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FINAL REPORT

SINGAPORE 10-15 MAY 1993



REGIONAL
TELECOMMUNICATION
DEVELOPMENT
CONFERENCE
FOR ASIA AND
THE PACIFIC (AS-RDC)



INTERNATIONAL TELECOMMUNICATION UNION

**Regional Telecommunication Development Conference
for Asia and the Pacific (AS-RDC/93)**

Singapore, 10 - 15 May 1993

FINAL REPORT

Geneva, June 1993

Regional Telecommunication Development Conference for Asia and the Pacific (AS-RDC)

Singapore, 10 - 15 May 1993

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Regional Telecommunication Development Conference for Asia and the Pacific (AS-RDC)

Singapore, 10 - 15 May 1993

FINAL REPORT

1. Introduction

The first Regional Telecommunication Development Conference for Asia and the Pacific (AS-RDC/93) was organised by the BDT¹ in Singapore from 10 to 15 May 1993. The objectives, working procedures, agenda and programme of the conference are described in Annexes I and II. The Conference was opened by His Excellency Mr. Mah Bow Tan, Minister for Communications, Singapore. Dr. Pekka Tarjanne, Secretary-General of the ITU, Mr. Arnold Ph. Djiwatampu, Director of the BDT and Mr. Tan Guong Ching, Chairman, Telecommunication Authority of Singapore, also addressed the Conference at the opening ceremony (see Annex III).

2. Participants

The conference was attended by 286 persons, including delegates and observers from 39 countries in the region and observers from 12 countries in other regions, representing both governments and the private sector. The list of participants (see Annex IV) includes a number of Ministers and senior officials responsible for telecommunications, representatives of 15 international and regional organizations (ABU, AIBD, AEU, APEC, APT, CEC, Forum Secretariat, ICAO, INMARSAT, INTELSAT, ITU SAARC, UNIDO, UNESCO and the World Bank) as well as many executives of operating entities, telecommunication equipment manufacturers and other private enterprises.

3. Background

The Asia-Pacific area is currently the most dynamic regional economy in the world with growth rates considerably higher than the average for other regions. An indicator of the growth in telecommunications networks and services is the increase by some 70% of the number of main lines over the last decade. Yet the average number of main lines per 100 inhabitants is still only around 4, or one tenth of the average of the OECD countries.

Asia-Pacific is also a region of great contrasts: between mighty continent-sized nations and tiny Pacific atolls; between rapidly expanding cities and remote rural areas; between free-enterprise city-states and centrally-planned republics. These contrasts are also reflected in telecommunication statistics. For instance, the three member countries of the OECD within the region (Australia, New Zealand and Japan) account for 70 per cent of the wealth (expressed in terms of GDP) and more than 50 per cent of the telephone lines, even though their population is just 5 per cent of the total. On the other hand, two countries (China and India) with two thirds of the region's population, share just 12 per cent of the wealth and telephone lines. In terms of telecommunications policy, the region ranges from state-run monopolies to competitive free-for-all environments, reflecting the conflicting ideologies of the region.

However, as individual nations in the region reach the point of economic take-off, intra-regional trade is growing and engendering a closer sense of regional identity. Indeed, the statistics for international telephone traffic in the region confirm the growing importance of trading links in the region. Thus, within-region calling accounts for over 50 per cent of all traffic originating in the Asia-Pacific. This is higher than for the North American Free Trade Area (NAFTA -- 42 per cent within region) and is fast approaching that of the European Community (EC -- 55 per cent within region).

¹ See Annex IX - List of abbreviations

The link between telecommunications and economic development is well established in numerous studies and reports. Public telecommunication services contribute around 1.5 per cent of national economic activity in the region directly and a much higher percentage indirectly, once equipment markets, private telecommunication services and the broader information industry are taken into account. Telecommunications also play a facilitating role for growth in other sectors which depend upon the rapid transfer of information, notably banking, transport and retail distribution.

However, the gap between the poorest and richest countries of the region, in terms of telecommunications development, is widening rather than narrowing. This would suggest that the development activities of organisations concerned with the economic development of the region should be targeted at the very poorest countries. International and regional cooperation, aimed at achieving a more balanced and harmonised telecommunication development in the region, was therefore one of the main themes of the AS-RDC/93.

Clearly, the Asia-Pacific region is an area of immense opportunity for potential investors in telecommunication networks and services and an area at the leading edge of new technological developments, particularly in the field of mobile communications. However, it must be borne in mind that it is also an area in which three quarters of all households have no access to a telephone and in which the estimated investment required just to maintain current levels of growth is at least US\$100 billion between now and the end of the century. The investment required in the lower income countries (including India and China) to reach a teledensity of, for example, 10 lines per 100 inhabitants, would be almost US\$400 billion. Consequently, policies and strategies ensuring access to basic telecommunications for all users and conducive to attracting the required investment were other major issues debated at the AS-RDC/93.

The Conference was chaired by Mr. NG, Hong Yew, Director General, Telecommunication Authority of Singapore (TAS). The Conference created three committees to deal with different aspects of telecommunications development, which considered a number of action-oriented draft resolutions proposing goals and actions to improve and harmonise telecommunications development in the region. The Conference adopted 15 Resolutions and four Recommendations², calling for actions by the Governments concerned, the ITU, APT³ and other international and regional organizations.

4. Proceedings

4.1 Designation of Chairpersons

Mr. NG Hong Yew, Director General, Telecommunication Authority of Singapore, was elected Chairman of the Conference, and Messrs. LUI Cai, Director, Ministry of P&T, China, Shuji KUSUDA, Director-General, International Affairs Department, Ministry of P&T, Japan and Inatio TEANAKO, Managing Director, Telecom Kiribati Ltd., Kiribati, were elected Vice-Chairmen. The Conference created three committees to deal with different aspects of telecommunications development, and for each of these a Chairperson and a Rapporteur were designated as shown in the table below.

Committee	Chairpersons and Rapporteurs
A. Policies, strategies, development plans, socio-economic and cultural impact, etc. Financial considerations.	Chairman: U.V. NAYAK, India Rapporteur: James BARR, Australia
B. Standards, harmonisation of networks and new services.	Chairman: DJAMHARI SIRAT, Indonesia Rapporteur: Annesley DE SOYZA, Papua New Guinea
C. Organisation and Management. Management and development of human resources	Chairman: Mohammed Ali YUSOFF, Malaysia Rapporteur: BP SHIVAKOTI, Nepal

² See Annex VII

³ See Annex IX - List of abbreviations

4.2 Agenda and programme of the Conference

The provisional agenda, elaborated in consultation with the Members of the ITU and approved by the Administrative Council in June 1992 was adopted (see Annex I).

As shown in the annexed programme for the first Plenary session (Annex V), 7 documents, dealing with various aspects of telecommunications development and plans of regional organizations, were briefly introduced during the first day's plenary session by representatives of international and regional organizations. These documents and other reference documents submitted to the conference, and in most cases introduced in the Committees, are listed in Annex VI. All reference documents are reproduced in a separate publication⁴.

A number of draft resolutions and proposals for projects and actions to be considered by the Committees were also introduced by the end of the first day. These proposals had been elaborated by the AS-RDC Task Force, established by the ITU and composed of representatives of countries in the region and international and regional organizations. The AS-RDC Task Force met four times before the Conference and the draft Resolutions had been circulated in advance. Therefore, the Conference may be considered as the culmination of the process of preparation of an action programme for regional cooperation in telecommunications development.

All three committees met simultaneously Wednesday through Friday morning. Each Committee considered the relevant documents and prepared a number of draft Resolutions and Recommendations on the basis of the draft proposals introduced during the first day of the Conference.

A steering committee composed of the Chairman and Vice-chairmen of the AS-RDC and the Chairmen, Rapporteurs and ITU focal points of the three Committees was established.

The Resolutions adopted by the Conference (see Annex VII) cover a wide range of issues, set targets and propose actions to reach these goals. The commitment of countries to achieve these objectives was expressed by a panel of Ministers and high ranking officials on the penultimate day of the Conference when the results of the Committee work was presented. Statements of the members of the Panel are reproduced in Annex VIII (those submitted in writing).

Resolutions also define the role of the organizations involved in the implementation of the decisions of the Conference and provide guidelines for the ITU and other development partners on the action to be taken.

Access to ITU databases and other information using the Union's Telecom Information Exchange Services (TIES) was demonstrated in two evening sessions.

On the last day, the Conference adopted the 15 Resolutions and four Recommendations shown in Annex VII, entrusting the ITU with the task of their final editing.

4.3 Closing Ceremony

During the closing ceremony, the Director of the BDT, Mr. Arnold Ph. Djiwatampu, congratulated the participants for their frank and open discussions of the problems being faced and for having identified possible solutions to those problems. He also indicated that mobilisation of resources from the private sector, whether in kind, in the form of expertise and support to seminars, or in cash through voluntary contributions, would be intensified. "It is my conviction that each and every private contribution will see returns beyond its expectations", he said. "We have the capability to provide you with the business information you need and we have the trust of our Members", concluded Mr. Djiwatampu.

Dr. Pekka Tarjanne, ITU Secretary-General, expressed his satisfaction with the balanced plan of action implied in the Resolutions adopted by the Conference. He also said that the follow-up mechanisms were probably the most important steps taken to produce real results – concrete telecommunications development for the people of the region. He then made an appeal to all participants to take steps to materialise the decisions collectively made. "Please do not wait for others

⁴ Separate publication - See list of documents submitted to the Conference - Annex VI

to go ahead and implement the results. Let us compete in showing a good example, let us push each other to make sure that all of us can look back at this exercise with satisfaction and pride", Dr. Tarjanne stated.

The Secretary-General expressed his thanks to the host of the conference and awarded to the Chairman of the Conference the 125th commemorative silver medal of the ITU as token of the ITU's appreciation for the cooperation of the authorities of Singapore in the organisation of the conference.

In his closing address, Mr. Ng, Chairman of the Conference, stressed the profound importance of the Conference to the development of telecommunications in the Asia-Pacific region. He also underlined the fact that not only were the needs of the region immense but that they were equally diversified. "Yet, the resources to meet these needs," Mr. Ng said, "be they financial resources, technical expertise or training facilities and materials, are in short supply". "Huge needs coupled with very limited resources", Mr. Ng added, "make coordination efforts of utmost importance for international, regional and subregional organizations concerned with telecommunication development in this region, if they are to truly serve the needs of their members."

Mr. Ng also commended the adoption of common directives which the region hopes to pursue in terms of telecommunications policies and strategies. "That we were able to meet on common ground in this way is indeed a good indication of the warm and cordial relations which the Member countries of the region enjoy", he said.

The closing addresses are reproduced in Annex III.

5. Summary of Resolutions and Recommendations

5.1 Telecommunication policies and strategies for the Asia-Pacific region

The AS-RDC Resolution No. 2 recognizes that the trend towards liberalization and restructuring of the telecommunication sector to encourage competition and investment is dependent upon effective and transparent regulatory policies. It defines seven common directives for formulating telecommunications policies and strategies:

- ❑ to promote understanding of the importance of the role of telecommunications and encourage investment on as wide a basis as possible;
- ❑ to provide, to the greatest extent practicable, access for all people to at least basic telecommunication services;
- ❑ to encourage the separation of regulatory and operating functions;
- ❑ to harmonise networks and service developments in order to reduce the great disparities within the region, strengthen the integration of the region and promote global inter-operability;
- ❑ to foster local manufacturing of telecommunication equipment and components, when appropriate;
- ❑ to introduce advanced telecommunication technology, such as satellite, fiber optics and mobile communications, so that a modern telecommunication infrastructure can be established in each country of the Asia-Pacific region;
- ❑ to utilise telecommunications for protecting the global environment.

It also creates a Working Group to develop guidelines, which will assist countries of the region to evaluate policies and strategies which will promote the restructuring of the telecommunication sector within the framework of each country's national strategies for economic, social and cultural development. The Working Group is asked to complete its work before August 1994.

5.2 Financing strategies

The AS-RDC Resolution No. 3 on financing strategies calls for the exchange of information and experience of the various financing strategies so as to assist countries in developing their own. It requests countries to achieve sufficient development of telecommunications by the reinvestment of revenues for maintenance and expansion, through cost reductions and by establishing appropriate tariffs. It also underlines the importance of private capital in telecommunication development in the region.

Finally, it instructs the BDT to conduct research on various options for financing strategies, their merits and demerits and of conditions for introducing the various strategies.

5.3 Access to all users

The issue of providing access to telecommunication services for users in rural and low-income urban areas is addressed in AS-RDC Resolution No. 4, which invites each country to prepare a telecommunication development plan to be included in comprehensive regional development programmes. The Resolution also requests that a calendar for its implementation be adopted with the objective of :

- ❑ providing at least one public phone in every community or village including national/international dialing facility;
- ❑ providing public pay phones extensively in urban areas;
- ❑ setting up telecommunication service centres for fax, telex and other value-added services in every business/commercial community in urban/semi-urban areas or in rural areas where economic activities would be enhanced;
- ❑ extending radio and TV coverage to rural areas.

The introduction of disaster prevention telecommunication systems to promote safety of life is also highlighted.

Finally, it instructs the BDT (in cooperation with APT and other regional organizations concerned)

- ❑ to study low-cost appropriate technology options for rural telecommunications including multiple access systems, cellular radio and VSAT;
- ❑ to prepare guidelines for rural telecommunications planning and for the choice of technology;
- ❑ to organise seminars on broadcasting development in rural areas.

5.4 Human resources development and management

The critical importance of human resources development and management in a changing and increasingly competitive environment and the need for international cooperation in this field is highlighted in AS-RDC Resolution No. 5. This Resolution calls for the strengthening of cooperation between telecommunication and broadcasting centres within the framework of ITU's International Sharing System (ISS). It also supports the creation of new training centres for the region and requests Member countries to upgrade and enhance education in the universities and graduate schools that serve as higher educational institutions in telecommunication fields.

Finally, the Resolution requests the ITU to cooperate with APT and other regional and sub-regional organizations in assessing ways to further improve the exchange of information in the field of human resources management and development. In particular, the ITU is requested to submit a proposal for improvement of the ISS to the forthcoming WTDC (Buenos Aires, March 1994).

5.5 Transfer of technology and know-how

Two resolutions on technology transfer were adopted: one on telecommunication technology transfer, including new technologies, and one on technology transfer in the field of broadcasting technologies.

The Resolution on telecommunication technology transfer (AS-RDC Resolution No. 10) reaffirms the need to transfer technology to developing countries, for example, through the exchange of experts, the organisation of seminars and meetings, the networking of telecommunication research institutions by electronic mail, teleconferencing and computer conferencing facilities. It also requests the ITU to review, update and improve handbooks which deal with technical questions of particular concern to developing countries. In addition, the Resolution invites manufacturers and their clients in developing countries to include, as part of equipment purchasing contracts, the transfer of relevant new technology and know-how.

The Resolution on technology knowledge transfer in the field of broadcasting technologies (AS-RDC Resolution No. 11) requests the ITU to cooperate with the ABU in the organisation of seminars and workshops on emerging broadcasting technologies at regular intervals.

5.6 Standardisation

The promotion of standardisation in the region is addressed in AS-RDC Resolution No. 6, aimed at:

- ❑ fostering the exchange of information on international standardization within the region;
- ❑ studying, formulating and promoting international standardization;
- ❑ facilitating the participation of countries in the standard-setting and application process.

The Resolution also requests ITU to collaborate with regional organizations in:

- ❑ promoting the dissemination, interpretation and application of international standards to users in the region through handbooks, seminars/workshops, standard harmonization meetings on specific new technology or standard-setting issues;
- ❑ supporting efforts in developing national customer equipment standards in countries of the region.

5.7 Radio Frequency Spectrum

In AS-RDC Resolution No. 7, the Conference considers the economic value of the radio frequency spectrum and recognises that the setting of appropriate spectrum fees is essential for equitable access to and efficient use of the spectrum. It resolves that each country should establish goals and objectives to facilitate and optimise the use of the spectrum and requests the BDT to carry out a study on radio frequency spectrum pricing and implementation methodologies. The objective is to analyse the advantages and disadvantages of different pricing policies with a view to providing guidelines for the countries of the region. The study should be completed by the end of 1994 and disseminated to all countries of the region.

A second Resolution (AS-RDC Resolution No. 8), concerning regional cooperation for strengthening frequency management planning and coordination, proposes:

- ❑ the establishment by each country of goals and objectives to facilitate the use of the radio frequency spectrum with minimal regulatory constraints;
- ❑ improved regional cooperation on frequency management;
- ❑ the exchange of information about available tools for frequency management;
- ❑ the establishment of national long-range spectrum plans;
- ❑ the comparison of national spectrum policies and plans in the region;
- ❑ the promotion of the use of common frequency bands for specific purposes such as FPLMTS and digital audio satellite broadcasting in the Asia-Pacific region;

The text also calls for the organisation of regular information meetings within the region to enhance knowledge of regulatory and technical procedures concerning radiocommunication services in general and broadcasting and broadcasting-satellite services in particular.

Maritime and Safety (Recommendation)

Through AS-RDC Recommendation No. 1 on maritime and safety matters, all countries are urged to support a project to be undertaken by the ITU to elaborate maritime radiocommunication master plans for the implementation of the Global Maritime Distress and Safety System (GMDSS) and the development of maritime radiocommunication services in the region.

Mobile Satellite (Recommendation)

AS-RDC Recommendation No. 4 on the use of advanced satellite services and technologies in support of telecommunications development in the Asia-Pacific region invites countries to consider the potential opportunities which new and emerging satellite communication services and technologies may offer. It also recommends the BDT to assist in identifying these opportunities, establishing rules, regulations and policies whenever required to take advantage of these systems.

5.8 Telecommunication Indicators

The Conference resolved to set up a working group on Telecommunication Indicators under the coordination of the ITU's Telecommunication Development Bureau (AS-RDC Resolution No. 9). The Working Group will involve the participation of specialists from national regulatory, planning and policy decision-making authorities and telecommunication operators, as well as from international and regional organizations. The role of the Working Group is to further develop the set of standardised indicators to be collected including human resources indicators. The first meeting of the Group is scheduled to take place within the next six months.

The Resolution also requests the Working Group to propose programmes and projects for regional cooperation in the development and adaptation of Management Information Systems for telecommunication operators, which will at the same time meet their requirements and facilitate their task of supplying the indicators required by end-users of such MIS. The ITU is requested to study the possibility of merging the regional working groups set up in other regions into one global forum for development of telecommunication indicators.

5.9 Special Assistance programme for the least developed countries (LDCs)

There are currently 48 LDCs throughout the world, 29 of which are in Africa (south of the Sahara), 13 in Asia and the Pacific, five in the Arab States Region and one in the Americas.

The ITU allocated 2.2 million Swiss francs in 1992 and 2.3 million Swiss francs in 1993 from its own funds for LDCs and adopted a joint programme approach for the provision of ITU assistance to LDCs concentrating on four main areas: management, maintenance, planning and training.

In AS-RDC Resolution No. 12, the Conference requests the ITU to increase the funds made available for LDCs in its regular budget with a view to enhancing their impact. It further requests the ITU to cooperate with APT to strengthen regional technical cooperation among developing countries and encourages the developed countries to enhance their assistance programme for the benefit of LDCs.

Specific activities to be included in the LDC programme of the ITU and for which financing is to be sought from external sources are:

- ☐ assistance on the reform and restructuring of the telecommunication sector;
- ☐ improvement of the maintenance of telecommunication networks;
- ☐ development of networks and services, including those in rural areas, to attain better efficiency and self-reliance.

5.10 Technical assistance to Broadcasters

AS-RDC Resolution No. 13 requests the ITU to assist broadcasting organizations to carry out VHF/UHF propagation measurements under different topographical and climatic conditions in a selected group of countries situated in the tropical areas of the region.

Besides the already mentioned Resolution No 11 on Transfer of technology in the field of broadcasting, a Resolution on technical assistance to broadcasters as a follow-up to a regional broadcasting project implemented by the ITU in the region was also adopted (AS-RDC Resolution No. 14). The latter resolves that the BDT elaborate project proposals to address the high priority needs identified by the countries of the region in cooperation with the ABU.

Assistance from manufacturers in the operation and development of broadcasting services
(Recommendation)

AS-RDC Recommendation No. 2 calls for improved participation of manufacturers in human resources development and improved after-sale support. It also recommends streamlined procedures for the supply of spare parts and the collection of statistical information on equipment performance.

Telecommunication tariffs for broadcasting (Recommendation)

Recognizing the relationship between the tariff structure and the distribution and exchange of television programmes and news at international level, the Conference also recommends that the BDT and the TSB co-operate with UNESCO and other organizations concerned in undertaking the necessary studies on appropriate tariff structures for enhancing the growth of international news exchange and information flow (AS-RDC Recommendation No. 3).

5.11 Coordination mechanism for implementing the AS-RDC Resolutions

AS-RDC Resolution No. 1 provides for the holding of regular coordination meetings to serve as fora for the exchange of views and information for coordination, monitoring and follow-up activities to implement the Resolutions of the Conference.

This Resolution also calls for increased coordination among all organizations involved in the region to ensure complementarity of the action taken and to avoid duplication of work among development partners. It instructs the ITU to compile reports on the progress made in the implementation of Conference Resolutions and to disseminate these reports once a year to all countries of the region and interested international and regional organizations.

The first Asia-Pacific Coordination Meeting is scheduled to take place prior to the World Telecommunication Development Conference planned to be held from 21 to 29 March 1994.

The Conference further resolved that this first meeting analyse and review the detailed action programmes elaborated by the participating organizations for the implementation of Conference Resolutions and that the outcome of this review be submitted for consideration by the executive organ of each organisation. The consolidated action plan will be reviewed by the forthcoming World Telecommunication Development Conference with a view to avoiding duplication of effort at the global level (see AS-RDC Resolution No. 15).

This last Resolution also supports the broad objectives of the project proposals which were submitted to the AS-RDC by the APT, the ABU and the ITU. However, the Conference decided that the project documents be reformulated and consolidated to avoid duplication of effort. The revised set will then become part of the action programme for implementing the AS-RDC Resolutions.

Annex I

PURPOSE, ORGANIZATION AND PROGRAMME

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PURPOSE, ORGANIZATION AND PROGRAMME

Purpose of Telecommunication Development Conferences

The recurrent Regional and World Telecommunication Development Conferences have a dual role:

1. to serve as *fora* for discussion and consideration of issues, programmes and projects relevant to telecommunications development with a view to coordinating the development of the telecommunication sector at the regional and global levels.
2. to provide guidance to the ITU Telecommunications Development Bureau (BDT).

Thus, the Conferences review the state of networks and services in the region concerned and worldwide, decide on a coordinated course of action and elaborate programmes for their improvement and further expansion. They are further expected to identify technical cooperation needs, including those for which cooperation with the ITU/BDT is envisaged, over a given period of time. The Conferences will also examine reports of the BDT and evaluate its achievements. Decisions of the Conferences are expressed in action-oriented Resolutions and Recommendations. These will, in addition to providing guidelines for the work of the BDT, be addressed to the countries themselves, multilateral and bilateral funding institutions, public and recognized private operating agencies, suppliers, etc. for appropriate action.

The success of the current efforts towards socio-economic development as well as regional and global integration, depends heavily on the development of harmonized and effective telecommunication infrastructures. The development of such an infrastructure is therefore in the interest also of advanced countries and the conferences may wish to make declarations stating common visions, goals and objectives of telecommunications development.

Periodicity

Regional Conferences are to be organized for each region every five years or so (one Regional Development Conference in each region and one World Development Conference between two consecutive ITU Plenipotentiary Conferences). However, the Conferences may resolve to create "Development Study Groups" or "Development Working Groups" or any other mechanism to assist in the implementation and monitoring of the progress of programmes and projects referred to in the various Resolutions adopted. Such Study Groups and Working Groups could also be involved in the preparation of the next Conference.

Participants

The Conferences are open to all concerned parties, including the private sector, to ensure transparency and complementarity. Thus, the Conferences are to be attended by high-level representatives of governments, of concerned regional organizations, of the private sector as well as of multilateral and bilateral financing and development agencies.

Private sector representatives will be charged the following participation fees*, as a contribution to cover the costs of facilities, documents and administrative support:

- | | |
|--|-------------------------------|
| - representatives of telecommunication operating companies and manufacturers | : 800 Swiss Francs per person |
| - representatives of consulting firms | : 200 Swiss Francs per person |
| - representatives of research and academic institutions | : 100 Swiss Francs per person |

* Participation fees may be paid to ITU account No. 8-765565.0 indicating "AS-RDC/93 Conference fee" at the Swiss Bank Corporation (SBS), Agence Vermont, CH-1211 Geneva 20, Switzerland.

Organization of work, agenda and programme of the AS-RDC

The provisional agenda and tentative programme of the AS-RDC are shown in Appendices 1 and 2 respectively.

The Conference may wish to elect a Chairperson (from the host country) and two or three Vice-chairpersons. The Conference will be conducted in English only. It may wish to establish three committees to deal with the following aspects of telecommunications development:

- Committee A** - Policies, strategies, development plans, socio-economic and cultural impact, etc. Financial considerations.(refer to agenda items 1-4 and 8).
- Committee B** - Standards, harmonization of networks and new services. (refer to agenda items 6 and 8).
- Committee C** - Organization and management. Management and development of human resources (refer to agenda items 5, 7 and 8)

The Conference may create additional working groups on specific subjects, as deemed necessary.

Each participant is free to attend any of the above committees according to his/her interest and responsibilities. As the committees will work in parallel, **countries should endeavour to form their delegations so as to ensure efficient participation in all the committees.**

Following the Preliminary/Consultative meeting (Bangkok 18-19 November 1992), a Task Force, with representatives from the region concerned, has been set up to assist in the preparation of the Conference. Proposals for Resolutions and action plans prepared by this Task Force as well as documents presented in plenary sessions will provide inputs for the discussions in the committees. On the basis of these and other proposals the committees are expected to propose objectives, targets and strategies with reference to the issues discussed and prepare result-oriented action plans and recommendations for consideration of the whole conference. The conference offers a unique opportunity to identify the issues which require *joint and/or harmonized* actions, and therefore proposals made by committees may wish to focus on opportunities for sub-regional and inter-regional cooperation and modalities of follow-up of actions proposed (agenda item 9).

The Committees will report to the plenary on their conclusions in order to allow all participants to express their views on proposals for Resolutions and action. Following this plenary discussion, an editorial group, to be set up by the Conference, will be entrusted with the task of preparing the final Resolutions and Recommendations of the Conference. These will be reviewed and adopted in the last plenary session.

In order to save time and structure the work of the committees, draft agendas for the committees will be prepared by the above-mentioned Task Force. It should be emphasized that these draft agendas are provisional and that each committee is invited to establish its own agenda.

PROVISIONAL AGENDA

1. Present state and development plans of telecommunications in the region.
2. Role of telecommunications in socio-economic and cultural development; priorities for telecommunications development in the region.
3. Telecommunication development policies and strategies for the region.
4. Investment considerations and financing strategies.
5. Organization and management issues.
6. Networks harmonization and new services.
7. Management and development of human resources.
8. International cooperation and policies for regional cooperation, including technical cooperation between developing countries (TCDC).
9. Modalities for monitoring, evaluation and progress review.
10. Other matters.

TENTATIVE PROGRAMME

Monday 10.5: Registration of participants and distribution of documents 10.00 - 17.00

Tuesday 11.5. through Saturday 15.5:- Working hours: 9.00 - 12.30 and 14.00 - 17.30 with coffee/tea breaks in morning and afternoon when not otherwise indicated in the programme

Tuesday 11.5	Wednesday 12.5	Thursday 13.5	Friday 14.5	Saturday 15.5
<u>10.00 Opening ceremony</u>	Committee work	Committee work	Committee work	Plenary session Presentation and adoption of Resolutions and Recommendations
Coffee/tea -break	Coffee/tea -break	Coffee/tea -break	Coffee/tea -break	Coffee/tea -break
Plenary session - adoption of agenda, - election of Chairmen - HLC* report - Introduction of reference documents and proposals	Committee work	Committee work	Committee work	continuation
Lunch	Lunch	Lunch	Lunch	Lunch
- Introduction of reference documents and proposals (cont'd)	Committee work	Committee work	Plenary session Panel of high ranking officials and Ministers. Presentation of outcome of committee work	Continuation
Coffee/tea -break	Coffee/tea -break	Coffee/tea -break	Coffee/tea -break	Closing Ceremony
- Introduction of reference documents and proposals_(cont'd)	Committee work Demonstration of TBT (incl. CBT)**	Committee work Demonstration of ITU data bases	Panel discussion (cont'd) Editorial group	

Tentative proposal for time allocation. The time given for introduction of documents in plenary will be 10 - 15 minutes per document.

