THE SKY IS NOT THE LIMIT:

A REVIEW OF U.S. SPACE TRANSPORTATION LAW FROM A WTO PERSPECTIVE

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ABSTRACT

This paper analyzes the compatibility of the Commercial Space Launch Act, as part of the US regulatory regime applicable to space transportation, with the law of the World Trade Organization through a discussion of the U.S. legislative efforts in the field of space-related activities and in light of the WTO Members' obligations as to measures affecting trade in services. The paper justifies the linking of space law to the regulatory regime of the World Trade Organization and explains the importance, in both the international and national contexts, of identifying space launch as an air or space service. The paper argues that U.S. space transportation law may violate the WTO's principle of MFN and the same is not excused under the GATS general exception clause. Therefore, the paper concludes that the U.S. CSLA needs to be modified and brought into compliance with WTO law to avoid potential international trade disputes in the field of space transportation.

I. Introduction

Since the time of the Cold War, the United States has always been at the forefront of space exploration and has consistently implemented policies and laws to support its efforts. Over

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the years, however, private entities have come to substitute the U.S. federal space agency in many space-related activities that used to be within the exclusive authority of the federal government. Moreover, quite recently, these same entities have realized that additional business opportunities exist in the field of space transportation and tourism. Therefore, in response to the private industry's initiative in the space transportation sector and in an attempt to comply with U.N. space treaties, the U.S. Congress has enacted, over the past 20 years, several pieces of legislation with the goal of serving private, public, and international "space transport" interests.

This paper will address one of the regulatory regimes applicable to space transportation, namely the Commercial Space Launch Act (CSLA), and will analyze its compatibility with the law of the World Trade Organization (WTO). In particular, Part II will define the content and perimeter of space law; it will first introduce the United Nations space agreements that have been agreed upon by many of the world's governments and will then distinguish this sphere of public international law from national space law. As to the latter, it will list U.S. legislative efforts in the field of space-related activities and will illustrate the evolution of U.S. commercial space transportation beginning with the Commercial Space Launch Act of 1989. Finally, Part II will review current U.S. space transportation law and will analyze space launch licensing requirements under the recently amended Commercial Space Launch Act. Part III will offer a description of the structure of the General Agreement on Trade in Services and will review WTO Members' obligations as to measures affecting trade in services. Part IV will present a justification for linking space law to the regulatory regime of the World Trade Organization and will explain the importance, in both the international and national contexts, of identifying space launch as an air or space service. Finally, this Part will review the GATS general obligation of most-favored-nation treatment (MFN). Part V will review the United States' specific commitments under the GATS, and will analyze the obligation of national treatment as applied to the service sectors of air

transport, space tourism, entertainment, and space transport. In addition, Part V will review the compatibility of the United States' CSLA licensing requirements under the GATS obligation of most-favored-nation treatment and will argue that U.S. space transportation law may violate the WTO's principle of MFN. Finally, this Part will address the GATS general exception clause and will show that the United States' failure to comply with WTO law may not be excused under this provision. Part VI will conclude this paper by arguing that U.S. CSLA needs to be modified and brought into compliance with WTO law to avoid potential international trade disputes in the field of space transportation.

II. Space Law[2]

According to the Office for Outer Space Affairs, the United Nations department responsible for promoting international cooperation in the peaceful uses of outer space, space law is defined as "the body of law applicable to and governing space-related activities."[3] Although the definition of space law generally refers to the principles and rules of international law set forth in the international space law treaties that have been concluded under the auspices of the United Nations, the term also includes "international agreements, treaties, conventions, rules and regulations of international organizations . . . national laws, rules and regulations,

[2] In the United States, the University of Mississippi Law School was the first to offer a space law course on a regular basis. In Italy, where the author completed his undergraduate legal education, the University of Padua's Department of International Studies has been offering an optional course in space law since 1983. *See* G. Gal*, Study and Teaching Space Law*, *in* SPACE LAW: DEVELOPMENT AND SCOPE, (1992) at 221-222.

[3] United Nations Office for Outer Space Affairs, Space Law: Frequently Asked Questions, *available at* http://www.oosa.unvienna.org/oosa/en/FAQ/splawfaq.html#Q1 (accessed 28 March, 2010) [hereinafter U.N. Office for Outer Space Affairs]. The U.N. Office for Outer Space Affairs was established by the U.N. General Assembly in December 1958. It became a unit within the Department of Political and Security Council Affairs in 1962, when the permanent Committee on the Peaceful Uses of Outer Space met for the first time, and was transformed into the Outer Space Affairs Division of that Department in 1968. In 1992, the Division was transformed into the Office for Outer Space Affairs within the Department for Political Affairs. *See* U. N. Office for Outer Space Affairs, *available at* http://www.oosa.unvienna.org/oosa/en/OOSA/index.html (accessed 28 March, 2010).

executive and administrative orders, and judicial decisions."[4] Space law is not a "self-evident or nature-given" body of laws but a system of regulations that "we need . . . to implement some international obligations and protect some important legal as well as financial interests of the State concerned, with a view in particular to responsibility and liability."[5]

2.1 International Space Law

"International [s]pace [l]aw is a monumental achievement in human development."[6] By laying down rights and obligations resulting from all activities directed towards outer space and within it, international space law provides the basis for legitimate relationships between space-faring countries while assuring that outer space use and exploration will be carried out "in the interest of mankind as a whole, [taking into consideration the] protection to life, terrestrial and non-terrestrial, wherever it may exist."[7] "The legal order for outer space that exists today is closely related to the international community's efforts to prevent the United States and the former Soviet Union from entering into an arms race in space."[8] Since the launch of the first Earth-orbiting artificial satellite by the Soviet Union in 1957, space law has developed into a substantial body of international and domestic law dealing with the use and exploration of outer space.[9] Shorty after the success of the Sputnik 1, the United Nations General Assembly established the United Nations Committee on the Peaceful Use of Outer Space (the "UNCOPUOS") and delegated to it the task of developing international space

[4] U.N. Office for Outer Space Affairs, *supra* note 2.

[5] U.N. OFFICE FOR OUTER SPACE AFFAIRS, MEETING INTERNATIONAL RESPONSIBILITIES AND ADDRESSING DOMESTIC NEEDS 2006 at 99, U.N. Doc. ST/SPACE/32, U.N. Sales No. E.06.I.11 (2006).

[6] N.C. GOLDMAN, AMERICAN SPACE LAW: INTERNATIONAL AND DOMESTIC 133 (2ND ED. 1996).

[7] *See* I. H. PH. DIEDERIKS-VERSCHOOR & V. KOPAL, AN INTRODUCTION TO SPACE LAW (3RD ED., 2008) AT 7.

[8] U.N. INSTITUTE FOR DISARMAMENT RESEARCH, COMMON SECURITY IN OUTER SPACE AND INTERNATIONAL LAW at 9, U.N. Doc. UNIDIR/2005/29, U.N. Sales No. GV.E.06.0.3 (2006).

[9] *See* S. Freeland, *Up, Up and… Back: The Emergence of Space Tourism and Its Impact on the International Law of Outer Space*, (2005) 6 CHI. J. INT'L L. 4; B. Beck, *The Next, Small, Step for Mankind: Fixing the Inadequacies of the International Space Law Treaty Regime to Accommodate the Modern Space Flight Industry*, (2009) 19 ALB. L.J. SCI. & TECH. 3.

law.[10] Under the auspices of the UNCOPUOS, five main multilateral treaties have been finalized: the "Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and other Celestial Bodies,"[11] the "Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space,"[12] the "Convention on International Liability for Damages Caused by Space Objects,"[13] the "Convention on Registration of Objects Launched into Outer Space,"[14] and the "Agreement Governing the Activities of States on the Moon and other Celestial Bodies."[15]

a) The Outer Space Treaty[16]

Through the Outer Space Treaty, the U.N. General Assembly recognized that the exploration and use of outer space for peaceful purposes is in the common interest of all mankind.[17] Under the Treaty, the ratifying countries pledge to carry out the exploration and use of outer space "for the benefit and in the interest of all countries, irrespective of their degree of

[10] *See* U.N. Office for Outer Space Affairs, United Nations Committee on the Peaceful Uses of Outer Space, *available at* http://www.oosa.unvienna.org/oosa/en/COPUOS/copuos.html (accessed 29 March 2010).

[11] Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and other Celestial Bodies, (1967) 6 I.L.M. 386 [hereinafter Outer Space Treaty].

[12] Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space, (1968) 7 I.L.M. 149 [hereinafter Rescue Agreement].

[13] Convention on International Liability for Damages Caused by Space Objects, (1971) 10 I.L.M. 965 [hereinafter Liability Convention].

[14] Convention on Registration of Objects Launched into Outer Space, (1975) 14 I.L.M. 43 [hereinafter Registration Convention].

[15] Agreement Governing the Activities of States on the Moon and other Celestial Bodies, (1979) 18 I.L.M. 1434 [hereinafter Moon Agreement].

[16] For an overview of the Outer Space Treaty, *see generally* DIEDERIKS-VERSCHOOR & KOPAL, *supra* note 6; Jasentuliyana, *supra* note 1; V. KAYSER, LAUNCHING SPACE OBJECTS: ISSUES OF LIABILITY AND FUTURE PROSPECTS (2001); SPACE LAW: CURRENT PROBLEMS AND PERSPECTIVES FOR FUTURE REGULATION (MARIETTA BENKO & KAI-UWE SCHROGL EDS., 2005); BIN CHENG, STUDIES IN INTERNATIONAL SPACE LAW (1997); CARL Q. CHRISTOL, SPACE LAW: PAST, PRESENT, AND FUTURE (1991); *see also* GOLDMAN, *supra* note 5, at 69-77; U.N. OFFICE FOR OUTER SPACE AFFAIRS, *supra* note 4, at 11-20.

