THE INTERNATIONAL TELECOMMUNICATIONS SETTLEMENTS PROCESS: WHAT'S NEEDED? DESTROY AND REPLACE IT OR ADJUST IT?

Peter A. Stern

Teleglobe Canada Inc., Montreal

IIC Telecommunications Forum

25 - 26 October 1990

Washington

For additional copies, contact the IIC, Tavistock House South, Tavistock Square, London, WC1H 9LF; Tel: 01-388-0671; Tlx: 24578; Fax: 01 380-0623; or the author at 680 Sherbrooke Street West, Montreal, Canada, H3A 2S4

TABLE OF CONTENTS

1. INTRODUCTION

A year ago the international telecommunications community was shocked by accusations of price gouging and cartelistic behaviour by the influential Financial Times. Hugo Dixon, the newspaper's telecommunications correspondent wrote of a "pricing system based on an obscure set of accounting practices" established by the "world's telephone companies in cozy club committees" whose "meetings switch from one capital city to another'"[1]. Such accusations were not new; they had, however, been limited to the more academic works. For example, in their 1988 book, When Countries Talk: International Trade in Telecommunications Services, Aronson and Cowhey speak of "the ancien regime of telecommunications (consisting) of national monopolies tied together by an international cartel that legally sanctioned administered prices, equal splits of international revenues, and rules that forbid competition for international traffic" and that "strictly controlled entry".[1] In a similar vein W.J. Drake of the University of California speaks of the "postal industrial complex" in which "PTT engineers were aghast at being described as undemocratic cartel managers conspiring against the free market, since commercial considerations had never been an acknowledged criteria for evaluating standards and regulations". In the same paper Drake quotes Eli Noam's reference to "the rent-seeking coalition that provided links of shared economic interests across frontiers"[2]. While not so virulent in their accusations of the existing international telecommunications settlement arrangements, Ergas and Paterson, nevertheless, suggested last year that these are no longer appropriate in a world of rapidly changing technology and supply and regulatory structures. They argued that while the present system of international settlements has many advantages it is outdated and they suggest a number of alternatives, some of which are examined in this paper. [2, 3]

An intense debate about the appropriateness of the international telecommunications regulatory framework of which the settlement process forms part had already taken place a few years earlier within the committee established under the International Telecommunications Union (ITU) to draft new international telecommunications regulations. Here proponents of a much more liberalized international system found themselves confronted by those who wanted to maintain, and even strengthen, the benefits that international agreement on procedures and standards had brought. The difficult compromise which was finally achieved during the final hours of the 1988 World Administrative Telegraph and Telephone Conference (WATTC-88) limits the reach of the new regulations to the basic international services and "the underlying international transport means used to provide such services". Beyond this, members are encouraged to respect the provisions of the new Regulations and the voluntary ITU standards (the CCITT and CCIR Recommendations). Article 9 recognizes the right of countries to enter into special mutual arrangements "which do not concern Members in general".[3]

The WATTC debates admittedly did not center on the traditional revenue settlement process but rather on the potential regulatory barriers to entry into the new competitive enhanced services market; however, developing countries used the occasion to introduce a proposal to modify the international settlements arrangements through an unequal division of the accounting to compensate them for the higher unit costs for facilities that they provide in their relations with industrialized countries[4]. A resolution attached to the new regulations instructs the ITU to do further cost studies and suggests that the results of such a study might lead countries in developing-industrialized country relationships to agree to a split of the accounting rate other than the normal 50/50.

Just as delegates at the WATTC in Melbourne were making their final compromises the Federal Communications Commission in Washington was issuing an analysis that showed that the US balance of payments deficit for international telephone traffic (or international message toll service, ITMS) had grown from $US 40 million in 1970 to $US 2 billion in 1988.[4]

Carrying this research further Leland Johnson has since concluded that accounting rates are substantially above the cost of network use and that the resulting excess profits earned by international carriers are encouraged because they can be used to subsidize domestic and local service.[5]

The Financial Times articles brought quick reaction from OFTEL, the UK regulator, which opened an inquiry into British Telecom's international rates which at the time were not included in the basket of prices subject to the UK price cap (RPI-X) formula. More recently the FCC arguing that "the US can no longer underwrite foreign telecommunications administrations particularly in developed countries" issued a notice of proposed rule making in which it proposes "a three-part reform of (the US) existing international settlements policy to bring international accounting rates closer to the cost of providing international telecommunications services and to reduce US international calling prices by perhaps as much as fifty percent" [6]. At the same time the European Commission was looking at the European telecommunications operators' pricing practices which result in a wide disparity between local, long distance, and intra European long distance rates.

Finally, countries such as the US, UK and others have been seeking to liberalize world-wide markets for telecommunications services (as a service in its own right and as a mode of delivery of other services) through the development of a new General Agreement on Trade in Services (OATS) presently being negotiated under the GATT Uruguay Round. Relevant to the discussion of prices charged for telecommunications facilities and services is the (still square bracketed) provision in the telecommunications annex to the proposed GATS which states that such prices should "reflect costs" or at least be "cost-oriented".[5]

The debate about international telecommunication practices and procedures which has recently been brought out in front of the general public must then be seen in the context of the discussions that have been taking place in somewhat more restricted circles about the appropriate structures for a new more liberalized international telecommunications regime. Following a brief review of the functioning of the present international settlements process, the accounting rates system, this paper presents and critically analyzes some of the alternatives that have been put forward with the objective of correcting the problems of excessive prices and large balance of telecommunications payments deficits. These alternatives have been justified by their authors as necessary because the current system is no longer consistent with the introduction of competition, of new services, and of new technologies, nor with the increased commercialization in the provision of international telecommunication facilities and services. The paper examines other alternatives, cooperative schemes, which have worked and continue to work well in situations where independent carriers have for one reason or another found themselves to be partners in joint ventures. The paper also gives a short overview of settlement practices of Canadian international carriers and, finally, offers some assessment of the impact of changes to the present arrangements on both industrialized and developing countries.

2. HOW THE INTERNATIONAL SYSTEM WORKS

2.1 The International Framework

The international telecommunications system consists of sovereign international carriers interconnecting among each other for the purpose of exchanging international telecommunications traffic. Many of these carriers are also responsible for providing telecommunications facilities and services inside their own countries. Some are government departments while others may be statutory bodies or even private companies. In a few countries competition has been introduced in

the provision of international services and facilities. The only significant exception to this model of joint provision of international services among sovereign international carriers was the Cable & Wireless owned telegraph cable network which spanned the British Empire during the latter part of the 19th and the earlier part of the 20th century.[6] Decolonizations and nationalizations after the Second World War led to the break-up of the Cable and Wireless owned international network. More recently, however, there has been a reversal in this process at least in certain countries where governments have privatized telecommunications operators and sold parts or all of them to foreign interests in order to reduce foreign debts and demands on tight budgets. Argentina, Chile, Mexico, Jamaica, New Zealand, Australia, and Venezuela are countries which have sold or are in the process of selling off to foreign interests significant parts of their telecommunications operations.

Nevertheless in most countries international facilities and services have and continue to be provided jointly and not end-to-end because these countries have simply been too reluctant to open to foreign ownership a sector which they feel is strategically important to their economies and sovereignty. Telecommunications is by no means the only sector where sovereign ownership and operation of a country's resources is the norm. The continuation of this practice is at the heart of the trade liberalization discussions now drawing to a conclusion under the GATT Uruguay Round.[7] Yet the introduction of greater international competition and removal of regulatory and market barriers to entry by foreign providers of facilities and services which is the main objective of large industrialized countries and groups such as the US and the EEC may well result in a gradual but significant erosion of the sovereignty principle.

Comprehensive international arrangements which have been developed over the past 150 years ensure that this system of Joint provision by sovereign operators works. It is not by chance that any country's telecommunication system can interconnect with that of any other country and that there is interoperability of virtually all services. Bilateral or multilateral agreements between or among international operators on the provisioning, operation, and maintenance of international facilities and services and their remuneration is facilitated by the broad framework of internationally agreed rules and guidelines developed by all countries under the auspices of the ITU.[8] The international settlements process which has now been so severely criticized is part of this framework and has been a cornerstone in the development of universal access to an international and interoperable system linking all countries small and large, developed and less developed.

