
Unrecognizable Japan

Page 8, By Leslie Maunsbach

Boldly declaring no less than world leadership, Japan has created an IT reform strategy called Ubiquitous Japan, or U-Japan, meaning anyone can connect with anything at any time, anywhere, and through anything.

Mr. Atsushi Umino, Deputy Director, Ministry of Internal Affairs and Communications (MIC), says Japan is not focusing on technology for technology's sake, but rather as a tool to solve social problems. "We [in the Japanese Government] have set a goal that Japan will lead the world as the cutting-edge ICT provider. By 2010, 100 percent of the citizens will have access to high-speed internet connection."

Always connected doesn't mean broadband use as we think of it today, with computer screens and mobile phones. The intention is for this broadband connection to be so deeply embedded in society that it will be unrecognizable from what it is today. Every citizen of Japan will have networks merge with every facet of their daily life – computers, telephones, public transportation, the medical system, business to business, machine to man – integrated in a seamless way.

"ICT is the key to our economic development, and can directly address a number of social problems including our biggest, which is the low birth rate coupled with an aging population, by helping provide, for example, distance medication and teleworking."

Education, as well, is benefiting from ICT developments. There is even hope that better education will reduce juvenile delinquency. The ICT plans also address cultural development and socialization. "Everyone can be a creator. Citizens can collaborate with each other in new, more dynamic ways."

Reducing traffic accidents,

alleviating train crowding, predicting and taking measures for natural disasters such as earthquakes or typhoons – are all examples of social problems that Japan will be able to address with the connected society.

Japan is working under the assumption that industry will drive technology growth, and citizens will utilize it. Umino explains that the government's role is to support the industries in their growth, and in training and supporting citizens to use the new technology.

"The assistance will not be funding, but, for example, incentives or low-interest loans to deploy the next-generation network," he says.

"By setting the goal of being the world front-runner ICT nation, we have made a very ambitious goal – a goal I'm positive we will achieve."

Who needs a next-generation network, anyway?

Page 12, by Johan Hjelm and Atsuhiko Ohkita

The Japanese are ready to change the world of internet-protocol television, IPTV. This is happening now, as the rest of the world is still trying to figure out what it means.

The Japanese have taken video over the internet to their hearts, and they are second only to the Americans when it comes to accessing YouTube.

Home-grown Japanese services have taken over the pole position by adding an important twist: They can charge for their services. And the content is not home videos, it is professionally produced.

But what has the potential to change the internet-protocol television world completely is the Japanese leveraging their strong position in consumer electronics.

Japanese broadband connections are the cheapest in the world, and leading operator NTT targets 20 million fiber-to-the-home connections by March 2011. The Japanese government has

launched an ambitious plan to turn all the 25 million broadband users in Japan into fiber users by 2010. This puts entirely new requirements on the network.

With broadband becoming a reality in Japanese homes, users start expecting it to work as well as the telephony network. For customers, voice-over-internet protocol (VoIP) has long been a reality, and the quality of service for the regular number series is dictated by Japanese law.

This has raised a number of problems for NTT, which it decided to address in its next-generation network (NGN) trials by solving all the quality of service problems for NGN in one stroke – and creating an open network to boot. Realizing that fiber is only the first step, NTT announced in 2004 that it would build an NGN with IP everywhere.

The most important feature of the NGN being created in Japan is quality of service. Using IP Multimedia Subsystem (IMS) to control the traffic, NTT is assuming that four types of communication will dominate in fiber networks of the future:

- Two-way communication, such as VoIP
- Unicast communication, such as video-on-demand
- Multicast communication, such as IPTV with HDTV resolution
- Connections to set up internet service providers

In an NGN, users can get all the advantages of IMS-based IPTV services, such as those under standardization in the Open IPTV Forum. This includes viewing missed broadcasts, trick play (back, forward, etc.) and interactive services.

The infrastructure of the NGN conforms to international standards, using IPv4 as well as IPv6, IMS in the core network for control of services, and a number of different suppliers of equipment (including television manufacturers) connecting their products into the network. Terabit routers will be the norm, and NTT is

working on studies to create a “carrier-grade” server platform with Japanese manufacturers.

NGN commercial deployment will happen in the near future, giving the Japanese another world first: commercial NGN services to ordinary customers.

