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INTERNATIONAL SATELLITE ORGANIZATIONS:
THEIR EVOLUTION FROM “ISOS” TO “GSCS”
and the
Further Privatization /Commercialization of Space Activities

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Abstract

In the late 1990s and early 2000s, major ownership changes occurred in the two principal international satellite organizations (ISOs), INMARSAT, and INTELSAT. These changes were brought about through “market forces” as well as by legal pressure, notably the US “ORBIT Act” of 2000. Eventually two regional satellite organizations, EUTELSAT and ARABSAT, were restructured, although they were not directly subject to the ORBIT Act’s terms and conditions.

While a small intergovernmental organization still exists, (ITSO, IMSO, EUTELSAT-IGO) the operations of the former ISOs are now handled by global satellite corporations (GSCs). Even the word “international” seems to be disappearing from most lexicons, and has been replaced by “global”.

At the same time, international treaties and intergovernmental agreements seem to be taking a second place to private contracts and agreements, particularly between financial institutions. Will the agreements that were fundamental to the transformation of the ISOs into GSCs continue to be honored? Should global financial enterprises be held accountable to the international community in the same manner as States?

This paper will attempt to answer these questions, while providing an overview of the privatization / commercialization trend, its impact on satellite communications, on the interpretation of the space treaties, and will attempt to draw some conclusions, maybe even lessons.

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Background

The 1980s and 1990s saw major political and economic changes worldwide. The opening up of new markets in the former Communist countries, adding impetus to opening the telecommunications sector and satellite skies as well. Regulatory reforms, such as separating the regulators from the operators and service providers, often were required as a condition to obtaining the needed capital, thus allowing foreign investors to have considerable influence in the operations of the telecoms and /or satellite systems.¹ These regulatory and ownership changes have contributed to the globalization of services, the blurring of borders, as funds, services, and even management are provided beyond national boundaries.

Also in the 1990s, many mobile satellite communication systems, subsumed under the GMPCS² acronym, were proposed by private sector consortia, which believed that the investments required for their deployment were beyond the capabilities of the government sector.³

While regulatory changes have left their mark, technology has evolved at a much faster pace. Technological changes, particularly network digitization and packet switching, have made it increasingly difficult to classify services in clear-cut categories.⁴ Even the International Telecommunication Union (ITU) is having difficulties drafting regulations that take into account the fast pace of technological changes!⁵

Many countries that relied nearly exclusively on the International Satellite Organizations (ISOs) for national and international services (and foreign revenue) had to open up their telecoms sector. In addition to the 1997 WTO Agreement on Basic Telecommunications, another major force in achieving these changes was a US law, the 2000 "ORBIT" Act.⁶ This law led to the privatization of the major intergovernmental satellite organizations (ISOs), INTELSAT, INMARSAT, and EUTELSAT, although the latter was not directly subject to the ORBIT Act.

However, since governments had been former stakeholders and partners, and were the ones that had originally funded the organizations, they could not be totally disregarded. Thus, the amendments to the ISO's original treaties / conventions include a residual intergovernmental organization: ITSO, IMSO, and EUTELSAT-IGO, respectively.⁷

Ten years later, the former ISOs, better known as "Global Satellite Corporations" (GSCs), are reporting large revenues, while diversifying their businesses and services. The GSCs now offer a wide array of digital, interactive, internet services, and what seem to be the most coveted, if not lucrative of all, broadband and High Definition TV (HDTV).⁸ With hundreds of satellites under the control of just a few corporations, they truly have global coverage, as most countries fall within the footprint of at least one of the satellites owned by these private consortia.⁹ It also becomes apparent that most of the spacecraft are manufactured, owned and operated by entities in developed countries; few developing countries are able to compete with them, in terms of reach or service offerings. Thus the "digital divide" which satellites were supposed to bridge becomes an ever-wider gap.

Among the issues that arise is whether the residual intergovernmental entities, ITSO, IMSO and EUTELSAT-IGO, can carry out their missions, and play a significant role in ensuring that the digital divide doesn't grow wider, and that developing countries are not further marginalized? A look at some of the conditions for the privatization of INTELSAT and subsequent initiatives might provide some insights as to their future.¹⁰

ITSO

The privatization of INTELSAT led to the restructuring of the whole organization, leaving ITSO as the remaining small intergovernmental organization. ITSO comprises 2 components: the Assembly of Parties (AP) which is constituted by the member Governments. The other component

is the Executive Organ; it is headed by the Director General (DG), who is also the Chief Executive Officer (CEO), the legal representative of ITSO, and responsible to the Assembly of Parties.¹¹ The Director General supervises and monitors the private Company's (Intelsat, Ltd.) provision of international public telecommunications services. An Advisory Committee (IAC) comprised of representatives of 23 member countries provides consultative advice to the Director General on any matters requested.

ITSO now has 150 Members, but plays no operational or commercial role.¹² One commentator notes that, "for the first time since 1971, the sole public international organization charged with ensuring that every country on earth receives international telecommunications service lacks the technological facilities to provide such service itself. Instead, ITSO must rely entirely on legal tools to accomplish its mandate."¹³

These tools include the 2000 Intelsat Agreement, and the Public Services Agreement (PSA). And petitions to the US's Federal Communications Commission (FCC).