[17] *See* Outer Space Treaty Art. 1; United Nations Office for Outer Space Affairs, *available at* http://www.oosa.unvienna.org/oosa/en/SpaceLaw/treaties.html (accessed 28 March 2010).

economic or scientific development, and shall be the province of all mankind."[18] In order to fulfill these goals, the Treaty provides, *inter alia*, that

> "[o]uter space shall not be subject to appropriation by claim of sovereignty, by means of use or occupation, or by any other means[;] Activities in the exploration and use of outer space must be carried out in accordance with international law . . . in the interest of maintaining international peace and security[;] no nuclear weapon or any other kinds of weapons of mass destruction shall be allowed to be placed in orbit or around the Earth[;] International cooperation and understanding are to be promoted[;] Astronauts shall be given every possible assistance[;] States Parties bear international responsibility for national activities in outer space[;] State Parties on whose registries the space objects are carried keep jurisdiction and control over such objects and the personnel thereof recorded in their registries[; and] All stations, installations etc. shall be open to representatives of other States Parties on a basis of reciprocity."[19]

Since its first signing, the Outer Space Treaty has been signed and ratified by almost 100 countries.[20]

b) The Rescue Agreement[21]

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[18] *See* Outer Space Treaty Art. 1.

[19] DIEDERIKS-VERSCHOOR & KOPAL, *supra* note 6, at 24-25; *see also* U.N. Office for Outer Space Affairs, Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, *available at* http://www.oosa.unvienna.org/oosa/en/SpaceLaw/outerspt.html (accessed 28 March, 2010).

[20] *See* U.N. Office for Outer Space Affairs, *supra* note 16.

[21] For an overview of the Rescue Agreement, *see generally* DIEDERIKS-VERSCHOOR & KOPAL, *supra* note 6; Jasentuliyana, *supra* note 1; KAYSER, *supra* note 15; Benko & Schrogl, *supra* note 15; CHENG, *supra* note 15; CHRISTOL, *supra* note 15; *see also* GOLDMAN, *supra* note 5, at 77-80; U.N. OFFICE FOR OUTER SPACE AFFAIRS, *supra* note 4, at 11-20.

Elaborating on Articles 5 and 8 of the Outer Space Treaty, the Rescue Agreement provides that "States shall take all possible steps to rescue and assist astronauts in distress and promptly return them to the launching State, and that States shall, upon request, provide assistance to launching States in recovering space objects that return to Earth outside the territory of the Launching State."[22] More generally, the Agreement addresses the issues of assistance to astronauts,[23] practical measures aimed at rescuing and helping the crew,[24] return of the spacecraft personnel to the representatives of the launching authority,[25] and discover of a spacecraft after an accident.[26] As to the secondary provisions of the Agreement, which consists of ten Articles, they concern matters such as adhesion, amendments, and withdrawal.[27]

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[22] United Nations Office for Outer Space Affairs, Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space, *available at* http://www.oosa.unvienna.org/oosa/en/SpaceLaw/rescue.html (accessed 28 March, 2010). Outer Space Treaty Arts. 5 and 8 provide that

> "States Parties to the Treaty shall regard astronauts as envoys of mankind in outer space and shall render to them all possible assistance in the event of accident, distress, or emergency landing on the territory of another State Party or on the high seas. When astronauts make such a landing, they shall be safely and promptly returned to the State of registry of their space vehicle. In carrying on activities in outer space and on celestial bodies, the astronauts of one State Party shall render all possible assistance to the astronauts of other States Parties. States Parties to the Treaty shall immediately inform the other States Parties to the Treaty or the Secretary-General of the United Nations of any phenomena they discover in outer space, including the moon and other celestial bodies, which could constitute a danger to the life or health of astronauts[; and] A State Party to the Treaty on whose registry an object launched into outer space is carried shall retain jurisdiction and control over such object, and over any personnel thereof, while in outer space or on a celestial body. Ownership of objects launched into outer space, including objects landed or constructed on a celestial body, and of their component parts, is not affected by their presence in outer space or on a celestial body or by their return to the Earth. Such objects or component parts found beyond the limits of the State Party to the Treaty on whose registry they are carried shall be returned to that State Party, which shall, upon request, furnish identifying data prior to their return."

[23] *See* Rescue Agreement Art. 1.

[24] *See* Rescue Agreement Arts. 2 and 3.

[25] *See* Rescue Agreement Art. 4.

[26] *See* Rescue Agreement Art. 5.

[27] *See* DIEDERIKS-VERSCHOOR & KOPAL, *supra* note 6, at 33.

c) The Liability Convention[28]

Elaborating on Article 7 of the Outer Space Treaty, the Liability Convention provides, *inter alia*, that "a launching State shall be absolutely liable to pay compensation for damage caused by its space objects on the surface of the Earth or to aircraft, and liable for damage due to its faults in space."[29] The Convention also sets forth procedures for the settlement of claims for damages.

d) The Registration Convention[30]

Ratified by 51 countries, the Convention provides, among other things, that

> "the launching State should furnish to the United Nations, as soon as practicable, the following information concerning each space object: [n]ame of launching State; [a]n appropriate designator of the space object or its

[28] For an overview of the Liability Convention, *see generally*; DIEDERIKS-VERSCHOOR & KOPAL, *supra* note 6; Jasentuliyana, *supra* note 1; KAYSER, *supra* note 15; Benko & Schrogl, *supra* note 15; CHENG, *supra* note 15; CHRISTOL, *supra* note 15; *see also* GOLDMAN, *supra* note 5, at 80-84; JULIAN HERMIDA, LEGAL BASIS FOR A NATIONAL SPACE LEGISLATION, 1-26 (2004); YUN ZHAO, SPACE COMMERCIALIZATION AND THE DEVELOPMENT OF SPACE LAW FROM A CHINESE PERSPECTIVE, (2009) at 44-51; U.N. OFFICE FOR OUTER SPACE AFFAIRS, *supra* note 4, at 21-30.

[29] United Nations Office for Outer Space Affairs, Convention on International Liability for Damage Caused by Space Objects, http://www.oosa.unvienna.org/oosa/en/SpaceLaw/liability.html (last visited Mar. 28, 2010). Outer Space Treaty Art. 7 provides that

> "[e]ach 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."

[30] For an overview of the Registration Convention, *see generally* DIEDERIKS-VERSCHOOR & KOPAL, *supra* note 6; Jasentuliyana, *supra* note 1; KAYSER, *supra* note 15; Benko & Schrogl, *supra* note 15; CHENG, *supra* note 15; CHRISTOL, *supra* note 15; *see also* GOLDMAN, *supra* note 5, at 84-87; ZHAO, *supra* note 27, at 31-44.

registration number; [d]ate and territory or location of launch; [b]asic orbital parameters [and the g]eneral function of the space object."[31]

The creation of the Registration Convention is a significant contribution towards the cause of preserving outer space for peaceful purposes.[32] Indeed, by requiring that the ratifying countries provide certain information as to their space objects, the Convention allows competent authorities to identify a spacecraft that may have caused damages and minimizes the likelihood that nuclear weapons or any other weapons of mass destruction be positioned into orbit.[33]

e) The Moon Agreement[34]

The Moon Agreement reaffirms and elaborates on many of the articles of the Outer Space Treaty as applied to the Moon and other celestial bodies, providing, *inter alia*, that these bodies should be used exclusively for peaceful purposes, that their environments should not be disrupted, and that the United Nations should be informed of the location and purpose of any space station established on those celestial bodies.[35] In addition, the Agreement provides that the Moon and its natural resources are the common heritage of mankind and that an international regime should be established to govern the exploitation of such resources.[36] As

[31] United Nations Office for Outer Space Affairs, Convention on Registration of Objects Launched into Outer Space, http://www.oosa.unvienna.org/oosa/en/SORegister/regist.html (last visited Mar. 28, 2010); *see also* U.N. Office for Outer Space Affairs, *supra* note 16.
[32] *See* DIEDERIKS-VERSCHOOR & KOPAL, *supra* note 6, at 44.
[33] *Id.*
[34] For an overview of the Moon Agreement, *see generally* DIEDERIKS-VERSCHOOR & KOPAL, *supra* note 6; Jasentuliyana, *supra* note 1; KAYSER, *supra* note 15; Benko & Schrogl, *supra* note 15; CHENG, *supra* note 15; CHRISTOL, *supra* note 15; *see also* GOLDMAN, *supra* note 5, at 90-108; U.N. OFFICE FOR OUTER SPACE AFFAIRS, *supra* note 4, at 11-20.
[35] U.N. Office for Outer Space Affairs, Agreement Governing the Activities of States on the Moon and Other Celestial Bodies, *available at* http://www.oosa.unvienna.org/oosa/en/SpaceLaw/moon.html (accessed 28 March 2010).
[36] *Id.*

of January 2008, 13 countries have ratified, and an additional four have signed the Moon Agreement.[37]

Although these five multilateral treaties form the basis for current international space law, much of the language contained in the agreements "reflects the bipolar power situation that faced the world during the Cold War."[38] Consequently, many of the most important issues facing space law and dealing with the unanticipated commercialization of space activities "bear little resemblance to the questions that received the most attention during the previous century."[39]

2.2 U.S. Space Law

a) *History of U.S. Space Law*

The United States was the first nation to adopt national legislation to regulate outer space activities and is so far the country with the most highly developed space-related legislation and regulations.[40] This achievement, however, is quite recent and represents the emerging need to regulate a fast developing commercial space transportation industry which came to exist for the first time in the mid-1980s.[41] In 1957, shortly after the Sputnik was launched,

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[37] As of today, two of the most important space-faring countries, the United States and Russia, have not yet become parties to the Agreement.

[38] John Adolph, *The Recent Boom in Private Sector Space Development and the Necessity of an International Framework Embracing Private Property Rights to Encourage Investment*, (2006) 40 INT'L LAW 963.

[39] Glenn Harlan Reynolds, *International Space Law in Transformation: Some Observations*, (2005) 6 CHI. J. INT'L L. 69; *see also* Freeland, *supra* note 6; Beck, *supra* note 6; Adolph, *supra* note 37; Benko & Schrogl, *supra* note 15, at 175.

