Essay

Convergence and Broadband Development in Indonesia

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Hi, all of IEICE members, I would like to overview the fundamental idea of communications development policy in Indonesia toward the coming era and make it widely understood by as many members as possible, for expected international collaborative research activities.

We have discussed two approaches available for the important issue of digital divide which has been discussed over the world since 1990s. One is the convergence approach and another is the broadband approach. They attack the high and low sides of the digital divide. More manageable the high side is made, more the low side pulls toward the high side.

The first approach corresponds to high-level policies. Most of these policies affect the high side of the digital divide, represented by big cities like Jakarta, Bandung, Surabaya, Yogyakarta, Medan, Makassar, etc., "main islands" Java, Bali, Sumatera and mature industries for mobile telecommunication, Internet, multimedia network and broadcast. The Telecommunication Law in Indonesia sounds outdated. It cannot cover emerging new technologies due to the unpredictable effects. Therefore, the law should be changed. In some cases, regulations contradict each other at the stage of implementation. For example, IPTV was in the "no man land" where it might not belong to any one of telecommunications, broadcast, or electronic transactions. The "patch" of a regulation is then created by issuing a Minister Decree of IPTV where any IPTV provider must have three licenses for broadcast, telecommunication and IPTV. This trend still continues. If more patches are required for a new technology, it would no longer be effective and efficient. Thus, we need a new scheme. That is a convergence framework.

As shown in Fig.1, studies of the law based on the convergence framework result in the structure of industries classified into 4 categories, Content Provider (CP), Application Service Provider (ASP), Network Service Provider (NSP) and Facility Based Operator (FBO). The CP produces all the contents covering either User Generated Content (UGC) or Professional Generated Content (PGC). The ASP aggregates contents and gives all application services. It ranges from content aggregator and broadcast to MVNO (Mobile Virtual Network Operator). The NSP delivers contents from ASPs through network to their end users. The NSP covers the functions of service control, mux broadcast, soft switch, access network, backbone and backhaul. The FBO provides only such "pure" infrastructure as tower, duck, fiber optic, satellite and earth station as an example. The medium goal of this policy is to create regulation and a new Convergence Law. By the end of 2011 year, the draft Convergence Law will be finalized. The ultimate goal is to create an effective and efficient ecosystem of telecommunications where Governments, industries and
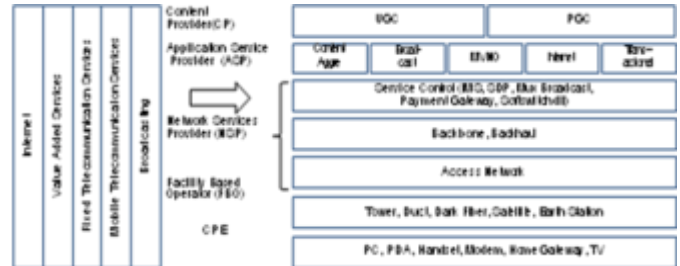

Fig.1　On transformation to new ICT Industry Structure (MICT study)

communities have mutual benefits toward each other.

The second approach deals with broadband policies. Indonesia has evolved its own proper plans to deploy broadband infrastructures considering its unique geographical landscape. It is complex, messy and much costly in investment. This is not entirely new for Indonesian society. The Palapa Ring Project – an ambitious project deploying 35,280 km sea-based optical fibers and 21,807 km land-based optical fibers to connect 33 provinces – was commenced in 1998. It has evolved organically. The last business model for the project is a private consortium where the private sector invests without Governments' support. Wimax and Long Term Evolution (LTE) technologies are next best target for the broadband policy. A new regulation will be required for them, while the real focus will be in its national synergy effect (economical and useful for human resources development).

Universal Service Obligation (USO) is also in its right course. Some representative examples of USO are the mobile Internet with very cheap tariff for remote regions where laptop/PC with mobile function can be carried by car or boat, Internet café for rural region, and the free call with a flat rate Rp.100,000/month (USD 10/month) for remote rural areas. However, the sustainability of USO still remains as a problem. A common issue in all USO programs above is that all programs are based on a top down approach and local users would not join any program. As a result, the project will run for years on the basis of contracts/agreements. It will be required for policy makers in the future to create policies which would empower local users toward sustainable USO.

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Hot Topics

Opto-Electronics and Communications Conference (OECC) – Its History, OECC2010 and Future

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The Opto-Electronics and Communications Conference (OECC) is an international conference established in 1996 to provide an international forum for the presentation and the discussion of significant research progress and the development and application of optical communication systems and opto-electronics; it gathers and presents the latest information from Asia and Oceania Region. Some features are;
-convergent conference for optical systems and networks, fibers,

and optical devices from research to development,
-to circulate in Asia/Oceania region every year,
-to be held in July between other two major optoelectronics related conferences i.e. OFCNFOEC in the North America (Feb./March) and ECOC in Europe (Sept.),
-more than 300 vetted papers presented,
-400 to 700 participants,
-to give a chance for presentation e.g. poster for students/younger researcher,
-to be organized by each local organizing committee,
-co-sponsorship by global societies i.e. IEEE, OSA, IEICE, etc,
-International Advisory Committee (IAC) /OECC, a permanent committee that advises on conference management.