Ostensibly, the restructuring of INTELSAT under the terms of the ORBIT Act would ensure that foreign markets and the satellite skies would open up to competition, with minimum interference of non-US governments, which were essentially bought out in 2000-2001.¹⁴ In brief, INTELSAT's satellites and associated assets were transferred to Intelsat and its International Telecommunications Union (ITU) network filings were transferred to the U.S. registry. Further, Intelsat LLC was granted conditional U.S. authorizations for INTELSAT's existing satellites, planned satellites, and planned system modifications associated with INTELSAT's frequency assignments in the FSS C- and Ku- bands existing as of privatization (2001).¹⁵ These constitute ITSO's "Common Heritage."

While Intelsat was to hold an Initial Public Offering (IPO) of its shares within a certain time after its privatization, economic factors intervened, and this requirement was

not enforced by the US Government. In 2005, the 1962 Communications Satellite Act, (and some ORBIT Act requirements) were amended, to take into account that Intelsat's privatization had taken place without the need for an IPO.¹⁶ Zeus Holdings Limited, a private equity group ended up acquiring all the Intelsat shares.¹⁷ In a letter to the FCC, ITSO stated that this action did not constitute an IPO as contemplated by the ORBIT Act.

ITSO also expressed its concern regarding potential effects of Intelsat's acquisition of PANAMSAT on Intelsat's fulfillment of its obligations under the Public Service Agreement (PSA). Intelsat countered that ITSO's complaints were essentially baseless; apparently the FCC agreed, and no action was taken against Intelsat's new owners, nor against the Intelsat-PANAMSAT merger that was taking place at the same time.¹⁸

The result is that Intelsat now controls and operates a fleet of 55 satellites in the FSS (Fixed-Satellite Service), using both C and Ku frequency bands. (It also leases capacity on satellites registered in other countries). This fact brings up a key issue associated with the privatization of INTELSAT, namely the "Common Heritage," concept as incorporated in the ITSO Agreement.

The ITSO (amended) Agreement and its definition of "Common Heritage"

The concept "common heritage" as a principle of international law¹⁹ is enshrined in Article I of the Outer Space Treaty (OST), albeit in slightly different words. Art. I states that "[the] exploration and use of outer space ... shall be carried out for the benefit and in the interests of all countries, irrespective of their degree of economic or scientific development, and shall be the province of all mankind."²⁰ [Emphasis added.]

The amended ITSO Agreement refers to the Outer Space Treaty, quoting that "outer space shall be used for the benefit and in the interests of all countries,"²¹ and that telecommunications by

satellite were to be provided “for the benefit of all mankind.”²² Omitted from this quote is an important part of Article I’s opening sentence, namely, that the benefits of using outer space should accrue *to all countries* “...irrespective of their degree of economic or scientific development, and shall be the province of all mankind.” [Emphasis added.]

Reference to the “Common Heritage,” in the ITSO Agreement context means “those frequency assignments associated with orbital locations in the process of advanced publication, coordination or registered on behalf of the Parties [at the time of privatization] with the International Telecommunication Union (ITU) in accordance with the provisions set forth in the ITU’s Radio Regulations which are transferred to a Party or Parties pursuant to Article XII...”²³

Thus, Parties (governments) to the ITSO Agreement would maintain control over orbital locations and frequency assignments, but only until such time as Notifying Administration(s) were selected to represent all ITSO members at the ITU.²⁴ Ultimately, the United States and the United Kingdom were chosen as the Notifying Administrations; other ITSO members seem to have little if any say over their “common heritage.”²⁵

What is lacking in ITSO’s definition of “common heritage” is any reference that these resources are to be used for the *benefit of all mankind*, although they are to be used to ensure that the Core Principles are met. Does the “common heritage” concept as used in the ITSO Agreement create an expectation of ownership in the radiofrequency spectrum (RFS) and orbital slots on the part of the Company, in contradiction to the terms of Art. II of the Outer Space Treaty? These are common “goods,” part of outer space, which under the terms of the OST, cannot be appropriated by any means.²⁶

While use of the “common heritage” is supposedly at the discretion of ITSO, in reality the Company’s two Notifying Administrations (USA and UK) are the ones that control its use, albeit subject to the

FCC’s oversight,²⁷ for at least twelve years from the date of transfer of ITSO’s space system to the Company.”²⁸

Does the fact that so many orbital positions are notified by one or two Administrations, lead to their control over the “best” orbital positions, thereby impeding entry to other satellite operators?²⁹ Are they likely to make use of the RFS and orbital slots based on the Company’s business plans, rather than on a goal of serving the “common good,” which should include the interests of the remaining 148 Administrations members of ITSO? Could this arrangement put the Core Principles at risk?³⁰

These are delicate issues, which for several years have been discussed at meetings of both ITSO’s Advisory Council and Assembly of Parties. Much of the debate has centered on the designation of Intelsat’s satellites as US/CH or UK/CH (CH for common heritage), to distinguish them from other satellites it operates that are not part of the CH. ITSO has sought to have more input regarding the management of these resources, specifically with the ITU, to ensure that the Company performs its public service obligations.³¹ Since no agreement has been reached with the Notifying Administrations (the US and UK), the AP decided that the DG, and the Frequency Working Party (FWP), should study alternative ways to settle the issue with the Notifying Administrations and the ITU.³²

*The ITSO Agreement and the Public Services Agreement (PSA)*³³

The restructuring of INTELSAT was conditioned on the Company’s abiding by certain obligations or Core Principles, as set forth in Article III of the ITSO Agreement, namely “to provide, *on a commercial basis*, the space segment required for *international public telecommunications services* of high quality and reliability...”³⁴ [Emphasis added.]

