, for example, while at home and the call is placed via the fixed line, I think they sense an advantage because the price is cheaper. But I understand that more inherent mobile-phone services on the other hand, like surfing Web sites or sending and receiving mail, are difficult to route via fixed-telephone lines. Thus, the normal mobile-phone fees will

apply to the data-communication part. I sense that this is a little tough for end users to understand.

The features of mobile phones have advanced tremendously and they are exceptionally easy to use. From the usage side, phone calls are just one part of all the things you can do. In spite of this, if you have a situation where this function uses this path and this function uses that path, it seems very difficult to understand. What are your thoughts on this?

Fusion Communications — Recent mobile phones are very advanced, and it's not just i-mode: there are mobiles that can view normal mail and normal Web sites via wireless LANs.

Ichii (*Study Group member*) — I'm well aware of that. There are many ancillary services now dependent on mobile carriers. Ring tunes and Web site-related stuff. I think all these services inevitably have to go through the mobile-phone carriers' networks, right?

Fusion Communications — Since the content provided by the mobile-phone carriers is good, users will pay to get to it. If equivalent music sites or other killer content were on the Internet, then naturally users would go there. So I think it's the user's choice.

Ichii (*Study Group member*) — That may well be.

Sakai (*Study Group Chair*) — Related to this topic, when you call out from a 050 or 060 number for example, the rates vary depending on the other party; that is, whether the call goes through the mobile-phone network or not. Does this assume that the network being used is indicated in some fashion? Or is it a case of nothing can be done?

NTT Communications — We assume an indication will be made.

Sakai (*Study Group Chair*) — Specifically, what kind of indication are you considering?

Aida (*Vice-Chair*) — I presume that when an FMC subscriber places a call, the subscriber will know which line is being used by some indication on the phone. But in the opposite case, when the FMC subscriber is called, will the user know over which network the call is connected?

Sakai (*Study Group Chair*) — Without some plan in place, they probably won't know. When someone makes a call from FMC, they could know which network they are being connected over by looking at an indication on the screen when the call is placed, since it's possible, for example, that the call will go out over the mobile-phone network even when calling from home because someone else at home is already on the phone.

Jupiter Telecommunications — On the calling side, that's what will probably happen. But how to identify the network when being called? One way to distinguish the network is to use different ring tones. In the configuration we are considering, the home phone would also ring at the same time, so the user would know that it's a call to the home phone.

Sakai (*Study Group Chair*) — In your scenario, two phones would ring? Both terminals would be called?

Jupiter Telecommunications — Both phones would be called.

Sakai (*Study Group Chair*) — But am I right in believing that the other companies here will mostly be using one-phone configurations?

Mitomo (*Study Group member*) — First, I have a question for Jupiter Telecommunications. I thought your presentation today was very easy to understand. But with FMC services, the previous situation — where mobile phones are charged as mobile phones and home phones are charged as home phones — will to some extent become integrated. This has both advantages and disadvantages. For example, when every member in a family has a mobile phone, it's possible to determine

roughly who used how much. But when calls from mobiles are placed from the home they go through the fixed-line network and are billed according to that network. Knowing this, children will likely try their best to take advantage of this to keep their own charges down. So when considering this type of service, will there be a way to break down the charges out of consideration of the needs of family services?

Jupiter Telecommunications — To be honest with you, we are still groping with these sorts of needs issues. Since these services have yet to be rolled out, it's hard to form an image of the users. We will continue to look at how we can come up with a shared image of what service configurations will compel people to try the services. When I imagine my own situation, I often find it annoying to have to get up and walk to the home phone because it's ringing even though my mobile is beside me. If we implement this well, latent needs will probably be uncovered.

Mitomo (*Study Group member*) — Either personally or objectively is fine, but do you have the sense it will be really viable?

Jupiter Telecommunications — I do. I didn't mention it here, but one point I think will be important is how small, how cheap, and how many features we can pack into these dual-mode handsets.

Mitomo (*Study Group member*) — My second question is for the Telecom Services Association. The comments on page 3 about the numbers say that you think 060 numbers are appropriate. Since in your examination you naturally looked at mobile, PHS, and IP numbers, does this mean that only 060 numbers are favorable, or does this mean that 060 numbers are favorable, but you did not find any problems with other numbers in your examinations. I'd like to know just how particular you are about 060.

VoIP Deployment Consortium — We discussed this many times amongst ourselves as well. Essentially, our member companies do not maintain mobile-phone facilities

that are assigned 090 numbers and do not have 0AB-J numbers. So to provide services with numbers they don't currently have is unrealistic.

