EXECUTIVE SUMMARY

THE MISSING LINK

REPORT OF THE
INDEPENDENT COMMISSION
FOR WORLD WIDE
TELECOMMUNICATIONS
DEVELOPMENT

This document summarises the analyses, arguments and recommendations in the Report of the Independent Commission. The complete version of our Report may be obtained from the Secretary-General of the

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REPORT OF THE INDEPENDENT COMMISSION FOR WORLD-WIDE TELECOMMUNICATIONS DEVELOPMENT

DECEMBER 1984

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EXECUTIVE SUMMARY

INTRODUCTION

1 When it met at Nairobi in 1982 the Plenipotentiary Conference of the International Telecommunication Union (ITU) decided to set up an Independent Commission for World-Wide Telecommunications Development to recommend ways of stimulating the expansion of telecommunications across the world. The Commission, which consists of 17 Members from different regions and with a variety of disciplines and experience, was established in May 1983. We met five times between October 1983 and November 1984.

2 Given the extensive literature on the subject we thought it best, rather than commission further research, to propose remedies. We have focussed our attention on public telephone systems.

3 Our task was essentially political in character. Of the 600 million telephones in the world three-quarters are concentrated in 9 countries. The remainder are distributed unevenly throughout the rest of the world. While telecommunication is taken for granted as a key factor in economic, commercial, social and cultural activity in industrialised countries and as an engine of growth, in most developing countries the telecommunications system is not adequate even to sustain essential services. In many areas there is no system at all. Neither in the name of common humanity nor on grounds of common interest is such a disparity acceptable.

4 An expanded world telecommunications network would benefit both developing and industrialised countries. The process of improving and expanding networks in developing countries will create a major market for telecommunications equipment. A more comprehensive world system will increase international traffic to the advantage of the operators. Where information flows so does commerce. More world trade and other contacts will increase understanding. An expanded telecommunications network will make the world a better and safer place.

OBJECTIVE

5 We believe that by the early part of the next century virtually the whole of mankind should be brought within easy reach of a telephone and, in due course, the other services telecommunications can provide. That should be the overriding objective. Achieving this will require a range of actions by industrialised and developing countries alike.

THE ROLE OF TELECOMMUNICATIONS

6 Telecommunications have often been neglected in favour of other sectors such as agriculture, water and roads. Telecommunications should be regarded as a complement to other investments and an essential component in the development process which can raise productivity and efficiency in other sectors and enhance the quality of life in the developing world.

7 Telecommunications play an essential role in emergency and health services, commerce and other economic activity, in public administration, and in reducing the need to travel. There is moreover a clear link between investment in telecommunications and economic growth.

8 The economic and social benefits an efficient telecommunications system confers on a community or a nation can be clearly perceived. The system can also be used as a channel for education, for disseminating information, encouraging self-reliance, strengthening the social fabric and sense of national identity, and contributing to political stability.

9 Dramatic technological advances are taking place at a time when the role of telecommunications in the process of development is more important than ever. In our view no development programme of any country will be balanced, properly integrated, or effective unless it accords telecommunications an appropriate role.

THE SITUATION TODAY

10 Telecommunications link all countries. But there is a wide disparity in the extent and quality of service as between industrialised and developing countries, and within developing countries between urban and remote areas. This reflects differences in economic capability, historical experience and in the priority given to investment in this sector.

11 Many developing countries have created efficient telecommunications systems extending into the more remote areas. But elsewhere the telephone service if far from universal. Three-quarters of the world's population live in countries with 10 telephones or less for every 100 persons; over half live in countries with less than one telephone for every 100 persons.

12 Uneven distribution of telephones is not the only problem. In many developing countries service may not be available even to those close to a telephone exchange. The service may be out of order for long periods. The causes of these and other shortcomings may include inadequate equipment and maintenance, or lack of trained staff.

13 In attempting to remedy this situation operating entities in developing countries face various problems. They may be unable to find the investment capital to improve and expand the network. With few exceptions there is no indigenous manufacture of telecommunications equipment. Most of this has to be bought abroad out of the scarce reserves of hard currency for which, in most developing countries, there are competing demands. At the same time, national policies can deter inward investment.

14 Most equipment is designed for use in advanced countries with temperate climates and may not suit conditions in developing countries where, in any case, there may not be enough staff trained to install, use and maintain it. Changes in manufacturers' products can create problems over spare parts for obsolescent equipment.

