

## **Panel on Multimedia Broadcasting Services for Mobile Terminal – 4th Meeting Summary of Minutes**

### 1. Date and Time

Monday, November 12, 2007; 18:00 to 20:00

### 2. Location

MIC Special Conference Room 1, 8th floor, 2nd Bldg. of the Central Common Government Office

### 3. Attendees

#### (1) Members (Japanese alphabetical order; honorifics omitted)

Susumu Ito, Yumi Ogose, Shun'ichi Kita, Hiroshi Suzuki, Akira Negishi (Chairperson), Hiroyuki Morikawa, Takashi Yamamoto, Nozomu Yoshida

#### (2) MIC Representatives

Ogasawara (Director-General, Information and Communications Policy Bureau), Kawachi (Deputy Director-General, Information and Communications Policy Bureau), Yoshida (Director, Broadcasting Policy Division), Oku (Director, Broadcasting Technology Division), Yoshida (Director, Terrestrial Broadcasting Division), Takeda (Director, Satellite and International Broadcasting Division), Nagashio (Senior Planning Officer, Broadcasting Policy Division)

### 4. Agenda

#### (1) Presentations (Third Group)

- Japan Satellite Broadcasting Association (Corporate Judicial Person)
- The National Association of Commercial Broadcasters in Japan (Corporate Judicial Person)
- Japan Broadcasting Corporation (NHK)
- Japan Community Broadcasting Association (Limited Liability Intermediate Corporation)
- QUALCOMM Japan, Inc.
- Panasonic Mobile Communications Co., Ltd.

#### (2) Others

### 5. Meeting Summary

#### (1) Presentations (Third Group)

Japan Satellite Broadcasting Association, The National Association of Commercial Broadcasters in Japan, Japan Broadcasting Corporation (hereinafter, "NHK"), Japan

Community Broadcasting Association, QUALCOMM Japan (hereinafter, “QUALCOMM”) and Panasonic Mobile Communications each gave a presentation on the study items and their views on them, followed by a question and answer session and an exchange of opinions.

1) Japan Satellite Broadcasting Association, The National Association of Commercial Broadcasters in Japan, NHK, and Japan Community Broadcasting Association

- Presentations

These four entities each gave a presentation. Refer to Handouts 1 to 4.

- Q&A, Exchange of Opinions

Member: Does NHK’s plan for the consolidation of broadcasting systems presuppose chargeable broadcasting? Today’s terrestrial broadcasting is basically dependent on advertising, and even NHK does not employ conditional access. Now, when we discuss the broadcasting system, we are discussing not only the transmission system but also the charging system. So, what’s your opinion on the charging system? In other words, do you envisage a chargeable business system that presupposes conditional access, or one along the lines of the current subscription fee system based on the Broadcasting Law? May we ask which method you have in mind?

NHK: First, please take our proposal today as merely representing the general direction of our thinking.

Technology-wise, we can consider various chargeable broadcasting systems, including conditional access. For example, if the user has to buy one terminal to listen to Company A’s chargeable programs and another terminal to listen to Company B’s programs, it would be quite troublesome for users. Therefore, generally speaking, it would be beneficial to users to standardize the technological aspects of digital broadcasting as a whole. In fact, e2bySkyperfecTV, WOWOW, and Star Channel all operate on the B-CAS platform, which is a standardized digital broadcasting system. As I understand it, this setup allows users to view any program as soon as they register with their respective stations. I believe we should continue to explore this kind of benefit in multimedia broadcasting services for mobile terminals.

Member: Regarding the platform neutrality proposed by Japan Satellite Broadcasting Association, I would like to know whether you intend this to refer to neutrality among different content providers, when you discuss its advantages and disadvantages to content providers.

Japan Satellite Broadcasting Association: Basically, we as the industry are approaching content providers on the basic principle of securing neutrality.

Member: I'd like to pose a question to Japan Satellite Broadcasting Association. As I understand it, today, many programs on CS (Communication Satellite) are long, for example, movies. However, I imagine there may be only few people who watch such long programs on their mobile phones. Therefore, could you tell us your ideas regarding such services?

Japan Satellite Broadcasting Association: Indeed, it may be rather hard to imagine people watching a two-hour-long motion picture on a mobile phone. However, with shorter programs such as animations, dramas and documentary shows, it is quite conceivable. So, we don't actually expect people to watch an entire movie, but rather, we want to emphasize our presupposition that CS broadcasting offers a variety of content that can be viewed on a mobile terminal.

Member: I'd like to know whether many community broadcasters are already in the black financially on an annual basis, and also whether you believe there is any upper limit to the number of community broadcasting stations as the industry continues to grow.