* HLC = High Level Committee

** TBT= Technology Based Training, CBT= Computer Based Training

Annex II

ANNOTATED AGENDA

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ANNOTATED AGENDA**Agenda item 1****Present state and development plans of telecommunications in the region**

In spite of the exceptional progress achieved by some of the countries in the Asia and Pacific Region, it is widely recognized that the telecommunication infrastructure is still inadequate in many of them where it still is mainly based on old technology and on networks which are unable to respond to the demands for new services and even for basic services in some countries. What is the status of telecommunication development in the countries of the region and what are their current plans for development? The AS-RDC should seek the answers to these questions which must be borne in mind when discussing the various aspects proposed under other points of the agenda. The overall objective of the conference is to analyze the causes and consequences of this gap and propose objectives, strategies and actions to improve the situation and for future developments in the region.

Information on the present state of telecommunication as well as on development trends and plans in the Region, based on information submitted for the "Yearbook of Common Carrier Telecommunication Statistics" and information to be collected by means of a survey carried out by the ITU in cooperation with the APT will provide inputs to the discussions on this agenda item. Other development partners, including concerned national, regional and international organizations, will also be invited to submit reference documents summarizing their activities and plans in the field of telecommunications.

The conference may wish to review the relevant documents with a view to making a preliminary analysis of the situation and the causes of shortcomings and to identifying the key-issues to be discussed in the conference.

The conference may also wish to examine the proposal, prepared by the AS-RDC Task Force¹, concerning the further development and maintenance of regional databases of indicators of telecommunication development (key figures).

Agenda item 2**Role of telecommunications in the socio-economic and cultural development;
Priorities for telecommunications development.**

The fundamental role of telecommunications in the socio-economic development and in particular in the ongoing process of regional and global integration needs to be clearly understood by decision makers at the highest level of the government, international development organizations, financial institutions, etc., so as to assign appropriate priority to investments in this sector.

A summary of the findings of studies made in this field prepared by the ITU will constitute a reference document for the discussions related to this agenda item.

However, further studies are needed, particularly in rural areas, to establish how development of telecommunications and subsequent changes in organizations and work processes affect socio-economic development, including human relations.

¹ A Task Force, composed of representatives of telecommunication organizations in the region and concerned regional and international organizations will be established by the ITU to assist in the preparation of the AS-RDC.

The conference may wish to examine the conclusions of available studies with a view to proposing priorities for telecommunication development and to identifying areas where further studies may be required.

Agenda item 3

Telecommunication development policies and strategies for the region

Telecommunications policies, regulations and legislation are currently being reviewed in many countries in the world. Many telecommunication administrations are being converted into autonomous corporations, with or without participation of the private sector and new service providers are entering the market.

Delegates are invited to review the Resolution 14- "Changing telecommunication environment" (Nice, 1989) **in advance** and consult with policy makers at the **highest** level, so as to be able to state their government's position as regards² :

- the location of authority,
- the relationships between operators and government,
- regulatory functions,
- relationships between regulatory agencies and government,
- relations with judicial system

Delegates are also invited to consider the "Singapore Declaration" adopted by the Ministerial Meeting organized by APT (Singapore, June 1992).

Information about restructuring of the telecommunication sector in some ITU member countries and a case study will provide further reference material for the discussions under this agenda item. Also user groups' participation in policy development and the consequences of the emerging framework for trade of services of the GATT should be considered in this context. Ways and means of transfer of technology, including cooperation in Research and Development, as well as opportunities for cooperation in local manufacturing may also be discussed under this agenda item.

The conference may wish to consider the various options available, bearing in mind the consequences of the changing environment and with due regard to the special conditions of the less advanced countries in the region. It is further invited to examine the relevant proposals prepared by the AS-RDC Task Force, with a view to preparing Resolutions and Recommendations for a course of action, considering also the role of the ITU in providing advice on policy options , etc. (as spelled out in Article 14 of the ITU Constitution), with a view to preparing guidelines for the BDT in this respect.

Agenda Item 4

Investment considerations and financing strategies

Information collected by the ITU about telecommunications investment in the region, sources of financing, procedures and appropriate funding mechanisms will provide reference material for the discussions related to this agenda item. Representatives of development banks will also will be invited to present their priorities, policies and procedures.

² Reference is here made to the options shown in Table 1E on page 37 of the document "the changing telecommunication environment" prepared by the ITU advisory group on Telecommunication Policy. Other sections of this document which are of relevance in this context are, for example, Section 6 "Establishing Telecommunication Policies and Regulations (page 14) and Section 2.2 - "Sector Legislation, Policy and Regulations" (page 15)

The overview of the findings of studies undertaken on the economic aspects of telecommunications mentioned under agenda item 3 above constitutes also an input to the discussions related to this agenda item.

Whilst bilateral and multilateral assistance is important to the developing countries of the region, the capital needs of telecommunications development and industries are now so great that there is a need to draw on a wider range of financial sources. This means mobilizing both public and private sector capital, as equity and by means of prudent borrowing.

The conference may wish to analyze the needs for investments in the telecommunication sector, identify sources of financing as well as funding mechanisms, and establish targets and goals for investment levels. It may furthermore consider opportunities for regional cooperation and joint ventures which could attract additional financing and, in this context, examine the relevant proposal prepared by the AS-RDC Task Force with a view to preparing Resolutions and Recommendations regarding such cooperation..

Finally, the conference is invited to consider the need for the regional and international coordination of telecommunication investments and to define the roles of the ITU, as well as of participating countries and other development partners.

Agenda item 5 Organization and Management issues

The adoption of the sector's policies, regulations and legislation to the changing telecommunication environment may be one condition for real improvement of management to take place. These changes naturally introduce new requirements for a more market-oriented, commercial approach to the management of telecommunication enterprises.

A representative from an advanced Administration will be invited to produce a reference document describing the efforts made to change the organization and improve the management in their organization, whilst the ITU will collect and present information on ongoing and planned technical cooperation activities in this area.

The conference may wish to identify common management problems with a view to preparing Recommendations for action that would lead to the improved management of telecommunication enterprises. In particular the conference may wish to consider what could be done at the regional level to improve management, and prepare Recommendations for programmes to be undertaken. It is furthermore invited to consider the role of the ITU in this context in order to provide guidelines for the BDT.

Recommendations prepared with reference to this agenda item may, for example, refer to regional or international cooperation in the development of:

- models for organizational development;
- guidelines for the improvement management;
- management information systems and other management tools.

Management obviously includes *human resources management*. Moreover, management development is clearly one of the most urgent forms of assistance required by the region. However, bearing in mind the importance of human resources in the process of change, a separate agenda item has been devoted to management and development of human resources (item 7).

Agenda item 6

Network harmonization and new services

With reference to this agenda item the conference may wish to consider the need for standardization and coordination of network development, review the goals and objectives set by the various international and regional organizations and by individual countries, as well as the forecasts of needs and resources required to meet these goals. In particular, the activities and plans of concerned regional organizations and ways of improving this cooperation could be discussed, as well as issues relating to inter-regional harmonization.

The ITU will provide a summary of its activities and plans in the fields of standardization and radiocommunications.

It is proposed that one task of the conference under this agenda item should be to review the objectives proposed by various regional organizations and in other fora as regards the harmonization and introduction of new services, with a view to preparing recommendations on how to ensure interconnectivity and how to define goals and targets in terms of new services to be provided, etc., at the level of groups of countries or sub-regions at a similar stage of development and with a similar size of network. Special consideration should be given to development of rural telecommunications.

Furthermore, the conference may wish to consider proposals for action to achieve these targets as well as options for implementing them, with a view to preparing recommendations on the improvement of networks and services.

Agenda item 7

Management and development of human resources

The improved management and development of human resources are essential conditions for the organizational development that is currently taking place in the Asia and Pacific region with the introduction of new technologies, the restructuring of the sector, the increased competition and the efforts of integration. International, regional and bilateral cooperation is required to share both the experience and the available expertise and to reduce the high cost of training and other tools for performance improvement.

The ITU will submit a reference document summarizing the activities undertaken in this field, including a critical analysis of their impact and proposals for action and the AS-RDC will prepare a proposal for improving the cooperation in this field.

The conference may wish to analyze typical performance problems and examine possible solutions, with a view to preparing Recommendations for action aimed at improving circumstances and reducing the cost of training. It is also invited to discuss ways and means of improving transfer of know-how from industrialized countries to developin countries as well as between developing countries in the region.

In this context, the conference may wish to review existing mechanisms for transfer of know-how and international cooperation in the field of human resources development, such as the ITU International Sharing System (ISS), examine the relevant proposals prepared by the AS-RDC Task Force and prepare Recommendations on how to further improve such systems and make better use of them. The conference may also wish to review the performance indicators, key figures and other standards proposed within the ITU/ISS.

Resolutions prepared with reference to this agenda item may refer to actions to be taken at the national level (recruitment and selection policies, career development, salaries and incentives, etc.). The conference may also wish to identify standard key figures to be used in human resources management and make proposals for regional and international cooperation for the development of information systems and other tools for manpower planning and human resources management, for the development of multinational training centres and for the use of institutions outside the telecommunication sector (e.g., for training in management, administration, commercial aspects, marketing, computer skills, etc.).

Agenda item 8

International cooperation

ITU will provide a summary of its technical cooperation activities in the region in the past decade and plans for future programmes.

The conference may wish to review the proposals made by the AS-RDC Task Force with a view to identifying actions where technical cooperation is required and the potential partners in such cooperation. It may furthermore wish to discuss ways and means of strengthening regional coordination as well as cooperation with adjacent regions.

The Conference is invited to identify actions required to further promote cooperation among countries in the region and coordination among other development partners and donors and to define the roles of (sub-)regional organizations and the ITU in this context. The conference is further invited to consider alternative modalities for cooperation with a view to developing Recommendations on the implementation of innovative approaches and strategies.

The Resolutions prepared with reference to this agenda item should provide guidelines for the BDT and other development partners, e.g. a definition of the ITU's role as a clearing-house for information on needs and activities of technical cooperation in the telecommunication sector. Thus, they could include proposals for programmes and projects for which the assistance of the ITU and other development partners are sought.

Agenda item 9

Modalities for monitoring, evaluation and progress review

Many Resolutions and Recommendations adopted by international conferences never get beyond the stage of declaration of intent. While such declarations of intent or objectives are necessary, they are clearly insufficient for change to take place.

A further condition for Resolutions and such like to be put into effect is delegates' commitment thereto. It is hoped that the way in which the AS-RDC has been organized will enable all delegates to participate actively in the decision-making process and that they will therefore feel committed to implementing the Resolutions and Recommendations they have adopted.

However, to ensure that the Resolutions, Recommendations and action programmes adopted are actually implemented, periodic reviews and progress reports are required; each Committee will therefore be requested to submit proposals for how to monitor progress of actions proposed for consideration under this agenda item and the Committee A may wish to consider proposals for a mechanism for coordination and follow-up of the Resolutions adopted by the AS-RDC.

The mechanism to be established for follow-up could also be used to involve representatives of the region in the preparation of the next Conference.

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Annex III

OPENING AND CLOSING STATEMENTS*

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**Opening Address
by Mr. Arnold Ph. Djiwatampu
Director, BDT
Singapore, 11 May 1993**

Your Excellencies,
Distinguished Guests and Participants,
Ladies and Gentlemen,

As the first elected Director of the BDT and coming from this region, I am pleased and honoured to be able to address you today during this opening ceremony of the first Regional Telecommunication Development Conference for Asia and the Pacific - a vast region covering over half of the globe, with 58 percent of the world's population. Seen from another angle, however, this figure brings to light a different picture, one in which a mere 17 percent of the world's telephones appears.

The region has a wide range of development, varying from the least developed countries (LDCs) where the telephone density is less than 0.1 percent, to the most developed ones where a 50 percent density prevails. In the rural areas of some developing countries, that figure even drops below one hundredth of a percent.

Using United Nations definitions, there are currently 48 LDCs in the world, 29 in Africa, 13 in Asia-Pacific, five in the Arab States and one in the Americas. It is the central objective of the ITU/BDT to lend special assistance to the LDCs as they form the weakest link in the global chain which has to be strengthened immediately if a truly harmonious global network is indeed what we seek.

It is in the interest of all that we assist the developing countries, especially the LDCs, for not only will the direct beneficiaries draw advantage from this, but the donors, the industrialized world, the manufacturers and the private sector also, as each and everyone plays his role in the huge newly-created markets.

The ITU/BDT is confident that with the potential resources available in the region (and I speak here of the manpower, the expertise and other facilities), this conference could be the event at which we resolve to stopgap urgent requirements on the one hand, and prepare for future challenges on the other, seeing that all of us here know how much information is essential to the economic and national development of countries. The ITU/BDT stands ready to cooperate with all its Members as well as with the regional organizations and the private sector so as to assist in strengthening and improving telecommunication services nationally and regionally. From my observations of the preparations undertaken by the AS-RDC Task Force, I am most optimistic that the conference will be successful, and even more to the point, that its follow-up activities will exceed our expectations.

At least four preparatory meetings with Administrations and in cooperation with the APT (the Asia Pacific Telecommunity), INMARSAT and others, have been held since last year, and it appears that an enormous, albeit interesting, task lies ahead for the ITU, the APT, Administrations, operators, financial institutions and last, but certainly not least, the industries (services as well as manufacturing).

Four main activity areas on which we propose to concentrate are:

- (1) Policy and regulatory solutions for the various levels of development in each country or group of countries, as we understand that a clear national regulatory mechanism will attract the interest and trust of domestic as well as foreign investors;

- (2) Standardization and network development, particularly since the ITU Helsinki Standardization Conference of last February placed much hope that the BDT would establish information meetings for developing countries in order to understand the importance of standards. For my part I believe that global standards under ITU coordination will be the best means for developing a better global network;
- (3) Frequency spectrum management so that Administrations are well equipped to manage their scarce resources nationally, and coordinate harmoniously with their neighbours with a view to anticipating the future spectrum requirements of new technologies and such like;
- (4) Human resources development in which the ITU has already invested heavily to enable qualified managers and engineers to ensure greater and accelerated development for the benefit of the countries and industry alike.

From the preparatory projects submitted for approval, ranging from between one and five years, it is clear that approximately 20 to 30 million US dollars are required. Though this is by no means a negligible sum, its magnitude should be seen alongside the requirements for the next 20 years, that is to say 500 million telephones currently valued at 750.1 billion dollars.

Your Excellencies,
Distinguished Guests and Participants,
Ladies and Gentlemen,

In closing, allow me to thank our host the Government of Singapore, the Telecommunication Authority of Singapore, Singapore Telecom, and all those who have so unsparingly assisted us to enable the AS-RDC to be held in such a pleasant and inspiring environment. I look forward to constructive deliberations and wish you all success in your endeavour.

Thank you for your attention.

**Opening address
by Mr. Tan Guong Ching,
Chairman, Telecommunication Authority of Singapore
Singapore, 11 May 1993**

Mr Mah Bow Tan,
Minister for Communications
Of the Republic of Singapore,

Your Excellencies
Distinguished Guests
Ladies and Gentlemen

On behalf of the Telecommunication Authority of Singapore, may I extend a very warm welcome to all delegates to this first Regional Telecommunication Development Conference for Asia and the Pacific. We are indeed very honoured to have the opportunity to host this Conference in Singapore.

Let me first thank the Telecommunication Development Bureau of the ITU for agreeing to organise this Conference here in Singapore. The Conference could not have been held at a better time. The region is currently experiencing strong economic growth. Business prospects are excellent, with the regional telecommunication market expected to grow in excess of 7% per annum for the next decade. Participants at the Conference will therefore be able to discuss the best ways of meeting the demand, in one of the fastest growing telecommunication markets in the world.

Besides its vast potential, a notable feature of the telecommunication market in the Asia-Pacific is its wide spectrum in terms of technological sophistication. The developed and newly-industrialising economies are already aspiring to Broadband-ISDN, to Personal Communication Systems and to intelligent and fibre-optic networks. On the other hand, many of the developing countries in the region are still catching up on basic telephone services. While this may present an interesting range of opportunities for those in the industry, it also provides a challenge for all of us, to help bridge the technological gap and to ensure a smooth and co-ordinated expansion of the industry.

In this regard, I am pleased to note the leading role played by the ITU. Through conferences such as this and its many other initiatives, the ITU is helping developing countries to improve their technical capabilities and to upgrade their telecommunication services. I strongly support the ITU in its endeavours as I believe that what it is doing will go a long way to help developing countries to enhance their economic competitiveness and hence to attract foreign investments. Indeed, it is no secret that a good telecommunication infrastructure is now a necessary pre-requisite for a successful industrialisation programme. Many foreign industrialists will not consider investing in a country unless they are certain that they can communicate speedily with their new subsidiaries there.

On its part, the hosting of this Conference signifies the importance that the Telecommunication Authority of Singapore places on international co-operation. We firmly believe that a high degree of co-operation is needed if we are to achieve a smooth expansion of the world's telecommunication infrastructure. Without the transfer of technology, without agreements on the technical standards for equipment, or on the use of limited satellite orbital positions, the world would not have made such great progress in telecommunications.

It is through conferences such as this, that we are able to bring together all the key players in the industry. They include high-level government representatives, regional and international telecommunication organisations, multilateral and bilateral funding agencies, manufacturers and consultants. I have no doubt that with such a distinguished gathering, the deliberations at this Conference will lead to the further refinement of the goals, policies and strategies of our future telecommunication developments.

Let me therefore once again, congratulate the Telecommunication Development Bureau of the ITU for organising the Regional Telecommunication Development Conference for the Asia-Pacific. I would like to urge all participants to make full use of the Conference to tap each others' experience and knowledge and to come up with even better and bolder ways to improve the industry.

Finally, let me wish the Conference every success, and to all participants a fruitful and enjoyable week ahead.

Thank you.

**Opening Address
by Dr. Pekka Tarjanne
Secretary-General of ITU
Singapore, 11 May 1993**

Excellencies,
Ladies and Gentlemen,
Dear friends,

The Conference starting today is the last (though certainly not the least) of the first global cycle of regional telecommunication development conferences.

I am honoured to welcome you to the beautiful city of Singapore, where dynamic state-of-the-art technologies blend harmoniously with graceful Asian traditional culture and hospitality. I am indeed indebted to the Government and to the Telecommunication Authority of Singapore for having provided such a beautiful setting, demonstrating that our hosts have spared no effort in offering the best facilities for such an important event.

The fact that the Regional Development Conference for Asia and the Pacific is taking place in Singapore prompts my first remark, which is that this part of the world, the Pacific Rim, offers concrete evidence that the expansion of telecommunication capabilities has gone hand in hand with explosive economic growth.

The indirect benefits of telecommunications, a subject of many weighty studies and theoretical expositions by eminent researchers, actually exist here for all to see.

The vast manufacturing potential, the natural inclination towards trade and the availability of advanced telecommunication facilities are the ingredients of the economic prosperity of the Pacific Rim, which is the home of the world's six fastest growing telephone companies.

If such a success story could be applied to the whole of Asia and the Pacific, there would be little or no reason for us to be meeting here today. However, as we all know, striking disparities do exist in this region, and that is the essential reason why so many policy-makers and responsible officials have come to analyse and discuss how to bridge the gap by mobilizing international solidarity and cooperation within the framework of the ITU.

In many countries and for many people, access to telecommunication and information is far from satisfactory. The negative consequences are easy to imagine, in terms of social and economic impairment. Thus we should not forget that over and above their well recognized business supporting function, telecommunications should be given credit and consideration for their social and developmental function.

Article 1 of the ITU Constitution states inter alia that one of the Union's purposes is "to promote the extension of the benefits of the new telecommunication technologies to all the world's inhabitants." In order to do so, the ITU must play a meaningful catalytic and coordinating role so as to ensure that the right of single individuals to communicate is secured through the correct combination of political will and international cooperation (including mobilization of financial resources and adequate technology).

In such a context, the Regional Telecommunication Development Conference for Asia and the Pacific can be seen as the ideal forum to analyse the present situation, determine priorities and define concrete lines of action designed to alleviate the disparities existing in the region.

Excellencies,
Ladies and Gentlemen,

Allow me to say a few words on how this Conference has been organized in order to fulfil such a challenging mandate. An ad hoc Task Force which met three times, concentrating on the most important issues, has prepared proposals for consideration by the Conference. These proposals will be dealt with by three Committees which will focus on the main areas where Members' involvement is needed in order to ensure accelerated telecommunications development.

- COM A: Policies, strategies and financing considerations
- COM B: Network harmonization, standards (including considerations on radio spectrum management)
- COM C: Human resources development and management

The Conference is expected to produce a set of realistic medium-term objectives together with action plans for achieving them. This means that the adoption of a resolution or a recommendation here in Singapore will entail the deployment of a certain amount of effort and resources by all partners. I do believe that the commitments made here during the next few days will be fulfilled. The ITU, will obviously assist its Members in all possible ways; however, it would be able to do very little without your full collaboration and clear guidance as to the right path to follow.

Our Conference has all the ingredients of success, including high-level participation, splendid premises and excellent facilities. It also benefits from the experience gained in organizing similar events in the past. As I remarked earlier, it is the last of the cycle of regional development conferences and as such it constitutes a natural bridge between that cycle and the forthcoming World Telecommunication Development Conference to be held in Buenos Aires (Argentina) from 21 to 29 March 1994, which will define global objectives and establish an action plan for worldwide telecommunication development activities to be carried out by the ITU Development Sector. To that end, the Buenos Aires Conference will also establish a calendar for future development conferences and set up development study groups to deal with thematic developmental issues as well as to ensure the continuity of GAS activities which have proven very beneficial for developing countries.

As for today's agenda, my closing comment is that the success of this Conference as a tool for promoting development will be measured by the number of ideas and tasks we will take home with us from Singapore.

I wish you a pleasant stay and fruitful deliberations.

Thank you.

**Opening Speech
by His Excellency Mr. Mah Bow Tan
Minister for Communications
Singapore, 11 May 1993**

Good Morning

**Distinguished Guests
Ladies & Gentlemen**

I am very pleased to be here this morning for the opening of the Asia-Pacific Regional Telecommunication Development Conference. On behalf of Singapore, I would like to extend a warm welcome to all delegates.

Growth and Regional Cooperation

The telecommunication industry worldwide has seen rapid and enormous growth. This is especially true in the countries within the Asia-Pacific region, which have experienced some of the fastest development in telecommunication infrastructure. Recent trends towards liberalisation have helped to spur the industry towards even greater heights.

The rapid development of telecommunications in the Asia Pacific would not have been possible without the cooperation and coordinated efforts of countries in the region. It is crucial for countries in the Asia Pacific region to develop and harmonise their telecommunication infrastructures and standards.

Towards this end, the efforts of the International Telecommunication Union (ITU) in organising this conference are commendable. ITU plays an important catalytic role in coordinating the development of telecommunications in many countries. It has also taken initiatives to give greater attention to the needs of developing countries as reflected in this conference. In so doing, it has helped to narrow the "telecommunications gap" between developing and developed countries. By bringing together policy makers, experts and operators from the telecommunications sector, this conference provides a unique opportunity for us to discuss strategies towards enhancing cooperation, future growth and development of the telecommunications industry in the Asia-Pacific region.

Telecommunications In Singapore

In Singapore, the development of telecommunication facilities and services has always been an integral part of our national strategy for economic development. We realise that the building of an efficient and modern telecommunication infrastructure plays a vital role in ensuring that Singapore remains an international business hub. It is our policy to ensure that the telecommunications industry in Singapore remains efficient and innovative, and that quality telecommunication services are provided to all businesses and households at competitive prices.

Singapore also recognises the importance of bilateral, regional and international cooperation in telecommunications. Singapore Telecom has ongoing joint ventures with many other countries in the provision of both telecommunication infrastructure and services. One example is the joint venture in submarine cable networks which link Singapore globally to countries in South East Asia, Western Europe, Middle East and other countries in the Asia-Pacific. Another example is in the area of radio frequency coordination, where Singapore participates actively in the Frequency Assignment Committee of Singapore, Malaysia and Brunei Darussalam (FACSMAB) as well as the ASEAN Radio Frequency Coordination Committee towards the planning and coordination of frequency spectrum usage in the region. Singapore Telecom is also cooperating with other regional telecommunication companies and administrations in Sri Lanka, Thailand and the Philippines in the provision of various telecommunication services.

Through such cooperation and joint ventures, we are glad to have the opportunity to learn from other countries and to share our experience and expertise. We are also keen to cooperate with other telecommunication administrations and companies in the area of research and development (R&D). Singapore's compact size and developed infrastructure network provides an excellent base and test-bed for telecommunication companies to carry out R&D work.

Conclusion

With the trend towards globalisation, telecommunication organisations are now looking beyond their domestic markets to expand their businesses. The changing world environment has made the telecommunication industry vibrant and innovative, and this poses a challenge to us to remain competitive.

This conference is therefore timely and serves as an excellent platform for us to exchange views, experiences and strategies on future development of the telecommunications industry in the region. I am confident that we in the Asia Pacific can together propel development in telecommunications to even greater heights.

On this note, may I wish all delegates an enjoyable and fruitful conference as well as an enjoyable stay in Singapore.

**Closing address
by Dr. Pekka TARJANNE
Secretary-General of the ITU
Singapore, 15 May 1993**

Mr Chairman of our Conference,
Excellencies, Ladies and Gentlemen,
Dear Friends

The first Regional Telecommunication Development Conference for Asia and the Pacific is coming to an end.

The Conference has adopted 15 Resolutions and 4 Recommendations – an excellent working ground for the next months and years. I'm happy to be able to state that this output is clearly action-oriented and that the totality of the Resolutions can be considered to be a balanced action plan.

Of course, we all have our favorites whether favorite companions, favorite cuisine or favorite resolutions – for some it is the strategies, the policies, the coordination – for others, some specific concrete projects such as the regional propagation measurement campaign or broadcasting technology transfer. For me, my favorite is the follow-up!

The Conference will not be worth much unless we ensure that the follow-up mechanisms are efficient and able to produce real results – concrete telecommunications development for the people of this region. I have an appeal to all of you here today – to 39 countries, 14 regional and international organizations and more than 250 participants including many from private companies.

Please do not wait for others to go ahead and implement the results. Let us compete in showing a good example, let us push each other to make sure that all of us can look back at this exercise with satisfaction and pride.

In the ministerial panel yesterday, it was pointed out that the next – the second – Regional Telecommunication Development Conference for Asia and the Pacific should be prepared and organized in a somewhat different way. I certainly agree.

With the first cycle ending now and leading to the first World Telecommunication Development Conference in Buenos Aires in March 1994, we have quite a different task ahead for the next cycle 1994-98 and in particular for the second Regional Telecommunication Development Conference for Asia and the Pacific, probably in early 1997! Potential host countries should start thinking seriously about this, remembering that according to relevant ITU decisions development conferences should be, as this one has been, synchronized with the corresponding Asia Telecom events, i.e. with Asia Telecom 97 Exhibition and its Forum. I look ahead with great enthusiasm and optimism. Let us decide already now to make 97 an even greater success than 93!

Let me conclude by expressing my warmest thanks to everybody, all of you – in particular our hosts: the people of Singapore, Singapore Telecom, the Telecommunication Authority of Singapore and the Government of Singapore. You, Mr Chairman, symbolize for us all of Singapore – you have led us in a wonderful and efficient way. That is why I am proud to offer you a token of our appreciation: the 125th commemorative silver medal of the ITU!

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**Closing address
by Mr. Arnold Ph. Djiwatampu
Director, BDT
Singapore, 15 May 1993**

Mr. Chairman,
Excellencies,
Distinguished Representatives,
Ladies and Gentlemen,

We have now come to the end of a very busy week, a week during which we have studied various areas of priorities for the development of telecommunications in the Asia-Pacific Region. The effective participation of representatives from the countries of the region as well as regional and other international organizations has made possible the holding of very frank and open discussions on the problems being faced as well as the identification of possible solutions to those problems.

The resolutions and recommendations resulting from this AS-RDC, if implemented, will have a far-reaching and positive impact on the telecommunications development of the region, nationally and regionally. These resolutions and recommendations touch upon providing our Members with a good understanding of the required policy and regulatory environment for a conducive telecommunication investment environment. The conference has also requested the BDT to proceed with working groups on standardization, on frequency management seminars, and on intensifying human resources development efforts. The follow-up to these resolutions, be it activities in the working groups, seminars or national projects, will be very challenging and interesting to meet these requests.

I am sure that these requests are truly needed by our Members and this is why the BDT will spare no effort to implement the various resolutions and recommendations and look for the necessary resources. We are optimistic that we will secure these resources because the resources are there for the asking. To be sure, multilateral resources from the UNDP, the World Bank, to name only two, are still very much needed, particularly for the LDCs. Nonetheless, resources from the private sector, whether in kind in the form of expertise and support to seminars, or in cash through voluntary contributions, will be intensified. And it is my conviction that each and every private contribution will see returns beyond its expectations. Of course, if you are skeptical, there is only one way of being sure: by trying. If you don't, unlike those who will have, you most certainly will not reap the benefits of what you have sown.