15 The more remote areas of developing countries pose special difficulties because of the distances involved, the terrain and sparse population. Profitability alone is an inappropriate criterion for investment in these areas; indirect benefits have to be taken into account. Since telecommunications operators' main business and source of profit are in urban areas, the incentive to invest there will be strong. If the service in these areas is neither efficient nor comprehensive, operators may see little point in providing service to remote areas.

INTERNATIONAL COOPERATION

16 While numerous international and regional organisations are involved one way or another in telecommunications, the ITU carries the principal responsibility in this field. We were charged with considering the most cost-effective way in which the ITU could stimulate and support the range of activities that might be needed to achieve a more balanced expansion of telecommunications networks.

17 The role of the ITU could be more effective if the relevant Resolutions of the ITU Plenipotentiary Conference in Nairobi in 1982 were put into effect, account being taken of the recommendations we make in this Report.

18 The primary source of funds for the ITU's Technical Cooperation activities is the United Nations Development Programme (UNDP). In recent years the ITU's income from this source has been insufficient to meet its overheads. This should be remedied.

19 WE RECOMMEND that contributors to and beneficiaries of the UNDP reconsider the importance they attach to the telecommunications sector, and provide appropriate resources for its growth. WE FURTHER RECOMMEND that all international organisations concerned with telecommunications give more favourable consideration than hitherto to assistance for the expansion of telecommunications world wide and that regional cooperation be accorded a higher priority.

THE CHOICE OF TECHNOLOGY

20 The quickening pace of change in technology has widened the range of technical options and complicated the choices developing countries have to make. The future offers improved quality and new capabilities at lower cost. We believe that public telecommunications systems will, over time, become wholly digital. The change from analogue to digital will take many years and it is for the operating entities in each developing country to take their own decisions. Conditions in remote and rural areas suggest that satellite or radio systems may offer cost-effective solutions. Not enough is being done to develop this potential. **WE RECOMMEND that manufacturers and operators be encouraged to develop systems which will enable the needs of the more remote areas of developing countries to be met at lower cost.**

21 Selection of product can be as important as choice of technology. Buyers must know what is available on the market. **WE RECOMMEND that the ITU, in conjunction with manufacturers of telecommunications**

equipment and components, consider compiling a comprehensive catalogue of telecommunications suppliers and systems currently in use.

INTERNAL ORGANISATION AND MANAGEMENT OF TELECOMMUNICATIONS

22 Many problems over availability and quality of service in developing countries are symptoms of inadequacies in organisation and management, rather than shortage of investment finance. While some countries have made impressive progress in overcoming these, in others, shortcomings persist. Many countries cannot be expected to make the necessary improvements without help.

23 It is for governments to decide whether telecommunications are publicly or privately owned, and whether competition should be admitted. But telecommunications should be run on business lines as a separate, financially self-sustaining enterprise. It should be properly managed and planned with effective controls.

24 All stages of planning, procurement and installation of capital plant should be closely monitored. Where possible procurement should be competitive and major procurement decisions should be taken openly at senior level. Procurement processes should be subject to independent audit. **WE RECOMMEND that developing countries consider pooling their purchases of appropriate equipment including terminals and components. WE ALSO RECOMMEND that, when purchasing equipment, developing countries ensure that the contract includes commitments on the supply of spare parts, training, commissioning, post-installation and maintenance.**

TRAINING

25 Lack of sufficient trained staff is a major cause of the shortcomings of telecommunications in developing countries. Managers, supervisors and staff must be thoroughly trained.

26 Most developing countries depend on outside help with training. Much has been done in recent years by the ITU, by other international agencies, by operators and universities in industrialised and some developing countries. Most major manufacturers provide training in the operation and maintenance of the equipment they supply. But there is still a gap between telecommunications training opportunities and needs in the developing world.

27 WE RECOMMEND that telecommunications operators in developing countries review their training needs and resources, and prepare systematic training plans; that developing countries use the resources available through the IPDC; that industrialised countries organise seminars to improve the qualifications of experts from developing countries; that the research and development (R & D) institutes we propose below be developed as a source of higher technological, supervisory and managerial training and as coordinating agencies for external training opportunities; that the ITU supplement the catalogue of training opportunities with information about training opportunities in the private sector; and that operators and manufacturers consider how they can enhance the training opportunities they offer to developing countries.

RESEARCH AND DEVELOPMENT AND LOCAL MANUFACTURE

Research and Development

28 The majority of developing countries depend at present on R & D in industrialised countries. Little of this is directed to the distinctive needs of the developing world, for instance for more cost-effective equipment to serve remote areas.