[40] *See* HERMIDA, *supra* note 27, at 78; International Law Association, Berlin Conference (2004), Space Committee, Report on the Legal Aspects of the Privatisation and Commercialisation of Space Activities, *available at* http://www.ila-hq.org/download.cfm/docid/B1965DD1-1F92-4FEB-B6F2089C67F5F595 (accessed 28 March 2010).

[41] *See* Timothy Robert Hughes & Esta Rosenberg, *Space Travel Law (and Politics): The Evolution of the Commercial Space Launch Amendments Act of 2004*, (2005) 31 J. SPACE L. 6; KAYSER, *supra* note 15, at 1. Two major events helped give rise to the 1980's development of a commercial space transportation industry: the

the United States Rocket and Satellite Research Panel called for the establishment of a National Space Establishment independent from military appropriations which would engage in space research and manned expeditions.[42] In 1958, this agenda was taken on by NASA.[43] Four years after the enactment of the National Aeronautics and Space Act, the U.S. Congress passed the Communications Satellite Act, a significant piece of legislation "to provide for the establishment of an operational communication satellite system."[44] In the following years, Congress continued its legislative effort in the satellite and communication field by enacting the International Maritime Satellite Telecommunications Act in 1978,[45] and the Land Remote-Sensing Commercialization Act in 1984.[46] The LANDSAT's new regulatory regime provided for the promotion of "commercial distribution and use of data from the civilian Landsat remote sensing satellites," and offered a significant contribution to the development of domestic space law and activities by breaking the ground for the establishment of a private commercial space industry.[47]

b) Commercial Space Transportation

In response to the regulatory confusion caused by the first ever privately funded rocket launch by Space Services, Inc., in 1983 President Regan ordered that the Office of Commercial Space Transportation ("OCST") be established within the U.S. Department of

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establishment of a private European launch services organization and the ban of commercial payloads from flying aboard the Space Shuttle (following the Space Shuttle Challenger disaster of 1986). *See id.*; *see also* Catherine E. Parsons, Comment, *Space Tourism: Regulating Passage to the Happiest Place Off Earth*, (2005) 9 CHAP. L. REV. 511.

[42] Jasentuliyana, *supra* note 1, at 71.

[43] *See* National Aeronautics and Space Act, Pub. L. No 85-568, 72 Stat. 426 (1958); *see* U.N. OFFICE FOR OUTER SPACE AFFAIRS *supra* note 4, at 81; HERMIDA, *supra* note 27, at 78.

[44] Jasentuliyana, *supra* note 1, at 77. *See* Communications Satellite Act, Pub. L. No 87-624, 76 Stat. 419 (1962).

[45] International Maritime Satellite Telecommunications Act, Pub. L. No 95–564, 92 Stat. 2392 (1978).

[46] Land Remote-Sensing Commercialization Act, Pub. L. No 98-365, 98 Stat. 451 (1984) [hereinafter LANDSAT].

[47] Jasentuliyana, *supra* note 1, at 79.

Transportation to issue regulations governing launch licenses for private companies.[48] The following year, Congress provided statutory authority for the new office by enacting the Commercial Space Launch Act of 1984, the most significant U.S. piece of legislation pertaining to space law.[49] Subsequently amended in 2004, the CSLA is the "principal law governing the licensing and regulation of commercial space transportation in the United States."[50]

i. Commercial Space Launch Act: From 1984 to 2004

The U.S. Congress enacted the Commercial Space Launch Act to "promote economic growth and entrepreneurial activity through utilization of the space environment [, and to] encourage the United States private sector to provide launch vehicles and associated launch services by simplifying and expediting the issuance and transfer of commercial launch licenses and by facilitating and encouraging the utilization of government-developed space technology."[51] As "the foundation upon which commercial space transportation licensing law and regulation has been built,"[52] the CSLA addresses three substantive areas: licensing and regulation,[53] liability insurance requirements,[54] and access by private launch companies to government facilities.[55] Until the 2004 amendment, the CSLA licensing requirements differed according to the "person" launching the vehicle or operating the launch site, and the national jurisdiction in which the launch and operations take place.[56] Specifically, CSLA Sec.

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[48] *See* Exec. Order No. 12,465, 49 Fed. Reg. 7211 (1984); *see also* GOLDMAN *supra* note 5, at 193. In November 1995, OCST responsibilities were delegated to the FAA which established the Office of the Associate Administration for Commercial Space Transportation (AST).

[49] Commercial Space Launch Act, Pub. L. No. 98-575, 98 Stat. 3055 (1984) (codified at 49 U.S.C. 70101-70119 (2009), formerly 49 U.S.C. 2601-2623 (1984)) [hereinafter CSLA]. The CSLA did not intend to modify U.S. law, but only to codify an existing system and organize its implementation. *See* KAYSER, *supra* note 15, at 91.

[50] *See* Hughes & Rosenberg, *supra* note 40, at 12.

[51] 49 U.S.C. § 2602.

[52] *Id.* at 11.

[53] *See* 49 U.S.C. App. §§ 2605-2613.

[54] *See* 49 U.S.C. App. § 2614.

[55] *See* 49 U.S.C. App. §§ 2615-2616.

[56] *See* CSLA § 6.

6(a)(1) provides that "[n]o person shall launch a launch vehicle or operate a launch site within the United States, unless authorized by a license issued . . . under this Act." Further, a United States citizen who wishes to launch a launch vehicle or operate a launch site may not do so unless authorized by a license issued under the Act if, (i) under CSLA Sec. 6(a)(2), the launch vehicle or the launch site is outside the United States or, (ii) according to CSLA Sec. 6(a)(3)(A) "first sentence," the launch vehicle or the launch site is both outside the United States and outside the territory of any foreign nation. However, a U.S. citizen operating a launch site or launching a vehicle which is both outside the United States and outside the territory of any foreign nation may avoid the prohibition set forth by CSLA Sec. 6(a)(3)(A) "first sentence," if "there is an agreement in force between the United States and a foreign nation and that such foreign nation shall exercise jurisdiction over such launch or operation."[57]

CSLA Licensing Requirements before the 2004 Amendment

	U.S. Citizen	Any Other Person
Launch takes place within the U.S.	CSLA License is Required	CSLA License is Required
Launch takes place outside the U.S.	CSLA License is Required	CSLA License is Not Required
Launch takes place outside the U.S. and the territory of any foreign country	CSLA License is Required	CSLA License is Not Required

[57] CSLA § 6(a)(3)(A) "second sentence."

Launch takes place outside of the U.S. and the territory of any foreign country but a foreign country has jurisdiction over it	CSLA License is Not Required	CSLA License is Not Required

Under the CSLA, any person may apply for the issuance of a license,[58] but even if an applicant is successful in obtaining it, she "may not launch a payload unless that payload complies with all requirements of Federal law that relate to the launch of a payload."[59] Moreover, even where no license is required,

> "the Secretary may take such action under this Act as the Secretary deems necessary to prevent the launch or a payload by a holder of a launch license under this Act if the Secretary determines that the launch of such payload would jeopardize the public health and safety, safety or property, or any national security interest of a foreign policy interest of the United States."[60]

Further, the CSLA delegates to the Secretary of the U.S. Department of Transportation the authority to suspend or revoke any license,[61] and to issue emergency orders to terminate, prohibit or suspend immediately the launch of a launch vehicle or the operation of a launch site if "the Secretary determines that such launch or operation is detrimental to the public health and safety, safety of property, or any national security interest of foreign policy interest of the United States."[62] As to space liability issues, the CSLA mandates responsibility to the OCST for regulating the liability of private space transportation companies and

[58] *See* CSLA § 9(a).
[59] CSLA § 6(b)(1).
[60] CSLA § 6(b)(2).
[61] *See* CSLA § 10(a).
[62] CSLA § 11(a).

provides that the OCST is to establish liability insurance requirements for commercial launch activities, taking into account the parameters of international law and the obligations of the United States.[63] In addition, the CSLA regulates the use of government property related to space launch activities and provides that excess or unused government launch property should be made available to private launch companies through lease or sale agreements.[64] Finally, the CSLA requires that the Secretary carry out the Act in a manner "consistent with any obligation assumed by the United States in any treaty, convention, or agreement that may be in force between the United States and any foreign nation."[65] More than a decade later, Congress amended the CSLA by enacting the Space Commerce Act of 1998, which explicitly granted authority to the Federal Aviation Administration (FAA) to license the return of vehicles from space to Earth.[66] Acting upon its newly conferred authority, the FAA's AST issued final rules defining the licensing process for the launch and re-entry of space vehicles in 2000.[67] In 2004, on the last day of its108th session, the U.S. Congress again amended the CSLA by enacting the Commercial Space Launch Act Amendments of 2004.[68] The CSLAA replaced the original legislation from 1984 and set forth, among other things, a legislative framework for the regulation of commercial human space flight.

c) U.S. Space Transportation Law

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[63] *See* CSLA § 16. The United States has signed and ratified only four of the treaties that comprise the U.N. framework of international space law: the Outer Space Treaty, the Liability Convention, the Rescue Agreement, and the Registration Treaty. The fifth treaty, the Moon Agreement, has not yet been ratified.

[64] *See* CSLA § 15(a). Congress included this provision as part of its efforts to support the private industry after various launch and test facilities developed during the early years of the space program had been abandoned or rarely used. *See* Bonnie E. Fought, Comment, *Legal Aspects of the Commercialization of Space Transportation Systems*, (1988) 3 HIGH TECH. L.J. 116 (now BERK. TECH. L.J.).

[65] CSLA § 21(d)

[66] Space Commerce Act, Pub. L. No. 105–303, 112 Stat. 2843 (1998). *See* Recent Development, *Commercialization of Space Commercial Launch Amendments Act of 2004*, (2004) 17 HARV. J. L. & TECH. 626.

[67] Commercial Space Transportation Reusable Vehicle and Reentry Licensing Regulations, 14 C.F.R. § 400-435 (2000). For a general overview of the two types of available licenses, *see* Hughes & Rosenberg, *supra* note 40, at 21-23.

