Globalism and Localism in Telecommunications
E.M. Noam and A.J. Wolfson (Editors)

Reforming the International Settlements System

Albert Halprin

In domestic telecommunications markets all around the world, there is a clear trend away from the monopoly provision of services and toward competition. This trend is by no means limited to the industrialized countries. In early 1994, the World Bank staff reported that "a growing number of [the Bank's] client countries are reforming telecommunications sector policy and structure along three main avenues: commercialization of operations, encouraging new entrants and competition, and increasing private participation."[1] From America to Zaire, nations have opened segments of their domestic telecommunications markets to competition. In these market segments, service prices have, predictably, been driven closer to costs, thus reducing distortions in the overall pricing structure of these countries' domestic telecommunications markets.

The same, however, cannot be said of international telecommunications service markets. Despite the dramatic progress so many countries have made in opening their domestic markets to competition, international services remain the preserve of a monopoly or cartel in virtually every nation, whether developed or developing. These providers also act as a global cartel, furthering their mutual interests by vigorously opposing the entry of new competitors into the international telecommunications marketplace. Countries continue to prohibit or restrict competition in order to maintain artificially high international service rates. The ostensible purpose of such policies is to maximize international revenues for use in financing the construction and maintenance of the nation's domestic telecommunications infrastructure. It should be noted, however, that in many nations where the international telecommunications service provider is a government-owned monopoly, the governments have a propensity to appropriate telecommunications operating surpluses for purposes other than reinvestment in the telecommunications infrastructure.[2]

It is also important to recall that even where entry into some or all parts of the market for facilities-based international services is legally open to new entrants, the market is characterized by exceedingly large economies of scale which effectively limit participation to a handful of carriers.

In sum, international telecommunications services are treated in most of the world as a source of cash for other purposes. As a result, government-sanctioned international service monopolies currently achieve phenomenally high returns on their investment. These rates of return far exceed the returns generated from domestic telecommunications services and are far above competitive levels. Very little precise information is publicly available about the margins and returns achieved by international service providers; not surprisingly, the governments and network operators involved are loath to divulge such information.

Nonetheless, given the anticipated rapid future growth in international traffic, it would be absurd for anyone to contend that the returns generated by monopoly international service providers are somehow warranted by their cost of capital or other measures of risk inherent in the international services market.

This is the backdrop against which any discussion of the prospects for reforming the international accounting rates settlement process must be set. That process remains essentially unchanged since its inception well over a century ago. One of the main purposes for which the International Telecommunication Union (ITU) was formed in 1865 was to create a mechanism for sharing revenues from international calls between the originating carrier in one country and the terminating carrier in another country. To summarize, the methodology devised by the ITU involves three elements -- accounting rates, collection charges, and settlement rates. The accounting rate is the internal price carriers in two countries agree upon for completing calls originating in each other's country. The collection charge is the price the originating carrier charges the caller for transmitting an international call. It covers the originating carrier's costs and profit margin, plus the accounting rate. The settlement rate refers to how the accounting rate revenues are shared between the two carriers. Under the ITU's recommendations, those revenues generally are shared on a simple 50:50 basis. The settlement rate, therefore, generally is half the accounting rate. Where there is an imbalance in the volume of incoming and outgoing traffic between carriers in two countries, the carrier that generates the higher volume of traffic is required to compensate the other carrier in the form of a settlement payment.

This system was designed to serve as an effective mechanism for managing transactions between government-sanctioned monopoly providers of international services. The system still operates effectively among the vast majority of countries that, as noted previously, continue to protect their international service providers from competition. But the decision of only a few countries to allow some competition in their international service markets has placed the accounting rates system under severe strain. In the United States, for instance, the competitive entry of multiple international service providers and the availability of new lower-cost technologies have created downward pressure on collection charges. In other countries, however, monopoly international service providers have not faced similar pressure to lower their collection charges. Nor have these foreign carriers had any incentive to negotiate lower accounting rates with their U.S. counterparts.

As a result, significant differences have emerged in collection charge levels between the U.S. and other countries. Also, accounting rates have come to represent a greater portion of the total charge for outgoing international calls from the U.S. These trends, along with other economic and social factors, have resulted in a large and growing imbalance in telecommunications traffic, and hence in settlements, between the U.S. and several major developed and developing nations. In 1991, outgoing international calls from the U.S. to Germany exceeded the number of calls in the other direction by almost 400 million. International callers simply were responding rationally to the gap between the collection charges imposed by U.S. international carriers competing stiffly with one another and those charged by the German monopoly provider, Deutsche Telekom. In 1991, the U.S. settlements deficit reached $3.3 billion. Other countries that have taken steps to promote price competition in their international services segment also have experienced large settlement deficits.