2.2 The International Settlements Process[9]

For an international telecommunications service provider international telecommunication accounting practices distinguish between remuneration of the corresponding carrier in the country of destination or transit for the delivery of its traffic and the charge in national currency collected by an operator from its customers for the international facilities and services provided. According to CCITT Recommendations D.150 and D.155, which concern tariff and accounting practices in the international telephone service, the carrier in the destination country can be remunerated on the basis of a flat-rate price per circuit, on the basis of the traffic units carried, or through a procedure whereby accounting revenue is shared between terminal operators. Under the flat-rate price and traffic unit price procedures the carrier at the destination establishes its prices broadly based on the cost of the international circuit section it provides, the use of its international exchange (gateway) and the national extension. Under the accounting revenue division procedure the value of traffic in each direction between two corresponding international carriers is multiplied by a mutually agreed tariff or "accounting rate" to give an accounting revenue which is "in principle, shared equally between the (carriers) of the terminal countries in respect of each traffic direction". In theory, international carriers can agree on other than equal shares when their costs or the extent of the facilities that each provides vary significantly; however, in practice accounting rates are shared

50/50. If during a given settlement period (say a month or a quarter) there is more traffic flowing in one direction than the other, the carrier which receives more traffic than it sends will receive a greater amount of compensation from the corresponding operator for delivering its traffic than it has to pay out. The direction of the traffic imbalance, therefore, determines which operator has to pay its partner in a bilateral relation more than it receives. If, for example, the accounting rate between Canada and a given foreign destination is SDR 1.66 and the accounting rate is divided 50/50 then Canada pays its foreign partner 1/2 x 1.66 = SDR 0.83 per minute of traffic to deliver that call to its destination from the mid-point (say mid Atlantic) to the destination subscriber; to facilitate accounting, however, partners in a bilateral relation look at the sum of the traffic in both directions for a given period and apply the accounting rate only to the difference. If, therefore, during the period there are more minutes of traffic flowing out of Canada than flowing in, the imbalance obtained by multiplying by half of the accounting rate gives the "traffic settlement" which is due to the foreign administration. The greater country's traffic imbalance with another country, the greater its net payments outflow.

If traffic levels are equal in both directions the outpayments are the same in both directions. In certain relations where traffic levels are more or less equal, carriers may agree to not exchange international accounts. Contrary to the result of most other international trade in goods and services transactions where a net export results in a net payment inflow in international telecommunications a net outflow of traffic will result in a net payments outflow from the country that "exports" that traffic.

Collection charges are considered to be a purely national matter fixed by the provider of the international services subject to government, regulatory, financial and competitive constraints. The International Telecommunication Regulations like CCITT Recommendation D.150 emphasize the need "to avoid too great a dissymetry between charges applicable in each direction of the same relation''.[10]

The countries of Europe and the Mediterranean Basin have established somewhat more detailed provisions for determining the compensation for facilities made available by one international carrier to another for transit and for delivery of a call through its national network. CCITT Recommendation 300.R establishes prices to be charged on a per circuit or per channel basis according to per minute utilization and distance.

What can cause significant traffic imbalances? Generally these can be attributed to large disparities in collection charges between partners, the greater difficulty of completing calls in one direction than the other and to certain calling patterns between families and businesses. In addition, the low level of disposable income and the lack of foreign exchange in certain countries may act as a barrier to outbound traffic growth.[11, 12]

A carrier with a traffic imbalance in its favor will naturally wish to maintain or even increase that imbalance. Its partner will on the contrary attempt to mitigate the financial impact of the imbalance by negotiating to have the accounting rate reduced and where appropriate assisting the other partner to overcome any technical difficulties which hampers outgoing calls. This is significant. The commercial nature of the international settlements arrangements is such that the interests of partners in a bilateral relationship always diverge unless a perfect balance in traffic is maintained. This is hardly characteristic of a cartel!

The trend has been to reductions in accounting rates reflecting the decreasing unit cost to the international carrier to deliver the traffic that it receives and the decreasing charges collected by the originating operator for an international call. Tensions arise when the latter collects less per unit of traffic than it has to pay out to the far end operator for delivering that unit. With the ever increasing

volume of international traffic there is, therefore, pressure to change accounting rates. Continuing negotiations between parties cause accounting rates to be driven lower again thereby contradicting accusations that the system is rigid and not apt to change or evolve.

2.3 Transit Arrangements

Carriers in countries which are used as transit points between origin and destination are remunerated either according to a flat-rate price for facilities made available on dedicated circuit basis rather than on demand or according to a traffic unit price on the traffic which is switched through the transit point(s). The terminal and transit carriers in a switched transit relation would normally negotiate an accounting rate for the relation and then divide it into two terminal shares and one or more transit shares. The balance of the accounting rate after deduction of the transit share(s) is normally divided equally between the terminal carriers; however, as in the case of direct relations they may also agree to something other than a 50/50 share.

With the advent of competition for transit traffic, carriers began in the late 1970s to offer Transit Remuneration Plans (TRPs) whereby transit facilities are offered to terminal operators at competitive rates. These rates are then deducted from the total rate between the two terminals. The balance is then divided between the terminal carriers. The fierce competition among carriers to attract transit traffic is hardly characteristic of a cartel no more than is their behaviour in negotiating accounting rates.

3. EXAMPLES OF OTHER SCHEMES

This section examines some other schemes that have at one time or other been put into practice. These are cooperative in nature designed to share revenues and costs among members of a partnership or consortium.

3.1 The Commonwealth Wavleave Schemes

Under the Wayleave Schemes which were in effect from 1948 to 1973 expenses of the Commonwealth network, known as the "common-user system" were shared on the basis of each partner’s so called 'Wayleave" revenue. Total actual expenses incurred by all partners in a given year were re-allocated to each partner in proportion to its shares of the total revenue. There were rules governing the costs that could be charged to Wayleave expenditure and their calculation and rules for excluding certain revenues and adjustments for other revenues where the collection charges for a given service in a given relation fell outside certain limits. Revenue derived from traffic coming from outside the common user system (known as foreign traffic) was shared 50/50 between the point of entry and terminal partner. The Wayleave Scheme had the great merit of providing a collective network which all partners could use without regard to routing. It encouraged the maximum use of the Commonwealth network and helped the poorer countries finance development of their facilities with the cost being borne by the partnership as a whole spread over the life of the facility; it had the disadvantage, however, that any move by a partner to increase or lower its collection rates, terminal charges or other element of net Wayleave revenue, affected all other Partners. This in turn made it almost impossible for a partner to assess the result of a decision to change its collection rates and at the same time the scheme did not encourage careful control of expenditure by individual partners, since their expenditures were shared by the partnership as a whole.

In 1958 a second parallel Wayleave scheme (Wayleave II) was introduced to cater for the broadband submarine cable systems which were being introduced into the Commonwealth system. Usage of

these systems was measured by each partner'sWayleave revenue with expenditure shared accordingly. In intra-Commonwealth relations a fixed scale of accounting rates, varying according to distance, was used instead of actual revenue. This meant that changes in Partners' intra-Commonwealth collection rates did not affect other Partners through the Wayleave II accounts. Revenues for traffic coming into the common-user system were retained by the entry point.

3.2 The Commonwealth Telecommunications Financial Agreement (CTFA)

The Wayleave schemes were replaced in 1973 by the Commonwealth Telecommunications Financial Arrangements or CTFA, a scheme whereby the cost of each partner's facilities which made up the Commonwealth common user system was recovered from each other partner in proportion to the use the latter made of that facility with use measured in terms of units of traffic actually carried over each facility. The system required detailed calculations both of usage on a stream by stream basis according to units of traffic and of incurred unit costs (such as maintenance, depreciation, rental, and administration costs) of each separate segment. The scheme had provisions for sharing costs of facilities operated jointly with administrations which were not members of the organization and, furthermore, it had some built-in adjustments designed to maximize the utilization of the common-user network and to counterbalance certain financial disparities between partners using different technologies.

In relations between any two partners revenues were shared equally between the two terminal points. Transit partners did not share in the revenues; however, they were compensated for the use of their facilities under the cost sharing part of the scheme which included an adequate return on capital invested. Revenues squalled traffic times accounting rate and not the amounts actually collected by each partner (Partners were free to set their collection charges according to their own needs and priorities). CTFA provided a partnership agreed set of accounting rates and divisions for use in all intra-Commonwealth relations. At the outset these rates were generally lower than prevailing rates outside the partnership and were much more reflective of the cost of providing facilities. The lower rates also encouraged the growth of traffic on the common-user Commonwealth network.

The scheme had a number of features which were beneficial to the partnership. For example, since unit costs of facilities on direct relationships were averaged and the same charges were paid by both partners in a given relation, the high cost partner (most often the developing country partner) shared in the economies of scale of the lower cost partner. Unrestricted use of network transit facilities at cost (including return on capital) was of significant benefit to partners that depended heavily on Commonwealth transit points since the charges were usually lower than the share of the accounting rate or the fixed fees borne by foreign administrations. The system encouraged partners to attract traffic from outside of the partnership and encouraged development of common-user facilities.

