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# ESSAY

## Privatization of Satellite Cooperatives: Smothering a Golden Goose?

ROB FRIEDEN\*

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### I. INTRODUCTION

Privatization has become a major economic and industrial model for international telecommunications, an industry historically predominated by government-owned carriers. In both developed and developing countries,<sup>1</sup> governments have abandoned part or all of their telecommunication carrier portfolios in the expectation that private ownership and competition will foster improved efficiency, increased investment in the sector, greater output, lower prices, service diversity, higher quality, and enhanced consumer welfare.<sup>2</sup> Some empirical studies have validated this expectation, showing improvements in many of the statistical indices used to track progress, efficiency, and performance in telecommunications.<sup>3</sup>

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1. See, e.g., Michele Balfour and Cameron Crise, A Privatization Test: The Czech Republic, Slovakia and Poland, 17 *Fordham Int'l L.J.* 84 (1993).

2. See, e.g., Ingo Vogelsang, Micro-Economic Effects of Privatizing Telecommunications Enterprises, 13 *B.U. Int'l L.J.* 313 (1995).

3. See, e.g., William L. Megginson et al., The Privatization Dividend, *Pub. Pol'y for Private Sector*, Dec. 1995, at 33.

Telecommunications privatization initiatives initially generated skepticism about what benefits, if any, would be gained and raised concerns that massive unemployment would result once a corporatized incumbent carrier restructured to meet competition from private systems.<sup>4</sup> Yet in most cases, governments have decided to promote private ownership in the sector and to allow some degree of facilities-based or resale competition.<sup>5</sup>

In view of the strong evidence that both operators and consumers in the telecommunications industry can benefit from privatization and competition, it would seem to follow that such initiatives would create producer and consumer gains in the satellite market segment as well.<sup>6</sup> Many countries have authorized facilities-based satellite competition, and several private, commercial satellite ventures operate in such diverse locations as the United States, Canada, Australia, Japan, Indonesia, Malaysia, Thailand, and Hong Kong.

If privatization has generated such ample dividends, should one necessarily conclude that every model of public ownership has become woefully obsolete? Put differently, should the cooperative model that has served as the organizational foundation for international and regional satellite carriers, exemplified by the International Telecommunications Satellite Organization (INTELSAT) and the International Maritime Satellite Organization (INMARSAT), be replaced by the private model as quickly as governments can sell off their stakes?

We should withhold an affirmative response to this question until we are able to conclude that the private operator model can generate the same positive network externalities and global connectivity as are achieved through the cooperative model. The fact that both cooperatives and their commercial competitors agree, for different reasons, that the cooperatives should be privatized suggests that more is at stake than simply fostering "a level competi-

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4. In some instances, unions or popular opinion thwarts privatization initiatives. For example, in Uruguay "the path to easy privatisation was blocked by a 1992 referendum that voted down the partial sale of the national telephone company." *Slowly Doesn't It*, *Economist*, Mar. 23, 1996, at 40.

5. See, e.g., Ahmed Galal et al., *Welfare Consequences of Selling Public Enterprises* (1993); James M. Naftel, *The Natural Death of a Natural Monopoly: Competition in EC Telecommunications After the Telecommunications Terminals Judgment*, 6 *Emory Int'l L. Rev.* 449 (1992); Steven D. Lando, Note, *The European Community's Road to Telecommunications Deregulation*, 62 *Fordham L. Rev.* 2159 (1994).

6. For an overview of regulatory and marketplace developments in international satellite services, see Rob Frieden, *International Telecommunications Handbook*, chs. 12-13 (1996).

tive playing field.” Officials at incumbent satellite cooperatives assert that privatization will allow them to adjust effectively to the changed circumstances arising from competition with private “separate systems.”<sup>7</sup> Officials at separate systems also consider some level of privatization to be essential for the cooperatives, but their vision of privatization more closely resembles divestiture: break up the once dominant cooperative into several smaller, regional carriers, each lacking the large transponder inventory in any ocean region<sup>8</sup> necessary for market domination.<sup>9</sup>

Heretofore, analysis by the U.S. government of satellite carrier privatization appears to have proceeded according to a simple political calculus. Because both major constituencies desire a change in the status quo, U.S. officials have considered it reasonable to make some kind of change ostensibly promoting competition and private enterprise.<sup>10</sup> Both incumbent cooperatives and their private competitors believe that the cooperative model has outlived its usefulness. Cooperatives believe that they must break free of the requirements that governments have placed in their charters compelling them to use cost-averaging among high and low volume routes and to promote global connectivity. The cooperatives have come to believe that quasi-governmental status, which has provided extensive privileges and immunities not available to private ventures, constrains their nimbleness and ability to respond quickly to consumer requirements. Competitors argue that the special status that governments confer on the cooperatives allows them to exploit preferential access to capital, orbital slots,

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7. See, e.g., Special Report: Satellite Pioneers Predict Bright Future, *Satellite News*, Oct. 23, 1995, available in LEXIS, News Library, CURNWS File (reporting that INTELSAT CEO Irving Goldstein noted the need for INTELSAT to change its corporate structure to enhance the speed with which it can make decisions and aggressively compete with market entrants).

8. Satellite carriers providing international and inter-regional service typically locate satellites in “middle ocean” orbital slots. At these locations satellites can maximize connectivity for users seeking transoceanic telecommunication between, for example, the United States and the United Kingdom or Japan. The world has three major ocean regions for purposes of satellite connectivity: the Atlantic, Pacific, and Indian.