Consequently, the fact is we basically examined what kind of services should be provided centering on 060 numbers. To be sure, for mobile carriers and others, the most convenient thing would be for their services that use existing numbers to continue to use those numbers. Many want to use the numbers users are using now even with FMC. Even at the numbers study group there was talk about that "based on certain conditions." In the future, though, numbers that identify the service concept and numbers that identify the facility are gradually going to become the same, right?

So when we think about what numbers to assign, in the case of providing services to customers, or in the case of identifying facilities, we have to consider at this type of study group forum not just simply using the current numbers in existence but also what developments will happen in the future. From our point of view, thinking about the future and about services for the coming ubiquitous age, we examined FMC with 060 numbers because we think it is important to continue to sell convenience to our mostly corporate users using 060 numbers.

Mitomo (*Study Group member*) — I understand.

Mukuda (*Study Group member*) — Am I correct in understanding that the companies that made presentations today do not yet have a very clear image of a timeframe for launching services?

Secondly, NTT East spoke about the necessity of developing presence-management functions and number-conversion functions in its discussion of technical issues. Roughly how long will it take to solve these technical issues? Once these are solved, I suspect some initial investment will be required. Roughly how much of an investment are you imagining?

NTT East — We haven't yet made any sort of trial calculations regarding investments.

I believe technical solutions can be worked out within the time it will take to determine the numbering scheme as well as the necessary systems, tariffs, and other related matters. Once the conditions are set, I feel we can have the technology up in

one form or another with a year at the latest. Of course, if I make a promise of “one year” here, that would be misleading. But as a rough guide, I think this is the timeframe we are looking at.

Kawamura (*Study Group member*) — I have one thing I’d like to reconfirm. I think the example Fusion Communications gave about “many people recently are making calls from their mobile phones at home despite having a fixed-line phone” was very instructive. What I’m not sure about, and Mr. Aida also spoke about this, is whether it is a good thing to register several mobile phones to one fixed-line phone. To be able to do this, will it be necessary to make several fixed-line phone contracts? Another company commented about assigning several numbers to one phone, but what is Fusion Communications considering?

Fusion Communications — We provide our services on the philosophy of personal numbers. For our corporate users, instead of having one switchboard number, each employee has one 050 number. We provide a service where one number can be used, in which the first number is 380 yen per month, but the second and subsequent numbers are 100 yen per month. With FMC, the configuration is likely to be the same, where a new 050 number is assigned to each mobile handset.

Sakai (*Study Group Chair*) — Am I right to imagine that there is more than one fixed-line phone in the home in this scenario?

Fusion Communications — That’s right. In this image, each person has a fixed-line phone. In other words, the fixed-line phone can be used with the mobile. Naturally, the fixed-line numbers are assigned on a one-to-one basis with the mobile phones.

Kawamura (*Study Group member*) — Then more than one fixed-line telephone set is necessary?

Fusion Communications — Actual physical fixed-line phones are not needed.

Sakai (*Study Group Chair*) — So you are imagining an FMC phone handset?

Fusion Communications — Precisely. Each person has one mobile handset and a 050 number is assigned to each handset.

Kawamura (*Study Group member*) — Then, if there is one fixed-line telephone number, the handset will ring when either number is called, right?

Fusion Communications — When a call comes from outside the home, for example, calling the father, the number will be 0001 of the 050 number and calling the child will be 0002 of the 050 number.

Kawamura (*Study Group member*) — What about that handset?

Fusion Communications — The handset is only this [shows a mobile handset].

Kawamura (*Study Group member*) — What about the physical fixed-line phone?

Fusion Communications — There's no need for a physical fixed-line phone.

Kawamura (*Study Group member*) — So in your scenario there are no actual fixed-line phones?

Fusion Communications — In the extreme case. The service can be realized without a fixed-line phone.

Sakai (*Study Group Chair*) — In the case where there is no FMC and, for example, there are three phones in the house — one in the father's room and one each in the two sons' rooms — in your scenario, will the phones ring separately according to the respective phone number?

Fusion Communications — That's right. Our main target is corporations, so in our image there is dial-in on each desk.

Kawamura (*Study Group member*) — I understand the scenario when receiving a call, but I haven't heard much about the aspects of calling services, where you can call from a fixed-line phone even using a mobile phone. In today's presentations, Fusion Communications and Jupiter Telecommunications spoke clearly about calling aspects, but I'd like a little more explanation about the calling process.

Fusion Communications — For example, with FMC, when you call from a mobile phone within range of your home wireless LAN network, naturally the call is placed from the 050 number and the other party sees the 050 number. The problem that will probably arise if we want to use a one-number system is that when you are outside the range of your home wireless LAN network, the handset will automatically make the call through the mobile-phone network and the other party will see the 090 mobile-phone number. At that point, of course, the one-number concept falls apart. Thus, I think some mechanism will need to be built that can display, through some configuration, the 050 number to the other party in this case.