The system did, however, have its disadvantages. It was complex (with the degree of complexity increasing with the introduction of the new technologies and services). It was costly to administer, it did not always give the expected results, and the final settlements could not be calculated until each and every partner had submitted its reconciled and audited accounts (which was no mean achievement). Consequently, the organization decided in 1983 to move to the accounting rates system being used by other administrations with, however, a small preferential adjustment being applied to the accounting rate division in relations between developing and the developed partners in favour of the former. The preferential adjustments were intended to ensure that the developing partners enjoyed the same advantage from the economies of scale as did the major partners. Lost with the old system was a built-in incentive for members of the Organization to develop and improve their international facilities which linked them to their Commonwealth partners and other

foreign destinations. Earlier this year the 30 members of the organization decided to discontinue the preferential accounting rates adjustment and to concentrate their effort and resources on a program of development and training where assistance could be directed to improving the network, its operation and administration. In international settlement terms therefore the history of the Commonwealth partnership has evolved from an end-to-end arrangement, where one company, Cable & Wireless, owned and operated the British Empire telegraph cable network, to one where the universally accepted accounting rates system for joint provision of international services and facilities by sovereign administrations prevails.

3.3 Telecom Canada Revenue Settlement Plan

While not international carriers the nine members of the Telecom Canada association have a revenue sharing arrangement called the Telecom Canada Revenue Settlement Plan which compensates each member company in proportion to its cost of providing domestic long distance services. In this plan collected toll revenues net of commission paid to independent telephone companies[13, 14] are put in a common pool from which settlements are paid out (or received as the case may be) for Canada-US traffic (settlements with US long distance carriers), Canada-overseas traffic (settlements with Teleglobe Canada), and Telesat Canada traffic (for domestic satellite services). Each member is then reimbursed from the pool for its portion of the so-called Recoverable Assigned Costs which included maintenance, depreciation, traffic, financial expenses and income tax. The residual portion of the pool is then distributed in proportion to each member's non-traffic sensitive access cost (the subscriber loop) assigned to Telecom Canada services in relation to total system assigned access cost. The assignment of access cost is based on the ratio of Telecom Canada direct costs to the direct transmission and switching costs associated with the local and monopoly toll services.

3.4 Nature of Cooperative Arrangements

The Commonwealth, like the Telecom Canada arrangements, are characterized by their cooperative nature. They have been developed to meet the needs of a partnership or consortium of sovereign or independent operators who have joined together to attain a common purpose. In the case of the Commonwealth it was a decision of governments to continue with a cooperative arrangement among sovereign international commercial carriers (usually monopolies) in order to promote the use and development of each partner's external telecommunications facilities. In the case of Telecom Canada the cooperative arrangement among independent telephone companies each with its territorial franchise ensure the existence of a Canada-wide long distance network.

Intelsat and Inmarsat, the joint telecommunications satellite cooperative (not for profit) ventures of international telecommunications operators, were formed under similar cooperative arrangements where each member contributes capital in proportion to its use of the system. The utilization charges are established at a level which generates the revenue required to meet the operation, maintenance and administration of the system as well as amortization of and compensation for use of capital.

4. THE CANADIAN SITUATION

4.1 The Canadian International Telecommunications Market

Canada's international telecommunications market is divided into two. The Canada-US, the largest bilateral market in the world, and Canada-Mexico traffic accounts for eighty percent of this and is provided on the Canadian side of the border by Telecom Canada, an association of nine major (Type

1) regional domestic telephone companies plus Telesat Canada, and by Unitel[15] (formerly CNCP) which provides non-public switched voice and data services across Canada. Presently there is no competition on the Canadian side for Canada-US and Canada-Mexico message toll service (MTS). Telecom Canada has operating agreements with AT&T, MCI, and US Sprint; Unitel, with RCA, Western Union, MCI, US Sprint, etc. for non-MTS. There are no specific restrictions within the leased line tariffs of Telecom members or Unitel covering their use for the provision of value-added services.

Teleglobe Canada has, for the time being[16], the exclusive mandate for the provision of international telecommunications facilities and services outside of the US market. Teleglobe does not provide domestic services and until recently has been dependent on the companies of the Telecom Canada group and Unitel to deliver Canada's overseas traffic to and from the international gateways in Montreal, Toronto and Vancouver.[17, 18] Teleglobe and Telecom, on the one hand, and Teleglobe and Unitel, on the other, have negotiated settlement agreements for the delivery of this traffic. For example, Teleglobe pays the Telecom Canada association a fixed amount per minute of incoming international message toll service (IMTS) traffic which is delivered to the destination subscriber. Similarly, there is a fixed amount for each call and minute of outgoing IMTS traffic which Teleglobe pays to the association. These amounts are intended to compensate the domestic carriers for providing billing and operator services, local access, and line haul to and from Teleglobe's gateways. They also contain a contribution to the local, rural and remote services which continue to be cross-subsidized in Canada from the benefits of the long distance and international services.

Overall, Teleglobe's outpayments to foreign carriers represent, by far, the single most important cost component in providing international service from Canada, followed by the settlement payments to Telecom Canada. Typically, Teleglobe keeps less than 5% of revenues collected in Canada.

4.2 International Collection Charges

With the exception, of course, for traffic with the US and Mexico international collection charges are established by Teleglobe in consultation with the domestic carriers and are subject to rate of return regulation. Revenues collected on behalf of Teleglobe by the domestic carriers for international calls originating in Canada are paid out to Teleglobe by Telecom Canada on behalf of its nine regional members after deduction of the agreed settlement amount.

The Canadian telephone subscriber will not normally be able to distinguish in his monthly statement between long distance (domestic, US and Mexico) telephone services provided by Telecom Canada members or the independent telephone companies and international services provided via Teleglobe's facilities. In spite of this and in a situation such as Canada's where the international and domestic carriers operate at arm's length, there are advantages for the international carrier to set the international collection rates because, inter-alia, of the flexibility that it gives it to optimize its traffic flow through appropriate rate differentiation and, therefore, to optimize the efficiency of the international network.

For example, Teleglobe introduced off-peak calling period discounts as an incentive to increase traffic during troughs in network utilization. Teleglobe's rates for international calls to given destinations have also been aligned with the cost of providing the service to those destinations including the settlement payments to the foreign as well as domestic carriers. Teleglobe's international telephone tariff schedule currently has 16 rate bands with each destination country classified according to the level of payments it receives in its settlements with Teleglobe. Within each band there are reductions for off-peak hours.

Thus as opportunities arise, Teleglobe undertakes to reduce collection rates and therefore stimulate traffic to those destinations where the foreign operator has agreed to reduce the accounting rate. Therefore, while they may not be mathematically related there is nevertheless a relationship between accounting rates and collection charges. Often the increase in traffic caused by the decrease in collection rates will more than offset the effect of the reduced accounting rate.

Canadian subscribers enjoy so-called "postalized" rates whereby overseas telephone calls to any given country are charged the same rate, without distinction as to their geographical point of origin within Canada. On the contrary, Canada-US collection rates are distance sensitive on both sides of the border.

4.3 Transit Arrangements

Ever since the days of the single channel telegraph cables Canada has been an important transit point between Europe and the Pacific Basin. The various revenue and cost sharing arrangements that existed first under the Commonwealth Telecommunications Board and later under the Commonwealth Telecommunications Organization established after the nationalization in various Commonwealth countries of the assets of Cable & Wireless and Marconi in the late 1940's, promoted the use of Commonwealth facilities by members of the organization around the world. Teleglobe continued as an important transit point especially for Commonwealth traffic flowing between the UK, Australia, Hong Kong and the Caribbean. The Canada transit route provided and continues to provide an off-peak hour alternative for Europe to Far East traffic. Teleglobe has accordingly invested heavily in North Atlantic and Pacific cable systems which carry not only terminal but also transit traffic. Since the discontinuation of the Commonwealth cost sharing arrangements there is no longer a special incentive for Commonwealth countries to use Canada as a transit point for switched traffic. Like other important transit points Teleglobe must therefore offer transit fees and quality of service which can attract such traffic in a highly competitive market.

4.4 Teleglobe's Settlements

Much like the US, Canada has had a net outward imbalance of traffic and, consequently, of payments. In 1989, the gap between outward and inward traffic was about 50%. The gap in 1984 was 25%. Over the past few years outward traffic has been growing at nearly 30% a year while inward traffic growth was just above 20%.

While not the only cause for the growth in outward traffic, reductions in international collection charges have had a significant effect. On the average, our collection rates have been reduced by 33.3% from $2.16 to $1.45 per minute since 1988. Over the same period accounting rate reductions have been agreed with more than 100 foreign administrations with reductions ranging from 5% to 75%. On the average, Teleglobe's accounting rates compare quite favorably with those of AT&T. Efforts to bring accounting rates lower and more in line with costs will continue so as to allow us and our correspondents to reduce collection charges and thereby stimulate the growth of international traffic between Canada and these countries. We are also presently negotiating reductions in our settlements with the domestic carriers. These have not changed for quite a number of years even though international collection rates in Canada have as indicated been reduced by over 30% in the last two years alone.