[68] Commercial Space Launch Amendments Act, Pub. L. No. 108-492, 118 Stat. 3974 (2004) [hereinafter CSLAA]. The bill became law upon signature by President George W. Bush on December 23, 2004.

The current body of laws regulating space transportation is laid down in 49 U.S.C. Secs. 70101-70121 and includes, among other things, definitions,[69] restrictions on launches, operations and re-entries,[70] and license applications and requirements.[71] In particular, the CSLA provides that under the new legal regime a license is required:

> "(1) for a person to launch a launch vehicle or to operate a launch site or reentry site, or to reenter a reentry vehicle, in the United States[;]
>
> (2) for a citizen of the United States (as defined in section 70102(1)(A) or (B) . . .) to launch a launch vehicle or to operate a launch site or reentry site, or to reenter a reentry vehicle, outside the United States[;]
>
> (3) for a citizen of the United States (as defined in *section 70102(1)(C)* . . .) to launch a launch vehicle or to operate a launch site or reentry site, or to reenter a reentry vehicle, outside the United States and outside the territory of a foreign country unless there is an agreement between the United States Government and the government of the foreign country providing that the government of the foreign country has jurisdiction over the launch or operation or reentry[;]
>
> (4) for a citizen of the United States (as defined in *section 70102(1)(C)* . . .) to launch a launch vehicle or to operate a launch site or reentry site, or to reenter a reentry vehicle, in the territory of a foreign country if there is an agreement between the United States Government and the government of the foreign

[69] *See* 9 U.S.C. § 70102.
[70] *See* 49 U.S.C. § 70104.
[71] *See* 49 U.S.C. § 70105.

country providing that the United States Government has jurisdiction over the launch or operation or reentry."[72]

CSLA Licensing Requirements after the 2004 Amendment

	U.S.-Controlled Foreign Entity	Any Person	U.S. Entity
Launch takes place in the United States - *CSLA Sec. 70104(a)(1)*	N/A	CSLA License is Required	CSLA License is Required
Launch takes place in the territory of a foreign country – *CSLA Sec. 70104(a)(2)*	CSLA License is Not Required	N/A	CSLA License is Required
Launch takes place outside both the United States and the territory of a foreign country – *CSLA Sec. 70104(a)(3)*	CSLA License is Required	N/A	N/A
Launch takes place outside both the United States and the territory of a foreign country and a foreign country has jurisdiction over the launch – *CSLA Sec. 70104(a)(3)*	CSLA License is Not Required	N/A	N/A

[72] 49 U.S.C. § 70104(a) (emphasis added).

Launch takes place in the territory of a foreign country and the United States Government has jurisdiction over the launch – *CSLA Sec. 70104(a)(4)*	CSLA License is Required	N/A	N/A

In addition, Sec. 70102 defines the terminology used in Sec. 70104(a) and provides, among other things, that:

a) "United States citizen" means

> "(A) An individual who is a citizen of the United States;"[73]
>
> "(B) An entity organized or existing under the laws of the United States or a State;"[74] or
>
> "[*Sec. 70102(1)(C)*] An entity organized or existing under the laws of a foreign country if the controlling interest . . . is held by an individual or entity described in [(A) or (B)]."[75]

b) "Launch" means "to place or try to place a launch vehicle or reentry vehicle and any payload, crew, or space flight participant from Earth."[76]

c) "Launch services" means "**(A)** activities involved in the preparation of a launch vehicle, payload, crew (including crew training), or space flight participant for launch; and **(B)** the conduct of a launch."[77]

[73] 49 U.S.C. § 70102(1)(A).
[74] 49 U.S.C. § 70102(1)(B).
[75] 49 U.S.C. § 70102(1)(C).
[76] 49 U.S.C. § 70102(4).
[77] 49 U.S.C. § 70102(6).

d) "Launch site" means "the location on Earth from which a launch takes place (as defined in a license the Secretary issues or transfers under this chapter) and necessary facilities at that location."[78]

Therefore, under U.S. space transportation law, as amended by the CLSAA: (i) no one may launch or reentry a vehicle or operate a launch or reentry site without being authorized by a license if the launch takes place from U.S. territory;[79] (ii) United States citizens (as defined in Sec. 70102(1)(A) or (B)) may not launch or reentry a vehicle or operate a launch or reentry site without being authorized if the launch or reentry takes place outside the United States;[80] (iii) United States citizens (as defined in Sec. 70102(1)(C)) may not launch or reentry a vehicle or operate a launch or reentry site without being authorized by a license if the launch or reentry takes place outside the United States and outside the territory of a foreign nation;[81] and (iv) United States citizens (as defined in Sec. 70102(1)(C)) may launch or reentry a vehicle or operate a launch or reentry site without being authorized if the launch or reentry takes place in the territory of a foreign nation unless there is an agreement in force between the foreign nation and the United States, which provides that the United States shall exercise jurisdiction over the launch or reentry, or the operation of the launch or reentry site.[82]

III. General Agreement on Trade in Services

[78] 49 U.S.C. § 70102(7).
[79] *See* 49 U.S.C. § 70104(a)(1); *see also* KAYSER, *supra* note 15, at 96.
[80] *See* 49 U.S.C. § 70104(a)(2); *see also* KAYSER, *supra* note 15, at 96.
[81] *See* 49 U.S.C. § 70104(a)(3); *see also* KAYSER, *supra* note 15, at 97.
[82] *See* 49 U.S.C. § 70104(a)(4); *see also* KAYSER, *supra* note 15, at 97.

The General Agreement on Trade in Services is a relatively new agreement and the first and only set of multilateral rules governing international trade in services.[83] The GATS entered into force in January 1995, as one of the landmark achievements of the Uruguay Round negotiations providing for the extension of the multilateral trading system to services.[84] "Negotiated in the Uruguay Round, it was developed in response to the huge growth of the services economy over the past 30 years and the greater potential for trading services brought about by the communications revolution."[85] All Members of the World Trade Organization are signatories to the GATS and have to assume the resulting obligations. The GATS applies to any measure taken by a WTO Member, whether in the form of law, regulation, procedure, rule, decision, administrative action, or any other form, that affects the trade in services, including measures in respect of:[86]

a. The purchase, payment, or use of a service;
b. The access to and use of, in connection with the supply of a service, services which are required by those Members to be offered to the public generally;
c. The presence, including commercial presence, of persons of a Member for the supply of a service in the territory of another member.[87]

The GATS applies to all measures affecting trade in services, regardless of whether such measures directly govern the supply of a service or whether they regulate other measures, so long as the services are supplied:[88]

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[83] For a list of services covered by the GATS, *see* GATT Secretariat, *Services Sectoral Classification List*, MTN.GNS/W/120 (Jul. 10, 1991).

[84] General Agreement on Trade in Services, Apr. 15, 1994, Agreement Establishing the World Trade Organization, Annex 1B, reprinted in Final Act Embodying the Results of the Uruguay Round of Multilateral Trade Negotiations, 33 I.L.M. 44 (1994) [hereinafter GATS].

[85] WTO, Understanding The WTO: The Agreements, Services: rules for growth and investment, *available at* http://www.wto.org/english/thewto_e/whatis_e/tif_e/agrm6_e.htm (accessed 9 November, 2009).

[86] *See* GATS Art. XXVIII.a.

[87] *See* GATS Art. XXVIII.c.

[88] The discipline of the GATS covers any measure bearing upon conditions of competition in supply of a service. *See* Panel Report, *European Communities – Regime for the Importation, Sale and Distribution of Bananas*, ¶ 7.281, WT/DS27/R/USA (May 22, 1997) [hereinafter *EC – Bananas* Panel Report]; Appellate Body Report,

a. From the territory of one Member State into the territory of any other Member ("mode 1" or "cross-border");
b. In the territory of one Member for consumption in that territory by a service consumer of any other Member ("mode 2" or "consumption abroad");
c. By a service supplier of one Member, through commercial presence in the territory of any other Member ("mode 3" or "juridical/commercial presence abroad"); or
d. By a service supplier of one Member, through presence of natural persons of a Member in the territory of any other Member ("mode 4" or "natural presence abroad").[89]

As to its regulatory structure, the GATS consists of three elements: the main text, composed of 29 articles and containing general obligations and disciplines; annexes dealing with rules that relate to specific sectors; and individual Members' specific commitments to provide access to their markets.[90] The obligations contained in the GATS may be categorized into two broad groups: (i) general obligations, some of which apply to all sectors (e.g., most-favored-nation treatment), and (ii) specific commitments, which are negotiated undertakings specific to each Member and whose scope may vary widely between WTO Members.[91] In

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European Communities – Regime for the Importation, Sale and Distribution of Bananas, ¶ 220, WT/DS27/AB/R (Sept. 9, 1997) [hereinafter *EC – Bananas* Appellate Body Report]. In order for a measure to be subject to the GATS, it must have been taken by central, regional or local government authorities, or non-governmental bodies in the exercise of powers delegated by central, regional or local governments or authorities. *See* GATS Art. I.3.a.

[89] *See* GATS Arts. I.1-3. With regard to "Mode 3" or "Juridical/Commercial Presence Abroad," GATS Art. XXVIII.d specifies that "commercial presence" means any type of business or professional establishment including (i) the constitution, acquisition or maintenance of a juridical person, or (ii) the creation or maintenance of a branch or a representative office, within the territory of a Member for the purpose of supplying a service.

[90] Specific commitments constitute the detailed obligations that a WTO Member assumed under the GATS with regard to specific service sectors.

