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STATE SOVEREIGNTY AND AERONAUTICAL PUBLIC CORRESPONDENCE BY SATELLITE

TARE C. BRISIBE*

I. INTRODUCTION

COMMUNICATIONS SERVICES to aircraft have traditionally been provided through ground-based technologies involving the use of High Frequency (HF), Ultra High Frequency (UHF), and Very High Frequency (VHF), radio waves. The HF system is used for long-distance communications between aircraft in flight and ground stations. Traditional long-range and some medium-range aircraft are equipped with a dual HF system including an antenna common to both transmitters, while short range aircraft may be equipped with a single UHF system (including an antenna) and may not be equipped with any HF systems. The VHF part of the electromagnetic spectrum is defined as the range of frequencies between 30 and 300 MHz.¹ Within this range, the band from 118 MHz to 138 MHz is dedicated to aeronautical mobile communications applications.² At these low-frequency ranges, the amount of bandwidth available is limited, which causes the use of these frequencies to deliver

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¹ BRUCE R. ELBERT, INTRODUCTION TO SATELLITE COMMUNICATION 29 (2d ed. 1999).

² *Id.*

very low data rates.³ These frequencies are also severely impacted by the ionosphere, which can "twist, bend, attenuate, and reflect these wavelengths."⁴ Communications systems using VHF/UHF must allow for significant fading and other disruption of the transmission, often on a random basis.⁵ This situation is more pronounced in the tropics around the geomagnetic equator, particularly during the spring and fall equinoxes⁶. Technical constraints arising from the use of HF and UHF/VHF frequencies catalyzed the evolution towards the use of other microwave applications involving communications between Aeronautical Earth Stations⁷ (AES) mounted on aircraft frames and satellites, in radio frequencies above 1 GHz.⁸

At the 10th Air Navigation Conference held under the auspices of the International Civil Aviation Organization (ICAO) in Montreal on September 5-20, 1991, the conference considered Agenda Item 2: Consideration of the Future Air Navigation Systems (FANS) concept for the future air navigation system, and its capability of correcting the shortcomings of the present Communications, Navigation, and Surveillance (CNS) system.⁹ The conference was presented with an overview of the FANS concept for the future air navigation system.¹⁰ The shortcomings of the existent air navigation system were discussed and a Communication, Navigation, and Surveillance and Air Traffic Management (CNS/ATM) concept for FANS was proposed.¹¹ The shortcom-

³ *Id.*

⁴ *Id.* at 30.

⁵ *Id.*

⁶ *Id.*

⁷ Mobile earth stations are defined as "earth station[s] in the mobile satellite service intended to be used while in motion or during halts at unspecified points." See ITU RADIO REGULATIONS 66. Whilst the term "Station" refers to "one or more transmitters or receivers or a combination of transmitters and receivers, including the accessory equipment, necessary at one location for carrying on a radiocommunication service" an "Earth Station" may be located either on the Earth's surface or within the major portion of the Earth's atmosphere. (See ITU RADIO REGULATIONS 58, 60).

⁸ For a description of the shortcomings arising from the use of VHF/UHF radio waves, see Michael Milde, *Legal Aspects of Future Air Navigation Systems*, XII ANNALS OF AIR & SPACE L. 87 (1987); WERNER GULDIMANN & STEPHAN KAISER, *FUTURE AIR NAVIGATION SYSTEMS - LEGAL AND INSTITUTIONAL ASPECTS*, 15-16 (1993); W. STOFFEL, *LEGAL ASPECTS OF AERONAUTICAL MOBILE SATELLITE SERVICES - THE ICAO FANS CONCEPT*, PROCEEDINGS OF THE 36TH COLLOQUIUM OF THE INTERNATIONAL INSTITUTE FOR SPACE LAW, 16 (Graz 1993).

⁹ ICAO Doc. 9583, AN-Conf/10/1991.

¹⁰ GULDIMANN & KAISER, *supra* note 8, at 78.

¹¹ *Id.* at 81.

ings that had been identified by the FANS Committee were stated in Appendix A to the report on Agenda Item 2.¹² The report also pointed out that most of the aforementioned limitations were intrinsic to the systems themselves, and that although the effects are not the same for every part of the world, it is evident that one or more of several factors inhibit the further development of air navigation almost everywhere.¹³ Therefore new CNS systems should surmount these limitations to become more responsive to users' needs.¹⁴ Thus, the new CNS systems should provide, *inter alia*: (a) global communications, navigation, and surveillance coverage from very low to very high altitudes, also embracing remote, off-shore and oceanic areas; and (b) digital data interchange between air-ground systems to fully exploit the automated capabilities of both.¹⁵ The FANS Committees concluded that the exploitation of satellite technology appeared to be the only viable solution to overcome the shortcomings of the existent CNS system and also fulfill the global needs and requirements of the foreseeable future.¹⁶ Consequently, the Committee developed "an overall long-term projection for the coordinated evolutionary development of air navigation for international civil aviation over a period of the order of twenty five years," in which complementary to certain terrestrial systems, satellite-based CNS systems would be the key to worldwide improvements.¹⁷

The main features of the communications aspect of the CNS system, set forth in the Appendix to the Report on Agenda Item 2, to be implemented over a period of twenty-five years, predicted that satellite data and voice communications will eventually be available for at least the larger part of the world. Initially HF may have to be maintained over polar regions until such time as satellite communication is available. In the future, aeronautical mobile communication would extensively use digital modulation techniques to permit high efficiency information flow, optimum use of automation both in aircraft and on the ground, and economical frequency spectrum utilization.¹⁸ Ex-

¹² *Id.* at 81-82. See also B.D.K. Henaku, *The Law on Global Navigation by Satellite*, 1 AST L. MONOGRAPHS 72 (1998)

¹³ GULDIMAN & KAISER, *supra* note 8, at 78.

¹⁴ *Id.*

¹⁵ *Id.*

¹⁶ *Id.*

¹⁷ *Id.* at 83.

¹⁸ *Id.*

cept in high-density areas within the coverage of terrestrial-based systems, aeronautical mobile satellite communications services (data and voice) would use satellite-relay, operating in the frequency bands allocated to the Aeronautical Mobile Satellite Services (AMSS), while terrestrial based air-to-ground communications would continue to serve in terminal areas and in other high-density airspace.

The AMSS offers digital voice and data services using geostationary satellites and is provided in the mobile satellite service bands 1,545 MHz – 1,555 MHz and 1,646.5 – 1,656.5 MHz.¹⁹ Within the broad scope of satellite communications to and from aircraft, four types of aeronautical communications could be conducted, as identified by ICAO. These include: air traffic service, aeronautical operational control, aeronautical administrative communications, and aeronautical public correspondence.²⁰ Satellite Aeronautical Public Correspondence (S-APC), the focus of this article, is the most recent development in aeronautical communication. S-APC consists primarily of connections of onboard facilities with existing fixed networks (e.g. domestic telephone networks), in addition to means for permitting the switching of connections to other aeronautical passenger facilities (via a ground station)²¹ to enable personal communications by passengers and crew. Approximately 3,000 aircraft have been equipped with satellite communications systems.²² The majority have been configured for S-APC.²³ Both the INMARSAT commercial global satellite system as well as the recently launched Connexion-by-Boeing service support AMSS.

S-APC in its simplest form, conducted within a mobile satellite communications network, follows distinct calling procedures depending on whether the call is made from air-to-ground, or ground-to-air. In case of the former, and with regards to passenger telephony, the equipment may consist of the AES, cabin telephone equipment in the cabin and a handset, which may be "cordless." The fixed cabin telephone equipment is provided with a credit card reader. When a passenger wants to make a

¹⁹ ICAO Doc. AN-Conf/11-IP/1 at 6.

²⁰ Stephan Kaiser, *Legal Implications of Satellite-Based Communication, Navigation & Surveillance Systems for Civil Aviation*, in GULDIMANN & KAISER, *supra* note 8, at 154-55.

²¹ *Id.* (citing Shifrin, *First Installation of (Satellite) APC-Telephone Approved by INMARSAT*, AVIATION WEEK & SPACE TECHNOLOGY, November 19, 1989 at 76).

²² ICAO Doc. AN-Conf/11-IP/1 at 7.

²³ *Id.*

call, the typical sequence of events would be as follows: the passenger walks from her seat to the central cabin telephone location; then keys in her seat number and inserts an acceptable credit card into the fixed cabin equipment. The handset is released after validation of the check bits and expiration date. In the event that either of these checks fails, the card is returned and the handset not released. Upon obtaining the handset, the customer returns to her seat and can commence making one or more telephone calls. Where telephones and associated credit card readers are located at the passengers' seats, a somewhat different procedure may apply. However, the procedure still involves reading the credit card and validating the check bits and expiration date before permitting the passenger to make calls.²⁴

With regards to crew telephony, credit card validation procedures are not required. Airline crew have access to special telephone services and networks, according to requirements and procedures developed by the airline industry. The capabilities include at least the following: access to the full Public Switched Telephone Network (PSTN) as for passengers, but without the need for a credit card (billing would be direct to the aircraft operator); access to specialized voice services via private networks, with or without address digits; ability to preempt an existing (passenger) call if necessary to make AES voice circuit equipment, a satellite channel or Ground Earth Station (GES) voice circuit equipment available; and ability to seize the next available AES voice circuit equipment without clearing any calls in progress. In the case of calls in the reverse direction, (i.e. ground-to-air) selected fixed-network users are able to access aircraft automatically by using the aircraft ID in the address digits. Operator-connected access is also available pursuant to the numbering plans enabling a PSTN subscriber to call the AES.²⁵

This article examines application of the state sovereignty principle to the inconsistencies surrounding the use by passengers of satellite communications systems for non-safety purposes within the legal and regulatory regimes that govern: outer space; the oceans and polar regions; international air transport; international satellite telecommunications; trade aspects of international economics; the state where the aircraft is certified and

²⁴ International Telecommunication Standard: Union Telecommunication Standardization Sector, *Telephone/ISDN Numbering Plan for the Mobile-Satellite Services of INMARSAT*, ITU-T RECOMMENDATION E.215 (1997).

²⁵ *Id.*

registered; the state being flown over; and the state where the ground facilities may have been established. Parts II and III will examine the principle of state sovereignty and jurisdiction in territorial airspace, above territorial waters and in the Polar Regions. Parts IV and V will address sovereignty and international trade law including the law applicable to outer space.

II. STATE SOVEREIGNTY OVER AIRSPACE AND TERRITORIAL WATERS

Territorial sovereignty has been stated as extending "principally over land territory, the territorial sea appurtenant to the land, and the seabed and subsoil of the territorial sea.²⁶ The concept of territory thus includes islands, islets, rocks, and reefs."²⁷ Furthermore, "in accordance with customary international law and the dictates of convenience, the airspace above . . . State territory is [sic] included."²⁸ Therefore, "the State territory and its appurtenances (airspace and territorial sea²⁹), together with the government and population within its frontiers, comprise the physical and social manifestations of the primary type of international legal person, the State."³⁰

With this in mind, the International Court of Justice pronounced in *The Case Concerning Military and Paramilitary Activities in and against Nicaragua*³¹ that

The basic legal concept of State sovereignty in customary international law, expressed in inter alia, Article 2, paragraph 1, of the United Nations Charter, extends to the internal waters and territorial sea of every State and to the airspace above its territory. As to the superjacent airspace, the 1944 Chicago Convention on Civil Aviation (Art. 1) reproduces the es-

²⁶ IAN BROWNLIE, PRINCIPLES OF PUBLIC INTERNATIONAL LAW 105 (1998).