ITSO’s main purpose is “to ensure that the Company fulfills the Core Principles on a continuing basis”, and as set forth in Art. III,

- (a) ... to ensure, through the Public Services Agreement, that the Company provides, on a commercial basis, international public telecommunications services, in order to ensure performance of the Core Principles.
- (b) The Core Principles are:
- (i) maintain global connectivity and global coverage;
 - (ii) serve its lifeline connectivity customers; and
 - (iii) provide non-discriminatory access to the Company's system.³⁵

The Public Services Agreement (PSA) reiterates and elaborates upon the Art. III Core Principles. In the PSA, "on a commercial basis means in accordance with the usual and customary practice in the [telecoms] industry. "Global connectivity (and coverage)" means the interconnection capabilities available to Intelsat users to enable communications within and between the 5 ITU regions, and to all parts of the Earth visible from satellites in orbit. "Non-discriminatory access means fair and equal opportunity to access Intelsat's system." These obligations are collectively referred to as the "Public Service Obligations (PSOs)."³⁶ Art. 2.03 of the PSA also states that the performance of the PSOs, Intelsat will be subject to "applicable national law" (US law), and that it will use its best efforts to mitigate the adverse consequences of changes to national law, should these prevent Intelsat from complying with its PSOs.³⁷

A Closer Look at the Core Principles as set forth in the PSA

The first Core Principle (Art. III (a)), to provide international telecommunications on a *commercial basis*, is the sine qua non of the Company, but in the PSA a key word, "public" is omitted. The Art. III (b)(i) core principle (to maintain global coverage and connectivity) should be met easily with the 55+ satellites utilized by Intelsat. However, connectivity depends not only on the satellites in orbit, but on the infrastructure available, as well as on local regulations, trade policies and agreements.³⁸

In some countries the satellite connection is very expensive, and may require "transiting" through another country, or a "double hop" connection, adding to its cost.³⁹ While Intelsat satellites are no longer the only option available to many countries, it is the only company that is obligated by law to provide global connectivity.⁴⁰ This obligation is part of the privatization deal, and despite the "worst case scenarios" depicted by that author, it will continue to be observed for a few more years.⁴¹ The question that arises is, "at what price continued connectivity?"

A partial answer leads to the second core principle or obligation, which is to serve Lifeline Connectivity Customers.⁴² The "Lifeline Connectivity Obligation" or "LCO", means "the obligation assumed by the Company as set out in the LCO contract to provide continued telecommunications services to the LCO customer."⁴³ The LCO customer is defined as meaning "all customers qualifying for and entering into LCO contracts."⁴⁴

While the requirements to qualify as an LCO customer are not set forth in the ITSO Agreement or the PSA, it's implied that poorer, underserved countries would qualify as such, as they rely on Intelsat's services for their principal means of communications, both domestic and international. While some of these countries were "grandfathered in" at the time of privatization, other countries may still qualify for LCO "status."⁴⁵

An on-going concern of ITSO is the pricing of services to "lifeline" countries. While Intelsat apparently has not raised prices for LCO services, (capacity available to lifeline users is at fixed pre-privatization costs for approximately 12 years), it has not lowered them, although the Company may be reporting great revenues. This is a sore point with some of the LCO customers, since they may be paying more than other "newer" customers for the same service. Although ITSO is supposed to review decisions taken by Intelsat in regard to petitions to enter into LCO contracts, can the Company to deny these petitions, based on

business practices? If so, would this be a “discriminatory” decision? This issue leads to the third Core Principal or obligation.

The third obligation is to provide non-discriminatory access to the Company’s system. i.e., fair and equal opportunity to access the Intelsat system.⁴⁶ Economic (and political) factors may play a role in non-discriminatory access to services.⁴⁷ One the one hand, since the Company is now in the business of making money, ostensibly anyone who can pay for the services should be able to obtain them. On the other hand, certain low-traffic routes may not be profitable to the Company, and it may seek to terminate services to those areas.