[91] *See* World Trade Organization, Services: The General Agreement on Trade in Services: Objectives, Coverage And Disciplines, *available at* http://www.wto.org/english/tratop_e/serv_e/gatsqa_e.htm (accessed 10 November,

particular, as to the GATS general obligations, the most-favored-nation treatment provision states that

> "[w]ith respect to any measure covered by this Agreement, each Member shall accord immediately and unconditionally to services and service suppliers of any other Member treatment no less favourable than that it accords to like services and service suppliers of any other country."[92]

Specific commitments, on the other hand, are sector specific commitments that are provided for market access and national treatment, apply only in the service sectors where the Members made commitments, and are generally put forward with two separate columns in the Member's schedule. A schedule is a list of commitments for every selected service sector that WTO Members came up with during the Uruguay Round. A Member may make commitments in each service sector or sub-sector in one, some, or all of the four "modes" of supply. In making their commitments, WTO Members can specify the limitations or conditions under which they will allow foreign services and service providers, through the four "modes" of supply, into their domestic market and compete with domestic services and service providers. These limitations or conditions can exist with respect to "market access" or "national treatment," that is conditional obligations that apply only to the sectors in which each WTO Member has made commitments.[93]

2009); Rafael Leal-Arcas, *The Gats in The Doha Round: A European Perspective*, IN THE WORLD TRADE ORGANIZATION AND TRADE IN SERVICES, FOOTNOTE 61 (KERN ALEXANDER & MADS ANDENAS EDS., 2008) AT 26.

[92] GATS Art. II.1. Under GATS Art. II.2, however, WTO Members "may maintain a measure inconsistent with [GATS Art. II.1] provided that such measure is listed in, and meets the conditions of, the Annex on Article II Exemptions."

[93] As to the conditional obligation of national treatment, GATS Art. XVII.1 provides that

> "[i]n the sectors inscribed in its Schedule, and subject to any conditions and qualifications set out therein, each Member shall accord to services and service suppliers of any other Member, in respect of all measures affecting supply of services, treatment no less favourable than that it accords to its own like services and service suppliers."

On the GATS national treatment obligation, *see* Fabio Leonardi, *A Bailout for the International Trade System: Rescuing the WTO from TARP*, (2010) XIV INT'L TRADE & BUS. L. REV. 291.

IV. Space Transportation and the WTO

This deal goes well beyond trade and economics.

– Renato Ruggiero.[94]

As "[t]he prevailing GATT regime on tariff regulations never laid hands on space affairs,"[95] the international community had to wait until the establishment of the WTO to witness a multilateral trade agreement cover a space-related activity for the first time in mankind's history.[96] Although the negotiating Parties were not able to reach a consensus during the 1986-1994 Uruguay Round, the space-related telecommunication services sector was eventually brought under the regulatory umbrella of the WTO through the Agreement on Basic Telecommunications, concluded by the WTO Members in 1998 and appended to the GATS as an Annex.[97]

4.1 Justifiability of the WTO-Space Linkage

"It is unquestionably true that [the] WTO cannot be used as a Christmas tree on which to hang every good cause that might be secured by exercising trade powers."[98] However, where international space activities enter international trade areas under the regulatory authority of WTO, they necessarily fall within the WTO's jurisdiction.[99]

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[94] WTO Director-General (1995 - 1999), congratulating "member governments for their determination and foresight in bringing the negotiations on basic telecommunications services to a successful conclusion." World Trade Organization, press release *available at* http://www.wto.org/english/news_e/pres97_e/pr67_e.htm.

[95] S. G. Sreejith, *When Sputnik Orbits Geneva: Legal Reflections on WTO Governance In Respect Of Commercial Space Activities*, *in* (2004) PROCEEDINGS OF THE FORTY-SEVENTH COLLOQUIUM ON THE LAW OF OUTER SPACE 405.

[96] *Id.*

[97] *See* Sreejith, *supra* note 94, at 405.

[98] *Id.*

[99] *See id.*

> "[The] WTO's jurisdiction is to be determined on the basis of its goals and the values upon which it is implanted [and thus, the] WTO has the power to exercise [the functions bestowed upon it] to the full extent, irrespective of the realm, as far as the Statute does not impose restrictions upon it. As an international organization [the] WTO's purpose is the creation of market conditions conductive to individual economic activity in national and global markets and to ensure a secure and predictable multilateral trading system. In pursuance of this purpose, if [the] WTO regulates space markets, there is nothing in it that is exasperating for the erudite critics."[100]

Although the WTO and space are not generally known as a "bread and butter" sort of combination, "it is without a shred of doubt that space business will also have to go on in a free market."[101] Therefore, since most of the space-faring countries, with the exception of Russia, are members of the WTO, their trade-related space activity ought to be reviewed through the lens of WTO law.[102]

4.2 Relevant Obligations and Commitments

a) Space or Air Transportation?

[100] *Id.* at 406.
[101] *Id.* at 407.
[102] *See id.*; *see also* Jasentuliyana, *supra* note 1, at 127, 129 (discussing the relationship among countries competing in the launch services market and GATT). As to the American space regulatory framework, U.S. space transportation law explicitly recognizes that international law – thus, including WTO law – may cover space-related activities where it provides that the Secretary of Transportation shall "carry out [the CSLA] consistent with an obligation the United States Government assumes in a treaty, convention, or agreement in force between the Government and the government of a foreign country . . . ." 49 U.S.C. §70117(e)(1).

Determining whether launching a space vehicle is a space or air transportation activity is extremely relevant from both a domestic and WTO perspective.[103] Indeed, under the GATS, air transportation activities find additional specific regulation in the Annex on Air Transport Services.[104] The Annex applies to measures affecting trade in air transport services, whether scheduled or non-scheduled, and ancillary services, and provides that the GATS "Agreement, including its dispute settlement procedures, shall not apply to measures affecting:

> (a) traffic rights, however granted; or
>
> (b) services directly related to the exercise of traffic rights . . ."[105]

The Annex goes on defining the meaning of "traffic rights" and provides that

> "'[t]raffic rights' mean the right for scheduled and non-scheduled services to operate and/or carry passengers, cargo and mail for remuneration or hire from, to, within, or over the territory of a Member, including points to be served, routes to be operated, types of traffic to be carried, capacity to be provided, tariffs to be charged and their conditions, and criteria for designation of airlines, including such criteria as number, ownership, and control."[106]

Therefore, if the launch of a space vehicle were deemed to be an air transport service, a country's domestic law providing for licensing requirements as a precondition for obtaining an authorization to launch would very likely fall into the category of "measures affecting traffic rights," thus limiting the applicability of WTO law to that measure.[107]

b) U.S. Specific Commitments

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[103] *See*, Benko & Schrogl, *supra* note 15, at 191, 193-94.
[104] *See* GATS Annex on Air and Transportation Services [hereinafter GATS Air Annex].
[105] GATS Air Annex ¶ 2.
[106] GATS Air Annex ¶ 6(d).
[107] By imposing licensing requirements as a precondition for obtaining an authorization to launch a vehicle, the law would limit the space vehicle's ability "to operate and/or carry passengers." *See* GATS Air Annex ¶ 6(d).

The United States, along with the other negotiating parties, was assisted in compiling its schedule of specific commitments by a list of services sectors and sub-sectors prepared by the GATT Secretariat.[108] The U.S. followed the GATT list in making its GATS commitments but limited liberalization of the U.S. services market to the following sectors:[109]

- Business Services;[110]
- Communication Services;[111]
- Construction and Related Engineering Services;
- Distribution Services;[112]
- Educational Services;
- Environmental Services;
- Financial Services;[113]
- Health Related and Social Services;[114]
- Tourism and Travel Related Services;[115]
- Recreational, Cultural, and Sporting Services;[116]
- Transport Services;[117]

Other services sectors and sub-sectors listed by the GATT Secretariat but in which the U.S. made no commitments include the Space Transport sector and the Other Transport Services

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[108] *See* GATT Secretariat, *supra* note 82.

[109] *See* The United States of America, *Schedule of Specific Commitments*, GATS/SC/90 (Apr. 15, 1994).

[110] Including Professional Services, Computer and Related Services, Real Estate Services, Rental/Leasing Services, and Other Business Services.

[111] Including Land-Based Courier Services, Telecommunications, and Audiovisual Services.

[112] Including Commission Agents' Services, Wholesale Trade, Retailing, and Franchising.

[113] Including Insurance and Financial Services (Limited to Banking and Other Financial Services and Excluding Insurance). For a general overview of this sub-sector, *see* Leonardi, *supra* note 92.

[114] Including Hospital and Other Health Care Facilities.

[115] Including Hotels and Restaurants (Including Catering), Travel Agencies and Operators, Tour Guide Services, and Other.

[116] Including Entertainment Services (Including Theatre, Live Bands, and Circus Services), News Agency Services, and Other Recreational Services.

[117] Including Rail Transport Services, Rail Transport, Road Transport, and Services Auxiliaries to all Modes of Transport.

sub-sector.[118] Additionally, in order to limit the application of the GATS national treatment and market access obligations, the United States identified further restrictions, qualifications, and exceptions in the various sub-sectors in which it made specific commitments.[119] However, within the Tourism Services sector and in regard to the Tour Guide Services and Other sub-sectors, the U.S. schedule of specific commitments indicates that the United States did not list any limitation or restriction to the application of the GATS national treatment obligation.[120] Similarly, no national treatment limitations appear in the U.S. schedule of specific commitments as to the Entertainment Services sub-sector (part of the Recreational, Cultural, and Sporting Services sector).[121]

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[118] *See* GATT Secretariat, *supra* note 82. The Other Transport Services sub-sector is part of the Transport Services sector. As previously mentioned, since the United States made no commitments in the Space Transport sector and Other Transport Services sub-sector, only general WTO obligations, such as most-favored-nation treatment, will apply to services that fall within these two categories.

[119] By specifying restrictions or exceptions as to the application of national treatment or market access within sectors where commitments were made, "a WTO Member may reclaim the power to effectively discriminate against foreign services and service providers in favor of domestic like services and service suppliers, or to provide for market conditions that favor domestic over foreign like services and service providers." Leonardi, *supra* note 92; *see* Wei Wang, *National Treatment in Financial Services in The Context of The GATS/WTO*, *in* GLOBAL FINANCIAL SECTOR DEVELOPMENT (JOSEPH J. NORTON & CHRISTOS HADJIEMMANUIL EDS., 2005) at 159.