9. See Gregg Daffner, *Intelsat vs. Private Satellite Systems: Visions for a Better Way*, in Proc. of the Pacific Telecommunications Council Seventeenth Annual Conference 620 (Dan J. Wedemeyer & Richard Nickelson eds.) (1995) [hereinafter *Proceedings*]; Rob Frieden, *Strategies for Market Entry by Private International Satellite Systems*, 16 *Telecommunications Pol'y* 354 (1992).

10. See, e.g., Clinton Administration Backs Affiliate Option Being Considered by Intelsat Working Group, *Telecommunications Rep.*, June 19, 1995, at 18; “Gore Heads Administration Meeting with Satellite Task Force,” *Telecommunications Rep.*, Sept. 18, 1995, at 21.

and markets. Yet these competitors have concentrated on acquiring market share in the business services and global video programming distribution markets with little regard for, or ability to provide, worldwide, basic telephony services.

This Essay considers whether and how satellite cooperatives must change in response to changed circumstances arising from more extensive competition by private separate systems, concluding that both incumbent cooperatives and their new commercial competitors have mischaracterized the privatization issue. The Essay describes how the incumbent cooperatives already have become more business-oriented and explains how privatization may simply serve as a way to avoid providing the services that have contributed most to the global telecommunications system and that have generated the largest positive network externalities. Finally, the Essay examines how some separate systems use privatization initiatives as a way to lobby for the structural divestiture of the cooperatives, with an eye toward diluting the cooperatives' market power.

## II. NETWORK EXTERNALITIES IN SATELLITE TELECOMMUNICATIONS

Satellite-delivered telecommunications can enhance consumer welfare by offering services to a vastly larger number of users and points of communication than purely land-based systems. Satellites can provide such expanded access without increased costs and often without higher user rates.<sup>11</sup> The unconcentrated signal from a geostationary orbiting satellite can illuminate as much as one-third of the earth's surface.<sup>12</sup> Once a carrier incurs the substantial sunk cost to make this footprint available, the incremental cost for it to serve an additional point of communication and additional users via another earth station approaches zero. An additional point of access requires users to install or interconnect with an earth station, acquire domestic facilities to link their premises with the earth station, and pay space segment charges.

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11. See Michael L. Katz and Carl Shapiro, *Technology Adoption in the Presence of Network Externalities*, 94 *J. Pol. Econ.* 822 (1986); Michael L. Katz and Carl Shapiro, *Network Externalities, Competition, and Compatibility*, 75 *Am. Econ. Rev.* 424 (1985) [hereinafter *Network Externalities*].

12. For an introduction on satellite technology, see Andrew F. Inglis, *Satellite Technology: An Introduction* (1991); Donald M. Jansky and Michel C. Jeruchim, *Communication Satellites in the Geostationary Orbit* (1987).

The value of satellite service accruing to users can increase as the satellite serves more earth stations and more users with no degradation in service quality, and often without higher charges to reflect the increased utility.<sup>13</sup> The concept of direct network externalities reflects the enhanced value of service accruing to users.<sup>14</sup> The benefit is considered an externality because standard economic analysis and the pricing of service may not take into account this outcome. Indirect network externalities result when increasing coverage and market penetration result in more plentiful, lower-cost complementary goods. For example, consensus on technical standards for earth stations accessing INTELSAT and INMARSAT satellites can promote industry-wide equipment compatibility and help manufacturers achieve economies of scale by having to support fewer product lines with different technical standards.<sup>15</sup> This facilitates the expansion of service coverage, lowers the marginal costs per customer, and reduces user fees.

Satellite cooperatives have generated positive network externalities simply by succeeding in commercially exploiting satellite technology previously used primarily for defense, space exploration, and intelligence-gathering applications. They have increased substantially the likelihood and extent of such positive network externalities by enacting governance documents that deliberately price space segment on an averaged-cost basis, thus enabling developing nations, already short of hard currency, to participate in the cooperative with an investment as low as a 0.05% ownership share.<sup>16</sup>

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13. INTELSAT typically does not engage in price discrimination on the basis of demand elasticity and user desire to lease capacity on a particular satellite. Private operators typically do. The "Hot Bird" concept reflects the added value and commensurately higher lease prices for satellites that relay the most desirable video programs and networks. Because users have a financial incentive in limiting the number of earth stations they need to install and maintain, they prefer to access only a few satellites for their complete inventory of video programming. Private satellite operators who have executed transponder leases with programmers that have the most desirable video product find that other programmers, with less attractive fare, want to lease capacity and exploit the benefits of being more widely accessible. See also Patrick R. Parsons and Robert M. Frieden, *The Cable and Satellite Television Industry* (forthcoming 1997).

14. "There are many products for which the utility that a user derives from consumption of the good increases with the number of other agents consuming the good." Katz and Shapiro, *Network Externalities*, *supra* note 11, at 424.

15. See Carmen Matutes and Pierre Regibeau, 'Mix and Match': Product Compatibility Without Network Externalities, 19 *Rand J. Econ.* 221, 222 (1988).

16. See Operating Agreement Relating to the International Telecommunications Satellite Organization "INTELSAT," art. 6(h), Aug. 20, 1971, 23 U.S.T. 4091, T.I.A.S. No. 7532.

