1. Introduction
The Regional Seminar on Costs and Tariffs for Member Countries of the Regional Group for Asia and Pacific has been organised in close cooperation with the Ministry of Internal Affairs and Communications of Japan (MIC). The meeting of the Study Group 3 Regional Group for Asia and Oceania (SG3RG-AO) has followed the seminar from the afternoon of 9 to 10 April 2013. Fifty seven delegates from 13 countries participated.

Mr Byoung Nam Lee, Chairman SG3RG-AO welcomed the delegates to participate to these very important events. Mr Seiichi Tsugawa, Chairman Study Group 3 focused on the importance of the results from WCIT and the ITRs for the region and for the works of this Regional Group. The Representative of the International Telecommunication Union Mr Wisit Atipayakoon expressed the importance to share points of view on the economic and financial issues. Finally, Mr Soichiro Seki, Director General for International Affairs from MIC Japan, addressed his welcome speech to all the participants from the region and officially opened the seminar by highlighting the regional collaboration and the importance to adapt the international accounting rate system to the new converged environment that is changing constantly.

The seminar was chaired by Mr Seiichi Tsugawa, Chairman Study Group 3 from KDDI, Japan.

2. Results
The choice of the subjects treated during this seminar was done in coordination with the Management Team for the Regional Group for Asia and Oceania, in order to serve as guidelines and recommendations for Administrations as well as for the discussions of the Study Group 3 Regional Group of the Study Group 3 meeting organised after the seminar.

Session 1: Strategies for the deployment of NGN and NGA in a broadband environment – Regulatory and economic aspects, Mr Roger STEELE, ITU Expert

The ITU has developed a series of studies and seminars related to regulation, pricing, funding and policy approaches to help countries develop their telecoms services. In this framework a major focus in recent years has been on Next Generation Networks (NGN) and Next Generation Access (NGA) specially oriented to what are the challenges and benefits from the new telecoms technologies. In this sense a paper on the Regulatory and economic aspects and strategies for the deployment of NGN and NGA in a broadband environment was developed. The results were presented during the Seminar for Asia and Pacific with the purpose to provide insights to help in the developing of national strategies and regulatory approaches towards broadband that will benefit the telecoms industry, consumers and all businesses that make use of telecoms services.

Session 2: Competition and regulation in a converged broadband world – the Significant Market Power (SMP) definition, Mr David BERNAL, ITU Expert

In the framework of the ITU/BDT Broadband Series, a paper on this issue has been developed and the results presented during the seminar. The presentation treated a number of salient facts about the converged broadband world. Driven by the availability of novel and innovative services, demand for bandwidth is growing substantially. Services rather than the underlying technology matter for the customers’ choice of broadband connection. The economies of scope brought about by convergence are reflected in bundling of services. A range of different access technologies co-exists with mobile broadband services gaining in importance not just in countries where fixed infrastructure is poor, but also in developed economies with almost universal fixed line coverage.
Discussion focused on the implications of these developments for market definition. It gives a brief summary of the key principles used by regulatory and competition authorities for establishing the boundaries of the relevant market and then looks at the extent to which different broadband technologies can be said to compete with each other in light of these principles, especially for the definition of the Significant Market Power (SMP).

Three countries presented their experience on competition regulation and definition of SMP:

- **How Competition and Regulation Drive Broadband in Sri Lanka** by Mr. Nishantha PALIHAWADANA, Telecommunications Regulatory Commission of Sri Lanka

  The presenter did a brief overview of the market situation in Sri Lanka and technological advances done specially on mobile development and penetration, there are 5 operators all of them providing services throughout 3G technology. In price regulation it was decide to reduce the incumbent’s submarine cable landing station charges by 50% in 2010, this resulted with a very low rate for final customers. The speaker explained that one of the effects of price decrease is the reduction of the quality of service (QoS), he explained the measures done by the Government to maintain and improve the QoS for fixed and mobile broadband which is an effective approach and could be replicated by others. Sri Lanka is working in the development of the national broadband policy as well as in the development of the national broadband network.

