Other documents

Distributed for information
(not presented)

- Telecommunication statistics collection and dissemination in Taiwan
  The Directorate General of Telecommunications, Taiwan-China

- Telecommunications data gathering in Germany
  Regulatory Authority for Telecommunications & Posts, Germany

- Background Paper for Official Statistics on Telecommunications in Sweden
  Swedish Institute for Transport and Communications Analysis (SIKA), Sweden

- State of telecommunications data collection and dissemination in Liberia
  Ministry of Posts and Telecommunications, Liberia

- Definition of Questions
  Study Groups, BDT, ITU

INTERNATIONAL TELECOMMUNICATION UNION

TELECOMMUNICATION DEVELOPMENT BUREAU

INFORMATION SYSTEMS UNIT

Document WTIM99/19-E
26 March 1999
Original: English

2nd World Telecommunication Indicators Meeting
(Geneva, 29 - 31 March 1999)

SOURCE: THE DIRECTORATE GENERAL OF TELECOM, TAIWAN-CHINA

TITLE: TELECOMMUNICATION STATISTICS COLLECTION AND DISSEMINATION IN TAIWAN

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ITU/BDT

The 2nd World Telecommunication Indicators Meeting

Geneva, 29-31 March 1999

Telecommunication Statistics Collection and Dissemination in Taiwan

Prepared by

the Directorate General of Telecommunications, Taiwan

Telecommunication Statistics Collection and Dissemination in Taiwan

Prepared by Directorate General of Telecommunications

I. Current Status of Telecom Liberalization

The government amended the *Telecommunications Act of 1958* in Feb. 1996. The new Act formally separated the operational and regulatory functions of the Directorate General of Telecommunications (DGT) and hence made it an independent regulatory authority leading telecom liberalization from July 1, 1996. So far, cellular phone, radio paging, mobile data, and trunked radio services have been open to competition. A total of 45 licenses were issued. In addition, the satellite communication services were also opened up in Dec. 1998. A total of 18 licenses were issued, including three for Mobile Satellite Services (MSS) and fifteen for Fixed Satellite Services (FSS).

Currently, we are planning for the deregulation of fixed network services. It is scheduled to issue the licenses by the end of 1999, without limitation on the number of licenses. In Internet, our government opened the Internet service to competition at the end of 1995. So far, there have been 76 licenses issued.

The issuance status of licenses is listed as follows:

Type of Service	Service Area	Issuance of License	
		As of July 1, 1996	As of Dec. 31,1998
Type I Telecom Enterprises		4	75
Fixed Network Services		1	1
Mobile Communication Services		11	56
CT-2	Regional	8	8
Cellular Phone		2	11
AMPS	Nationwide	1	1
DS1800	Nationwide	-	3
	Regional	-	3
GSM900	Nationwide	1	1
	Regional	-	3
Radio Paging		1	9
	Nationwide	1	3
	Regional	-	6
Mobile Data		-	8
500 MHz	Nationwide	-	1
	Regional	-	3
800 MHz	Nationwide	-	1
	Regional	-	3
Trunked Radio		-	20
500 MHz	Nationwide	-	1
	Regional	-	12
800 MHz	Nationwide	-	1
	Regional	-	6
Satellite Communications Services		-	18
MSS		-	3
FSS		-	15
Type II Telecom Enterprises		67	168
Internet		-	76
Value-added services		-	92

* Type I telecom enterprises refers to facilities-based telecom operators. Type II telecom enterprises refers to non-facilities based telecom operators.

II. Collection and Dissemination Process of Telecom Statistics

1. Statistics Collection

In order to monitor network and service competition, to acquire market share information, to assess dominant carriers for anti-competition investigation, to measure efficiency of telecom operators, and to promote the development of telecom sector, the DGT requires operators to report their relevant statistics periodically. The data we collected are listed below:

1) Fixed Network

The fixed network carriers are required to report statistics to DGT monthly. The items include:

- Number of subscribers and capacity of local telephone network
- Number of long distance and international telephone calls
- Traffic minutes of long distance and international telephone calls
- Revenues of local, long distance and international telephone calls
- Revenue of data communications services

2) Mobile Communications

Operators for cellular phone and radio paging services are required to report their statistics to DGT monthly on the following items:

- Revenue
- Number of subscribers and capacity
- Traffic minutes
- Number of base stations
- Number of Carrier channels

Meanwhile, DGT also collects the following QoS indicators from cellular operators in a yearly basis.

- Service provisioning time
- Call blocking rate in rush hours
- Dropped call rate
- Service coverage
- Customer satisfaction

The above QoS data are gathered by operator's self-assessment and professional survey. As for the customer satisfaction, the *Consumers' Foundation* or similar organization is usually commissioned to make such a survey.

3) Internet

The Institute for Information Industry (III) collects the data monthly by attribute of subscriber, such as educational, individual and household, as well as corporate users.

Educational users:

The number of TANET (Academic Net) subscribers is derived from the amount of IP accounts allocated to schools every month.

Individual and household users:

The figure comes from the statistics of dial-up subscribers, excluding the free IP accounts.

Corporate users

The figure comes from the statistics of dedicated subscribers. We take 10 users for one leased line on average to figure out the number of corporate users.

4) Cable TV

The number of CATV home pass is defined as the product of penetration rate and number of households, which is provided by the Government Information Office. The penetration rate of CATV is derived by the sampling survey, while the number of households is provided by the Ministry of Interior.

2. Statistics Dissemination

The statistics are released by press release or posted on websites of related agencies.

III. Current Statistics on Telecom Services in Taiwan

1) Local Phone

By the end of 1998, the penetration rate and subscribers of our local telephone topped 52.45% and 11,500,000 respectively, compared to 50.08% and 10,860,000 in 1997. The growth rate of the local phone subscribers was 5.87%..

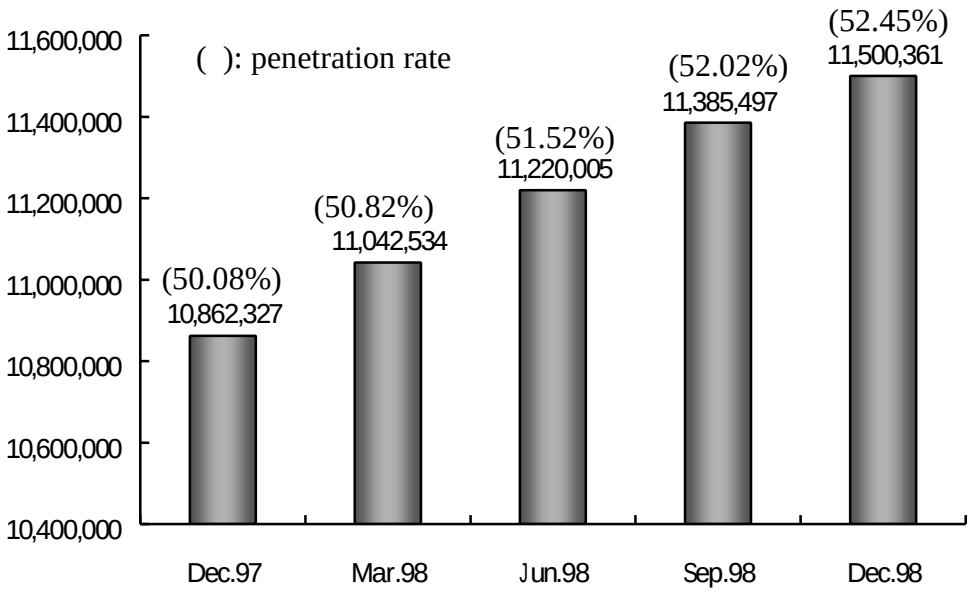

Figure 1. The Growth of Local Telephone Subscribers in Taiwan

2) Cellular Phone

Since the new entrants of cellular phone services launched their businesses in early 1998, they have contributed to the booming of the telecom market. By the end of 1998, the penetration rate and subscribers of the mobile phone service reached 21.56% and 4,720,000 respectively, compared to 6.88% and 1,490,000 in 1997. The growth rate of mobile phone subscribers hit an amazing 216% (see Figure 2).

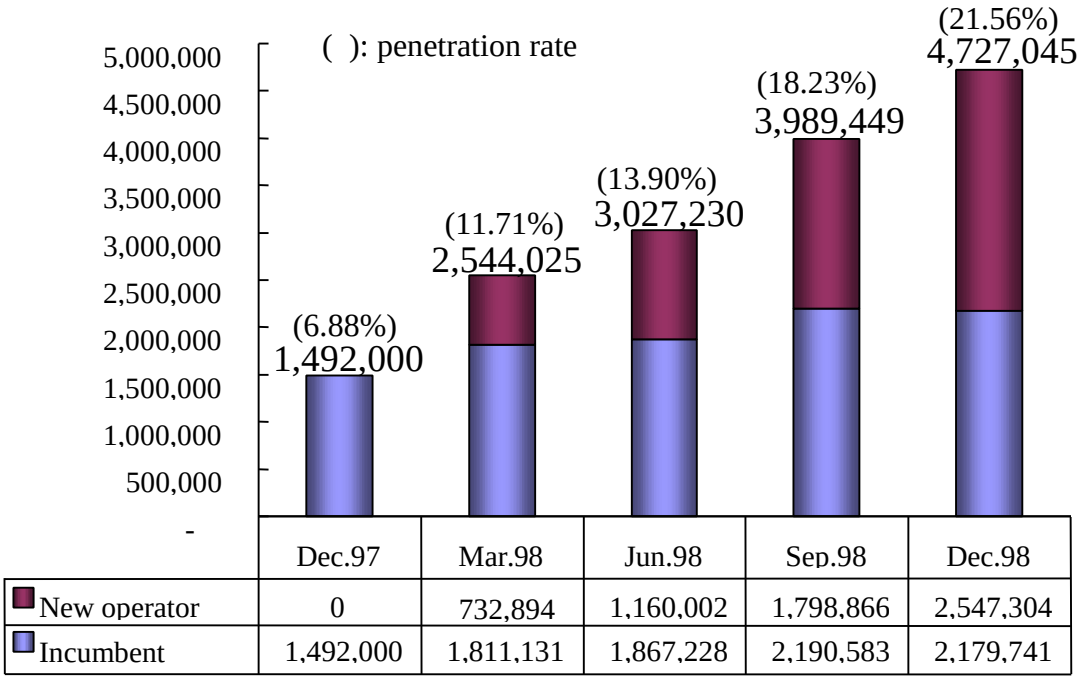

Figure 2. The Number of Mobile Phone Subscribers in Taiwan

3) Internet

By the end of Dec. 1998, the rate of Internet population in Taiwan hit 14.3%, and the Internet users broke 3 million ever since.