²⁷ *Id.*

²⁸ *Id.*

²⁹ See *Fisheries Case (U.K. v. Nor.)* 1951 I.C.J. 116 (Dec. 18). Note however that some coastal states, including the United States of America, Canada, Malaysia, Australia and New Zealand, have claimed the right to exercise control over foreign aircraft beyond the limits of the airspace over their territorial waters. NICHOLAS GRIEF, PUBLIC INTERNATIONAL LAW IN THE AIR SPACE OF THE HIGH SEAS 147 (1994). These claims to control have been made in areas referred to as Air Defence Identification Zones (ADIZ). *Id.* The purpose being "to enhance the protection of national security by making the entry of aircraft subject to identification requirements." *Id.* Establishment of such zones do not however constitute or imply a claim to sovereignty. *Id.* On the precise nature and validity of ADIZ's in the context of international laws of the air and sea, see *id.* at 153-57.

³⁰ BROWNLIE, *supra* note 26, at 105-06.

³¹ *Case Concerning Military and Paramilitary Activities in & Against Nicaragua (Nicar. v. U.S.)*, 1986 I.C.J. 14, 111 (June 27).

*tablished principle of the complete and exclusive sovereignty of a State over the airspace above its territory. That Convention, in conjunction with the 1958 Convention on the Territorial Sea, further specifies that the sovereignty of a coastal State extends to the territorial sea and the airspace above it, as does the United Nations Convention on the Law of the Sea adopted on 10 December 1982. The court has no doubt that these prescriptions of treaty law merely respond to firmly established and long-standing tenets of customary international law.*³²

Treaty provisions, the dictum of the ICJ, and opinion juris all point to the fact that states exercise supreme and exclusive sovereignty in their territorial jurisdictions,³³ which for the purpose of this article is comprised of the airspace above national territory and territorial waters, traversed by aircraft on-board which S-APC services are provided and consumed. Nonetheless, the methods by which states have chosen to exercise their sovereign rights, within the listed jurisdictions and with regards to the stated activities, when applied to S-APC, give rise to qualifications that require further examination. Thus there is a need to reconcile conflicting complexes arising from the clash between what one writer³⁴ has stated as consisting of a rule-complex³⁵ (founded on a regulatory philosophy influenced by the common international legal concept of state sovereignty) and an activity-complex.³⁶ These conflicting complexes themselves appropriately reflect the enduring divide between what are commonly referred to as the spatialist and functionalist schools of thought.³⁷ The spatial approach, according to Bin Cheng, is the primary nature of international *lex lata*, with its three-tier classification of state jurisdiction (discussed *infra*), as opposed to the

³² Statute of the International Court of Justice, 1945, C.II, art. 38 provides *inter alia* that "The Court, whose function is to decide in accordance with international law such disputes as are submitted to it, shall apply international custom, as evidence of a general practice accepted as law."

³³ M. DIXON & R. MCCORQUODALE, *CASES AND MATERIALS ON INTERNATIONAL LAW* 26 (2000).

³⁴ Henaku, *supra* note 12, at 103.

³⁵ Differences in the legal/regulatory regimes governing: national airspace, the airspace over the oceans, outer space, international aviation, telecommunications and trade aspects of international economic law. *Id.*

³⁶ The technology and components of the future International Civil Aviation Organisation's Communications Navigation Surveillance /Air Traffic Management System in general. *Id.* at 104. This article addresses the activity-complex of S-APC service provision. In other words, the technological infrastructure and system architecture of mobile satellite communications for non-safety aeronautical purposes.

³⁷ BIN CHENG, *STUDIES IN INTERNATIONAL SPACE LAW* 434-37 (1997) [hereinafter BIN CHENG (1)].

functional approach which, contends that the locus of an act need be of no moment to its legality or illegality, which can be determined solely by reference to its nature.³⁸

Before going any further on this complex and/or conflict and its application to air travel, there is a need to shed some light on the origins³⁹ and nature of the sovereignty concept. It is necessary to understand that the principle of sovereignty is regarded as a fundamental concept in international law, and an integral part of the principles of equality of states and of territorial integrity and political independence that are referred to in Article 2 of the United Nations Charter.⁴⁰ State sovereignty itself remains inextricably linked to what is referred to as "territory," which in spatial terms has been divided into four⁴¹ categories, three of which were first identified by Judge Max Huber, sitting as sole arbitrator in the *Island of Palmas Case (The Netherlands v. United States)*.⁴² These four categories are comprised of: national territory (over which one state, or in exceptional circumstances, two or more states, exercises territorial sovereignty); *territorium extra commercium* (territory which cannot form the territory of a state); *territorium nullius* (territories that are not under the sovereignty of a recognized subject of international law, but which are capable of being acquired by any state in accordance with the rules of international law governing acquisition of territory); and *territorium commune humanitatis* ("the common heritage of mankind").⁴³

In this context, the *Permanent Court of Arbitration in the North Atlantic Coast Fisheries Case (United Kingdom v United States)*⁴⁴ stated that, "one of the essential elements of sovereignty is that it is to be exercised within territorial limits, and that, failing proof to the contrary, the territory is coterminous with sovereignty."⁴⁵

³⁸ *Id.*

³⁹ The concept of sovereignty originated in the closer association of the developing State and the developing community which became inevitable when it was discovered that power had to be shared between them. The function of the concept was to provide the only formula which could ensure the effective exercise of power once this division of power or collaboration of forces had become inescapable. See DIXON & MCCORQUODALE, *supra* note 33, at 248 (citing H. HINSLEY, SOVEREIGNTY 22-25 (1986)); see also John H. Jackson, *Sovereignty-Modern: A New Approach to an Outdated Concept*, 97 AM. J. INT'L LAW 782 (2003).

⁴⁰ DIXON & MCCORQUODALE, *supra* note 33, at 248.

⁴¹ See BROWNLIE, *supra* note 26, at 105; BIN CHENG (1), *supra* note 37, at 434-37.

⁴² 2 R.I.A.A. 829 (Per. Ct. Arb. 1928).

⁴³ BIN CHENG (1), *supra* note 37, at 435-36.

⁴⁴ 11 R.I.A.A. 167, 180 (Perm. Ct. Arb. 1910).

⁴⁵ DIXON & MCCORQUODALE, *supra* note 33, at 250.

Consequently, the competence of states, in respect of their territory, is traditionally described in terms sovereignty as well as "jurisdiction."⁴⁶ In other words, the normal complement of state rights, the typical case of legal competence (or legal personality) is described commonly as "sovereignty," while particular rights, or accumulations of rights quantitatively less than the norm, are referred to as "jurisdiction" (especially rights, or claims, liberties and powers).⁴⁷ Brownlie goes on to add, as far as the subject of jurisdictional competence of states is concerned, that distinct from the power to make decisions or rules (i.e., the prescriptive or legislative jurisdiction), which in the opinion of this author equates to the "particular rights" mentioned above, states also have "power to take executive action in pursuance of or consequent on the making of decisions or rules (i.e., the enforcement or prerogative jurisdiction)."⁴⁸ Bin Cheng on the other hand, has chosen to refer to this distinction between prescriptive or legislative jurisdiction vis-à-vis enforcement or prerogative jurisdiction, by using the terms "jurisdiction"⁴⁹ and "jurisdiction,"⁵⁰ respectively.⁵¹

Bin Cheng bases this classification upon the recognition under international law that states have over any one or a combination of three types of jurisdiction, including "territorial jurisdiction" – "the jurisdiction to which a State is normally entitled over its own territory, territory under its sovereignty"; "quasi-territorial jurisdiction" – jurisdiction of a state over "its aircraft, spacecraft and . . . any other means of transport which is designed for travel in areas not subject to the territorial jurisdiction of any State . . . and which has a special relationship with the State concerned through ownership, nationality, registration, or any other recognized link"; and "personal jurisdiction" – "the jurisdiction of a State over its own nationals, be they natural or legal persons, excluding, however, . . . aircraft even though

⁴⁶ BROWNLIE, *supra* note 26, at 106.

⁴⁷ *Id.*

⁴⁸ *Id.* at 301.

⁴⁹ "The normative power of a State to enact laws, take decisions, and, if need be, administratively or judicially to interpret such laws and decisions with legally binding effect." *Id.*

⁵⁰ "A State's power concretely and physically to perform the functions of a State, be they legislative, judicial or executive. It may thus, under this power, hold legislative assemblies, conduct judicial enquiries, carry out arrests, or establish armed forces." *Id.*

⁵¹ BIN CHENG (1), *supra* note 37, at 38-39.

they may be endowed with nationality.”⁵² The justification for these various classifications and distinctions can be derived from the proposition that jurisdiction is territorial, i.e., “the power of a State over different objects of international law varies, above all *ratione loci*, according to whether one is speaking of national territories”, or any of the three types of territory listed above.⁵³ These jurisdictional complexities, when applied to the provision of S-APC services on-board aircraft flying over national state territories and oceanic open spaces, raise interesting international civil and even criminal legal ramifications, considering that aircraft do not readily fit within the jurisdictional rules of either domestic or international law.

Nonetheless, the following examination of the sovereignty in airspace principle should serve as a starting point for answering questions relating to the principle’s impact and effectiveness; bearing in mind that although states may exercise sovereignty *de jure*, the nature of the activity-complex in the case of end-to-end S-APC service provisions, in most cases, places *de facto* control in the hands of the entity(s) licensed (in most cases by third states) to operate the infrastructure in question i.e., the satellite(s), Aeronautical Earth Stations affixed to the aircraft frames, aircraft, and ground-based infrastructure. Two questions require clarification: first, the extent to which a state that is flown over can control certain activities on board a foreign registered aircraft within its territory; and second, whether the right to overflight permits the use of facilities for non-safety communications.