The BDT is serious in its desire to seek cooperation with the donors. We have the capability to provide you with the business information you need and we have the trust of our Members. From your collaboration with us, you will likewise gain the trust of our Members.

Our Asia-Pacific Regional Office in Bangkok, headed by Mr. Graham Davey and assisted by Mr. Ismet Hamiti, the office in Jakarta with Dr. Michael Calvano and Mr. John Budden, and the office in Kathmandu with Dr. Shailendra Hajela and Mr. Kanti Gunawardana are, I am sure, going to be very busy. The BDT staff at Headquarters, for its part, will provide them with full support, with even better and more effective mechanisms. On the other hand, we would ask the beneficiaries, the administrations, the operators, etc., to react quickly, to reply immediately, because time really is money not only in terms of reducing overhead costs but also in terms of seizing each opportunity as it presents itself. The opportunities that are before us today will simply not present themselves again. And this applies also to the donors.

Your Excellencies,
Distinguished Participants,
Ladies and Gentlemen,
Colleagues,

Finally, I am sure that you all wish to join me in extending our sincere appreciation to our hosts, the Government of the Republic of Singapore, the Telecommunication Authority of Singapore, Singapore Telecom and others who, together, have made possible this first Regional Telecommunication Development Conference for Asia and the Pacific in a very warm and hospitable environment. My sincere thanks go also to the Chairman, Mr. Ng Hong Yew, whom I would like to congratulate, on your behalf also, as he is the one who led the conference to a safe and timely end, as well as the Chairmen, Vice-Chairmen and Rapporteurs of the conference and committees.

May I also thank you, the participants, for you have really participated and contributed to the success of this first AS-RDC, and all the ITU staff who have worked so splendidly.

I wish you luck in your work, and God speed.

Thank you.

**Closing remarks
by Mr. Hong Yew Ng
Chairman of the Conference
Singapore, 15 May 1993**

Your Excellencies
Dr Pekka Tarjanne, Secretary-General, ITU
Mr Arnold Djiwatampu, Director, BDT
Distinguished delegates
Ladies and gentlemen

All too soon, the time has come to deliver my closing remarks to you, honourable delegates of this Conference. It has certainly been a great pleasure to serve you as Chairman of this Conference and to show Singapore's support for and solidarity with the ITU and with our neighbours in the region by hosting this Conference.

The deliberations of this Conference over the last five days have been on matters of profound importance to the development of telecommunications in the Asia-Pacific and I join with my colleagues in the region to express the hope that the results and repercussions of these deliberations will be equally profoundly felt.

If I may, I would like to express a few thoughts on the issues which have come to light this week.

Firstly, it has been emphasized several times this week that the needs of this region are not only immense, but also immensely varied. Yet, the resources to meet these needs - be they financial resources, technical expertise or training facilities and materials - are in short supply.

Now more than ever, this means that the ITU and other international, regional and subregional organisations concerned with telecommunications development in this region must co-operate with one another fully so as to avoid any unnecessary duplication of work.

The regional co-ordination mechanism established by this conference will therefore have a very important task to perform. Huge needs coupled with very limited resources make co-ordination efforts of utmost importance for these organisations, if they are to truly serve the needs of their members.

Another issue which has been discussed at some length has been telecommunications policies and strategies. I am pleased to note that the conference was able to endorse a number of common directions in which the Asia-Pacific region hopes to proceed. That we were able to meet on common ground in this way is indeed a good indication of the warm and cordial relations which Member countries of the region enjoy.

Resolutions have been passed dealing with issues such as maritime radiocommunications, the promotion of standardisation, human resource management and development and the restructuring of the telecommunications sector.

I also note that this Conference has seen a wide representation of interests voiced. I am happy that general agreement has been reached on a number of resolutions and recommendations to advance the future development of telecommunications in the region. I am sure that the successful implementation of these resolutions will lead to further development of telecommunications for countries in the Asia-Pacific and to the improvement of the quality of life for all people in the region.

In closing, I hope that your stay in Singapore has been an enjoyable and comfortable one. It has been a great pleasure to welcome all of you to our country.

Thank you.

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Annex IV

LIST OF PARTICIPANTS

PAGE INTENTIONALLY LEFT BLANK

PAGE LAISSEE EN BLANC INTENTIONNELLEMENT

ADMINISTRATIONS

Afghanistan (Islamic State of)

Mr. Ali AHMAD (D)
Vice-President
Ministry of Communications
KABUL
Tel: +93 22282

Argentine Republic

Ms. Luz REMEDI (D)
Licenciada en Historia y Comunicaciones
Comisión Nacional de Telecomunicaciones
Sarmiento 151 - Piso 4
1000 BUENOS AIRES
Tel: +54 1 3121309
Fax: +54 1 3124511

Mr. Luis Alberto ROMERO (D)
Engineer
Comisión Nacional de Telecomunicaciones
Sarmiento 151 - Piso 4
1000 BUENOS AIRES
Tel: +54 1 3137144
Fax: +54 1 3139134

Mr. Pedro Antonio SEQUEIRA (D)
Engineer
Comisión Nacional de Telecomunicaciones
Sarmiento 151- Piso 4
1000 BUENOS AIRES
Tel: +54 1 3137144
Fax: +54 1 3139134

Australia

Mr. James BARR (C)
Assistant Secretary, International Policy Branch
Department of Transport and Communications
Telecommunications Policy Division - GPO Box 594
CANBERRA A.C.T 2601
Tel: +61 6 2746748
Fax: +61 6 2747646

Mr. Neil CRANE (D)
General Manager, Technical Support
TELSTRA
GPO Box 7000
SYDNEY NSW 2001
Tel: 02-2875000
Fax: 02-2875617

Mr. John MALCOLM (D)
Regional Manager of Indochina
TELSTRA
GPO Box 7000
SYDNEY NSW 2001
Tel: 02-2875000
Fax: 02-2875617

Mr. Robert SCOBLE (D)
Regional Representative
TELSTRA
7th floor, IBM Building
BANGKOK 104000
Tel: +66 2 2730663
Fax: +66 2 2730662

Mr. Richard SMITH (D)
Director, Asia-Pacific
Department of Transport and Communications
GPO Box 594
CANBERRA CITY ACT 2601
Tel: 06-2746560
Fax: 06-2747646

Bangladesh (People's Republic of)

Mr. Fazlur RAHMAN (C)
Chairman
Bangladesh Telegraph and Telephone Board
Telejogajog Bhaban - 36/1, Mymensing Road
DHAKA 1000
Tel: +880 2 831500/407800
Fax: +880 2 832577/833003

Mr. Abdus Saber SIDDIQUI (D)
Resident/Senior Engineer, Radio Bangladesh
National Broadcasting Authority
DHAKA
Tel: +880 2 402304

Mr. Abdul WAHED (D)
Additional Chief Engineering, Engineering Planning & Development
Bangladesh Television, National Broadcasting Authority of Bangladesh
121 Kazi Nazrul Islam Road - Shahbag Avenue
DHAKA 1000
Tel: +880 2 862263
Fax: +880 2 832927

Bhutan (Kingdom of)

Mr. Sangey TENZIN (D)
Superintendent Engineer
Department of Telecommunications
THIMPHU

LIST OF PARTICIPANTS

Brunei Darussalam

H.E. Mr. Dato Haji Zakaria Haji SULAIMAN (C)

Minister of Communications
Ministry of Communications
Bandar Seri Begawan 1150
BRUNEI DARUSSALAM
Tel: +673 2 242526
Fax: +673 2 220127

H.E. Mr. DATO PADUKA HJ MOHD YUNOS (CA)

High Commissioner
High Commission of Brunei Darussalam
SINGAPORE

Mr. Pg Sazalee BIN PENGIRAN ZOHARI (D)

Senior Telecom Engineer (Operation & Maintenance)
Telecommunications Department
Ministry of Communications Building - Jalan Berakas 2051
BRUNEI DARUSSALAM
Tel: +673 2 242 324
Fax: +673 2 235 585

Mr. Peter C.V. CHIN (D)

Senior Telecom Engineer (Network Operations)
Telecommunications Department
Ministry of Communications Building - Jalan Berakas 2051
BRUNEI DARUSSALAM
Tel: +673 2 242 324
Fax: +673 2 235 585

Mr. DATO PADUKA HAJI ABDULLAH ABU BAKAR (D)

Director
Telecommunications Department
Ministry of Communications Building - Jalan Berakas 2051
BRUNEI DARUSSALAM
Tel: +673 2 242 324
Fax: +673 2 220 445

Mr. Hong Beng LIM (D)

Acting Senior Telecom Executive Engineer (Corporate Planning)
Telecommunications Department
Ministry of Communications Building - Jalan Berakas 2051
BRUNEI DARUSSALAM
Tel: +673 2 242 324
Fax: +673 2 235 585

Canada

Mr. Victor BANNING (D)

Manager, Services Analysis
Communications Canada
300 Slater Street
OTTAWA ONT. K1A0CS
Tel: +1 613 998 4333
Fax: +1 613 952 0567

Mr. Sushil Kumar BHATTACHARYYA (D)

Associate Director
BELL Canada - Department of Communications
Room 2290 - 160 Elgin Street
OTTAWA, ONTARIO
Tel: +1 613 781 0047
Fax: +1 613 563 3352

Ms. Janis DORAN (D)

Head, Multilateral Telecommunications
Department of Communications - Government of Canada
300, Slater Street - Room 1702
OTTAWA, ONTARIO K1A 0C8
Tel: +1 613 990 4241
Fax: +1 613 952 5313

Mr. Ken YOKOYAMA (D)

Trade Commissioner
Dept. of External Affairs (Canada)
125 Sussex Drive, Ottawa
ONTARIO K1A 0G2
Tel: +1 613 996-1425
Fax: +1 613 944 0050

China (People's Republic of)

H.E. Mr. Xianzu YANG (C)

Vice-Minister
Ministry of Posts and Telecommunications
13, West Chang An Ave.
BEIJING 100804
Fax: +861 6011370

Mr. Cai LIU (D)

Deputy Director
Ministry of Posts and Telecommunications
13, West Chang An Ave.
BEIJING 100804
Tel: +861 6024130
Fax: +861 6011370

Mr. Wenchu QU (D)

Division Chief
Ministry of Posts and Telecommunications
13, West Chang An Ave.
BEIJING 100804
Tel: +861 6021330
Fax: +861 6011370

Mr. Benji SUN (D)

Deputy Division Chief
Ministry of Posts and Telecommunications
13, West Chang An Ave.
BEIJING 100804
Tel: +861 8320520
Fax: +861 6011370

LIST OF PARTICIPANTS

China (People's Republic of)

Mr. Zhanning WANG (D)

Deputy Director

Ministry of Posts and Telecommunications

13, West Chang An Ave.

BEIJING 100804

Tel: +861 6020618

Fax: +861 6011370

Ms. Xuemei ZENG (D)

Official

Ministry of Posts and Telecommunications

13, West Chang An Ave.

BEIJING 100804

Tel: +861 6037609

Fax: +861 6011370

Mr. Jixin ZHOU (D)

Deputy Director

Ministry of Posts and Telecommunications

13, West Chang An Ave.

BEIJING 100804

Tel: +861 6011249

Fax: +861 6011370

Mr. Fuzeng GAO (O)

Director, Institute of Broadcasting Science

Ministry of Radio, Film & TV

BEIJING

Tel: +86 1 6092098

Fax: +86 1 2913757

Mr. Zhenzhong PAN (O)

Engineer-in-Chief, Institute of Standardization & Planning

Ministry of Radio, Film & TV

BEIJING

Tel: +86 1 6092923

Fax: +86 1 6092176

Mr. Guanghan ZHANG (O)

Head of Information Service, Institute of Broadcasting Science

Ministry of Radio, Film & TV

BEIJING

Tel: +86 1 6092098

Fax: +86 1 2913757

Democratic People's Republic - of Korea

H.E. Mr. CHANG BONG JIN (C)

Vice-Minister of Posts and Telecommunications

Department of International Relations

Ministry of Posts & Telecommunications - Central District

PYONGYANG

Tel: +850 2 36344

Fax: +850 2 814418

Mr. Yong Chun CHA (D)

Official for Broadcasting (Sound), International Department

Ministry of Posts & Telecommunications

Central District

PYONGYANG

Tel: +850 2 36344

Fiji (Republic of)

Mr. Berenado VUNIBOBO (C)

Executive Chairman of Board of Directors

FIJI Posts & Telecommunications Limited

P.O. Box 40

SUVA

Tel: +679 210605

Fax: +679 305595

Mr. Mohammed FAROUK (D)

Manager Engineering

FIJI International Telecoms. Ltd.

P.O. Box 59

SUVA

Tel: +679 312933

Fax: +679 300750

Mr. Barma NAND (D)

Manager, Telecom Network

FIJI Posts & Telecommunications Limited

P.O. Box 603

LAUTOKA

Tel: +679 666480

Fax: +679 666600

Mr. Josua TURAGANIVALU (D)

Director, Regulatory Unit

Ministry of Information, Broadcasting, Television & Telecommunications

P.O. Box 2225 - Government Buildings

SUVA

Tel: +679 211257

Fax: +679 300766

France

Mr. Bernard Henri ROUXEVILLE (C)

Administrator, Head, International Multilateral Affairs Department

Ministère des Postes et Télécommunications - DSP

20, avenue de Ségur

75700 PARIS

Tel: +33 1 45646849

Fax: +33 1 40610698

LIST OF PARTICIPANTS

France

Ms. Brigitte SCHÄRS (D)

Counsellor, International Affairs (Asia-Pacific)
Ministère de l'Industrie, des P&T et du Commerce Extérieur
Direction du Service Public - 20, avenue de Ségur
75700 PARIS
Tel: +33 1 45641533
Fax: +33 1 42730002

India (Republic of)

Mr. U.V. NAYAK (C)

Member (Production) Telecom Commission
Ministry of Communications - Department of Telecommunications
Sanchar Bhawan - 20 Ashok Road
NEW DELHI 110001
Tel: +91-11-3710834
Fax: +91-11-3782202

Mr. R.S. BANSAL (D)

Adviser (Human Resource Development)
Ministry of Communications - Department of Telecommunications
Sanchar Bhawan - 20 Ashok Road
NEW DELHI 110001
Tel: +91-11-3718460
Fax: +91-11-3717016

Mr. S. KRISHNAN (D)

Deputy Director General (Long Term Planning)
Ministry of Communications - Department of Telecommunications
Sanchar Bhawan - 20 Ashok Road
NEW DELHI 110001
Tel: +91-11-3710254

Mr. K.B. LAL (D)

Director (Switching), C-DOT
Ministry of Communications - Department of Telecommunications
Albar Bhawan, Chanakyapuri
NEW DELHI 110021
Tel: +91 11 606650
Fax: +91 11 6885558

Mr. S.P. PURWAR (D)

Deputy Director General (Telecom Revenue)
Ministry of Communications - Department of Telecommunications
Sanchar Bhawan - 20 Ashok Road
NEW DELHI 110001
Tel: +91-11-3714141

Mr. P.S. SUNDARAM (D)

Director (Engineering), Research & Development
All India Radio & Doordarshan
14 B Ring Road, 1 P Estate
NEW DELHI 2
Tel: +91 11 3719978
Fax: +91 11 3316674

Indonesia (Republic of)

Mr. Djakaria PURAWIDJAJA (C)

Director General
Directorate General of Posts & Telecommunications (POSTEL)
Jalan Kebon Sirih 37
JAKARTA 10340
Tel: +62 21 3846000
Fax: +62 21 3102254

Mr. DJAMHARI SIRAT (D)

Deputy Director General
Directorate General of Posts & Telecommunications (POSTEL)
Jalan Kebon Sirih 37
JAKARTA 10340
Tel: +62 21 3845038
Fax: +62 21 3102254

Mr. Yuri GUNADI (D)

Communication Attaché
Embassy of the Republic of Indonesia
7, Chatsworth Road
SINGAPORE 1024
Tel: +65 7377422

Mr. Susilo D. HARTONO (D)

Director of Personnel
Directorate General of Posts & Telecommunications (POSTEL)
Jalan Kebon Sirih 37
JAKARTA 10340
Tel: +62 21 3901900
Fax: +62 21 3102254

Mr. Djojowisuko MULYONO (D)

Department of Engineering
Directorate General of Posts & Telecommunications (POSTEL)
Jl. Kebonsirih 37
JAKARTA
Tel: +62 21 330008
Fax: +62 21 3102254

Mr. Arifin NUGROHO (D)

Department of Engineering
Directorate General of Posts & Telecommunications (POSTEL)
Jl. Kebonsirih 37
JAKARTA
Tel: +62 21 330008
Fax: +62 21 3102254

Mr. Tyasno NURHADI (D)

Official
Tourism, Post and Tel. Department
Jl. Tomane Raya 14
JAKARTA
Tel: +22-506506
Fax: +22-502685

LIST OF PARTICIPANTS

Indonesia (Republic of)

Ms. Ingrid PANDJAITAN (D)

Director of Telecommunication Standards
Directorate General of Posts & Telecommunications (POSTEL)
Jalan Kebon Sirih 37
JAKARTA 10340
Tel: +62 21 5669316
Fax: +62 21 5669317

Mr. Bambang SULISTYO (D)

Vice-President - PT. INDOSAT
Directorate General of Posts & Telecommunications (POSTEL)
Jl. Merdeka Barat No. 21
JAKARTA 10110
Tel: +62 21 3801362
Fax: +62 21 370484

Iran (Islamic Republic of)

Mr. Hossein MAHYAR (C)

Director General of Telecommunications
Ministry of PTT
P.O. Box 11365-931
16314 TEHRAN
Tel: +98 21 843612
Fax: +98 21 867999

Mr. Mehdi Ahmadi ALIABADI (D)

Vice President, Planning & Development Affairs
Islamic Republic of Iran Broadcasting (IRIB)
P.O. Box 19395-3333
TEHRAN
Tel: +98 21 21960
Fax: +98 21 291051

Mr. Mohammad HAKKAK (D)

Consultant
Directorate General of Telecommunications
P.O. Box 11365-931
16314 TEHRAN
Tel: +98 21 638061
Fax: +98 21 61323373

Mr. Abdekhezr KAMRANI (D)

Deputy Managing Director in Planning & Programming
Telecommunication Company of Iran
P.O. Box No. 16314
TEHRAN
Tel: +98 21 862449/948638
Fax: +98 21 8601122

Italy

Ms. Alessandra PILERI (D)

Head of Telecom Department
PTT Ministry - International Relations Office
Viale America 201
00144 ROME
Tel: +39 6 59584668
Fax: +39 6 5942405

Japan

Mr. Shuji KUSUDA (C)

Director-General, International Affairs Department
Ministry of Posts and Telecommunications
3-2, Kasumigaseki 1-chome Chiyoda-ku
TOKYO 100-90
Tel: +81 3 3504 4090
Fax: +81 3 3504 0884

Mr. Yoshihiro ISHIDA (D)

Director, Office of Telecommunications Standards
Ministry of Posts and Telecommunications
3-2, Kasumigaseki 1-chome Chiyoda-ku
TOKYO 100-90
Tel: +81 3 3504 4941
Fax: +81 3 3504 0884

Mr. Kozo IWASO (D)

Advisor
Ministry of Posts and Telecommunications
3-2, Kasumigaseki 1-chome Chiyoda-ku
TOKYO 100-90
Tel: +81 3 3504 4794
Fax: +81 3 3504 0884

Mr. Toshiyuki KANO (D)

First Secretary
Ministry of Foreign Affairs - Embassy of Japan
16, Nassim Road
SINGAPORE 1025
Tel: +65 2358855

Mr. Yushi KITAHARA (D)

Director, International Cooperation Division
Ministry of Posts and Telecommunications
3-2, Kasumigaseki 1-chome Chiyoda-ku
TOKYO 100-90
Tel: +81 3 3504 4971
Fax: +81 3 3501 0344

LIST OF PARTICIPANTS

Japan

Mr. Shigeru MUTOH (D)

Advisor
Ministry of Posts and Telecommunications
3-2, Kasumigaseki 1-chome Chiyoda-ku
TOKYO 100-90
Tel: +81 3 3504 4794
Fax: +81 3 3504 0884

Mr. Akira NISHIHARA (D)

Deputy Director, International Organizations Division
Ministry of Posts and Telecommunications
3-2, Kasumigaseki 1-chome Chiyoda-ku
TOKYO 100-90
Tel: +81 3 3504 4794
Fax: +81 3 3504 0884

Mr. Shuji OBU (D)

Planning Director, International Organizations Division
Ministry of Posts and Telecommunications
3-2, Kasumigaseki 1-chome Chiyoda-ku
TOKYO 100-90
Tel: +81 3 3504 4791
Fax: +81 3 3509 5077

Mr. Ikuo OHASHI (D)

Director, International Organizations Division
Ministry of Posts & Telecommunications
3-2 Kasumigaseki 1-chome - Chiyoda-ku
TOKYO
Tel: +81 3 3504 4790
Fax: +81 3 3504 0884

Mr. Shunzo SUGIMOTO (D)

Assistant-Director, International Organizations Division
Ministry of Posts and Telecommunications
3-2 Kasumigaseki 1-chome Chiyoda-ku
TOKYO 100-90
Tel: +81 3 3504 4794
Fax: +81 3 3504 0884

Mr. Noboru SUZUKI (D)

Advisor
Ministry of Posts and Telecommunications
3-2, Kasumigaseki 1-chome Chiyoda-ku
TOKYO 100-90
Tel: +81 3 3504 4794
Fax: +81 3 3504 0884

Mr. Yoshio UTSUMI (D)

Deputy Director-General, Communications Policy Bureau
Ministry of Posts and Telecommunications
3-2, Kasumigaseki 1-chome Chiyoda-ku
TOKYO 100-90
Tel: +81 3 3504 4751
Fax: +81 3 3504 0884

Mr. Kazuyoshi YAMAMOTO (D)

Chief, International Organization Cooperation Section
Ministry of Posts and Telecommunications
3-2, Kasumigaseki 1-chome Chiyoda-ku
TOKYO 100-90
Tel: +81 3 3504 4975
Fax: +81 3 3501 0344

Kiribati (Republic of)

Mr. Inatio TEANAKO (C)

Managing Director
Telecom Kiribati Ltd
c/o Ministry of Transport Communications & Tourism - P.O. Box 487 BETIO
BAIRIKI TARAWA
Tel: +686 26036
Fax: +686 26193

Mr. Tooto KABWEBWENIBEIA (D)

Engineer, Engineering Department
Broadcasting & Publication Authority
Box 78
BAIRIKI, TARAWA
Tel: +686 21187
Fax: +686 21096

Mr. Ieronimo KIENENE (D)

Operations Manager
Telecom Services Kiribati Limited
P.O. Box 72
BAIRIKI TARAWA
Tel: +686 21287
Fax: +686 21424

Korea (Republic of)

Mr. Young-Soo KIM (C)

Deputy Director
Ministry of Communications
100 Sejong-Ro, Jongro-ku
SEOUL 110-777
Tel: 82-2-7502341
Fax: 82-2-7502346

Mr. Sung-Hwan KIM (D)

Manager
Korea Telecom
100 Sejong-Ro, Jongro-ku
SEOUL 110-777
Tel: 82-2-7503816
Fax: 82-2-7503830

LIST OF PARTICIPANTS

Korea (Republic of)

Ms. Tae-Eun KIM (D)
Senior Researcher
Korea Information Society Development Institute (KISDI)
966-5 Taechi-Dong, Kangnam-Ku
SEOUL 135-280
Tel: 82-2-5314022
Fax: 82-2-5585922

Kuwait (State of)

Mr. Hameed AL-KATTAN (D)
Director, Technical Services
Ministry of Communications
P.O. Box 318
SAFAT, KUWAIT 11111
Tel: +965 4816602/4844319
Fax: +965 4848883

Mr. Abdulwahab ALSANEEN (D)
Controller of Frequencies
Ministry of Communications
P.O. Box 16
SAFAT 13001
Tel: +965 4830869
Fax: +965 4848883

Mr. Hameed ASHKANANI (D)
Head of PCM Division
Ministry of Communications
P.O. Box 16
SAFAT, KUWAIT 13001
Tel: +965 5755277
Fax: +965 5755112

Lao People's Democratic Republic

H.E. Mr. Thongsavath PRASEUTH (C)
Vice-Minister of Communications, Transports, Posts & Construction
Ministry of Communications, Transports, Posts & Construction
Jawaharlal Nehru Street
0100 VIENTIANE
Tel: 5005
Fax: 4919 or 9068

Mr. Snith XAPHAKDY (D)
Telecommunication Engineer, International Telecommunication Division
Ministry of Communications, Transports, Posts & Construction
Jawaharlal Nehru Street
0100 VIENTIANE
Tel: 4599
Fax: 4919

Lebanon

Mr. Maurice-Habib GHAZAL (D)
P.E.R. - Senior Chairman GAS/President Global Network
Ministry of Posts and Telecommunications
Avenue Riad El-Solh
BEIRUT
Tel: /Fax +9611200888
Fax: +33 1 42217373

Malaysia

Mr. Mohamed Ali YUSOFF (C)
Director-General
Jabatan Telekom Malaysia
Wisma Damansara - Jalan Semantan
50668 KUALA LUMPUR
Tel: +60 3 2557700
Fax: +60 3 2530508

Mr. Abdul Majid ABDULLAH (D)
Assistant General Manager
Pusat Latihan TELEKOM
54100 Kuala Lumpur
Tel: 05-292 661
Fax: 03-2931812/2926958

Mr. Akib Abdul HAMID (D)
Head of Section
Pusat Latihan TELEKOM
54100 KUALA LUMPUR
Tel: 03-2926611
Fax: 03-2931812/2926958

Mr. Rozlan OTHMAN (D)
Assistant Manager
Pusat Latihan TELEKOM
54100 KUALA LUMPUR
Tel: 03-2881272
Fax: 03-2825817

Mr. Mohd Zaki YUSUFF (D)
Director, Licensing & Enforcement
Jabatan Telekom Malaysia
Ground Floor, Wisma Damansara
50668 KUALA LUMPUR
Tel: +60 3 255 6687
Fax: +60 3 2530508

Mr. Muhammad Nor ZAKARIA (D)
Deputy Director (Engineering) Training
Radio TV Malaysia (RTM)
P.O. Box 1199 Jalan Pataj Bark
59700 KUALA LUMPUR
Tel: 03-2821752

LIST OF PARTICIPANTS

Maldives (Republic of)

Mr. Hussain SHAREEF (D)

Director

Department of Posts & Telecommunications

Postel Building - 34 Marine Drive

MALE' 2004

Tel: +960 323457

Fax: +960 320000

Micronesia (Federated States of)

Mr. Virgilio LUARES (D)

Broadcast Chief Technician, Technical Department

FSM National Government Broadcast

P.O. Box 1096

KOLONIA POHNPEI FSM

Tel: +691 320 2296

Fax: +691 320 5212

Mongolia

Mr. Pagchaa ARVINTSOGT (D)

Chief, Department of Mongolian Telecom Company

Mongolian Telecom Company

Sq. Sukhbaatar 9

ULAANBAATAR

Tel: 323722

Fax: 325412

Ms. Amarsaihan ELBRUS (D)

Officer Manager, Sound Engineer, Foreign Affairs Department

Mongol Radio & Television (MRTV)

Huvisgalyn Zam 3

ULAANBAATAR 11

Tel: +976-1-26663/328939

Myanmar (Union of)

Mr. U Tin TUN (D)

Assistant General Manager

Myanmar Posts and Telecommunications

43, Bo Aung Gyaw Street

YANGON

Tel: +95-1-81234

Nepal

Mr. Gajendra Singh BORA (D)

Deputy General Manager

Nepal Telecommunications Corporation

Central Office - Singhdurbar, Putli Bagaicha

KATHMANDU

Tel: +977 1 215444/220250

Fax: +977 1 226260

Mr. BP SHIVAKOTI (D)

Divisional Engineer

Radio Broadcasting Service

Radio Nepal - P.O. Box 634

KATHMANDU

Tel: +977 1 223910/215929

Fax: +977 1 221952

Netherlands (Kingdom of the)

Mr. Johan DIJKXHOORN (D)

Dr. Engineer

NEPOSTEL / Dutch PTT

P.O. Box 30000

2500 GA THE HAGUE

Tel: +31 70 3323990

Fax: +31 70 3324029

New Zealand

Mr. Hunter DONALDSON (C)

General Manager, Communications

Ministry of Commerce

P.O. Box 2847

WELLINGTON

Tel: +64 4 4742965

Fax: +64 4 4990797

Pakistan (Islamic Republic of)

Mr. Malik Ali CHAUDHRY (D)