29 R & D geared to developing country needs will best be undertaken by establishments in the developing world. Some larger countries already have such establishments, but most lack the necessary resources.

30 Conditions and needs are often similar throughout a region or sub-region and it may be advantageous to create regional or sub-regional R & D institutes. These should wherever possible be developed out of an existing entity and concentrate on the specialised requirements of the countries they serve. They should adapt existing designs and use modules and components available on the world market.

31 WE RECOMMEND that the major regional and sub-regional political and economic organisations consider as soon as possible how best R & D institutes might be established.

Local Manufacture

32 Manufacture of telecommunications equipment in developing countries reduces foreign exchange problems and dependence on the major international firms. Equipment and spare parts which are needed but are no longer available can continue to be produced.

33 Few developing countries have sufficient resources or demand to support manufacture of major high technology equipment. Many can and do make simpler equipment. This should be encouraged.

34 Collective manufacturing ventures by groups of countries at regional or sub-regional level should be encouraged.

35 WE RECOMMEND that developing countries review the possibilities for local or regional manufacture. WE FURTHER RECOMMEND that manufacturers in industrialised countries consider the scope for cooperation with developing countries in local or regional manufacture.

A CENTRE FOR TELECOMMUNICATIONS DEVELOPMENT

36 As an immediate step to improve the present arrangements for assisting developing countries, WE RECOMMEND that a Centre for Telecomminications Development be established by the Administrative Council of the ITU during 1985. The Centre would comprise a Development Policy Unit, which would collect and analyse data on policies and experiences from around the world; a Telecommunications Development Service organised into teams of specialists to offer high calibre advice to developing countries on aspects of creating and operating an effective public network; and an Operations Support Group, which would provide assistance with specific projects. The work of the Centre would complement the activities of the Technical Cooperation Department (TCD) of the ITU.

37 These functions could cost some US$ 10 million annually. To ensure that the Centre responds to the needs and views of its financiers and beneficiaries, an Advisory Board of 15 to 20 members representing different regions and interests would be set up. This would determine its own rules of procedure, give policy direction to the Centre, assure its finances and administer its budget.

38 Members of the Advisory Board would be selected by the Secretary-General in consultation with interested parties, and appointed by the Administrative Council. The Secretary-General, who would be *ex-officio* Vice-Chairman of the Advisory Board, would ensure that the policy guidelines for the Centre laid down by the Administrative Council were observed, and coordinate the efforts of the Centre and the TCD. On the recommendation of the Advisory Board he would appoint the Director and Deputy Director of the Centre.

39 In time the Centre and the TCD could be merged. The Advisory Board and the Administrative Council should examine this matter further.

40 WE INVITE the Secretary-General of the ITU to carry out the necessary consultations so that the Centre can be established as soon as possible in the course of 1985.

FINANCING THE DEVELOPMENT OF TELECOMMUNICATIONS

41 If developing countries are to give greater priority to telecommunications and to improve and expand their public telecommunications networks, we estimate that total investment of US$ 12 billion a year will be needed.

42 The dimensions of the financing problem would be reduced if the Recommendations already made in this Report were implemented. An effective telecommunications system which meets demand not only is inherently profitable but also generates wealth. Technological advance continues to widen choice and drive down the cost of equipment. Developing countries who represent a fast-growing and potentially the largest equipment market are well placed to obtain the benefits of modern telecommunications from manufacturers in industrialised countries on competitive prices and terms.

43 ACCORDINGLY WE RECOMMEND that developing countries review their development plans to ensure that sufficient priority is given to investment in telecommunications.

44 WE FURTHER RECOMMEND that developing countries make appropriate provision for telecommunications in all projects for economic or social advance and include in their submissions a checklist showing that such provision is being made.

45 The expansion of telecommunications world wide should take place in stages over a period of some twenty years. Rather than generalise the problem, each country, or region at least, has to be seen as an individual case. Some countries have long been regarded as special cases. Some may be able to finance expansion from their own resources. However, there are others so disadvantaged geographically or economically that they will not find it easy to develop and sustain a telecommunications system

to meet demand, except in the longer term. In the main, developing countries share many problems – scarcity of foreign currency, low credit ratings, comparative neglect of the more remote areas and lack of trained personnel.

46 While it is reasonable to suppose that a high proportion of investment in telecommunications in many developing countries can be financed by commercial means, provided the right conditions can be created, the disadvantaged countries and more remote areas will require finance on concessionary terms.