Our international call charges compare quite favorably with those in other countries. An analysis of international business telephone call charges among OECD members shows that Australia, Canada and the US have one of the lowest charges which are at a level of about 82-84% of the OECD average.[19] This is significant because in a comparison of US and Canadian overseas rates three Canadian "handicaps" must be kept in mind: the enormous difference in the volume of overseas

traffic; the Canadian policy of "affordable local telephone service" implying a significant degree of cross-subsidization of local and remote services by Canadian long distance and international services; and the policy of the federal government to apply a tax on telecommunications services. Business users are eligible for a credit to offset this tax.

4.5 Regulatory Oversight

Before being privatized in April 1987 Teleglobe was not regulated. The Canadian government through the Department of Communications and the Treasury Board approved the corporation's annua1 budget and major construction expenditures. Teleglobe would similarly have had to seek approval of any tariff increases had there been the need for any.[20]

Teleglobe is now subject to the regulatory oversight of the Canadian Radio-television and Telecommunications Commission (CRTC). For the four year period 1 January 1988 to 31 December 1991 the newly privatized company is being allowed a rate of return on common equity, on average over the transitional period, in the range defined by the weighted average mid-point of the return allowed by the CRTC on common equity of Bell Canada and British Columbia Telephone Company[21] plus 2%.[22] This rate of return regulation applies to the totality of Teleglobe's business. All tariffs have to be approved by the CRTC. While the CRTC has no direct authority over accounting rate levels negotiated with foreign administrations, it approves the settlement agreements between Teleglobe and the domestic carriers.

The CRTC can gain access in confidence to Teleglobe's accounting rates settlement agreements and can apply some regulatory remedy if it feels that these are not in the public interest.

4.6 Settlement Arrangements Between Canadian Telecommunications Companies and US Carriers

With only one exception, Canadian telephone companies do not have separate agreements with US carriers. Rather, Telecom Canada as an association of its nine regional members[23] has agreements with AT&T, MCI, US Sprint and other US long distance carriers for MTS and other services such as 800, private line, packet switched data and transborder satellite. Telecom Canada settles with these carriers on the basis of an accounting rate procedure. Net receipts from any monthly settlement go into a common pool. Net outpayments are taken from the pool. This pool is used by Telecom Canada to share revenues and costs among member companies for the use of each others facilities for long distance communications. Canadian independent telephone companies[24] interconnect with Telecom Canada members that deliver their traffic to and from the US. They settle with their interconnecting Telecom Canada member subject to the interconnection agreement between them.[25]

Prior to 1986 AT&T and Telecom Canada shared revenues according to a cost-based ratio of 51.74/48.26 with the larger share going to the latter. Under the current interconnection agreements, Telecom Canada and the US long distance carriers settle under an accounting rate procedure with the current (as of 1 October 1990) rate of $US 0.28 per minute for peak period traffic $US 0.24 for off-peak. This represents a reduction of respectively 33% and 37% over the previous rates of $US 0.42 and $US 0.38.

Unitel has similar interconnection agreements with US carriers for services other than MTS.

The CRTC approves the interconnection agreements including the accounting rates which Telecom Canada and Unitel have negotiated with their US correspondents. Like the domestic long distance and local rates, Canada-US call charges must also be approved by the CRTC.

Long distance settlement agreements between Telecom Canada members and the interconnecting independent telephone companies are subject to approval by the appropriate regulator. These companies are, however, regulated individually by their respective regulators on a rate of return basis.

In 1981 the CRTC conducted an extensive review of the Telecom Canada Revenue Settlement Plan (see section 3.3 above) and approved the procedure.[26]

5. ALTERNATE ARRANGEMENTS: CHARGING THE SYSTEM

There have been many proposals to replace the accounting rates system with other arrangements. While Drake has complained about "the dearth of theoretically-informed examination of the production and contents of the ancien regime"[27], the authors of these proposals, mainly from the academic circles, would no doubt dispute Drake's conclusions that their proposals were devoid of theoretical foundation. We will examine a few of these and assess their practicability as alternatives to the current practice.

5.1 End-to-End Ownership Arrangement

Aronson, Cowhey, Ergas and Paterson [28] have suggested an end-to-end ownership arrangement whereby one or several global carriers would own and operate international facilities and services. They would pick up and deliver traffic to each connecting country's international gateways. The domestic carrier(s) would then be responsible for carrying the traffic between the gateway and the customer. Under such an arrangement, according to Aronson and Cowhey, each country could continue to structure its national telecommunications as it best sees fit and could continue to cross-subsidize local rates from the international service through an access charge applied at its international gateways. They warn, however, that such an arrangement would require that "the precise terms governing foreign entry into domestic markets would be negotiated bilaterally, subject to guidelines in the multilateral agreement" and that as a consequence countries need to "develop a nondiscriminatory way of limiting the total number of foreign networks".[29]

For Ergas and Paterson the main benefit of an end-to-end ownership and operation arrangement is its ability to "by-pass the accounting rate" allowing "the new end-to-end carriers ... to introduce price structures attractive to the larger, global customers with extensive discounts for long term commitment[30]. Aronson and Cowhey confirm that "this model is particularly appealing for large users and well-situated providers of telecommunications services'".[31]

Ergas and Paterson also feel that there are benefits to be gained by "greater control over end-to-end quality, improved customer account management and more effective 'one-stop-shopping"'.

However, while arguing in favour of this alternative, its proponents also reveal the shortcomings of their proposal. It is evident that under an end-to-end arrangement competition would be restricted because few global carriers would have the huge investments required and because, as Aronson and Cowhey indicate, there would be a need in negotiations among countries to limit the number of foreign carriers leading to an oligopolistic market structure. It is difficult to determine under these circumstances the extent to which the customer of international services would benefit since these authors all admit that the only winners would be the large users with sufficient bargaining power. One must also wonder, how with this solution with fewer providers of international telecommunication facilities and services, a cartelistic market structure could be avoided if it cannot, as they claim or imply, under the present arrangements. Furthermore, one must ask what really are the benefits to be gained by "greater control over end-to-end quality, improved customer account management and more effective 'one-stop-shopping "' when there are adequate provisions

in existing and forthcoming CCITT Recommendations that allow international operators to deal efficiently with exactly these and other procedures. Ergas and Paterson are surely not suggesting that the present system be replaced for such questionable benefits. How many of the hundreds of millions of international callers around the world will really need or want "one-stop-shopping"?

This model, which Aronson and Cowhey call the "Direct Foreign Investment Model", has the further disadvantage that it assumes that all countries would be prepared to allow other countries' global carriers to establish and operate international facilities and services right into their countries on the basis of reciprocity for their global carriers a practice, which they point out, is not currently the case in the air transport sector. Recognizing the impracticality if not the impossibility of being able to respect such a condition, Aronson and Cowhey suggest as an alternative an "International Corporate Alliance Model" consisting of joint ventures of carriers and perhaps large users, equipment manufacturers, and other investors "implicitly or explicitly approved by governments".

It is not difficult to surmise which countries and which carriers would be beneficiaries of such arrangements and which would be the losers.

Interestingly, both the global carrier examples which Ergas and Paterson use to illustrate their argument have so far failed to establish themselves according to the end-to-end model. Cable & Wireless which formed alliances with American and Japanese carriers to build a "Global Digital Highway" is now inviting other carriers such as Teleglobe to take investment shares in the trans-Atlantic and trans-Pacific fibre optic cable systems which form part of their global network. In compensation Cable & Wireless would exchange international traffic with the investing carriers. With participation then being opened to other sovereign international carriers there is little left to distinguish this arrangement with the traditional practice of joint ventures among international carriers to build international facilities such as undersea cables and satellite systems. These arrangements are, of course, carried out in conjunction with the continued application of the accounting rates system. Their other example, Panamsat, the US private satellite venture, has encountered difficulties in getting agreement from foreign administrations where ownership participation by entities from these countries has been denied for the simple reason that such an arrangement would have undermined the basic principle of the international telecommunications system namely equal sharing of ownership by sovereign entities leading to equal sharing of the accounting rates.

Aronson and Cowhey have again not failed their critics in providing them with a good argument, why their model with end-to-end owned and operated facilities connecting into international gateways would not necessarily bring down the prices charged to customers. Since national governments or regulators would effectively continue to control access fees for connection to the local network, there is nothing to conclude that prices would be any lower than under the present arrangements. The object of contention would simply have been shifted from the level of accounting rates to the level of access charges.

5.2 Free Trade/Competitive Model [32]

This is in reality another varient of the end-to-end model where international telecommunications markets would be opened to entry by competing foreign carriers. France Telecom could for example offer US foreign and perhaps also US domestic services in competition with AT&T, MCI and US Sprint, who would have the same privileges in the French market. While such a model could become possible under the proposed General Agreement on Trade in Services (GATS), it is unlikely that any country (including the US) is prepared, for the foreseeable future to commit itself to completely opening its basic telecommunications services markets without restriction to foreign entry.[33]

The likely outcome of such a model would be an oligopoly with a small number of huge multinational providers dividing the market among themselves rather than competing with each other. The only beneficiaries would be the large users.