- **SMP and Competition Regulation in Thailand** by Ms. Onwaree JARERNPORN, NBTC Thailand

  The procedures applied by the Thai Regulator for prevention of unfair competition were presented. In 2008 a market definition and relevant was done with specific criteria such as demand substitutability, supply substitutability and market factors. Following these procedures many dispute cases were presented and are under provision. The office of NBTC is currently reviewing relevant markets and list of SMP.

- **Market Power and Competition Policy in the Telecommunications Market** by Mr. Atsushi UMINO, Director for Policy Planning, Tariff and Telecommunications Access Policy Division, MIC, Japan

  The presenter did a brief overview of the market situation in Japan regarding mobile and fixed broadband services, including a benchmarking with some European and Asian countries. The presentation focused on the changes in the Competition Policy in Telecommunications Market in Japan with response to changes of the changing environment.

**Session 3: Results from the World Conference on International Telecommunications (WCIT-12) related to costs and tariffs issues, Ms. Carmen PRADO-WAGNER, ITU/BDT**

The main results and modifications of the International Telecommunication Regulations (ITRs) were presented with emphasis on the following items and provisions: mobile roaming (items 4 and 5), provisions of services in relation to cost reduction (Articles 3 and 4), economics (articles 6, 9 and Appendix 1) and the new resolution 5 international telecommunications service termination and exchange traffic.

**Session 4: Cost modeling and tariff policies discussion session**

This session was divided in three presentations, the first one on the Comparative review on methodological aspects of BU-LRIC models, done by Mr Yongsun CHOI, INJE University, Korea. This presentation focused on the methodologies used for the development of Bottom-up (BU) models as well as the dimensioning of the network topologies which effectively utilizes geodata and GIS in the cost analysis. The BU cost model of Korea was presented and the discussion focused on the activities of the SG3RG-AO Group for the development of a costing methodology for the region.

The second presentation on Telecommunications Price Regulation in Thailand, by Ms Onwaree JARERNPORN, NBTC, Thailand, showed the actual situation of the telecommunication market in this country, the regulatory provisions related to tariff regulation. These provisions stipulate that setting of the maximum rate of fee and tariff shall be expressed by clear calculating method; be fair to both the licensee and the user; and not cause a discrimination, preference or obstacle to the user or any person. The actual prices derived from ROR model were presented and the execution of an ITU/NBTC Price study for the regulation that benefits consumers while fosters healthy competition. Including the collection and generation of good information on cost levels, current prices and level of competition and the revision of the current price regulation regime, with a view to move to price cap.

The third and last presentation on Tariff Policy in Mongolia, by Ms Erdenechuluun URANZAYA, Information Technology, Post and Telecommunications Authority of Mongolia. The presenter introduced the current telecommunication/ICT market situation and the tariff policy and regulatory situation. The methodology for setting up
tariff for communications' services applied in Mongolia is based accordingly a principles accepted by ITU recommendations and World Economic and Co-operations Organization, World Trade Organization’s methodologies. These are cost based principle, price cap principle and benchmarking. Tariff policies in Mongolia have just been approved and the Information Technology, Post and Telecommunications Authority of Mongolia is in process to apply it.

Session 5: Initiatives to stimulate demand for broadband services and development of local content: online administration, e-learning, e-government, Mr Roger STEELE, ITU Expert
This presentation is a follow on from Session 1 where the strategic issues for the deployment of NGN were considered. This session was focused on the practical measures to develop NGNs and how to increase the local content and demand that provide the economic benefits. This session considered some of the "how" and "what" to resolve issues in order to meet the policy aims discussed in the earlier session. The International Internet capacity and IP transit is expensive everywhere, but especially in developing countries, in this sense if most Internet content is initially overseas, this increases the cost to each customer. For that more local content could reduce the international cost-contribution and huge benefits to end users from local language content. As demand increased Content Data Networks emerge and service providers move their servers to be closer to the customers. This reduces the dependency on (and cost of) the international portion of the total service cost.