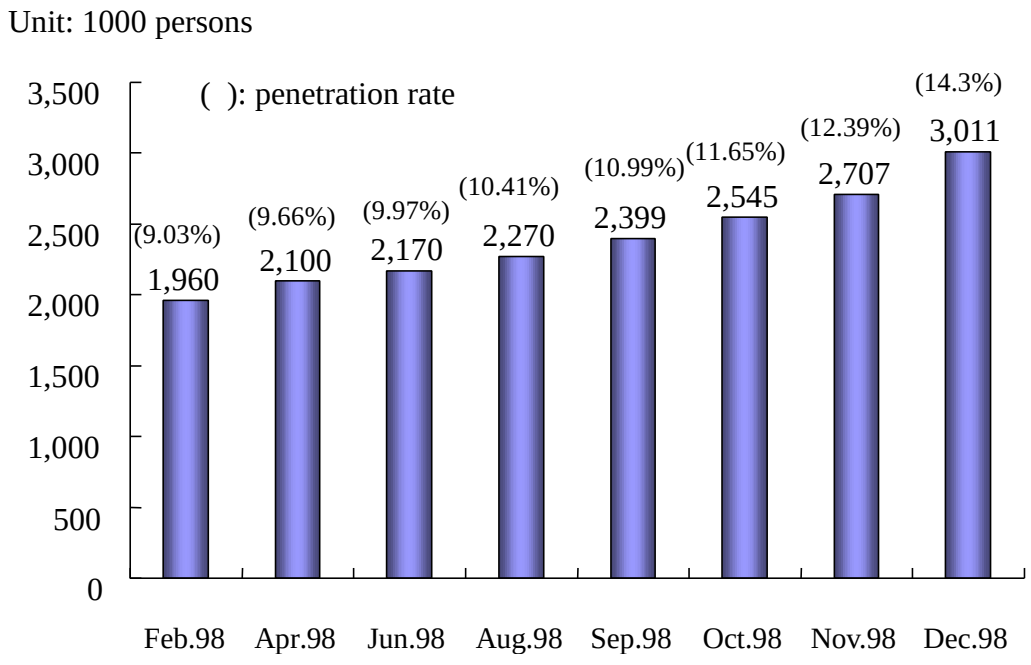

Figure 3. The Growth of Internet Population in Taiwan

5) Cable TV

According to the latest survey made in Dec. 1998, the penetration rate of cable TV reached 75%-80%. And the number of households in Dec. 1998 totalled 6.37 million. Thus, the number of CATV home pass reached 4.18-4.47 million.

IV. Conclusion

In the past, the telecom business was run by the government in a monopolistic way and the data gathering was easy, quick and simple. However, when telecom market is liberalized, the increasing number of private telecom operators is significant and the data collection becomes more difficult, time-consuming and complicated. It is very important for the regulatory body to release accurate and timely statistics. The telecom statistics not only help operators and relevant industries in making investment plans, but also help regulators in making policies. Hence, telecom authorities heavily rely on operators' cooperation in this regard. Since telecom market is toward globalization, the statistics provided by countries in the world render a developing trend of telecom sector. We have to follow the trend and take a look at the local and global statistics. Therefore, how to gather timely and accurate statistics becomes a very important issue for us to discuss. This includes, but not limit to, the method of data collection, the definition of data items, and the format of unified data.

INTERNATIONAL TELECOMMUNICATION UNION

TELECOMMUNICATION DEVELOPMENT BUREAU

INFORMATION SYSTEMS UNIT

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SOURCE: REGULATORY AUTHORITY FOR TELECOMMUNICATIONS & POSTS

TITLE: TELECOMMUNICATIONS DATA GATHERING IN GERMANY

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Telecommunications data gathering in Germany

1. Legal basis for gathering primary data

The German Regulatory Authority's work is based on the *Telecommunications Act*, which entered into force on 1 August 1996, and the following ordinances having the force of law issued under the Act:

- Ordinance concerning Telecommunications Licence Fees of 23 July 1997,
- Ordinance concerning Rates Regulation in the Telecommunications Sector of 1 October 1996,
- Network Access Ordinance of 23 October 1996,
- Telecommunications Universal Service Ordinance of 30 January 1997,
- Frequency Fee Ordinance of 21 May 1997,
- First Ordinance amending the Frequency Fee Ordinance of 16 December 1997,
- Telecommunications Type Approval Ordinance 1995 of 20 August 1997,
- Ordinance concerning the Contributions for Frequency Usage of 19 November 1996,
- Telecommunications Customer Protection Ordinance of 11 December 1997,
- Ordinance regulating the Licensing of Technical Staff of 19 December 1997, and
- Functions Assignment and Accreditation Ordinance of 10 December 1997.

The following ordinance related to data protection has also been issued:

- Telecommunications Carriers Data Protection Ordinance of 12 July 1996.

The Telecommunications Act and the ordinances are available for viewing and downloading on the Regulatory Authority's web site (**http://www.regtp.de**). Most of the texts are available in English.

The Telecommunications Act contains several provisions, including Sections 72 and 81, which entitle the Regulatory Authority to gather data on companies operating in the telecommunications market. According to Section 72 the regulator may request information on the economic circumstances of companies engaged in telecommunications, in particular on their revenues, if this is necessary for it to discharge the functions provided for by the Act. According to Section 81 the regulator is obliged to submit to the legislative bodies of the Federal Republic of Germany every two years a report on its activity and on the situation in and development of the telecommunications sector; in this case the regulator requires aggregate company data in order to be able to fulfil its obligation satisfactorily.

The scope of the Regulatory Authority's rights to gather data is currently the subject of controversy. The regulator is not entitled to gather company data specially for general publication or forwarding to international organisations such as the ITU.

2. Current situation in respect of gathering data on the telecommunications market

The Regulatory Authority has one section which is responsible for telecommunications market observation and whose aim is to observe developments among telecommunications service providers, in particular the licensees operating in the German telecommunications market, and to overview the whole telecommunications market using the insight gained and the data gathered on individual companies and segments.

The telecommunications market, including the voice telephony market, was opened up to full competition on 1 January 1998. The total number of licensees in Germany at the beginning of February 1999 stood at 491. 181 of these licensees hold a Class 4 licence for voice telephony on the basis of self-operated telecommunications networks in competition with Deutsche Telekom AG, the former monopolist. More than 50 service providers have already entered the voice telephony market. There are also more than 1,100 providers which offer licence-exempt telecommunications services, including a number of Internet service providers.

In view of the current number of service providers in the telecommunications market and the unsatisfactory legal basis for gathering data (see Section 1) it is not easy to make sound statements about the whole telecommunications market within the scope of market observation. However, it is necessary to gather data in order to overview the size of and developments in the telecommunications market and to provide a basis for regulatory decisions. There is currently no legislation in Germany which entitles the Federal Statistical Office to gather data on telecommunications services; the Office therefore has no relevant data of significance available. The Regulatory Authority's telecommunications market observation section gathers the data required for market analysis from various sources such as

- annual reports from companies or groups obliged to publish such reports,
- technical publications and the press,
- market research institutes,
- professional associations, institutes and universities,
- research via the Internet,
- external and internal studies, and
- telephone and written company surveys.

German companies are comparatively reluctant to provide data, partly because of historical reasons related to a dislike of state intervention.

Thorough research needs to be conducted in order to gather processable data for analysis of the whole telecommunications market. In the light of the work involved in gathering such data it is clear that a full analysis of the whole market cannot be made. In the past figures related to revenue, jobs and, to a certain extent, investment in the whole telecommunications market could be projected using the data available on individual companies and segments. A more in-depth analysis could be made of individual market segments such as the mobile services and leased lines segments.

3. Provision of data for the ITU and related problems

The Regulatory Authority has for several years provided its data on the German telecommunications market for publication in particular in the *World Telecommunications Development Report*. The data required for the *Report* comprise data in response to questions on regulation and to rather comprehensive and, in some cases, detailed questions on individual segments of the telecommunications market.

Questions on the Regulatory Authority itself, the degree of liberalisation of individual market segments, and licensing and licensees are unproblematic.