5.3 Other Proposals

Other proposals such as collection at both ends and revenue and cost sharing arrangements are neither practical nor appropriate to the present commercial environment of independent national operators providing services jointly with monopoly or competing international operators in other countries.

6. MODIFICATIONS WITHIN THE EXISTING SYSTEM

6.1 Assessment of Some Proposals

As an alternative to rejecting the accounting rates system altogether, a number of changes within the system have been proposed. Ergas and Paterson[34], for example, suggest that both carrier interconnection agreements and the CCITT Recommendations contain provisions for "planned, periodic reductions" in accounting rates through the application of a price cap (RPI-X) formula based on productivity gains. International operators, they propose, could even apply schedules of reduction of accounting rates over time or after a certain volume of traffic has been reached. It is, however, very doubtful that new rules could be introduced into the CCITT Recommendations which many find already to be too restraining and inconsistent with the move toward a greater liberalization of the regime which these authors also seen to want to promote.

There would, furthermore, be problems in applying an RPI-X formula. What standard would one use to measure the retail price index and productivity gains in each country? What happens in the likely case when these vary at different rates? Would this lead to an effective accounting rate split of other than 50/50? Who would enforce the commitment to decrease rates according to the agreed formula? Would there be a need for a disputes settlement mechanism? Where would it reside?

In another proposal by the same authors each operator in an international relation would lease or buy the facilities forward from their usual meeting point (say mid way) to its correspondent’s international gateway. Beyond that the foreign carrier would as in an end-to-end ownership relation pay the domestic carrier an access or "handling charge, applied on a national treatment basis". Again it is difficult to see how this might work in practice. Would, for example, the accounting rate method still apply in one direction if one of the two correspondents is not prepared to sell or lease his facilities? What assurance were there that prices would be lower than in the traditional method of settlement? Why would one country’s international and domestic carriers (in most countries they are the same) be prepared to receive less compensation for the facilities and services they provide to the foreign carrier under this "quasi gateway to gateway" option than under the regular accounting rates mechanism? One would have to assume that if a country has a policy of cross-subsidization, the subsidy element would have to be built into the access charge.[35]

Other modifications which these and other authors have proposed include: application of other than 50/50 accounting rate divisions; off-peak accounting rates; and two tiered accounting rates with the lower rate applying once a certain imbalance has been reached; and growth based accounting rates with a lower rate applying once a certain traffic level has been reached.

Much has been said and written about the proposal to split accounting rates in proportions other than 50/50. The Maitland Commission had proposed such an arrangement in calls between

industrialized and developing countries with the additional resources being used in the latter "for example, to finance pre-investment costs" of telecommunications development projects.[36] Proportions other than 50/50 might for example, be justified and agreed when "the facilities made available by each of the Administrations of the terminal carriers are not approximately equivalent, or if Administrations reach agreement on a different proportion when, for example, the costs differ greatly".[37] A recent study[38] by the ITU on the costs of providing and operating international telephone services between industrialized and developing countries shows that "on the average, the total cost per minute of telephone calls is about 2.08 times higher (SDR 0.76 vs SDR 0.37) in the given group of (19) developing countries compared with the cost in the given group of (8) industrialized countries. A number of important assumptions did, however, need to be made and, furthermore, like the inconclusive study that preceded it[39]. This study indicates the extreme difficulty of obtaining reliable data because of the absence of "accounting and administrative infrastructures necessary for the derivation of data, their collection from various sources and finally their integration".[40] Neither study mentioned the transaction costs that might be involved in any system that would require precise costing of services.

The OECD in discussing the merits of "non-uniform settlement procedures" also acknowledges that this implies "a knowledge of relative costs for international service between countries" which would be difficult to obtain because "with increased international competition and privatization there is a growing reluctance by operators to reveal costs".[41] The OECD suggests, on the contrary, what is needed is greater transparency in accounting rates, traffic flows, revenues, and perhaps also costs; however, neither the OECD nor any other proponents of bringing accounting rates closer to costs have dealt with the complexity and transaction costs. One would have to begin with a universal agreement on the calculations and accounting procedures to be used. In addition, the extreme difficulty of obtaining proper data in many countries cannot be overlooked.

There are other inconveniences with the unequally split accounting rates scheme as the Commonwealth experience has shown; there was the lack of adequate assurance that resources thus transferred would be used by recipients to develop their networks or services; the preferential adjustment could be negated through negotiated adjustment to the accounting rate level; and finally in a commercial environment there is the reluctance of some international operators to reveal commercially sensitive traffic, accounting and other data and also to fund activities which they feel more appropriate to national or international development agencies.

Making accounting rate levels more flexible depending on the particular circumstance (eg. variations in daily traffic volumes, degrees of imbalance, etc.) is, of course, possible under the present arrangements and needs simply to be negotiated and agreed between operators. However, as Ergas and Paterson point out, there are inconveniences such as the different off-peak periods depending on the direction of traffic flow.

Teleglobe has looked at the feasibility of two-tiered or growth based accounting rates and came to the conclusion that the potential benefit of implementing such arrangements is outweighed by far by the huge administrative burden that they imply. Regular phased-in reductions which are a function or projected traffic growth agreed with our correspondents are a much more sensible and simply solution. Teleglobe does have peak and off-peak rates with several countries.

Teleglobe as a net exporter of traffic is constantly negotiating to have accounting rates lowered to reflect productivity gains and regulatory-driven reductions in collection rates.

6.2 The FCC and OFTEL Reviews

The FCC's proposed three-part reform is intended to be implemented very much within the system. Through it the FCC seeks "to reduce US international calling prices by perhaps as much as fifty percent" by:

(i) permitting a US international carrier to reduce the accounting rate with any one of its foreign correspondents without it having to obtain a waiver of the International Settlements Policy (ISP), which is intended to ensure uniform settlement rates among US international carriers on parallel routes. The carrier would have to notify the FCC of the lower rate which would continue to have to be divided 50/50. No other changes to the operating agreement would be allowed with the foreign carrier which "must be prepared to offer the same rate to all US carriers serving that country";

(ii) modifying the ISP waiver procedure to allow waivers only for "a change that results in a more cost-based accounting rate" combined with "a firm carrier commitment to lower international calling prices";

(iii) having US pressure applied in appropriate international fore to have accounting rates brought closer to cost, for example, through the revision of any language in any existing or proposed, CCITT Recommendations in order to clarify that international accounting rates should be cost-based and that all countries should exercise their best effort to minimize the national cost of providing international telecommunications services", or through the permitting of simple resale and sharing on international routes.

In conclusion, there is the implication that if foreign governments and operators are not prepared to bring accounting rates in line with costs and reduce the large disparities in collection charges, the FCC would assume "authority to establish international accounting rates" by attaching the required conditions to "grants or certificates of operation of international facilities" under Section 214 of the Communications Act.[42] It is, however, difficult to understand what leverage the FCC has to force foreign carriers to offer the same rate to all US carriers serving that country. One must assume an automatic return to the status quo if a foreign carrier is not prepared to go along.

OFTEL's first concern was not with controlling international accounting rates but with the high UK prices for international calls and private circuit leases. Following his investigation of these prices and the question of international simple resale, the Director General of Telecommunications, Sir Bryan Carsberg, proposed two measures designed to put downward pressure on BT's prices for international services, namely, implementation of a price cap on UK international call charges and circuits which had until March 1991 been excluded because of the scope that this had given Mercury to compete more effectively with BT internationally and allowing simple resale between the UK and any other country that similarly allows it in direction of the UK.[43] Any adverse effect on the UK's balance of payments due to a lowering of collection charges should inOFTEL's view be offset through indirect benefits such as the possibility for the UK to attract more overseas operations to the UK because of the attractiveness of lower telecommunication costs. Forcing a lowering of international call prices would, of course, also put pressure on BT and Mercury to seek a lowering of accounting rates with their correspondents.

6.3 The European Commission

The European Commission has undertaken an informal inquiry, the first step in a procedure which might eventually lead to an anti-trust procedure against European telecommunications operators if it is found that they have colluded to keep intra-European long distance rates artificially high. The

objective of the Commission is to put pressure on operators to bring their international prices more in line with costs and also to facilitate and promote intra-European communication.