Confidence in being different

Page 18, by Mats Thorén

Ted Matsumoto holds the reins as Softbank Mobile’s chief strategy officer, and he is adamant about Softbank being very different – not just from its Japanese competitors but from any other carrier in the world.

“We came from the internet world and we embraced the communications part of it only very recently.”

Softbank aims to become number one in the highly competitive Japanese telecom market and took a decisive step in April 2006 by taking over Vodafone K.K.’s ailing business. A year later Softbank Mobile had achieved an amazing turnaround, going from losing customers to signing up new ones at the highest rate in the market.

Operators subsidize the cost of handsets for the customer, recovering their outlay from traffic charges. Softbank changed that typical Japanese model to a more European-American style and stopped subsidizing.

Softbank Mobile introduced a new flat-rate plan in October 2006 and a promise to always undercut the other two big providers. This attracted new customers as well as many competitors’ customers. When it comes to pricing policy, one reason frequently given for Softbank’s growth is that it has some of the most attractive calling plans in the market. It also produced successful TV advertisements featuring Cameron Diaz and Brad Pitt. The aim was to establish a sophisticated brand image, and to communicate a “flat-rate voice” behavior that subscribers would emulate.

He cites four basic factors, that

contributed to the success: Increasing network coverage by doubling the number of base stations, increasing the color range of its hand-sets, making convergent offerings with Yahoo! (Japan), and working very hard with marketing and sales.

Matsumoto names the third factor as the most important. “Because it will make us stand apart even more in the future. But we are still in a very early stage of the game.”

Softbank was established in 1981 as a PC software distribution company and soon became a market leader. “Through these experiences, we came to understand these people, how they work, how to motivate and encourage them.”

Commenting on Google’s mobile initiative, he says he understands that Google doesn’t want obstacles to growth, like expensive or inflexible handsets.

“We and our subsidiary, Yahoo! are absolutely in the same position as Google, on this point.” If [Google’s] Android is really successful, Linux is going to have a strong base to attract many developers, and finally, we will have a very strong and cost-effective, open platform. We can make any middleware we like, if we want it.”

Internet revenues will come from many sources like increased traffic revenues, content income and advertising – especially if combined with a good search engine, and secure payment systems, etc.

“But this is only the beginning. We should guide the consumers directly to the actual transaction. In the future, we believe mobile carriers like us will become very efficient retailers of all kinds of goods.”

Bridging the gap

Page 24, by Marc LeClerc

In the case of the convergence of telecoms with the internet and media businesses, the parties engaged have radically different mindsets and value

propositions.

Looking to history to see if we can learn from industrial convergences in the past: in the last hundred years, the story of the consumer retail and mass-media businesses has been, for the most part, one of enthusiastic cooperation in creating more efficient markets, improving distribution, adding choice, and making happier customers.

Traditionally, the telecom business has used retail models (subscription-, content-, or usage-based pricing) to monetize network assets, while most profitable businesses on the internet have adopted the broadcast/advertising model.

Telecoms offer mobility and tight identity management; the internet offers tools to efficiently make available and find content; and the media industry provides professionally produced music and video. So it’s only natural that they are gravitating towards each other.

Let’s apply the lessons from consumer retail in resolving the issues raised in merging the telecom, internet, and media industries into networked multimedia.

What telecoms can provide:

- Efficient point-of-sale and billing.
- The power of mobility and ubiquitous access.
- Linking the real world with the data space.
- Presence and availability.
- User profile information.
- A unified, coherent end-user experience.

What the internet brings:

- Access to digital information and services.
- A place to publish and share information.
- Search engines.
- Social networking.
- An audience for advertising.

What the media industry provides:

- Professionally produced text, music, and video.

- Content prepared for broadcast media.
- Targeted advertising content.

It will not be easy to link these three industries into a common value chain called networked multimedia. But in recent years we have seen the arrival of IMS – a framework which if properly applied could provide the media, telecom, and internet businesses with a bridge that unites them. IMS can be used to build a converged user experience that leverages the best from the telecoms, media, and internet worlds. The Communications Services (CoSe) defined in IMS in order to provide end-to-end interoperability of key IMS capabilities across networks are:

- Telephony: the ability to create, merge, split, and tear down voice and video sessions in real time.
- Messaging: the ability to create and transmit deferred messages (such as SMS and MMS).
- Push-to-talk: the ability to push a message (text, voice, video) to a group of receivers.
- Subscriber profile: user location, presence status, group management, identity handling, user profiles, and so forth.