The requested data on telecoms operators, ie their names, addresses and services, can be provided but are restricted to licensees and licence-exempt telecommunications service providers (see Section 2). However, it is not always possible to state whether or not a licensee has already entered the market.

The demographic questions are also unproblematic because the requested data are obtainable from the Federal Statistical Office.

In the past questions on the telephone networks, tariffs and international telephone traffic could not be fully answered. Most of the data provided were restricted to Deutsche Telekom AG which offers a full range of telecommunications services and which held the voice telephony monopoly until 31 December 1997. Up until then these data constituted a sufficiently accurate record of the whole telecommunications market.

A large number of carriers and voice telephony service providers entered the market in 1998. It is therefore increasingly difficult to answer the current ITU questionnaire in view of its scope and depth. A comparison of the old data, which relate only to Deutsche Telekom AG, with the new data, which relate to the whole market, could be misleading. It is almost impossible to provide data on the individual carriers' tariffs and outgoing international traffic flows.

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Proposals for the revision of the ITU questionnaire

- Questions on the regulatory situation are unproblematic and should be retained.
- Questions on the voice telephony service should relate only to the total market and not to individual companies and should not relate to quality of service or technical details.
- Questions on mobile service tariffs are difficult to answer because the tariffs can change several times a year and because there are currently 400 different tariff structures in Germany. The questions could be restricted to the carriers' tariffs for business and/or private customers and to the tariffs applicable at the end of the year in question.
- Questions should not relate to companies' finances, with the possible exception of real investment in the telecommunications market: companies' financial data are often confidential and available in only a few cases.
- Questions on voice telephony traffic flows should relate to total traffic per minute. Traffic flows should be subdivided into local, long-distance and outgoing international traffic flows at the most.

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INTERNATIONAL TELECOMMUNICATION UNION

TELECOMMUNICATION DEVELOPMENT BUREAU

INFORMATION SYSTEMS UNIT

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SOURCE: SIKA, SWEDEN

TITLE: BACKGROUND PAPER FOR OFFICIAL STATISTICS ON TELECOMMUNICATIONS IN SWEDEN

_____

1999-03-26

International Telecommunication Union
Att. Ms Dalia Mendiluce
Place des Nations
CH-1211 Geneva 20
Switzerland

Background paper for official statistics on telecommunications in Sweden

During 1996 Statistics Sweden carried out a questionnaire survey about the telecommunications industry in Sweden in co-operation with The Swedish Institute for Transport and Communications Analysis (SIKA) and Eurostat. The reference period was the year 1995. This was the first time this industry was surveyed since the deregulation of the telecommunication market in Sweden. Statistics on telecommunications was earlier published by the former state monopoly Televerket.

The second survey about the telecommunications industry was carried out in 1997 by Statistics Sweden in co-operation with SIKA and Eurostat. The reference period was the year 1996. The experiences from this survey is described below. At the moment a survey for the reference period 1997 is being carried out by Statistics Sweden in co-operation with SIKA. The results from this survey will hopefully be published in April this year.

Results from the surveys are published in a report called *Telecommunications*. A few tables from the last published report are also published on SIKA´s web site, www.sika-institute.se.

Telecommunications 1996

During the spring 1997 draft questionnaires were elaborated, one less comprehensive for companies with 0 to 9 employees and one more comprehensive for companies with 10 or more employees. There were no problems with the less comprehensive version of the questionnaire. For the more comprehensive questionnaire some meetings with the companies were held to check the draft questionnaire.

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P.O. Box 17 213 ·SE-104 62 Stockholm ·Visit: Maria Skolgata 83 ·Phone: +46-8506 206 00 ·Fax: +46-8506 206 10
E-mail: sika@sika-institute.se ·www.sika-institute.se

The survey concerned both companies and sole proprietorships within the sub-sectors 64.201, 64.202 and 64.203 according to NACE rev.1.

The sub-sectors of the survey was:

SE-SIC 92 / NACE Rev. 1	Group according to economic activity
64.2	Telecommunications
64.201	Network operation (incl. Mobile telephony)
64.202	Radio and television broadcast operation
64.203	Cable television operation

There were totally 163 enterprises in the population and all these enterprises were included in the survey. Answers from 146 companies were received, which gave a response rate of 89,6 per cent. 51 of the enterprises were wrongly classified (31 per cent) and 17 enterprises did not answer the questionnaire. 2 of the big companies and 15 of the smaller companies were missing in the survey.

The survey of NACE rev. 1 64.2 covers the telecommunications industry in Sweden quite well. All known bigger companies were included in the survey. At the end of the survey two small companies that were wrongly classified in the Business Register were found. These two companies had together 14 persons employed, 9 Millions SEK in total turnover and 21 Million SEK in total operating costs.

Below follows some result from the 1996 survey:

Telecommunications NACE Rev 1. 64.2	
Number of enterprises in the population	163
- of which wrong classification	51
- of which without any activity	5
- of which non response	17
The result is based on answers from 90 enterprises	90
Number of persons employed (year persons)	25 001
Employment 31 December 1997	24 081
Total turnover, Millions of SEK	50 845
Total costs, Millions of SEK	47 196
Value added, Millions of SEK	13 142

Methodological feedback of knowledge gained from the study of 1996

- The information about volume was difficult to estimate for the enterprises.
- Some enterprises had just started their business and therefore had some difficulties filling in the questionnaire.
- Many enterprises made very rough estimates both for the breakdown of turnover and for the volume, but especially for the volume figures.
- The most difficult parts were Data communication services in fixed network and fixed leased lines (both turnover and volume data).
- Information about both turnover and volume data for fixed telephony services (PSTN) in not so difficult for the companies to estimate. Often they can provide for example data about volume in traffic minutes.
- The information about volume for Data communication services is very sensitive. The companies were reluctant to reveal this information.
- What can be published? In Sweden there are a few very big companies that belong to the same group, which means that sensitive information about a single company can be revealed and therefore can’t be published.
- It is important to have instructions with clear definitions.

The definitions raise problems. Some companies have difficulty separating goods from services. They often sell solutions in a package, where both goods and services are included. Statistics on a very detailed level are asked for and some companies, especially the smaller ones, do not have any information on that detailed level.

INTERNATIONAL TELECOMMUNICATION UNION

TELECOMMUNICATION DEVELOPMENT BUREAU

INFORMATION SYSTEMS UNIT

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SOURCE: MINISTRY OF POSTS AND TELECOMMUNICATIONS, LIBERIA

TITLE: STATE OF TELECOMMUNICATIONS DATA COLLECTION AND DISSEMINATION IN LIBERIA

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DOCUMENT PRESENTED BY THE LIBERIAN DELEGATION TO THE SECOND WORLD TELECOMMUNICATIN INDICATORS MEETING – GENEVA, SWTIZERLAND 29 – 31 MARCH 1999

PRESENTED BY : H. OCTAVIUS WALKER
ASSISTANT MINISTER
FOR PLANNING, RESEARCH
AND STATISTICS

Republic of Liberia
Ministry of Posts and Telecommunications
Monrovia, Liberia

Mr. Chairman, Honourable Director of the
Telecommunication Development Bureau,
Fellow Delegates,
Ladies and Gentlemen:

I bring you greetings from the people of Liberia and His Excellency Darkpanah Dr. Charles Ghankay Taylor, President of the Republic of Liberia for this important meeting. For us, we consider this meeting as highly important for the fact that we have just com from a seven years war, and all our Telecommunications Statistical Collection Mechanism have been totally destroyed.

Again, we see this meeting as one that will help our country, Liberia, in the Telecommunications Statistical Collection and Dissemination Process. I am sure that at the end of this meeting, all those knowledge that have been absent will be placed on track. We also seize this opportunity to congratulate the Country Representatives of the United Nations Developments Projects (UNDP) for its tireless efforts in making sure that all conferences organised by the ITU, through the TDB are properly handle, especially in ensuring that participants receive their invitation and all benefits on time.

Fellow participants, as you may all be aware, our country Liberia has just returned from war which acartered every fabric of our National Telecommunications Industry. Not with-standing, we are pleased to state herein some methods use in the collection of telecommunications statistics. It is herefore our wish and pleasure, that this paper and the content contained therein will be of beneficiary to member countries as we all strive to build a global Telecommunication industry.

Once again, I say, the people of Liberia loves you and asks the organisers that Liberia will always be remembered when ever such conference is organised.

THANK YOU!

H. OCTAVIUS WALKER
Asst. Minister for Planning, Research and Statistics
Liberia Representative
TDB Meeting, Geneva.

SOURCES OF DATA COLLECTIONS

Data collection made by the Bureau of Planning, Research and Statistics prior to the Civil Crisis was nation-wide from the various Post Offices established in the various counties in the country including the Central Office in Monrovia.

The sources were categorised into four (4) zones as follows:

a) Zone One (1)

Zone one (1) consisted of the various counties and the specific areas 1 Post Office.
- Bomi County - Tubmanburg Post Office
- Montserrado County - Bensonville
- Margibi County - Kakata, Harbel, Robertsfield and Marshall.

b) Zone Two (2)

- Nimba County - Tarpita, Sanequelle and Ganta
- Capemount - Robertspot
- Bong County - Gbanga

c) Zone Three (3)

- Sinoe County - Greenville
- Grand Bassa County - Buchanan
- Rivercess County - Rivercess City

d) Zone Four (4)

- Lofa County - Voinjama, Kolahun and Foya
- Grand Gedeh County - Zwedru and Kawekein
- Maryland County - Harper and Pleebo
- Grand Kru County – Barclayville

Data collection is presently being limited to the Central Office since after the Civil Crisis reason being that the postal establishments in the various counties were destroyed during the war.