[120] *See* The United States of America, *supra* note 108. In the sectors or sub-sectors where commitments have been made, a WTO Member may

> "limit market access or national treatment by inscribing the term 'Unbound' in its schedule of commitments for each or some modes of supply. This means that the WTO Member wishes to remain free to introduce or maintain laws or regulations that limit market access or national treatment or favor domestic over foreign firms in that sector or sub-sector and mode of supply. Alternatively, if the Member wishes that there be no limitations on market access or national treatment for the service sector or sub-sector and modes of supply, it will write 'None' in its schedule of commitments. Finally, a WTO Member may subject itself to the obligations of market access and national treatment but limit the extent of their application by writing specific limitations or conditions in its schedule for one, some, or all of the modes of supply."

Leonardi, *supra* note 92. As this paper will explain, the United States cannot have violated the GATS national treatment and market access obligations because, with regard to space transportation services, the U.S. (i) did not make commitments in the relevant sectors or sub-sectors, and (ii) agreed to have the GATS Agreement not applicable to certain sectors or sub-sectors. Therefore, this paper will not analyze U.S. space transportation law from a GATS market access perspective; instead, it will explain the importance of defining the relevant GATS sectors and sub-sectors in which space transportation services may fall by using, as an example, the GATS national treatment obligation.

[121] *See* The United States of America, *supra* note 108.

c) Most-Favored-Nation Treatment

GATS Art. II.1 provides that,

> "[w]ith respect to any measure covered by this Agreement, each Member shall accord immediately and unconditionally to services and service suppliers of any other Member treatment no less favourable than that it accords to like services and service suppliers of any other country."[122]

Although a WTO Member must provide national treatment and market access to foreign services and service suppliers only in the sectors where it made commitments, the GATS general obligation of most-favored-nation treatment applies across the board to all services regardless of a country's specific commitments.[123] Most-favored-nation treatment is a rule that applies "immediately and unconditionally" and requires that a "service or service provider originating in one WTO Member be not treated less favourably than a 'like' . . . service or service provider that originates in any other Member."[124] More specifically, Art. II.1 of the GATS "prohibits discrimination between like services and service suppliers from

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[122] GATS Art. II.1. Under GATS Art. II.2, however, WTO Members "may maintain a measure inconsistent with [GATS Art. II.1] provided that such measure is listed in, and meets the conditions of, the Annex on Article II Exemptions."

[123] *See* GATS Art. II. Although the GATS most-favored-nation treatment is a general obligation, GATS Art. II.2 provides that "[a] Member may maintain measures inconsistent with paragraph 1 provided that such a measure is listed in, and meets the conditions of, the Annex on Article II Exemptions." The only relevant exemption that the United States listed refers to "Transport Services: Space Transportation" and provides that the most-favored-nation treatment rule does not apply to "[q]uantitative restrictions and price disciplines in certain bilateral agreements on the launch of satellites in the international commercial space launch market." *See* Members' Lists of MFN Exemptions, accessible through the WTO website at http://tsdb.wto.org/default.aspx. For a general overview of the most-favored-nation treatment exemptions within the GATS, *see* Rudolf Adlung & Antonia Carzaniga, *MFN Exemptions under the General Agreement on Trade in Services: Grandfathers Striving for Immortality?*, (2009) 12 J. INT'L ECON. L. 357-392.

[124] JAN WOUTERS & BART DE MEESTER, THE WORLD TRADE ORGANIZATION: A LEGAL AND INSTITUTIONAL ANALYSIS (2007) at 24, 27. For an overview of the GATS most-favored-nation treatment rule and international trade implications, *see* United Nations Conference on Trade and Development, Most-Favored-Nation Treatment, UNCTAD/ITE/IIT/10, Sales No. E.99.II.D.11 (1999).

different countries," and applies regardless of whether the discrimination is *de jure* or *de facto*.[125] The GATS Agreement does not provide any guidance as to the meaning of "like services," or "like service suppliers," but Art. II.1 "calls for a determination of the nature and extent of the competition relationship between the services or service suppliers concerned," taking into consideration the characteristics of the service or the service supplier, the classification and description of the services in the United Nations Central Product Classification (CPC), and consumer habits and preferences regarding the service or the service supplier.[126]

V. The CSLA under WTO Law[127]

Although the WTO may have general authority over trade-related space activities, violations of WTO law may be found only with regard to those government "measures" that the Negotiating Parties agreed to subject to the WTO agreements.[128] Therefore, a preliminary issue that needs to be addressed is whether U.S. space transportation law includes "measures" that are covered by WTO law and, more specifically, by the provisions of the General Agreement on Trade in Services. The first Article of the GATS provides that the Agreement on services applies to WTO Members' measures that affect trade in services.[129] In addition, GATS Art. I.3.b states that "'services' includes any service in any sector except services

[125] *EC – Bananas* Appellate Body Report, ¶¶ 231-234 (holding that "no less favorable treatment" should be interpreted to include *de facto*, as well as *de jure*, discrimination); *see* PETER VAN DEN BOSSCHE, THE LAW AND POLICY OF THE WORLD TRADE ORGANIZATION. TEXTS, CASES AND MATERIALS (2D ED. 2008) AT 325. Even if a measure does not appear on its fact to be discriminatory against foreign services or service suppliers, it may still be determined to discriminate *de facto* if, after reviewing all the facts relating to the application of the measure, it is clear that it discriminates in practice.

[126] *See* VAN DEN BOSSCHE, *supra* note 124 at 340.

[127] *To the Reader:* in reviewing the compatibility of the CSLA with WTO law, please keep in mind that the parties involved in the launching of a space vehicle are (i) the launch services provider, (ii) the launch services customer (e.g., a space tourist), and (iii) the launch site provider, which will also furnish certain associated services. *See* DIEDERIKS-VERSCHOOR & KOPAL, *supra* note 6, at 107.

[128] *See* Leonardi, *supra* note 92; *see also*, *e.g.*, GATS Air Annex ¶ 2 (providing that WTO Members' measures affecting air traffic rights are not subject, among other things, to the provisions of the GATS).

[129] *See* GATS Art. I.1.

supplied in the exercise of governmental authority." Doubtless, commercial space transportation constitutes a type of services;[130] moreover, space transportation has become a service which is now being supplied on a commercial basis by private companies within a competitive private industry.[131] In addition, the CSLA may be deemed to contain "measures that affect trade in services" because the U.S. statute provides for "law[s], regulation[s], rule[s], or . . . other [measures in] other form"[132] which (i) are "taken by central governments and authorities"[133] and, among other things, (ii) subject the commercial space transportation industry to licenses and other requirements which modify the conditions of competition among commercial space transportation companies.[134] Finally, these measures may be deemed to "affect trade in services" because the CSLA provides for licensing requirements that affect, *inter alia*, the "use of a [space transportation] service"[135] where the supply of the service takes place (i) from the territory of one Member into the territory of any other Member;[136] (ii) in the territory of one Member to the service consumer of any other Member;[137] (iii) by a service supplier of one Member, through commercial presence in the territory of any other Member;[138] and (iv) by a service supplier of one Member, through

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[130] *See* Sreejith, *supra* note 94, at 408; Jasentuliyana, *supra* note 1, at 127; GATT Secretariat, *supra* note 82.

[131] GATS Art. I.3.c provides that "'a service supplied in the exercise of governmental authority' means any service which is supplied neither on a commercial basis, nor in competition with one or more service suppliers." As previously mentioned, space transportation has recently become a very lucrative business in which private entities compete with each other to provide highly profitable space tours to customers who are willing to pay up to $250,000 to have their life's dream come true. *See* Benko & Schrogl, *supra* note 15, at 192.

[132] *See* GATS Art. XXVIII.a.

[133] *See* GATS Art. I.3.

[134] *See* Panel Report, *EC Bananas* Panel Report, ¶ 7.281; *EC Bananas* Appellate Body Report, ¶ 220. Under the CLSA, the licensing requirement limits the ability of a commercial space transportation service provider to compete against other service providers in the business of providing space transportation services.

[135] GATS Art. XXVIII.c.

[136] *See* GATS Art. I.2.a (e.g., where the operations of a launch site are carried on within the territory of WTO Member X and the launch site in located in Member Y).

[137] *See* GATS Art. I.2.b (e.g., where the launch takes place in the territory of WTO Member X and the space tourist is a citizen of Member Y).

[138] *See* GATS Art. I.2.c (e.g., where the launch site operations are carried on by a company from WTO Member X through a branch in the territory of Member Y).

presence of a natural persons of a Member in the territory of any other Member.[139] Thus, as the CSLA provides for government measures affecting trade in services, U.S. transportation law may be properly reviewed under the WTO regulatory framework.

5.1 National Treatment

As previously mentioned, a determination of whether a WTO Member's domestic law complies with the GATS obligations of national treatment (and market access) is appropriate only where that Member's schedule indicates that the country made specific commitments in the services sector or sub-sector under consideration.[140]

a) Air Transport

The Negotiating Parties addresses Air Transport services during the Uruguay Round negotiations and agreed on limiting the application of WTO law to this sector by providing, among other things, that the GATS Agreement would not apply to WTO Members' domestic measures affecting air traffic rights.[141] The Negotiating Parties, however, excluded from the limitation clause of the Annex Air Transport measures affecting aircraft repair and maintenance services, the selling and marketing of air transport services, and computer reservation system (CRS) services.[142] As a consequence, measures falling within these sub-sectors will have to comply, *inter alia*, with the provisions of GATS Art. II.1 and, if the country made specific commitments in its schedule, Arts. 16 and 17.[143] The U.S. schedule of specific commitments shows that the United States undertook to provide market access and

[139] *See* GATS Art. I.2.d (e.g., where personnel from WTO Member X operates a launch site located in the territory of Member Y).
[140] *See* Leonardi, *supra* note 92.
[141] *See* GATS Air Annex ¶ 2.
[142] *See* GATS Air Annex ¶ 3.
[143] *See* GATS Arts. 16 and 17.