None of these functions are unique to IMS, but it is the only standard that covers all these areas for mobile-, fixed-, and cable-based communications in the same framework.

Telecoms, the media, and the internet have much to gain by working together to create a unified market for networked multimedia, and IMS provides a way of reaching this destination.

Multimedia is a team sport

Page 30, by Joakim Philipson

A new market is opening up, including players from the telecom, media, and internet world. At present, these industries have very

different business models as well as different historical inertia in respect to market innovation: Internet focus is on speed and the end-user experience, media focus is on new formats and channels, and telecom focus is on high quality and proven volume services.

Mobile operators have been able to control the whole value chain, when providing mobile voice services. However, in the case of providing internet and media services, this is no longer the case.

Ericsson has conducted a study with 22 key internet and media companies. The study emphasized the industry perspectives over the next three years, in areas such as:

- What are the main trends driving and affecting the industry most?
- What are the key challenges and opportunities in the multimedia market?
- What business models and roles do they want operators to take?

The feedback from some of the major global internet and media companies, as surveyed in this study, is that the operators should open up and be part of shaping the market. They view the operators' role as being more than a bit-pipe. In fact, two-thirds of them stated that they would prefer the operator being either a service enabler or a service provider.

They also argue that the current roadblocks for innovation greatly harm the overall business value, and there is an obvious need to unleash market innovation.

To make this a reality, all parties need to cooperate in building sustainable “win-win” ecosystems.

The right time to move is now, when all other things are settling into place. There are clear signs that this change starting to take place, where the other players in the game welcome the operator as a partner. The new market players are used to cooperating and operating at internet speed, so with or without support they will find

a way to market. It's a runaway train without brakes – catch it before the opportunity has passed!

Understanding the digital natives

Page 36, by Eva Windisch and Niclas Medman

Blurring the boundaries between work and private life, the “Digital Natives” are tomorrow's most powerful media consumers and professionals. The behavior of digital natives has been thoroughly analyzed by Ericsson ConsumerLab. Today in their early 20s, they were born into digital technology. The internet, mobility, and related technologies have always been available for them.

Not only do they expect to have communication and consumption tools available constantly during their free time, as consumers, but they also expect these tools to support them in work. This represents a major shift in user behavior as well as a major business opportunity.

Service providers that can satisfy the round-the-clock need for connectivity and services can establish close interaction with this user group. They want a lot of services, and now, as they join the workforce, they are increasingly able to pay for this richer lifestyle.

Service providers in the multimedia market will see two major consequences of the digital natives entering the workforce:

1. A high demand for multimedia services from a group willing and able to spend more on these services.
2. A requirement for tools to support the group's advanced way of communicating both in their personal and professional lives. This, in turn, raises demand on enterprise communications and IT managers to support them.

In the enterprise domain, most IT managers have a conservative view of

the benefits that new technology can bring to business users. Recent multimedia market research by the analyst firm IDC shows that 79 percent of young consumers in the survey use communities and 52 percent actively add content – this in sharp contrast to the 30 percent of IT managers in the survey who use communities in their private lives. The survey shows that almost 50 percent of IT managers do not use functions such as wikis, blogs, RSS, or social networking, etc. in their private lives.

About 60 percent of IT managers are familiar with functions such as wikis, blogs, RSS, social networking, communities, and user-generated content, but only 30 percent encourage the use of it within their enterprises.

Figures from KnowledgeStorm/UniversalMcCann show that 69 percent of business professionals use social networks primarily for business networking and development.

Increasingly, young businesspeople are bypassing directives from their IT departments regarding what is allowed or not, and bringing in privately owned devices and applications they use outside the office. They do this because they see great productivity or convenience gain. In this lies a very important message to operators, service providers, and employers going forward.

The missing link in the new value chain: the broker!

Page 40, by Pankaj Asundi

The next-generation mobile services will use a combination of smart devices, such as the iPhone, and an intelligent mix of technologies to provide a richer experience for consumers.

The task of tying everything together falls outside the traditional roles of operators, internet, and media companies. Enter the broker, who can effectively mobilize and distribute existing internet properties, content, and infotainment. By utilizing and

exposing features and capabilities in wireless networks globally, the broker can provide an environment for content innovation, distribution mechanisms, and profitable business models.

The broker can provide clear, added value to each participant in the entire value chain – the brand, the advertiser, the application provider, the vendor, the mobile operator, and end user.