If no other alternative service provider is available, and the LCO customers are terminated after 2013, they will be further isolated from the rest of the world. Such an outcome would be in contradiction to one of INTELSAT’s original purposes, to provide services to all areas of the world,⁴⁸ and in contradiction to the Outer Space Treaty, which states that “outer space (including the radio frequencies and orbital positions) shall be used for the benefit and in the interests of all countries.”⁴⁹

Is it possible to (objectively) assess the impact that privatization has had on the poorer countries, and how well the Core Principles have been observed by Intelsat? In this respect, ITSO’s Director General (DG) reported to the June 2010 Assembly of Parties (AP) that, in his estimation, Intelsat has complied with its public service obligations in the 2008-2010 period, offering non-discriminatory access and satellite coverage to the three oceanic regions, enabling the connection of any country or territory with any other country or territory, and meeting its commitments to protect LCO (lifeline connectivity obligation) prices.⁵⁰ Further, according to the FCC, INTELSAT’s privatization appears to have had a positive impact on the global marketplace for communications services by ensuring increased competition and increased access, as well as placing a

priority on continued provision of service to all regions of the globe.⁵¹

Still, ITSO remains concerned about prices for services to lifeline customers. Thus, the DG was urged to continue working with Intelsat to renegotiate a new business model for LCO contracts; this would be known as the “Special Renewal Programme.”⁵² This initiative could ensure the prolongation of the LCO contracts, even if they take a different form.

Since the LCO contracts under the terms of the PSA, the PSA and ITSO itself are subject to termination by 2013, the next question relates to their future, their survival beyond the 12 years from the transfer of ITSO’s space system to the Company.⁵³ In this regard, ITSO’s Strategy Plan was approved, and a working group was set up to analyze ITSO’s future; it will present recommendations to the next AP in 2012.⁵⁴

ITSO’s Future

A fundamental issue is whether private global corporations like Intelsat, Inmarsat and Eutelsat will be willing to continue providing international *public* services once they are no longer required by law or agreement to do so? In Intelsat’s case, the arrangements (and ITSO’s financial support)⁵⁵ could expire by 2013, unless the members of the Assembly of Parties (AP) decide to prolong it.⁵⁶ On the other hand, the AP may also terminate the agreement “by a vote pursuant to Article IX(f) of the Parties,⁵⁷ but such a vote would require the vote of at least two-thirds of the Parties whose members are present and voting.⁵⁸

Thus, while ITSO may not have the support of all Members, it is unlikely that more than 100 of its 150 members would vote to terminate ITSO. A potential problem may lie in the fact that a holdings company (through Intelsat and the US AP Member) still controls the purse strings. However, even if privatization has given corporations more power and control over operations, governments are still the entities that issue authorizations and licenses to provide services, and grant protection through their bankruptcy courts.⁵⁹

Corporations and banks may merge or disappear, but nations and their governments will endure. Are there some measures that the residual entities could take, to ensure their survival beyond 2013?

Several “global” initiatives are being undertaken by the private and public sectors, as the support of both is needed to carry them out. Whether or not they will entail a public service obligation remains to be seen, since the idea of an international public service obligation may sound anachronistic nowadays, with the emphasis on private initiatives.

Yet, without some public service obligation imposed by the government(s) on private parties, there may be even less incentive to provide services to the underserved sectors of society, of the world.⁶⁰ Does the satellite / telecom sector need a new variation on the ISOs? At least one author believes so! Prof. Jakhu suggests “an inter-governmental global organization, preferably modeled on the original INMARSAT or INTELSAT system, with financial participation by private entities of all States... to provide telecommunications services to all countries on a *non-discriminatory basis*.”⁶¹ (The latter is defined in the PSA as meaning fair and equal opportunity to access the Intelsat system).⁶²

Perhaps the concepts of “public service”⁶³ and “universal access” need to be revisited, as they depend in part on technological changes, such as the digitization of communications systems. While in telecoms’ early days, public service meant that everyone should have access to a telephone (a goal of the FCC as well as of the ITU.), today, access to broadband /internet access is a “hot topic” in all parts of the world.⁶⁴

Access to the internet, and access to (or lack thereof) digital technology, together with wireless technologies have radically changed global communications. They have helped some countries “leap-frog” to the 21st century and to by-pass the traditional state operators, since many mobile telephony systems are operated by private parties,

albeit with official sanctions. Internet “cafés” can be found in remote villages in nearly every country, allowing persons who can’t afford a computer to access the ‘net. Mobile phones are used as public call boxes, replacing traditional public phones. Despite this progress, much remains to be done to bridge the “digital divide”, and to ensure that satellite communications remain global in scope and access.

Could ITSO play a role in bridging this divide, and ensure access to digital technology? A look at some initiatives may provide an answer. A few years ago, the World Summit on the Information Society (WSIS) was convened in two phases, in 2003 and 2005 respectively. The 2003 Geneva session put forth an Action Plan, to which ITSO contributed the “Global Broadband Satellite Infrastructure Initiative (GBSI), aiming to bridge the ever-widening “digital divide.” The GBSI seems to have been “sidetracked,” but the WSIS continues to hold its forum on a yearly basis, the latest one having taken place in May 2010.⁶⁵ The main emphasis of this year’s forum was on bringing broadband to every country, every region of the world, thereby putting the Millennium Development Goals (MDG), which were established in 2000, “back on track”, according to the ITU’s Secretary-General.⁶⁶

In order to achieve the MDG by 2015, a Broadband Commission was set up in 2010, with representatives from governments, private sector, several UN agencies, in particular the ITU and UNESCO, and other intergovernmental organizations, including ITSO.⁶⁷ The Broadband Commission is to define practical ways in which countries — at all stages of development — can achieve the MDG in cooperation with the private sector.⁶⁸

Perhaps ITSO could avail itself of its presence on this Commission to further a proposal made earlier in 2010 by ITSO’s DG, and approved by the AP.⁶⁹ His idea is to set up a reserve fund for capacity-building actions in satellite communications, in cooperation with the ITU Excellence Centres,

an initiative that will begin later in 2010. The DG's proposal could "dovetail" with the Broadband Commission's goals: in order for technology to be adopted and to be useful, adequate training is essential.