Many proposals for fundamental reform of the settlements process have been adumbrated over the last several decades, but beyond certain modifications in the format, the basic methodology has not been altered. One reason is that the reform proposals often have been at cross-purposes. Some developing and less-developed countries, for instance, have focused on the way accounting rates are shared, arguing that they should receive more than half of the rate in order to cover their higher infrastructure development costs. The U.S. and other industrialized nations, in contrast, have focused on the absolute level of accounting rates. They want the rates to be lowered to reflect more closely the actual costs incurred in jointly delivering international calls.

In a recent report, the ITU summarized several proposed approaches to fundamental reform of the accounting rates system. These include:

- "Sender-keeps-all, in which the [carrier] originating the call keeps all of the revenues it collects...;

- "Facilities-based payments, in which the [carrier] originating the calls pays for the use of certain facilities used to terminate the call, such as transmission lines, switches, [and] the local loop, according to cost...;

- "Volume-based payments, in which the compensation paid by the sending country is tied more directly t the volume of calls sent" (such as a "bilateral agreement based on different payments on a descending unit cost scale according to the volume of calls sent"); and

- "A call termination fee, in which a [carrier] charges the same fee to terminate calls irrespective of origin."[3]

Why has there been little movement toward implementing these or any other fundamental reforms? There are, I believe, three major forces for inertia frustrating reform efforts, even in the face of the increasingly apparent shortcomings of the existing accounting rates system. The first is the decision of most countries to continue limiting competitive entry into their international telecommunications service markets. The existing accounting rates system works to the advantage of countries that have preserved their international service monopolies, so these countries have virtually no incentive to support reform initiatives.

The second factor is related to a fundamental premise of the accounting rates system -- the notion that every international call is a 50-50 cooperative venture between a carrier in the originating country and a carrier in the terminating country. It is on the basis of this concept that accounting rates are split evenly between the two carriers. The concept, however, bears no relation to the actual economics of the delivery of international telecommunications traffic. In reality, of course, international calls are not handed off from carrier to carrier at the precise mid-point between the origination and termination points. Moreover, the actual costs the originating and terminating carriers incur vary from call to call and depend in part on the facilities each carrier uses to carry the signal.

The third factor is perhaps the most entrenched barrier to creating a genuinely competitive international telecommunications market. I am referring to regulations still in force in most nations that require two separate carriers to be involved in completing every international call. In order to complete a call, a carrier authorized to operate in country A must hand off the call to another carrier authorized to provide international services in country B. The entire accounting rates system is premised on this scheme, which, to be fair, accurately reflected the way international services were delivered when the system was devised.

No longer. Today, telecommunications service providers both large and small have the technical capability and the commercial desire to provide end-to-end transmission of international calls from one country to another, over their own facilities and/or through resale of facilities leased from other carriers. New technologies such as low earth-orbit satellites (LEOs) only serve to accelerate and accentuate the potential for a single carrier to carry an entire end-to-end international call over its own facilities. Regulatory barriers alone explain why end-to-end service provided by a single carrier is available between only a few countries today.

Given these powerful forces favoring the status quo in the accounting rates system, there is little reason to hope for dramatic progress in improving the system beyond what has been achieved in recent years. Several nations have opened their international telecommunications service markets in whole or in part to competition, but this alone will not solve the problem. Indeed, as we have seen, the introduction of international services competition in some markets while monopolies continue to operate in most markets has exacerbated the problems in the current accounting rates system.

In the United States, the focus of recent initiatives has been on reducing the level of accounting rates to more closely match costs, and not on fundamental reform of the system. The Federal Communications Commission has devoted considerable attention to this issue in its proceeding on regulation of international accounting rates.[4] Among other things, the Commission has devised incentives for U.S. international carriers to negotiate lower accounting rates with correspondent carriers.

Perhaps the most potent tool at the FCC's disposal for driving down accounting rates is international private line resale. International private lines can be used to circumvent the settlements system, because traffic carried over such lines is not subject to accounting rates. Thus, by allowing the interconnection of international private lines to the public switched network, regulators can exert downward pressure on accounting rates. Unfortunately, the FCC, while recognizing the potential for international private lines to serve this function, has failed to use this tool to maximum advantage.