Director of Engineering, Engineering Department

Pakistan Broadcasting Corporation

Broadcasting House

ISLAMABAD

Tel: +92 51 820357

Mr. Akhtar Mahmood DAD (D)

Director of Engineering, Engineering Department

Pakistan Television

P.O. Box 1221

ISLAMABAD

Tel: +92 51 821260

Fax: +92 51 823406

Papua New Guinea

H.E. Mr. Martin THOMPSON (C)

Minister for Information and Communication

Ministry of Information and Communication

P.O. Box 1279

BOROKO, NCD

Tel: +675-25 2298

Fax: +675-25 2298

LIST OF PARTICIPANTS

Papua New Guinea

Mr. Annesley DE SOYZA (D)

Manager, Spectrum Engineering Branch
Spectrum Management Department
P.O. Box 1783
PORT MORESBY, NCD
Tel: +675-274533
Fax: +675-212199

Mr. John KAMBLIJAMBI (D)

Corporate Manager Communications
Post and Telecommunication Corporation
P.O. Box 1349
BOROKO, NCD
Tel: +675 274100
Fax: +675-256868

Mr. Clark KULINIASI (D)

Chief Engineer, Telecommunications Division
Post and Telecommunications Corporation
P.O. Box 7395
BOROKO, NCD
Tel: +675-274957
Fax: +675-259582

Mr. Marena SANSAN (D)

Assistant to Minister for Information and Communication
Ministry of Information and Communication
P.O. Box 1279
BOROKO, NCD
Tel: +675-251866
Fax: +675-252298

Mr. John O. WAINGUT (D)

Controller, Technical Services
National Broadcasting Commission
P.O. Box 1359
BOROKO
Tel: +675-253022
Fax: +675-255403 / 256296

Philippines (Republic of the)

H.E. Mrs. Josefina T. LICHAUCO (C)

Vice-Minister for Communications (Undersecretary)
Department of Transportation and Communications
Corner Times Street
QUEZON CITY
Tel: +63 2 981160
Fax: +63 -2 9217128

Mr. Simeon L. KINTANAR (CA)

Commissioner
National Telecommunications Commission
865 Vibal Building - Edsa Corner Times Street
QUEZON CITY
Tel: +63 2 981160
Fax: +63 2 9217128

Ms. Kathleen G. HECETA (D)

Director, Legal Department
National Telecommunications Commission
865 Vibal Building - Edsa Corner Times Street
QUEZON CITY
Tel: +63 2 998390
Fax: +63 2 9217128

Mr. Mark JAVIER (D)

President
Philippine Globe Communications
CC P.O. Box 960
MAKATI METRO MANILA
Tel: +63 2 879971

Mr. Antonio URERA (D)

Sr. Vice President and Chief Operating Officer
Eastern Telecommunications Philippines
Gil J. Puyat Ave.
MAKATI METRO MANILA
Tel: +63 -2 8187862
Fax: +63 2 8164322

Portugal

Ms. Maria de Fátima BOTELHO (D)

Senior Adviser - International Affairs
Instituto das Comunicações de Portugal
Avenida José Malhoa, No. 21/21A - 7 piso
1000 LISBOA
Tel: +351 1 7269223/ext.2704
Fax: +351 1 7263465

Saudi Arabia (Kingdom of)

Mr. Sami S. AL-BASHEER (D)

Director-General, International Relations
Ministry of Post, Telegraph and Telephone
RIYADH 11112
Tel: +966 1 4637100
Fax: +966 1 4032048

LIST OF PARTICIPANTS

Singapore (Republic of)

Mr. Hong Yew NG (C)

Director-General

Telecommunication Authority of Singapore

Comcentre, #05-00, 31 Exeter Road

SINGAPORE 0923

Tel: +65 7396802

Fax: +65 7330071

Ms. Carolyn CHAN (D)

Economist

Telecommunication Authority of Singapore

Comcentre, #05-00, 31 Exeter Road

SINGAPORE 0923

Tel: +65 7396828

Fax: +65 7330073/7330074

Ms. Valerie D'COSTA (D)

International Affairs Officer

Telecommunication Authority of Singapore

Comcentre, #05-00, 31 Exeter Road

SINGAPORE 0923

Tel: +65 7396864

Fax: +65 7330079

Mr. Koon Chye KUA (D)

Engineer

Singapore Broadcasting Corporation

Caldecott Hill, Andrew Road

SINGAPORE 1129

Tel: +65 3503409

Fax: +65 2538808

Mr. Wing Hin LAI (D)

Higher Executive Engineer

Singapore Broadcasting Corporation

Caldecott Hill, Andrew Road

SINGAPORE 1129

Tel: +65 3503438

Fax: +65 2552544

Mr. Lychow LAM (D)

Engineer

Singapore Broadcasting Corporation

Caldecott Hill, Thomson Road

SINGAPORE 1126

Tel: +65 3503402

Fax: +65 2552544

Mr. Wai Meng LEE (D)

Higher Executive Engineer

Singapore Broadcasting Corporation

Caldecott Hill, Andrew Road

SINGAPORE 1129

Tel: +65 3503671

Fax: +65 2538808

Mr. Keng Thai LEONG (D)

Director, Planning

Telecommunication Authority of Singapore

Comcentre, #05-00, 31 Exeter Road

SINGAPORE 0923

Tel: +65 7396809

Fax: +65 7330073/7330074

Mr. Ter Kwang LIEW (D)

Senior Executive Engineer (Planning & Development)

Singapore Broadcasting Corporation

Caldecott Hill, Andrew Road

SINGAPORE 1129

Tel: +65-3503405

Fax: +65-2552544

Mr. Choon Sai LIM (D)

Director, Radio

Telecommunication Authority of Singapore

Comcentre, #05-00, 31 Exeter Road

SINGAPORE 0923

Tel: +65 7396807

Fax: +65 7330079

Mr. Cher Keng NG (D)

Assistant Manager (Policies)

Telecommunication Authority of Singapore

Comcentre, #05-00, 31 Exeter Road

SINGAPORE 0923

Tel: +65 7396825

Fax: +65 7330073/7330074

Mr. Chin Tuan TAN (D)

Manager (Technical Standards)

Telecommunication Authority of Singapore

4-8, George Street - City Exchange, #03-00

SINGAPORE 0104

Tel: +65 5396685

Fax: +65 5381074/5380925

Mr. Joo Thong TAY (D)

Senior Executive Engineer

Singapore Broadcasting Corporation

Andrew Road

SINGAPORE 1129

Tel: +65 3503499

Fax: +65 2552544

Mr. Seng-Chwee TENG (D)

Engineer

Singapore Broadcasting Corporation

Caldecott Hill, Andrew Road

SINGAPORE 1129

Tel: +65 3503417

Fax: +65 2552544

LIST OF PARTICIPANTS

Singapore (Republic of)

Mr. Han Koon TEO (D)
Engineer
Singapore Broadcasting Corporation
Caldecott Hill, Andrew Road
SINGAPORE 1129
Tel: +65 3503124
Fax: +65 2538808

Solomon Islands

Mr. Robert BOKELEMA (D)
Director, Spectrum Management Division
Ministry of Posts & Communications
P.O. Box G25
HONIARA
Tel: +677 21821
Fax: +677 21472

Sri Lanka (Democratic Socialist - Republic of)

Mr. Radley DISSANAYAKE (D)
Chief Engineer - Licensing & Customer Services
Directorate General of Telecommunications
411 Galle Road
COLOMBO 3
Tel: +94 1 575013
Fax: +94 1 575002

Ms. Arundathi WIMALASURIYA (D)
Director of Engineering
Sri Lanka Broadcasting Corporation
P.O. Box 574
COLOMBO
Tel: +94 1 693179
Fax: +94 1 695488

Sweden

Mr. Tomm HAUGER (D)
Head, Far East Operation
SWEDTEL of TELEVERKET
Street Eriksgatan 117 - P.O. Box 6296
10235 STOCKHOLM
Tel: +46 8 6902200
Fax: +46 8 345743

Thailand

Mr. Smith TUMSAROCH (C)
Director General
The Post & Telegraph Department
87 Soi Sailom, Phaholyothin Road
BANGKOK 10400
Tel: +66 2 271 3508
Fax: +66 2 271 3516

Mr. Phisal JORPHOCHAUDOM (D)
Assistant Director, Telecommunication Services Division
The Communications Authority of Thailand
99 Chaeng Watthana Road
BANGKOK 10002
Tel: +66 2 573 5493
Fax: +66 2 573 7093

Ms. Orawan JULAYANON (D)
Chief, International Cooperation Section
Telephone Organization of Thailand
89/2 Chaengwattana Road, Donmuang
BANGKOK 10210
Tel: +66 2 574 9553
Fax: +66 2 574 9535

Mr. Aran PERMPIBOON (D)
Director, Department of Human Resources
Telephone Organization of Thailand
89/2 Chaengwattana Road, Donmuang
BANGKOK 10210
Tel: +66 2 505 4777/574 9494
Fax: +66 2 574 9392

Mr. Rianchai REOWILAIK (D)
Director, Frequency Management Division
The Post & Telegraph Department
87 Soi Sailom, Phaholyothin Road
BANGKOK 10400
Tel: +66 2 2710151-60 Ext.155
Fax: +66 2 271 3514

Mr. Chakree SUBPRAWONG (D)
Acting Head of Sector of Corporate Planning Process
Telephone Organization of Thailand
Corporate Planning Office - 388 Phahonyothin Road /11th Floor - IBM Building
BANGKOK 10400
Tel: +66 2 253 1817
Fax: +66 2 2531811

Mr. Kittu YUPHO (D)
Deputy Director General
The Post & Telegraph Department
87 Soi Sailom, Phaholyothin Road
BANGKOK 10400
Tel: +66 2 271 3509
Fax: +66 2 271 3516

Tonga (Kingdom of)

Mr. Taniela TUFUI (C)
Chief Secretary & Secretary to Cabinet of the Prime Minister's Office
Prime Minister's Office
NUKU'ALOFA
Tel: +676 21300

LIST OF PARTICIPANTS

Tonga (Kingdom of)

Mr. Lemeki MALU (D)

General Manager

Tonga Telecommunications Commission (T.T.C.)

P.O. Box 46

NUKU'ALOFA

Tel: +676 23945

Fax: +676 24800

Turkey

Mr. H. Hasmet ESEN (D)

Member of the Board, Board of Research & Studies

TRT - Turkish Radio & TV Corporation

Inceleme Arastirma Kurulu, TRT Sitesi, Oran Yolu

ANKARA

Tel: +90 4 4901725

Fax: +90 4 4901733

United States of America

Mr. Richard BEAIRD (C)

Acting Coordinator and Director

Bureau of International Communications & Information Policy

U.S. Department of State - 2201 C Street, N.W.

WASHINGTON, DC 20520

Tel: +1 202 647 5832

Fax: +1 202 647 5797

Ms. Jean PREWITT (C)

Associate Administrator

National Telecommunications & Information Administration

U.S. Department of Commerce - 14th & Pennsylvania Avenue, N.W.

WASHINGTON, D.C. 20230

Tel: +1 202 482 1304

Fax: +1 202 482 1865

Mr. Rudolfo BACA (D)

Senior Attorney Advisor

Federal Communications Commission

1919 M Street, N.W. - Room 658, Office of International Communications

WASHINGTON, D.C. 20554

Tel: +1 202 632 0935

Fax: +1 202 632 0929

Mr. Keith BERGELT (D)

Deputy Office Director, Analysis

Embassy of the United States

10-5, Akasaka 1-chome, Minato-ku

TOKYO 107

Tel: +81 3 3224 5913

Fax: +81 3 3505 1862

Ms. Doreen BOGDAN (D)

Telecom Policy Specialist

National Telecommunications & Information Administration

U.S. Department of Commerce - 14th & Pennsylvania Avenue, N.W.

WASHINGTON, D.C. 20230

Tel: +1 202 482 1866

Fax: +1 202 482 1865

Mr. Masami ELBELAU (D)

Member, Board of Directors

Palau National Communications Corporation

P.O. Box 99

KOROR

Tel: +680 488 2606

Fax: +680 488 1888

Mr. Brian F. FONTES (D)

Acting Chief-of-Staff to Interim Chairman Mr. J.H. Quello

Federal Communications Commission

1919 M Street, N.W. - Room 802

WASHINGTON, D.C. 20554

Tel: +1 202 632 7557

Fax: +1 202 632 5173

Ms. Jane N. HURD (D)

Consultant

National Telecommunications & Information Administration

U.S. Department of Commerce - 14th & Pennsylvania Avenue, N.W.

WASHINGTON, D.C. 20230

Tel: +1 202 675 4585

Fax: +1 202 675 4586

Mr. Bruce LEVINE (D)

Second Secretary

Embassy of the United States

30, Hill Street

SINGAPORE 0617

Tel: +65 338 0251 Ext. 306

Fax: +65 338 4550

Mr. Walter MANGER (D)

International Relations Officer

Bureau of International Communications & Information Policy

U.S. Department of State - 2201 C Street, N.W.

WASHINGTON, DC 20520

Tel: +1 202 647 9340

Fax: +1 202 647 0158

Ms. Doreen Frances MCGIRR (D)

Senior Counsellor

Bureau of International Communications & Information Policy

U.S. Department of State - 2201 C Street, N.W. - Room 6317

WASHINGTON, DC 20520

Tel: +1 202 362 4310

Fax: +1 202 647 0158

LIST OF PARTICIPANTS

United States of America

Mr. Robert POLLARD (D)
First Secretary
Embassy of the United States
30, Hill Street
SINGAPORE 0617
Tel: +65 338 0251 Ext. 308
Fax: +65 338 4550

Mr. Nerony LAM SAM (D)
Financial Controller
Posts and Telecommunications Department
General Post Office
APIA
Tel: +685 23456
Fax: +685 24000

Mr. Karl Erik RYE (D)
General Manager
Palau National Communications Corporation
P.O. Box 99
KOROR
Tel: +680 488 1888
Fax: +680 488 1888

Viet Nam (Socialist Republic of)

Mr. Mai Liem TRUC (C)
Deputy Director General
Directorate General of Posts & Telecommunications
18, Nguyen Du Street
HANOI
Tel: +84 4 254905
Fax: +84 4 255851

Ms. Nguyen Que HUONG (D)
Director, Department for Technology and International Relations
Directorate General of Posts & Telecommunications
18, Nguyen Du Street
HANOI
Tel: +84 4 256936
Fax: +84 4 255851

Mr. Tran Duc LAI (D)
Assistant to Director General
Directorate General of Posts & Telecommunications
18, Nguyen Du Street
HANOI
Tel: +84 4 256897
Fax: +84 4 255851

Western Samoa - (Independent State of)

Mr. Sapau R. PETAIA (C)
Director
Posts and Telecommunications Department
General Post Office
APIA
Tel: +685 24671
Fax: +685 24000

LIST OF PARTICIPANTS

INTERNATIONAL/REGIONAL ORGANIZATIONS

Austria

UNIDO

Mr. Geoffrey MARIKI (O)
Industrial Development Officer
United Nations Industrial Development Organization
Vienna International Centre - P.O. Box 300
1400 VIENNA
Tel: +43 1 21131/5336
Fax: +43 1 232156

Bangladesh (People's Republic of)

SAARC

Mr. ASHRAF-UD-DOULA (O)
Counsellor
South Asian Association for Regional Cooperation
High Commission for the People's Republic of Bangladesh - 101 Thomson
Road - #06-07 United Square
SINGAPORE 1130
Tel: +65 2550075

Belgium

C.E.C.

Mr. Kurt KÖNIG (O)
Commission of the European Communities
Rue de la Loi 200 (Bâtiment Beaulieu 9 6/129)
1049 BRUXELLES
Tel: +32 2 296 8629/296 8628
Fax: +32 2 296 1740

Fiji (Republic of)

FORUM

Mr. Edmond DURAND (O)
Director, Telecommunications Division
FORUM Secretariat
P.O. Box 856
SUVA
Tel: +679 312 600
Fax: +679 302203

France

UNESCO

Mr. Martin HADLOW (O)
Head, UNESCO Office Kuala Lumpur, Malaysia
United Nations Educational, Scientific and Cultural Organization
P.O. Box 12544
50782 KUALA LUMPUR
Tel: +60 3 255.9122/255.9133
Fax: +60 3.255.2870

Japan

A.E.U.

Mr. Toshisada OKABE (O)
Secretary-General
Asia Electronics Union
5th Floor - Kyodo Building - 2-4-10 Iwamoto-cho - Chiyoda-ku
TOKYO 101
Tel: +81 3 5820 5630
Fax: +81 3 5820 5631

Mr. Yoshihisa TSUTSUI (O)

Editor of A.E.U. Journal
Asia Electronics Union
5th Floor - Kyodo Building - 2-4-10, Iwamoto-Cho - Chiyoda-ku
TOKYO 101
Tel: +81 3 5820 5630
Fax: +81 3 5820 5631

Malaysia

A.B.U.

Mr. Om P. KHUSHU (O)
Director, Technical Department
Asia-Pacific Broadcasting Union
P.O. Box 1164, Pejabat Pos Jalan Pantai Baru
59700 KUALA LUMPUR
Tel: +60 3 2823108
Fax: +60 3 2825292

Mr. Hugh LEONARD (O)

Secretary-General
Asia-Pacific Broadcasting Union
P.O. Box 1164, Pejabat Pos Jalan Pantai Baru
59700 KUALA LUMPUR
Tel: +60 3 2823592
Fax: +60 3 2825292

A.I.B.D.

Mr. Answar Sadique PAUL (O)

Head of Training
Asia-Pacific Institute for Broadcasting Development
P.O. Box 1137, Pantai
59700 KUALA LUMPUR
Tel: +60 3 2823719/2824618
Fax: +60 3 2822761

Singapore (Republic of)

APEC

Ms. Merry WICKES (O)

Asia-Pacific Economic Cooperation
APEC Secretariat
438 Alexandra Road, #19th floor
SINGAPORE 1025
Tel: +65-276 1880
Fax: +65-276 1775

LIST OF PARTICIPANTS

Singapore (Republic of)

APEC

Ambassador William BODDE Jr. (O)
Executive Director of Asia-Pacific Economic Cooperation
APEC Secretariat
438 Alexandra Road, #19th floor
SINGAPORE 1025
Tel: +65 276 1880
Fax: +65 276 1775

Thailand

A.P.T.

Mr. A. NARAYAN (O)
Director, Project Development
Asia-Pacific Telecommunity
12/49, Soi 5, Chaengwattana Road
BANGKOK 10210
Tel: +66 2 5730044
Fax: +66 2 5737479

Mr. K. SASAKI (O)
Consultant
Asia-Pacific Telecommunity
12/49, Soi 5, Chaengwattana Road
BANGKOK 10210
Tel: +66 2 5730044
Fax: +66 2 5737479

Mr. Hiroyasu SONOKI (O)
Executive Director
Asia-Pacific Telecommunity
12/49, Soi 5, Chaengwattana Road
BANGKOK 10210
Tel: +66 2 5736891
Fax: +66 2 5737479

Mr. Shin Yong SUP (O)
Expert
Asia-Pacific Telecommunity
12/49, Soi 5, Chaengwattana Road
BANGKOK 10210
Tel: +66 2 5730044
Fax: +66 2 5737479

ICAO

Mr. K.P. RIMAL (O)
Technical Officer, Communications, Asia & Pacific Office
International Civil Aviation Organization
BANGKOK
Tel: +66 2 5378189
Fax: +66 2 5378199

United Kingdom of Great Britain - & Northern Ireland

INMARSAT

Mr. Francis CHOI (O)
Regional Director, East Asia
International Maritime Satellite Organization
40, Melton Street
LONDON NW1 2EQ
Tel: +44 71 7281096
Fax: +44 71 728 1627

Mr. Gavin TREVITT (O)

Press & Public Relations Manager
International Maritime Satellite Organization
40, Melton Street
LONDON NW1 2EQ
Tel: +44 71 728 1217
Fax: +44 71 7281179

United States of America

INTELSAT

Mr. Eui KOH (O)
Regional Director, Asia-Pacific
International Telecommunications Satellite Organization
3400, International Drive, N.W.
WASHINGTON, D.C. 20008-3098
Tel: +1 202 944 7236
Fax: +1 202 944 7925

WORLD BANK

Mr. Ali SABETI (O)
Chief, Telecommunications & Informatics
The World Bank
1818 H. Street, N.W.
WASHINGTON, D.C. 20433
Tel: +1 202 458 2855

LIST OF PARTICIPANTS

OPERATORS/MANUFACTURERS & OTHERS

Argentine Republic

Mr. Octavio NADAL VIÑALS (O)
Engineer, Exportation Department Chief
PECOM NEC S.A.
Maipú 1 - 8 piso
1599 BUENOS AIRES
Tel: +54 1 345 1240/5
Fax: +54 1 331 8331

Belgium

Mr. Robert VINCKIER (O)
Telecommunication Consultant
Swaenebeecklaan, 7
2970 GRAVENWEZEL
Tel: +32 3 3840156
Fax: +32 3 3840156

Canada

Mr. Pierre DEROME (O)
Managing Director
Telecommunications Executive Management Institute of Canada (TEMIC)
550, Sherbrooke Street, West, Suite 47
MONTREAL - H3A 1B9
Tel: +1 514 849 0666
Fax: +1 514 499 1012

Mr. N. Mark LOPIANOWSKI (O)
Director
Teleconsult Limited
402, West Pender Street
VANCOUVER B.C. V6B 1T6
Tel: +1 604 684 1144
Fax: +1 604 737 6854

Ms. Duan Zhi (Diana) MIAO (O)
Director, Project Development
CANAC TELECOM/CN Communications
201, Shui on Centre - 8, Harbour Road
HONG KONG
Tel: +852 802 7128
Fax: +852 802 7655

Finland

Mr. Yrjö SIRKEINEN (O)
Managing Director
TELECON Ltd
Kitarakuja 4 D
00420 HELSINKI
Tel: +358 0 5072788
Fax: +358 0 5071229

France

Mr. Guy GARCIA (O)
Project Department Manager
France Câbles et Radio (French Polynesia - New Caledonia)
124, rue Réaumur
75000 PARIS
Tel: +33 1 42217178
Fax: +33 1 42217304

Germany (Federal Republic of)

Ms. Noorjainbee GULAMMYDIN (O)
Secretary to the Project Manager, Media & Communications Department, FE
Friedrich Ebert Stiftung (FES)
c/o AIBD, P.O. Box 1137 - Pantai Bahru P.O.
59700 KUALA LUMPUR
Tel: +60 3 2822489
Fax: +60 3 2822757

Mr. Peter HERING (O)
Media & Communications Department
Friedrich Ebert Stiftung (FES)
39 Newton Road
SINGAPORE 1130
Tel: 2515106
Fax: 2534535

Mr. Hendrik KETTNER (O)
Technical Coordinator, FES/PIBA
FES/Pacific Islands Broadcasting Association
P.O. Box 116 - Port Vila
VANUATU
Tel: +678 24250
Fax: +678 24252

Mr. Gunter LEHRKE (O)
Media & Communications Department
Friedrich Ebert Stiftung (FES)
Godesberger Allee 149
5300 BONN
Tel: +49 228 8830
Fax: +49 228 883600

Mr. Rainer WELZEL (O)
Project Manager, Media & Communications Department
Friedrich Ebert Stiftung (FES)
c/o AIBD - P.O. Box 1137 - Pantai Bahru P.O.
59700 KUALA LUMPUR
Tel: +60 3 2822489
Fax: +60 3 2822757

LIST OF PARTICIPANTS

Israel (State of)

Mr. Amos RON (O)

Vice-President, Marketing and Customer Services
Bezeq, the Israel Telecommunications Corporation Ltd
1, Hasoreg Street
JERUSALEM
Tel: +972 2 395351
Fax: +972 2 253734

Mr. Daniel ROSENNE (O)

Chief Scientist and Business Development
TADIRAN Telecommunication
18, Hasivim Street
PETACH-TIKVA 49104
Tel: +972 3 9261610
Fax: +972 3 9262929

Italy

Mr. Luca LISPI (O)

Economic Adviser
SIP Direzione Generale
Via Flaminia 189
00196 ROMA
Tel: +39 6 36883124
Fax: +39 6 36883155

Japan

Mr. Makoto FUJISAWA (O)

FUJITSU Limited
Sea Fort Square Building - 2-3-12 Higashishinagawa - Shinagawa-ku
TOKYO 140
Tel: +81 3 5460 7154
Fax: +81 3 5460 7366

Mr. Hirofumi HAMADA (O)

FUJITSU Limited
Sea Fort Square Building - 2-3-12 Higashishinagawa - Shinagawa-ku
TOKYO 140
Tel: +81 3 5460 7153
Fax: +81 3 5460 7366

Mr. Satoru HASHIMOTO (O)

Nippon Telegraph & Telephone Co. (NTT)
1-1-6 Uchisaiwai-cho, Chiyoda-ku
TOKYO
Tel: +81 3 3509 8181
Fax: +81 3 3509 8188

Mr. Tsuneo HOSHI (O)

Nippon Telegraph & Telephone Co. (NTT)
1-1-6, Uchisaiwai-cho, Chiyoda-ku
TOKYO
Tel: +81 3 3495 5215
Fax: +81 3 3495 5219

Mr. Yasuhisa ISHIKAWA (O)

President
KDD Engineering and Consulting, Inc.
2-1-23, Nakameguro, Meguro-ku
TOKYO 153
Tel: +81 3 3794 8200
Fax: +81 3 3794 8209

Mr. Kozo NAKAMURA (O)

Manager, Engineering Administration Division
OKI Electric Industry Co., Ltd.
4-10-3, Shibaura, Minato-ku
TOKYO 108
Tel: +81 3 3454 2111 (2062)
Fax: +81 3 3798 7685

Mr. Tsuneo OKABE (O)

Japan Telecommunications Engineering & Consulting Service (JTEC)
2-29-5, Nishietotanda, Shinagawa-ku
TOKYO 141
Tel: +81 3 3495 5211
Fax: +81 3 3495 5219

Mr. Kenji SAGA (O)

Professor, Asia University
JANPEEC
c/o Japan Institute of International Affairs 1-2-20 Toranomon, Minato-ku
TOKYO
Tel: +81 3 3501 9361
Fax: +81 3 3503 6707

Mr. Sakae SEKIGUCHI (O)

Deputy Manager, International Cooperation Division
Kokusai Denshin Denwa Co., Ltd.
3-2, Nishishinjuku 2 chome, Shinjuku-ku
TOKYO 163-03
Tel: +81 3 3347 6745
Fax: +81 3 3347 6470

Mr. Yasuhiro SHINTANI (O)

Senior Manager, International Organizations Division
Kokusai Denshin Denwa Co., Ltd.
3-2, Nishishinjuku 2 Chome, Shinjuku-ku
TOKYO 163-03
Tel: +81 3 3347 6478
Fax: +81 3 3347 6470

Mr. Mitsuhiro TAKASE (O)

Vice-President and General Manager
NTT International Corporation
21st Mori-Building 4-33, Roppongi 1-chome, Minato-ku
TOKYO 106
Tel: +81 3 5562 7731
Fax: +81 3 5562 7708

LIST OF PARTICIPANTS

Japan

Mr. Tadao TAMIYA (O)

Chief Engineer, Telecommunications Division
HITACHI Ltd.
216, Totsuka-cho, Totsuka-ku
YOKOHAMA 244
Tel: +81 45 881 1221
Fax: +81 45 862 9085

Mr. Gengo TAZAKI (O)

Manager, Training Software Department
FUJITSU International Engineering Limited
1015, Kamikodanaka Nakahara-ku
KAWASAKI 211
Tel: +81 44 754 3834
Fax: +81 44 754 3507

Mr. Eiichi WASHISU (O)

Associate Chief Engineer
Telecommunication Network Systems Group, FUJITSU LIMITED
12-5, Shimokodanaka 2-chome Nakahara-ku
KAWASAKI
Tel: +81 44 754 4044
Fax: +81 44 740 5133

Mr. Makoto YAMASHITA (O)

Consultant
TTC
Hamamatsu-cho Suzuki Building - 1-2-11 Hamamatsu-cho Minato-ku
TOKYO 105
Tel: +81 422 59 3059
Fax: +81 422 59 2518

Mr. Tadaaki YOKOO (O)

Senior Engineer
NHK
2-2-1, Jinnan, Shibuya-ku
TOKYO 150-01
Tel: +81 3 5478 5874
Fax: +81 3 3466 7789

Mr. Mikio YOKOYAMA (O)

Deputy Director (Project Research & Promotion Dept)
KDD Engineering and Consulting, Inc.
2-1-23, Nakameguro, Meguro-ku
TOKYO 153
Tel: +81 3 3794 8216
Fax: +81 3 3794 8209

Korea (Republic of)

Mr. Se Kyoung PARK (O)