In addition to training, a key component to the success of these initiatives is adequate funding. The Broadband Commission includes several persons with "deep pockets", who individually could fund many development projects in their entirety.⁷⁰ Does their participation on this Commission include a financial commitment on their part?

As to ITSO's proposal, the AP was willing to set up a reserve fund, 80% of which would go to training, albeit with the prior approval of the Advisory Council. But a fixed amount of money is not mentioned, nor does the Broadband Commission site make reference to its funding.

One way that ITSO (and the other residual intergovernmental organizations (IGOs), could ensure their financial survival, and thus ensure the continuity of their vital mission(s), would be to re-negotiate the terms for the continued use of the "common heritage" orbital slots and RFS. Should new satellites be located in the same orbital slot, and use the same RFS as the satellites included in the CH, these replacement satellites should be considered part of the CH as well. The common heritage component has not changed, only the spacecraft making use thereof is new. The "common heritage" should remain common to the ITSO Members, not only the purview of the 2 Notifying Administrations.⁷¹

Under the current arrangement, ITSO's funding beyond the 2013 will be obtained through the PSA.⁷² The PSA states that beyond the 12 years (2013), Intelsat will fund ITSO in an amount negotiated in good faith, based on principles and financial expenditures of ITSO during the first 12 years. But, Intelsat's annual funding for ITSO shall not exceed US \$1.8 million (2013 dollars). ITSO's contingency fund will be maintained at \$500,000, also adjusted for inflation.⁷³

One issue with this arrangement is that the PSA will be in force until the date determined by ITSO for the termination of the ITSO Agreement.⁷⁴ The survival of either or both the PSA and ITSO Agreement seem to depend on, or are conditioned by each other. Perhaps a more logical arrangement could be reached, based on ITSO's survival, not its demise. A new contractual arrangement could be worked out, whereby a percentage of the Company's revenues would be transferred to ITSO, rather than a flat sum of money. Intelsat has reported high revenues in the last few years (as well as a high debt level), so that increasing the amount of funds transferred to ITSO for the continued use of the CH should not put Intelsat in an untenable financial position.

Conclusion

Privatization and globalization have had their pluses and their minuses. On the plus side, many new jobs were created in many sectors and countries. But this has also been a minus, in that some of these jobs have been "outsourced," not always to the benefit of the parent corporation or the employees. Many new companies that were formed with the "telecom bubble" at the beginning of this decade have not survived. The globalization (and meltdown) of the economic sector has made every country interdependent, creating a "domino effect" in many instances.

Globalization of the internet and the media, while keeping people informed on current events, seem to result in increasing the global stress level as well. While parts of the private sector may have thrived, governments are also aware that satellite systems are a critical component of their country's infrastructure, and major contributors to socio-economic development.

We would do well to remember that the common heritage of mankind belongs to humans, not to corporations, and its use should remain for the benefit of all humanity.

¹ Telefónica of Spain is a significant investor in several of the Latin American countries (Argentina, Peru, Chile, Colombia), and also owns 33% of the shares in HISPASAT, the Spanish satellite consortium. Private parties are also major investors in national telecom systems (e.g., the Malaysian mobile telecoms, and the MEASAT systems are owned by one individual. TELMEX is part of Grupo Carso, which has many interests in TV, mobile telephony, internet services in many Latin American countries. Telefónica is its principal rival in this region.

² GMPCS = Global Mobile Personal Communication Satellites / Systems / Services.

³ IRIDIUM, GLOBALSTAR and ORBCOMM (non-GEO systems) seem to be the only relatively successful GMPCS providers, even if they had to seek bankruptcy protection under US laws. IRIDIUM's major client/user is the US Dept. of Defense. Globalstar has received major financial assistance from the French government, as France Telecom was one of the early investors in the system. Without government intervention / investments, these systems would not have survived.

⁴ One of the most obvious examples is the personal mobile phone; it began as merely a two-way means of voice or text communication. Now, it can take photographs, upload and download internet archives, provide GPS, email services, etc. Mobile phones have so many applications that certain governments (Saudi Arabia, UAE) are curtailing their use by foreigners and natives, ostensibly for "security" reasons.

⁵ ITU-BDT, Trends in Telecommunication Reform (2009), published February 2010. Chapter 2 discusses the challenges facing regulators, as telecommunication markets transition to IP-based network platforms allowing a diversity of new services and applications.