In its 1991 International Resale Order, the FCC concluded that resale of international private lines to provide switched services would promote new entry into the international telecommunications market and more efficient use of facilities, and would exert downward pressure on international accounting rates.[5] But the Commission then proceeded to place new *restrictions* on international resale. From the early 1980s, when AT&T amended its international service tariffs to remove prohibitions on resale, and most other U.S. international carriers followed AT&T's lead, there had been virtually no restrictions of any sort on international resale. In the International Resale Order, however, the FCC for the first time prohibited "one-way" resale, that is, resale of international private lines interconnected to the U.S. public switched network but not to the public switched network in the country at the other end.

By barring one-way resale, the FCC achieved the exact opposite of the asserted purpose of the International Resale Order -- the promotion of international private line resale as a means to put downward pressure on international accounting rates. The order reduced the potential of international private line resale to drive down rates. This gap between the stated intent of the order and its actual impact is an example of what the Senior Senator from New York, Daniel Patrick Moynihan, refers to as the "leakage of reality" in American political discourse and public policymaking. Or perhaps the FCC's order is best viewed as a contemporary example of Orwellian "Newspeak."

The Commission reasoned that one-way resale could enable foreign carriers or administrators to divert to private lines U.S. inbound switched traffic, thus avoiding making settlements payments to U.S. carriers for transmitting such calls and further exacerbating the U.S. settlements deficit. The FCC therefore required U.S. international carriers to permit resale only on those routes where "two-way" resale is allowed, that is, where the foreign government also allows international private lines to be interconnected to its public switched network. Moreover, the Commission required every company that wants to resell international private lines in the U.S. to file an application demonstrating that the foreign country to which the traffic will be delivered "affords resale opportunities equivalent to those available under U.S. law."

In the International Resale Order, the FCC suggested that this new requirement of equivalent resale opportunities would allow international private line resale to:

> Those countries, such as Canada, the United Kingdom, Sweden, and Australia, that are in the process of implementing cost-based international accounting and collection rates and have more liberal telecommunications regimes, including permitting or requiring resale of international private line and international telephone services.[6]

Yet, in the three years since the International Resale Order was adopted, only two countries have been certified by the FCC as affording equivalent resale opportunities -- Canada and the United Kingdom. This is due not to the lack of openness in Sweden's, Australia's, or other nations' international service markets, but rather to the lengthy and onerous application process the FCC imposed on would-be international private line resellers. Potential resellers have been discouraged by this burdensome process from seeking international private line resale authority.

This has resulted in aberrations such as the continuing prohibition on the resale of private lines to New Zealand, even though that country long ago abolished all restrictions on interconnection of private lines to the public switched network. The revenues resellers could derive from offering private line-based services between the U.S. and New Zealand apparently do not justify the time and costs that would be required to prove to the FCC's satisfaction that New Zealand offers equivalent resale opportunities. Potential resellers know that they will face significant delays and regulatory costs countering U.S. international carriers' systematic opposition to all requests for international resale authority. The perverse effect of the Commission's policy is to discourage international private line resale.

Moreover, the Commission's concerns about one-way resale were largely misplaced. Except in those few countries that impose a complete ban on the provision of any telecommunications services by entities other than the government-sanctioned monopoly, one-way resale of international private lines *would* in fact create downward pressure on foreign collection charges, which is one of the explicit objectives of the FCC's International settlements policy. Foreign resellers delivering traffic to the U.S. over private lines would attract customers by offering service at rates lower than those charged on the same route by the network operator using lines subject to the accounting rates system. In response, the network operator would be forced to lower its collection charge on the U.S. route, thus narrowing the current gap in collection charges on the route. Lower collection charges in the foreign country would, in turn, reduce the calling imbalance between the two countries and thus would begin to redress the U.S. settlements deficit with the foreign country.

The incoherence of the FCC's policy on international private line resale is made plain by its contradictory policy on "call-back" services. Call-back service allows a customer in a foreign country to dial a number in the U.S. and receive a dial tone at a switch owned by a U.S. reseller, which the customer can then use to place a call via an outbound switched service of a U.S. carrier. Customers in foreign countries are attracted to call-back services because they can benefit from the lower collection charges imposed by U.S. international carriers. Earlier this year, the FCC granted international resale authority to three call-back operators despite objections from U.S. carriers that the process essentially allows the call-back operators to use the facilities of other carriers without compensation.[7] The Commission approved the applications, in part, because it believed the call-back services would put "significant downward pressure on foreign collection rates." In authorizing call-back services, the FCC has braved the hazards of questionable legality and ITU regulations that prohibit such services, and has antagonized foreign administrations, all in the name of creating pressure on foreign collection charges.