47 In order to increase the flow of resources immediately, WE RECOMMEND that countries and international agencies with development assistance programmes give higher priority to telecommunications.

48 WE ALSO RECOMMEND that they ensure that specific provision is made for appropriate telecommunications facilities in development assistance projects.

49 WE RECOMMEND FURTHER that those who provide international satellite systems study urgently the feasibility of establishing funds to finance earth segment and terrestrial facilities in developing countries.

50 To increase awareness of the essential role telecommunications play in development, **WE APPEAL** to the

Governments participating in the next Economic Summit to give encouragement to practical measures to improve and expand telecommunications.

51 As a means of reducing trade risks in the telecommunications sector and the cost of insuring against these, WE RECOMMEND that industrialised countries extend export/import financing and insurance cover to suppliers of telecommunications equipment. WE ALSO RECOMMEND that the International Bank for Reconstruction and Development (IBRD) consider including telecommunications in its proposal for multilateral guarantees against non-commercial risks. Where projects are financed in part by IBRD loans WE RECOMMEND that finance agencies consider cross-default arrangements as a form of insurance.

52 Operating entities in industrialised countries which provide international telecommunication services have an interest in improving the ability of their counterparts in developing countries to handle international traffic effectively. **WE RECOMMEND that Member States of the ITU consider setting aside a small proportion of revenues from calls between developing countries and industrialised countries to be devoted to telecommunications in developing countries or contributed for example to a fund to finance pre-investment costs.**

53 We have examined other methods of financing that would take time to put into effect. For example, a surcharge might be raised on domestic or international traffic or on expenditure on investment. This and other ideas

require further analysis and we hope that industrialised and developing countries and international agencies will contribute to the debate.

54 WE RECOMMEND that governments of industrialised countries review their financing instruments and institutions to ensure that they can meet the financing requirements of extending telecommunications networks in developing countries.

55 WE RECOMMEND FURTHER that Member States of the ITU, in collaboration with international finance agencies, study the possibility of a revolving fund and of telecommunications investment trusts as methods of raising funds for investment in telecommunications, with a view to putting these ideas into effect by the next Plenipotentiary Conference at the latest. The Secretary-General of the ITU is invited to report to the Plenipotentiary Conference on progress made with these studies.

56 WE RECOMMEND that the Secretary-General of the ITU, in the light of progress on our other recommendations, study the idea of an organisation to coordinate the development of telecommunications world wide (WORLDTEL) and submit his conclusions to the Plenipotentiary Conference.

57 WE RECOMMEND that the Secretary-General of the ITU monitor the implementation of all the preceding recommendations, report on progress to the Administrative Council and, where necessary, act to stimulate further progress.

CONCLUSIONS

58 We look to governments of industrialised and developing countries alike to recognise their common interest in improving and expanding telecommunications networks world wide. We appeal for a joint effort to this end. In particular higher priority than hitherto should be given to investment in telecommunications. Existing networks in developing countries should be made more efficient and increasingly self-reliant. The benefits of the new technologies should be fully exploited. Financing arrangements should take account of the foreign exchange problems of developing countries. The role of the ITU should be more effective.

59 The recommendations we have made reflect this analysis of the problem. There is no single remedy. A range of actions over a wide front is required. Progress will be made only in stages. But if the effort is sustained the situation world wide will be transformed in 20 years and the objective we have set achieved.

THE COMMISSION'S MANDATE

Resolution No. 20

The Plenipotentiary Conference of the
International Telecommunication Union
(Nairobi, 1982)

Establishment of the Independent International Commission for World-Wide Telecommunications Development

. . . . . .

2.1 to examine the totality of existing and possible future relationships between countries in the field of telecommunications involving technical cooperation and a transfer of resources in order to identify the most successful methods of such transfer;

2.2 to recommend a range of methods including novel ones for stimulating telecommunication development in the developing world using appropriate and proven technologies in ways which:

a) serve the mutual interest of governments, operating companies, the public and specialized user groups in the developing world and of the public and private sectors in the developed countries; and

b) lead to progressive achievement of self-reliance in the developing world and the narrowing of the gap between the developing and developed countries;

2.3 to consider the most cost-effective ways in which the Union could stimulate and support the range of activities that might be necessary to achieve a more balanced expansion of telecommunication networks;

2.4 to complete its work in about a year's time;

2.5 to submit its report to the ITU Secretary-General.