A. SOVEREIGNTY, TERRITORIALITY AND AIRSPACE

The principle of state sovereignty in airspace, traceable to discussions dating to the pre-World War I era, were crystallized in the provisions of Article 1 to the Paris Convention on Aerial Navigation of 1919, while in contemporary times the legal basis for the exercise of sovereignty by states to the airspace over their respective territories derives from the provisions of Article 1 to the 1944 Chicago Convention,⁵⁴ which declares, “The con-

⁵² *Id.*

⁵³ *Id.*

⁵⁴ NICHOLAS M. MATTE, AEROSPACE LAW 15-16 (1969) [hereinafter MATTE (1)]. Note that in addition to the 1919 Paris Convention, the Ibero-American Convention Relating to Aerial Navigation of 1926 and the Inter-American International Convention on Commercial Aviation of 1928 were both based upon the national sovereignty in airspace principle. See P.P.C. HAANAPPEL, THE LAW AND POLICY OF

tracting States recognize that every State has complete and exclusive sovereignty over the airspace above its territory.”⁵⁵ It has been contended by Nicholas Matte that the “emphasis on the principle of sovereignty is more understandable during troubled times of war and periods immediately following, when international conventions on air law have been drawn up and accepted, creating principles to serve above all, as a means of national defense.”⁵⁶ Matte asserts further that the sovereignty principle, however, “does not help peaceful development of international navigation for economic, commercial or touristic reasons,” leading to a need to replace the principle of sovereignty with one of “freedom of functional international air traffic, which would at the same time preserve the security of states.”⁵⁷

Before addressing the “freedom of functional international traffic” proposition, to which we shall return in the context of S-APC services provided to international civil aviation, note that in order to apply the lateral limits of airspace sovereignty (a term not defined by the Chicago Convention⁵⁸) one would also need to appreciate the meaning of state territory defined in Article 2 to the Chicago Convention. This Article provides that, “For the purpose of this Convention, the territory of a State shall be deemed to be the land areas and territorial waters adjacent thereto under the sovereignty, suzerainty, protection or mandate of such State.”⁵⁹ This scenario contrasts sharply with the freedom-of-the-air principle, which pertains above the high seas because as it has also been contended, the innocent passage for vessels and an “open-port policy” in maritime law is easier to accept from the standpoint of national security than freedom-of-

AIR SPACE AND OUTER SPACE, A COMPARATIVE APPROACH 15 (2003) [hereinafter HAANAPPEL (1)].

⁵⁵ Convention on International Civil Aviation, *opened for signature*, Dec. 7, 1944, art. 161 Stat. 1180, 15 U.N.T.S. 295 [hereinafter Chicago Convention].

⁵⁶ MATTE (1), *supra* note 54, at 17.

⁵⁷ *Id.*

⁵⁸ For a detailed attempt to provide a definition of the term ‘airspace’ see *id.* at 21-36.

⁵⁹ Chicago Convention, *supra* note 55, art. 2. “The territorial scope of a States Jurisdiction, as recognized and accepted by contracting States to the Chicago Convention extends, therefore, upwards into space and downwards to the centre of the earth, the whole in the shape of an inverted cone.” See BIN CHENG, THE LAW OF INTERNATIONAL AIR TRANSPORT 121 (George W. Keeton & George Schwarzenberger, eds. 1962) [hereinafter BIN CHENG (2)].

the-air.⁶⁰ Vessels are physically limited to the high seas, territorial waters, international straits and maritime ports and thus, perhaps with the exception of submarines, are more easily identifiable. Aircraft on the other hand, move much more rapidly and can penetrate any part of airspace above a given sovereign state and are consequently far less easy to identify.⁶¹

Though the "freedom of functional international air traffic" proposition made by Matte has yet to fully materialize, and in spite of the security considerations underlying the sovereignty principle and the extent of its territorial application, multilaterally-agreed economic aspects (including the right of overflight) of present day⁶² international civil aviation continue to be catered to under the Chicago Convention's Article 5 (non-scheduled international services) and Article 6 (scheduled international services), respectively.⁶³ In the words of Matte on one hand, both Articles "provide the multilateral, quasi-universal basis of the legal framework for all international air services."⁶⁴ Article 5 is inspired by a relatively liberal spirit as the basis for a more liberal regulatory regime for non-scheduled services and flights, while Article 6, seeking to implement the sovereignty principle of the Chicago Conventions Article 1, affords the basis for a more restrictive and rigid regulatory regime for scheduled air services.⁶⁵ Haanappel, on the other hand, claims that the Chicago Conventions Articles 5, 6 and 7, respectively, speak of the "right" to make flights, and to operate air services, and that "right" is the appropriate term set forth within multilateral and bilateral agreements between states exchanging contractual rights to fly aircraft, and to operate air services that derogate from the customary international law principle of Article 1 of the Chicago Convention, to the effect that each state has complete and exclusive sovereignty in the airspace above its terri-

⁶⁰ On the 'right of innocent passage' and the 'meaning of innocent passage' within territorial waters, see United Nations Convention on the Law of the Sea, Dec. 10, 1982, art. 17, 19 [hereinafter UNCLOS 1982].

⁶¹ HAANAPPEL (1), *supra* note 54, at 16.

⁶² Attempts at fostering the widest possible multilateral freedom in international civil aviation is not a recent development when one considers both the provisions of Article 15 (as amended in 1929) to the 1919 Paris Convention as well as Article XXI of the 1928 Havana Convention, respectively. *Id.*

⁶³ NICOLAS MATTE, TREATISE ON AIR-AERONAUTICAL LAW 140 (ICASL-McGill University 1981) [hereinafter MATTE (2)].

⁶⁴ *Id.* at 140-41.

⁶⁵ *Id.*

tory.⁶⁶ He contends further that there is a distinction between the “rights/privileges of aircraft,” “rights/privileges with respect to international air services,” and the “rights of airlines,” and that Articles 5 and 7 of the Chicago Convention speak of “rights of aircraft,” although Article 7 also uses the term “airlines,” while two agreements (discussed *infra*) annexed to the Chicago Convention speak of “rights and privileges” with respect to “international air services,” and finally that bilateral agreements are concerned with the rights of designated air carriers to operate on certain routes.⁶⁷

Bearing the above arguments in mind, the freedom of movement by aircraft across multiple borders continues to be facilitated pursuant to the provisions of the International Air Services Transit Agreement (“Transit Agreement”) and the International Air Transport Agreement, (“Transport Agreement”) annexed to the Chicago Convention, the combined effect of which give rise to what is now accepted by several writers, including, Bin Cheng, Matte, Diedericks-Verschoor and Haanappel, as constituting the Freedoms of the Air.⁶⁸ The Transit and Transport Agreements - especially the Transport Agreement⁶⁹ - provide a multilateral, contractual exchange of sovereign rights that greatly facilitates the performance of international air services having to cross many jurisdictions; although for those countries that have not ratified the Transit Agreement, over-flight rights would have to be negotiated bilaterally.⁷⁰ Under Bilateral Air Transport Agreements (BATS), “States exchange traffic rights and/or overflight rights leaving the exercise of the commercial modalities thereof largely to the management judgment of designated airlines,

⁶⁶ HAANAAPPEL (1), *supra* note 54, at 104-05.

⁶⁷ *Id.*

⁶⁸ The first two freedoms are described in the Transit Agreement, and concern the freedom to fly over a country or to make a technical landing. They are also listed in the Transport Agreement, together with three more freedoms. The third freedom enables the state to carry passengers and cargo from its own territory to a foreign State, whereas the fourth concerns the transport of passengers and cargo from a foreign state to its own territory. The right to carry passengers and cargo between two foreign states is contained in the fifth freedom. I.H.P.H. DIEDERIKS-VERSCHOOR, AN INTRODUCTION TO AIR LAW 13 (7th ed. 2001). *See also* BIN CHENG (2), *supra* note 59, at 9-12; MATTE (2), *supra* note 63, at 143; HAANAAPPEL (1), *supra* note 54, at 103-109; P.P.C. Haanappel, *The Transformation of Sovereignty in the Air*, XX AIR & SPACE L. 311, 315 (1995) [hereinafter Haanappel (2)]

⁶⁹ The Transport Agreement, regarded as the five freedoms agreement remains poorly ratified. Haanappel (2), *supra* note 68, at 315.

⁷⁰ *Id.* at 316.

rather than to governmental influence.”⁷¹ Such agreements do not fundamentally change the concept of sovereignty; rather they modify and liberalize its exercise without detracting from the basic notion of sovereignty expressed in Articles 1 and 6 of the Chicago Convention. Thus, confirming the pre-existing nature of state sovereignty over its airspace now accepted as a part of customary international law and declared in the Chicago Convention, while bearing in mind the present combined effect of the Transit Agreement as well as BATS, leads one to the belief that there is an evolution in the exercise of national sovereignty through liberal BATS and the opening up by a number of states of their hitherto closed borders to international travel.⁷²

An interesting illustration of circumstances where the concept and/or application of sovereignty in airspace has been extended from the multilateral exchange of rights between states to the actual transfer of such rights to a third party can be made with the steps currently being taken by the European Community to formulate what has been regarded as the “Single European Sky.”⁷³ In this respect and according to Article 3(f) of the Treaty Establishing the European Community (EC), the EC is empowered to develop a common transport policy pursuant to a legal basis for EC action to establish a policy in the area of airspace management and design set forth in the Treaty’s Article 80(2).⁷⁴ That Article provides that “the Council may, acting by a qualified majority, decide whether, to what extent and by what procedure appropriate provisions may be laid down for sea and air transport. The procedural provisions of Article 71 shall apply.”⁷⁵ Article 80(2), therefore, offers a broad legal basis for the implementation of that Treaty’s objectives in the area of air transport. It has already been used for EC action in this area, most recently as a legal basis for the European Commission’s proposal for a Council Regulation establishing the European Aviation Safety Agency.⁷⁶ In general, it allows for EC measures intended to:

⁷¹ P.P.C. Haanappel, *The Transformation of Sovereignty in the Air 19 in THE USE OF AIR AND OUTER SPACE COOPERATION AND COMPETITION 13-26* (Chia-Jui Cheng ed. 1995) [hereinafter Haanappel (3)].

⁷² *Id.* at 25-26.

⁷³ http://europa.eu.int/comm/transport/air/single_sky/index-en.htm (last visited Feb. 6, 2005).

⁷⁴ Consolidated Version of the Treaty Establishing the European Community, art. 3(f), 2002 O.J. (C325) 1, 40 [hereinafter Consolidated Treaty].

⁷⁵ *Id.* art. 80(2).

⁷⁶ Established on July 15, 2002, of a new European Community (“EC”) system of, *inter alia*, air safety, to be based upon the mandate of a European Aviation

- Implement the free movement guarantees under the Treaty;
- Harmonize airspace classifications and standards; and
- Set down minimum standards in relation to a European airspace.

It has been argued that ordinarily states have no right to transfer matters regarding the air space above their territories to a supranational organization such as the EC (or another state).⁷⁷ According to this view, Article 1 of the Chicago Convention, which recognizes the complete and exclusive sovereignty as belonging to the contracting state, would be deemed to be mandatory.⁷⁸ Thus, any transfer of sovereign rights to another state or institution would seem to be excluded by the Chicago Convention.⁷⁹ However, the same source argues that

Article 1 did not establish the sovereignty of states over their air space, contending thereto, that Article 1 of the Chicago Convention and Annex 11 (Air Traffic Services) merely recognized the pre-existing concept of sovereignty.⁸⁰ Consequently, those provisions acknowledge the right of the parties to their sovereignty, but do not create an obligation for the parties to keep it.⁸¹ In other words, Article 1 is of a declaratory rather than a constitutive nature. It is generally accepted that sovereignty over air space can be seen as a derivative of sovereignty over the territory of a state. Territorial sovereignty being essentially a concept of ownership, while the territory remaining (part of) the state's property. Therefore, as with any other property right, the state is free to transfer the sovereignty over its air space, in part or whole, to another state or a supranational organization. By (partially) delegating sovereign rights, the ceding state allows another state or a supranational organization to exercise certain actions on/over its territory.⁸²

Safety Agency ("EASA") expected to commence its operations in September 2003. It was also used as a legal basis for Council Directive 93/65/EEC of 19 July 1993 on the definition and use of compatible technical specifications for the procurement of air-traffic-management equipment and systems, 1993 O.J. No(L187) 52, which serves for the implementation of Eurocontrol Standards.