However, efforts are being made to reactivate them. The sources of data collections in the Central Office are as follow:

A. Controller

- Central Cashier
- Domestic Account
- Supply Office (Postage Stamps)

B. Counter Service

C. Monrovia and its surroundings

- Paynesville
- Capitol Building
- Freeport
- Barclay Training Centre (BTC)
- Randall Street (Annex 1)

Other sources within the Ministry

- Regulatory Bureau
- Philatelic Bureau
- EMS

ANNUAL REPORT
BUREAU OF PLANNING, RESEARCH AND STATISTICS
JANUARY – DECEMBER 1998

The Bureau of Planning, Research and Statistics is charged with the responsibility of collecting statistical data of mailable items received, delivered and despatched for both foreign and local as well as revenue generated from lock boxes, stamps, sales, radio licence and EMS. It seeks to analyse these data and do a comparative analysis of previous years to the current to make some projections. It plans and makes research for the Ministry.

During the period under review, total mailable items received from foreign countries was 289,982, mailable items delivered was 141,519 while mailable items despatched amounted up to 62,184.

Revenue generated is as follows:

Stamps sale .... 215.845.00 LD$
Radio licences .... 118,120.00 USD$
EMS..... .... 14,265.00 USD$
DV-2000 .... 330,400.00 LD$

Total amount in USD$ amounted up to 22,750.00 and LD$ 60,939.00. The overall malable items, received, delivered and despatched is in the total of 493,685 for the fiscal year 1998.

The report system in the Bureau has been done on a quarterly basis. This implies that the report has been done from January – March, April – June, July – September and October – December.

Total number of DV-2000 collected and dispatched during the period, October 1 –31 was 6,608 which amounted to LD$ 330,400.00

<u>RECOMMENDATIONS</u>

The Bureau is pleased to make the following recommendations:

1. That the following positions in the Bureau be occupied:

    a) The position of Assistant Director
    b) The position of Statistician
    c) Office Assistant

2. The Bureau is left with a decision to collect its statistical data where it finds it necessary.

TOTAL MAILABLE ITEMS RECEIVED, DELIVERED AND DISPATCHED
FOR THE PERIOD UNDER REVIEW / JANUARY – DECEMBER 1998

ITEMS	**QUANTITY**
MAILABLE ITEMS RECEIVED	289,982
MAILABLE ITEMS DELIVERED	141,519
MAILABLE ITEMS DISPATCHED	62,184
DV-2000 DISPATCHED	6,608
TOTAL	**500.293**

TOTAL MAILABLE ITEMS RECEIVED FROM FOREIGN COUNTRIES WITHIN THE VARIOUS QUARTERS (JANUARY – DECEMBER) 1998

ITEMS	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	5th Quarter
Ordinary letters	51.248	46.511	51.248	41.921	190.928
Registered letters	13.160	7.469	13.160	4.157	37.946
Expressed letters	3.956	2.661	3.956	5.631	16.204
Printed matters	33.495	4.113	3.495	3.298	44.401
Parcels received	160	17	140	11	331
EMS parcels	82	19	39	14	154
EMS packages	2	-	3	13	18
TOTAL	**102.103**	**60.790**	**72.041**	**55.045**	**289.982**

TOTAL MAILABLE ITEMS DELIVERED

ITEMS	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	5th Quarter
Ordinary letters	28.021	19.664	28.021	23.961	99.6678
Registered letters	5.263	4.599	5.263	5.167	20.292
Expressed letters	2.475	3.278	2.475	3.747	11.975
Printed matters	2.646	1.566	2.646	2.084	8.942
Parcels received	112	8	77	14	211
EMS letters	62	135	62	109	368
EMS parcels	1	21	5	7	34
EMS packages	2	12	3	13	30
TOTAL	**38.582**	**29.283**	**38.552**	**35.102**	**141.519**

INTERNATIONAL TELECOMMUNICATION UNION

TELECOMMUNICATION DEVELOPMENT BUREAU

INFORMATION SYSTEMS UNIT

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SOURCE: STUDY GROUP, BDT

TITLE: DEFINITION OF QUESTIONS

Observations and comments about the document are welcome at the Study Groups Secretariat of BDT

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Thank you very much

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INTERNATIONAL TELECOMMUNICATION UNION

TELECOMMUNICATION DEVELOPMENT BUREAU

ITU-D STUDY GROUPS

Document 2/019-E
6 August 1998
Original: English

FIRST MEETING OF STUDY GROUP 1: GENEVA, 10 - 12 SEPTEMBER 1998
FIRST MEETING OF STUDY GROUP 2: GENEVA, 7 - 9 SEPTEMBER 1998

Questions: All

STUDY GROUP 2

SOURCE: TELECOMMUNICATION DEVELOPMENT BUREAU (BDT)

TITLE: DEFINITION OF QUESTIONS

Please find hereafter the definition of Questions 10a/2 to 10g/2 for the study period 1998-2002.

Q. 10/2 Communications for rural and remote areas

This Question includes seven separate projects: 10a/2, 10b/2, 10c/2, 10d/2, 10e/2, 10f/2 and 10g/2.

All projects have been proposed for study within the context of the Question which addresses "Communications for rural and remote areas". Since there are substantial relationships and interdependencies among the individual projects, they can be handled most efficiently as components within a single Question.

Q. 10a/2 Communications for rural and remote areas

1 Statement of problem or situation

In the current study period, from 1994 to 1998, the study of Question 4/2: "Communications for rural and remote areas" has resulted in conclusions and recommendations which are based on available and existing experience and knowledge.

At this time, many factors which relate to and influence "Communications for rural and remote areas" are changing and are evolving very rapidly. Examples include:

– Technology is changing and progressing quickly, providing continually increased capability at progressively lower cost. This is especially true in radio technology, which is usually the technology of choice in serving the rural and remote areas of developing countries.

– Experience in implementing major Rural Telecommunications Programmes is expanding quickly as more developing countries recognize and respond to the requirement. This results in an increasing knowledge base which enables well proven conclusions to be reached regarding the "best practices" which should be followed by developing countries in implementing major Rural Telecommunications Programmes.

– The demands for telecommunication services from residents of the rural and remote areas of developing countries are rising dramatically, as are the demands of those elsewhere who want to communicate with these areas.

– Rapid gains are being made in understanding and taking advantage of the benefits in economic, social and cultural development for the citizens of rural and remote areas through integrated delivery of the applications which are made possible by the advent of telecommunication services.

New information and experience in this field of knowledge is becoming available steadily and rapidly. The conclusions and recommendations of the completed study period are based on the knowledge that is available at this time. In order to take advantage of the new knowledge which will continue to become available, it is recommended that the study of this Question continue during the next study period.

2 Question or issue proposed for study

On the basis of current and recent studies and information, analyse the material which is available and formulate conclusions and recommendations on the following topics:

a) the best methods and techniques for selecting appropriate technology options for rural telecommunications;

b) the best methods of planning, implementing and sustaining rural telecommunication development programmes.

Note that topics c), d) and e) of Question 4/2 in the 1994-1998 study period are not proposed to continue in the next study period.

3 Description of the expected output

The output will specifically address and provide details of "best practice methods" under the defined topics, e.g. selecting appropriate technology options for rural telecommunications, and planning and implementing sustainable rural telecommunication development programmes.

The output will provide helpful guidance at the senior and middle management levels, relative to promoting the provision of telecommunication services in the rural and remote areas, to those responsible for selecting the most appropriate technology, and for planning and implementing rural telecommunications programmes.

4 Required timing of the expected output

A preliminary report and conclusions and recommendations are to be available by mid-1999.

5 "Proposers/Sponsors" - Those who requested study of the Question or issue

Continuation of this Question is recommended by the group of experts who addressed this Question in the study period from 1994 to 1998.

6 Sources of input required, in carrying out the study

In order to study this Question successfully, contributions are required from sovereign governments and service providers which have successfully implemented telecommunications programmes in their rural and remote territories. These contributions will enable those responsible for work on the Question to develop a comprehensive understanding of current "best practice" techniques, and to develop the most appropriate conclusions and recommendations.

7 Target audience for the output

a) Indicate expected types of target audience, by noting all relevant points on the matrix which follows:

	Developed countries	Developing countries	LDCs
Telecom policy makers	Y	Y	Y
Telecom regulators	N	Y	Y
Service providers (operators)	N	Y	Y
Manufacturers	Y	Y	Y

All target audiences in developing countries and LDCs will benefit. Also, Manufacturers in developed countries will benefit, as a result of the new markets which will become open.

b) Target audience - Who specifically will use the output?

The output will be most helpful specifically to the senior and middle management personnel of all Member States and Sector Members who are responsible for establishing strategies and plans for the delivery of sustainable telecommunication services throughout the rural and remote areas of developing countries and LDCs.

c) Proposed methods for the implementation of the results

The report which documents the results of this work should be distributed to all Member States and Sector Members at no direct cost. The conclusions and recommendations should be addressed, and if appropriate endorsed by resolution at the next World Telecommunication Development Conference, and at regional telecommunication development conferences as appropriate. The conclusions and recommendations of this work should be endorsed, supported and promoted by the successor programmes to BAAP Programmes 9 - "Integrated Rural Development" and 12 - "Development of Telematics and Computer Networks".