Sakai (*Study Group Chair*) — Do you have the same image at NTT Communications?

NTT Communications — I think it would be good to have the freedom to choose whether to display the 090 number or the 050 number to the other party when calling from a mobile phone. A solution might be routing the call through the fixed-line network at the mobile-phone handset.

Kawamura (*Study Group member*) — Why hasn't 060 numbers come up in the discussion? In this situation, is displaying 060 numbers not possible?

Sakai (*Study Group Chair*) — We are talking about the situation where 050 would be used as FMC numbers. If 050 numbers were used in FMC services, then there would be a 050 number and a mobile-phone number. So the discussion is which of these is assigned when calling over a fixed-line network.

Kawamura (*Study Group member*) — Are there 050 mobile phones?

Sakai (*Study Group Chair*) — When calling indoors within a WiFi network, the call goes out the 050 number and when calling outside the WiFi network, the call goes out a 090 or 080 number. Most likely when the call is made from a 050 network, the 050 number is displayed to the other party. But we can envision a situation when a call is made from outside the WiFi network and the other party sees the 090 number even though the caller intended to use the FMC number, not the mobile phone. Is this interpretation of the conversation correct?

Kawamura (*Study Group member*) — I hadn't considered examining the provision of FMC services with 050 numbers.

Sakai (*Study Group Chair*) — It's a possibility. But even if we used 060 numbers, the same problem would arise. Calling with a 060 number would potentially be seen as a 090 number on the other end if the call were made outside the WiFi network. This assumption is correct, right?

Fusion Communications — If you think about the traditional systems, yes, 090 would be displayed.

VoIP Deployment Consortium — We raised the issue of which number should be conveyed to the other party on page 11 of our materials. It still remains an unresolved issue, whether to transmit the number of the device or the number of the service.

We wrote here that having this selectable is desirable, leaving aside how it would be accomplished technically. From the user's perspective, which number is better? Showing 090 and other numbers that are given to traditional lines and devices might be more understandable, because there will likely be people saying "What's this 060 number showing up on the screen?" Still we also find this a perplexing problem.

Aida (*Vice-Chair*) — Certainly the one-phone scenario is easy to understand for FMC, but the fact is that now if you walk around with a PHS on these premises, there are

areas where you can't get a good signal. If we move to wireless LANs, you'll also have to be aware of how much battery power you have left while you're talking.

I know, from the point of calling, having an address book function makes the mobile handsets easy to use. But when receiving calls, having a phone in front of you on your desk in the office means probably better sound quality and no worries about the batteries going dead. So I think there will be some resistance to tossing out wired telephones. Jupiter Telecommunications spoke about wired telephones, but I sense the standpoint of the other companies is basically the one-phone concept. Is this really for the best?

NTT East — For households and SOHO, there are many variations of handling this, such as ringing both the fixed-line phone and the WiFi phone or, if people are frequently away from their desk, just ringing the WiFi phone. We hope to keep looking at these things while watching future demand.

NTT Communications — I have the impression that, for our corporate users, the time employees spend at their desks is rather short, and thus needs for receiving calls at mobile handsets are increasing. Of course, this is not to deny the fixed-line phone itself because there are naturally other usage scenarios. So I think it's evitable that fixed-line phones will remain as the minimum communication means.

Aida (*Vice-Chair*) — When talk of FMC first surfaced, there was this idea that when the mobile phone was placed in its charger, the fixed-line phone would be called. But hearing today's presentations, I didn't get the image that any thought was being given to such a service. Has this issue not yet been determined?

Another thing is that the first PHS handsets could also be used as cordless extension phones within the home, which is similar to the two-phone services like the one J:COM is currently providing. However, for a number of reasons, that initial PHS-cordless combination never really took off.

Also, just glancing at the service proposed by the Telecom Services Association, it seems to me to be not much different from the so-called UPT [universal personal telecommunications] service. Although there's the point of whether the protocol is an ITU standard or not, UPT also lacks in popularity at

present. Of course 10 years have passed and technology has advanced on many fronts, but I'd like to hear your candid impressions of whether you sense FMC will flourish.

Jupiter Telecommunications — Just as you pointed out, there was some feeling that this is exactly the same as the old PHS. What's different is that the original buzz at the time was about shrinking the cordless phone and taking it outside. Now it's about receiving calls to your home with your one personal handset that's always with you whether you are walking around outside or whether you are at home. The eventual form may be the same but the way they are used is different. If the handsets can be made more diverse, smaller, lighter, and cheaper, I think there is room to grow services that users will choose.