⁶ Open-Market Reorganization for the Betterment of International Telecommunications Act, "ORBIT Act," P. L. No. 106-180, 114 Stat. 48 (2000). The ORBIT Act was last amended in July 12, 2005 (P. L. No. 109-34, 119 Stat. 377). The ORBIT Act required the issuance of an "Initial Public Offering" (IPO), to ensure that shares previously owned by the ISO members would be sold to the public at large. Economic circumstances intervened, and this requirement was essentially dropped. See Francis Lyall, "On the Privatization of INTELSAT." J. Space L, Vol. 28, Number 2

(2000) 101-120, for an excellent analysis of INTELSAT's creation and subsequent mutation.

⁷ ITSO is the acronym for Intelsat's inter-governmental entity; IMSO is Inmarsat's, and EUTELSAT-IGO is the remaining intergovernmental organization of Eutelsat. These 3 entities maintain the rights to the frequencies and orbital positions assigned to them by the ITU before 2001; they are collectively owned by member states, and allow the private companies created after 2001 to use them. The residual organization also oversees the private companies' activities to ensure that they observe the basic or core principles, which are defined in the amended agreement(s) of the respective organizations.

⁸ In the early days of satellite communications, satellites were used primarily for international and domestic telephony, or "POTS" (Plain Old Telephony Services); now they've gone to "DISHES" (this author's acronym for digital, interactive/ internet, satellite, high definition, email services.)

⁹ Intelsat operates 55 satellites; Inmarsat operates 11 GEO satellites and Eutelsat operates 26 satellites. In addition to these now-private fleets, SES World Skies, a private operator since its founding in the mid-1980s, provides services via 43 satellites. Loral Communications is majority owner of Telesat, Canada, which operates 12 satellites of its own and manages operations of another 13 satellites for third parties. Hispasat, alleges that it is the 7th largest operator in terms of revenue, has 6 satellites in orbit. The Indian National Satellite (INSAT) system consists of 21 communication satellites, 11 of which are operational. INSAT is one of the largest government-operated domestic communication satellite systems. Among the GMPCS "constellations" are IRIDIUM (66 satellites), Globalstar (48), and ORBCOMM (36+). EUROCONSULT lists 40 FSS operators in its 2010 Analysis of FSS Operators; these are part of the 200+ GEO communications and broadcasting satellites in orbit. More than 800 satellites of different kinds (military, weather, GPS, earth observation, etc.) are in outer space.

¹⁰ The privatization of INMARSAT, which took place in the late 90s set the stage for the subsequent privatization of the other ISOs, but will not be dealt with in this paper; rather the focus is on ITSO and Intelsat.

¹¹ Article VIII, INTELSAT Agreement, amended by the Assembly of Parties (AP), 17 Nov. 2000.

(Cited as the ITSO Agreement hereinafter.] The full text is found at www.itso.int.

¹² www.itso.int.

¹³ Kenneth Katkin, "Communication Breakdown? The Future of Global Connectivity after the Privatization of INTELSAT." 38 Vand. J. Transnat'l L. (2005) 1323-1400.

¹⁴ FCC Report to Congress, FCC- FCC 06-82, fn.19. Upon privatization, former INTELSAT Signatories and non-Signatory investing entities were issued shares in Intelsat Ltd. according to their March 2001 investment shares in INTELSAT. (All these shares were acquired in 2005 by Zeus Holdings Company, which sold them to another holdings company a few years later. In 2009, the FCC approved the transfer of Intelsat's legal headquarters from Bermuda to Luxembourg, for tax reasons.)

¹⁵ *Ibid.*, p.3. Fn. 18 details the frequencies and orbital positions that are part of the "common heritage." The United States and United Kingdom were the two countries selected by INTELSAT to manage licensing issues; i.e., they are the Notifying Administrations. The US is responsible for licensing the launch and operation of satellites for FSS in C- and Ku-bands; the UK is responsible for Broadcasting Satellite Services (BSS) and FSS in Ka-bands.

¹⁶ Pub. L. 109-34 July 2005, 119 Stat 377, "To amend the Communications Satellite Act of 1962 to strike the privatization criteria for INTELSAT separated entities, remove certain restrictions on separated and successor entities to INTELSAT, and for other purposes." As mandated by the ORBIT Act, the FCC would compile "a list of any foreign nations in which legal or regulatory practices restrict access to the market for satellite services, thereby undermining competition or favoring particular competitors." (Sec.4.) (A few months after this law was passed, Intelsat merged with its former rival, PANAMSAT, whose satellites became part of the Intelsat fleet, but not part of the "Common Heritage" (CH).

¹⁷ Federal Communications Commission (FCC), FCC Report to Congress as Required by the ORBIT Act. Adopted June 13, 2006; released: June 15, 2006. FCC 06-82, at p. 5.

¹⁸ *Ibid.*, pp. 6, 14, 15.

¹⁹ See "common heritage of mankind" at <http://en.wikipedia.org>, for a good synopsis of this phrase—its origins, evolution and what it encompasses at present. Many articles have been written on the use of the phrase "Common heritage of mankind" in space law (cf. The Moon Agreement). For an analysis of the "province of

mankind," in Art. I of the OST, see S. Hobe, "Outer Space as the Province of Mankind - An Assessment of 40 Years of Development." Proceedings of the IISL's 50th Colloquium on the Law of Outer Space, Hyderabad, India (2007) 442-449.