Japan Community Broadcasting Association (Limited Liability Intermediate Corporation) (hereinafter, "Japan Community Broadcasting Association"): Today, the radio industry on the whole is in a very severe situation economically, and I believe most community broadcasters are in the red. However, as the capital investment for digitalization becomes less expensive, I think many of them will gradually move into the black on an annual basis.

Currently, there are 214 community broadcasting stations operating in Japan, whereas the number of municipalities will eventually shrink to about 1,300. However, we don't expect every municipality to have a community broadcasting station. Some municipalities are extremely small, whereas others are very big, such as Takayama City in Gifu Prefecture. Small municipalities may find it difficult to build their own broadcasting stations. So in the future, depending on the area, one may consider several municipalities joining together to build a single common station.

Member: I think disaster information is very important. I do understand, however, that you

will not conduct business relating only to disaster information on a daily basis. So, what kind of business do you have in mind for using vacant frequency bands? I still haven't got a clear idea of the difference between this kind of business and conventional business, so I'd like to hear a response to this question from each presenter.

**Japan Community Broadcasting Association:** In our presentation, we focused on disaster information principally because of the Niigataken Chuetsu-oki Earthquake in 2007. It should be kept in mind, however, that community broadcasting stations are not established for the purpose of providing disaster broadcasting in the first place. Their main purpose is to provide reliable information to the area.

Community broadcasting differs from other media in that it is meant for a particular municipality. While analog broadcasting is meant for a very large area, i.e., a prefecture, community broadcasting presupposes a broadcasting station meant for a local area with a population of 50,000 to 100,000. In this regard, we consider it a type of media that not only serves the local people in times of disaster, but also contributes to the culture and economy of each local community.

**NHK:** We think the new system will be useful in an emergency such as in the event of a disaster for three reasons: first, the services that have so far been oriented toward fixed subscribers will become available to people on the move; second, the services that have so far played various social roles can be utilized by people on the move; and third, such terminals are used by users on a daily basis. In this regard, we believe this system differs from conventional media in that it can deliver a variety of information to people on the move, not only disaster news but also information that serves as a kind of public mission, on a daily basis.

**The National Association of Commercial Broadcasters in Japan:** We believe that our daily activities as a broadcaster will in the long run help to foster trust in times of disaster. In this respect, in today's presentation we specifically mentioned disaster, simply in the sense that the daily human relationships between the media personalities and the listeners will go a long way in times of disaster.

We are also currently conducting experimental broadcasting of digital radio for practical use in Tokyo and Osaka. One of the advantages of digitalization is the multi-channel capability, which means that we can create a media with it that caters to diverse lifestyles and life situations. One other thing is that we would be able to build a new business model capitalizing on the functions unique to digital radio, which would mean opening up new

business horizons.

Japan Satellite Broadcasting Association: Generally speaking, we are already presenting disaster news as provided for in the Broadcasting Law, and we believe people will continue to avail themselves of our system within that scope. One thing we should mention is that we are not planning to make it specific to individual areas; so basically it will continue along the same lines as today.

Member: Japan Satellite Broadcasting Association did not express its view on the delivery of disaster information. I'd like to ask you what kinds of new business you envision when you are given a frequency band differing from the one you have today.

Japan Satellite Broadcasting Association: I don't know whether I speak for everybody at Japan Satellite Broadcasting Association when I say this, but I think it would be possible to broadcast all our channels in simultaneous mode and also to capitalize on the characteristics of the mobile terminal, in particular, its bidirectional feature.

On the other hand, as Mr. Ito has just pointed out, people will not watch long programs on a mobile terminal. Therefore, we can think of arranging content for the mobile terminal, for example, broadcasting just the highlights of sports programs, taking advantage of the characteristics of the content and channels we currently possess.

Member: So, let me try to summarize all your presentations this way: One of the main points is that you intend to expand your services by using new frequency bands, and another is that, as expressed by Japan Community Broadcasting Association, you would like to use new frequency bands because of the scarcity of frequency bands—am I correct? The point I am trying to make is that switching from analog to digital is significant in that it gives rise to new services. So, what is important is not the ability to broadcast information on disasters, but rather the chance to create new services. Is my understanding correct?

Japan Community Broadcasting Association: If a new community broadcasting station is opened in an area which lacks one today, it means that a new service has been launched there. In rural areas, too, frequency bands are gradually becoming more scarce; so, we would like the Government to allocate new frequency bands to rural areas to allow these areas to open new stations.