For the brand and advertiser, a broker provides a mechanism for targeted advertising.

For internet companies, the inherent nature of mobile reach across the globe is a huge opportunity. For operators, new revenue streams can come from the existing network, along with the ability to increase data traffic and provide new services.

For end users, the greatest benefit will come from new services created by mash-ups from the network.

The ecosystem of application developers, operators, and media and content companies will benefit from a trusted partner who can manage and provide global reach. Making applications sensitive to context and aware of location, preference, and behavior enables the whole industry to bring more services to market more quickly, significantly increasing revenue opportunities while reducing the cost of service delivery.

As networks become more open, the challenge will be to ensure that services and the end-user experience are maintained at a very high level. A broker who is a trusted partner can foster such openness and will open up more opportunities for the value chain of the entire mobile industry.

Keeping up with Japan and the US, the right way!

Page 44, by Theo Geers

The EU Commissioner for Information Society and Media, Viviane Reding, feels that the fragmentation of the market into 27 national sub-markets

and various competition conditions are causing 500 million consumers in the EU to miss out on many modern telecommunications services. She wants to change this with her proposals for the reform of the European telecommunications sector, which were presented in November 2007.

But the new regulation framework must not aim only at more competition between the established top dogs and their challengers. It must also provide sufficient motivation for investment, especially in broadband networks.

The need to catch up is clear.

Reding's intention is to keep the broadband market in Europe subject to regulation for the indefinite future. For some cases, she also wants to increase the power of national regulators. At the same time, she wants to create a new European regulating authority. In extreme situations, it should be able to overrule the decisions of a national regulator.

However, there has been no indication to date of any kind that a new authority in Brussels with 100 employees would be in a position to make better decisions than a national regulator. The feeling of insecurity for investors would be even greater, as a regulatory decision made at the national level might later be changed at the next-higher European level. Especially against the background of global competition, this would be the worst signal that Brussels could presently send. Trying to create more competition through a new European super agency will most probably backfire with respect to network expansion.

Making broadband truly universal

Page 46, by Tom Lindström

It is today widely accepted that there is a digital divide that must be closed or at least greatly reduced.

The ongoing digitization of

terrestrial TV broadcasting now offers the historic opportunity, already seized by some countries, to put to new use the radio spectrum resource that is freed by the higher efficiency of the digital transmission mode. This resource is often referred to as “the digital dividend,” since it releases “new” spectrum into the hands of authorities that regulate the use of spectrum, without the need to constrain any existing usage.

Administrations and regulators must support the public interest to manage the spectrum efficiently, putting it to the best social and economic use rather than simply using it for more of the same. In many countries it comes down to a choice between a new national spectrum resource to facilitate broadband coverage for most of the population, or more television channels in the terrestrial network.

This unprecedented amount of attractive spectrum is sufficient to allow public service broadcasters to significantly develop and expand their services in the terrestrial delivery mode.

In the United States a digital dividend of about 100 MHz is being made available for various communications uses, dedicated mobile TV, and Public Safety. Already in transition to digital TV, the UK left some frequency channels free in order to ease the use of the dividend.

The ITU World Radio Conference, at its meeting in October–November 2007, agreed on a new allocation to the “Mobile Service” in parts of the UHF band. Unfortunately, the allocation is different in the three ITU regions of the world, varying between 698–806 MHz, 698–862 MHz, and 790–862 MHz.

The European Commission concluded that for the digital dividend benefits to be fully available to European consumers and societies, it needs to be harmonized with respect to which usage goes where. It proposes to subdivide the whole band of

470–862 MHz into three sub-bands. The lowest band will be used for existing radio and television services, and for more advanced television services such as high-definition transmission. This part will be under full national control.

The middle band is proposed to be used for unidirectional high-power services, for example, narrowband broadcast mobile TV. This band is proposed to be under national management with optional EU coordination. The final, upper band is proposed for bidirectional medium- to low-power networks such as wireless broadband access and high-speed mobile data access.

There is now an opportunity for the three ITU regions to arrive at solutions that create the largest possible global harmonization.

Radio technologies widely available within five years offer enough network capacity for highly interactive advanced services, including broadcasting services. The smaller cells of communications systems compared to large high-power broadcasting cells provide total network capacities that are orders of magnitude higher and allow a wide variety of content to be delivered to different cultural, ethnic, and language groups.

Do you really deliver what your customers expect?