⁷⁷ STUDY FOR THE EUROPEAN COMMISSION ON THE REGULATION OF AIRSPACE MANAGEMENT AND DESIGN – FINAL REPORT 91-3 (May 2001).

⁷⁸ *Id.*

⁷⁹ *Id.*

⁸⁰ *Id.*

⁸¹ *Id.*

⁸² *Id.*

A similar illustration, where a significant exchange of sovereign rights over airspace between and amongst states has occurred, can be made with reference to the Minsk Agreement⁸³ pertaining to the airspace above the Commonwealth of Independent States (of the former Union of Soviet and Socialist Republics) comprised of the Republics of Azerbaijan, Armenia, Georgia, Belarus, Kazakhstan, Kyrgyzstan, Moldova, Tajikistan, Uzbekistan, Ukraine, Turkmenistan, and the Russian Federation.⁸⁴ In this instance, it is contended by Yuri Kolosov *et al.*, that pursuant to the Minsk Agreement, the airspace of contracting states over which they have complete and exclusive sovereignty, as well as those regions of open airspace, where, according to international treaties, air traffic maintenance was assigned to the former USSR for the purpose of organizing the execution of flights and Air Traffic Control, would now be considered to be common airspace.⁸⁵ The aforementioned authors, in so contending, re-affirm the principle of complete and exclusive sovereignty of a state over the airspace above its territory, recognized by Article 1 of the 1944 Chicago Convention, claiming that the Chicago Convention does not prejudice the establishment by certain states (on the basis of mutual agreement) of a "common" airspace for functional purposes.⁸⁶ They consequently make reference to the Convention on Cooperation in the Field of Air Navigation and Joint Organization and Ensuring of Air Traffic in the Upper Air-Space of Western Europe as an example of a useful precedent where common airspace for functional purposes has been agreed upon and established between nation states.⁸⁷

In view of the totality of arguments and assertions examined above, suffice it to state "that no aircraft may fly in, into or through a State's national airspace without its permission, acquiescence or tolerance, at no matter what altitude," and "once within the territory of another State, a foreign aircraft, together

⁸³ *Agreement on Civil Aviation and Airspace Utilization*, 25 December 1991, ICAO Reg. No. 3720.

⁸⁴ For an examination of the legal status of the single CIS airspace vis-à-vis the sovereignty of the superjacent states, see Phillip Saprykin, *The Legal Status of the Airspace above the Commonwealth of Independent States*, XXII ANNALS OF AIR & SPACE L. 325, 325-33 (1995); Yury Kolosov, Yury Maleev & Alexander Travnikov, *Common Airspace of the CIS Member-States*, AIR AND SPACE LAW IN THE 21ST CENTURY 108-11 (Karl-Heinz Bockstiegel ed. 1999).

⁸⁵ *Id.* at 108.

⁸⁶ *Id.*

⁸⁷ *Id.*

with its crew and passengers, must comply with local laws and regulations.”⁸⁸ This led one to assert that states exercise supreme and exclusive sovereignty in the airspace above their territory and the territorial waters adjacent thereto, although treaties, multilateral and bilateral, may give rise to an exchange of such national sovereignty rights over airspace.⁸⁹

B. NATIONALITY OF AIRCRAFT⁹⁰

Having examined the nature and extent of those sovereign rights that states exercise over their national territory, including the superjacent airspace, it is only proper to determine if and how such authority by states can be exercised with respect to the actual objects that traverse the airspace governed by individual states, (i.e. the aircraft equipped with S-APC service consumed by individual airline passengers). The question of nationality of aircraft, as it pertains to the provision of S-APC, is almost as important as the principle of sovereignty discussed above. This is especially true because the primary rule applicable to the conduct of S-APC set forth in the Chicago Convention’s Article 30(a) provides that:

Aircraft of each contracting State may, in or over the territory of other contracting States, carry radio transmitting apparatus only if a license to install and operate such apparatus has been issued by the appropriate authorities of the State in which the Aircraft is registered. The use of radio transmitting apparatus in the territory of the Contracting State whose territory is flown over shall be in accordance with regulations prescribed by that State.⁹¹

In addition, but more importantly, Article 30(b) of the Chicago Convention provides that “Radio transmitting apparatus may be used only by members of the flight crew who are provided with a special license for the purpose, issued by the appropriate authorities of the State in which the aircraft is registered.”⁹²

The words contained in the body of Article 30(a), “carry radio transmitting apparatus only if a license to install and operate

⁸⁸ BIN CHENG (2), *supra* note 59, at 122.

⁸⁹ Haanappel (3), *supra* note 71, at 13-36.

⁹⁰ See John C. Cooper, *A Study on the Legal Status of Aircraft*, EXPLORATIONS IN AEROSPACE LAW 215-50 (Ivan Vlasic ed., 1968); John C. Cooper, *National Status of Aircraft*, 15 J. AIR L. & COM. 292 (1950); DIEDERIKS-VERSCHOOR, *supra* note 68, at 22-25; MATTE (2), *supra* note 63, at 180-81; BIN CHENG (2), *supra* note 59, at 128-32; HAANAPPEL (1), *supra* note 54, at 46-48.

⁹¹ Chicago Convention, *supra* note 55, art. 30.

⁹² *Id.*

such apparatus has been issued by the appropriate authorities of the State in which the Aircraft is registered” and those contained in the body of Article 30(b), “appropriate authorities of the State in which the aircraft is registered” are probably the most pertinent in this regard.⁹³ The reason for this is that aircraft have the nationality of the state in which they are registered, per the provisions of Article 17 of the Chicago Convention.⁹⁴ Consequently, licenses, which are issued for radio transmitting apparatus and for those of the flight crew must be issued or certified by the state in which the aircraft has been registered.⁹⁵ The private international legal ramifications of these circumstances are most evident in matters pertaining firstly to the problems of jurisdiction in civil and/or criminal matters which may arise on board an aircraft resulting from the provision of S-APC services; and secondly, the problems pertaining to the liability of the airline, or of the air carrier or operator towards passengers and third parties on the ground. These matters however fall outside the scope of this article.

III. STATE JURISDICTION IN THE AIRSPACE OVER HIGH SEAS AND POLAR REGIONS

Air traveling demands an entertaining, pleasant, secure and productive environment for passengers who may spend 70 percent of their total travel time in the aircraft on long-distance flights. Further, it is correct to assume that long-distance flights will traverse open trans-oceanic and polar routes. These facts give rise to several questions, including: firstly, whether S-APC services may be offered in geographical regions of this nature; secondly, if this is possible, whether authorizations would be required; thirdly, what sorts of authorizations would be required to be obtained; and fourthly, from which authority. Therefore the nature and extent to which the concept of state sovereignty applies in the open spaces of the high seas and the Arctic Region constitutes the theme of this section.

A. AIRSPACE ABOVE THE HIGH SEAS

A significant part of the geographical area over which the S-APC services are currently being provided, or planned to be provided to aircraft, are the “high seas,” which constitute “all parts

⁹³ *Id.*

⁹⁴ *Id.* art. 17.

⁹⁵ BIN CHENG (2), *supra* note 59, at 129.

of the sea that are not included in the exclusive economic zone, in the territorial sea or in the internal waters of a State, or in the archipelagic waters of an archipelagic State."⁹⁶ This definition, it has been contended, infers that the exclusive economic zone⁹⁷ (EEZ) is optional except where a coastal state includes such a zone, and that a significant proportion of the freedoms of the high seas (discussed *infra*) are according to the UNCLOS 1982, applicable in the EEZ."⁹⁸ Note that, besides the rights of states to establish EEZ's under binding treaty provisions of the UNCLOS 1982, the establishment of EEZ's is a concept which has also been firmly established under customary international law.⁹⁹ The aforementioned definition of the high seas, the optional right of states to the claim of an EEZ, and the application of international law to the said EEZ on the one hand, and high seas on the other hand, all warrant a close examination. With regards to the EEZ, Michael Milde, referring to Articles 56 and 58 respectively of the United Nations Convention on the Law of the Sea (UNCLOS 1982), states that the EEZ is an area of the sea which was given a specific legal regime.¹⁰⁰ In clarifying the nature of the EEZ, Milde contends that "the EEZ is a zone *sui generis* with special rights reserved for the coastal State and the traditional freedoms of the high seas (minus the rights reserved for the coastal State) maintained for other States."¹⁰¹ The sovereign rights of the coastal state within the EEZ relate only to the natural resources of the sea; the coastal state cannot interfere with the other traditional freedoms of the high seas, in particular the right of navigation and overflight. In other words, special economic rights and jurisdiction over the resources and installations are granted to the coastal state, whilst the traditional free-

⁹⁶ UNCLOS 1982, *supra* note 60, art. 86.

⁹⁷ "The exclusive economic zone is an area beyond and adjacent to the territorial sea, subject to the specific legal regime established in this part, under which the rights and jurisdiction of the coastal State and the rights and freedoms of other States are governed by the relevant provisions of this Convention." *Id.* art. 55. "The exclusive economic zone shall not extend beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured." *Id.* art. 57.

⁹⁸ BROWNIE, *supra* note 26, at 229.

⁹⁹ See *Continental Shelf Case (Tunis. v. Libya)*, 1982 ICJ18; *Gulf of Maine Case (Can. v. U.S.)*, 1984 ICJ 246; *Continental Shelf Case (Libya v. Malta)*, 1985 ICJ Rep 13.

¹⁰⁰ M. Milde, *United Nations Convention on the Law of the Sea – Possible implications for International Air Law*, VIII ANNALS OF AIR & SPACE LAW, 167–200 (1983).

¹⁰¹ *Id.*

doms of the high seas, including in particular the right of navigation and overflight, are maintained.

The jurisdiction that the coastal state can exercise in the EEZ relates to the establishment and use of artificial islands, installations and structures, marine scientific research, and the protection and preservation of the marine environment.¹⁰² Thus, with respect to traditional freedoms of the high seas exercisable by all states, the coastal state is not granted any precedence or priority. Consequently, pursuant to the provisions of Article 87 of the UNCLOS 1982, and as far as the focus of this article is concerned, within the EEZ all states enjoy the freedom of overflight, referred to in Article 87 of the Convention, and other internationally lawful uses of the sea integral to that freedom and associated with the operation of aircraft.¹⁰³ This freedom of overflight must be exercised with due regard to the rights and duties of the coastal state, and aircraft must comply with the coastal state's laws and regulations adopted in accordance with the UNCLOS 1982 under Article 58(3).¹⁰⁴

Beyond the EEZ however, in addressing the legal regime of the high seas, Article 87 of the UNCLOS established the principle of freedom of the high seas by stating that:

1. The high seas are open to all States, whether coastal or landlocked. Freedom of the high seas is exercised under the conditions laid down by this Convention and by other rules of

¹⁰² UNCLOS, *supra* note 60, art 60. The rights of states and jurisdiction which can be exercised over artificial islands constitute an interesting facet of the EEZ's legal regime, especially in the light of the desire for States (such as the Netherlands) to construct artificial islands to serve as airports outside of territorial waters. Complex questions would necessarily arise regarding the rights of other States to use the airspace over such airports including the rights to use such an airport without bilateral air services agreements with the State that has constructed such an airport. For the various views on the issues arising, see Haanappel (3), *supra* note 71, at 23; E.J. Molenaar, *Airports at Sea: International Legal Implications*, 14 INT'L J. OF MARINE & COASTAL L. 371-386 (1999); H. Wassenbergh, *The Status and Use of an Airport on an Artificial Island*, XXIV AIR & SPACE L. 178 (1999); W. Lawrence, *Superports, Airports and Other Fixed Installations on the High Seas*, 6 J. OF MAR. L. & COM. 575-91 (1975).