8 Proposed method of handling this Question or issue

a) How? Indicate the suggested handling of the proposed Question or issue

1) Within a Study Group
   - Question (over a multi-year study period) *
   - Focus Group (12 months duration maximum) Preferred
   - Programmes *
   - Projects *
   - Expert consultants An alternative
2) In other ways - describe (e.g. regional, within other organizations, jointly with other organizations, etc.) *

b) Why? Explain why you selected the alternative under a) above

The study of this Question involves the review, analysis, and assessment of the experience of many countries in the delivery of telecommunication services to the rural and remote areas. From this investigation, "best practice" models will be developed, which will provide the basis for the conclusions and recommendations that will be determined.

Work of this nature, involving as it does the careful collection of experiences and opinions from many countries, and noting the relative urgency, can be carried out most effectively and promptly by a small group of experts, a Focus Group. As an alternative, if the formation of a Focus Group proves to be impractical, the work could be carried out effectively by expert consultants.

As noted above, topics c), d) and e) of Question 4/2, in the 1994-1998 study period, are not continuing. Topics a) and b) are continuing, having been reworded to more precisely focus the work.

9 Coordination requirements of the study

Close coordination is required with the successor programmes to BAAP Programmes 9 - "Integrated Rural Development" and 12 - "Development of Telematics and Computer Networks".

Coordination is required as appropriate with regional telecommunications organizations that are involved in work which relates to telecommunication services in rural and remote areas.

Also, there must be coordination as appropriate with other UN Agencies, including, *inter alia*, UNDP, UNESCO, and with selected NGOs which have interests in this field.

10 Other relevant information

To be defined.

Q. 10b/2 Development of multi-purpose community telecentres

1 Statement of the problem or situation

In the present context of globalization, it is necessary to put an end to the isolation of rural communities so that they can pool experience and keep abreast of progress in society, and thereby identify for themselves the opportunities that exist for their own activities and needs - in short, so that they too can have a chance to contribute to and draw on the global information society.

Rural communities have not benefited from worldwide and national progress as much as urban societies. In addition to immense problems of infrastructure, organization and human and financial resources, rural areas lack access to information which would be useful for their needs and to training facilities, as well as to machinery for communicating with those involved in development. They are thus excluded from the progress made by "city-based" institutions. At the same time, the knowledge and talents available in rural communities are often neglected or looked down upon, which leads to a break with traditional modes of life without any real prospects for change.

Today's developments in telecommunications and telematics represent for rural communities not just an opportunity to remedy the unbalanced situations existing at present, but also a challenge to make a leap forward into the information age and to become equal and competitive partners in our global society.

An integrated model of services for information, education and telecommunications would be a first step in the process of improving training in the rural environment and could stimulate education for development.

2 Question or issue proposed for study

How to set up and develop services that will involve the rural population? What facilities should telecentres be equipped with and how should they be organized in order to secure the participation of the people in applications for development activities, particularly in the educational and cultural fields? Consideration should also be given at the same time to ways of carrying out an evaluation in order to measure the impact of telecentres in the development process.

3 Description of the expected output

Evaluation studies in the field focusing on pilot projects (such as those undertaken by ITU and UNESCO) in order to make telecentres more viable in future and to develop guidelines for appropriate telematic services.

4 Required timing of the expected output

Three years.

5 "Proposers/sponsors" - Those who requested study of the Question or issue

UNESCO, in view of the interest of Member States and on the basis of its collaboration with ITU.

6 Sources of input required in carrying out the study

ITU, UNESCO, UNDP, FAO, WHO, UNEP, development sector NGOs, public telecommunication operators and public authorities of Member States concerned.

7 Target audience for the output

a) Indicate expected types of target audience, by noting all relevant points on the matrix which follows

	Developed countries	Developing countries	LDCs
Telecom policy makers		Yes	Yes
Telecom regulators		Yes	Yes
Service providers (operators)		Yes	Yes
Manufacturers			

b) Target audience - Who specifically will use the output

Governments of the different Member States concerned, rural associations and communities, development NGOs involved in the field, regional and international organizations in the development sector.

c) Proposed methods for implementation of the results

– Campaigns to increase the awareness and enlist the support of the local populations around the idea and in the establishment of telecentres.

– Training of managers from the communities to manage and run the telecentres; they will be responsible, among other things, for familiarizing members of the public with the telecentres and for maintenance.

8 Proposed method of handling this Question or issue

a) How? Indicate the suggested handling of the proposed Question or issue

1) Within a study group:
   – Question (over a multi-year study period) ☐
   – Focus group (12 months duration maximum) ☐
2) Within regular BDT activity:
   – Programmes ☐
   – Projects ☐
   – Expert consultants ☐
3) In other ways - Describe (e.g. regional, within other organizations, jointly with other organizations, etc.) ☐

By means of surveys and questionnaires, seek the opinion of national, regional and international organizations and development-oriented NGOs which might be involved in activities around the multi-purpose community telecentres.

b) Why? Explain why you selected the alternative under a) above

It is both necessary and useful to involve development players already in contact with the local people in the telecentre projects.

9 Coordination requirements of the study

ITU and UNESCO have come to develop sound collaboration in the field of telematics. It would be desirable to go on taking advantage of this cooperation for more ambitious projects.

The list of countries hosting telematic projects could thus be extended by involving development partners such as FAO, UNDP and other organizations interested in the Question. This would provide a solid cross-agency team capable of undertaking a rigorous evaluation through progress reports on projects.

10 Other relevant information

In the light of the document "ACC Statement on Universal Access to Basic Communication and Information Services" and within the framework of the Buenos Aires Action Plan (WTDC-94), ITU has set up an integrated rural development programme, in which the concept of a multi-purpose community telecentre is a central element. IDRC, ITU and UNESCO have since worked together on the development of a general multi-purpose community telecentre project, which, initially, is being applied in five pilot projects in Africa (Benin, Mali, Mozambique, Tanzania and Uganda). These are being implemented over a three-year period starting in 1997.

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Q 10c/2 Penetration and service targets for rural telecommunications

1 Statement of problem or situation

When telecommunication services are provided in the rural and remote areas of developing countries, these services are normally provided at a Public Call Office (PCO) and/or Multipurpose Community Telecentre (MCT) located near the centre of the community. This is a cost-efficient way in which a relatively small number of lines can provide universal access to telecommunication services, to serve the entire local population.

It is important to provide sufficient lines to fully meet the telecommunications needs of the local population, both to originate and to receive calls and messages. However, to ensure substantial usage of each line, it is desirable to not provide an excessive number of lines. Matching the number of lines provided to the telecommunications needs of the community will maximize the net revenue of the service provider, and help to ensure the sustainability of the rural telecommunication services.

2 Question or issue proposed for study

On the basis of studies carried out, experience, and knowledge gained by the ITU-D, and by other organizations including Member States and Sector Members, consolidate the information available and formulate conclusions and recommendations on this Question:

What are the appropriate service levels required for rural telecommunications, when the services are typically provided in a PCO or equivalent, relative to the population of the area served and any other significant factors? What other factors are significant, and how should they be measured?

The intention is to define the service level that best meets the joint goals of fully meeting the service needs of the community, for both outward and inward calling, and that also maximizes the net revenue of the service provider.

3 Description of the expected output

The output will be a planning guideline that will be used by business development planners, network planners and network development managers, in service provider (operator) organizations, for developing plans and programmes to provide telecommunication services to rural and remote areas.

4 Required timing of the expected output

A preliminary report, conclusions and recommendations are to be available by mid-1999.

5 "Proposers/Sponsors" - Those who requested study of the Question or issue

Study of this Question is recommended by the group of experts who addressed Question 4/2, "Communications for rural and remote areas", in the study period from 1994 to 1998.

6 Sources of input required, in carrying out the study

The input/contributions required will provide appropriately detailed information from service providers in all parts of the world that are providing telecommunication services in their rural and remote areas through the use of PCOs, MCTs and equivalent.

7 Target audience for the output

a) Indicate expected types of target audience, by noting all relevant points on the matrix which follows:

	Developed countries	Developing countries	LDCs
Telecom policy makers	N	Y	Y
Telecom regulators	N	Y	Y
Service providers	N	Y	Y
Manufacturers	Y	Y	Y

This information will be used by Policy Makers, Regulators, and service providers in developing countries and LDCs, in developing, evaluating and implementing specific network extension plans to provide telecommunication services throughout the rural and remote areas.

Manufacturers will use this information in product design and product line evolution, ensuring that their products are well matched to the needs of the developing countries and LDCs.

b) Target audience - Who specifically will use the output?

The specific target audience is the business development planners, network planners and network development managers, in the service provider organizations of developing countries and LDCs, who are responsible for developing plans and programmes to provide telecommunication services to rural and remote areas. The output will also be used by those responsible for developing national telecommunications policy, and for regulating the provision of telecommunication services, in the rural and remote areas of developing countries and LDCs.

c) Proposed methods for the implementation of the results

The report which documents the results of this work should be distributed to all Member States and Sector Members at no direct cost. The conclusions and recommendations should be endorsed, utilized, supported and promoted by the successor programmes to BAAP Programmes 3 - "Guidelines for the Elaboration of a Business-oriented Development Plan", 9 - "Integrated Rural Development" and 11 - "Information Services".