Senior Engineer
Electronics & Telecommunications Research Institute
P.O. Box 8, DAEDUG DANGI
ETRI DAEJEON
Tel: +82-42-8606166
Fax: +82-42-8606430

Marshall Islands (Republic of the)

H.E. Mr. Kunio LEMARI (C)

Minister of Transportation & Communications
P.O. Box 1079
MAJURO - MARSHALL ISLANDS MH 96960
Tel: +692 625 3445
Fax: +692 625 4220

Mr. Peter BOON (O)

Director, Communications
Transportation & Communications
P.O. Box 1079
MAJURO - MARSHALL ISLANDS MH 96960
Tel: +1 692 6253569
Fax: +1 692 6253486

Mr. Robert EELKEMA (O)

Attorney General
P.O. Box 890
MAJURO - MARSHALL ISLANDS MH 96960
Tel: +692 625 3244
Fax: +692 625 5218

Portugal

Mr. Alvaro ROCHA (O)

Manager, International Relations Office
Telefones de Lisboa e Porto (TLP), S.A.
Rua Andrade Corvo No. 30 - 4 piso
1000 LISBOA
Tel: +351 1 3527752
Fax: +351 1 3557639

Russian Federation

Mr. Timothy John BREWER (O)

Strategic Advisor
Global Information Systems Inc.
Prospect Mira
129223 MOSCOW
Tel: +7 502 221 5008
Fax: +7 502 221 5008

LIST OF PARTICIPANTS

Singapore (Republic of)

Mr. Hon Kee CHEONG (O)

Director

Glenayre Electronics Singapore Pte Ltd

Block 5012 Ang Mo Kio Ave. 5 - Techplace II - #05-03

SINGAPORE 2056

Tel: +65 4811828

Fax: +65 4812838

Mr. Joon Kay GOH (O)

Manager (Technical & Operational Training)

Singapore Telecommunications Pte Ltd

Singapore Telecommunication Academy - 1, Hillcrest Road

SINGAPORE 1128

Tel: +65 4600267

Fax: +65 4669855

Mr. Stephan GRANROTH (O)

Area Manager

NOKIA (Sea) Pte Ltd

541 Orchard Road, #12-01, Liat Towers

SINGAPORE 0923

Tel: +65 7338922

Fax: +65 7324485

Mr. Koon Fah LEONG (O)

Assistant Manager

NEC Business Coordination Centre(s) Pte Ltd

138 Robinson Road - #18-01/05 Hong Leong Centre

SINGAPORE 0106

Tel: +65 2238601

Fax: +65 2259753

Mr. S.P. LEONG (O)

Managing Director

INFOTEL Technologies Pte Ltd

SINGAPORE

Tel: +65 2876822

Fax: +65 2876577

Mr. Foong-Teng LOONG (O)

Economist

Singapore Telecommunications Pte Ltd

Comcentre, #18-00, 31 Exeter Road

SINGAPORE 0923

Tel: +65 8382141

Fax: +65 7321044

Mr. R. SUBRAMANIAN (O)

Associate Professor

Nanyang Technological University

Nanyang Avenue

SINGAPORE 2263

Tel: +65 7911744

Fax: +65 7912687

Mr. Mei Chyn TANG (O)

Product Manager

Singapore Telecommunications Pte Ltd

Comcentre, #20-00, Exeter Road

SINGAPORE 0923

Tel: +65 8382596

Fax: +65 7376498

Mr. Helmar TEN WINKEL (O)

General Manager

PHILIPS Communications & Processing Services Pte Ltd

Lorong 1 Toa Payoh

SINGAPORE 1231

Tel: +65 3502810/3502811

Fax: +65 2553703

Mr. Peter TEO (O)

General Manager

Telescience (Singapore) Pte Ltd

629 Aljunied Road #08-10 - Cititech Industrial Building

SINGAPORE 1438

Tel: +65 7494900

Fax: +65 7494700

Mr. TEO LENG MING (O)

Director

Epitome Marketing Pte Ltd

605 A Macpherson Road - #04-07 - Citimae Industrial Complex

SINGAPORE 1336

Tel: +65 3825066

Fax: +65 3823037

Mr. T.T. TJHUNG (O)

Professor

National University of Singapore

Engineering Block 2, Level 5 - 10 Kent Ridge Crescent

SINGAPORE 0511

Tel: +65 7726681

Fax: +65 7795441

Ms. Sau Lin WONG (O)

Department Manager

Singapore Telecommunications Pte Ltd

Comcentre, #17-00, 31 Exeter Road

SINGAPORE 0923

Tel: +65 8382750

Fax: +65 2559953

Mr. Kwok Chuen YIP (O)

Engineer

Singapore Telecommunications Pte Ltd

Comcentre, #21-00, 31 Exeter Road

SINGAPORE 0923

Tel: +65 8382527

Fax: +65 2353095

LIST OF PARTICIPANTS

Singapore (Republic of)

Mr. Thomas ZILLIACUS (O)
President
NOKIA (SEA) Pte Ltd
541 Orchard Road - #12-01 Liat Towers
SINGAPORE 0923
Tel: +65 7338922

Switzerland (Confederation of)

Mr. T.F. GLOOR (O)
Consultant
PETROTECH Project Procurement PTE Ltd
128, Sophia Road #02-02
SINGAPORE 0922
Tel: +65 339 1825/339 4929
Fax: +65 336 7754

United Kingdom of Great Britain - & Northern Ireland

Mr. David James HALL (O)
Senior Executive ITU & Commonwealth Affairs
Cable and Wireless
90, Long Acre
LONDON WC2E 9SL
Tel: +4471 3154053
Fax: +4471 3155048

Mr. Yong C. HENG (O)
Manager
MOTOROLA
Jays Close, Viabes Ind Estate
BASINGSTOKE RG22 4PD
Tel: +44 256 484384
Fax: +44 256 817907

United States of America

Ms. Beverly ANDREWS (O)
Director, Regulatory Policy
COMSAT
950, L'Enfant Plaza, SW
WASHINGTON, D.C. 20024
Tel: +1 202 863 6867
Fax: +1 202 488 3814

Mr. C. Elliott BARDSLEY (O)
Vice-President
Orion Network Systems, Inc.
2440, Research Blvd
ROCKVILLE, M.D. 20850
Tel: +1 301 258 8101
Fax: +1 301 258 8119

Mr. Gregg DAFFNER (O)
Vice-President, Market Development & Regulatory Affairs
PanAmSat
One Pickwick Plaza
GREENWICH, CT 06830
Tel: +1 203 622 6664
Fax: +1 203 622 9163

Mr. Stephen DUTTON (O)
Director, International Affairs
NYNEX Corporation
1828 L. Street, N.W. Suite 1000
WASHINGTON, D.C.
Tel: +1 202 416 0133
Fax: +1 202 955 1179

Mr. Oliver DZIGGEL (O)
President
Enterprise Development International Foundation
5619 Bradley Boulevard
BETHESDA MD 20814
Tel: +1 301 652 0141
Fax: +1 301 652 0177

Mr. David M. LEIVE (O)
General Counsel - Chairman, Regulatory Colloquium
INTELSAT
3400 International Drive, N.W.
WASHINGTON, DC 20008
Tel: +1 202 944 6850
Fax: +1 202 944 7860

Mr. W. Kenneth LINDHORST (O)
International Services Vice-President
AT&T
Room 1137L3, 295 N. Maple Avenue
BASKING RIDGE, NJ 07920
Tel: +1 908 221 4179
Fax: +1 908 221 4593

Mr. C. Travis MARSHALL (O)
Deputy to Chief Executive Office for International Telecom. Relations
MOTOROLA, Inc.
1350 I St NW
WASHINGTON, D.C. 20005
Tel: +1 202 371 6911
Fax: +1 202 842 3578

Mr. Eric NELSON (O)
Director of International Affairs
Telecommunications Industry Association
2001 Pennsylvania, N.W. Suite 800
WASHINGTON, D.C. 20006
Tel: +1 202 457 7737
Fax: +1 202 457 4939

LIST OF PARTICIPANTS

United States of America

Mr. Richard RAMLALL (O)

Director, Strategic Investments

BELL ATLANTIC INTERNATIONAL

1310 N Courthouse RD - 5th Floor

ARLINGTON VA 22201

Tel: +1 703 351 4542

Fax: +1 703 351 4523

Ms. Walda ROSEMAN (O)

President

CompassRose International, Inc.

WASHINGTON, D.C.

Mr. Keith VAN VLECK (O)

Manager, Advanced Systems

GTE Systems

P.O. Box 7188

MOUNTAIN VIEW - California

Tel: +1 415 966 4446

Fax: +1 415 966 3095

TAS PERSONNEL

Ms. Joon Chin FUM-KO

Deputy Director

Mr. Choong Juke CHIAM

Manager

Ms. Irene NG

Corporate Communications Officer

Mr. Seng Onn LOONG

Admin/Legal Officer

Mr. Keok Tong LING

Engineer

Mr. Ivollex HODINY

Engineer

Ms. Joann KWANG

Executive Officer

Mr. K. THULASIDASS

Executive Officer

Ms. Melinda TAN

Technical Officer

Mr. Kian Hua TAN

Technical Officer

Secretariat

Ms. Inder KAUR

Ms. Esther LIM

Ms. Chitra RAMADASS

Ms. Catherine YONG

ITU PERSONNEL

Dr. P. Tarjanne
Secretary-General

Mr. A.Ph. Djawatampu
Director BDT

Mr. Th. Irmer
Director TSB

Mr. G. Davey
Senior Counsellor
Chief, ITU Regional Office, Bangkok

Mr. M. Giroux
Senior Counsellor, BR
Chief, TS Department

Mr. P. Kurakov
Senior Counsellor, BDT
Chief, FOP Department

Mr. A. Laouyane
Senior Counsellor, BDT
Chief, PSP Department

Mr. T. Ras-Work
Senior Counsellor
Chief, External Affairs Department

Mr. N. Akyuzalp
Counsellor, BDT
Head, Strategies & Programming Division

Mr. J. Budden
Counsellor, BDT
Network Operation and Maintenance
ITU Area Office, Jakarta

Mr. M. Calvano
Counsellor, BDT
Area Representative
ITU Area Office, Jakarta

Mr. R. Davidson
Counsellor, BDT
Head, Evaluation Unit

Mr. J. Ernberg
Counsellor, BDT
Coordinator, Telecommunication Dev. Conf.

Mr. J. Escudero
Counsellor, SG
Chief, Conference Services

Mr. K.K. Gunawardana
Counsellor, BDT
Network Operation and Maintenance
ITU Area Office, Kathmandu

Mr. S.K. Hajela
Counsellor, BDT
Area Representative
ITU Area Office, Kathmandu

Mr. I. Hamiti
Counsellor, BDT
Area Representative
ITU Area Office, Bangkok

Mr. P. Kantchev
Counsellor, BDT
Special Studies & Backstopping Unit

Mr. D. Staglianó
Counsellor, BDT
Head, Telecommunication Policies Division

Mr. J. Allinger
Document Reproduction, SG

Mr. W. Borkenhagen
Coordinator ASP Region, BDT

Ms. M. Crisp
Associate Expert
ITU Area Office, Kathmandu

Mr. G. Jones
Informatic Support, SG

Ms. F. Lambert
Press Officer, SG

Mr. M. Minges
Statistics - Information Systems, BDT

Mr. C. Sánchez
Finance - Budget, BDT

Mr. I. Syed
Information Systems, SG

Mr. J.H. Yoon
Associate Expert
ITU Area Office, Jakarta

Secretariat

Ms.D. Bocard

Mr. C. Bochet

Ms. L. Choutko

Ms. R. Ganose

Ms. I. Gordon

Ms. I. Haran

Ms. M. McGrath

Ms. N. Obuobi

Ms. E. Sellier

Ms. V. Shahna-Ekman

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Annex V

**PROGRAMME
OF THE FIRST PLENARY SESSION
TUESDAY 11 MAY 1993**

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PROGRAMME OF THE FIRST PLENARY SESSION - Tuesday 11 May 1993

9.00-10.00 *Registration (of newcomers who have not registered on Monday 10 May)*

10.00 Opening Ceremony

Mr. Arnold Ph. Djiwatampu,
Director, Telecommunication Development Bureau (BDT)

Mr. Tan Guong Ching,
Chairman, Telecommunication Authority of Singapore (TAS)

Dr. Pekka Tarjanne,
Secretary-General of the International Telecommunication Union (ITU)

H.E. Mr. Mah Bow Tan,
Minister of Communication, Singapore

11.00 Coffee/tea break (Press Conference in Gardenia Room - Press and invited officials)

11.30 Election of chairpersons, creation of committees

11.45 Introductory remarks (Mr. Arnold Ph. Djiwatampu, Director, BDT)

12.30 *Lunch break*

14.30 Overview of telecom developments in Asia-Pacific
(Mr. Ahmed Laouyane, Chief, Policies, Strategies and Programming, BDT)

14.50 Asia-Pacific Economic Committee (APEC) activities and plans

15.10 Asia-Pacific Telecommunity (APT) activities and plans

15.30 Forum Secretariat activities and plans

15.45 *Coffee/tea break*

16.00 Activities of the World Bank

16.20 Asia-Pacific Broadcasting Union (ABU) activities and needs related to telecom

16.40 Role of telecoms in education and cultural development
United Nations Educational, Scientific and Cultural Organization (UNESCO)

17.10 Introduction of AS-RDC Task Force proposals

17.50 Introduction of ABU proposals.

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Annex VI

**LIST OF DOCUMENTS
SUBMITTED TO THE CONFERENCE**

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LIST OF REFERENCE DOCUMENTS SUBMITTED TO THE CONFERENCE

<u>Doc. No.</u>	<u>Title</u>	<u>Source</u> [*]
1	List of reference documents	ITU
2	Purpose, organization and programme	ITU
3	Annotated agenda (provisional)	ITU
4	Regulatory and policy issues in the mobile satellite service	INMARSAT
5	Telecommunications institutional strengthening within the context of sustainable development	CIDA (Canada)
6	Sharing Canada's telecommunications expertise with developing countries	TEMIC (Canada)
7	Rural communications : development of a profitable rural telecommunications infrastructure	CIDA (Canada)
8	Report on the present and future activities of the Special Autonomous Groups (GAS)	ITU
9	NTT's Human Resource Development	NTT (Japan)
10	NTT's fund raising for the expansion of its telecommunication network in Japan	NTT (Japan)
11	The regulatory environment of Malaysia	Jabatan Telekom Malaysia
12	Contribution from Intelsat	INTELSAT
13	The ITU and Human Resource Management and Development in the Asia and Pacific Region	ITU
14	National frequency management organization	SPECTROCAN (Canada)
15	The development of telecommunications policies in Japan and Japanese cooperation to developing countries	Japan
16	Standardization of telecommunications in Japan	Japan
17	ITU assistance to the Least Developed Countries (LDCs)	ITU
18	Economic justification for telecommunications investment in developing countries	ITU

^{*} See list of abbreviations - Annex IX

<u>Doc. No.</u>	<u>Title</u>	<u>Source</u> *
19	Restructuring of Telecommunications in developing countries : An empirical investigation with ITU's role in perspective	ITU
20	Asia-Pacific Telecommunity Activities	APT
21	Extract from the Uruguay Round Draft Final Act (December 1991)	GATT
22	Contribution of the delegation of the United States of America	U.S.A.
23	Methods of sale of state-owned telecommunications enterprises	Mr. Mustafa
24	Telecom Development Indicators (separate publication)	ITU
25	The Singapore Declaration (separate publication by APT)	APT
26	The changing role of government in an era of Telecom Deregulation (Separate publication)	ITU
27	Radiocommunication Bureau activities	ITU/BR
28	ITU and the broadcasting industry	ABU
29	NTT and the development of telecommunications in Japan	NTT (Japan)
30	Overview of Asia-Pacific regional telecommunications networks and facilities	ITU
31	ITU development assistance activities in the Asia and Pacific Region	ITU
32	Promoting of telecommunications equipment manufacturing in the Asia and Pacific region	UNIDO
33	Contribution of the Forum Secretariat Telecommunications Division	Forum Secretariat
34	Development of international tariffs and issues at stake for developing countries	Study Group 3 ITU/TSP
35	Congestion in the telephone network - Due to the telephone directory ?	Vinckier
36	The role of telecommunications in socio-economic development - Development priorities	France
37	The financing of telecommunications development in France	France
38	APT project proposals	APT
39	ITU project proposals	ITU
40	Organization and human resource development in Telekom Malaysia	Malaysia
41	Role of telecommunications in educational and cultural development	UNESCO

<u>Doc. No.</u>	<u>Title</u>	<u>Source</u> *
42	Impact of European Community telecommunication policies after 1993 in the Asia and Pacific region and assistance offered by ECE to developing countries in the region for telecommunication development	Commission of the European Communities
43	From Melbourne 1988 to Helsinki 1993 and beyond - Global standardization at ITU in transition	ITU/TSB
44	Remarks by Mr. R. C. Beaird, Acting Coordinator and Director, Bureau of International Communications and Information Policy, U.S. Department of State	U.S.A.
45	Human Resource Management and Development - AIBD experience	AIBD
46	The GATT and trade in international telecommunications services : some implications for the Asia-Pacific region	CIRCIT
47	Speech by Ambassador William Bodde, Jr., Executive Director, Asia Pacific Economic Cooperation	APEC
48	A short report on the status of the telecommunication sector in the Islamic State of Afghanistan and damages incurred since 1978	Afghanistan
49	Telecommunication Indicator Handbook	ITU/OECD
50	Project proposals submitted by the Asia-Pacific Institute for Broadcasting Development and the Asia-Pacific Broadcasting Union	AIBD/ABU
51	Operational support system	SWEDTEL Scanswitch AB (Sweden)

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Annex VII

RESOLUTIONS AND RECOMMENDATIONS

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COORDINATION MECHANISM FOR REGIONAL COOPERATION

The Regional Telecommunication Development Conference for Asia and the Pacific,
Singapore 10-15 May, 1993,

noting

the importance of the Resolutions adopted by the Regional Telecommunication Development Conference for Asia and the Pacific,

recognizing

1. that the International Telecommunication Union (ITU), a specialized United Nations Agency, has been assigned by the UN General Assembly to play the eminent role, internationally, in Standardization (TSB), Radiocommunications (BR) and development (BDT) in telecommunication, including broadcasting;

2. that the Asia-Pacific Telecommunity (APT) was established in May 1979 as a regional telecommunication organization under the auspices of the Economic and Social Commission for Asia and the Pacific (ESCAP) by an inter-governmental agreement (Article 32 of the International Telecommunication Convention adopted at the ITU's Plenipotentiary Conference, Malaga-Torremolinos, 1973) to meet the needs of:

- a) balanced development of telecommunication services of the ESCAP region;
- b) cooperation in detailed planning and management of the existing and projected telecommunication services within the region and of implementation of the Asian Telecommunication Network;
- c) establishment of a consultative forum within the region for the settlement of telecommunication matters which are susceptible of being located on a regional basis;
- d) permanent machinery to correlate planning and operational arrangements amongst national telecommunication organizations within the region;
- e) exchange of information, technical experts, etc. amongst the telecommunication organizations of its members and associate members;
- f) formulation and implementation of bilateral/multilateral telecommunication programmes within the region in coordination with the ITU and other appropriate international or regional organizations,

considering

1. that many international, regional and subregional organizations have contributed, and will continue to contribute, to the development of telecommunications in the Asia-Pacific region;

2. that the ITU and APT have been engaged in setting up telecommunication development programs in coordination with each other and in cooperation with other international, regional and subregional organizations, such as ICAO, UNESCO, UNIDO, UNDP, World Bank, ABU, ADB, APEC, Forum Secretariat, ASEAN, SAARC, etc.;

3. that the APT, which aims at the development of telecommunications in the Asia-Pacific region and has actively worked to that end, will continue to play an important role in the development of telecommunications in the region, and that the Forum Secretariat has an important role in the development of telecommunications in the Pacific region and is ideally located in Fiji for that role;

4. that a coordination mechanism for regional cooperation, follow-up and monitoring is necessary to secure the well-balanced development of telecommunications in the Asia-Pacific region and to implement effectively the Resolutions adopted by this Conference;

5. that, for coordination, follow-up and monitoring, the ITU/BDT should collaborate with international, regional and subregional organizations dealing with Telecommunications,

resolves

to call on member countries in the Asia-Pacific region to report on the progress of the implementation of AS-RDC Resolutions to the ITU/BDT, and APT,

invites

APT, ABU and other related international, regional and subregional organizations dealing with Telecommunications to collaborate with the ITU/BDT and member countries in the Asia-Pacific region in the follow-up, monitoring and coordination for the implementation of the Resolutions adopted by this Conference and continue to work in a coordinated manner towards the development of telecommunications in the Asia-Pacific region,

instructs the ITU/BDT

1. to organize, in collaboration with APT, "Coordination Meetings" as a follow-up mechanism to the Regional Telecommunication Development Conference for Asia and the Pacific;

- a) the objective of these Coordination Meetings, is to serve as fora for exchange of opinions and information for coordination and to monitor progress in follow-up activities related to the implementation of the Resolutions adopted by this Conference;
- b) members of the Coordination Meetings should be ITU Members from the Asia and Pacific region. International, regional and subregional organizations dealing with telecommunications in the Asia-Pacific region are co-opted as members to participate;
- c) the first Coordination Meeting should be held before the World Development Conference scheduled for 21-29 March 1994;

2. to fully use, in collaboration with APT, every occasion to exchange information and collaborate with international, regional and subregional organizations dealing with telecommunications, with a view to optimizing the use of resources for telecommunication development and avoiding duplication of work;

3. to compile reports from Member countries in the Asia-Pacific region on the progress of the items of the resolutions adopted by this Conference and on activities of the ITU/BDT in the Asia-Pacific region, and distribute these reports to each country and the international and regional organizations concerned at least once a year.

TELECOMMUNICATION STRATEGIES AND POLICIES FOR THE ASIA-PACIFIC REGION

The Regional Telecommunication Development Conference for Asia and the Pacific,
Singapore, 10-15 May 1993

reconfirming

that telecommunications play an important role in a country's social and economic development,

recalling

1. Resolution 14 of the Plenipotentiary Conference of the ITU, Nice, 1989, relating to the changing telecommunication environment;
2. the Asia-Pacific Declaration on Strategies for Accelerating the Growth of Telecommunications, Singapore, 1992;
3. Resolutions ATDC/90/RES1 (African Telecommunication Policy and Strategy), EU-RDC/91 No.1 (Telecommunication Policies, Strategies and Cooperation Mechanisms), AM-RDC/92 No. 1 (Regional Mechanism for Telecommunication Policy) and AR-RDC/92 No.1 (Regional Mechanism for Coordination and Monitoring of the Implementation of Resolutions adopted by the Conference) adopted by the Regional Telecommunication Development Conferences of the African, European, American and Arab regions;
4. the Final Report of the Independent Commission for World-Wide Telecommunications Development, Geneva, 1984;
5. the decisions of the Additional Plenipotentiary Conference, Geneva, 1992, regarding the vital role of telecommunications in socio-cultural-economic development;
6. the establishment of the Telecommunication Development Bureau (BDT) and the recent election of a new Director for the BDT as a sign of the importance of telecommunication development world-wide; and
7. the Rio Declaration on the Environment and Development and Agenda 21 (June 1992),

considering

1. that the development of the telecommunication sector varies widely among countries of the Asia-Pacific region and that hence, development policies and strategies must be adapted to meet the particular concerns of each country; and
2. that new and enhanced technologies continue to evolve, such as satellite communications, fibre optics and mobile communications, which can offer workable solution to this development gap;

recognizing

1. that the restructuring of the telecommunication sector in the Asia-Pacific region is a crucial response to the need for the diversification of services and that technological advancements continue to place pressure on traditional telecommunication infrastructures;
2. that, with these changes in the telecommunication environment, market principles have begun to operate in the telecommunications sector, an area which has traditionally been monopolized by the state in the past;
3. the need to move towards market-based economic principles which permit the attraction of public capital, and private capital to the extent practicable and consistent with national policies and priorities;

4. that telecommunications have become more closely linked with international commerce and now involve a growing diversity of participants and that reliable modern telecommunications are now an economic necessity for all countries;
5. that the trend towards liberalization and restructuring of the telecommunication sector to encourage competition and investment is dependent upon effective and transparent regulatory policies;
6. that the regulatory development should take into account the long-term investment plans required for the expansion of general telecommunication networks;
7. that the establishment of a country's manufacturing industry will help promote a well balanced development of the telecommunication sector; and
8. that telecommunications can play an essential part in protecting the global environment by measuring the environmental situation and also by avoiding the unnecessary movement of vehicles,

resolves

1. to endorse the following common directions in formulating telecommunication policies and strategies. Countries in the Asia-Pacific region should endeavour, taking into account each country's individual circumstances and requirements:

- (a) to promote the understanding of the importance of the role of telecommunications in social and economic development and encourage investment on as wide a basis as possible;
- (b) to ensure, to the greatest extent practicable, access for all people to at least basic telecommunication services at a reasonable price;
- (c) to encourage the separation of regulatory and operating functions;
- (d) to develop harmonized networks and services in order to help reduce disparities within the region and strengthen the integration of the region as a whole and to promote global inter-operability;
- (e) to foster, when appropriate, local manufacturing of telecommunication equipment and components;
- (f) to consider introducing advanced telecommunication technology, such as satellite, fiber optics and mobile communications so that a modern telecommunication infrastructure can be established in each country of the Asia-Pacific region;
- (g) to utilize telecommunications for protecting the global environment through:
 - development and implementation of technology for monitoring the global environment;
 - establishing information networks for the exchange of information on the global environment;
 - using telecommunications to reduce the need for transport of people and goods;

2. to create a Working Group on Telecommunication Policies and Strategies under BDT coordination with representatives from Member states of the region with the following objective:

to develop guidelines which will assist countries of the region to evaluate policies and strategies which will promote the restructuring of the telecommunication sector within the framework of each country's national strategies for economic, social and cultural development;

3. that this Working Group shall carry out its tasks between July 1993 and August 1994;
4. that the Working Group shall determine its own terms of reference and working methods with a view to minimizing costs and optimizing the use of resources;

5. that the Working Group shall present to the World Telecommunication Development Conference in March 1994 at Buenos Aires, Argentina, an interim report of its activities and conclusions;
 6. that the BDT should ensure effective coordination between the Working Group and the relevant international and regional bodies and should make available to the Working Group all relevant documents, including the reports of the other regional working groups on telecommunication policies and strategies set up by the development conferences of the other regions with a view to avoiding duplication of work, promoting the interregional exchange of information and optimizing the use of available resources.
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FINANCING STRATEGIES

The Regional Telecommunication Development Conference for Asia and the Pacific,
Singapore 10-15 May 1993,

noting

the importance of financing strategies in the field of telecommunications,

considering

1. that the development of telecommunications infrastructure varies widely within the region;
2. that considerable efforts and funds are required to construct and maintain telecommunication networks;
3. that revenues depend on the tariff structures and levels and their further development with a trend towards better cost orientation,

recognizing

1. that ODA (Official Development Assistance) has played an important role in improving the telecommunications infrastructure in developing countries, and that this important role is expected to continue in the future;
2. that private capital, however, may be required for telecommunications infrastructure development necessitating the evaluation of the regulatory framework and reliance on market forces;
3. that new ways of utilizing private capital for telecommunication development, such as joint ventures and "Build, Operate and Transfer" (BOT), "Build, Lease and Transfer" (BLT), etc. have become popular, and that, even in such cases, it should not be forgotten that improvement of telecommunications infrastructure in rural areas is important;
4. that in order to invest the revenue from telecommunications services in the maintenance and expansion of the same, telecommunications operators have to be financially autonomous and establish an appropriate tariff system;
5. that there are APT project proposals on this issue,

resolves

that countries in the Asia-Pacific region should:

1. exchange information on the various financing strategies that they are adopting;
2. try to achieve sufficient development of telecommunications through growing revenues obtainable through increased business efficiency, cost reductions, and appropriate tariffs;
3. move toward policies that may attract private investment, consistent with national objectives,

instructs the BDT

1. to conduct research on the merits and demerits of various financing strategies, such as ODA, Leasing BOT, BLT, joint ventures, privatization and other means under the various conditions prevailing in the countries in the Asia-Pacific region; the research shall be scheduled as a one-year programme and cover the following issues:

- options for financing strategies;
- reason why certain countries have adopted specific strategies;
- conditions for introducing the various strategies;
- merits and demerits of each strategy, based on country case studies;
- conditions for rebalancing tariffs and orienting prices towards costs.

invites countries in the region, concerned organizations, donor countries and multilateral aid and financing agencies

1. to cooperate with the BDT and APT in the above study as well as in the implementation of their respective projects;
 2. to give due priority to investment in telecommunication development in developing countries in view of its importance as a tool for development of all other sectors;
 3. to meet the needs of the region.
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ACCESS TO ALL USERS