¹⁰³ See 1 R. JENNINGS & SIR A. WATTS, *OPPENHEIM'S INTERNATIONAL LAW*, ch. 6 ¶ 343 (9th ed. 1992).

¹⁰⁴ On the subject of the airspace over the EEZ in general, see Kay Hailbronner, *Freedom of the Air and the Convention of the Law of the Sea*, 77 AM. J. INT'L L. 490, 509-10 (1983); Kay Hailbronner, *The Legal Regime of the Airspace Above the Exclusive Economic Zone*, VIII AIR LAW 30, 30-40 (1983); Paul P. Heller, *Airspace over Extended Jurisdictional Zones*, LAW OF THE SEA: NEGLECTED ISSUES, 135, 142-43 (John K. Gamble, Jr. ed., 1978); David J. Attard, *THE EXCLUSIVE ECONOMIC ZONE IN INTERNATIONAL LAW* 80 (1987).

international law. It comprises, *inter alia*, both for coastal and land-locked States:

- a. Freedom of navigation;
 - b. Freedom of overflight;
 - c. Freedom to lay submarine cables and pipelines subject to Part VI;
 - d. Freedom to construct artificial islands and other installations permitted under international law, subject to Part VI;
 - e. Freedom of fishing, subject to the conditions laid down in Section 2;
 - f. Freedom of scientific research, subject to Parts VI and XIII.
2. These freedoms shall be exercised by all States with due regard for the interests of other States in their exercise of the freedom of the high seas, and also with due regard for the rights under this Convention with respect to activities in the area.¹⁰⁵

From the foregoing, it is evident that the scope of the high seas extends to the superjacent airspace, to which the UNCLOS 1982 makes reference when establishing the freedoms mentioned hereinbefore, where states may exercise a freedom to fly over, individually or collectively. An area to which, it has been stated, "relatively little attention has been paid, despite the extent of that airspace and its commercial, strategic and environmental significance."¹⁰⁶ On the subject of freedom of overflight established by the UNCLOS 1982, a related rule under Articles 37, 38 and 39 must be noted, pertaining to the right of transit passage in straits used for international navigation. Under the right of transit passage, aircraft enjoy the right of unimpeded transit passage in straits used for international navigation between one part of the high seas, or an EEZ, and another part of the high seas or an EEZ.¹⁰⁷ "Transit passage" when applied to aircraft therefore mean the freedom of overflight solely for the purpose of continuous and expeditious transit of the strait.¹⁰⁸ In this respect, aircraft, while exercising the right of transit passage, must proceed without delay through or over the straits and must refrain from the threat or use of force against the sover-

¹⁰⁵ UNCLOS, *supra* note 60, art. 87.

¹⁰⁶ Philip Allot, *Mare Nostrum: A new International Law of the Sea*, 86 AM. J. INT'L L. 767 (1992); Marian Nash Leich, *Contemporary Practices of the United States Relating to International Law*, 84 AM. J. INT'L L. 237 (1990); GRIEF, *supra* note 29, at 1.

¹⁰⁷ ICAO Doc. LC/29-WP/81, 10/3/94 at 11.

¹⁰⁸ *Id.*

eignty, territorial integrity or political independence of the states bordering the state.¹⁰⁹ Such aircraft must refrain from any activities other than those incident to their normal modes of continuous and expeditious transit unless rendered necessary by force majeure or by distress.¹¹⁰ Furthermore, aircraft in transit passage, shall first observe the rules of the air (discussed *infra*) as they apply to civil aircraft, and second, at all times, monitor the radio frequency assigned by the competent internationally designated air traffic control authority or the appropriate international distress radio frequency.

Having given thought to the statements made above, the issue to consider here remains the freedom to provide S-APC services on board aircraft exercising the right to fly over the EEZ, international straits or the high seas respectively, including the Polar Regions, and the extent to which the concept of state sovereignty may or may not be applicable. From the foregoing, such activity cannot be rightly stated as being comprehensively regulated by the principal international instruments expected to regulate the use of the high seas and the superjacent airspace thereto, i.e. the UNCLOS 1982, and thus it is for this reason that the provisions of the 1944 Chicago Convention as well as the Constitution, Convention and Radio Regulations of the ITU, become pertinent. In this respect, and with regards to civil aviation and non-safety aeronautical communications in the airspace of the high seas, while the freedom of flight over the high seas is proclaimed in the UNCLOS 1982, the actual regulation of flight in this geographical area is specifically dealt with under the provisions of Article 12,¹¹¹ to the Chicago Convention, which provides that:

Each contracting State undertakes to adopt measures to insure that every aircraft flying over or manoeuvring within its territory and that every aircraft carrying its nationality mark, wherever such aircraft may be, shall comply with the rules and regulations relating to flight and manoeuvre of aircraft there in force. Each Contracting State undertakes to keep its own regulations in these respects uniform, to the greatest possible extent, with those established from time to time under this Convention. Over the high seas, the rules in force shall be those established under this

¹⁰⁹ *Id.*

¹¹⁰ *Id.*

¹¹¹ For an analysis of the provisions of Article 12 to the Chicago Convention, see Dr. Jean Carroz, *International Legislation on Air Navigation over the High Seas*, 26 J. AIR L. & COM. 158, 158-72 (1959).

Convention. Each State undertakes to insure the prosecution of all persons violating the regulations applicable.¹¹²

The provisions of Annex 2 to the Chicago Convention implement the Rules of the Air referred to in Article 12 of the Chicago Convention. The foreword to this annex provides, *inter alia*, "the Annex constitutes the Rules relating to the flight and manoeuvre of aircraft within the meaning of Article 12. Therefore over the high seas these rules shall apply without exception."¹¹³ The applicability of Annex 2 without exception is further reiterated in the Annexes' Chapter 2.1.1, while its relevance to the high seas is confirmed in Chapter 2.1.2.¹¹⁴ The effect of Article 12, then is that the ICAO Rules of the Air stated in Annex 2 are mandatory for flights over the high seas, and any discretion given in Article 37 of the Chicago Convention would not apply. A close examination of Annex 2 reveals that the regulation of communications set forth in Chapter 3.6.5 applies to controlled flights and deals with maintenance of listening watch, establishment of two-way communication and procedures on communication failure under the general heading of Air Traffic Control services.¹¹⁵ No mention is made of passenger non-safety communications, such as would be conducted by providing S-APC services directly to aircraft.

One other annex to the Chicago Convention, which ought to contain detailed regulations addressing the provision of S-APC services to aircraft over the high seas, is Annex 10, concerning aeronautical communications. Annex 10, comprised of four volumes, in essence implements specific provisions of the Chicago Convention, namely: Article 28 (Air navigation facilities and standard systems), Article 30 (Aircraft radio equipment), Article 69 (Improvement of air navigation facilities) and Article 83, respectively. However, Annex 10 makes reference to the ITU Radio Regulations, which on a close examination provide specific provisions relating to the conduct of aeronautical communications services for non-safety purposes.¹¹⁶ In this regard, and in order to ensure adequate protection for safety and regularity of flight messages, provisions are included in the Standards and Recommended Practices elaborated in the said Annex, thereby

¹¹² See Chicago Convention, *supra* note 55.

¹¹³ T. UNMACK, CIVIL AVIATION: STANDARDS & LIABILITIES 42 (1999).

¹¹⁴ *Id.* at 43.

¹¹⁵ *Id.*

¹¹⁶ ITU Radio Regulations art. 48.

guaranteeing safety related messages, which have priority and pre-emption over other non-safety aeronautical users.¹¹⁷ Because these principles of priority and pre-emption guarantee the precedence of communications for safety purposes, non-safety communications must cease immediately if necessary to permit transmissions of messages accorded a certain order of priority. Considered within this framework, one can presume that non-safety communications, such as S-APC services to passengers on board aircraft over the high seas, is by deduction permitted, albeit on a non-interference basis.

At this juncture it is important to stress that "the principle of the freedom of the high seas has been described as *multiforme et fugace*, and in truth it is a 'general principle of international law, or a policy concept, from which particular rules must be deduced. Its application to specific problems often fails to give precise results.'"¹¹⁸ This statement explains the difficulty one faces in attempting to provide answers to the questions posed above, bearing in mind the Rules of the Air set forth in the Chicago Convention's Article 12.¹¹⁹ First, whether S-APC services may be offered in geographical regions of this nature; second, if this is permitted, whether authorizations would be required; third, what sorts of authorizations would be required to be obtained; and fourth, from which authority. In this respect, Carroz submits that as no state may claim territorial sovereignty over the high seas or the airspace above, the obligation to insure compliance with the rules there in force can only rest with each contracting state with respect to the aircraft carrying its nationality mark.¹²⁰ The rules in force over the high seas established under the Chicago Convention are supposedly implemented in national laws and regulations.¹²¹ Thus the obligation of each contracting state to insure the prosecution of all persons violating the regulations applicable concerns only the violation of its own regulations by aircraft carrying its own nationality mark.

B. AIRSPACE OVER THE ARCTIC REGION

On the extent to which the regime set forth in the UNCLOS 1982 addressing the high seas is applicable to S-APC, the Arctic

¹¹⁷ *Id.* art. 51.

¹¹⁸ BROWNLIE, *supra* note 27, at 231.

¹¹⁹ Chicago Convention, *supra* note 55, art. 12.

¹²⁰ See Carroz, *supra* note 111, at 172.