8 Proposed method of handling this Question or issue

a) How? Indicate the suggested handling of the proposed Question or issue

1) Within a Study Group
   - Question (over a multi-year study period) *
   - Focus Group (12 months duration maximum) An alternative
2) Within Regular BDT Activity
   - Programmes *
   - Projects *
   - Expert consultants Preferred
3) In other ways - describe (e.g. regional, within other organizations, jointly with other organizations, etc.) *

)

b) Why? Explain why you selected the alternative under a) above

The task involves the obtaining of possibly elusive facts, not in rounding up opinion. There will be expert judgement involved, establishing legitimate causal relationships, based on the facts which are obtained, and careful evaluation of them. As well as knowledge and experience in telecommunications, expertise in the area of socio-economic factors and relationships is also required.

9 Coordination requirements of the study

As already noted, close coordination will be required with the successor programmes to BAAP Programmes 3, 9, and 11.

In seeking relevant experience and information, appropriate liaison and coordination should be established, *inter alia,* with regional organizations, e.g. CITEL, ETSI and APEC.

10 Other relevant information

To be defined.

Q. 10d/2 Definition of a set of indicators describing the state of development of a country's rural telecommunications network and services

1 Statement of problem or situation

The appearance of complex market structures with alternative service providers, new services, and competition make it increasingly difficult to assess the overall status and development situation of rural telecommunications in a country. It is widely accepted that the development and outlook of a country's telecommunications strongly impact the country's economic development and prospects. Easy and accurate assessment, enabling national and regional comparison, is helpful to central and local governments and to international organizations and investors, and thus benefits developing countries. The indicators will enable:

- comparative analysis of the state of telecommunications development of a country, via standard concepts, methods of assessment and demand criteria;
- assessment of development objectives;
- comparison via an appropriate set of indicators describing the country's:
  - demography and economy;
  - legal and regulatory system;
  - market structure for delivery of key services;
  - demand, coverage, penetration, service quality and service accessibility;
  - key economic parameters (e.g. rates, investment, earnings, taxation, etc.);
  - human resources used to deliver services.

This information supports efficient market assessment and comparative analysis.

2 Question or issue proposed for study

What is the appropriate set of indicators to adequately characterize a country's current and future telecommunication services market, for the information of business analysts, and political and business decision makers? These indicators and their standard determination and expression should facilitate simple information collection in developing countries.

3 Description of the expected output

The output will define a standard, accepted set of parameters ("key indicators") for national use which will be provided regularly to the ITU, to build and maintain an international database to facilitate analysis and decision-making. The definition of the parameters and their determination is intended primarily to define the state of rural telecommunications in developing countries.

4 Required timing of the expected output

A preliminary report and conclusions and recommendations are to be available by mid-1999.

5 "Proposers/Sponsors" - Those who requested study of the Question or issue

The initial sponsorship for this Question came from Inmarsat.

The output, and the regularly published international Key Indicator profile of rural telecommunications which it will make possible, will be of substantial value to all organizations and individuals who take a substantive interest in the creation of infrastructure which enhances

economic development. This includes sovereign governments, from both the policy and regulatory points of view, the International Funding Institutions (IFIs), and, in the private sector, both investors and service providers in developing countries and worldwide.

6 Sources of input required, in carrying out the study

The major contributions will come from Member States and Sector Members, in both developing and developed countries. It is hoped that detailed information about the extensive "Key Indicator Suites" which are in current use by both regulatory agencies and service providers in many developed countries will be made available to those responsible for addressing this Question.

7 Target audience for the output

a) Indicate expected types of target audience, by noting all relevant points on the matrix which follows:

	Developed countries	Developing countries	LDCs
Telecom policy makers	Y	Y	Y
Telecom regulators	Y	Y	Y
Service providers	Y	Y	Y
Manufacturers	Y	Y	Y

The telecommunications industry is well suited to the use of "Key Indicators" which describe and define both the services which are provided and the networks upon which they are provided. More availability of quantitative information, specifically focused on communications for rural and remote areas, will be helpful in both developed and developing countries, and to both the public and the private sector.

b) Target audience - Who specifically will use the output?

The output will be useful and will be used by high level authorities and managers responsible for planning, organizing and controlling the provision and delivery of telecommunication services to rural and remote areas throughout the world, and in particular to the rural and remote areas of developing countries and LDCs. This includes, in the public sector, those responsible for establishing national telecommunications policy and monitoring its implementation, and those with regulatory responsibility. In the service provider organizations, this includes those responsible for setting strategy and for developing and delivering rural telecommunications programmes. Both manufacturers and financial institutions will find the output helpful in defining and responding to market opportunities.

c) Proposed methods for the implementation of the results

The report which documents the results of this work should be distributed to all Member States and Sector Members at no direct cost. The conclusions and recommendations which result from this work should be implemented to expand and enhance the indicator type information already being provided by the ITU, with specific focus on telecommunication services in the rural and remote areas. The additional information which now becomes available on a regular and continuing basis will be circulated to Member States and Sector Members as appropriate, within existing procedures.

8 Proposed method of handling this Question or issue

a) How? Indicate the suggested handling of the proposed Question or issue

1) Within a Study Group
   - Question (over a multi-year study period) *
   - Focus Group (12 months duration maximum) *

2) Within Regular BDT Activity
   - Programmes Ongoing
   - Projects *
   - Expert consultants Initially

3) In other ways - describe (e.g. regional, within other organizations, jointly with other organizations, etc.) *

b) Why? Explain why you selected the alternative under a) above

This proposed Question uses the approach to the development of industry information which is proceeding well under BAAP Programme 11, and focuses specifically on communications for rural and remote areas. Once the appropriate Key Indicators have been developed, agreed on, and have become available, it is expected that the periodic ongoing aggregation and publication of this material will become part of the ITU "routine round" of information publication.

As a component of the work under this Question, it is hoped that it will be practical to address the aggregation of information on rural telecommunications at a finer granularity than the national level. In this regard, the management accounting techniques used by large service providers in developed countries offer valuable examples, both of how such information can be captured and displayed, and of the value that it brings to those responsible for managing and developing the network areas which are reported on.

The nature of this work, which is highly specialized and will require detailed bilateral dialogue and negotiation with many parties, can best be carried out by a knowledgeable and experienced consultant.

9 Coordination requirements of the study

The primary coordination of this proposal is with the successor programme to BAAP Programme 11 - "Information Services". This Question conforms to the objective of Programme 11, focused specifically on the delivery of communications to rural and remote areas.

Following directly from this, close coordination is also appropriate with the Strategic Planning Unit (SPU) of the ITU General Secretariat.

10 Other relevant information

To be defined.

Q. 10e/2 Sound and television broadcasting and communication for rural and remote areas

1 Statement of problem or situation

In the current study period, Question 8/2, "Public service broadcasting infrastructure in developing countries", has addressed the study of this important subject area. One part of this work has related to the identification of the ways and means to assist developing countries in improving their sound and television broadcasting technical infrastructure.

From the results of the survey carried out among the Public Service Broadcasters, it has become clear that the distribution of sound and television broadcasting services throughout developing countries is often difficult to implement due to the lack of communications facilities in rural areas.

The advent of telecommunication services in the rural and remote areas provides an excellent opportunity to take advantage of these new facilities to extend sound and television broadcasting capability into these previously unserved areas.

2 Question or issue proposed for study

On the basis of completed studies, experience and knowledge gained by the ITU-D and by other organizations including UNESCO, WBUs and the FAO, and by the Member States and Sector Members of the Development Sector, develop conclusions and recommendations on this question:

How best can the telecommunications infrastructure in the rural and remote areas be planned and used to provide sound and television broadcasting to the population living there? How will this effect the cost of creating telecommunications infrastructure in the rural and remote areas?

of the expected output

The output will provide a guideline on the network planning and provisioning of sound and television broadcasting capability throughout rural and remote areas, including appropriate technical and economic detail, for use by the service provider's network planners and/or the network planners of the broadcasting authority. This planning guideline will include broad gauge cost information.

This guideline will be based on "best practice" experience of countries and organizations which have been successful in providing sound and television broadcasting capability throughout their rural and remote areas.

4 Required timing of the expected output

A preliminary report, conclusions, and recommendations are to be available by mid-1999.

5 "Proposers/Sponsors" - Those who requested study of the Question or issue

Study of this Question is recommended by the groups of experts who addressed Question 4/2 and Question 8/2 in the study period from 1994 to 1998. Question 8/2 was proposed by the WBUs on behalf of Public Service Broadcasters (both radio and television) in developing countries. Other Proposers/Sponsors TBD.

6 Sources of input required in carrying out the study

Contributions are expected from sovereign governments, Public Service Broadcasters, service providers who provide sound and television broadcasting facilities, manufacturers whose product line includes appropriate systems and capability, and from both UN Agencies and regional organizations that have interest in and knowledge of public broadcasting.

Contributions from regional broadcasting organizations will be particularly helpful, as these organizations will be able to offer regional perspectives on sound and television broadcasting service for rural and remote areas.

7 Target audience for the output

a) Indicate expected types of target audience, by noting all relevant points on the matrix which follows:

	Developed countries	Developing countries	LDCs
Telecom policy makers	N	Y	Y
Telecom regulators	N	Y	Y
Service providers	N	Y	Y
Manufacturers	Y	Y	Y

b) Target audience - Who specifically will use the output?

The intent of this Question is to ensure that Public Broadcasting is appropriately included in plans and programmes that promote Integrated Rural Development through the provision of telecommunication services throughout the rural and remote areas of developing countries and LDCs.