NHK: We naturally think it necessary to continue developing new services and new functions, capitalizing on the new features of digital broadcasting. At the same time, in terms of public broadcasting and the public mission of broadcasting, we also should retain disaster information as one of its core roles. Thus we think it necessary to aggressively develop and offer, within this framework, new services, or services based on new functions, on a daily basis.

The National Association of Commercial Broadcasters in Japan: In terms of the quality of new services in connection with the digital radio broadcasting we presented today, we would like to pursue changes in quality, such as high sound quality and crystal clear sound without noise.

In terms of quantity, we expect to be able to offer multi-channel services that can accommodate a variety of life situations and diverse lifestyles.

These may be called magazine-type services, rather than broadcasting, that is, a selection of well-targeted services for a segmented group of users.

We expect to see more and more such services, taking advantage of multi-channel settings.

Member: We hear a request to open more than 100 new community broadcasting stations. However, as long as they do it in the analog world, I'm afraid they will end up being inefficient in their use of frequencies, due to mutual interference. How big should a frequency band be? If it is accompanied by a technology that allows efficient use, that's fine, but this is extremely difficult with analog. With digital, you can easily multiplex various media, or in other words, you can realize multimedia. The fundamental question I have is whether it would be a good idea to include a system that does not allow the efficient use of radio waves. Does anybody have any opinions on this point?

Japan Community Broadcasting Association: First, as to the concept of "one broadcasting station per city," well, area-wise, some cities, like Kushiro in Hokkaido, are so big that one would have to send waves at high power and may also need to build a relay station. On the other hand, it may not be a good idea to allocate one frequency band to a small city like Warabi in Saitama Prefecture, in terms of using radio waves efficiently. In this regard, there can be intermediate areas where frequency bands are not wasted, which would mean a slight modification to the current system. We also think it necessary to re-allocate all analog frequencies eventually, which would also make it possible to re-use the same frequency bands in the Kanto area, and so on.

## 2) QUALCOMM

- Presentations  
Refer to the Handout 5.
- Q&A, Exchange of Opinions

Member: Can you tell us who else apart from QUALCOMM is offering services using MediaFLO (Forward Link Only), and what their services are?

QUALCOMM: At present, Verizon Communications is also offering services using MediaFLO technology. This North American telecommunications company distributes terminals incorporating MediaFLO technology in order to enhance the added value of their telecommunications services. The services are provided by MediaFLO USA, which is a so-called Category 0 carrier and also serves as a content aggregator.

This content aggregator procures a variety of content from various content providers and arranges it into a number of programs for mobile users, thereby offering chargeable multi-channel broadcasting services with close to 10 channels based on streaming.

We hear that next year, AT&T of the United States will also launch similar services. So, as of today, these two companies are either operating or about to start operating such services with a clear road map.

Member: May I ask what triggered the creation of the so-called Category 0 carrier, the telecommunications operators' needs or QUALCOMM's own strategy?

QUALCOMM: The Category 0 carrier as we call it is the brainchild of QUALCOMM, rather than something created by telecommunications operators' needs. It aggregates a variety of content, builds a network, and runs all the broadcasting operations.

Member: Concerning royalties, page 5 of your handout says, "We will grant a license for multimodal terminals, which are based on CDMA (Code Division Multiple Access) /WCDMA (Wideband Code Division Multiple Access) terminals with MediaFLO incorporated, under the standard licensing terms and conditions, without setting a royalty rate higher than the standard rate." Will you guarantee this even when a new technology is introduced in the future? For example, today we see LTE, or Long Term Evolution, and things like that. Will you treat them separately?

QUALCOMM: You are right, when a new technology comes out, it will be a different story.

For existing mobile terminals that use our CDMA patents and for which the royalty is paid, there won't be any additional royalty for MediaFLO. However, for those terminals which do not use CDMA in the first place or which use a totally different telecommunications system, that provision does not apply per se, and we will need to set a reasonable licensing scheme designed specifically for MediaFLO.

Member: We don't know whether people will use MediaFLO by itself, but at any rate, a separate licensing scheme will apply to other terminals such as WiMAX (Worldwide Interoperability for Microwave Access) terminals, correct?

QUALCOMM: That's correct.

Member: It will be the year 2011 or later when multimedia broadcasting services are introduced to Japan, which is more than four years from now.

On the other hand, it has already been introduced in the United States, which means that, presupposing the same system, Japan will be five years behind. Now, one of the main viewpoints in the objectives of this Panel is: "From the viewpoint of strengthening Japan's international competitiveness, it is important for us to take the initiative as we have led the world with 'one-segment.'" Supposing MediaFLO makes further strides with later versions, is there a possibility that a MediaFLO standard more advanced in content than in the United States will be introduced into Japan, where the habit of viewing images on a mobile phone is more prevalent?