Future School Promotion Project, Ms. Yuka KOBAYASHI, ICT Accessibility and Human Resources Development Division, MIC, Japan
This presentation is an overview of the utilization of ICT in Japanese education. In a study of ICT utilization done by the Ministry of Education, Culture, Sports, Science and Technology (MEXT), it was found that the score was higher in the objective test given in the ICT-utilized class than those without, and pupils’ knowledge, understanding and motivation to learn was higher. Moreover, it has been pointed out that classroom ICT utilization raised teacher-pupil bidirectionality, in the sense to promote inter-pupil collaboration in learning new materials as well as increasing the teacher's opportunity to render “personalized teaching”. To promote the utilization of ICT in education, the institute ICT-environment in classrooms is conducting experimental studies with an emphasis on the technical aspects with the objective of compiling guidelines (manuals). Information obtained will be used to expand the coverage of ICT-utilized teaching to other schools.

Session 6: International roaming services: a review of best practices, Mr Dimitri YPSILANTI, ITU Expert
The high prices charged for international mobile roaming services have in recent years come under increased scrutiny by policy makers and telecommunication regulators. The presentation provided an overview of this issue, examines the initiatives which have been taken at the international, regional and bilateral levels and illustrated the best practice tools which have been applied in different countries/regions to improve the roaming services a especially the prices. This paper has been developed as a Discussion Paper in the framework of the Global Symposium of Regulators (GSR2012). This is available on the website: www.itu.int/ITU-D/treg/Events/Seminars/GSR/GSR12/documents/GSR12_IMR_Ypsilanti_3.pdf
Discussion focused on wholesale price regulation, and how some countries such as European, Australian, New Zealand countries are regulating these prices, and to made available the prices they are applying. Thailand expressed the importance of the ITU participation on the issue of Roaming to find better solutions to bring the benefit of telecom users in the world.

ITU-T Study Group 3 activities on International mobile roaming and Recommendation D-98, Ms. Eriko HONDO, KDDI, Japan
The purpose of this presentation was to review what have been done in the ITU-T Study Group 3 period 2009-2012 with respect to IMR and encourage members of the Study Group 3 (SG3) to keep following this issue.
Through a lot of discussion and consideration, SG3 agreed on the approval of ITU-T Recommendation D.98 which incorporates practical measures to protect consumers from “bill-shock” and promote appropriate competitive environment and efficient regulatory intervention.

Session 7: Taxation of telecommunication services, Ms. Carmen PRADO-WAGNER, ITU/BDT
This presentation focused on the discussion of the effects of imposing special taxes on telecommunications equipment and services in addition to the general run of taxes, such as VAT, which apply to most or all goods and services. It is not easy to balance the taxation process of a country, and certainly is something that should be done on a case by case basis. But governments should think carefully before imposing special or new taxes on the telecommunications sector.
This should be done only when there is no alternative to raise tax revenue, which would be less damaging to the economy in terms of market distortions and negative impacts on economic growth. Finally for the telecommunications industry to maximize benefits as a source of growth, tax authorities, regulators and operators need to work together. For example, by having a consultation with all stakeholders before taken serious decisions related to taxes. This could be very useful in assessing the possible distorting effects of each tax in the quality and quantity of services, and of course the possible loss of population welfare. A debate had been open related to the experience of countries on taxation: Vanuatu, Thailand and Brunei Darussalam expressed their point of view and the way how their countries are dealing with taxes. In Vanuatu they are removing taxation of all telecommunication devices and equipment and there is not specific taxation on telecommunication services. However, there is still a concern regarding fuel, as this is used considerably specially in the rural areas, and it is highly taxed. In this sense operators are paying very expensive and this squeezes their revenues. In the case of Thailand, some taxes are imposed specially on the usage of numbering and spectrum fees, and of course all these funds are collected by the Government. No special taxes are imposed to the telecommunication services. Regarding the case of Brunei Darussalam, the delegate expressed that in this country no special taxes are imposed to the sector including custom taxes and telecommunication services taxes.