Yet the costs call-back service operators incur in delivering their services are inherently higher than the costs a reseller using international private lines incurs delivering the same service. Call-back services, therefore, cannot create as much downward pressure on collection charges as private line resale. Moreover, the same concern that prompted the FCC to prohibit one-way international private line resale also applies to call-back services -- they divert traffic away from outgoing lines to the U.S. on which settlement payments would apply. In addition, however, every call placed through a call-back service results in a settlement payment from a U.S. carrier to a foreign carrier. That does not happen with international private line resale. In terms of the settlements deficit, the U.S. is worse off as a result of call-back services than as a result of one-way private line resale. A much better argument can be made for authorizing one-way international private line resale than for permitting call-back service. The FCC's policy allowing the latter while prohibiting the former is incoherent.

Another important regulatory lever the FCC could use to encourage cost-based accounting rates is a requirement that end users be allowed to resell capacity on undersea cables. In 1985, the Commission proposed to do just that in CC docket no. 83-1230.[8] Specifically, it proposed to allow "enhanced service providers and other non-carrier users to acquire indefeasible rights of user (IRUs) in international submarine cables and to require the current carrier owners of such cables to make IRUs available at a negotiated price." The next year, the FCC concluded that non-carrier entities are "eligible" to acquire IRUs, and it encouraged carriers to make IRU sales. But it stopped short of requiring involuntary sales of

IRUs, stating that it would not do so unless such a course proved necessary to protect the public interest.

The fact is that there have been few voluntary sales of IRUs since the FCC adopted this policy. This is unfortunate because allowing users to lease capacity in undersea cables could create pressures on accounting rates similar to those caused by international private line resale. In the domestic telecommunications market, the FCC's facilities resale requirements were a key factor in opening the market to competition and ensuring the efficient pricing of services. The same result can be achieved internationally through an aggressive facilities resale policy. Undersea cable operators are vigorously opposed to a more rigid requirement that they sell IRUs to non-carrier entities, primarily because they want to protect the high returns they generate. There has been little discussion of this issue since the mid-1980s, but it deserves renewed consideration.

Conclusion

The current system of international accounting rates and settlements is highly dysfunctional and serves only the interests of the carriers currently involved in the system. It creates an environment in which all carriers, including the ostensibly competitive U.S. carriers, profit handsomely from international telecommunications traffic. This has created strong incentives for these carriers to resist fundamental reforms to the system. As a result, we have only the most limited form of international telecommunications competition.

Fundamental reforms would pay deep dividends. Lower international telecommunications rates would stimulate global commerce, generate higher traffic volumes, and result in more efficient use of international facilities. Indeed, the same benefits we have seen from the introduction of real competition in segments of many nations' domestic telecommunications markets would be reproduced on a global scale.

Endnotes

1. World Bank, *Telecommunications Sector Background and Bank Group Issues* (Seminar presented Feb. 16, 1994 to the Executive Directors of the World Bank and the International Finance Corporation).

2. *Id.* at 17.

3. ITU, *World Telecommunication Development Report* (1994), Geneva.

4. Regulation of International Accounting Rates, CC Docket No. 90-357, Phase I, Notice of Proposed Rulemaking, 5 FCC Rcd 4948 (1990); Phase I Report and Order, 6 FCC Rcd 3552 (1991); Further Notice of Proposed Rulemaking, 6 FCC Rcd 3434 (1991), Phase II; Phase II First Report and Order (*International Resale Order*), 7 FCC Rcd 559 (1992); Phase II Order on Reconsideration and Third Further Notice of Proposed Rulemaking, 7 FCC Rcd 7927 (1992).

5. *International Resale Order*, *supra* n.5.

6. *International Resale Order* at 559.

7. Via USA, Ltd.; Telegroup, Inc.; and Discount Call International Co., Order, Authorization and Certificate, File Nos. I-T-C--93-031, I-T-C-93-050, and I-T-C-93-054 (released May 11, 1994).

8. International Communications Policies, Notice of Proposed Rulemaking, 104 FCC 2d 208 (1985); Report and Order, 104 FCC 2d 208 (1986); Order on Reconsideration, 2 FCC Rcd 7375 (1987).