The Regional Telecommunication Development Conference for Asia and the Pacific,
Singapore 10-15 May 1993,

considering

1. that the telecommunication services and networks are undergoing a process of globalization and its importance in developing a global community;
2. that the telecommunication infrastructure in many countries in the Asia-Pacific region has not sufficiently penetrated to give access to basic services to the entire population, especially not to those in remote rural areas and low-income residential areas, even though many countries have fairly well developed networks to cover urban users;
3. that facilities for radio and television broadcasting can be built relatively economically and in a relatively short time;
4. that rural telecommunication, while often deemed non-profitable, could become financially viable, given that appropriate low cost technology is used and adequate tariffs are applied,

recognizing

1. that the provision of telecommunication infrastructure in rural areas stimulates development and economic activities in these areas, thus reducing the migration to big cities;
2. that the access to basic telecommunication services to all those underprivileged living in remote and rural areas and to those who cannot afford a telephone on their own in urban areas, assumes the role of a lifeline for the sustenance of human life, and serves not only as a means of public communications but also as comprehensive communications facilities for relaying information on medical treatment, disaster prevention (emergency), administrative matters and regional education;
3. that the provision of telecommunication services to these areas should not be solely based on its financial viability in a narrow sense but also on potential benefits for society as a whole;
4. that the provision of radio and television broadcasting services in rural and low income areas is an efficient means of developing cultural values, raising the standard of living and improving education in such areas;
5. that some of the countries in the Asia-Pacific region need help and assistance in the development of their rural telecommunications;
6. that there are APT project proposals on this issue,

resolves

1. to extend access of basic telecommunication services to all those underprivileged living in rural and remote areas and to those who cannot afford a telephone on their own in urban areas in every member country with mutual help so that all those people can be brought on to the main stream forming the global community and recommends each country in the region to develop a time-bound comprehensive telecommunication development plan to achieve the following objectives:
 - a) to provide a public telephone at least in every rural community or a village including remote areas to provide access to the plain old telephone service with national/international subscriber dialling facility;

- b) to provide public telephones/payphones extensively in urban areas to give free access to the people;
 - c) to open a community telecommunication service centre to provide fax/telex and other basic services in every business/commercial community in urban/semi-urban areas as well as in rural communities where economic activities would be enhanced by such services;
 - d) to enable reception of radio and television broadcasting in rural areas at the earliest possible date;
2. to support practical projects, avoiding duplication of efforts with other organizations, as a means of implementing part of this Resolution;
 3. that the establishment of telecommunication networks should be included in comprehensive regional development programmes;
 4. that, where applicable, the central government should collaborate with the local government and operating agencies for realizing access of telecommunications to all users;
 5. that introduction of a disaster prevention telecommunications system should be promoted as a means of securing a lifeline for the sustenance of human life,

instructs the BDT

in collaboration with APT and other international, regional and subregional organizations:

1. to organize seminars on the development of telecommunication and broadcasting services for rural and low-income areas;
 2. to study low-cost appropriate technology options for rural telecommunications and community telecommunication service centres, (including in particular Multiple Access Systems, cellular radio, VSAT, etc.) and prepare guidelines for:
 - a) planning of rural telecommunications, including methods of cost-benefit analysis taking into account political, economical, social and cultural aspects;
 - b) the choice of technology in different conditions.
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**HUMAN RESOURCES MANAGEMENT
AND HUMAN RESOURCES DEVELOPMENT (HRM/HRD)**

The Regional Telecommunication Development Conference for Asia and the Pacific,
Singapore 10-15 May 1993,

noting

the importance of human resources management and human resources development in the field of telecommunications,

aware of

1. the need to adapt the organization and management of telecommunication enterprises to the changing environment;
2. the urgent need for additional opportunities for technical and management training to improve the efficiency and productivity of telecommunication organizations in an increasingly competitive global environment;
3. the need to up-grade the skills and retrain many of the existing staff members whose skills have become obsolete;
4. the need to revise and develop new training programmes and courses so as to ensure that telecommunications and management programmes, courses and support materials match the real training needs of the region;
5. the need to exploit new and innovative technologies, such as interactive media and distance learning, i.e. technology based training (TBT), to improve the quality and cost-effectiveness of delivery of instructional materials and to foster international cooperation in the development of such training;
6. the need to sustain and further develop existing telecommunication and broadcasting training centres and institutions and to improve the relationship between these training centres and universities in the region, particularly in the fields of science, technology and business administration;
7. the need to upgrade and enhance education in the universities, graduate schools and other institutions of higher education and to promote acceptance of foreign students at such institutions in order to keep up with the fast technological progress in the field of telecommunications and broadcast engineering and to meet the rapidly increasing demand for high-level engineers/specialists;
8. the need for appropriate HRM practices to ensure sustainability of institutions,

recognizing

1. that many of the telecommunication administrations in the Asia-Pacific region have devoted considerable resources to human resources development and established their own training centres (frequently with the assistance of the ITU), at least for training of skilled workers and technicians;
2. that the APT, APEC, AIBD and other regional and subregional organizations actively promote human resources development in the Asia-Pacific region;
3. the existence of the Asian Institute of Technology (AIT) and the Asia-Pacific Institute for Broadcasting Development (AIBD) and other academic institutions, which offer advanced training in telecommunication and broadcast technology, management, etc.;

4. that the Advanced Level Telecommunication Training Center in Ghaziabad, India, and some other "centres of excellence" (e.g. in Malaysia, Singapore) have already accommodated trainees from less well equipped countries in the region and continue to do so;
5. the efforts made within the framework of the ITU International Sharing System to promote cooperation in the field of HRM/HRD, through the development of databases including training resources, training of training managers, course developers and trainers, establishment of working groups on TBT, etc;
6. the numerous seminars and workshops on different subjects related to telecommunications organized by the ITU, APT, ABU and other regional organizations and international organizations;
7. that the ITU International Sharing System (ISS) is presently not fully utilized in the Asia-Pacific region,

considering

1. that, in addition to the ITU, regional and subregional organizations, such as APT and ABU, play important roles in human resources development in the Asia-Pacific region and that improved information exchange and coordination between these organizations would increase their effectiveness in this field;
2. that manufacturers and suppliers of telecommunication equipment have an important role to play in the transfer of know-how of new technologies, particularly with respect to installation, maintenance and operation of their equipment and systems, on a voluntary or sound commercial basis,

resolves

1. to strengthen cooperation between existing telecommunication and broadcasting centres within the framework of the ITU International Sharing System (ISS) and promote the active participation in the ISS of regional telecommunication organizations, academic institutions, telecommunication equipment and service providers and private operators with a view to optimizing the use of their resources, primarily at the regional level but also at the global level;

it is recommended that the participants of the ISS in the Asia-Pacific region, with support of the ITU, and regional and subregional organizations such as APT and AIBD, cooperate in and give special attention to the tasks listed in the Annex;

2. to support the creation of new training centres by countries of the Asia and Pacific region as required for education, training and research in human resources development for telecommunication and broadcasting regulatory bodies as well as operating organizations;
3. that member countries in the Asia-Pacific region should upgrade and enhance education in the universities and graduate schools that serve as higher educational institutions in telecommunication fields and endeavour to open such institutions to foreign students, in particular from less developed countries;
4. to encourage telecommunication organizations and institutes in the Asia-Pacific region to participate actively :
 - in regional ISS activities and meetings;
 - in the next inter-regional ISS meeting in Brazil in June 1993;
 - in the development of a work plan for modifying ISS operation to be proposed to the World Telecommunication Development Conference, Buenos Aires, 21-29 March 1994,

suggests

that the BDT make use of the existing capabilities and facilities available at the AIBD, to assist in the implementation of projects on broadcast training,

requests the BDT, in cooperation with APT and other regional and subregional organizations concerned ,

1. to assess ways to further improve the exchange of information with a view to improving coordination of activities in the field of human resources management and development in the Asia-Pacific region;
2. to coordinate the submission of regional and subregional project proposals in this field and the mobilization of resources for these through the Asia-Pacific Coordination Mechanism described in AS-RDC/93 Resolutions Nos. 1 and 15;
3. to assess means of enhancing the ISS in the Asia-Pacific region and worldwide prior to the World Telecommunication Development Conference,

invites

all telecommunications and broadcasting organizations in the region and all interested countries to participate actively in the implementation of this resolution,

calls upon

- Members of the ITU;
- international organizations;
- regional organizations and institutions;
- regional development banks;
- UNDP;
- the private sector,

to support and consider participation in the implementation of this resolution, seeking to establish cooperative actions to optimize the channeling and use of financial resources.

Priority tasks for the ITU/ISS in Asia-Pacific

- organization development and specification of job profiles on the basis of common (ITU) job classification system;
 - undertake telecommunication manpower planning and training needs analysis using standardized classification systems and indicators in the countries in the region with a view to compiling those at regional level and identifying common needs and to enabling regional and interregional comparisons of productivity and service quality;
 - training of HRM/HRD managers (e.g. in job classification, recruitment/selection, manpower and career planning, training needs analysis, performance appraisal);
 - development of new, standardized training programmes and courses, matched to the needs (including those of regulators) and using, when appropriate, new training technologies (distance learning, TBT, etc.);
 - training of instructors;
 - training of managers, engineers, technicians and operators by means of regional courses and seminars carried out in existing training facilities and institutes or as distance learning e.g. in development of corporate plans, business administration, financing, project management, new technologies, operation and maintenance of new equipment (when regional cooperation is more cost/effective than each organization catering for their own needs);
 - further development of ISS database for HRD and training resources and establishment of a regional database compatible with ITU databases to facilitate sharing of resources at the global level;
 - further research and development of models for human resources management and development;
 - explore the possibility of developing a professional degree programme in telecommunications along the lines proposed for countries in Europe (a two to four-year part time distance learning programme, which could be followed by staff members while working), and drawing upon the experience gained and resources developed in that region;
 - encourage more active participation in the Asia-Pacific ISS by telecommunication entities, regional organizations, academic institutes and the private sector in the region;
 - explore ways and means for less developed countries in the region to make more and better use of the resources available through the ISS, and prepare proposals for, in particular, the conditions (financial and other) for how to make resources (courseware, trainers, training facilities, etc.) available to participants of the ISS and how this could be financed in the case of the least developed countries (e.g. through bilateral and multilateral aid);
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PROMOTION OF STANDARDIZATION IN THE ASIA AND PACIFIC REGION

The Regional Telecommunication Development Conference for Asia and the Pacific,
Singapore, 10-15 May 1993,

considering

1. that the Additional Plenipotentiary Conference of the International Telecommunication Union (Geneva, 1992) adopted a resolution for strengthening the relationship with regional telecommunication organizations;
2. that the Asia-Pacific Declaration adopted at the APT ministerial level meeting (Singapore, 1992) has recommended that the APT and ITU take necessary steps in developing, adapting and promoting international standards in this region,

recognizing

1. that in many areas of technology e.g. mobile radio, digital switching, etc., there are more than one standard or that network architecture requires interworking or compatibility among different systems adopted by a country or a region;
2. that many developing countries of the region have difficulties in selecting and applying new technology because of high growth rates, rapid technology progress and limited financial resources, but on the other hand the needs for transmission, customer equipment in public, data, maritime, aeronautical areas involving radio, digital techniques, optical fibre and satellite technologies are very urgent;
3. that certain developed countries of the region do not have the resources to adequately document, represent or promote their special concerns (such as simplicity, robustness, environmental tolerance, modularity, etc.) in the standard-setting process;
4. the importance for social and economic development of developing harmonized networks with interconnectivity within and between countries of the region;
5. the need and interests of manufacturers, international carriers, special service providers in developing and promoting facilities, services, networks and components of systems that meet specific market segments;
6. the efforts made by APT in this field;
7. that APT has prepared projects for meeting the needs of the countries of the region,

resolves

1. to promote international standards in order to develop and enhance regional cooperation and coordination on standardization matters;
2. to take proper steps to foster an exchange of information on international standardization within the region;
3. to take steps to study, formulate and promote international standardization within the region;
4. to take steps to facilitate the participation of countries and organizations in the region in the standard-setting and application process;
5. to support the efforts of APT, APEC, ASEAN, SAARC and other fora in the exchange of standards information and harmonization of standards between countries of the region,

requests the ITU, in particular the Telecommunication Standardization Bureau (TSB), in collaboration and coordination with the APT and other related regional and subregional organizations:

1. to facilitate the inputs of regional and subregional organizations and of developing countries to the ITU telecommunication standard-setting process;
2. to promote the dissemination, interpretation and application of global ITU standards (ITU Recommendations) to users in the region;
3. to hold seminars and workshops, to assist APT in organising its study groups and to participate in its study group activities;
4. to prepare handbooks;
5. to assist in meetings for the harmonization of standards in the region on specific new telecommunication technology or standard-setting issues,

invites

1. APT, ASEAN, APEC and other fora to support the countries they represent to have their needs considered at the international level within the ITU and to assist in the interpretation and application of those global standards in the countries of the region;
2. the countries of the region to pay attention to the need to establish global ITU standards and harmonize national standards within the region, when appropriate.

IMPLEMENTATION OF A STUDY ON PRICING OF THE RADIO FREQUENCY SPECTRUM

The Regional Telecommunication Development Conference for Asia and the Pacific,
Singapore, 10-15 May 1993,

considering

1. that an economic value can be placed on the radio frequency spectrum;
2. that an essential element of national frequency management involves the setting of a radiocommunications licensing structure and spectrum fees;
3. that there is a need for advice and guidance to administrations in the setting of radiocommunications licence and spectrum fees,

recognizing

1. that some administrations have some form of licensing structure and spectrum fees in place;
2. that the principles underlying the derivation of these fees are not always clear or rational; and
3. that the setting of appropriate spectrum fees is essential for equitable access to and efficient use of the spectrum,

noting

1. that there are several pricing methodologies that could be adopted;
2. that a combination of one or more of these methodologies may be needed to meet differing demands and conditions; and
3. that spectrum management objectives may differ from economic objectives,

resolves

that each country's spectrum management organization should establish goals and objectives to facilitate and optimize the use of the radio spectrum in the national interest;

requests the BDT, in coordination with the Radiocommunication Bureau

1. to organize a study for spectrum pricing and implementation methodology. Such a study shall include:
 - a) any particular pre-conditions which are conducive to adopting each pricing method, for example, a country's geographical location, its regulatory and legislative structure and the status of the entity charging spectrum fees,;
 - b) the pros and cons of adopting each pricing method;
 - c) the impact of adopting each pricing method on spectrum users, regulators and the development of radiocommunication technology; and
 - d) any other implications of adopting each pricing method.

2. to initiate the study as soon as possible and complete it by the end of 1994, disseminating the study reports to all member administrations of the region.

**STRENGTHENING FREQUENCY MANAGEMENT, PLANNING
AND COORDINATION AMONG MEMBER COUNTRIES**

The Regional Telecommunication Development Conference for Asia and the Pacific,
Singapore, 10-15 May 1993,

considering

1. that the radio frequency spectrum is an important natural resource whose use can increase the efficiency and productivity of many segments of society and provide services that enhance the quality of life to the population;
2. that the effective integration of each nation into the international community of spectrum users can lead to more efficient use of the spectrum resource;
3. that efficient and rational use of the radio frequency spectrum requires sound knowledge of radio regulatory and operating procedures among national spectrum management units as well as user groups, especially broadcasting organizations which have to use high power transmitters to deliver their services,

further considering

the on-going activities of the recently restructured radiocommunication sector of the ITU,

resolves

1. that the BDT, through the Regional Telecommunication Development Conference for Asia and the Pacific, collaborate with the Radiocommunication Bureau and with national radiocommunication organizations in the region to :
 - a) encourage each country's spectrum management organization to establish goals and objectives to facilitate the use of the radio spectrum in the national interest;
 - b) undertake efforts to increase the effective and efficient use of spectrum with minimal regulatory constraints;
 - c) improve regional cooperation in all facets of frequency management especially the effectiveness and efficiency of bilateral and regional frequency assignment coordination;
2. that the BDT in conjunction with the Radiocommunication Bureau, through the appropriate fora, support efforts of Member countries :
 - a) to exchange information about available tools that will strengthen national frequency management and monitoring;
 - b) to develop human resources in the area of spectrum management, giving priority to the areas of satellite registration, coordination procedures relating to satellite systems and special characteristics of sound and television broadcasting;
 - c) to establish a national long-range spectrum plan that is flexible and ensures a country's ability to manage the spectrum resource efficiently;
 - d) to compare national spectrum policies and plans in the region;
 - e) to promote the use of common frequency bands allocated for specific purposes, such as FPLMTS and digital audio satellite broadcasting in the Asia-Pacific region;

- f) to improve dialogue between the spectrum management organization and radiocommunication user groups including both public and private sector on national spectrum policy and planning issues and technical standards;

3. that the BDT, in conjunction with the Radiocommunication Bureau and in cooperation with the ABU and the APT :

- a) organize regular information meetings, at suitable locations within the region, on regulatory and technical procedures, including Broadcasting and Broadcasting Satellite Services;
 - b) seek to mobilize support from all available sources to facilitate participation in information meetings of participants from developing countries of the region;
 - c) organize regional preparatory seminars for Radiocommunication Conferences, which may have important issues including Broadcasting and Broadcasting Satellite Services within their terms of reference.
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TELECOMMUNICATION DEVELOPMENT INDICATORS

The Regional Telecommunications Development Conference for Asia and the Pacific,
Singapore, 10-15 May, 1993,

considering

the growing importance of telecommunications as a tool for socio-cultural-economic development and growth,

aware of

1. policy and decision makers' need for an accurate, timely and relevant set of statistics to assess the impact and consequences of telecommunications as well as to forecast, set targets and plan telecommunication development;
2. regulatory authorities' need for relevant data to monitor compliance with telecommunication laws, regulations and licensing agreements;
3. telecommunications operators' need for adequate management information systems (MIS) as an aid for decision making and to generate the aggregated data needed by policy makers, planners and regulatory authorities;
4. telecommunication HRM/HRD specialists' need for relevant data and indicators on HRM/HRD areas, i.e. manpower forecasting, training and HRD costs, quantity of training, and other areas,

further considering

1. that many developing countries lack the means and expertise to provide statistics on a regular basis;
2. that operating entities are the main source of the aggregated data (telecommunication indicators), required by policy makers, planners and regulatory authorities, but that many of these enterprises in Asia-Pacific lack adequate management information systems (MIS), capable of providing accurate information on a timely and regular basis, as well as the expertise required to develop and handle such MIS;
3. that, while much data for the region is available in reports, there is no coherent overall strategy about what should be collected, where it should be stored and how it should be disseminated;
4. that the emergence of greater competition means that a list of indicators should be defined as far as possible that is not commercially sensitive but at the same time meets the needs of policy makers, planners, regulatory authorities, researchers and other users;
5. that increased awareness of the usefulness of telecommunication indicators among the entities which are requested to provide the data, participation of representatives of such entities in the process of defining data requirements and availability of appropriate tools for processing the data would provide incentives for them to supply data on a timely and regular basis;
6. that the participation of representatives of the various categories of data users in the process of defining indicators will ensure the relevance of the data collected,

resolves

to create a Working Group on Telecommunication Development Indicators under BDT coordination with the participation of specialists from national regulatory, planning and policy decision-making authorities and telecommunication operators, as well as from regional and international organizations, such as APT, ABU, APEC, ADB, ESCAP, OECD and the World Bank, whose mandate shall be:

- a) to further develop the set of standardized indicators to be collected at regional and international levels;
- b) to promote awareness of the usefulness of telecommunication development indicators among potential users, manufacturers and data suppliers;
- c) to promote the availability of appropriate databases for processing telecommunication development indicators, the maintenance of these indicators, and the dissemination of these indicators particularly among service providers and manufacturers;

that the Working Group shall be established as soon as possible; that the inaugural meeting of the Working Group shall take place within six months at the latest, and that the ITU/BDT shall act as Executive Coordinator,

requests the BDT

1. to study the possibility of merging the regional working groups, set up in other regions for the same purpose, into one global forum for the development of telecommunication indicators, with a view to ensuring global harmonization of these indicators and to avoiding duplication of work;
2. to report on the result of this study and propose appropriate measures for the consideration of the first World Telecommunication Development Conference (Buenos Aires, March 1994).

TRANSFER OF TECHNOLOGY

The Regional Telecommunication Development Conference for Asia and the Pacific,
Singapore, 10-15 May 1993,

recalling

Chapter 3.2 of the Asia-Pacific Declaration on strategies for accelerating the growth of telecommunications concerning "Promoting transfer of technology", (Singapore Declaration, June 1992);

recognizing

1. that many countries would benefit from technology transfers in a wide range of fields, from basic telecommunication technology to new technology, such as the maintenance and operation of telecommunication networks, network management, ISDN technology and optical fiber technology;
2. that technology transfer in order to be effective must first be carefully assessed for its suitability with the existing telecommunication infrastructure;
3. that joint ventures can be effective means of transfer of technology;
4. that transfer of management know-how and tools is an essential part of transfer of technology;
5. that seminars and training conducted by various countries as well as by international and regional organizations have contributed to the transfer of technology, and hence to the development of telecommunication networks in the region;
6. that technology transfer among developing countries can be promoted further in addition to the transfer of technology from developed countries or through international organizations;
7. that the handbooks compiled by the GAS (Special Autonomous Groups) and APT have been an effective way of providing guidelines to transfer technology to developing countries;
8. that purchasing new equipment offers opportunities to include the transfer of the manufacturer's know-how in equipment procurement contracts;
9. that the providers of telecommunication equipment and services are important partners in ensuring the flow of technology to developing countries and that they are available to enter freely into such arrangements,

resolves

1. that developed countries consider transferring to developing countries, on a voluntary and/or a sound commercial basis, the necessary technology in the field of telecommunications, not only conventional technology but also new technologies and services;
2. that developing countries should cooperate with other developing countries by exchanging experts, organizing seminars and meetings, networking of telecommunication research institutions by means of e-mail, teleconferencing and computer conferencing facilities, etc.;
3. that recipient countries should systematically and fully utilize technology transfers in their countries,

requests the BDT, in cooperation with the APT and other concerned international, regional and subregional organizations

1. to continue to hold seminars or training in the field of telecommunications to raise the technological level in developing countries;
2. to promote the exchange of information among international organizations, donor countries and recipient countries on the transfer of technology, inter alia, by assisting them to set up cooperative networks between telecommunication research institutes in developing as well as developed countries;
3. to coordinate the submission of regional and subregional project proposals in this field and the mobilization of resources for these through the Asia-Pacific Coordination Mechanism described in AS-RDC/93 Resolutions Nos. 1 and 15,

further requests the BDT

1. to review, up-date and improve the handbooks formerly compiled by the GAS, also taking into account other relevant handbooks prepared by the various CCITT Study Groups;
2. to continue to develop new handbooks in the area of transfer of technology, in accordance with the decisions of the WTSC, Helsinki, March 1993, and with Resolution PLEN/3 (APP, Geneva, December 1992);
3. to ensure that these handbooks are disseminated to developing countries and that users are properly initiated in their use,

invites

1. countries in the Asia-Pacific region as well as international and regional organizations to attend the meeting on transfer of technology organized by APT in Bangkok 5-7 August 1993;
2. providers of telecommunication equipment and services to make available to their customers in developing countries the relevant new technologies and know-how on a voluntary basis and/or in accordance with sound commercial principles,

appeals to international organizations and donor countries

to assist the developing countries in the Asia-Pacific region in exploring ways and means of improving transfer of technology, including technical and financial assistance.

TECHNOLOGY KNOWLEDGE TRANSFER IN THE FIELD OF BROADCASTING

The Regional Telecommunication Development Conference for Asia and the Pacific,
Singapore 10-15 May, 1993,

considering

1. that new technologies are being rapidly developed in the fields of sound and television broadcasting;
2. that, whilst enabling new and sophisticated broadcasting systems to be introduced, these technologies can also assist in the improvement of existing services;
3. that such technologies can enable broadcasters to meet some needs which could not easily be met with currently-applied technologies (for example, multiple broadcasting channels);
4. that, in a highly competitive environment caused by international services delivered by satellites, it has become an urgent necessity for national broadcasters in developing countries to provide nation-wide coverage and high quality services;
5. that broadcasters in developing countries of the Asia-Pacific region have very little access to professional information about new technologies, since they are usually unable to participate in international equipment exhibitions and symposia due to financial constraints,

noting

1. that the BDT, the ABU and the Friedrich Ebert Stiftung Foundation (FES) jointly organized a seminar on new broadcasting technologies in Singapore from 5 to 8 May 1993;
2. that this seminar was highly successful and provided benefits to a number of professional broadcasting engineers and their respective organizations,

resolves

1. that the BDT cooperate with the ABU to organize seminars or workshops on emerging broadcast technologies;
2. that such seminars be arranged at appropriate intervals, resources permitting,

invites

the Asia-Pacific Broadcasting Union (ABU) and the Radiocommunication Bureau (BR) to cooperate with the BDT for the purposes of this Resolution.

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**SPECIAL ASSISTANCE PROGRAMME FOR THE LEAST DEVELOPED COUNTRIES (LDCs)
IN THE ASIA AND PACIFIC REGION**

The Regional Telecommunication Development Conference for the Asia and Pacific Region;
Singapore, 10-15 May 1993,

considering

1. the ITU's overall policy of assistance to LDCs and in particular Resolution No. 26 of the Nice Plenipotentiary Conference (1989), which

instructs the Secretary-General

1. to continue to review the state of telecommunication services in the Least Developed Countries identified by the United Nations and needing special measures for telecommunication development;
 2. to report his findings to the Administrative Council;
 3. to propose concrete measures intended to bring about genuine improvements and provide effective assistance to these Least Developed Countries from the Special Voluntary Programme for Technical Cooperation, the Union's own resources and other sources;
 4. to report annually on the matter to the Administrative Council;
2. the decision of the UN system to lend greater assistance to the LDCs in accordance with the Programme of Action for the LDCs that was decided by the UN Paris Conference (1990);
 3. the endorsement by the Additional Plenipotentiary Conference (Geneva, 1992) of the High Level Committee's (HLC) Recommendation No. 21, which *recommends* that the Telecommunications Development Bureau (BDT) give special attention to the requirements of the Least Developed Countries,

noting

1. that there are currently 48 LDCs¹ throughout the world, 29 of which are in Africa (south of the Sahara), 13 in Asia and the Pacific², five in the Arab Region, and one in the Americas;
2. that although the ITU - due to limited resources - cannot assist LDCs financially in the expansion and modernization of their networks, it can - through the practically-oriented programmed activities, well-coordinated with the other projects financed by other resources in the countries concerned - assist in the improvement of the quality of existing networks and services and help LDCs in the region to generate more revenue as a result of this improved efficiency;
3. that many of the projects proposed by the ITU, APT and other (sub)regional organizations are particularly relevant for the LDCs;

¹ This figure includes Namibia which is considered as an LDC in accordance with UNGA Resolution 45/198.

² Afghanistan, Bangladesh, Bhutan, Cambodia, Republic of Kiribati, Lao, Maldives, Myanmar, Nepal, Solomon Islands, Tuvalu, Vanuatu, Western Samoa

4. that the Administrative Council, at its 47th session in June/July 1992, adopted a joint programme approach for the provision of ITU assistance to LDCs, which concentrates on four main areas (management, maintenance, planning and training); that the Asia and Pacific LDCs are thus to benefit from all programme activities included in the ITU Assistance Programme to LDCs (Annex 1); and that this programme could be extended if additional resources are available and other partners show interest in participating in development,

requests the ITU

1. to increase the funds made available for LDCs in its regular budget with a view to enhancing their impact;
2. to cooperate with the APT in strengthening regional technical cooperation among developing countries (TCDC) and in encouraging the developed countries to enhance their assistance programme for the benefit of LDCs;

resolves

to endorse the following activities included in the LDC programme of the ITU (see addendum) and for which financing is also sought through other sources:

- a. assistance on the reform and restructuring of the telecommunication sector;
- b. improvement of the maintenance of the telecommunication networks;
- c. development of networks and services, including those in rural areas, to attain better efficiency and self-reliance;
- d. human resources development;

appeals

to the international and regional financial and development institutions, the regional organisations concerned, governments, and the private sector to provide resources, in cash or in kind, to support the ongoing and planned activities in LDCs.