7. CONCLUSION: IS THE PRESENT SYSTEM REALLY UNSUSTAINABLE?

The main and generally shared conclusion of the very limited number of academics who have recently begun to study the present international telecommunication arrangements and in particular the accounting rates method for international settlements is that the system, which has served its purpose, is inconsistent with the world-wide liberalization trends and must therefore be replaced; we have seen, however, in our analysis of their proposals that there are some important deficiencies in their conclusions. Closer examination of some of their arguments favoring one or another alternative has, on the contrary, revealed some fresh arguments in favour of the present system. Furthermore, their conclusions are based on the unsubstantiated view that the present system is a cartel that does not provide any pressure on prices, while in fact prices of international commercial services provided by international carriers such as Teleglobe have been reduced by as much as 35% over the last few years and have been accompanied by a continuing trend of reduction in accounting rates through the negotiating mechanism which is afforded by the current arrangements. Ergas and Paterson who last year at the margin of the ITU Plenipotentiary Conference talked about "the harmful consequences of the present arrangements"[44] and made a number of proposals for new types of arrangements, have since turned their research efforts to showing that everyone benefits when accounting rates and collection charges are reduced.[45]

Yet these same authors had indicated in their earlier paper that the accounting rate system is consistent with an institutional structure in which international facilities and services are jointly provided by sovereign international carriers. The OECD adds that "there is widespread agreement that the international accounting arrangements have historically benefited the development of international telecommunications services and interconnectivity".[46] It goes without saying that the system is universally recognized and applied. It is simple. Transaction costs are minimal since it does not require complex determination of supporting data such as per unit costs of segments of the network and, furthermore, nothing in the scheme prevents sovereign countries from adopting national tariff policies which best suit their requirements and circumstances. The system is also flexible. It can be adapted to and applied differently to different services. Countries have the possibility to negotiate more than one accounting rate for a given service to cater for off-peak or other special customer charges. They may agree to apply other than 50/50 accounting rate divisions or, alternatively, a "sender-keeps all" arrangement. In fact, the new international framework is such that countries may enter into special mutual arrangements "which do not concern members in general".[47] The system has the further advantage that it can be applied in conjunction with other systems such as the collaborative arrangements which were described earlier in this paper. The most obvious argument in favour of the system is that it evolves as it functions towards a continuous realignment of accounting rate levels in a downward direction. This in turn allows collection rate reductions which lead to higher traffic volumes and then further rate reductions.

In addition, Ergas and Paterson have mentioned the predictability, uniformity, stability and incentive aspects of the system and, in spite of the doubts expressed about its continued relevance, it remains to be shown that it is inconsistent with the changing technological, administrative and regulatory structures around the world. On the contrary, one of its main advantages is that it maintains a universal framework within which international telecommunications administrations who find themselves in diverse regulatory and structural situations can continue to operate with each other with minimal constraints while continuing to seek through negotiations to advance their commercial

interests through accounting rate reductions resulting in collection rate reductions and further traffic stimulation.

On the other hand, one cannot fail to agree with the FCC that the reluctance by countries and international operators to bring accounting rates and collection charges in line with costs, has caused "unwarranted settlement payments"[48] to be made by countries such as the US and Canada which have made important progress in bringing down international call prices and have relentlessly negotiated with our foreign correspondents with the overall objective of lower accounting rates across the board.

The system has, however, been criticized for keeping international customer charges and accounting rates well above cost, for causing huge traffic imbalances which result in balance of payments deficits, for failing to impose "discipline on carriers to ensure that the cost reductions secured through technical advance are passed on to consumers", and finally as a means for the international carriers to administer prices through an international cartel.[49] By calling or implying that the system is a cartel critics such as Aronson, Cowhey, Drake, Dixon, Noam and others have demonstrated that they do not really understand how it works. Had they put it to the test, as might have been expected, they would have quickly had to conclude that, since there is no provision for the international carriers to enter into agreements to set prices and quotas, one of the more important conditions of a cartel has not been respected. Furthermore, there are no legally enforceable documents with penalties for violators of such pricing arrangements and, furthermore, no formal system of collusion as these authors would have their readers believe.[50] There are, of course, the ITU Constitution, Convention and Administrative Regulations, international treaties which above all recognize each nations sovereignty to organize and regulate its telecommunications according to its needs and interests. These treaties, which have resulted from difficult negotiations and compromises, maintain a delicate balance between the interests of any one nation and those of its partners. The present international settlements process has been developed to be consistent with such sometime opposing interests in mind and as shown earlier contains a built-in commercially driven dynamism towards cost reduction in all instances where traffic imbalances occur which is the rule rather than the exception.

A very important conclusion that one needs to be drawn is that international cooperation among sovereign nations, which have jointly developed such a framework, can only be achieved through bilateral negotiation between partners on each relation. One country ’s telecommunication administration, government or regulatory authority cannot impose prices or other disciplines on another sovereign country. Governments and regulatory authorities have jurisdiction over only one of the partners in a bilateral or multilateral negotiation of accounting rates.

It has been Teleglobe’s experience that many of our foreign partners have recognized the impact of their high accounting rates and collection charges on Teleglobe and have through discussion agreed to respect the trend towards lower accounting rates even if they could not always show it to be of immediate benefit to them. Some have, as indicated earlier, agreed with reductions of up to 75%. Where, however, in a bilateral negotiation an administration, which is the beneficiary of important settlement payment inflows, refuses to agree to lowering the accounting rates and take measures to even the flow, more coercive methods may need to be envisaged. The most obvious measure consists in maintaining high collection rates for calls to such countries causing significant price disparity with calls to neighboring countries which have agreed to lower accounting rates and thereby discouraging traffic flows to the former. Ultimately, some countries might even consider mounting of some retaliatory trade sanctions affecting other sectors and letting the quality of service on the particular relation drop to the point where it will seriously impede traffic flows towards the recalcitrant country.

The OECD study opposes the use of the accounting rate system to assist development of goals because it would not be efficient. Developing countries have, however, argued that providing them a higher share of the revenues in relations with the industrialized countries would only reflect the higher costs they incur in providing their part of the international facilities and services. The difficulty, as we have seen, is how to determine what those costs are. There is, however, merit, we believe, in the OECD's suggestion that "in order to assist developing economies to adjust to lower accounting rates and not to induce a too abrupt fall in revenue it could be envisaged that when introducing lower rates these could be introduced on a growth-based basis. That is rates are reduced once a pre-set volume of traffic has been attained". We had indicated earlier that the introduction of growth based accounting rates is a cumbersome and costly process. We would, therefore, prefer regular phased-in reductions agreed before hand as a function of projected traffic growth and in recognition of the financial impact of our developing country partners.

We feel that these objectives can be achieved not by destroying the system, which has been so carefully constructed with the divergent needs of over 160 countries in mind, but through a mutual understanding of difficulties being encountered by some. We are confident that such mutual understanding will in the end prevail and permit the achievement of an overall reduction in the level of world-wide accounting rates and collection charges and an elimination or at least serious reduction in collection charge disparities and payments outflows. It is through reasoned discussion of this important international telecommunication issue in fora such as this that the concerns of all parties will be better understood and where consequently, progress can be made in promoting a more just and reasonable application of this system.

NOTES

1. The Financial Times, 3 April 1990. In a later article Dixon predicted that "the days when the world's telephone companies could agree among themselves incosy club committees how the international telecommunications market should be regulated are passing" (Financial Times, 15 May 1990).

2. Drake's like Aronson's, Cowhey's and Dixon's criticisms of the international telecommunications system are based in part on some serious misunderstanding of how it works. For example, on the subject of collection charges Drake writes that they "comprise two elements, access charges and utilization charges. Access charges include the initial fee for subscriber hook-up and regular rental payments for terminals and/or continued connection. They are established and collected solely at the national level in accordance with an administration's particular budgetary circumstances, and may vary widely across countries. They are established and collected via international coordination, since transmission involves the facilities of sending, receiving and sometimes transit countries". (See W.J. Drake, Asymmetric Deregulation and the Transformation of the International Telecommunications Regime**,** in E.M. Noam, G. Pogerel, ed. Asymmetric Deregulation: The Dynamics of Telecommunications Policies in Europe and the United States, Norwood Ablex Publishers.) While certain Recommendations in the D-Series (eg. D.10, D.11 which deal with the public data service, and D.210 which deals with charging and accounting in the ISDN) define these two components of collection charges, none comes near to suggesting that they "be established and collected via international coordination". Recommendation D.150 for the Telephone Service does not speak of utilization and access charge components. It simply states that "the collection charge is the charge collected by an administration from its public for the use of the international telephone service". Like the International Telecommunication Regulations this Recommendation states that too great a dissymmetry between collection charges in each direction in the same relation should be avoided. See Annex A, ref. [9].

3. For an overview of the WATTC debate see P.A. Stern, International Telecommunication Regulations: Issues and Tensions, an Update on WATTC-88, Paper presented at the Interdisciplinary Seminar on Regulated Industries, Centre for the Study of Regulated Industries, McGill University, 15 February 1989.

4. The Independent Commission for World Wide Telecommunications Development (The Maitland Commission) had recommended in 1984 that "Member States of the ITU consider in the light of their own circumstances a rearrangement of their international traffic accounting procedures with the aim of setting aside a small proportion of revenues from calls between developing countries and industrialized countries. The resources transferred thereby should be devoted to the telecommunications sector in the developing country or countries concerned or contributed to a fund and used, for example, to finance pre-investment costs." The Missing Link: Report of the Independent Commission for World Wide Telecommunications Development (The Maitland Commission Report) Geneva, December 1984.