¹²¹ *Id.*

Region merits special attention, not only because it is comprised of sea-ice without any underlying landmass, but also because it is a region over which the conduct of civil aviation continues to take place and to which varying claims of territorial sovereignty have been made.¹²² In the 1970's, although authors such as Pharand had observed that the freedom of overflight was being exercised in the superjacent airspace of the arctic, in present times, the existence of polar routes would indicate that the use of polar airspace, with the attendant right to conduct aeronautical communications for non-safety purposes such as S-APC, falls within the scope of arrangements involving individual states.¹²³ In this respect,

although the new cross-polar routes take international flights over previously untraveled territory, commercial airlines have been flying in the polar region north of the Arctic Circle for more than 40 years. In 1954, Scandinavian Airlines System (SAS) inaugurated DC-6B service from Copenhagen to Los Angeles via Sondre Stromfjord. In 1957, SAS began polar services from Copenhagen to Tokyo via Anchorage. From that time through the mid-1980s, flights through the polar region increased as Anchorage became the primary stopping point for passenger traffic between Europe and East Asia. In 1983, Finnair inaugurated the first non-stop service from Europe to Japan by flying from Helsinki north through the polar region and down the Bering Strait to Tokyo. Today, hundreds of flights operate each week over the interior of Russia en route between Europe and Asia. Similarly, a large volume of traffic crosses the Atlantic north of Iceland and the Arctic Circle on flights between Europe and the West Coast of North America. Development of the new cross-polar routes began in 1994, when the Russian government initiated work with the airlines and the international community to establish a series of polar routes through its airspace. By mid-1998, the current four cross-polar routes were defined and made available for demonstration flights. The first official polar-route flight by a commercial airline was conducted in July 1998. U.S. and Asian airlines then conducted more than 650 demonstration flights under special arrangements with Russian authorities. Today, air-

¹²² On the various schools of thought attempting to explain the legal status of the arctic sea, and the analysis of various writers regarding the "Sector Principle," see GRIEF, *supra* note 29, at 24-28; ARTHUR WATTS, *INTERNATIONAL LAW AND THE ANTARCTIC TREATY SYSTEM* 113 (1992). See also John C. Cooper, *Air Space Rights Over the Arctic* in *EXPLORATIONS IN AEROSPACE LAW* 171 (Ivan Vlasic ed., 1968).

¹²³ DONAT PHARAND, *THE LAW OF THE SEA OF THE ARCTIC* 176-79 (1973).

lines operate non-stop 747 and 777 service to destinations in Asia via the polar routes.¹²⁴

On a related note and pursuant to ICAO Assembly Resolution A33-13 (Use of Crosspolar Routes) it is stated that the establishment of a formal structure was the result of the combined efforts made by Canada, China, Finland, Germany, Iceland, Japan, Mongolia, Norway, the Russian Federation and the United States who demonstrated an unprecedented spirit of international cooperation in resolving this most complex task.¹²⁵ Furthermore, the resolution states that the structure became operational on February 1, 2001, with the announcement of the Russian Aviation Authorities about the implementation of the cross-polar airways system traversing the waters of the Arctic Ocean.¹²⁶ And more importantly, the "use of cross-polar routes shall be open for aircraft of all Contracting States in accordance with the provisions of the Convention on International Civil Aviation."¹²⁷

In both polar regions, the Arctic as well as Antarctica, use has been made of lines of longitude converging at the poles to produce a sector of sovereignty by a number of States (Canada and the former USSR).¹²⁸ Brownlie contends that "while the 'sector' principle does not give title which would ordinarily arise otherwise if the necessary State activity occurs, it represents a reasonable application of the principles of effective occupation¹²⁹ as they are now understood, and as they were applied in the *Eastern Greenland Case*."¹³⁰ However, if a national claim to exercise territorial sovereignty over Arctic land areas is valid, the claimant state's sovereignty extends to the territorial sea and the superjacent airspace in accordance with the normal rules of in-

¹²⁴ Polar Routes Offer New Opportunities, available at http://www.boeing.com/commercial/aeromagazine/aero_16/polar_route_opportunities.html (last visited on June 1, 2005).

¹²⁵ A33-13: Use of Crosspolar Routes, available at http://www.icao.int/icao/en/res/a33_13.htm (last visited Apr. 8, 2005).

¹²⁶ *Id.*

¹²⁷ *Id.*

¹²⁸ WATTS, *supra* note 122, at 113.

¹²⁹ Contemporary approaches to international law consider three primary matters with respect to sovereignty over territory: effective occupation, consent and the right of self-determination. The main basis for establishing sovereignty over territory today is by effective occupation, being the continuous and peaceful display of sovereignty. See BROWNLIE, *supra* note 26, at 136-42; DIXON & MCCORQUODALE, *supra* note 33, at 258; (Neth. v. U.S.) 2 RIAA 829 (1928).

¹³⁰ Legal Status of Eastern Greenland Case (Nor. v. Den.) P.C.I.J. Rep Ser A/B (1933) No. 53.

ternational law, i.e., the UNCLOS 1982 and 1944 Chicago Convention. This assertion should be considered in the context of the fact that the Arctic itself has been determined to be an area of floating sea-ice without any underlying land mass, and thus the basis for applying the sector principle in this region becomes questionable since "there is no polar land mass for sector claims to relate to and the land base for the sector is part of a land mass which is external to and distinct from, although adjacent to, the area covered by the sector claim."¹³¹ This assertion should also be understood in the light of the fact that the sector principle has neither been confirmed by rules of international law nor established as a principle of customary international law and is generally not considered by several writers on the subject, as a sufficient legal basis of title.¹³²

C. ANTARCTIC AIRSPACE

Quite like the Arctic region, Antarctica is not without its own international legal complexities. The principle difference however, with far reaching consequences, is that Antarctica is a land mass and remains subject to the provisions of the 1959 Antarctic Treaty¹³³ (AT) that came into force on 23 June 1961.¹³⁴ The effect of the AT, as far as the subject of sovereignty is concerned, has presumably frozen the existing claims¹³⁵ and potential claims¹³⁶ that could be made by states in Antarctica, noting that

¹³¹ WATTS, *supra* note 122, at 113.

¹³² *Id.*

¹³³ Antarctic Treaty, Aug. 4, 1961, 402 U.N.T.S. 71. The Antarctic Treaty together with five separate international agreements provide the rules which govern activities in Antarctica and collectively they are known as the Antarctic Treaty System (ATS). These five international agreements are: CONVENTION FOR THE CONSERVATION OF ANTARCTIC SEALS (1972); CONVENTION ON THE CONSERVATION OF ANTARCTIC MARINE LIVING RESOURCES (1980); Convention on the Regulation of Antarctic Mineral Resource Activities (1988); PROTOCOL ON ENVIRONMENTAL PROTECTION TO THE ANTARCTIC TREATY (1991).

¹³⁴ At present, forty-four countries have acceded to it. Consultative (voting) status is open to all countries who have demonstrated their commitment to the Antarctic by conducting significant research. Twenty-seven nations have Consultative status. See http://www.antarctica.ac.uk/About_Antarctica/Treaty/treaty_peru.html (last visited Apr. 8, 2005).

¹³⁵ "Seven States, namely: Chile, Argentina, United Kingdom, Norway, Australia, France and New Zealand had made claims to territorial sovereignty in Antarctica." RUDIGER WOLFRUM, *THE CONVENTION ON REGULATION OF ANTARCTICA MINERAL RESOURCE ACTIVITIES – AN ATTEMPT TO BREAK NEW GROUND* 34 (1991).

¹³⁶ "In 1958 both the United States of America and the USSR, had reserved all rights arising from the previous activities of their nationals, as a consequence of which both States were referred as States asserting a basis of claim." *Id.*

non-claimant states do not assert claims or recognize the legal validity of other claims. The area itself is defined under Article VI of the AT to mean "the area south of 60° South Latitude, including all ice shelves, but nothing in the present Treaty shall prejudice or in any way affect the rights, or the exercise of the rights, of any State under international law with regard to the high seas within that area."¹³⁷ Bearing the above facts in mind, an attempt to answer the questions pertaining to claims of sovereignty to parts of Antarctica by states, and by consequence the airspace thereto, would require an examination of the provisions of AT's Article IV which states that:

1. Nothing contained in the present Treaty shall be interpreted as:
 - b. a renunciation by any Contracting Party of previously asserted rights of or claims to territorial sovereignty in Antarctica;
 - b. a renunciation or diminution by any Contracting Party of any basis of claim to territorial sovereignty in Antarctica which it may have whether as a result of its activities or those of its nationals in Antarctica, or otherwise;
 - c. prejudicing the position of any Contracting Party as regards its recognition or non-recognition of any other State's rights of or claim or basis of claim to territorial sovereignty in Antarctica.
2. No acts or activities taking place while the present Treaty is in force shall constitute a basis for asserting, supporting or denying a claim to territorial sovereignty in Antarctica or create any rights of sovereignty in Antarctica. No new claim or enlargement of an existing claim, to territorial sovereignty in Antarctica shall be asserted while the present Treaty is in force.¹³⁸

In addition, the AT's Article VII (4) remains pertinent because it states that "Aerial observation may be carried out at any time over any or all areas of Antarctica by any of the Contracting Parties having the right to designate observers."¹³⁹

The provisions above must be construed in the light of the fact that were Antarctic claims to be regarded as valid, such claims would extend beyond the claimed territory (in this case a "sector") to the territorial sea and superjacent airspace. If this were to be the case, then only in the airspace beyond the claim-

¹³⁷ The Antarctic Treaty, 402 U.N.T.S. 71 (1961).

¹³⁸ *Id.*

¹³⁹ *Id.*

ant state's territory does the freedom of overflight prevail. Whereas, if a territorial claim is invalid, or if there is no claim, the waters adjacent to the coast would be considered as high seas and the airspace above those waters would be subject to the international regime of the airspace of the high seas, i.e., the UNCLOS 1982 and Chicago Convention of 1944. With regards to the validity of Antarctic territorial claims, (of which diverse views have been made) it is contended by Rothwell that:

The provisions of the AT have sought to take into account the positions of each of the various parties which had an interest in Antarctica at the time of the Treaty's negotiation and can be interpreted to mean:

1. The treaty is not to be taken as a renunciation of existing claims to territorial sovereignty by any party.
2. The treaty is not to be taken as a renunciation or diminution of any basis of claim to territorial sovereignty which any party may have.
3. The treaty does not prejudice the position of any party as regards its recognition or non-recognition of any other party's right of or claim to territorial sovereignty in Antarctica.¹⁴⁰

The reality of this ambiguous situation, as far as claims to sovereignty in Antarctica and attendant airspace is concerned, is evidenced by the continuing claims to sovereignty and jurisdiction by States even in recent times.¹⁴¹

IV. SOVEREIGNTY AND INTERNATIONAL TRADE LAW ASPECTS OF INTERNATIONAL ECONOMIC LAW

Prior to 1996, the international trade in services and the regulation of such trade had been the subject of bilateral agreements dealing with the treatment of nationals of the parties thereto or regional agreements, which could also be bi-lateral, constituting free trade areas or customs unions. Recognizing the growing importance of trade in services for the growth and development of the world economy it became necessary to establish a multilat-

¹⁴⁰ DONALD R. ROTHWELL, *THE POLAR REGIONS AND THE DEVELOPMENT OF INTERNATIONAL LAW* 76 (1996).