QUALCOMM: As with any other technologies, it is quite natural for a technology to advance from earlier versions to later versions over time. This is also true of not only telecommunications technologies but also MediaFLO.

Today, we are not in a position to tell in detail which part of MediaFLO will be enhanced or how, or whether performance will be enhanced, four years from now. However, needless to say, FLO Forum is studying hard how to address the needs for a variety of content and various services, as well as how to increase the efficiency of frequency usage. Therefore, it is quite conceivable that at a certain point in the future, a system will be introduced into Japan that offers higher performance than is available today in the United States.

Member: Now, am I correct in understanding that your royalty policy will not change as your system is enhanced from one version to the next?

QUALCOMM: In reference to the general concept of our royalty policy on page 5 of the handout, our royalty policy will not change as long as the situation matches this concept. Today's G3, as you know, is enhanced almost on a daily basis, but its royalty percentage remains the same. So, you can assume that the situation will be the same with us.

Member: One of the presenters today stated that, since a chip solution supporting more than one broadcasting system has become the mainstream, there won't be any disadvantage in introducing more than one broadcasting system. If so, what would be your biggest point of market appeal to differentiate your system from other broadcasting systems?

In other words, if a certain broadcasting system were essential for offering such and such a service, then this difference would be vast; otherwise, the only remaining point of differentiation would be cost, as somebody has already mentioned at this meeting. So, please tell us what your biggest point of market appeal would be.

QUALCOMM: Technology-wise, it would be the high efficiency in the use of frequencies. All business operators that use radio waves, including broadcasters, are given a certain limited frequency band, and they all need to maximize its efficiency of use. The choice of a system that allows them to transmit as many bits of data as possible, say 10%, 20%, or even 50% more than they do now, will ultimately determine their competitiveness. Therefore, comparisons should be made with other systems in terms of how much content can be delivered to how many users within the limited bandwidth. In comparison with other systems we know of today, we believe MediaFLO has a big advantage in this regard.

Member: I guess the diagram presented on page 2 of the handout illustrates the gains brought about by statistical multiplexing, but it has long been known that statistical multiplexing has a significant advantage. My point is, therefore, if statistical multiplexing is also taken into account in other systems, then we can accept the comparison. However, if statistical multiplexing is used in one system and not in others, then I feel that would be unfair. What would you say on this point?

QUALCOMM: You are quite right regarding what the other systems are and whether they take full advantage of statistical multiplexing. One thing I would like to point out is that none of the other existing systems used in our comparison use statistical multiplexing as skillfully as ours. If you are asking me whether the other systems would perform as well as ours if they supported statistical multiplexing, then the answer would be yes.

Member: Am I correct in understanding that you support statistical multiplexing on your current chip set?

QUALCOMM: Yes, we do.

### 3) Panasonic Mobile Communications

- Presentations  
Refer to Handout 6.
- Q&A, Exchange of Opinions

Member: If you have any information on what other countries are doing about the phasing out of FM radio frequency bands and what they think of it, please share it with us.

Also, while I think it will be some time before Japanese radio is digitalized, could you tell us whether the phasing out of FM radio is being considered or discussed in Japan?

Panasonic Mobile Communications (hereinafter, "Panasonic Mobile"): We don't know exactly whether the phasing out of FM radio is being considered in any other countries. However, as touched on by the presentation on IBOC (in-band on-channel) at the previous meeting, we believe at least that there is a need for introducing digital FM vis-à-vis today's analog FM. It might be a good idea as Japan's strategy to first target an area that lies outside of backbone broadcasting.

Member: We hear that QUALCOMM is manufacturing a chip set that supports more than one broadcasting system. Now, I'd like to ask whether device manufacturers can support more than one system.

Panasonic Mobile: Our biggest concern is that of royalties. QUALCOMM has said that the chip manufactured and sold by QUALCOMM includes the royalty. However, if we incorporate a QUALCOMM chip into our devices, we will need to develop on our own those chips that we do not procure from QUALCOMM, and in such cases, there still remains the issue of royalty.

Another issue is that, while we would not need to pay a royalty if we employed the same system for mobile phones, the one-segment tuner for Nintendo's DS Lite, which is to be launched soon, will probably be subject to a royalty as it does not use WCDMA. This is another concern.

Member: Then what about the royalty for the use of ISDB-T (Integrated Services Digital Broadcasting-Terrestrial) on terminals based on different systems?

Panasonic Mobile: From the viewpoint of international competitiveness and overseas deployment, we would like to expect rights holders to be somewhat lenient for the sake of the national interest.