INTELSAT governance documents recite such lofty objectives as "expand[ing] telecommunications services to all areas of the world . . . which will contribute to world peace and understanding . . . for the benefit of all mankind."<sup>17</sup> INTELSAT seeks to achieve such goals by deploying a global constellation of satellites and by creating a governance structure that favors investment and active participation by representatives of countries with low volume traffic requirements and, presumably, an interest in capturing the benefits of network externalities. For example, article IX of the INTELSAT Agreement requires broad geographical representation on the Board of Governors, the cooperative's executive board of directors. Article V(d) of the INTELSAT Agreement requires the cooperative to offer space segment at the same rate for each type of usage, a provision interpreted as requiring the cooperative to average costs for each service category so that a single rate applies regardless of traffic density.

The governance documents of INTELSAT and INMARSAT also confer privileges and immunities that provide the cooperatives with financial, operational, and logistical advantages not provided to private satellite ventures. The Headquarters Agreement<sup>18</sup> of both organizations requires the host country to exempt the cooperatives from tax liability and to treat their employees as diplomats, free from official searches and civil liability. Immunity from law further insulates the cooperatives from regulatory agency scrutiny and provides antitrust exemption. Such privileges and immunities translate into savings of millions of dollars over what commercial entities typically have to pay. In addition, treaty-level commitments to the cooperatives require every state party to the INTELSAT Agreement<sup>19</sup> and INMARSAT Convention<sup>20</sup> to avoid causing "significant" technical or economic harm to the cooperatives when authorizing separate system competition. Ironically, these provisions and the limitations proposed by INTELSAT and adopted by the United States on access to the Public Switched Tel-

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17. Agreement Relating to the International Telecommunications Satellite Organization "INTELSAT," Aug. 20, 1971, 23 U.S.T. 3813, T.I.A.S. No. 7532 [hereinafter *INTELSAT Agreement*].

18. See International Telecommunications Satellite Organization Headquarters Agreement, Nov. 22-24, 1976, 28 U.S.T. 2248, T.I.A.S. No. 8542.

19. See *INTELSAT Agreement*, supra note 17, article XIV(d), 23 U.S.T. at 3854.

20. International Maritime Satellite Organization Convention, Sept. 3, 1976, art. 8, 31 U.S.T. 1, 6, T.I.A.S. No. 9605.

ephone Network<sup>21</sup>—ostensibly to safeguard the cooperatives' core revenue streams—forced separate systems to concentrate on peripheral video and business applications that have developed into the most financially lucrative of all segments.

Both INTELSAT and INMARSAT have accomplished their missions of providing, respectively, worldwide and maritime/aeronautical access via satellite to basic telecommunication services. Indeed, much of their recent expansion in both satellite inventory and revenues has resulted from targeting non-core service markets: transponder leasing for domestic services, business applications, and video program distribution in INTELSAT's case, and land mobile services in INMARSAT's. The INTELSAT Agreement grants to the cooperative the legal competency to provide such services. It does so merely to supplement core, "lifeline" access to switched and private line, primarily voice traffic commonly referred to as plain old telephone service (POTS), the chief mission of the cooperative. The INMARSAT Convention was amended to include aeronautical services as a core competency. However, when the cooperative sought expanded opportunities to provide land mobile services via a different constellation of satellites, it had to create a separate commercial venture.<sup>22</sup>

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21. As part of its determination of what would constitute "significant economic harm" under article XIV(d) of the INTELSAT Agreement, the INTELSAT Board of Governors established a proposed cap on separate system provision of services that access the public switched telephone network, that is, switched telephone services. The cap has risen incrementally from 100 voice grade circuits per satellite system to 8000 bearer circuits per satellite and will cease to exist in the future. The FCC initially adopted an Executive Branch proposed bar on switched services that access the public switched telephone network, but later eliminated the bar and imposed access limitations paralleling the INTELSAT guidelines. See, e.g., Determination No. 85-2, 49 Fed. Reg. 46,987 (1984); implemented in Establishment of Satellite Systems Providing International Communications, Report and Order, 101 F.C.C.2d 1046 (1985), on recon., 61 Rad. Reg.2d (P & F) 649 (1986), on further recon., 1 FCC Rcd. 439 (1986); see also *In re Permissible Services of U.S. Licensed International Communications Satellite Systems Separate from the International Telecommunications Satellite Organization (INTELSAT)*, Order, 7 FCC Rcd. 2313 (1992), further modifications, 9 FCC Rcd. 347 (1994).

22. INMARSAT has executed a privatization plan by spinning off a separate commercial venture, known as ICO, Ltd., to pursue a \$2.6 billion land mobile services venture designed to provide service to handheld receivers via a constellation of ten intermediate circular orbiting satellites. See U.S. General Accounting Office, Report to the Chairman, House Comm. on Commerce, Telecommunications: Competitive Impact of Restructuring the International Telecommunications Satellite Organizations, GAO/RCED-96-204, at 10-14 (July 1996). ICO has received over \$1.5 billion in equity subscriptions, primarily from existing INMARSAT signatories. While INMARSAT holds a minority investment share in ICO, Ltd., the two enterprises must operate at arm's length, a requirement ostensibly designed to curb incentives for governments, INMARSAT, and INMARSAT signatories to favor ICO in the face of its competitors.