Page 52, by Gerd Holm-Öste and Christina Birkehammar

Operators must start measuring user value and assuring that quality is delivered all the way. This requires a stepped, pragmatic approach – a framework of activities.

So far operators have focused mainly on the network, measuring performance within the network entities, while neglecting performance of the service itself. This is why, too often, new services fail. It makes sense to shift focus from operator targets for

user service performance, to user-experience-based targets.

The telecom networks, with many hundreds of user services, produce a huge volume of performance indicators (PI). Still, the market is struggling over which PIs to choose for expensive service measurement and follow-up, and has yet to establish standards or guidelines for the best PI selection.

After looking at possible solutions, Ericsson created the User Service Performance (USP) framework. By carefully selecting a handful of user experience-specific PIs, this framework enables operators to cost-effectively predict and monitor essential performance values. The USP framework includes a brand-new system-service assurance level (Quality of System Service, or QoSS), which paves the way for estimating performance closer to actual user service

Separating user services from system services allows you to set performance requirements and specify how user quality is best measured and monitored. Because system services in principle are user-independent, they are under the control of the network/systems vendor. When we talk about system-service solutions, we include the user equipment. Examples of system services are push-to-talk, mobile TV, IPTV, and multimedia telephony, whereas user services are those like CNN with content and FriendFinder, and are based on one or more system services.

You need only a few PIs to reflect the performance that users expect. We call our key performance indicators System Service KPIs (S-KPIs), and the criteria for our selection are strong user focus combined with access and system independence.

Verifying system-service performance means verifying the S-KPIs. This gives a solid QoSS level within a defined test environment, user equipment, and with relevant traffic load.

Knowing the QoSS simplifies

launch and risk evaluation. The system service works well, and testing of the corresponding user services or interfaces becomes easier and therefore cheaper. The control services become manageable in a new way because of fewer indicators. These allow a sharper focus for marketing and pricing efforts.

By knowing that service performance meets user expectations before launch, your matchmaking of segments and prices will be a lot easier. Using QoS drops sales and marketing expenses in time to launch and in time to make competitive branding. Some 5–10 percent of operating expenses (OPEX) are spent on the service level, and this is perhaps the one OPEX part that is yet growing, and why the USP framework countermeasures are welcome.

Using the tools that enable service quality at all levels will make you a key player in this dynamic market.

Ensuring your customers show up at the party...

Page 56, by Elizabeth McPhillips and Filip Veli Gültekin

Successful launch of a data service is as much about understanding and managing customers as it is about getting the technology right. Here is how you can assure a successful service launch:

Define your objective before making any development or implementation decisions.

Vision and strategy should be determined not only by the operator, but by all stakeholders. Operators tend to bring in the other parties too late.

Once you have an explicit strategic direction in hand, you need a clear picture of the market. By performing market research before developing and launching a service, you'll be able to identify user needs, define your addressable market, and segment the users, while analyzing the market window and competitive landscape.

The next step is to ensure proper usability of the service. Secure device readiness, visibility of the service, and optimal design during the prelaunch phase.

The convenience of mobile terminals means that users want to use them immediately. As was shown in several cases in varied geographies, traffic is largely driven by the number of available preconfigured devices. For business messaging services, the most important factor is to have the client preinstalled on the device, or to support a clientless application such as push e-mail based on MMS.

Consider usage scenarios – how and when the service will be used – and design the whole package accordingly. Second, consider developing and producing branded handsets that not only guarantee specifications are set based on the service concept, but also allow for increased value-chain control.

Pricing is an art, with different variants needed for different markets. Nonetheless, the market has demonstrated a few key learnings. For business solutions such as push e-mail, flat-fee pricing is seen as the most effective pricing model, and is chosen by many operators globally.

Pricing and promotion can be greatly complemented by appropriate alliances that work to the advantage of both the operator and the content or media provider.

After your launch, analyze usage- and transaction-based behavior. Having the data mining tools and processes in place will enable you to better understand your customers, the impact of marketing activities, and to gather knowledge to drive future decisions. For example, analyzing per-category hits per portal page will let you see the best place to position promotion materials. Investigating failed search attempts will help determine which new content to bring in. Analyzing overall user behavior will support the creation of target groups. Many successful campaigns have

segmented users based on lifestyle rather than the traditional factors of age, gender, and income. The latter are not seen as good indicators of whether a user will buy these services.