Since the first OECC in 1996 in Makuhari, Japan, we have already had 15 OECCs, each with more than 300 presentations and 300 -700 participants as indicated in Fig.1.
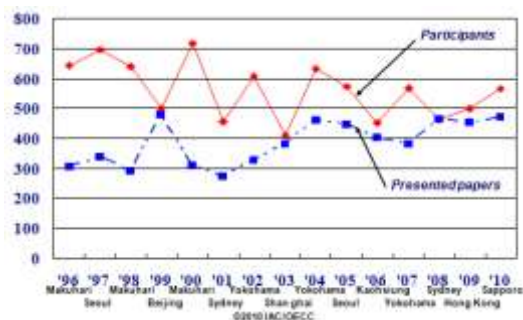

Fig.2   Number of participants and presented papers in the 15th OECC

The 15th OECC 2010 was successfully held in the Sapporo Convention Center (SCC), Sapporo, the northern part of Japan, for five days from July 5 to 9, 2010, where as many as 566 participants gathered from home and abroad. The OECC conference held in Japan before this was held in Yokohama three times in a row.   After a comprehensive consideration of the convenience of travel from abroad, surrounding environment and facilities, etc., Sapporo in Hokkaido was selected as the new conference site. This site was very favorably accepted and it was considered to be one of contributing factors for attracting so many participants.

The aim of this conference was to seek how to realize high efficiency, low power consumption, and low cost of large capacity-communication networks in the face of the rapid spread of ICT technologies including the Internet. Also, a new major theme "How can the progress of broadband technologies contribute to alleviating the energy, environmental, and economic crises while the world is faced with global warming, which is a crisis for the global and energy environment, and an economic crisis that is a crisis for the social environment, was set in this conference. During the conference, up-to-date research results for various technologies including extra-large-capacity long-distance transmission technologies, high-efficiency network control technologies, broadband access technologies, future optical fiber technologies, and high-functionality, low-power consumption optical device technologies, etc., were introduced and the directions, etc., of relevant developments were discussed. Thus, we consider that the material presented significantly contributed to the aim of the conference. Moreover, we consider that, at this new site in the heart of a nature-rich environment, we could focus on solutions to significant problems involving the global environment and the economic environment.

Not only the conference sessions but social events were also held with enthusiastic participation: Summer night ski jumping trials performed by expert jumpers were held in the Okurayama Jump Stadium with more than 110 participants. The stadium is famous as the place that hosted the Sapporo Winter Olympiad in 1972 and the top of the mountain afforded great scenes of the countryside. More than 280 participants also enjoyed a lot of beer and BBQ at the conference banquet held in the Sapporo Bier Garten in an old beautiful red block building with a 120 year history.

The IAC/OECC has already decided the locations of OECC2011 –2013 and discussed issues from the management viewpoint;

The OECC2011 will be held on July 4 - 8, 2011 again in Kaohsiung, Taiwan after the successful conference in 2006. Please see the details at *http://www.oecc2011.org*. Scope of the conference ranges from the ordinary topics, to LCD, Solar cell and Solid state lighting technologies, and emerging technologies that are recent active technical fields in Taiwan.   Most important date is the paper submission deadline of March 18, 2011. The organizing committee and IAC welcome your paper submission.

The OECC2012 will be held in Busan, South Korea in July 2-6, 2012. Busan, located in the southeastern part of the Korean peninsula, is the second largest metropolis where we can enjoy not only such circumstances as seashore (swimming in summer), mountains (hiking), hot spas (bathing), but historical temples and cuisines such as sea food, traditional Korean dishes and international ones as well.

The OECC2013 will be held again in Japan. Its details are under discussion and will be informed later.

The OECC looks forward to having your continuous support, i.e., submission of papers, participation in coming conferences and organizing them with us. Seeing you soon there.

Fig.3   The plenary speakers, Prof. M. Nakazawa, Prof. C. Lin, Dr. P. Magill, from the left

Fig.4   Participants discussing with speakers in Poster Session

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2011 IEICE General Conference comes up in Tokyo and provides English Sessions of Interesting Topics
IEICE-TFIPP

2011 IEICE General Conference comes up to be held at Tokyo City University on March 14th-17th. It will provide the following Sessions completely in English:
(1) English Session BS-4 "Network Design, Management and Control for Future Networked Systems"
Quite many papers to be presented will cover network issues and wireless technologies. This Session is composed of successive sub-Sessions and held every day during the Conference.
(2) Special Session organized by IEICE International Affairs Committee TK-5 "Updated Trend of Regional ICT Research and Development toward Next Decades" only on Wednesday, March 16th, from 13:30 to16:30. Some of IEICE Overseas Section Representatives will present interesting topics for you.

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Message from TFIPP Secretariat

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