The decision to privatize a satellite cooperative should be based on an affirmative conclusion that satellite systems collectively will continue to meet the world's expanding basic satellite telecommunications requirements. Unfortunately, the debate has not addressed whether privatization can occur without derogating the benefits of satellite connectivity, particularly access to POTS on a global basis. Instead, separate system operators allege that INTELSAT and INMARSAT have impermissibly dominated the international satellite telecommunications marketplace by exploiting their government-conferred privileges and immunities in ways that maximize market access, profits, retained earnings,<sup>23</sup> warehousing of orbital slots for satellites, and avoidance of tax liabilities. INTELSAT officials, furthermore, appear so enamored with the opportunity to enhance their competitive advantage through privatization and the expansion of non-core services that they seem willing to abandon the status quo and the economies of scale needed to provide ubiquitous POTS efficiently.<sup>24</sup>

### III. POTS TO PANS AND REDUCED NETWORK EXTERNALITIES

None of the players in the satellite telecommunications industry seem content with the status quo because each has visions of capturing large market shares in non-POTS service segments. The satellite cooperatives' current organizational structure makes it difficult for them to diversify and for separate systems to compete with the incumbents who, institutional limitations notwithstanding, have aggressively diversified well beyond basic, lifeline services. Pretty Advanced New Services (PANS)—the business and video program delivery applications that constitute elements of the Global Information Infrastructure<sup>25</sup>—fill transponders, generate

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23. Both INTELSAT and INMARSAT accumulated such large sums of retained earnings that their management decided to increase the rate of compensation paid to signatories (investors) for the use of capital not converted into capacity usage. The cooperatives' governance documents required them to reduce space segment charges which in turn could have resulted in lower end-user charges. See James D. Earl, *Through the Looking Glass of Privatization*, in Proc. of the Pacific Telecommunications Council Seventeenth Annual Conference, *supra* note 9, at 634.

24. For a critique of INTELSAT's earlier economic arguments in favor of the cooperative structure and limited competition, see Chris Rourk, *Analysis of the Technical and Economic Issues Raised in the Consideration of International Telecommunications Satellite Systems Separate From INTELSAT*, 46 Fed. Comm. L.J. 329, 339-45 (1994).

25. See Rob Frieden, *Social, Logistical and Developmental Issues in the Global Information Infrastructure*, in *Speakers' Papers, 7th World Telecommunication Forum, Strategies Summit*, 14 (1995); see also Rob Frieden, *Satellites in the Global Information Infrastructure: Opportunities and Handicaps, Telecommunications*, Feb. 1996, at 29.

higher revenues, justify larger constellations of satellites, and presumably accrue more generous profits.

From the perspective of the separate systems, the cooperative model prevents full and fair satellite service competition because INTELSAT and INMARSAT can leverage their role as the premier carrier of POTS into domination of ancillary, yet highly profitable markets. On the other hand, officials at these cooperatives assert that diversification into new market niches is necessary to shore up revenues that might drop when separate systems acquire a greater share of PANS markets, leaving INTELSAT with non-lucrative POTS traffic and INMARSAT with an even smaller niche—POTS traffic for users in maritime, aeronautical, and certain land mobile locations. Because the cooperatives have aggressively expanded the number of in-orbit satellites, they risk huge stranded investment costs if they cannot provide both POTS and PANS.

If the cooperatives and separate systems had their way, an unanticipated but quite possible outcome would be that lesser-developed countries might have better access to Home Box Office and other video programming than they would to satellite-delivered dialtone.<sup>26</sup> INTELSAT and separate systems currently vie to have their satellites considered “Hot Birds” for video programming—that is, the preferred satellite of programmers and users—because the most popular programs are accessible from that particular satellite. Separate systems have shown absolutely no interest in providing small slivers of single transponders for switched international message telephone service. For example, 82.9% of the \$246.9 million in revenues PanAmSat Corporation generated in 1996 came from broadcast services, primarily the carriage of video programming.<sup>27</sup> Business communications services generated \$39.9 million, of which only a tiny fraction constituted long distance telephone services.<sup>28</sup>

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26. ICO, Ltd., and other new ventures like Iridium and Globalstar, proposed to offer ubiquitous satellite-delivered dialtone at rates likely to be in the \$3.00 per minute range. See Rob Frieden, *Satellites in the Wireless Revolution: The Need for Realistic Perspectives*, *Telecommunications*, June 1994, at 34; see also *Satellite-based Personal Communication Services*, *Telecommunications*, Dec. 1993, at 25.

27. *PanAmSat Experiences 112% Increase in 1996 Total Revenues, Achieves 157% Increase in 1996 EBITDA*, *Business Wire*, Jan. 27, 1997, available in LEXIS, News Library, CURNWS File.