Session 8: Providing broadband services through PPP (Public Private Partnership) models, Mr David BERNAL, ITU Expert
Governments in most countries face the challenge to meet the growing demand for new broadband infrastructures. As available funds in the public sector are limited to develop these kinds of projects, governments have found a new way to collaborate with private companies to provide better and feasible broadband services to the end users. PPPs are a means by which the public and private sectors can work together as they provide a contractual and formalized framework needed for easier cooperation between all parties. A typical PPP structure can be quite complex involving contractual agreements between a number of different participants including Financiers, Government, Engineers, Contractors, Operators, and Customers. The Public Private Partnership (PPP) allows basically having access to additional funds, advanced technology and improving the efficiency of the project management not only in terms of operation and maintenance but also in terms of planning and development. Additionally, PPPs allow that project risks can easily turn into government risk and a long term contract has to be in place. What can be easily demonstrated is that PPPs offer wider benefits than simply financing, so that PPPs encourage innovative network approaches. The special case of spectrum auctions for broadband plans (especially for digital TV and broadband services) had been explained from the point of view of consumer benefits and industry benefits. The different PPP models vary mainly by the ownership of the assets, the assumption of risk, responsibility of investments and duration of the contract, these variation were presented and discussed. The case of Spain was also explained.

Session 9: With possible erosion by OTT, is International Telephone Service on the brink of abyss?, Mr Yasunori MATSUDA, Vice-Chairman of the SG3RG- AO, KDDI, Japan
This presentation illustrated that in this era of the telecommunication/ICTs, the Over the Top (OTT), such as Skype, Facebook are emerging speedily, by offering conventional source of revenue (Call, SMS, etc.) for free, they are getting very rapidly the backing of users. The influence on the International Telephone Service is significant in particular. Telecom Operators notice their revenues decrease because the loss of international traffic. This leads to the concern that their equipment/operation costs would be difficulty covered. The discussion focused on the following question: with the possible OTT’s spread to developing countries in association with the increase of 3G/WiFi and smart phones, how could telecommunication operators cope with this issue? The presentation invited the meeting for further discussions which could take place after the seminar during the regional group meeting.

3. Follow-up activities
The follow-up activities were defined during the seminar and specially during the meeting of the Regional Group for Asia and Oceania, as follows:
- Participants were informed that taking into account that this regional seminar on costs and tariffs is the unique regional event on economics and finance of telecommunication issues, it was decided to change their actual format from Seminars to Regional Economic and Financial Forums (REFF). This is because it is becoming more and more entering into interactive expert discussions with the participation of panelists from all telecommunication/ICT stakeholders and countries experiences. Accent will be given to the discussion panels on costing and pricing methodologies in order to promote the experiences sharing between countries and presentation/discussion of best practices. Several subjects where proposed by participants to be taken in to
consideration for the organization of the Forum next year, some of them are: Infrastructure sharing, bundle services price regulation (fixed and mobile broadband), IP Interconnection charging, cost modelling and market analysis, BU-LRIC, tariff legislation, PPP regulatory aspects, IIC situation in ASP.

- The BDT representative, Ms Prado-Wagner, actively participated at the Ad-Hoc groups and presented results from the ITU/BDT Tariff Policies survey on the following subjects:
  - During the discussions with the Ad Hoc group on Mobile Termination Rates (MTR) and International Mobile Roaming (IMR) regarding the new questions on National and International Mobile Roaming, that have been prepared last year in coordination with this group. It was noted that the first year the collection of data is very limited as countries don't have the habit to respond them and sometimes need to find the information from other services. From the second year more robust information will be presented.
  - The results from the IIC section were presented during the discussions of the Ad Hoc Group on International Internet Connectivity (IIC).
  - As it was requested by the SG3RG-AO group last year the results on costing models were submitted and presented as well.

- BDT also informed about the organization of the High level Workshop on International Roaming that will be organized by BDT in coordination with TSB, as well as on the preparation of a more complete report on International roaming services: best practice policies and guidelines, that will be disseminated during the workshop tentatively will be held in Geneva from 22 to 23 September 2013. It was proposed and accepted that the Rapporteur group on IMR participate actively in the revision/elaboration of this report as well as in the workshop.

- The next SG3RG-AO Seminar and Meeting for 2014 will be held in Mongolia in early July.


The Chairman of the Seminar and the Chairman of the SG3RG-AO thanked the Ministry of Internal Affairs and Communications of Japan (MIC) for the excellent organization of both events. The meeting thanked to the management team, all the speakers for their very informative and excellent presentations during the seminar, and the BDT and TSB staff for the excellent work done, and requested BDT to continue with the organization of the Regional Economic and Financial Forum (REFF) together with the future activities of the Study Group 3 as well as to continue with the synergies for both sectors to support the Asia and Pacific region.

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