VoIP Deployment Consortium — The more I think about whether it is the same as UPT or different from UPT, the more I begin to doubt myself. In the UPT numbers defined in Article 10 of the Regulations for Telecommunications Numbers, although there are some designated requirements, service control facilities are service-control functions that change connections with area notifications and presence information. These facilities also have interconnecting network signals with type 1 telecommunications facilities and are based on international standard recommendations. If we were to do this, we would probably have to set up new switches and other facilities. Nevertheless, the FMC services we are considering do have similarities with UPT.

Conventional UPT services probably resemble FMC in how they exchange area information and calling status information, although UPT services are in a format where calls are routed with first priority to the mobile-phone side depending on the current location and then record another location as the call-reception destination. While the service scenarios are fairly different in some points, realistically speaking, they are not so far apart from a system standpoint.

Still, service control in this area is expected to become more sophisticated and it's possible to foresee more and more features being incorporated related to unified billing, response while not at home, and other processes. We made our proposal as it relates to improving the efficiency and functionality of inter-corporate

communications, while considering how they can be utilized in a future ubiquitous-networked society.

Mitomo (*Study Group member*) — I think that each of you has slightly different ideas about FMC services. Presuming we can resolve the technical issues, I'd like to hear your thoughts from a business standpoint. I'd like to know what might raise your motivation to undertake FMC as a business. For example, "removing this barrier would increase the incentive and motivation" or else "we have these pending problems or these kinds of concerns."

VoIP Deployment Consortium — Whereas businesses will provide FMC services within networks, our position at the VoIP Deployment Consortium is an image of providing functions to networks from outside networks and unifying the examinations.

If NTT East and West provide 060 services or some such services, there will be a lot of discussion about whether these services can be provided to other businesses as well and whether provision can be made possible through an external environment. We feel the study of these items is also an issue.

Fusion Communications — This may be the same thing, but we would study FMC as an MVNO [mobile virtual network operator]. At the moment, we have nothing but fixed-line services, so if we tried to launch FMC services, a lot of impracticalities would probably crop up. Take number display, for example: mobile carriers will continue to use their 090, 080, and 070 services, so they will likely resist displaying 060 numbers.

If we were to go ahead, the only way we could do it realistically would be to operate as an MVNO in some form and provide our services within that framework.

NTT Communications — We don't have mobile either, so FMC would require us to talk about purchasing a mobile arm. If we did launch FMC services, one key would be to format them so they are as easy as possible for the users to use.

The main urgent area of FMC services would be voice services, but how the world beyond voice will come out or how it will continue to develop will be something that is very tricky indeed without a lot of people racking their brains.

Consequently, I think it is more necessary to think and act on these things than to make demands.

NTT East — Looking at FMC globally, it really hasn't sold at all yet. One issue I think is how to pump up the buzz about the models of handsets and whatnot. I suspect FMC is also tangled up with the handling of compensation payments.

NTT West — Looking at FMC from the carrier's side, what, for example, is the biggest incentive for regional companies? I think the biggest advantage would be being able to reduce the costs on one leg, since now fees are charged on both legs — on the caller and the receiver, and translating that into a benefit for the user.

Thus, I think the biggest challenge for fixed-line companies to provide seamless FMC services is whether they can smoothly route through mobile networks or effectively build a mechanism that provides the services inexpensively.

Jupiter Telecommunications — As NTT East just said now, in the sense of realizing the services we are now considering, the biggest item is enriching the handsets. I think it is truly regrettable if all we can do is sell solutions for corporations, even as mobile carriers are putting out good handsets.

And about developing the one-number concept in the future, as Fusion just said, if the only way businesses with just fixed-line assets can provide FMC is by becoming an MVNO or something and bundling a series of services, then there is a possibility that companies will converge into a few groups or that one large firm will take the whole market.

In this light, although specific studies are needed, if the FMC services connect mobile carriers and fixed-line carriers really well, then we can probably expect the growth of quite robust services. I think this is very difficult to achieve however.

Sakai (*Study Group Chair*) — Looking at the figures NTT East provided, at the end there is an image of WiFi. Are there many instances of OAB-J IP phones connected by WiFi today?

NTT East — Almost none. There are many service types, but this is only one of them.

Sakai (*Study Group Chair*) — Of course, as you said, there will be cases where they are connected by fixed-line phones, but as for FMC at the present time, does this figure represent your image of WiFi?

NTT East — There may be services where both are called.

Sakai (*Study Group Chair*) — I understand.

Aida (*Vice-Chair*) — How far do the carrier's services extend? That's what is difficult to untangle. If there are main phones and extension phones and the carrier's service extends to the main phone, the phones after that must be the user's equipment, right?

Sakai (*Study Group Chair*) — If WiFi is employed, however, it may be possible for the carrier's service to include extensions as well.

Are there any more comments? Then, this adjourns today's discussions.