28. For example, “[l]ong-distance telephone services revenue decreased from \$0.5 million for the three months ended September 30, 1995 to \$0.4 million for the three months ended September 30, 1996, a decrease of \$0.1 million or 20%. Long-distance telephone services revenue decreased from \$1.7 million for the nine months ended September 30,

If separate systems like PanAmSat lack the inclination and spare capacity to serve international message telephone service,<sup>29</sup> this market segment must by default fall to cooperatives like INTEL-SAT. Were a privatized INTELSAT to devote even more time, money, and effort to expanding its PANS market share, then the level of positive network externalities might possibly drop for international POTS. In their zeal to target and serve PANS markets, satellite cooperatives might then have to raise POTS rates, thereby reducing positive network externalities, because they would need more revenues to support a larger satellite fleet, one perhaps less efficiently loaded with revenue-generating traffic. POTS rates might rise simply because satellite cooperatives might try to burden all ratepayers with investments in costly technological features required only by a smaller set of PANS customers. According to some observers, "markets exhibiting network externalities can fail, in that the unregulated outcome produces less total surplus than is possible. Indeed, recognizing that 'externality,' is commonly understood to denote market failure."<sup>30</sup>

Satellite users have grown to expect global connectivity—the ability of the integrated, interconnected telecommunication infrastructure to provide dialtone anytime and to achieve access to any geographical point served by an earth station. If separate systems do not play a significant role in achieving a global connectivity assessment<sup>31</sup> either because they serve only one region, concen-

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1995 to \$1.2 million for the nine months ended September 30, 1996, a decrease of \$0.5 million or 29%." SEC, Form 10Q, Quarterly Report Pursuant to Section 13 or 15 (D) of the Securities Exchange Act of 1934, For the quarterly period ended September 30, 1996, PanAmSat Corporation, Management's Discussion and Analysis of Financial Condition and Results of Operations, Revenues, Commission File Nos. 0-26712, 33-63284, (visited Oct. 23, 1996) <<http://www.sec.gov/Archives/edgar/data/931134/0000893838-96-000092.txt>>.

29. This outcome may have resulted because INTELSAT, its signatories, which operate major international gateway facilities, and the U.S. government severely limited access to the public switched telephone network for so many years. Alternatively, separate systems by choice may have targeted large capacity customers like video programmers. Whether by necessity or choice, separate systems primarily have targeted and served non-POTS users.

30. John E. Lopatka and William H. Page, *Posner's Program for the Antitrust Division: A Twenty-Five Year Perspective*, 48 *SMU L. Rev.* 1713, 1739 (1995).

31. In 1995, PanAmSat became the first separate system to operate satellites in each of the three major ocean regions (Atlantic, Pacific, and Indian). Other systems operate in one region, thereby requiring interconnection with another satellite carrier or with INTELSAT. Currently, connectivity between satellites depends on whether and how a carrier, earth station operator, or space segment broker can customize a multiple satellite carrier routing. Such requests typically originate from broadcasters on an ad hoc basis, or occasionally from multinational enterprises with geographically diverse installations.

trate on PANS markets, or are unable to access the public switched telecommunication network in some countries, then cooperatives remain the satellite carrier of first and last resort.<sup>32</sup> Accordingly, privatization of satellite cooperatives becomes all the riskier because the contemplated organizational realignment might:

- adversely impact previously accrued network externalities; and
- reduce the versatility, connectivity, and robustness of network access that consumers receive from the current global telecommunication infrastructure.

Even if privatization generates the kind of consumer dividends that have accrued in other telecommunication sectors, the gains will flow primarily to businesses using PANS and consumers of video programming. These gains must also be weighed against any losses in positive network externalities resulting from migration of traffic onto several "balkanized" satellite networks that may not be fully interconnected, as well as from the possible increases in POTS rates even if the POTS-providing part of a former cooperative continues to average costs. Nobody has yet contended that remote localities and lesser-developed countries do not deserve access to state of the art satellite networks for POTS unless they pay the higher unit costs that a Ramsey-pricing,<sup>33</sup> fully commercialized environment would entail. The United States, the United Kingdom, Canada, and even Hong Kong have universal service funding mechanisms designed to make POTS fully accessible and priced at below-market rates. The international satellite cooperative model only requires the availability of averaged satellite prices and low thresholds for investment by lesser-developed countries.

#### IV. FALSE PRIVATIZATIONS

The scope and nature of satellite cooperative privatization means different things to different constituencies. For INTELSAT it means operational freedom. For INMARSAT it means the same

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32. Full global connectivity requires a significant satellite component because terrestrial and submarine facilities do not serve all geographical points. Satellite access, if available, may constitute a cheaper alternative, for example, to localities far interior from a point where a submarine cable makes landfall, or far from high-volume terrestrial cables.

33. Ramsey pricing uses supply and demand elasticity as a gauge for determining what prices to charge. Under this pricing scheme carriers will offer the lowest rates to large-volume users having many other service options and high sensitivity to price increases. Conversely, carriers will charge the highest rates to low-volume users having few if any service options and a keen desire to communicate with the rest of the world.

kind of privatization opportunity INTELSAT now seeks, plus an equity stake in ICO, Ltd., the "separate" venture providing land mobile services to handheld terminals communicating directly with a new constellation of intermediate circular orbiting satellites.<sup>34</sup> For separate systems like PanAmSat, it means stripping cooperatives of "diplomatic status, tax exemption, antitrust immunity, government subsidies, and freedom from the regulatory process."<sup>35</sup>

The privatization debate should instead address other issues, such as how to enable incumbent satellite carriers to revamp their governance, management, and operations to respond to changed circumstances in a manner that fosters full and fair competition. This analytical framework places satellite service privatization more closely in the context of other privatization initiatives in telecommunications where governments link incumbent "liberalization" with increased market entry and deregulation. Satellite cooperative management should be removed from a "decision-making process [that] mixes political, public policy and business considerations, and the constant search for consensus among oftentimes competing interests . . . [who have] inhibit[ed] the ability of the organization to respond in a timely way to customers' needs or competitive market forces."<sup>36</sup>

The terms and conditions for such "liberalization," however, must include more than a stipulation that restructured incumbent cooperatives will retain "universal access" as a primary "tenet."<sup>37</sup> Despite congressional hearings, inter-agency task forces, direct involvement by the Vice President of the United States, and extensive analysis by officials and investors in the satellite cooperatives, little if any guidance has been offered to determine just how to spin off a nimble and competitive satellite venture while retaining, in the words of a Clinton administration official, a "scale[d] back . . .