Member: Also from the viewpoint of international deployment, I tend to think that, unless we clearly spell out the terms and conditions regarding royalties and declare that everybody can use the system under the same terms and conditions, we will not be able to beat the competition. What are your opinions?

Panasonic Mobile: You are quite right. In this regard, we hear that Brazil is scheduled to launch ISDB-T based commercial broadcasting together with one-segment broadcasting in December, and we would like to confirm at that point how we are going to handle the royalty issue.

Member: The plan to incorporate ISDB-T-based systems into an FM broadcasting band sounds very aggressive and exciting, but I'm afraid it would be hard to make inroads into an area like Europe, with its tightly knit culture. In that regard, some of you have said that PDC (Personal Digital Cellular) has lost to GSM (Global System for Mobile Communications), and I would attribute that to essentially a cultural bond based on European culture. I'm afraid it would be extremely hard to break that wall. The important thing would be, instead of throwing in the same thing, to pursue a sort of merger when the existing system is to be upgraded. For example, now that PDC has failed, one should try to standardize it together as WCDMA when the existing system is upgraded. I don't think a simplistic, attack-and-capture approach will work any more. What do you think?

Panasonic Mobile: That's an extremely tough problem. We hear today that the Europeans are spreading the rumor that Japan cannot produce one-segment terminals that comply with GSM. However, the terminal we are going to launch this coming December (P905i) is designed to display one-segment screens while supporting both WCDMA and GSM. This will serve as our counter-evidence to the Europeans' rumor.

Indeed, it seems much more difficult to succeed in digital broadcasting overseas than we tend to think in Japan. In Europe, as for TV broadcasting for fixed receivers, TV

broadcasters are allocated channels and given broadcasting rights, whereas in the case of DVB-H (Digital Video Broadcasting-Handheld) -based broadcasting for mobile receivers, telecommunications operators are given licenses for frequency bands and offer services. In Japan, frequency bands for broadcasting are allocated only to broadcasters and telecommunications operators are shut out. So there are differences in licensing systems and cultural aspects. While there may be various barriers, I believe we should strive to maintain our unity and work hard toward the realization of a unified system.

Member: QUALCOMM has said that the multiplexed use of frequencies will become essential and also bring about a competitive advantage. Now, I'd like to hear what the manufacturers think of it. In particular, I'd appreciate their telling us what road map and standards they have in mind for the transition from today's one-segment or three-segment to frequency multiplexing.

Panasonic Mobile: We think multiplexing has its own advantages. We are not totally disregarding it; in fact, we consider it an excellent broadcasting system.

Multiplex broadcasting comes with a variety of content worth multiplexing and a robust framework for delivering such content, and furthermore, you can expect a significant numbers of users. So, in such marketing terms, I believe it is extremely effective.

However, it has one great disadvantage: It uses up an entire frequency band from a minimum of 5 MHz to a maximum of 8 MHz. On the other hand, the systems Japan is proposing, such as ISDB-Tsb and ISDB-Tmm, are based on single segments and therefore offer greater flexibility in the use of frequencies. In extreme cases, we can get rid of unnecessary segments and deliver services using only necessary segments. Our point is, therefore, that it makes great sense to have two systems, because users are given a chance to make a choice after considering the pros and cons of the two systems in terms of technology and use.

Member: Do you mean that if two systems are adopted and coexist, you will produce terminals supporting both of them?

Panasonic Mobile: That's a very difficult question to answer. Frankly, we need time. There are a number of factors to consider. If we were to support the two systems, how much would the costs of the terminals increase? If we were to increase their prices, then would users really buy them? No matter how good a product we make, and no matter how much we emphasize the advantage of supporting two systems, if users are not convinced and do

not buy it, we will not get any business. If, upon carefully analyzing the market, we feel confident in making money with a two-system product, then we may go with it. On the other hand, if we consider one-segment and its family the winner, we may as well go with the current system. At this point in time, we cannot make any promises.

Member: From the viewpoint of contributing to the safety and security of Japanese citizens, I find the idea of using multimedia broadcasting very interesting. On the other hand, I don't really find the argument tenable that because it's a Japanese technology the Japanese Government should support it.

Along these lines, certain systems which capitalize on Japanese technologies and expertise, such as the earthquake prediction system based on the difference between P and S waves and the tsunami prediction system, may well make inroads abroad. Also, it may make sense, and can be expected, that Asian countries will adopt ISDB-T because they are already familiar with it. In these respects, if we get a clearer picture of how to support technologically the service of providing information on safety and security, and sort out the royalty issue, we will find it easier to sell abroad. That's the impression I have got through today's discussion.