¹⁴¹ See Proclamation (Maritime Zone) No. 1 of 1993 in UNITED NATIONS, DIVISION FOR OCEAN AFFAIRS AND THE LAW OF THE SEA, OFFICE OF LEGAL AFFAIRS, *LAW OF THE SEA BULLETIN* No. 24, p.47 (1993), wherein the United Kingdom established a 200-mile maritime zone around South Georgia and the Sandwich Islands. Also by Proclamation of 26 July 1994, Australia established a 200 mile EEZ in relation, *inter alia*, to the external territories, which include the Australian Antarctic Territory. *Id.*

eral framework of principles and rules for trade in services with a view to the expansion of such trade under conditions of transparency and progressive liberalization and as a means of promoting the economic growth of all trading partners and the development of developing countries.¹⁴² In the context of satellite communications it has been contended that the first prerequisite for an open, competitive market is a legal and regulatory structure that does not discriminate in favor of existing service providers, or otherwise limit the number of independent service providers that are permitted to provide services to consumers. Vigorous competition between a large number of service providers is believed to encourage investment in infrastructure, provision of new services, improvements in quality and availability of lower prices. The World Trade Organization (WTO) founded upon the 1994 General Agreement on Tariffs and Trade (GATT) is dedicated to lowering or removing trade barriers in order to provide the open and competitive markets that the global economy requires if it is to successfully meet the needs of its six billion inhabitants.¹⁴³ Upon conclusion of the Uruguay Round of trade talks in 1994 and the execution of the General Agreement on Trade in services (GATS) under the auspices of the WTO, participating states concluded that issues concerning, *inter alia*, liberalization in the telecommunications sector, were too sector-specific to be fully addressed by the general regulatory principles set forth in the GATS.¹⁴⁴

In total, 116 nations participated in the Uruguay Round negotiations concluded in December, 1993, achieving a new legal framework for international trade in services that would be administered by the newly created WTO, known as the GATS.¹⁴⁵ The GATS agreement operates on three levels:

1. The main text contains general principles and obligations that all members have to apply on issues concerning total coverage of internationally traded services (Article I), the Most Favoured Nation principle of non-discrimination (Article II), national treatment (Article II), transparency

¹⁴² General Agreement on Trade in Services (1994), available at http://www.wto.org/english/docs_e/legal_e/26-gats.doc (last visited March 31, 2005) [hereinafter GATS].

¹⁴³ *Draft Final Report on ITU-D Question 17/1: Satellite Regulation in Developing Countries*, 18-23, ITU Document RGQ17/1/029-E (Sept. 4, 2003).

¹⁴⁴ M.E. Davis, *The WTO Agreement on Basic Telecommunications Services*, 19 PAC. TELECOMM. REV. 10-14 (1997).

¹⁴⁵ GATS, *supra* note 142.

(Article III), regulations (Article VI), international payments (ARTICLE XI), individual countries commitments (Part III, Articles XVI, XVII and XVIII) and progressive liberalization (Article XIX);

2. Annexes, dealing with rules for specific sectors; and
3. Individual countries specific commitments to provide access to their markets.¹⁴⁶

The schedules of services are the means by which each WTO member makes legally binding commitments on market access (Article XVI) and national treatment (Article XVII).¹⁴⁷ The Schedules may contain additional commitments (Article XVIII) that create an open-ended possibility to negotiate commitments on measures affecting trade in services that are not captured by market access and national treatment.¹⁴⁸ Whether full or limited access is granted, members may not take measures that reduce the level of access inscribed in their schedules.¹⁴⁹ In addition to the rules described above, participating states, concluding that issues concerning, *inter alia*, liberalization in the telecommunications sector were too sector-specific to be fully addressed by the general regulatory principles set forth in the GATS, went ahead on February 15th of 1997, after negotiations representing sixty-eight countries, to conclude an agreement on basic telecommunications (BTA). This caused the regulatory disciplines contained in the GATS and the Telecommunications Annex of the GATS to become applicable to all telecommunications services included in the WTO Members' schedules, plus further broad regulatory principles unique to the BTA, embodied in a document known as the "Reference Paper" intended to address issues¹⁵⁰ including: competition safeguards; interconnection; universal service; transparency of licensing; independence of regulators; and scarce resource allocation.¹⁵¹ At the close of three-year negotiations in February 1997, the commitments of sixty-nine governments (contained in fifty-five schedules) were

¹⁴⁶ Tare Brisibe, *Policy & Regulatory Developments in Asia-Pacific after the GMPS-MoU and the WTO General Agreement on Trade in Services: A Case for GMPCS System Operators*, 21 PAC. TELECOMM. REV. 31 (2000).

¹⁴⁷ *Id.*

¹⁴⁸ *Id.*

¹⁴⁹ *Id.* at 32.

¹⁵⁰ See Philip L. Spector, *The World Trade Organization Agreement on Telecommunications*, 32 INT'L LAW. 217 (1998).

¹⁵¹ *Id.*

annexed to the Fourth Protocol of the GATS.¹⁵² For satellite-related communications, thirty-nine schedules (fifty-three governments) committed on some or all types of mobile satellite telecommunications services. In addition, ten governments scheduled commitments on value-added telecommunications services, which in some cases included satellite communications.¹⁵³ On February 5, 1998, the results of the WTO negotiations on market access for basic telecommunications services formally entered into force.¹⁵⁴

The BTA, its associated reference paper and the WTO/GATS are, when combined, of great significance to the circulation of mobile satellite user terminals - including Aeronautical earth stations by which S-APC services can be offered - especially because fifty-three governments¹⁵⁵ committed on some or all types of satellite based mobile service sector 'o,' described as an "other" category in the GATS Services Sectoral Classification List, which breaks down telecommunications into fourteen sub-sectors. It can be deduced that the combined effect of the GATS and BTA would enhance the ability for, *inter alia*, global mobile satellite systems to surmount regulatory obstacles to the provision of telecommunications services, including S-APC, on a global basis. Dixon and McCorquodale, bearing the concept of sovereignty in mind, have argued that the sovereignty of states could be considered to be under threat by the interaction and interdependence of the world economy and the resulting inability of governments to give force to national policy objectives because of the ratification of international economic agreements.¹⁵⁶ This argument, based upon circumstances that have been examined by other writers,¹⁵⁷ is based upon separate analysis¹⁵⁸ drawing upon the practices of the International Monetary Fund (IMF)

¹⁵² *Highlights of the Basic Telecommunications Commitments and Exemption*, available at http://www.wto.org/english/tratop_e/serv_e/telecom_highlights_commit_exempt_e.htm (last visited Feb. 9, 2005) [hereinafter *Telecommunications Highlights*].

¹⁵³ *Id.*

¹⁵⁴ See Davis, *supra* note 144, at 10-14; Spector, *supra* note 160, at 217-22; Brisbane, *supra* note 156, at 28.

¹⁵⁵ *Telecommunications Highlights*, *supra* note 152.

¹⁵⁶ DIXON & MCCORQUODALE, *supra* note 33, at 549.

¹⁵⁷ P. A. Salin, *Non-Trade Globalization Issues and Space Communications*, 7 TELECOMM. & SPACE J. 130, 130-58 (2001).

¹⁵⁸ See WTO Appellate Board Report on Japan - Taxes on Alcoholic Beverages, WT/DS8/AB/R, WT/DS10/AB/R, WT/DS11/AB/R, 16 (November 11, 1996); see also A. Orford *Locating the International: Military and Monetary Interventions After the Cold War*, 38 MARV. INT'L L.J. 443, 464-67, 470 (1997).

and the WTO, respectively, and concludes that both the ratification of international economic agreements and the application of these agreements by the international economic institutions have placed significant limits on state sovereignty.¹⁵⁹

The argument presented by Dixon and McCorquodale can be put to test by referring to the actual workings of the dispute resolution panel of the WTO.¹⁶⁰ In the year 2000, a request for consultations was filed before the Dispute Settlement Body of the WTO by the United States, in accordance with Article 4 of the Understanding on Rules and Procedures Governing the Settlement of Disputes and Article XXIII of the GATS, regarding Mexico's commitments and obligations under the GATS with respect to basic and value-added telecommunications services.¹⁶¹ The request for consultations stated *inter alia* that Mexico's GATS commitments and obligations require Mexico to:

- Provide market access and national treatment for basic and value-added telecommunications services (GATS Articles XVI and XVII and Mexico's Schedule of Specific Commitments annexed to the GATS);
- Maintain appropriate measures for the purpose of preventing a major supplier of basic telecommunications services from engaging in or continuing anti-competitive practices, such as anti-competitive cross-subsidization (Section 1 of the Reference Paper on Pro-Competitive Regulatory Principles (the Reference Paper), which Mexico has inscribed in its Schedule of Specific Commitments as "additional commitments" pursuant to GATS Article XVIII);
- Ensure interconnection with a major supplier at any technically feasible point in the network; under non-discriminatory terms, conditions and rates; in a timely fashion; and at cost-oriented rates that are transparent, reasonable, and sufficiently unbundled; and to provide recourse to an independent domestic body to resolve interconnection disputes within a reasonable period of time (Section 2 of the Reference Paper);
- Administer any universal service obligation in a transparent, non-discriminatory, and competitively neutral manner that is not more burdensome than necessary for the kind of univer-

¹⁵⁹ DIXON & MCCORQUODALE, *supra* note 33, at 549.

¹⁶⁰ World Trade Organization, *Mexico – Measures Affecting Telecommunications Services – Request for Consultations by the United States*, WT/DS204/1, S/L/ 88 (Aug. 29, 2000).

¹⁶¹ *Id.*

sal service defined by Mexico (Section 3 of the Reference Paper);

- Ensure that its regulatory body is not accountable to any supplier of basic telecommunications services and that the regulator's decisions and procedures are impartial with respect to all market participants (Section 5 of the Reference Paper);
- Administer in a reasonable, objective, and impartial manner its laws, rules, regulations, and other measures of general application affecting trade in basic and value-added telecommunications services (GATS Article VI:1); and
- Ensure access to and use of public telecommunications transport networks and services on reasonable and non-discriminatory terms and conditions for the supply of basic and value-added telecommunications services and ensure that relevant information on conditions affecting access to and use of public telecommunications transport networks and services is publicly available (GATS Annex on Telecommunications, Sections 4 and 5).¹⁶²

The request filed by the United States alleged further that since the entry into force of the GATS, the Government of Mexico has adopted or maintained anti-competitive and discriminatory regulatory measures, tolerated certain privately-established market access barriers, and failed to take needed regulatory action in Mexico's basic and value-added telecommunications sectors. These acts and failures to act, in the opinion of the United States, raised serious questions regarding whether Mexico was in compliance with its GATS commitments in these sectors, stating that Mexico:

- Enacted and maintained laws, regulations, rules, and other measures that deny or limit market access, national treatment, and additional commitments for service suppliers seeking to provide basic and value-added telecommunications services into and within Mexico;
- Failed to issue and enact regulations, permits, or other measures to ensure implementation of Mexico's market access, national treatment, and additional commitments for service suppliers seeking to provide basic and value-added telecommunications services into and within Mexico;
- Failed to enforce regulations and other measures to ensure compliance with Mexico's market access, national treatment, and additional commitments for service suppliers seeking to provide basic and value-added telecommunications services into and within Mexico;

¹⁶² *Id.*

- Failed to regulate, control and prevent its major supplier, Teléfonos de México (Telmex), from engaging in activity that denies or limits Mexico's market access, national treatment, and additional commitments for service suppliers seeking to provide basic and value-added telecommunications services into and within Mexico; and
- Failed to administer measures of general application governing basic and value-added telecommunications services in a reasonable, objective, and impartial manner, ensure that decisions and procedures used by Mexico's telecommunications regulator are impartial with respect to all market participants, and ensure access to and use of public telecommunications transport networks and services on reasonable and non-discriminatory terms and conditions for the supply of basic and value-added telecommunications services.¹⁶³

In light of the above, the United States considered that the action and inaction described might be inconsistent with Mexico's GATS commitments and obligations, including Articles VI, XVI, and XVII; Mexico's additional commitments under Article XVIII as set forth in the Reference Paper inscribed in Mexico's Schedule of Specific Commitments, including Sections 1, 2, 3 and 5; and the GATS Annex on Telecommunications, including Sections 4 and 5.¹⁶⁴ By November, 2003, in what was regarded as a key decision for United States long-distance telecommunications companies, the WTO issued a preliminary ruling regarding price-setting for cross-border services.¹⁶⁵ Accordingly, the WTO panel ruled that charges to United States telecommunications companies for the connection of long-distance calls to the network of dominant domestic operator Telmex were artificially high and not based on cost.¹⁶⁶ Telmex has the option to appeal the decision. Subject to any appeals, Telmex must lower its interconnection rates for United States carriers or face sanctions. On a consequential note, the Mexican telecommunications regulator¹⁶⁷ Cofetel is currently taking steps to amend the regula-

¹⁶³ *Id.*

¹⁶⁴ *Id.*

¹⁶⁵ See DSB Adopts Panel Report on Mexican Measures Affecting Telecommunications Services from United States, available at http://www.wto.org/english/news_e/news04_e/dsb_1june04_e.htm (last visited Feb. 7, 2005).