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34. See Inmarsat Council Moving Toward Privatization in Bid to Remain Competitive, *Comm. Daily*, Apr. 2, 1996, at 3, available in LEXIS, News Library, CURNWS File.

35. *Future of Satellite-Based Services: Hearing Before the Subcomm. on Telecommunications and Finance of the House Comm. on Energy and Com.*, 103d Cong., 2d Sess. 103-44 (1994) (testimony of Rene Anselmo, Founder and Chairman of PanAmSat Corp.) [hereinafter *Congressional Hearing*].

36. *Id.* at 120 (statement of Bruce L. Crockett, President and Chief Executive Officer of Comsat Corp.).

37. In response to the question posed by Representative Ralph M. Hall regarding the need to establish a universal access fund to promote global access, Crockett stated: "Well, I think that the fact that INTELSAT and INMARSAT are prepared to stipulate as part of the privatization process that universal access will be one of their tenets, that we won't have to worry about that being a problem." *Id.* at 158.

global . . . consortium . . . providing essential global interconnectivity 'lifeline' services."<sup>38</sup>

Universal access and global connectivity mean more than the existence of a satellite footprint over all populated regions of the world.<sup>39</sup> The late Rene Anselmo, founder of PanAmSat, testified before Congress that "providing global 'universal' satellite services is no burden, nor is providing service to lesser developed countries a burden . . . ; [instead,] [i]t's a golden opportunity."<sup>40</sup> The services PanAmSat offers, however, do not include ubiquitous POTS access and lifeline services to localities that were unserved or underserved before it entered the marketplace. Rather, PanAmSat has exploited market access opportunities primarily by outmaneuvering INTELSAT for video programmers and other business customers. Universal access entails more than Anselmo's stated willingness to pick up any thin route INTELSAT would care to abandon.<sup>41</sup>

At the very least, a privatized or revamped satellite cooperative needs to retain satellites in all ocean regions with an efficient level of transponders loaded with paying traffic; it also needs to retain adequate orbital slot reservations, sufficient cash in hand, and a level of staff and other resources sufficient to maintain current space segment usage rates. Likewise, such ventures must have the wherewithal to capture the benefits of future efficiency gains. Simply put, the divestiture of a satellite cooperative into two or more entities should do nothing to prevent the surviving POTS-provider from achieving economies of scale, global connectivity, and ubiqui-

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38. Clinton Administration Backs Affiliate Option Being Considered by Intelsat Working Party, *supra* note 10, at 18.

39. The late Rene Anselmo, founder of PanAmSat, appears to have equated satellite footprint coverage with universal service:

"During the next nine months we will launch PAS-3 and PAS-4 and we will have created a private global satellite system that will serve 98% of the world's population. That's what's called 'universal service' in the language of the spinmasters from Comsat who will be here to tout 'universal service' as a burden they must bear, a cross of thorns they must carry in return for being 'shackled' with all their privileges.

Congressional Hearing, *supra* note 35, at 129.

40. *Id.* at 130.

41. The following quote, furthermore, does not qualify PanAmSat as a provider of global POTS:

I am the only one who has ever provided universal service. . . . Anybody can use our satellite. You don't have to kiss a minister's ass to do it. You just get an appliance and use the technology. That is not true under the INTELSAT system. The only one that can use it is the PTT monopoly.

*Id.* at 161.

tous interconnection with terrestrial facilities used to originate and terminate international message telephone service. INTELSAT can achieve the operational freedom it desires by separating its POTS and PANS service offerings, but in a manner that does not allocate all the latest generation satellites and cutting-edge technologies to the PANS-affiliate, or to spun off commercial ventures. The surviving POTS cooperative should not have to muddle through with higher costs, less attractive orbital slots, and inadequate personnel and operational resources. Likewise, INMARSAT should follow through on its commitment to provide core maritime and aeronautical services as a cooperative, leaving ICO, Ltd. to compete in the riskier land mobile market.

Officials of separate systems fear that privatization would accord cooperatives yet another opportunity to erect barriers to full and fair competition. To allay such concerns, they not only want the incumbents to be relieved of their government-granted privileges and immunities, they also want them to be "restructured into several separate companies . . . with any one company not allowed to own or control more than two in-orbit satellites, and an equal number of future orbit slots, in each ocean region."<sup>42</sup>

## V. THE PREFERRED SOLUTION AND WHAT IS FEASIBLE

In an ideal world, satellite cooperatives would not risk reducing positive network externalities and balkanizing POTS network connectivity through privatization when nonstructural remedies like corporatization could achieve the same degree of commercial orientation and operational flexibility. By streamlining and economizing the existing scope of operations, the incumbent satellite organizations will be able to attain much of the autonomy they seek without officially privatizing.<sup>43</sup> In exchange for operational flexibility, much of which they have achieved already despite the cooperative structure, INTELSAT and INMARSAT would lose the privileges and immunities that reduce the cost of borrowed

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42. *Id.* at 136 (testimony of Rene Anselmo).