²⁰ Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, Jan. 27, 1967, 18 U.S.T. 2410, 610 U.N.T.S. 205. [Emphasis added.] [Cited hereinafter as the OST.]

²¹ Partial quote of Article I, Outer Space Treaty, as found in the Preamble, INTELSAT Agreement (entered into force 12 February 1973), and in the 2000 amended Agreement's Preamble. [Cited as ITSO Agreement hereinafter.]

²² *Ibid.* Articles II, and III of the 1973 Agreement already make reference to the "*global commercial telecommunications satellite system*," but also state that the "primary objective" of the organization is to "provide, on a commercial basis .. the space segment for *international public telecommunications services*." [Emphasis added].

²³ ITSO Agreement, Art. I(1). But see note 16, RE: the July 2005 Amendments to the 1962 Satellite Communications Act and ORBIT Act.

²⁴ ITSO Agreement, Art. XII (a).

²⁵ See note 14, RE: the FCC's transfer of authorization to use certain orbital positions and frequencies.

²⁶ Art. II. OST, states that "outer space is not subject to national appropriation by claim of sovereignty, by means of use or occupation, or by any other means". OST, note 20.

²⁷ On 23 November 2007, the FCC released an Order Proposing the Modification to ITSO's licenses. ITSO had made a similar request at the time of the Intelsat- Panamsat merger (FCC IB Docket No. 06-137), but had been denied. This time, at the behest of the US Dept. of State, the FCC agreed to impose two conditions on Intelsat: one, that the US remain a signatory to the PSA, and secondly, that should Intelsat declare bankruptcy, a successor-in-interest will perform the obligations in the Public Service Agreement (PSA.) FCC DA 07-4715.

²⁸ ITSO Agreement, Art. XXI.

²⁹ "Frequency coordination is the key process provided for in the [ITU] Radio Regulations for the use of scarce radio frequency spectrum / orbital location resources... What if the Administration with which coordination is sought responds in a way that does not enable

progress towards achieving coordination?” This was one of the questions posed by a frustrated operator seeking to coordinate a satellite with Eutelsat. Presentation by AMOS Spacecom, ITU BR Workshop on the efficient use of the spectrum/orbit resource. Geneva, 6 May 2009. Accessed at www.itu.int.

³⁰ At ITSO’s 12th Advisory Council in March 2010, the Frequency Working Party (FWP) discussed the issue of coordinating the Common Heritage orbital positions, suggesting that the Notifying Administrations (USA and United Kingdom) should provide more details in the information submitted to ITSO’s Director General, before notifying the International Telecommunication Union (ITU). Author: ANACOM, www.anacom.pt, [Cited as 12th IAC hereinafter.]

³¹ ITSO, 10th Meeting of ITSO Advisory Council (IAC), 10-11 March 2009. Author: ANACOM, www.anacom.pt.

³² ITSO, 34th Meeting of Assembly of Parties, 22-24 June 2010. Author: ANACOM, www.anacom.pt [Cited as 34th AP hereinafter.]

³³ Public Service Agreement (PSA) between International Telecommunications Satellite Organization (ITSO) and Intelsat Ltd. (Bermuda-UK), Intelsat LLC, and Intelsat Service Corporation (both incorporated in the USA). (Agreement not dated) [Cited hereinafter as PSA].

³⁴ ITSO Agreement, note 11, Preamble. The same wording is found in the 1973 INTELSAT Agreement.

³⁵ Ibid, Art. III, “Main Purpose and Core Principles of ITSO.”

³⁶ PSA, Art. 2, “Honoring the Public Service Obligations.” Art. 2.01 defines the Public Service Obligations; Art. 2.03 defines specific terms.

³⁷ See, FCC 06-82, note 14: ITSO’s objections to the “IPO” and to Intelsat’s merger with PANAMSAT were disregarded, although the IPO involved amending the ORBIT Act. Also see FCC 07-4715, note 27.

³⁸ K. Katkin, note 13. The author presents a number of “what if” scenarios: what if the US were to take drastic actions against certain users of the Intelsat system which are on the US list of “rogue” administrations. He raises interesting points regarding the US’s potential to disconnect users, thereby abrogating the global connectivity requirement.

³⁹ According to one source, in 2007 the World Bank highlighted international connectivity as

the ‘missing link’, noting that the African region accounts for less than 1% of the world’s bandwidth capacity. The Bank reported that 20 countries lack direct terrestrial access and were forced to rely on expensive satellite connectivity for links with each other and the rest of the world. For an excellent compilation on the “digital divides” (by region), see Carson Analytics digital divides, www.caslon.au/dividesprofile10.htm.

⁴⁰ K. Katkin, note 13. Pre-privatization, Latin America could receive signals only from Intelsat and Panamsat; now more than 45 satellites could provide services in the region. Whether they all are authorized to provide services is not stated in “Latin American Satellite Access Guide”: A Supplement to VIA SATELLITE magazine, Access Intelligence, publisher, Rockville, MD. (2008).