¹⁶⁶ *Id.*

¹⁶⁷ *Id.*

tions pertaining to long-distance telecom services into and from Mexico.¹⁶⁸

V. SOVEREIGNTY IN OUTER SPACE

In the preceding sections we examined the extent and effect that the principle of state sovereignty plays within different activities and jurisdictions, pertaining to the provision of S-APC. Realizing that S-APC constitutes a dynamic activity taking place within the various legal and regulatory regimes in force, it remains to be seen whether this pivotal sovereignty principle applies to outer space as well. In this respect, the relevant international instrument that sheds light on the matter is the Outer Space Treaty of 1967 and the provisions of its Article II thereto, which provides that "Outer Space, including the Moon and other celestial bodies, is not subject to national appropriation by claim of sovereignty, by means of use or occupation, or by any other means."¹⁶⁹ If this declaration were literally interpreted, it would mean that states do not exercise sovereignty in outer space. However, the spacecraft/satellite(s) located in space orbit over which radiocommunications signals by which S-APC services are offered remain subject to the jurisdictional powers exercised by states albeit under separate provisions of the Outer Space Treaty including, *inter alia*, Articles VI, VII, and VIII.

In this respect, the Outer Space Treaty of 1967 makes provision, in its Articles VI¹⁷⁰ and VII¹⁷¹ respectively, for the responsi-

¹⁶⁸ For an analysis of the impact of the WTO treaty and its consequences vis-à-vis dispute settlement in international law, see John H. Jackson, *International Law Status of WTO Dispute Settlement Reports: Obligation to comply or Option to "Buy Out"*, 98 AM. J. INT'L L. 109 (2004); Joost Pauwelyn, *The Role of Public International Law in the WTO: How far can We Go*, 95 AM. J. INT'L L. 535 (2001).

¹⁶⁹ See BLACKSTONE'S INTERNATIONAL LAW DOCUMENTS 119 (Malcolm D. Evans ed. 2001).

¹⁷⁰ "States Parties to the Treaty shall bear international responsibility for national activities in outer space, including the moon and other celestial bodies, whether such activities are carried on by governmental agencies or by non-governmental entities, and for assuring that national activities are carried out in conformity with the provisions set forth in the present Treaty. The activities of non-governmental entities in outer space, including the moon and other celestial bodies, shall require authorization and continuing supervision by the appropriate State Party to the Treaty. When activities are carried on in outer space, including the moon and other celestial bodies, by an international organization, responsibility for compliance with this Treaty shall be borne both by the international organization and by the States Parties to the Treaty participating in such organization." *Id.* art. VI.

bility and liability of states involved in space activities. Specifically, Article VI imposes responsibility on state parties to the treaty to ensure that any space activity carried out by government agencies or non-governmental entities is performed safely and in conformity with the Outer Space Treaty and existing regulations of that state. Space activities performed by non-governmental entities are also subject to continual supervision by that state party. Thus, where the provision of S-APC services are conducted by private commercial entities, it would be the responsibility of a state party to the treaty to ensure that any such activity is performed in compliance with the provisions of the Outer Space Treaty and, hence according to Article III, with international law.¹⁷² In other words, before any space-segment activity aimed at providing S-APC services can take place, the commercial entity wishing to perform such operations would have to fulfill any Outer Space Treaty requirements as well as other requirements established by the state party to the Outer Space Treaty responsible for the activities of that commercial entity. One writer¹⁷³ recommends that amongst the most important would be the receipt of prior authorization, also referred to as a license or permit.¹⁷⁴

VI. CONCLUSION

Earlier on in this article, two pertinent issues were posed in the context of providing S-APC services on-board aircraft overflying the airspace of states, as well as the airspace above the open oceanic and polar regions, wherein the said states may or may not exercise sovereign rights. The first was the extent to which a state that is overflown can control certain activities

¹⁷¹ "Each State Party to the Treaty that launches or procures the launching of an object into outer space, including the moon and other celestial bodies, and each State Party from whose territory or facility an object is launched, is internationally liable for damage to another State Party to the Treaty or to its natural or juridical persons by such object or its component parts on the Earth, in air or in outer space, including the moon and other celestial bodies." *Id.* art. VII.

¹⁷² "States Parties to the Treaty shall carry on activities in the exploration and use of outer space, including the moon and other celestial bodies, in accordance with international law, including the Charter of the United Nations, in the interest of maintaining international peace and security and promoting international co-operation and understanding." *Id.* art. III.

¹⁷³ See Nandasiri Jasentuliyana, *Regulation of Space Salvage Operations: Possibilities for the Future*, 22 J. SPACE L. 5 (1994).

¹⁷⁴ PAMELA L. MEREDITH & GEORGE S. ROBINSON, *SPACELAW: A CASE STUDY FOR THE PRACTITIONER: IMPLEMENTING A TELECOMMUNICATIONS SATELLITE BUSINESS CONCEPT* 42 (1992).

onboard a foreign-registered aircraft within its territory and secondly, whether the right to overflight permits the use of facilities for non-safety communications, with regards to the extent to which a state that is overflown can control certain activities onboard a foreign-registered aircraft within its territory. Note that by the year 1990, there were only thirteen National Telecommunications Regulatory Authorities (NTRA's).¹⁷⁵ Since that time, the number has roughly doubled every four to five years.¹⁷⁶ Today there are no less than 123 NTRAs. Even in the most deregulated environment, the consequences of effective enforcement remains self-evident: to give effect to those rules deemed necessary to maintain order in the sector; to facilitate stability, predictability, progress and investment; to deter wrongdoing; and to maximize social and corporate welfare. Most NTRA's derive their power to enforce regulation first and foremost from their domestic enabling legislation.¹⁷⁷ In other words, the statutes by which states exercise their sovereign rights through "particular rights" or "jurisdiction."¹⁷⁸ In addition to conferring power to dispose of substantive matters,¹⁷⁹ enabling legislation generally empowers the regulatory authority to: (i) inquire; (ii) collect information; (iii) investigate; (iv) determine culpability, and (v) impose penalties.¹⁸⁰ In addition, some regulatory authorities place conditions for enforcement or even enforcement mechanisms themselves in the licenses they issue.¹⁸¹

¹⁷⁵ See ITU, TRENDS IN TELECOMMUNICATION REFORM 2002 at 15. [hereinafter ITU TRENDS]

¹⁷⁶ *Id.*

¹⁷⁷ An exception to this is Columbia, where the regulatory authority is not responsible for enforcement actions in the telecom sector. Rather, an entirely different government agency maintains this responsibility. See *id.* at 45.

¹⁷⁸ BROWNLIE, *supra* note 26, at 105; BIN CHENG (1), *supra* note 37, at 434-37.

¹⁷⁹ For example, Article 8 of Morocco's Law 24-96, requires the ANRT to establish terms and conditions for interconnection and to establish the procedure for submitting interconnection disputes. The ANRT also must establish the rules governing the radio frequency spectrum. See *Effective Regulation: Case Study - Morocco*, ITU TRENDS, *supra* note 175, at 23.

¹⁸⁰ ITU, REPORT OF THE RAPPOREUR'S GROUP ON QUESTION 18/1 (March 18, 2003) [hereinafter ITU RAPPOREUR'S GROUP].

¹⁸¹ In Egypt, for example, a system to receive and investigate complaints and repair faults must be specified in a license. In Morocco, quality of service standards are included (and presumably enforced by the NTRA) as license conditions. In others, e.g., Singapore and Brazil, quality of service standards are adopted as regulations applicable to all service providers. Regulatory authorities of the European Union member states must follow the relevant directives issued by this supra-national body.

Second only in importance to an NTRA's enabling act or statute are the day-to-day practices and procedures it employs to implement its laws. In some cases, enforcement procedures or certain of their components are specified in the enabling statute.¹⁸² Some NTRA's have developed separate procedures for industry violators and complaints by consumers/end users.¹⁸³ In either case, as many examples indicate, enforcement procedures generally include: (i) providing notice of the alleged infraction; (ii) providing an opportunity to respond; (iii) issuing interim decisions or orders; and (iv) imposing sanctions.¹⁸⁴ Many NTRA's have the power to order operators to produce individual documents or records, and can enter an operator's premises and seize those documents if operators do not comply. Similarly, some regulators may conduct on-site tests in order to determine an operator's compliance with type-approval, quality of service or radio communication non-interference requirements. Because these are fairly intrusive powers, agency officials may often require judicial warrants before they exercise their search and seizure powers. In other countries, however, those powers are granted by statute and may require no judicial pre-clearance.¹⁸⁵

While such measures as described above may well suffice with regards to certain telecommunication services provided over terrestrial based infrastructure. The matter assumes a fair degree of complexity when one considers the inconsistencies surrounding the use by passengers of communications facilities for non-safety purposes, on-board aircraft relying upon space - based satellite platforms and earth - based ground infrastructure, within legal and regulatory regimes that govern: outer space; the oceans and polar regions; international air transport; international satellite telecommunications; trade aspects of international economics; the state where the aircraft is certified and registered; the state being flown over; and the state where the ground facilities may have been established. The ability to regulate and enforce satellite communications in this context does put the sovereignty concept to test and without the ability to enforce laws, a national regulatory regime can be truly rendered meaningless.

¹⁸² ITU RAPPORTEUR'S GROUP, *supra* note 180.

¹⁸³ *Id.*

¹⁸⁴ ITU TRENDS, *supra* note 175. Some NTRA's, e.g., Zimbabwe's POTRAZ, do not have the authority to levy fines. This is carried out by the courts. *See* Contribution of Zimbabwe to ITU-D Question 18/1 at 2 (Jan. 2, 2004).

¹⁸⁵ *Id.* at 47.