43. See Rob Frieden, *Should Intelsat and INMARSAT Privatize?* 18 *Telecommunications Pol'y* 679, 685-6 (1994) (arguing against the type of privatization proposed for INTELSAT, but favoring INMARSAT's spin off of a separate commercial venture structured to pursue markets outside the cooperative's mission and legal competency); see also Alexandra M. Field, *INTELSAT at a Crossroads*, 25 *Law & Pol'y Int'l Bus.* 1335, 1356 (1994) ("The pressure to shift to a more corporate structure seems to come as much from the inside as from outside sources."); Joseph Pelton, *How Intelsat Was "Privatized" When No One Was Looking*, *Via Satellite*, Mar. 1992, at 38.

capital, shelter retained earnings, secure market access, create exemptions from antitrust, tax and other legal liabilities, and allow them to occupy many of the best satellite orbital slots.<sup>44</sup>

Although privatization will impose handicaps that could result in depressed earnings with no measurable improvement in efficiency, management of both satellite cooperatives have pressed their signatory owners to pursue privatization initiatives. Ironically, nothing in the current governing documents prevents the cooperatives from streamlining, reducing overhead and staff, or even de-averaging rates selectively to meet competition. The current management team at INTELSAT has substantially corporatized the cooperative and has aggressively expanded the number of in-orbit satellites to tap every available market—including ones historically considered outside the cooperative's wingspan—by deploying "landmass" satellites for intraregional and domestic services instead of for transoceanic, interregional services. This evidence suggests that INTELSAT is quite capable of responding effectively to market forces while retaining its cooperative structure and preserving the goal of worldwide, low-cost POTS. Nevertheless, the cachet of privatization, combined with support for privatization from most constituencies, including the U.S. government, as well as the possibility of a significant appreciation in signatory investment<sup>45</sup> make some sort of INTELSAT privatization inevitable.<sup>46</sup> Accordingly, we should consider what form of privatization poses the least harm to network externalities while addressing how to foster fair, facilities-based competition. Preserving network externalities requires more than rhetoric about the importance of global rate averaging and POTS access. Any structural realignment must stipulate that the entity inheriting the POTS mission must continue to average

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44. United States trade officials have stated that market-opening telecommunications trade commitments, presented by states under the auspices of the World Trade Organization, Group on Basic Telecommunications, will not apply to international satellite organizations like INTELSAT and INMARSAT absent competitive safeguards. "USTR Charlene Barshefsky told separate system companies in Feb. 12 [1997] letter that market access will be denied to proposed Intelsat affiliate if it isn't created to be 'independent' of Intelsat." *Comm. Daily*, Feb. 19, 1997, available in LEXIS, News Library, CURNWS File.

45. Brightening privatization prospects for INTELSAT has significantly buoyed the share price of Comsat Corporation, the sole U.S. investor in the cooperative. See Debra Sparks, *Comsat: Wallflower No More*, *Fin. World*, Mar. 11, 1996, at 14.

46. "It doesn't take a rocket scientist to figure out that the Satellite Act, INTELSAT, and INMARSAT no longer make sense in today's world. For me the question isn't whether INTELSAT and INMARSAT should be privatized, but rather when and how." Congressional Hearing, *supra* note 35, at 2 (statement of Edward J. Markey, Chairman, Subcomm. on Telecommunications and Finance).



rates without exception, as articulated in article V of the INTEL-SAT Agreement.<sup>47</sup> To promote universal access, the POTS entity should own and operate a constellation of satellites currently filled with POTS traffic at efficient transponder loading levels and should have access to additional orbital slots and satellite resources in case traffic requirements necessitate them. This means that the POTS and PANS enterprises must divide resources fairly without saddling the former with the oldest and least efficient satellites.

Similarly, universal access requires that the POTS entity possess adequate network control earth stations, personnel, and capital. Fairness requires that all of INTELSAT's and INMARSAT's retained earnings should vest in the POTS entity. Both cooperatives have managed to evade terms in their governance documents requiring them to lower space segment utilization charges when revenues exceed a level needed for future investment. Instead of lowering rates across the board the cooperatives increased signatory compensation for the use of capital not converted into space segment use at above market interest rates.

The POTS entity should promote seamless connectivity with earth-based resources by seeking investment in the cooperative and access to its satellites by both incumbent Public Telecommunication Organizations, which invested in the original INTELSAT and INMARSAT, and market entrants or non-carriers. The Federal Communications Commission (FCC) previously refused to require direct access to INTELSAT space segment by competitors of Comsat, on the view that a single signatory was needed to coordinate with the cooperative and that no significant savings would accrue if carriers could procure satellite capacity directly from INTELSAT.<sup>48</sup> The FCC may not have officially recanted these views, but its more robustly competitive philosophy surely now would reject a market channelization scheme that perpetuates a

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47. While INTELSAT claims to have de-averaged some rates on the basis of competitive necessity, separate systems allege predatory pricing. Because it provides "plain vanilla" lifeline access and services that separate systems apparently do not care to offer, the POTS enterprise need not and should not deviate from an averaged cost pricing system.