**Special Assistance Programme for the Least Developed Countries (LDCs)
in the Asia and Pacific Region
(Summary 1993-1997)**

	Project Title	Duration (years)	Objectives	ITU Contr. (SF000)	Other Sources (SF000)
1	Assistance on the reform and restructuring of the telecommunication sector	2	To provide consultancy services and assistance to LDCs in the formulation of sector policy and regulatory reforms which would best meet the needs of the countries concerned. To review and analyse the restructuring programme taking place in developing countries in order to disseminate experience.	200	600
2	Improvement of the maintenance of telecommunication networks	3	To assist LDCs in the improvement of the standard of maintenance in switching, transmission, outside plant and power supplies, and to maintain the quality of services at an acceptable level and with a minimum cost.	450	1,500
3	Development of networks and services, including rural areas, so that they become more effective and self-reliant	4	To define the strategy for the extension of telecommunication networks according to countries' priorities and needs; to propose models for development of services in rural areas; to conduct and coordinate economic studies on the cost and impact of rural telecommunication programmes with a view to encouraging efficient operation network.	500	1,500
4	Human Resources Development	3	To conduct training courses and workshops in telecommunications highlighting management aspects, addressing the known (urgent) common training needs of the countries concerned, and to support national training centres for better self-efficiency.	300	900

Note : The ITU has allocated 2.2 million Swiss francs in 1992 and 2.3 million Swiss francs in 1993 from its own funds for the LDCs; that while this amount is not large, it will act as a catalyst; that the LDCs are also expected to benefit from appropriations from the ex-Special Voluntary Programme for Technical Cooperation as well as from other sources; that it has been proposed that some 60 to 75% of LDC funds be used for multi-LDC joint activities and that the remainder be kept in reserve for individual requests and to meet various unforeseen activities, including emergencies.

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**VHF/UHF PROPAGATION MEASUREMENTS
IN THE ASIA-PACIFIC REGION**

The Regional Telecommunication Development Conference for Asia and the Pacific,
Singapore, 10-15 May 1993,

considering

1. that the Radiocommunication Sector recommended method for propagation prediction in the VHF/UHF bands is largely based on studies carried out in temperate areas;
2. that tropospheric parameters such as temperature, atmospheric pressure, water vapour concentration, and variations in surface refractivity are different in tropical areas from those in temperate areas;
3. that the results of Radiocommunication Sector studies have, in several cases, been found not to be applicable in tropical areas;
4. that accurate prediction methods are necessary for effective planning of broadcasting services, as well as efficient use of the radio spectrum;
5. that development of accurate prediction methods requires that measurements be carried out within the region over a sufficiently long period of time,

noting

1. that most countries situated in tropical areas of the Asia-Pacific region are economically developing and have inadequate resources to carry out propagation studies;
2. that Resolution No. 5 of WARC-79 invites the International Telecommunication Union to offer assistance, in collaboration with international and regional organizations, to developing countries in the tropical areas which endeavour to carry out propagation studies;
3. that the Forum Secretariat has recently, with support from the German technical cooperation organization Gesellschaft für Technische Zusammenarbeit (GTZ), completed an initial study of these problems and is considering a further investigative project on this topic,

resolves

1. that the BDT, in coordination with the Radiocommunication Bureau, assist broadcasting organizations in a selected group of countries and other relevant organizations, in the Asia-Pacific region, to carry out propagation measurements with the aim of:
 - 1.1 collecting long-term propagation data in VHF/UHF bands under different topographical and climatic conditions at selected centres in the tropical areas of the region for land, sea and mixed paths;
 - 1.2 analysing the data to develop propagation prediction methods suitable for the Asia-Pacific region;
 - 1.3 contributing data to the relevant Study Groups of the Radiocommunication Sector;
2. that to this end the BDT prepare a suitable project proposal in collaboration with member countries in the region, the Asia-Pacific Broadcasting Union (ABU) and the Forum Secretariat;
3. that the BDT mobilize resources for implementation of the project from all available sources,

requests

the BDT to collaborate with the Asia-Pacific Broadcasting Union (ABU) in respect of this project and, in particular, to encourage ABU Members to submit the results of measurements to the Radiocommunication Bureau.

TECHNICAL ASSISTANCE TO BROADCASTERS

The Regional Telecommunication Development Conference for Asia and the Pacific,
Singapore, 10-15 May 1993,

considering

1. that there are a number of factors which impede planned development of broadcasting services in developing countries of the Asia-Pacific region;
2. that a regional UNDP-funded project - RAS/89/007, a summary of which is given in the Annex, was implemented by the International Telecommunication Union (ITU) and provided invaluable assistance to the participating countries in some key areas of development;
3. that, owing to its limited funding and duration, the regional project RAS/89/007 could cover, on a minimal scale, only the most urgent of the numerous problems faced in operation and development of broadcasting services in the participating countries;
4. that, in order to consolidate the gains of the project mentioned above, it is essential to take further actions in specific areas which could not be fully addressed in the regional project;
5. that developing countries in the Asia-Pacific region are in continuing need of assistance from international organizations because of inadequate technical and financial resources,

noting

1. that the terminal report and the specific country reports related to the project RAS/89/007 identify the key factors impeding planned development of broadcasting services in the countries which participated in the project, and include specific recommendations for follow-up action as summarized in the Annex;
2. that these recommendations are based on extensive surveys and studies carried out by project experts, the results of which were reported to and implicitly endorsed by the countries concerned, as well as the Standing Engineering Committee of the Asia-Pacific Broadcasting Union, which was a cooperating agency;
3. that the general recommendations contained in the terminal report are applicable not only to the fourteen participating countries, but also to other developing countries of the region,

resolves

1. that the BDT consider the recommendations of the project for follow-up action and initiate necessary steps for implementation of these recommendations, in consultation with the Administrations concerned as well as the Asia-Pacific Broadcasting Union (ABU);
2. that the BDT invite the Administrations concerned and the ABU to indicate priorities between various recommendations contained in the above reports;
3. that the BDT elaborate project proposals to address the high priority needs;
4. that the BDT seek to mobilize resources from all available sources to implement such projects;
5. that, as far as possible, the BDT arrange the services of experts from within the region to implement such projects in order to promote technical cooperation among developing countries;

6. that this Resolution apply not only to the countries which participated in project RAS/89/007, but also to other developing countries of the region,

invites

1. the Asia-Pacific Broadcasting Union (ABU) to cooperate with the BDT in implementing this Resolution;
2. the ABU and the AIBD to assist the BDT in identifying experts for the purposes of resolves (5).

ANNEX

SUMMARY INFORMATION ON RAS/89/007

1. **Project Title:** Technical Training and Advisory Assistance in Sound and Television Broadcasting
2. **Participating Countries:** BANGLADESH, BRUNEI DARUSSALAM, CHINA (PEOPLE'S REPUBLIC OF), INDIA, INDONESIA, IRAN (ISLAMIC REPUBLIC OF), LAO PEOPLE'S DEMOCRATIC REPUBLIC, MALAYSIA, NEPAL, PAKISTAN, PAPUA NEW GUINEA, PHILIPPINES, SRI LANKA AND VIETNAM (REPUBLIC OF)
3. **Duration:** 30 months, between 1 July 1990 and 31 December 1992
4. **Immediate Objectives:**
 1. An improved standard of technical cooperation and maintenance of existing sound (radio) broadcasting services.
 2. An improved standard of technical operation and maintenance of existing television broadcasting services.
 3. Prepare countries for future expansion to enable them to provide maximum sound (radio) broadcasting coverage for their country. Planning and Design.
 4. Prepare countries for future expansion to enable them to provide maximum television broadcasting coverage for their country. Planning and Design.
 5. Enable the ABU and the countries to decide on a centralized test, calibration and equipment evaluation capability and provide appropriate recommendations.
 6. Arrange an exchange of information on modern broadcasting engineering and equipment in the form of a workshop between broadcasting equipment manufacturers (world-wide) and broadcasting organizations which are ABU and AIBD members in the developing countries of the Asia and Pacific region.
5. **Outputs produced**
 - 5.1 A set of 20 Technical Manuals were produced to act as guidelines on technical operation and maintenance procedures for existing sound and television broadcasting equipment in each country.
 - 5.2 Three 2-week training workshops were organized and conducted, in collaboration with the AIBD, in areas of network and coverage planning, operation and maintenance, technical stores inventory control and management.
 - 5.3 National counterparts in all participating countries were assisted by means of documented planning guidelines, and actual planning exercises were carried out in some countries.
 - 5.4 Sample sets of technical specifications for sound and television broadcasting equipment were prepared and circulated. Additionally, a scheme of continuous exchange of such specifications among ABU members was initiated.
 - 5.5 A three-day workshop of broadcasters and broadcast equipment manufacturers/suppliers was organized immediately after "Broadcast Asia 92", and fellowships were awarded to insure attendance from participating countries.

6. Summary of Recommendations (extracted from the Project's Terminal Report)

To secure sustainability of benefits obtained from the project and develop them further, the following are recommended as follow-up:

- 6.1. More dynamic, economy and market oriented, modern organizational structures with centralized planning and investment but decentralized operation and management may be considered by each organization and country. To this effect, expert assistance from international agencies may be sought.
 - 6.2. Master plans must be drawn up in each participating country, for the development of broadcasting, based on immediate, short-term and long-term needs. Such plans should be periodically reviewed to accommodate technological developments and changing needs.
 - 6.3. Assessment of the coverage of sound and television broadcasting services, interferences and the use of radio-frequency spectrum should be continued through field strength surveys initiated under the project.
 - 6.4. Based on the overall broadcasting philosophy of the country, technical operations and maintenance strategies should be established by each organization at the corporate level.
 - 6.5. On the basis of the Project's output documents, sets of instructions should be prepared on technical operations, maintenance and safety, by each broadcasting organisation for each network or station (at central, regional or provincial, district and station levels).
 - 6.6. Broadcasting system standards as specified by the ITU (through the Radio Regulations, CCIR Recommendations, etc.) must be adhered to and closely monitored.
 - 6.7. In-country crash courses on modern management techniques should be arranged for all senior executive levels and engineers at every level.
 - 6.8. The ABU Technical Centre should be enabled and supported to establish a set of comprehensive and computerized databases which would basically function as a link to match the needs of ABU members with globally available information and resources.
 - 6.9. Training methods and programmers of AIBD should be improved through further and better support of the member countries for a parallel expansion of its resources.
-

IMPLEMENTATION OF AS-RDC RESOLUTIONS

The Regional Telecommunication Development Conference for Asia and the Pacific,
Singapore 10-15 May, 1993,

noting

1. that the realisation of the goals, objectives and action programme outlined in the AS-RDC Resolutions will require considerable resources, which may not be readily available;
2. the proximity of the first World Telecommunication Development Conference, which will take place in Buenos Aires, Argentina, 21-29 March 1994,

recalling

the coordinating and catalytic role of the ITU, and in particular that the functions of the development sector should be, inter alia, to:

- "activate the mobilization of resources to provide assistance..." (Article 21 d of the Constitution);
- "promote and coordinate programmes to accelerate the transfer of appropriate technologies" (Article 21e of the Constitution);
- "encourage participation by industry in telecommunication development..." (Article 21 f of the Constitution),

considering

1. the need to avoid duplication of efforts and, hence, to reduce the total cost of achieving the goals and objectives declared in the AS-RDC Resolutions;
2. that the activity programme, broadly outlined in the various AS-RDC Resolutions, needs to be planned in more detail with clear indications of responsibilities of the various partners involved, as well as of the required resources and associated costs;
3. that coordinated efforts in regional and global telecommunication development programmes should achieve the goals and objectives outlined in the AS-RDC/93 Resolutions in a more cost-effective way than if each country or regional organization attempts to achieve them on its own,

recognizing

1. the efforts made by, in particular, the ITU, APT and ABU, to identify regional needs and to formulate the projects to meet these needs submitted to this Conference;
2. that many of these projects are already supported by a number of Governments in the region,

considering further

that these projects are related to the implementation of the AS-RDC Resolutions but that the mobilization of resources for these and their execution require further coordination between the partners involved,

resolves

1. that the first Asia-Pacific Coordination Meeting (see AS-RDC/93 Resolution No. 1), taking into account available resources and priorities, analyse and review detailed programmes of action elaborated by the organizations concerned, according to their respective mandates, for the implementation of AS-RDC Resolutions and submit a report on the outcome to the Executive Organs of the organizations concerned for their consideration;
2. that the activities undertaken by the organizations concerned for the implementation of the AS-RDC Resolutions in accordance with the outcome of the Coordination Meeting be reviewed by the forthcoming World Telecommunication Development Conference (WTDC), Buenos Aires, Argentina, with a view to avoiding duplication of efforts at the global level;
3. to support, consistent with Member needs, the broad objectives and main activities of such regional projects as outlined in proposals submitted to this Conference by the ITU, APT and ABU;
4. that the project proposals submitted to the AS-RDC should be reviewed by the partners involved and reformulated as appropriate to avoid duplication,

urges

Member countries and donors to cooperate with the ITU/BDT in the mobilization of resources required for the activities geared towards the implementation of AS-RDC Resolutions in line with the **resolves** of this Resolution.

DEVELOPMENT OF MARITIME RADIOCOMMUNICATION SERVICES IN ASIA AND THE PACIFIC

The Regional Telecommunication Development Conference for Asia and the Pacific,
Singapore 10-15 May, 1993,

considering

the existing deficiencies of maritime radiocommunication services in the Region as contained in the findings of the Project RAS/86/123,

considering also

1. that the Global Maritime Distress and Safety System (GMDSS), adopted by the International Maritime Organization (IMO) as the 1988 amendments to the 1974 Convention for the Safety of Life at Sea, came into effect on 1 February 1992 in order to improve maritime distress and safety communications, including those for distress alerting, search and rescue, and the dissemination of maritime safety information, such as navigational and meteorological warnings;
2. that the GMDSS will affect all cargo ships over 300 gross tons and all passenger ships engaged on international voyages;
3. that under the GMDSS's seven-year implementation period ending on 1 February 1999, States undertake to designate sea areas of operation and to make available appropriate shore-based radiocommunications facilities according to the sea areas they define, and that also in that time frame, all ships subject to the GMDSS shall be provided with radio installations capable of complying with specific functional requirements;
4. the desirability that countries in the region take steps to ensure an early implementation of the GMDSS provisions,

considering further

the relevant Resolutions and Recommendations on Maritime Mobile Services and Maritime Mobile-Satellite Services in the Radio Regulations,

realizing

that although the results obtained in the Project RAS/86/123 were very important, several countries in the Region still need ITU support in overcoming the difficulties of implementing the GMDSS within the time schedule above-mentioned, specially concerning shore-based facilities,

recognizing

the need for effective maritime radiocommunications, for both commercial and distress and safety purposes, to enhance commercial activities, efficiency of shipping operations and the safety of life at sea,

recommends

that the BDT organize a project, as outlined in the annex, to elaborate, with the fullest participation of national officials and in cooperation with the regional organizations concerned, IMO, Inmarsat and other organizations, the maritime radiocommunication master plans for the implementation of the GMDSS and the development of maritime radiocommunication services in the Region,

urges

all countries in the Region to support the above-mentioned BDT project so as to ensure its urgent implementation,

appeals

to countries in the Region, financing institutions and UNDP to provide the necessary assistance for implementation of the above-mentioned BDT project.

OUTLINE OF THE BDT PROJECT

DEVELOPMENT OF MARITIME RADIOCOMMUNICATION SERVICES IN ASIA AND THE PACIFIC

I. Objective

The immediate objective is to elaborate master plans for the development of maritime radiocommunication services in the following countries: Bangladesh, Brunei, Fiji, India, Indonesia, Malaysia, Myanmar, Pakistan, Papua New Guinea, Philippines, Singapore, Sri Lanka, Thailand, Tonga and Viet Nam.

The master plans should contain the description of the existing situation, a plan for improvement and a plan of action. The description of the existing situation and the plan for improvement should contain the configuration of the system, including commercial and distress and safety facilities, a description of the coast stations, and eventually, of the Inmarsat land earth station, the operating and maintenance structure, staff and training needs and the overall organization and management of the maritime radiocommunication network. The plan of action should provide straightforward information on the cost estimates and the time schedule necessary to implement the proposed master plan. In summary, the master plan should provide the necessary technical and financial information required in the search of financing and in the preparation of the calls for bids.

II. The BDT's role

The task of the Telecommunications Development Bureau (BDT) will be to supervise this regional project and, in coordination with the regional organizations concerned, IMO and Inmarsat, to transmit the planning know-how in this field to the various countries and to give each country the necessary advice and support on particular items.

III. Implementation of the project

It is envisaged that the various stages of the implementation of the project will be as follows:

ACTIVITIES	BY WHOM	ESTIMATED COST - US\$
1. Adoption of a guide for the formulation of national master plans for the development of maritime radiocommunication services in the Region.	BDT	30.000
2. Nomination by each country of a National Coordinator of the project and his Alternate. They will be in charge of the elaboration of the master plans. Preferably the Coordinator and his Alternate should be transmission engineers, experienced in maritime radiocommunications.	Administrations	in kind
3. Creation by each Administration of a working group on the development of maritime radiocommunications chaired by the National Coordinator and with participants from SAR (Search and Rescue) Authorities, Port Administration and the main maritime transport bodies. This working group will assist the National Coordinator in the elaboration of the master plan.	Administrations	in kind

4.	<p>Organization by the BDT of a seminar with the following objectives:</p> <ul style="list-style-type: none"> - to brief coordinators on the use of the planning guide; - discussion on the findings and proposals contained in the report of the Project RAS/86/123; and - to provide National Coordinators with updated information on maritime radiocommunications, including the GMDSS. 	<p>BDT</p> <p><u>Note:</u> Attended by the National Coordinator and his Alternate. Experts from IMO, Inmarsat and others will be invited, in addition to ITU experts.</p>	90.000
5.	Preparation by National Coordinators of draft master plans.	<p>Administrations (National Coordinators)</p> <p><u>Note:</u> Advice and support provided by the BDT at Administrations' request, depending on the difficulties that may arise during this work. Depending on circumstances such support may be provided by correspondence or by field missions.</p>	in kind
6.	Elaboration and organization by the BDT of a schedule of workshops to discuss the draft master plans elaborated by the National Coordinators.	<p>BDT</p> <p><u>Note:</u> Experts from IMO, Inmarsat and others will be invited, in addition to ITU experts.</p>	90.000
7.	If necessary and at the country's request, review by the BDT of the master plan drawn up by each National Coordinator, before final publication.	<p>BDT</p>	60.000

IV. Project outputs

For each participating country:

- an updated master plan for the development of maritime radiocommunication services including the necessary technical and financial information required in the search for financing and in the preparation of calls for bids;
- training of two specialists in maritime radiocommunication planning and development to the point where they are fully capable of supervising/coordinating the implementation of the activities called for in the master plan.

V. Supporting role of the BDT

After the finalization and publication of the master plans, the BDT will remain available to lend support to member countries in their later phases and according to their needs, with the possible participation of other cooperation organizations. These phases may include the distribution of master plans to various sources of finance, preparation of calls for bids, evaluation of manufacturers' bids, technical acceptance of installations, etc.

**ASSISTANCE FROM THE MANUFACTURING SECTOR
IN THE OPERATION AND DEVELOPMENT OF BROADCASTING SERVICES**

The Regional Telecommunication Development Conference for Asia and the Pacific,
Singapore 10-15 May, 1993,

considering

1. that broadcasters in the Asia-Pacific region encounter numerous difficulties in operating and developing their services, which can be overcome with greater cooperation by manufacturers;
2. that such cooperation needs to be organized on a continuing basis;
3. that one of the main thrusts of BDT's action programme is aimed at encouraging the private sector to invest and contribute in development projects,

noting

1. that, within the framework of Project RAS/89/007, the ITU organized a workshop in June 1992 with the objective of improving dialogue on the ways in which broadcasters and manufacturers can work together to provide the public with reliable and improved services, and that the workshop made some proposals for this to be effectively achieved;
2. that the Asia-Pacific Broadcasting Union (ABU) assisted the ITU in the aforesaid activity;
3. that as a result of (1) and (2), an understanding exists of the difficulties encountered by Asia-Pacific broadcasters and the ways in which manufacturers can help to solve them,

recommends

1. that the BDT promote greater cooperation between broadcasters and manufacturers in all possible ways including the following:
 - streamlined procedures for supply of information and spares;
 - participation of manufacturers in Human Resources Development;
 - improved after-sale support to broadcasters;
 - collection of statistical information on equipment performance;
2. that the BDT's role envisaged under **recommends** 1 be undertaken at minimum cost and without affecting the priorities already established,

requests

the Asia-Pacific Broadcasting Union (ABU) and existing associations of manufacturers, such as the International Association of Broadcasting Manufacturers (IABM), to collaborate with the BDT for the purposes of this Recommendation.

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**TELECOMMUNICATION TARIFFS FOR SIGNAL TRANSMISSION CIRCUITS USED
BY INFORMATIONAL AND EDUCATIONAL MEDIA ORGANIZATIONS**

The Regional Telecommunication Development Conference for Asia and the Pacific,
Singapore 10-15 May, 1993,

considering

that an appropriate tariff structure is an important factor for the distribution and exchange of television programmes, news, information and educational material on an international level, especially between developing countries,

noting

the report on telecommunication tariffs applicable to information organizations drawn up by the ITU and UNESCO as a result of a study undertaken in 1986,

recommends

that the BDT and Telecommunication Standardization Bureau (TSB) cooperate with UNESCO and other organizations concerned in undertaking the necessary studies on appropriate tariff models to *promote the growth of international news and information flow* and that the BDT advise Member states of the results of these studies.

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**USE OF ADVANCED SATELLITE SERVICES AND TECHNOLOGIES IN SUPPORT OF
TELECOMMUNICATION DEVELOPMENT IN THE ASIA-PACIFIC REGION**

The Regional Telecommunication Development Conference for Asia and the Pacific,
Singapore, 10-15 May 1993,

recognizing

the rapid and complex advances taking place in satellite technologies and the corresponding expansion in the industry;

the requirements of all types of users, including disaster relief agencies, the maritime, aeronautical and land transport communities, the news media, environmental agencies, and many others for the availability of the latest advances in satellite communications services and the requirements of many countries for telecommunication services for rural and remote areas;

the potential these technologies offer member administrations of the Asia-Pacific region for the development of their telecommunication sector and economy,

recalling

the decisions of the Additional Plenipotentiary Conference, Geneva, 1992, regarding the functions of the Telecommunication Development Sector, in particular Article 21, paragraphs f), g) and h) of the Constitution,

noting

the decisions, recommendations and conclusions of a number of international conferences and meetings on the development of satellite communications, including:

- those of WARC 92 concerning the future of mobile satellite communication services, the additional allocations made to accommodate future requirements in the mobile satellite service and the on-going discussions in various other fora concerning the decisions of WARC92;
- the 6th INMARSAT Assembly of Parties decision to adopt the International Agreement on the Use of INMARSAT Ship Earth Stations (SESS) in the Territorial Sea and Ports, Recommendation 3.1.6 of WARC-MOB-87 concerning the use of SESS and Conclusions of the IMO Maritime Safety Committee (May 1991) on this Agreement;
- the October 1992 ICAO Assembly Recommendation on the Use of Aeronautical Earth Stations for Non-Safety Air-Ground Communication, subject to certain conditions (e.g. licensing, priority provision for safety services, etc.);
- those of recent INMARSAT meetings, such as the Intergovernmental Meeting of Experts on the Trans-Border Use of Land Mobile Earth Stations (LMES) on the movement and use of Land Mobile Earth Stations across national borders and the INMARSAT Regional Mobile Satellite Conference (September 1992);
- the 1991 8th INMARSAT Assembly of Parties decision to establish an Inter-sessional Working Group on the future evolution of INMARSAT and the fact that this IWG will be reporting its findings to the October 1993 Assembly of Parties;

considering

the complex policy and regulatory challenges posed to governments by the fast-paced development of satellite communications technology in an increasingly competitive global economy;

taking into account

the sovereign right of states to establish laws, policies and regulations consistent with their individual telecommunication goals and requirements,

invites

member administrations of the region to inform themselves of the meeting results in "**noting**" above and to consider the potential opportunities which new and emerging satellite communication services and technologies may offer their respective telecommunication development efforts;

recommends

that the BDT, in collaboration with the Radiocommunication Bureau and Telecommunication Standardization Bureau and other relevant organizations, assist member administrations of the Asia-Pacific region in identifying these opportunities and establishing rules, regulations and policies, as appropriate, to take advantage of these technologies.

Annex VIII

**PANEL OF MINISTERS
AND HIGH-RANKING OFFICIALS
Friday 14 May 1993 p.m.**

**List of participants
Statements by panellists***

* Those submitted in writing.

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PANEL OF MINISTERS AND HIGH-RANKING OFFICIALS

Friday 14 May 1993 p.m.

List of participants

CHAIRMAN

Mr. Hong Yew NG
Director General,
Telecommunication Authority of Singapore

BANGLADESH

Mr. Fazlur RAHMAN
Chairman,
Bangladesh Telegraph and Telephone Board

BRUNEI DARUSSALAM

H.E. Mr. Dato Haji Zakaria Haji SULAIMAN
Minister of Communications

CHINA

H.E. Mr. Xianzu YANG
Vice-Minister of Posts and
Telecommunications

FIJI

Mr. Berenado VUNIBOBO
Executive Chairman of the Board of Directors,
Fiji Posts & Telecommunications Limited

INDONESIA

Mr. Djakaria PURAWIDJAJA
Director General, Directorate General
of Posts & Telecommunications (POSTEL)

JAPAN

Mr. Shuji KUSUDA
Director-General, International Affairs Dept.,
Ministry of Posts and Telecommunications

KIRIBATI

Mr. Inatio TEANAKO
Managing Director, Telekom Kiribati Ltd.

KOREA D.P.R.

H.E. Mr. Chang Bong JIN
Vice-Minister of Posts and
Telecommunications

LAO P.D.R.

H.E. Mr. Thongsavath PRASEUTH
Vice-Minister of Communications,
Transports, Posts & Construction

MALAYSIA

Mr. Mohamed Ali YUSOFF
Director-General, Jabatan Telekom Malaysia

PAPUA NEW GUINEA

H.E. Mr. Martin THOMPSON
Minister for Information and Broadcasting

PHILIPPINES

H.E. Mrs. Josefina T. LICHAUCO
Vice-Minister for Communications
Department of Transportation
and Communications

THAILAND

Mr. Smith TUMSAROCH
Director General,
The Post & Telegraph Department

VIETNAM

Mr. Mai Liem TRUC
Deputy Director General,
Directorate General of Posts
& Telecommunications

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STATEMENT BY MR. FAZLUR RAHMAN
Chairman, Bangladesh Telegraph and Telephone Board
(BANGLADESH)

Mr. Chairman,
Your Excellencies,
Mr. Secretary-General of the ITU,
Mr. Director of BDT/ITU,
Distinguished Delegates, Ladies and Gentlemen,

Bangladesh having a very high density of population and a very low density of telecommunication facilities, the opportunity to join this Regional Telecommunication Development Conference has been of very high importance to us. With telecommunication facilities, some countries of this region have attained very high level of development and excellence and many other countries of the region, including mine, Bangladesh, are striving hard to provide minimum telecommunication service facilities to their people. Realising the power of telecommunications in the overall development of the country's economy, Bangladesh is striving hard to develop its own telecommunication facilities. With this end in view, Bangladesh is trying to double its present telecommunication facilities in the next 3 to 4 year period. This, however, will call for tremendous efforts on our part and the direction and guidelines given by this Conference shall help us immensely in achieving this goal. As a matter of fact, with ITU's support, Bangladesh hopes to arrange a National Telecommunication Development Conference, as soon as possible, which will enable our country to promote telecommunication development in the right direction.

Finally, I would like to thank the Telecommunication Authority of Singapore and the Secretary-General of the ITU for having provided us with such grand facilities to discuss and arrive at a full consensus and resolutions in a very cordial atmosphere.

Thank you.

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STATEMENT BY HIS EXCELLENCY MR. DATO HAJI ZAKARIA HAJI SULAIMAN
Minister of Communications
(BRUNEI DARUSSALAM)

Mr. Chairman,
Dr. Pekka Tarjanne, Secretary-General of the ITU
Your Excellencies,
Distinguished delegates,
Ladies and Gentlemen,

Let me first of all thank you, Mr. Chairman, for giving me the floor. It is indeed both a privilege and an honour for me to be present here today at this Regional Telecommunication Development Conference. I would like to express my sincere appreciation to the host Government and the ITU for the efficient manner this Conference is organized. Let me offer my congratulations to you, Mr. Chairman, on your election as Chairman of the Conference. I am sure, with your expertise and wide experience, as you have demonstrated in the last few days, you will guide the Conference to a very successful conclusion.

Judging from the reports presented to us by the Chairmen of the Committees, during the last few days, our officials have worked very hard and have had extensive discussions and exchanges of views over a wide range of issues affecting telecommunications. The many resolutions before us reflect the fact that we are all strongly committed in our efforts towards improving, strengthening and enhancing facilities in the telecommunications sector. Telecommunications continue to play an important role in our society and will continue to do so in the decades to come. It is recognized that telecommunications, particularly telephones, are becoming a necessity in our daily life. It is no longer a luxury, available only to the privileged. It is already an important vehicle of economic growth. Commerce and trade depend on the availability of an efficient telecommunication service. The Asia-Pacific region is recognized as the fastest growing region in the world, but unfortunately, it also has many developing countries with poor telecommunication infrastructure. It is reported that the biggest demand pool in the world is for telephone service in the third world, to which most of the countries of the region belong. Therefore, this Conference is held at the most appropriate time.