national treatment for air transport services but limited its commitments to the sub-sector of aircraft repair and maintenance.[144] Therefore, if space launch services were deemed to be air transport services, the United States would not be under the obligation to comply with any GATS obligations unless the measures under scrutiny affect aircraft repair and maintenance. This issue is especially relevant with regard to suborbital spacecrafts in light of the regulatory framework created by the CSLA. Until December 2004, several U.S. agencies were competing for jurisdiction over suborbital crafts, that is, spaceships designed to enter space using rocket power but characterized by an airplane-like behavior during take-off and landing.[145] Indeed, the nature of these vehicles "led to an ongoing turf fight" over whether the authority to regulate human suborbital space flight belongs to the "space-related" AST, or to the "aircraft-related" FAA-AVR office.[146] Although this administrative struggle reached a conclusion with the enactment of the CSLAA, it is necessary to note that this issue may potentially affect international trade in services if it were raised before the WTO.[147] The fact that in the United States air-related activities do not seem to include space transportation does not preclude other WTO Members from crafting a contrary argument during negotiations with the United States, or before the WTO's dispute settlement bodies. Were this argument successful, U.S. space transportation law would have to be reviewed by comparing the U.S. legislation to the Air Transport services commitments that the United States made in its GATS schedule.[148] However, the United States limited its GATS commitments to aircraft repair and maintenances, thus excluding other Air Transport services sub-sectors from the obligations of national treatment and market access. Consequently, as the CSLA licensing requirements do not seem to affect this sub-sector, no international trade implications stem from these provisions of U.S. space transportation

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[144] *See* The United States of America, *supra* note 108.
[145] Recent Development, *supra* note 65, at 626.
[146] *See id.* at 626; KAYSER, *supra* note 15, at 80. While the FAA's AST office regulates space-related launch vehicles, the FAA's Regulation and Certification Group (FAA-AVR) regulates experimental *aircrafts*.
[147] *See* Recent Development, *supra* note 65, at 625-28.
[148] *See* The United States of America, *supra* note 108.

law.[149] Finally, as the GATS Annex on Air Transport services provides, among other things, that the GATS agreement does not apply to measures affecting "air traffic rights," all of the CSLA licensing requirements that might affect U.S. international trade obligations are removed from the jurisdiction of the WTO.[150]

b) Space Tourism and Entertainment

Public space travel became a reality in 2001, when Dennis Tito – followed a few years later by Mark Shuttleworth – paid a significant amount of money to become the world's first space tourist.[151] "Historically, the commercial space launch industry focused primarily on putting payloads, such as satellites, into orbit, using launch vehicles that did not return to earth. Such launches have, however, dropped off, and the industry is increasing its focus on space tourism."[152] In 2004, however, the space tourism industry shifted its focus from orbital to suborbital space travel, and market studies suggest that this type of commercial space flight may soon develop as an attractive niche market that will attract a considerable number of customers willing to pay up to $250,000 for a suborbital trip.[153] Within the context of WTO law, the United States followed the GATT Secretariat list of services sectors and sub-sectors by making specific commitments in its GATS schedule with regard to Tourism services.[154] In

[149] The provisions of the CSLA under review in this paper affect only the launch and re-entry of a space vehicle and launch site operations. *See* 49 U.S.C. § 70104.
[150] At least, as far as the GATS obligations are concerned. *See* GATS Air Annex ¶ 2.
[151] *See* Benko & Schrogl *supra* note 15, at 192.
[152] U.S. Government Accountability Office, Commercial Space Transportation: Development of the Commercial Space Launch Industry Presents Safety Oversight Challenges for FAA and Raises Issues Affecting Federal Roles, *available at* http://gao.gov/products/GAO-10-286T.
[153] *Id.* This "trend" was started by Scaled Composites's SpaceShipOne, a privately financed spacecraft which won the Ansari X Prize award for making two journeys to an altitude of more than 100 kilometers within two weeks while carrying the equivalent weight of two passengers with the same reusable manned spacecraft. *See* X Prize Foundation, Ansari X Prize, *available at* http://space.xprize.org/ansari-x-prize (accessed 28 March, 2010). One of the space tourism industry's leaders, Virgin Galactic, is currently offering trips into space at the "modest" price of $200,000. *See* Virgin Galactic, Booking, *available at* http://www.virgingalactic.com/booking/ (accessed 28 March, 2010).
[154] *See* The United States of America, *supra* note 108; GATT Secretariat, *supra* note 82.

particular, the U.S. committed, among other things, to grant full national treatment to the sub-sectors of Tour Guide Services and Other.[155] According to the GATT Secretariat list of services sectors and sub-sectors, the Tour Guide Services sub-sector was originally assigned the Central Product Classification (CPC) number 7472;[156] the United Nations CPC list identifies this particular classification as including "[t]ourist guide services by tourist guide agencies and own-account tourist guides."[157] Whether space-tourism-related services such as the launch of space vehicles fall within the category of Tour Guide Services – or the "mysterious" Other subsector – is extremely relevant because it would allow WTO law to access the U.S. space transportation legal framework and test its compatibility with the GATS obligation of national treatment (and market access). However, even if it is safe to assume that space tourists will receive some kind of tour guiding during their space adventure, the U.S. CSLA does not seem to regulate any "tour guiding" activities that may take place during the launch, flying, or re-entry stages that take place during a "typical" space trip.[158] Therefore, measures implemented within the U.S. space transportation law framework are not likely to be subject to the GATS national treatment and market access review even though the United States made specific commitments in its schedule as to the Tour Guide Services and Other sub-sectors. On the other hand, a determination of whether the CSLA complies with the GATS national treatment (and market access) obligation may be feasible if space tourism were deemed to be a kind of entertainment service.[159] Indeed, the United States committed to provide full national treatment to the Entertainment services sub-sector, which is part of the Recreational, Cultural, and Sporting services sector, and included as

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[155] *See* The United States of America, *supra* note 108.

[156] *See* GATT Secretariat, *supra* note 82. Most of the sectorial entries included in the GATT Secretariat list are accompanied by numerical references to the United Nations Central Product Classification system to provide a detailed explanation of the services activities covered by each listed sector or subsector on which the Secretariat list is based.

[157] United Nations Statistics Division, Detailed structure and explanatory notes, CPCprov code 74720, *available at* http://unstats.un.org/unsd/cr/registry/regcs.asp?Cl=9&Lg=1&Co=74720 (accessed 29 March, 2010).

[158] As previously mentioned, the provisions of the CSLA under review in this paper affect only the launch and re-entry of a space vehicle and launch site operations. *See* 49 U.S.C. § 70104.

[159] *See* Parsons, *supra* note 40, at 496. *See* The United States of America, *supra* note 108.

instances of entertainment services theatre, live bands, and circus events.[160] As the language adopted in the U.S. schedule is not exclusive, it is possible – and definitely not absurd – to presume that space trips may too qualify as entertaining activities.[161] At this time, though, such a determination does not seem to have practical effects as to the U.S. international trade obligations within the GATS regulatory framework. Indeed, the CSLA language does not appear to discriminate between domestic services or services suppliers and foreign like services or service suppliers.[162] Nonetheless, the issue of whether to classify space tourism as an entertainment service is likely to have important international trade implications when, in a not-too-far future, space travel and entertainment will have become a more accessible and lucrative business.

c) Space Transport

Space Transport is one of the many services sectors listed by the GATT Secretariat in which the United States failed to make specific commitments.[163] Therefore, any determination as to whether space transportation ought to be classified under this category is unnecessary for the purpose of reviewing the CSLA from a GATS national treatment (and market access) perspective.[164] However, given the increasingly rapid growth of the space transportation industry, a brief analysis of this classification may be relevant as a basis for future WTO negotiations or disputes. The GATT Secretariat list assigned to the Space Transport services

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[160] *See* The United States of America, *supra* note 108.

[161] In December 2009, Virgin Galactic's founder Richard Branson announced that he had retained the services of British pop group Spandau Ballet to entertain space tourists who will travel on board the Virgin Galactic's SpaceShipTwo. *See* Sarah Rodman, *Sound off*, THE BOSTON GLOBE, Dec. 18, 2009, *available at* http://www.boston.com/ae/music/articles/2009/12/18/spandau_ballet_in_space/; *see also* Parsons, *supra* note 40, at 493-97.

[162] *See* 49 U.S.C. § 70104.

[163] *See* GATT Secretariat, *supra* note 82. The only WTO Members that made commitments in the Space Transport sub-sector are Austria, Moldova, and Switzerland. *See* WTO Members' Schedules of Specific Commitments in the Transportation services sector, *available at* http://tsdb.wto.org/matrixlist.aspx.

[164] As previously mentioned, national treatment and market access constitute GATS obligations that apply only in the services sectors and sub-sectors in which a WTO Member made specific commitments.

sector the CPC number 733, and the United Nations Provisional Central Product Classification identified this CPC number as the "Transportation via space" class (part of the "Transportation via space" group, "Air transport services" division, and "Transport, storage and communication services" section).[165] In the CPC List Version 1.0, the "Transportation via space" classification was changed into "Transport via space," its CPC number became 663, and an explanatory note was added to specify that "Transport via space" includes space transportation services, launching and placing of satellites in space, and services provided by space laboratories.[166] This classification was not changed until the drafting of CPC List Version 2.0. Here, space transportation was classified in different categories based on whether the transportation involves passengers or freight.[167] In the latter scenario, the CPC list specifies that "Space transport services of freight" includes space transportation of freight and launching and placing of satellites in space.[168] On the other hand, the CPC list provides that "Space transport services of passengers" include "transportation of passengers to, from and in outer space by any means."[169]

Space Transport under the CPC System

	CPC Number	CPC Explanatory Notes
GATT Secretariat List	733 – Transport via Space	N/A

[165] *See* GATT Secretariat, *supra* note 82; *see also* United Nations Statistics Division, Detailed structure and explanatory notes, CPCprov code 7330 *available at*, http://unstats.un.org/unsd/cr/registry/regcs.asp?Cl=9&Lg=1&Co=7330 (accessed 28 March, 2010).
[166] United Nations Statistics Division, Detailed structure and explanatory notes, CPC Ver.1.0 code 66300, *availbale at*, http://unstats.un.org/unsd/cr/registry/regcs.asp?Cl=3&Lg=1&Co=66300 (accessed 28 March, 2010).
[167] United Nations Statistics Division, Detailed structure and explanatory notes, CPC Ver.2 *available at* http://unstats.un.org/unsd/cr/registry/regcst.asp?Cl=25 (accessed 28 March, 2010).
[168] United Nations Statistics Division, Detailed structure and explanatory notes, CPC Ver.2 code 65320, *available at* http://unstats.un.org/unsd/cr/registry/regcs.asp?Cl=25&Lg=1&Co=65320 (accessed 28 March, 2010).
[169] United Nations Statistics Division, Detailed structure and explanatory notes, CPC Ver.2 64250, *available at* http://unstats.un.org/unsd/cr/registry/regcs.asp?Cl=25&Lg=1&Co=64250 (accessed 28 March, 2010).