48. See *In re Regulation Policies Concerning Direct Access to INTELSAT Space Segment for the U.S. International Service Carriers*, Report and Order, 97 F.C.C.2d 296 (1984), enforced sub nom. *Western Union Int'l, Inc. v. FCC*, 804 F.2d 1280 (D.C. Cir. 1986).

“carriers’ carrier” monopoly for U.S. carrier access to INTELSAT space segment.<sup>49</sup>

A plain vanilla, POTS-providing INTELSAT would resemble what the signatories of INMARSAT recently created when they decided to spin off a commercial enterprise to engage in riskier and potentially more profitable mobile services to handheld transceivers. While ICO, Ltd. has attracted press attention and is exploring ways to finance an estimated \$2.6 billion investment in a new constellation of satellites, INMARSAT the cooperative will continue to fulfill its essential mission. That mission is to provide maritime, aeronautical, and some land mobile services, with particular emphasis on protecting life and property in locales where few if any other satellite operator provides service. Providing POTS neither grabs headlines nor bolsters campaigns for bigger satellite fleets and more aggressive marketing. Yet it remains an essential undertaking that can generate a healthy rate of return if managed properly. If anything, the quest to do more has motivated INTELSAT and INMARSAT officials to consider leveraging core services and basic competency into peripheral markets fully capable of competing with private enterprises. A free-standing, POTS-based cooperative, unable to act on the temptation to diversify, could not wrongly exploit the privileges and immunities conferred to facilitate global connectivity, rate averaging, and worldwide participation.

Separate systems have a valid claim that the privileges, immunities, and other preferences that cooperatives enjoy give them an unfair competitive advantage. Because INTELSAT and INMARSAT were not prevented from diversifying into adjacent markets, we do not know whether their performance in these new markets is attributable to economies of scope or to the special privileges and immunities that allow them to restrain competition from private systems. What we do know is that once the decision to “liberate” the incumbent cooperatives is made, whether through privatization or the creation of a separate commercial enterprise, several competitive safeguards will be necessary. The governments that agreed to create satellite cooperatives must look closely at any divestiture

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49. “Under the Authorized User I policy, [see 4 F.C.C.2d 421 (1966), clarified, 6 F.C.C.2d 593 (1967)] Comsat’s role was limited primarily to that of a ‘carriers’ carrier,’ providing satellite circuits to the USISCs for their use in furnishing international common carrier services to end users.” Policy for the Distribution of United States International Carrier Circuits Among Available Facilities During the Post-1988 Period, CC Docket No. 87-67, Notice of Proposed Rulemaking, 2 FCC Red. 2109, para. 4 (1987).

or reorganization and ensure that the incumbents, their affiliates, and the spun-off ventures compete in the marketplace on equal terms with the growing industry segment of private, commercial systems. Although a non-privatized POTS entity should retain government-conferred privileges and immunities, surely a privatized or spun-off commercial enterprise has no valid claim to them. Similarly, POTS and PANS enterprises must conduct business at arm's length, preferably with little cross-ownership and limited opportunities for companies to invest in both entities. Practically speaking, privatization or divestiture will continue to involve many of the same investors as in the original ventures. Consequently, governments, and not the signatories, must establish the rules that regulate interaction between the two entities.<sup>50</sup> Such rules should prohibit the POTS entity from cross-subsidizing competitive PANS, and should make the PANS venture fully answerable to the law.

## VI. CONCLUSION

Despite the concerns raised throughout this Essay, a properly executed privatization can enhance consumer welfare. With safeguards designed to retain the consumer benefits accruing from network externalities, governments should divest their telecommunication satellite holdings and withdraw the special privileges and immunities that insulate against competition from those enterprises that abandon the mission of promoting global access to basic telecommunication resources. Improper execution of the privatization maneuver, however, may exacerbate previous mistakes by expanding the permissible market access wingspan of incumbents while reducing or eliminating regulatory safeguards.

In the case of international satellites, the privatization issue has become immersed in a broader referendum on what an incumbent should and should not be able to do in light of changed circumstances that include market entry by private competitors. Incumbent satellite cooperatives should not leverage dominance in the POTS market into domination of the PANS market. Likewise, they should not exploit their special status, granted to them

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50. The FCC has yet to resolve all issues relating to Comsat's investment in both INMARSAT and ICO, Ltd. See *In re Participation by Comsat Corporation in a New Inmarsat Satellite System Designed to Provide Service to Handheld Communications Devices*, Order, 10 FCC Rcd. 1061 (1995); *In re Petition of Motorola Satellite Communications, Inc. for a Declaratory Ruling Concerning Participation by COMSAT Corporation in a New Inmarsat Satellite System Designed to Provide Service to Handheld Communications Devices*, Memorandum Opinion and Order, 9 FCC Rcd. 7693 (1994).

because of their POTS mission and their ability to foster positive network externalities, to thwart private competitors. On the other hand, private competitors should not exploit their newfound influence with relevant decision makers to have unfair burdens and handicaps imposed on incumbents, their affiliates or spun-off ventures, no matter how much prior policies deprived them of full and fair market access. The international satellite marketplace has generated ample consumer dividends. Necessary but risky tinkering with the organization, management, and regulation of the sector should enhance consumer welfare rather than tilt the competitive playing field in the favor of one type of operator versus another.