Accordingly, in these countries, the output will be useful to and used by those responsible for establishing national telecommunications policy for remote and rural areas, those responsible for regulating telecommunications in remote and rural areas, and for those who actually plan and implement Programmes which bring telecommunications to remote and rural areas. It will also be used by Public Service Broadcasters who actually provide the sound and television broadcasting service in these areas.

c) Proposed methods for the implementation of the results

The report which documents the results of this work should be distributed to all Member States and Sector Members at no direct cost. The conclusions and recommendations should be addressed, and if appropriate endorsed by resolution at the next World Telecommunication Development Conference, and at regional telecommunication development conferences as appropriate. The conclusions and recommendations of this work should be endorsed, supported and promoted by the successor programmes to BAAP Programmes 9 - "Integrated Rural Development", 10 - "Broadcasting Infrastructure" and 12 - "Development of Telematics and Computer Networks".

8 Proposed method of handling this Question or issue

a) How? Indicate the suggested handling of the proposed Question or issue

1) Within a Study Group

– Question (over a multi-year study period) *

– Focus Group (12 months duration maximum) *

2)Within Regular BDT Activity

–Programmes *

–Projects *

–Expert consultant Recommended

3) In other ways - describe (e.g. regional, within other organizations, jointly with other organizations, etc.) *

b) Why? Explain why you selected the alternative under a) above

This Question can best be addressed through a study carried out by a consultant who is knowledgeable and experienced in the field. The output is intended to provide a "best practice network planning guideline" which provides detailed guidance and successful examples of how best to implement sound and television broadcasting service for rural and remote areas.

9 Coordination requirements of the study

The primary coordination requirement is with the successor programme to BAAP Programme 9 - "Integrated Rural Development". Appropriate coordination is also needed with Study Group Question 4/2, "Communications for remote and rural areas", and with Study Group Question 8/2, "Public service broadcasting infrastructure in developing countries".

Other coordination requirements - To be defined.

10 Other relevant information

The WBUs, working in conjunction with the Haso Bunko Foundation (HBF) of Japan, have recently funded an in-depth study of some of the more pressing aspects of Question 8/2, concerning the introduction of digital techniques into all areas of sound broadcasting, including delivery and transmission in telecommunication networks.

The recommendations which have been developed by Question 8/2 have been based on an extensive survey of the Public Service Broadcasters. A recommendation will be put forward to the WTDC 1998, addressing the issue of the joint development of telecommunications and broadcasting networks in a synergistic and coordinated fashion.

Q. 10f/2 Measurement of the impact of Information and Communications Technology (ICT) in rural and remote areas

1 Statement of problem or situation

It is widely assumed that the provision of access to telecommunication services and the computer-based applications which take advantage of these services, often known collectively as "Information and Communications Technology" (ICT), in previously unserved or underserved rural and remote areas, and also in previously unserved or underserved urban or semi-urban areas, has a significant positive impact in promoting and supporting economic, social and cultural development. More scientific evidence which confirms this assumption would encourage both public and private sector organizations to implement ICT programmes in rural and remote areas. To provide such evidence, a set of standardized key indicators is required to measure and evaluate the impact in case studies, which may involve comparisons over time or comparisons between areas with or without access to ICT. Such standardized indicators would also make international comparisons of the effectiveness of different approaches, technologies, etc. used in rural ICT projects more meaningful and enable identification of "best practice".

These indicators would address all three areas of economic, social and cultural development, and would primarily focus on direction and rate of change, e.g. improvement or worsening, and how quickly, not merely the current level of development. The sorts of indicators contemplated could include income, GDP/capita, trade measurements, measures of productivity, unemployment rates, generation of new employment, literacy and other educational indicators, health indicators (infant mortality, longevity and others), and indicators of cultural development.

Several attempts to develop such indicators at the macro level have been made by UN and other development organizations but there is not yet a set of universally accepted indicators, and additional indicators are needed at the micro level to measure impact in small scale projects, particularly in rural and remote areas and in deprived urban areas.

Clearly such indicators would also be of value to many other development cooperation agencies organizations, such as other UN organizations, financing institutions, bilateral cooperation agencies and NGOs. Governments of developing countries could also use them to measure progress and to evaluate the impact of development projects.

2 Question or issue proposed for study

What are the appropriate indicators to use, to assess the initial and ongoing impact of the provision of ICT in rural and remote areas, and in previously unserved or underserved urban and semi-urban areas, to measure the impact of the availability of ICT in furthering the economic, social and cultural development of the area?

3 Description of the expected output

The output will comprise an evaluation methodology and a set of "key indicators" that can be used to assess and describe the direction and rate of change of economic, social and cultural development of the area reported upon.

A subject which requires particular attention is the "granularity" of the key indicators. Desirably, it would be applicable to entities as small as a village, and as large as a sovereign country.

4 Required timing of the expected output

A preliminary report, conclusions and recommendations are to be available by mid-1999.

5 "Proposers/Sponsors" - Those who requested study of the Question or issue

Study of this Question is proposed by the group of experts who addressed Question 4/2 in the study period from 1994 to 1998 and by the BDT staff with responsibility for BAAP Programmes 9 and 12 in the same period.

Preliminary discussion with other UN Agencies, with representatives of the IFIs and of many NGOs, and with a wide range of other public and private sector organizations, indicates that a significant number of additional sponsors can be found.

6 Sources of input required in carrying out the study

Participation and contributions are expected from all of the groups indicated above - UN Agencies, sovereign governments, IFIs, NGOs, and other public and private organizations.

The initial approach will be to determine what techniques and measurements are currently in use by the various potential clients/users of the proposed indicators, to assess progress as addressed by this Question. This investigation will form the basis for synthesizing a set of more comprehensive, sensitive and accurate indicators of development state and progress.

The intention of these indicators is to provide a comprehensive, "whole person/whole community" measurement, addressing all aspects of integrated development, recognizing that telecommunications is the essential vehicle to provide access/connectivity to the area or community, and that the applications that provide the actual value, for example in telemedicine, distance education, information access and transaction processing, make use of the underlying ICT.

7 Target audience for the output

a) Indicate expected types of target audience, by noting all relevant points on the matrix which follows:

	Developed countries	Developing countries	LDCs
Telecom policy makers	Y	Y	Y
Telecom regulators	Y	Y	Y
Service providers	Y	Y	Y
Manufacturers	Y	Y	Y
Research institutions	Y	Y	Y
Development agencies	Y	Y	Y
NGOs	Y	Y	Y

b) Target audience - Who specifically will use the output?

The output will be used by senior managers, policy makers and planners at UN Agencies, in sovereign states, the IFIs, the NGOs, development agencies and in many other public and private sector organizations.

A hoped-for outcome of the development and availability of the indicators will be a higher degree of coordination and cooperation between multiple agencies and organizations, based on the

expectation that development efforts in the various occupational sectors are mutually supporting each other.

c) Proposed methods for the implementation of the results

The report which documents the results of this work should be distributed to all Member States and Sector Members at no direct cost. The conclusions and recommendations which result from this work should be implemented to expand and enhance the indicator type information already being provided by the ITU. It is expected that it will be appropriate to establish close linkages with the information-reporting function in other UN Agencies. It may in fact be appropriate to provide this integrated information through a jointly-prepared report involving other UN Agencies.

The indicators will also be used for impact evaluation in the pilot projects implemented by the BAAP Programme 9 - Integrated Rural Development.

The specific focus must of course be on the rural and remote areas. The evaluation reports which then become available on a regular and continuing basis will be circulated to Member States and Sector Members as appropriate, within existing procedures and also to the clients/users of reports from other participating UN Agencies.

8 Proposed method of handling this Question or issue

a) How? Indicate the suggested handling of the proposed Question or issue

1)Within a Study Group

–Question (over a multi-year study period) *

–Focus Group (12 months duration maximum) *

2)Within regular BDT activity

–Programmes Ongoing

–Projects *

–Expert consultants Initially

3)In other ways - describe (e.g. regional, within other organizations, jointly with other organizations etc.) *

Cooperation with organizations already involved in indicator development and/or participating in the BAAP Programme 9 will be sought.

b) Why? Explain why you selected the alternative under a) above

This proposed Question will require close coordination with other organizations, primarily other agencies within the UN system. The task, and the challenge, will be to obtain and systematize the best possible information profile utilizing an appropriately modest expenditure of resources. To the extent practicable, it will be desirable and appropriate to use existing indicator components, perhaps captured, aggregated and displayed in new ways, rather than establish unique new indicator components.

Once the appropriate Key Indicators and the resulting profile have been developed, agreed on, and have become available, it is expected that the periodic ongoing collection, aggregation and publication of this material will become part of the "routine round" of periodic information publication currently performed by the ITU and by the other UN Agencies.

As a component of the work under this Question, it is hoped that it will be practical to address the aggregation of the required information at a much finer granularity than the national level. It should

be noted that the management accounting techniques used by large telecommunication services providers in developed countries offer useful examples, both of how such information can be captured, aggregated and displayed and of the value that it brings to those responsible for managing and developing the business and network areas which are reported on.

The nature of the proposed work, which is highly specialized and will require detailed bilateral dialogue and negotiation with many parties, can best be carried out by a thoroughly knowledgeable and well experienced consultant.

9 Coordination requirements of the study

In addressing this Question, close coordination will be required with all the agencies and organizations that are in a position both to contribute to and to benefit from the outcome of this work. These will include, *inter alia*, UN Agencies, IFIs, NGOs, and development agencies such as CIDA, IDRC, SIDA and USAID.