5. The US prefers the stronger words "reflects cost to the greatest extent possible", while the EEC wants the less stringent "cost-oriented" prices.

6. Following the nationalizations of the assets of Cable & Wireless (and Marconi), in various Commonwealth countries after World War II, the Commonwealth network also became to be characterized by the joint provision of international telecommunications facilities by

sovereign international telecommunications entities. Their revenues and costs were, however, shared according to collaborative financial agreements signed by the member Governments.

7. More recently some countries have opened their telecommunications sectors to foreign ownership. Argentina, Chile, Mexico, and New Zealand are examples. Australia has now envisaged selling to foreigners part of Aussat which will compete with Telecom Australia - OTC. In the US up to 25% ownership of US carriers is now allowed. In contrast, the Canadian Government in privatizing Teleglobe, Canada's international carrier, did not permit ownership by non-residents nor non-resident carriers (see section 5 of the Teleglobe Canada Reorganization and Divestiture Act).

8. These rules are contained in several legal instruments, the most fundamental of which currently are 1989 ITU Constitution and Convention which not only describe the composition, purpose and structure of the Union but also contain general provisions concerning international telecommunications such as, for example, the right of the public to use international telecommunication services or the priority of safety of life and government telecommunications over other types of telecommunications or provisions concerning the establishment, operation and protection of telecommunication channels and installations. The Administrative Regulations are also binding international treaties which set out the rules for the orderly use of the radio frequency spectrum and the geostationary-satellite orbit which are both limited resources (Radio Regulations) and for the provision of international telecommunications services (International Telecommunication Regulations). Detailed provisions concerning the development, implementation, operation and maintenance of international facilities and services are contained in Recommendations of the International Radio and International Telegraph and Telephone Consultative Committees (CCIR, CCITT). These Recommendations are established within international committees of experts representing governments, operators, manufacturers and others, and while they are not legally binding in nature and do not have treaty status, they do provide a basis for normalization since they represent the collective view and in that respect provide a common basis for bilateral mutual agreements on the establishment of international telecommunications services within the framework of international treaties such as the Convention and Regulations. The Recommendations are thus considered to be important in ensuring interconnection and interoperability of international telecommunication facilities and services.

9. Description taken from P.A. Stern, The Atwater Project on the Impact of Telecommunication and Data Services on Commercial Activity and Economic Development: The International Telecommunication System, Montreal, March 1990.

10. Article 6.1.1 of the International Telecommunication Regulations states that "each administration shall, subject to applicable national law, establish the charges to be collected from its customers. The level of the charges is a national matter; however, in establishing these charges, administrations should try to avoid too great a dissymetry between the charges applicable in each direction of the same relation", Final Acts of the World Administrative Telegraph and Telephone Conference, Melbourne, 1988 (WATTC-88). Similarly, Annex A of CCITT Recommendation D.150 defines the collection charge as being "the charge collected by an Administration from its public for the use of the international telephone service" and invites administrations "as a general principle, in fixing the collection charges, (to) make every effort to avoid too large a dissymmetry between the charges applicable in each direction of the same relation" (Blue Book).

11 The OECD points out that "the direction of calls, their frequency and duration are a function of a variety of factors. These include the degree and pattern of internationalization of manufacturing and service activities, international trade in these activities, and the pattern of international location of subsidiaries. It also reflects the pattern of international migration, the development of domestic telecommunication infrastructures, and national levels of disposable income. The price of international calls, although important, is not the sole factor in determining direction, frequency and duration of calls. The elasticity of demand with respect to the price of an international call will differ from country to country, and in some cases may be fairly inelastic in the short run, but be susceptible to change in the longer run as consumer habits change". See Working Party on Telecommunication and Information Services Policies, International Telecommunication Charging Practices and Procedures, DSTI/ICCP/TISP/90.7, 16 May 1990.

12. CCITT Recommendation D.150 gives the following reasons why collection charges at two ends of a relation will not necessarily be the same:

a) in most countries collection charges and accounting rates will be expressed in different currencies;

b) collection charges and accounting rates may be based on different traffic units;

c) the value of national currencies can fluctuate relative to the special drawing right (SDR) or the gold franc;

d) collection charges may be influenced by government fiscal policies.

Recommendation D.300R (Europe and Mediterranean Basin) adds two more reasons:

e) Administrations frequently establish common collection charges for geographical zones or groups of countries;

f) in many relations there will be different routes with different accounting rates to which a single collection charge will be applied.

13. In addition to the nine mayor telephone companies which are members of Telecom Canada there are over 50 independent companies whose size varies from 500 to 350,000 network access lines. Some are privately owned, some provincially owned and others municipally owned.

14. There are four principal forms of settlement between Telecom members and the independent telephone companies: (i) commission per message received and operated and line-haul payment which takes into account the number of circuits and circuit miles provided by the independent; (ii) commissions per messages received and operated and a prorating of the balance of revenues based on the total message miles contributed by each company in carrying the traffic; (iii) the accounting rate method; (iv) the originating carrier receives a constant percentage of the originated toll revenue or a fixed commission for each originated toll message. (See Report of the Federal-Provincial-Territorial Task Force on Telecommunications, Competition in Public Long-Distance Telephone Service in Canada, Minister of Supply and Services Canada 1988, ISBN 0-662-56266-6).

15. Unitel has recently applied to the Canadian Radio-television and Telecommunications Commission (CRTC) to compete with Bell Canada in public long distance telephone service. It is expected that the CRTC will begin hearings on Unitel's application in April 1991. (See CRTC Telecom Public Notice 1990-57, Unitel Communications Inc. Application to Provide Public Long Distance Telephone Service: Scope of Proceedings, 11 June 1990 and CRTC Telecom Public Notice 1990-73 Unitel Communications Inc. and

B.C. Rail Telecommunications/Lightel Inc. - Applications to Provide Public Long Distance Voice Telephone Services and Related Resale and Sharing Issues: Scope and Procedure, 3 August 1990).

16. Teleglobe's mandate as the sole authorized Canadian operator of facilities to provide Canada/overseas telecommunications services is assured for minimum period of five years from the date of privatization (April 1987).

17. In September 1990 the CRTC decided to permit resellers and private users to access Teleglobe's international message toll service directly through the resale of Canadian domestic carriers' private lines (see CRTC Telecom Decision CRTC 90-19, Application by Fonorola Inc. and ACC Long Distance Ltd., 4 September 1990). The CRTC ruled in favor of the request by the resellers to interconnect directly into Teleglobe's facilities stating that this decision is consistent with two earlier related decisions, namely, Decision 90-2, Teleglobe Canada Inc. - Resale and Sharing of International Services, 23 Februarv 1990, which allows the resale and sharing of international private lines for services other than interconnected voice and Decision 90-3, Resale and Sharing of Private Line Services, which allows resale and sharing of domestic leased lines for interconnected voice services on a joint use basis (that is, not dedicated to a single user), provided a monthly per channel contribution is made to the local service.

18. In The Global Telecommunication Traffic Boon: A Quantitative Brief on Cross-Border Markets and Regulation, IIC, 1990, Gregory C. Staple ranks the top 25 international carriers by the volume of outward public telecommunication traffic carried in 1988. According to Staple's figures Telecom Canada ranks fifth after AT&T, DeutscheBundespost Telekom, British Telecom, and France Telecom. Teleglobe ranks 16th ahead of MCI and US Sprint.

20. Since its creation in 1950 Teleglobe has never had to increase its rates for overseas telephone service.

21. Before August 1989 the federal government (through the CRTC) had regulatory jurisdiction only over two regional Telecom Canada members, Bell Canada and British Columbia Telephone and four national companies, CHOP (now Unitel), Telesat Canada, Teleglobe Canada, and Cantel, the cellular radio competitor of Bell Canada. The other members of the Telecom Canada consortium as well as most of the independents were regulated by their respective provincial governments. In August 1989 the Supreme Court of Canada ruling in the case of Alberta Government Telephones vs CRTC and CNCP Telecommunications decided that the federal government has exclusive Jurisdiction over the members of Telecom Canada, that had up to then been regulated provincially, because these companies provided inter-provincial long distance services. The court, however, also decided that Alberta Government Telephones and the other provincially owned telephone companies were protected by "crown immunity" under the Railwav Act. (For a good discussion of the Canadian regulatory situation see H.N. Janisch and R.J. Schultz, Exploiting the Information Revolution: Telecommunications Issues and Options for Canada, The Royal Bank of Canada, Montreal, October 1989.)

22. See Direction to the Canadian Radio-Television and Telecommunications Commission Respecting the Approval of the Telegraph Tolls and Telephone Tolls for the New Corporation in Force from Time to Time in the Transitional Period, annexed to PC 1987-705, 2 April 1987, Privy Council of Canada. In the same document the Government of Canada directs the CRTC to accept "for the purpose of calculating the revenue requirements of the new company a new balance sheet in which the net fixed assets are 140 percent of the

net historical book value as reflected in the balance sheet of Teleglobe" with "a ratio of long term debt to equity of 45/55".