⁴¹ Intelsat and any successor-in-interest (in the event of Intelsat’s bankruptcy) is obligated to perform the PSA obligations. FCC DA 07-4715. The FCC’s 2009 Report to Congress on the ORBIT Act reiterates these obligations. FCC 09-51.

⁴² Art. III (b)(ii), ITSO Agreement.

⁴³ Ibid, Art. I (h).

⁴⁴ Ibid, Art. I (r).

⁴⁵ K. Katkin, note 13, goes into great detail on the LCO customer. In brief, to qualify for the LCO contract, a few factors are taken into consideration, e.g., the country’s GNP and its teledensity. Many of the developing countries that were Signatories to INTELSAT became LCO customers, and under the terms of the PSA, service to them cannot be unilaterally terminated. ⁴⁶ Art. III (b)(iii), ITSO Agreement; PSA Art.2.02.(iv). Is the distinction between *provision* of service, and *access* to service being blurred, as well as the distinction between *equal* and *equitable* access?

⁴⁷ Katkin, note 13, presents a series of US-centric factors that might impinge on non-discriminatory access to the Intelsat system.

⁴⁸ ITSO Agreement, Preamble.

⁴⁹ Ibid, Preamble, citing Art. I of the OST.

⁵⁰ ITSO, 34th Assembly of Parties, 22-24 June 2010.

⁵¹ FCC Report To Congress As Required By The Orbit Act, Tenth Report, Adopted: June 12, 2009, Released: June 15, 2009. FCC 09-51.

⁵² Ibid. At what cost to the ITSO members and to Intelsat have the PSA obligations been met? This is not stated in any report.

⁵³ ITSO Agreement, Art. XXI; PSA Art. 15.

⁵⁴ ITSO, 12th IAC, March 2010. (The Strategy Plan did not garner the support of more dominant AP Members (the US, UK, Canada, among others).

⁵⁵ PSA, Art. 14, states that Intelsat is obligated to provide ITSO's funding for 12 years, with monies obtained prior to the execution of the PSA. If ITSO continues beyond this time, Intelsat will contribute an additional amount of money, to bring the fund to its original level of US \$500,000, adjusted to take into account inflation.

⁵⁶ ITSO Agreement, Art. XXI. "Duration."

⁵⁷ Ibid. Art. XXI.

⁵⁸ Ibid, Art. IX (f),(g).

⁵⁹ See note 2. But for the protection of the US bankruptcy courts, (and subsequent government contracts) the GMPCS systems would not have survived. Most, if not all satellite systems have commercial contracts with the government sector, providing a stable and large source of revenue. Other initiatives, on the other hand, seek to further secure the private sector's financial interests in space assets. See UNIDROIT's proposed Protocol on Space Assets, www.unidroit.org.

⁶⁰ Many countries have special projects to provide telecoms and internet services via satellite to rural, isolated areas. E.g., Colombia's COMPARTEL project is financed by government revenue obtained from higher service charges to certain economic strata. Other countries have an obligatory universal services fund (USF). (See the US1996 Telecommunications Act. Recent proposals to modify this Act would take into account universal access to broadband (internet) services.

⁶¹ R. Jakhu, "Legal Issues Relating to the Global Public Interest in Outer Space," *J.Space L.* Vol. 32 No.1 (Summer 2006), 31-110. [Emphasis added.] This article provides an excellent discussion on the concept and provision of public service in different countries.

⁶² Art. 2.2.02 (iv), PSA, note 33.

⁶³ <http://en.wikipedia.org> provides a definition: "[public] services [are those] provided by government to its citizens, either directly (through the public sector) or by financing private provision of services. The term is associated with "a social consensus; i.e., certain services should be available to all, regardless of income."

⁶⁴ The global economic slowdown has not affected the international Internet market; rather, international Internet traffic grew 74 percent in

2009—up from 55 percent in 2008. In 2009 alone, carriers put in more new international capacity than the total capacity of all international Internet links in existence in 2007. While demand for Internet capacity soared, prices continued to decline, particularly for high capacity ports. *Telegeography* [email] Feed, 15 Sept. 2009.

⁶⁵ www.itu.int/wsis/implementation/2010/forum/geneva.

⁶⁶ Ibid, press release, 10 May 2010.

⁶⁷ www.Broadbandcommission.org. The Commission was to deliver its outcomes (2 reports) to the UN Secretary-General in September 2010. The ITU has also undertaken studies on broadband's social and economic impact.

⁶⁸ www.broadbandcommission.org.

⁶⁹ 34th AP Meeting, note 32. Prior to expending funds, however, the DG needs the approval of the Advisory Committee.

⁷⁰ See www.broadbandcommission.org for a listing of the Commissioners.

⁷¹ According to 'Satellites to be Built & Launched by 2019, World Market Survey', governments will continue to dominate the space market, accounting for two thirds of the total number of spacecraft launched and the same amount of launch and manufacturing revenues. EUROCONSULT, 6 Sept. 2010 press release. Two Notifying Administrations are hardly representative of the 180+ governments that are ITU members.

⁷² Art. VII, ITSO Agreement.

⁷³ Art. 14, PSA.

⁷⁴ Art.15, PSA.