In the context of the Buenos Aires Action Plan, there is a logical linkage with Programme 11. The work of Programme 11 will be a valuable component of the answer to this Question. Related to this, close coordination will also be appropriate with the strategic Planning Unit (SPU) of the ITU General Secretariat.

10 Other relevant information

To be defined.

Q. 10g/2 Enhancing the capacity of NGOs to achieve development aims, through the use of telecommunication

1 Statement of Problem or Situation

Increasingly, development efforts in less and least developed countries are being led by national and international NGOs, recognised by governments, the UN system and others as key actors. Some are directly involved in media (e.g. community radio, development video, telecentres); others use telecommunication to achieve their aims (e.g. aid agencies, training and educational initiatives, local economic initiatives etc.); while others still are generally aware of the important role of telecommunication but have yet to come to grips with the issues and possibilities.

There is a danger that many opportunities to enhance development using telecommunication are being lost, because of lack of awareness of potential especially of new technologies, lack of coordination between NGOs, national authorities and private sector, (often unintended) obstacles in national and international broadcasting policy and telecommunication regulation, and even poorly designed international standards that impede appropriate technologies.

Finding a solution to these problems should significantly increase the capacity of these NGOs to achieve their development aims, through the use of telecommunication and information technologies.

2 Question or Issue Proposed for Study

General Question:

What is the actual and potential impact of current telecommunication trends on the activities of development NGOs, and what policies and actions can enhance their capacity to utilize telecommunication more effectively to achieve development aims?

Specifically:

1) Based on existing evidence, what new opportunities have recent events opened up for development-oriented NGOs through communication media and technologies use (e.g. Internet, radio and television broadcast, satellite, video). How do they, and can they, contribute concretely to achieving the development aims of NGOs, especially in least developed countries?

2) What are the current obstacles to the widespread dissemination of these benefits? This might include: lack of awareness regarding benefits; lack of finance; inadequate universal service and access to basic network; restrictive telecommunication regulation; unsupportive broadcast policy including frequency allocation; inappropriate technology and standards, including digital sound broadcasting; etc.

3) What policies and action, from NGOs, governments, ITU, and others, can best address these obstacles? These might include better coordination between NGOs; additional support for non-commercial Internet use; regulation and frequency provision of local development-oriented radio; support for innovative universal service actions, especially in the context of liberalization; access to satellite broadcasting by NGOs; and so forth.

3 Description of the Expected Output

– An analysis of the impact and potential of telecommunication technologies on the development-oriented NGOs, especially in least developed countries.

– An analysis of the obstacles to disseminating the effective use of telecommunication technologies, in terms of awareness, regulations, access to resources and services, broadcasting policy, standards etc.
– Concrete policy guidelines and proposals for actions, at national and international level, to ensure NGOs can take advantage of these technologies, working with national governments, ITU and others, to maximize development gains.

The users will be:

National and International NGOs, and their representative and other organizations; national government, especially those involved in telecommunication and broadcasting policy and regulation; broadcasting and telecommunication regulators; telecommunication operators; the ITU.

4 Required timing of the expected output

This question must be addressed urgently, but without undue haste. The timescale for the recommendations extends into the future, taking into consideration the rapidly evolving national and international telecommunication environment

A careful consultation and research methodology (see below) will have to be deployed, if the output is to address the issues effectively. An 18- to 24-month study period would seem reasonable, before preliminary results can be achieved.

5 Proposers/Sponsors - Those who requested study of the Question or Issue

Organization: Platform for Cooperation on Communication and Democratization

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The Platform is in the process of becoming a member of ITU-D.

6 Sources of input required in carrying out the study

The following organizations would benefit from the output and are to contribute to the work in different ways:

Media related NGOs: The Proposers comprise an association of NGOs, members of which have agreed to contribute to this Study Group. Among these are:

1) AMARC: World Association for Community Radio Broadcasters;
2) APC: Association for Progressive Communication;
3) Article 19: International Centre Against Censorship;
4) Catholic Media Council;
5) IAMCR (PCR Section): International Association for Media and Communication Research;
6) IFJ: International Federation of Journalists;
7) IWTC: International Women's Tribune Centre;
8) MacBride Round Table on Communication;

9) PANOS London;

10) People's Communication Charter;

11) Vidéazimut: International Coalition for Audiovisuals for Development and Democracy;

12) WACC: World Association for Christian Communication;

13) Worldview International Foundation;

14) ZEBRA: Audio-Visual Network for North-South Understanding;

15) Group of Eight: A Network of Communication in Latin America and the Caribbean;

The support of others will be gained prior to the WDTC. These include:

– other agencies and organizations involved in communications and development especially in least developed countries, such as IDRC and FES;

– major development NGOs, such as Concern Worldwide, OXFAM and Trócaire, a number of whom have already been contacted;

– national governments, especially regulators and policy makers in broadcasting, media and development.

UNDP (especially Sustainable Development Media Programme);

UNESCO (Communications, Information and Informatics Sector);

ITU (all three sectors; and Inter-Agency Project on Universal Access);

World Bank (InfoDev Programme).

7 Target audience for the output

7.1 Indicate expected types of target audience, by noting all relevant points on the matrix which follows

	Developed countries	**Developing countries**	**LDCs**
Telecom Policy Makers	Limited	Yes	Yes
Telecom Regulators	Yes	Yes	Yes
Service Providers (Operators)	Limited	Yes	Yes
Manufacturers	Limited	Limited	

The enhancement of development activities by NGOs is of keen interest to governments and indeed regulators from the universal service perspective. Major commercial service providers have some interest in providing service, but small operators with a development brief, for instance in Internet provision, will be most interested. Manufacturers may have an interest in niche areas such as digital radio standards for use in local and small scale development radio.

7.2 Target audience – Who specifically will use the output

The target audience is primarily national and international NGOs, working hand in hand with government policy makers and development support actions. Those in development policy, telecommunication, and broadcasting will be especially targeted. The policy recommendations and actions will be focused especially on their requirements, and related to the practical problems they face in achieving their aims and the environment in which they daily work.

International organizations, especially the UN Agencies such as ITU, UNDP and UNESCO, will also be targeted for practically useful and feasible policies and actions that can, with minimal levels of financial support, significantly enhance the use of communications by NGOs.

7.3 Proposed methods for the implementation of the results

The Platform for Communication and Democratization comprises now over 20 international NGOs active in media, communication and development issues. This offers a ready-made means of dissemination, to their target groups, collaborators, partners and others. Several of these produce regular magazines and newsletters, organise conferences and meetings and engage in other dissemination and information activities. Members will also undertaken to publicise the findings at the many international and national gatherings in which they participate.

The output will also be the subject of one or more Colloquia, or Workshops dedicated to the results.

8 Proposed method of handling this question or issue

a) How? Suggested handling of the proposed Question

The preliminary proposed methodology for addressing this question is:

– a survey questionnaire to a selected number of NGOs, with a view to gaining at least 200 responses biased towards those involved in least developed countries;

– a review of the literature, including "grey literature" (unpublished reports, conference proceedings etc.) in the academic, NGO, UN and commercial contexts;

– a review of the activities of UN organizations in this domain, and possibly of selected countries, especially least developed countries;

– a series of interviews with key individuals among NGOs, UN and other agencies, national government, telecom operators and service providers;

– at least one Colloquium/workshop, or perhaps one each in a couple of regions, to debate preliminary findings and proposals.

The appropriate combination of mechanisms is still a matter for discussion. However, the following is a first approximation.

Within a Study Group

– Question (over a multi-year study period)	yes
– Focus Group (12 months duration maximum)	possible

Within Regular BDT Activity

– Programmes	yes
– Projects	uncertain
– Expert consultants	yes

This work will be completed working closely with the Platform for Cooperation on Communication and Democratization, and its member organizations. In particular, the Platform will be willing to prioritise this issue and devote its resources, in terms of time and energy, towards completing and disseminating the work.

b) Why? Why we selected the alternative under a) above

A Study Group would seem appropriate in order to bring together the range of interest represented at the ITU, and to allow a sufficient amount of time to complete the work. A Focus Group might be relevant only at a certain stage on the work.

A Programme (sharing with other related Questions) would be useful in organising the Colloquia, and in piloting possible actions towards the end of the study period.

Expert consultancy would be required in developing the methodology to be used, in undertaken the literature reviews and in organizing the interviews.

9 Coordination requirements of the study

Coordination will be required with related Study Groups and Programmes of ITU-D. Currently, in the two Study Groups, issues of relevance arise in: SG1/1; SG 2/1 SG 3/1; SG4/1; SG1/2; SG2/2; SG 4/2; SG 6/2; SG 7/2; SG 8/2. In relation to BAAP Programmes 1, 6, 9 10, 12 and 12 appear to be most relevant.

However, close cooperation may also be required with specific issues discussed in Study Groups of ITU-T and ITU-R, around specific spectrum allocation, technology and standardization issues.

Coordination will also be required with a range of organizations outside the ITU, including UN agencies as mentioned above; NGOs coalitions; regional telecommunications organizations; etc.

10 Other relevant information

Fundamentally, this is a request from the NGOs involved in the Platform for Cooperation on Communication and Democratization to engage in constructive cooperation with ITU member and UN agencies to together explore the obstacles, and develop proposals to enhance the use by NGOs of communication media to achieve common development aims.