23. The ten Telecom Canada members are: British Columbia Telephone Company; Alberta Government Telephones (ACT); Saskatchewan Telecommunications; Manitoba Telephone System (MTS); Bell Canada; The New Brunswick Telephone Company; The Island Telephone Company; Maritime Telegraph and Telephone Company Limited; Newfoundland Telephone Company Limited; and Telesat Canada. The consortium was originally formed in 1931 to facilitate the provision of coast to coast telephone service.

24. supra note 13

25. supra note 14

26. See CRTC Decision 81-13, Bell Canada, BC Tel, and Telesat Canada: Increases and Decreases in Rates for Services ant Facilities Furnished on a Canada-wide Basis by Members of the Trans-Canada Telephone System

27. Drake, supra note 2 at p. 2

28. Aronson & Cowhey, ref. [l], Ergas and Paterson et al, ref. [2, 3]

29. Aronson & Cowhey, ref. [1], p. 221

30. See Ergas and Paterson ref. [2] p. 17

31. See Aronson & Cowhey, ref. [1], p. 225

32. While Article II, Coverage, of the draft Multilateral Framework for Trade in Services (MTN.GNS/35, 23 July 1990) states that all services shall be covered, Section 2.3.4 of the proposed Sectoral Annex on Telecommunications states that "a Party shall not be required to grant market access to service providers, including telecommunications service providers, of other parties other than as provided for in its schedule", in other words, to the extent it is prepared to commit itself to opening markets in a particular service sector (draft dated 5 October 1990).

33. US international carriers such as AT&T and MCI along with the Consumer Federation of America and the International Communications Association are opposed to including coverage of basic telecommunications services in the proposed Multilateral Framework for Trade in Services of the telecommunications annex (see Telecommunications Reports, Aug. 27, 1990 p. 1 - 4 and Sept. 10, 1990 p. 11 13). The United States Trade Representative (USTR) and Department of Commerce fear "that exclusion of basic telecommunications may lead to the exclusion of other sectors and could undercut the entire services negotiations" and therefore support "an agreement that incorporates universal coverage of services and does not exclude any sectors" with "however, strong safeguards for the provision of basic telecommunications services must be built into the agreement to defend US trade, regulatory, and commercial interests" (see letter from Robert A. Mosbacher, Secretary of Commerce to Hon. Carla A. Hills, United States Trade Representative, September 14, 1990). In other words, basic services would not be specifically excluded from the agreement but the US would only be prepared to make binding commitments on the principles of MEN, national treatment and market access on a reciprocal basis.

34. See Ergas and Paterson, ref. [2].

35. Article IV of the proposed Multilateral Framework for Trade in Services foresees the possibility of countries allowing subsidies which would have to be notified. This article

might, however, lead to disputes depending on the interpretation of Article 4.2.2 of the Sectoral Annex on Telecommunications (version 5.10.90) which would require public telecommunications transport services to be priced in a manner "reflecting cost" or to be "cost oriented".

36. Maitland Commission Report, see supra note, ref. 4.

37. CCITT Recommendation 150, paragraph 2.3.1.

38. **Follow-up Study of the Costs of Providing and Operating International Telephone Service Between Industrialized and Developing Countries,** ITU, Geneva, 1990.

39. **Study of the Costs of Providing and Operating Telecommunications Services Between Industrialized and Developing Countries,** ITU, Geneva, 1988, ISBN 92-61-03841-7.

40. supra note 38.

41. supra note 11 at p. 17.

42. FCC Notice of Proposed Rulemaking in the Matter of Regulation of International Accounting Rates, CC Docket No. 90-337 Released Aug. 7, 1990.

43. Advice submitted by the Director General of Telecommunications to the Secretary of State, International Telephony: Simple Resale and Control of Prices, 1 Oct. 1990. On 5 March 1991 the British Government issued a White Paper which formally ended the duopoly which had existed for seven years. Of significance with respect to international services was the decision of the government to include the price of international services in the price cap formula, the agreement by British Telecom to reduce its prices for its international services by 10% as soon as possible, and the opening of international markets for simple resale (including live voice and telex) but only with countries that similarly allow it. It is unlikely, however, that the government will issue any new international licenses for the time being.

44. Ergas and Paterson, ref. [2], p. 13

45. See Ergas and Paterson, ref. [3]. In order to arrive at their conclusion that a reduction in accounting rates and collection charges results in everyone benefiting, Ergas and Paterson have had to make some important assumptions about traffic elasticities and carrier costs. For example, traffic elasticities for countries where the per minute collection charge is more than $US 2.50 are assumed to be -1.2 or -1.8. One must, however, question the validity of such an assumption especially in the case of developing countries where, as the OECD study indicates, demand may in fact be "fairly inelastic in the short run" (supra note 11 at p. 7). Available statistics show that demand in developing countries is, in fact, very inelastic lying in the range from -0.2 to -0.8 for domestic and long distance telephone service. Demand for international calling in these countries must reasonably be expected to be even more inelastic.

46. supra note 11 at p. 19.

47. Article 9, International Telecommunications Regulations (Melbourne, 1988).

48. supra note 42 at p. 9.

49. Aronson and Cowhey, ref. [1], Ergas and Paterson, ref. [2, 3], Drake supra note 2

50. The Penguin Dictionary of Economics defines a cartel as "a group of firms which enter into an agreement to set mutually acceptable prices for their products, and this is often accompanied by output and investment quotas. The rules of the cartel will be embodied in a formal document, which may be legally enforceable, and penalties will be laid down for

firms which violate it. The essence of a cartel is that it is a formal system of collusion, as opposed to a set of informal or tacit agreements to follow certain pricing policies. Currently, cartels are illegal in the U.K. and the U.S., it being held that their general effect is to restrict output, raise prices, and, in general, create monopoly conditions in industry. On the other hand, cartels have been legalized at certain times, especially in Germany in the inter-war period, when they were seen as a means of achieving gradual "rationalization" of an industry suffering from excess capacity or of achieving sufficient strength to compete more effectively in international trade." See G. Bannock, R.E. Baxter and R. Rees, The Penguin Dictionary of Economics, Penguin Books, 1972.

REFERENCES

[1] Jonathan D. Aronson, Peter F. Cowhey, When Countries Talk, International Trade in Telecommunications Services, Ballinger Publishing Company, Cambridge, Massachusetts, 1987 ISBN 0-88730-284-X.

[2] H. Ergas, P. Paterson, P. Geissler, International Telecommunications Accounting Arrangements: An Unsustainable Inheritances? Conference on The Development of International Telecommunications: Its History and Its Future, Villefranche-sur-mer, France, June 1989.

[3] H. Ergas, P. Paterson, S. Cobee, P. Geissler, The Joint Provision of International Telecommunications Services: An Economic Analysis of Alternate Settlement Arrangements, Eighth ITS International Conference, Venice, Italy, March 1990.

[4] Kenneth B. Stanley, The Balance of Payments Deficit in International Telecommunications Services, FCC Industry Analysis Division and Report of the Common Carrier Bureau to the Federal Communications Commission on International Accounting Rates and the Balance of Payments Deficit in Telecommunications Services, Washington, 12 December 1988.

[5] L.L. Johnson, Competition, Pricing and Regulatory Policy in the International Telephone Industry**,** Rand Publication Series, R-3790-NSF/MF, The Rand Corporation, Santa Monica CA, July 1989.

[6] FCC Notice of Proposed Rulemaking in the Matter of Regulation of International Accounting Rates, CC Docket No. 90-337, Federal Communications Commission, Washington, released 7 August 1990.

[7] OECD Working Party on Telecommunication and Information Services Policies, International Telecommunication Charging Practices and Procedures, DSTI/ICCP/TISP/90.7, 16 May 1990.

[8] FCC Industry Analysis Division, Accounting Rates and the IMTS Deficit, 1985-1990, Washington, 1 June 1990.

[9] CCITT Recommendation D.150 New System for Accounting in International Telephony, CCITT IX Plenary Assembly, Melbourne, 1988 (Blue Book).

[10] CCITT Recommendation D.155 Guiding Principles Governing the Apportionment of Accounting Rates in Intercontinental Telephone Relations, CCITT IX Plenary Assembly, Melbourne, 1988 (Blue Book).

[11] CCITT Recommendation D.300R Determination of Accounting Rate Shares and Collection Charges in Telephone Relations Between Countries in Europe and the Mediterranean Basin, CCITT IX Plenary Assembly, Melbourne, 1988 (Blue Book). .

[12] Sir Bryan Carsberg, Advice Submitted by the Director General of Telecommunications to the Secretary of State, International Telephony: Simple Resale and Control of Prices, Oftel, 1 October 1990.

[13] A Press Commentator’s Guide to the Complexities Economics of Telephone Call Charging, New Analysis, Intermedia, June-July 1990, Volume 18, No. 3.