I am happy to note that the deliberations during the last four days revealed a full measure of concurrence among countries in the Asia-Pacific region over a wide spectrum of issues. It is widely recognized that change is about the only constant factor in modern telecommunications. The sustained pace of technical innovations has opened up new issues and new applications. In placing the Asia-Pacific region within the context of these changes, and in the light of these challenges and those that await us in the years ahead, the Asia-Pacific region will need to step up the pace of development even more than before - development in both dynamic adaptation and sustenance of growth.

The many resolutions, which have been presented to us for adaptation, will give a full expression of our joint efforts and endeavours. More than ever these will have a significant resounding effect and impact on other regional telecommunication development conferences. Besides, the resolutions will serve as our regional inputs to the World Telecommunication Development Conference scheduled for Buenos Aires in March 1994. The Asia-Pacific region, already recognized as the Economic Growth Centre of the 21st century, will need to play a more significant and aggressive role in the fast growing telecommunications sector, if it wants to maintain its place in the new world of global competition.

We have covered many important issues in the last few days. The decisions reached will have far reaching implications. These reflect our commitment to the future. I will attempt to comment on a few of the resolutions before us. The Resolution on "Coordination Mechanism for Regional Cooperation", for instance, is an important resolution, which will give us a jump-start in our efforts toward more cooperation, avoid duplications and more importantly optimise the use of scarce and expensive resources. This resolution will bring together many regional, subregional and international organizations to collaborate with ITU and the Telecommunication Development Bureau (BDT) - in the process of continuous exchange of opinions and information.

Brunei welcomes the Resolution on "Telecommunications Strategies and Policies for the Asia-Pacific region". We share the views expressed by many delegates that the development of the telecommunication sector varies widely amongst countries of this region and the need to find a workable solution to narrow this gap. We believe that this Conference has addressed this issue correctly. We particularly welcome the proposal to set up a Working Group on Telecommunication Policies and Strategies under BDT. It is a step in the right direction. The state of development of telecommunications infrastructure in the countries of the region also varies widely from country to country as the costs involved to construct and maintain telecommunications networks are quite considerable. There are however new ways of funding these expensive but necessary expenditures and the resolution before us takes these into account.

We also welcome the step proposed to be taken on the question of standardization. As the world, metaphorically speaking, becomes smaller and the indication of global economic growth becomes more apparent, the role of telecommunications becomes more and more important. In this changing political and economic environment, we need to be able to communicate with one another, in different parts of the world with different time zones at any time of the day or night. The question of standardization was addressed by the Additional Plenipotentiary Conference held in Geneva in 1992 and again, in this region, by the APT Ministerial Level Meeting held in Singapore, also in 1992. This is not, therefore, a new issue. This Conference now puts emphasis on this subject and we welcome the steps proposed to be taken which we feel will benefit us more. A harmonized, compatible and inter-operable network can only bring benefit to us and our society. Not only will it bring increased economic benefits but we shall also harvest social and political gains.

As a developing country, Brunei is more aware than most other of the importance of Human Resources Development and proper Human Resources Management. As we continue our efforts to develop, expand and improve our services, we need more properly trained and skilled technicians. These are never too easy to obtain in this competitive world, particularly in the ever changing telecommunications environment. We have very limited capacity to conduct in-house training but we need to continually upgrade the skills of our technicians to enable us to maintain our expanding networks. We, therefore, welcome this Resolution.

Mr. Chairman,

Before I close, I also would like to say that we view the other issues discussed as no less important, which all highlight the increasing role played by telecommunications in our present day society. We support the adoption of the resolutions which have been laid before us.

Finally, Mr. Chairman, I wish once again to express my delegation's profound appreciation to the Government and People of Singapore for the warm hospitality extended to us and to the organizers of the Conference and to you, personally Mr. Chairman, for the excellent arrangements made for this Conference. We also acknowledge the important role played by ITU for the progress of telecommunications in the Asia-Pacific region.

Thank you.

STATEMENT BY HIS EXCELLENCY MR. XIANZU YANG
Vice-Minister of Posts and Telecommunications
(CHINA)

Distinguished Mr. Chairman,
Distinguished Secretary-General of the ITU,
Distinguished Excellencies,
Ladies and Gentlemen,

It is my great pleasure to have the opportunity to participate in the first Telecommunication Development Conference for Asia and the Pacific and this panel of high-ranking officials and Ministers. Just now we listened to the presentation of the outcome of the committee work by Chairmen of the Committees. The participants have had serious and earnest discussions on the interesting issues concerning the present telecommunication development in this region, and a series of constructive resolutions will be worked out. I believe that the successful conclusion of the Conference and the implementation of the resolutions will undoubtedly have an active impact on the promotion of telecommunication development in this region.

With the prosperous development of the economy in this region in recent years, telecommunications, as an infrastructure of economic development, is faced with opportunities as well as challenges. All the countries are actively studying the strategies, policies and measures in telecommunication development so as to meet the demand of the developing economy and social progress. The holding of the Conference by the ITU at this significant moment to enable the telecommunications colleagues in the region to sit together, exchange experiences and ideas and explore issues concerning the enhancement of regional cooperation is really beneficial to all. Based on the practice of the accelerated telecommunications growth in China in recent years, I would like to state the following views :

1. The difference in socio-economic development has resulted in the different phases of telecommunication development in the Asia-Pacific countries and region. Therefore, the countries should determine their own telecommunication development strategies and policies by basing them on their actual conditions and the issues that they are faced with and thus achieve their respective telecommunications targets. Attention should be paid to the learning of the advanced experiences from various countries and regions but it is inadvisable to adopt or seek a unified model of development.
2. With the rapid development of telecommunication technologies, the updating period of telecommunication technology is getting shorter and shorter. I would like to suggest that the ITU and the APT continue with their coordination role, encourage and promote the transfer of technology from the developed countries to the developing countries as well as that between the developing countries and actively carry out bilateral and multilateral cooperation, as this cooperation is beneficial to all.
3. Telecommunication standardization should be further strengthened and should be able to catch up with the pace of the updating of telecommunication technology. We approve of the globalization of telecommunication standardization in the belief that it will ensure the compatibility and interconnectivity of various standards and will promote the global development of telecommunications. Hence it is our hope that the ITU will continue to play a leading role in telecommunication standardization.
4. In order to suit the need of the great development of telecommunications in this region, human resources development and training should be earnestly enhanced. As far as this is concerned, we should make full use of the existing training centres and training bases, improve and perfect them, and exchange the experiences of human resources development and training at intervals.

Finally, it is my sincere wish that through this Conference, the telecommunications colleagues from different countries will go forward hand in hand and cooperate with each other to bring telecommunication development in this vigorous region to a higher level. While I have the floor, I would like to express my gratitude to our host, the Telecommunication Authority of Singapore, and to the ITU for their contribution to the preparation and the organization of this Conference.

Thank you Mr. Chairman.

Thank you all.

SUMMARY OF REMARKS MADE BY MR. BERENADO VUNIBOBO
Executive Chairman of the Board of Directors,
Fiji Posts & Telecommunications Limited
(FIJI)

Mr. Vunibobo thanked the ITU for organizing the Conference. He also thanked the Telecommunication Authority of Singapore for hosting the event.

He stated that his delegation had no difficulty in approving the resolutions which had been discussed in the three committees of the Conference.

He suggested, however, that there was scope for improving the structure of the Conference as it was the first of its kind. Thus, the agenda could be sharpened and the focus could be more clearly defined.

He expressed the hope that the implementation of the resolutions could be co-sponsored by the countries concerned.

He suggested that perhaps, in the future, documents could be circulated well in advance, so as to enable delegates to study papers. This was particularly important for small delegations which did not always have the resources to cover adequately all the events of the Conference and could not contribute effectively to discussions unless they were given the opportunity to examine papers in advance.

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STATEMENT BY MR. DJAKARIA PURAWIDJAJA
Director General, Directorate General of Posts and Telecommunications (POSTEL)
(INDONESIA)

Mr. Chairman,
Excellencies,
Mr. Secretary-General of the ITU,
Mr. Director of BDT,
Distinguished delegates,

First of all, since it is the first time we have the opportunity to take the floor in the plenary session, on behalf of the Indonesian delegation, I would like to congratulate you for having been selected as Chairman of this very important conference. I would also like to congratulate the three Vice-Chairmen, the Chairmen of Committees, the Rapporteurs and the capable staff of ITU. With all your contributions, I am convinced that this Conference will achieve a great success.

Mr. Chairman,
Excellencies,
Ladies and Gentlemen,

Telecommunication development in the Asia-Pacific has to be given special attention since in this region, a very contrasting situation exists. There are advanced industrialized countries, developing countries and least developed countries as well. And apart from these three different categories, Indonesia sees that the highest priority for technical and development assistance should be given to the LDCs. Why? Because if we could compare the international/regional telecommunication system in the Asia-Pacific with the ring of a chain, in order to get a stronger chain, the weakest part of it should be strengthened. In other words, the greatest attention and highest priority should be given to the least developed countries (LDCs) and gradually be directed to more developed countries as needed.

Mr. Chairman,
Excellencies,
Ladies and Gentlemen,

In our view, development assistance to LDCs would be much more effective if developing countries could be involved as much as possible in this process. This is because the essential problems faced by LDCs could be better understood by developing countries rather than by industrialized countries. Likewise, assistance to developing countries would deliver an optimum result if carried out by industrialized countries. In this context, the role of international organizations such as ITU/BDT and APT, which are working on multilateral basis, is indispensable.

I would like to draw your attention to the role of international/regional organizations such as ITU/BDT and APT, particularly with respect to telecommunication development in Asia and the Pacific. With its very limited budget and small number of staff, we have recognized the important role played by APT, a long time before ITU decided, through the Plenipotentiary Conference (Nice, 1989), to strengthen its regional presence, including in the Asia and Pacific region. However, this does not mean that the role of APT should be terminated. The two organizations should work together more closely and cooperatively; their activities should complement each other. Duplication of effort, time and money should be avoided through better and more effective coordination. In this context, the needs of LDCs and developing countries should be sharply identified and used as a basis for undertaking any projects or works.

On behalf of the Indonesian delegation, I would like to endorse all the resolutions, which, I believe, have been intensively deliberated in Committees A, B and C. I am sure that the outcome of all the works done in these Committees, coupled with suggestions or proposals from all parties concerned, would be beneficial to all countries in this region. The ultimate objective of accelerating telecommunication development in this region, in my view, is two-fold. First, to narrow the gap between the most developed and the least developed countries; second, at the same time also to raise the whole status of telecommunication development status for Asia and the Pacific.

To conclude my comments and statement, allow me once again to express my gratitude and appreciation to all of you present here today, for your contribution, dedication and hard work for the great success of this conference.

Thank you for your attention.

STATEMENT BY MR. SHUJI KUSUDA
Director-General, International Affairs Department,
Ministry of Posts and Telecommunications
(JAPAN)

Mr. Chairman
Mr. Secretary-General, ITU
Distinguished participants,

I am very honoured to take part, with such distinguished Ministers and delegates, in this important panel. I would also like to take this opportunity to thank the Government of Singapore and the BDT Secretariat for all their efforts in preparing for this very important and successful Conference, which has given us a chance to meet as a region and exchange information and share our experiences concerning telecommunications development.

In particular, I appreciate having had an opportunity to talk face to face with the representatives of various international and regional organizations on development.

We have spent the past two days and a half discussing matters concerning the telecommunication development process through three major aspects: policy and financing, network harmonization and human resources. Many important resolutions and recommendations have been prepared after deep discussion.

It is a fact that this region is, as a whole, the most vigorously growing in the world. Carefully observing the situation, however, we have clearly found at this Conference that there still remain a lot of unsolved problems in telecommunications development. We are also all aware that the needs of developing countries are huge, but resources are quite limited. From this point of view, the discussion on the need to set up working groups and the endorsement of specific projects was too much highlighted at the committees, but the discussion on the practicability from the financial point of view seemed to be rather weak.

Therefore, I believe that it is important for all international and regional organizations to go hand in hand to coordinate development activities, avoiding the duplication of efforts and resources.

However, this is the first time a meeting of this kind is held in the Asia-Pacific Region and I am very pleased with the fact that we could exchange views and share problems concerning the telecommunication development process in this region. In other words, this is the beginning of the dialogue, not the end, and we shall continue these efforts.

Above all, taking this opportunity, I would like to comment on some resolutions and recommendations. I sincerely appreciate that a coordinating mechanism for regional cooperation will be set up.

In the telecommunication field, however, there still remain various kinds of problems to be solved. With regard to the development of telecommunications in the Asia-Pacific region, the APT has valuable experience for more than 20 years. It has made many contributions to human resources development through various kinds of seminars, training and fellowships.

The APEC is a rather new body, which covers broader economic issues. So far, with regard to the telecommunication field, it addressed some practical issues like teleports, data compilation and so on. In the future, the APEC may deal with socio-economic issues on telecommunications, such as the need for deregulation in Asia-Pacific telecommunications, the need for standardization, the influence of telecommunications tariffs on business activities and so on.

Basically, ITU/BDT should play a leading role in coordinating all the regional and sub-regional organizations. But it is not an easy task, because each organization has its own raison d'être and bureaucratic mechanism. Unless ITU/BDT achieves rational planning and conducts streamlined management, it will not be able to attract both the other organizations' attention and member countries' support.

With regard to telecommunications strategies and policies for the Asia-Pacific region, we should make clear policies and strategies under BDT. I think these strategies should be related to the regional development programme. On the other hand, at the APP in Geneva 1992, we adopted a resolution to consider the need for a strategy and policy forum, which will be discussed in the next Plenipotentiary Conference in Kyoto. According to the proposal, this Strategy and Policy Forum will discuss all telecommunications policy matters.

At the same time, every sector (Standardization and Radiocommunication) has its own strategic matters. So it is a crucial problem how to avoid duplication with many similar strategies.

Finally, I would like to touch upon the importance of international cooperation and assistance. The Japanese Government has promoted it positively. In particular, it has promoted such multilateral cooperation activities as starting a special contribution to APT last year, while promoting mainly bilateral cooperation before.

Recently, as the Asian economy has made much progress, more and more countries have become donor countries in international cooperation finances. I am very optimistic about future development in Asia.

In closing, nobody denies that telecommunications plays a leading role in social and economic development. As a person engaged in administration and operation of telecommunications, we have to continue to challenge all difficulties so as to achieve our goals of furthering the development of telecommunications throughout the world.

Thank you.

STATEMENT BY MR. INATIO TEANAKO
Managing Director, Telecom Kiribati Ltd.
(KIRIBATI)

Mr. Chairman
Mr. Secretary-General of the ITU
Mr. Director of BDT,
Your Excellencies,
Distinguished participants,

It is indeed an honour for me to address this Regional Telecommunication Development Conference for Asia and the Pacific.

On behalf of my delegation, and also of the delegations of the Pacific Forum countries, I would like to thank the ITU and the Government of Singapore for the arrangements and preparations they have gone through to have this Conference here in Singapore and for the invitation for Kiribati to participate.

For the past few days, the three committees as I know have gone through a very hard task of tidying up the various resolutions for their approval by the Plenary session.

As I participated in Committee A, I realized the very involved task that we had to go through in arriving at an acceptable text for the various resolutions. In that regard, I congratulate and thank all committees for the hard work that they have gone through to accomplish one major task of this Conference.

Briefly, Kiribati is a small island nation in the mid-Pacific Ocean with various types of telecommunication problems. In order not to bore you with my island telecommunication problems, I only ask that any assistance in the development of our telecommunications will be more than welcome.

In concluding, I must once again thank the ITU and the Government of Singapore for organizing this Conference here in beautiful Singapore.

Thank you.

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STATEMENT BY HIS EXCELLENCY MR. CHANG BONG JIN
Vice-Minister of Posts and Telecommunications
(DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA)

Mr. Chairman
Your Excellencies,
Mr. Secretary-General of the ITU
Mr. Director of BDT,
Distinguished delegates,
Ladies and Gentlemen,

We are very happy to address the important Regional Telecommunication Development Conference for Asia and the Pacific, the first of its kind held after the restructuring of the organization of the International Telecommunication Union.

The ITU has a long history one century old. During the intervening period, it has adapted itself to the evolving situation in the telecommunication environment with its new technologies and therefore has reorganized its different sectors in such a way as to meet the Member countries' needs in this fast growing field.

This radical restructuring of the Union was decided upon at the ITU Additional Plenipotentiary Conference held last year in Geneva and was made possible mainly by the determined action of the ITU leadership headed by its Secretary-General, Dr. Pekka Tarjanne, as well as the active endeavours of ITU Member countries.

Our country, the Democratic People's Republic of Korea, attaches great significance to this Regional Conference, during which we have adopted major Resolutions and Recommendations, vital for the development of telecommunication infrastructures in the Asia and Pacific Region. We can assure you that we will do our best to put into practice these action-oriented resolutions and recommendations.

I would like to extend our congratulations to the Chairman of the Conference, Mr. Huang Yew Ng, Director-General of the Telecommunication Authority of Singapore, and through him, to the Government of Singapore, for the excellent facilities provided to all delegates, which significantly contributed to the success of this Conference.

Lastly, I wish this important Regional Conference great success in its final deliberations.

Thank you very much for your attention.

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**STATEMENT BY HIS EXCELLENCY MR. THONGSAVATH PRASEUTH
Vice-Minister of Communications, Transports, Post and Construction
(LAO P.D.R.)**

Mr. Chairman,
Excellencies,
Dr. Tarjanne,
Distinguished Delegates,
Ladies and Gentlemen,

It is a great honour for me to participate in this meeting of the Regional Telecommunication Development Conference for Asia and the Pacific. I would like to congratulate the ITU and its Secretary-General, and the Telecommunication Authority of Singapore, for taking the initiative to convene this Conference. It is appropriate and timely and I am sure that my friends from the countries of this region welcome this conference wholeheartedly. I, on behalf of my country, would like to assure you that we will do our utmost for its success and work with you to achieve the goals for which it is being held.

Telecommunications have taken long strides in the past decade or so and the network has become more global, with national boundaries becoming more and more blurred. In this situation, many of the countries of this region are still struggling to provide basic telecommunication facilities for their people. Even within this region there are very wide variations in the status of telecommunications between countries. We, with the assistance of the ITU, APT and other international institutions, must devise ways and means to bridge this gap between the countries of other regions and ours, both technologically and in terms of the degree of access and availability of telecommunication services. From the agenda it can be seen that this is the precise objective of the Conference.

We had deliberated on many of these items at Singapore last year at the meeting of the Ministers for these matters of the APT Member countries. I am glad that this was taken into account at the preparatory/consultative meeting held in Bangkok in November 1992 while preparing the agenda. The first item in the agenda mentions the need for discussion on the present state of telecommunication development in the countries of this region. I would like to take this opportunity to introduce briefly the telecommunication networks in Lao PDR.

1. The Lao People's Democratic Republic is a landlocked country in Indochina with an area of about 240,000 square kilometers. The population of Lao is about 4 million. The economy is largely based on farming. Though the country possesses abundant natural resources, exploitation of these is hampered due to mountainous terrain and lack of infrastructure, particularly transports and communications. The capacity of the existing telephone system in the country is 8500 lines installed in 17 automatic and 67 manual exchanges, which are antiquated. Some important provincial capitals are linked to Vientiane by HF radio links. An international telephone service operated manually is available from Vientiane by means of satellite circuits to the gateway in Australia, a microwave system to Thailand and satellite links to Moscow and Hanoi. A domestic and international telegraph service is available in about 100 towns, but these are transmitted manually by Morse code on HF radio systems on a shared basis.
2. We are at present in the process of implementing a project for installing digital electronic exchanges in six important cities, including the national capital, Vientiane. This will be linked by digital transmission media. This project has been taken up with the assistance of the World Bank, UNDP, ITU and some friendly countries. The first phase covering the major portion of the project has already been commissioned. The second phase covering the other five provincial capitals is at an advanced stage of implementation and is due for commissioning by the end of this year.

3. We are already working on the next phase of development with the assistance of UNDP, the World Bank and some friendly countries. On the basis of the government's policy of moving towards the market economy, the public and private sectors will also be called upon to assist telecom development in our country. We hope to maintain and accelerate the growth of telecommunications, which has been neglected for so long due to historic reasons. We eagerly look forward to assistance from various sources in this national effort to make telecommunications accessible to all citizens in every part of the country.
4. Apart from the national network, we are also trying to cooperate with our neighbours in building up a subregional network for the countries of Indochina. We have had some discussions in a formal meeting between the three countries last year and the response is encouraging. The idea is to extend the national network beyond the borders to link the three countries with marginally additional cost. We are already linked with Thailand by microwave and in the subsequent phases this sub-regional network can extend to the ASEAN region and the SAARC region.
5. We have gone through the agenda with great interest and all the resolutions listed are very relevant to our country. I am sure we can formulate concrete plans for achieving the objectives of each item and devise means to ensure their successful implementation.

To conclude, I would like to express my thanks to the Government of Singapore, particularly the Telecommunication Authority of Singapore, and ITU/BDT for their hospitality during our stay in the nice city of Singapore. Once again, may I convey my sincere congratulations to yourself, as Chairman of the Conference, and Dr. Tarjanne, Secretary-General of the ITU for the excellent arrangements and guidance at this conference.

STATEMENT BY MR. MOHAMED ALI YUSOFF
Director-General, Jabatan Telekom Malaysia
(MALAYSIA)

Mr. Chairman,
Your Excellencies,
Distinguished delegates,
Ladies and Gentlemen,

Before I offer my views on the totality of this Regional Conference, allow me to recall that we are living in a changing telecommunication environment both in technology and structure. In the ITU, the spirit of change started in the Nice Plenipotentiary Conference in 1989 and continued to that of the Geneva Additional Plenipotentiary Conference in 1992. This resulted in the restructuring of the ITU itself with effect from 1.3.1993, and the creation of the BDT that paved way for this Regional Conference and the World Development Conference in 1994.

The cry for assistance for development from the LDCs especially in the Asia-Pacific region must not go unheard and if heard it must not be ignored. I am appealing to the developed countries like America, Europe and Japan to come forward voluntarily to help develop telecommunications in the developing countries.

Focusing on some resolutions namely:

- (a) Implementation of AS-RDC Resolutions;
- (b) Transfer of Technology;
- (c) Asia Pacific Coordination Mechanism,

these are essentials to every member country in pursuing the development of telecommunications in this region.

The activities of BDT, APT, FORUM, ABU, AIBD and other international and regional organizations must be geared towards complementing each other so as to avoid duplications of funds and resources.

The resolutions from Committee B on standardization and harmonization are very important for this region as most of the countries with the exception of Japan, Australia and New Zealand are without indigenous manufacturers. They are subject to standards imported from outside their countries such as from America/Canada, Europe and Japan. To a certain extent, the importation of standards becomes a dumping ground for obsolete technology. It is grossly unethical for developed countries to even suggest deployment of obsolete technology to these countries merely because they are poor and underdeveloped.

Similarly, frequency spectrum utilization is equally important for the sharing of this common valuable asset. If technology and equipment are imported there is a tendency for the frequencies spectrum that goes with the equipment to interfere with the spectrum management of the region. The need for equitable sharing of frequencies in this region should be a top priority.

Rural development is real in the Asia-Pacific region. Here we are measuring the time needed to obtain access to a telephone as a yardstick rather, than the number of telephones per hundred inhabitants. It seems therefore satellite systems may provide the answer to rural development and the development of the Asia-Pacific region. Assistance from INTELSAT, INMARSAT and other satellite owners is a step in the right direction towards this development.

Human Resource Development is no less important in the development of telecommunications as expressed by the panellists. It surprises me to note that there are telecommunication training centres around the globe, such as TEMIC (Canada), USTTI (USA), ALTTC (India), AIT (Thailand) and other countries like Sweden, Japan, China, Singapore, Malaysia, etc. I hope that these countries will offer facilities voluntarily to other less fortunate countries to develop their manpower resources.

In conclusion, while endorsing the resolutions of this conference, I appeal to all developed countries and financial institutions to be more charitable. I also urge the ITU, APT, regional and international organizations to play their role effectively for the benefit of the Asia-Pacific countries, for the benefit of telecommunications and for the benefit of mankind.

Thank you.

STATEMENT BY HER EXCELLENCY MRS. JOSEFINA T. LICHAUCO
Vice-Minister for Communications
Department of Transportation and Communications
(PHILIPPINES)

As the Asia-Pacific world, meaning 58% of the global population, goes through changes of no mean dimension, I cannot help but look back to the year 1987 when Malaysia very graciously was host to forty-four telecommunication administrations, that had become, at that time, more than half a decade ago, truly enthralled by the concepts of Liberalization, Deregulation and Demonopolization, at the same time that the developing and underdeveloped world struggled to accelerate their development.

Today, the realization that the global village will always remain a myth and never a reality has achieved critical significance, as demonstrated by the Resolutions and Actions being proposed through the Committee Reports of this distinguished assembly.

On the part of the Philippines, I am extremely elated to read in Document 5 of Committees A/C of 6 May 1993, that the Philippines valuable experience of Institutional Strengthening within the context of sustainable development, has been set forth and noted. As our country undertook giant studies in 1987 to accelerate telecommunication development and rationalize a very critical sector of the country through demonopolization, liberalization and privatization, sustainable institutional strengthening has provided very valuable support.

As a member of Asean and the fast developing world, we support these worthy resolutions, but specially note the following:

1. I would like to stress the importance of regional cooperation, and therefore developing coordination mechanisms for this cooperation.
2. It is important that we have analysed and will continue to analyse specific telecommunication strategies and policies for the Asia-Pacific region, but financing these strategies becomes a very critical problem, which leads me to the issue of technology transfer, which must, of necessity, be not only sound or unsound commercial endeavours (meaning, for example, a harmless looking proviso in the supply contracts of suppliers and contractors from the developed and advanced countries), but must definitely veer towards, explore and then employ voluntary endeavour.
3. It is important to develop radiocommunication services through the Master Plan for GHDSS. The Philippines, being a beautiful island-archipelago of cruel volcanoes and destructive typhoons, but beautiful beaches and a smiling people, support the attention being given to maritime transportation. The Asia-Pacific region and the Philippines have been witness to big sea tragedies, and this recognition to pursue strictly the mandates of the SOLAS Convention within the specific deadlines thereunder is very important.
4. The Special Assistance Programmes for the Least Developed Countries in the Asia-Pacific region must not only be developed, but must be pursued to its ultimate implementation and not remain merely a programme drafted with beautiful verbosity, but a concrete programme implemented within specific guidelines.
5. The other resolutions are noteworthy, Mr. Chairman, but due to constraints of time, I cannot mention them all except to state that strong support is being given by the Philippine Government. Most of these comments anyway are intended to emphasize the need and importance of these resolutions.

May I please be allowed to congratulate the different committees and their respective chairmen for their excellent work. I would like to extend our gratitude to the ITU for providing the opportunity for this excellent assembly to convene.

Last, but certainly not least, may I congratulate the Chairman of this Assembly, Mr. Hong Yew Ng, and extend our deep thanks to the Government of Singapore for hosting this conference within the beautiful country that is Singapore.

Thank you, Mr. Chairman.

Annex IX

LIST OF ABBREVIATIONS

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LIST OF ABBREVIATIONS

ABU	Asia-Pacific Broadcasting Union
AEU	Asia Electronics Union
AIBD	Asia-Pacific Institute for Broadcasting Development
AIDAB	Australian International Development Assistance Bureau
AIT	Asian Institute of Technology
APEC	Asia-Pacific Economic Cooperation
APT	Asia-Pacific Telecommunity
ASEAN	Association of South-East Asian Nations
BDT*	Telecommunication Development Bureau (of the ITU)
BR*	Radiocommunication Bureau (of the ITU)
CIDA	Canadian International Development Agency
CIRCIT	Centre for International Research on Communication and Information Technology
ESCAP	United Nations Economic & Social Commission for Asia and the Pacific
ICAO	International Civil Aviation Organization
IMO	International Maritime Organization
INMARSAT	International Maritime Satellite Organization
INTELSAT	International Telecommunications Satellite Organization
INTUG	International Telecommunications Users Group
JICA	Japan International Cooperation Agency
OECD	Organisation for Economic Co-operation and Development
SAARC	South Asian Association for Regional Cooperation
TAS	Telecommunication Authority of Singapore
TEMIC	Telecommunications Executive Management Institute of Canada
TSB	Telecommunication Standardization Bureau (of the ITU)
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNIDO	United Nations Industrial Development Organization
WB	World Bank
WMO	World Meteorological Organization

* French acronym.