CPC List Version 1.0	663 – Transportation via space	Space transportation services, launching and placing of satellites in space, and services provided by space laboratories
CPC List Version 2.0	65320 – Space transport services of freight	Space transportation of freight and launching and placing of satellites in space
	64250 – Space transport services of passengers	Space transportation of passengers to, from and in outer space by any means

Thus, in light of this classification, it seems very plausible that the Space Transport services sector would constitute the most appropriate category to cover space travel, that is, a space transportation service provided to space tourists willing to pay to be transported "to, from, and in outer space" by a space vehicle. Therefore, a determination of whether a WTO Member's space transportation law complies with the GATS national treatment (and market access) obligation will likely occur within the GATS Space Transport sector, taking into consideration commitments and limitations inscribed in that sector by the WTO Member.

5.2 Most-Favored-Nation Treatment

The GATS general obligation of most-favored-nation treatment applies across the board to all services sectors and sub-sectors, regardless of what commitments a country made in its schedule of specific commitments.[170] Therefore, a WTO Member must provide most-favored-nation treatment to services and service suppliers whenever it takes measures that are covered by the GATS Agreement.[171]

a) CSLA Sec. 70104(a)(3) under WTO Law

As seen, a determination of whether a CSLA license is required under U.S. space transportation law is based on the nature of the person launching the space vehicle or operating the launch site, and whether the launch takes place within U.S. territory, outside U.S. territory, outside U.S. territory and outside the territory of a foreign nation, or in the territory of a foreign nation.[172] These licensing requirements find their origin in the "concerns that exist as to the extent of US jurisdiction and control over launch, activities, the extraterritorial implications of licensing launches and launch operations in foreign nations, and liability considerations of commercial launch activities."[173] Within this context, the U.S. CSLA provides, *inter alia*, that "[a]n entity organized . . . under the laws of a foreign country [and whose] controlling interest . . . is held by an individual [who is a U.S. citizen, or an entity organized or existing under the laws of the United States or a U.S. State]"[174] must obtain a license in order "to launch a launch vehicle or to operate a launch site or reentry site, or to reenter a reentry vehicle, outside the United States and outside the territory of a

[170] *See* Leonardi, *supra* note 92.
[171] *See* GATS Art. II.1.
[172] *See* 49 U.S.C. § 70104.
[173] KAYSER, *supra* note 15, at 93-94.
[174] 49 U.S.C. § 70102(1)(C).

foreign country . . ."[175] However, under these circumstances, a license is not necessary if "there is an agreement between the United States Government and the government of the foreign country providing that the government of the foreign country has jurisdiction over the launch or operation or reentry."[176] If a launch takes place outside of U.S. or foreign territory, no country may be susceptible of exercising its jurisdiction. However, as the entity launching the space vehicle or operating the launch site is controlled by U.S. interests, the United States could be held liable for any damages caused by the launch or operations carried out by the U.S.-controlled entity.[177] Therefore, as the United States is primarily responsible for these activities, the CSLA requires that a license be obtained unless another country pledges, by agreement, to bear this burden.[178] In order to understand the practical application of 49 U.S.C. Sec. 70104(a)(3), let's take into consideration the following hypothetical scenario.

Example 1

> *A space tourist from Brazil wishes to be travel into space. Space tourist learns that there are two major space travel operators: Euro Space, a European company, and Indian Star, an Indian company. Both companies provide space travel packages by using the services of Space Operations US, a U.S.-controlled Japanese company which provides launch site operations from a launch site located on a state-of-the-art platform in the middle of the Pacific Ocean (outside any country's jurisdiction). The European Union and the United States have entered into an agreement providing that the European Union will have jurisdiction over the launch and operations that take place outside of the*

[175] 49 U.S.C. § 70104(a)(3).
[176] *Id.*
[177] *See* KAYSER, *supra* note 15, at 97. The legal consequences of liability for damage are regulated in the Outer Space Treaty of 1967 and in the Liability Convention of 1972. In particular, the Liability Convention states that a "launching state" is a country which "launches or procures the launching of a space object, or a state from whose territory or facility a space object is launched." *See* Liability Convention Art. 1.
[178] *See* KAYSER, *supra* note 15, at 97.

United States and any foreign country's territory. India, however, has no agreement with the United States. After having approached Indian Star, space tourist is informed that Indian Star will not be able to offer the space travel until it obtains a CSLA license from the U.S. government.[179] *Unhappy, Space tourist contacts Euro Space and is informed that Euro Space is ready to make space tourist's life's dream come true at his convenience, as Euro Space does not need to obtain a license from the U.S. government.*[180] *Satisfied with the response, space tourist pays $200,000 to Euro Space and enters into a contract with the European company to be transported from Japan to the launch site and launched into space.*

As shown in Example 1, Euro Space has a competitive advantage over Indian Star because the European space tour company can readily provide space transportation services to tourists who wish to be transported into space. Indian Star, on the other hand, is adversely affected by the U.S. CSLA because it needs to obtain a CSLA license before it can provide space transportation services to its customers.[181] Therefore, the United States may have violated the WTO most-favored-nation treatment obligation because, by requiring Indian Star to obtain a CSLA license to provide space transportation services, the U.S. accorded to Indian Star treatment less favorable than that it accorded to Euro Space.[182] Indeed, under WTO law,

> "with respect to any measure [i.e., the CSLA], each Member [i.e., the United States] shall accord immediately and unconditionally to services and service

[179] In this case, 49 U.S.C. § 70104(a)(3) requires that Indian Star obtain a license because "there is [no] agreement between the United States Government and the government of the foreign country providing that the government of the foreign country has jurisdiction over the launch or operation or reentry."

[180] Euro Space does not need a license because "there is an agreement between the United States Government and the government of the foreign country providing that the government of the foreign country has jurisdiction over the launch or operation or reentry." 49 U.S.C. § 70104(a)(3).

[181] In other words, the CSLA modified the conditions of competition between the European Euro Space company and the Indian space tour company.

[182] Under the facts of Example 2, Euro Space does not need to obtain a license through Space Tour in order to provide space transportation services.

> providers [i.e., Indian Star] of any other Member [i.e., India] treatment no less favourable [i.e., requiring a CSLA license] than that it accords to like services and service suppliers [i.e., Euro Space] of any other country [i.e., the European Communities]."[183]

As previously explained, the CSLA licensing requirement is a GATS measure affecting trade in services.[184] More specifically, under the scenario set forth in Example 1, the CSLA licensing requirement is a measure that affects space travel services supplied by an Indian service supplier to a Brazilian consumer.[185] In the alternative, if Indian Star is present in Japan through a branch or affiliate, the CSLA licensing requirement may be deemed to affect trade in services supplied by an Indian service supplier, through commercial presence of the supplier in the territory of Japan.[186] The CSLA licensing requirement "affects" trade in services because by requiring the Indian company, and not the European supplier, to obtain a CSLA license to launch space vehicles from the U.S.-operated launch site located in the Pacific Ocean, the U.S. statute limits the Indian service supplier's ability to compete against Euro Space.

b) CSLA Sec. 70104(a)(4) under WTO Law

According to CSLA Sec. 70104(a)(4), "[a]n entity organized . . . under the laws of a foreign country [and whose] controlling interest . . . is held by an individual [who is a U.S. citizen, or an entity organized or existing under the laws of the United States or a U.S. State]"[187] must obtain a license in order "to launch a launch vehicle or to operate a launch site or reentry site, or to reenter a reentry vehicle, in the territory of a foreign country if there is an

[183] GATS Art. II.1.
[184] *See* GATS Art. I.1.
[185] *See* GATS Art. 1.2.b. Under the facts of Example 1, both India and Japan are WTO Members.
[186] *See* GATS Art. I.2.c.
[187] 49 U.S.C. § 70102(1)(C).

agreement between the United States Government and the government of the foreign country providing that the United States Government has jurisdiction over the launch or operation or reentry."[188] Here, the foreign country's sovereignty over the launch site will shield the United States from potential liability issues even if the launch and operations are carried out by U.S.-controlled persons. Therefore, in this scenario, there is no need for the United States to impose licensing requirements to the launch of space vehicles and operations of launch sites.[189] However, the United States may be held liable for damages caused by the launch or operations carried out by U.S.-controlled persons where there is an agreement between the foreign country and the United States providing for U.S. jurisdiction over the launch or operations. Therefore, where such an agreement is in force, the CSLA will protect U.S. interests by providing for extraterritorial application of U.S. space transportation law and imposing licensing requirements.[190] As in the case of CSLA Sec. 70104(a)(3), this provision may raise significant WTO law-compliance issues. Let's look at the following hypothetical.

> *Example 2*
>
> *A space tourist from Brazil wishes to travel into space. Space tourist learns that there are two major space travel operators: Euro Space, a European company, and China Universe, a Chinese company. Euro Space provides space travel packages by using the services of Space Operations US, a U.S.-controlled entity organized under the laws of the European Union which provides launch site operation services from a launch site located in the European Union. China Universe provides space travel packages by using the services of Space Operations China, a U.S.-controlled entity organized under the laws of China which provides launch site operation services from a launch site located in*

[188] 49 U.S.C. § 70104(a)(4).
[189] *See* KAYSER, *supra* note 15, at 97.
[190] *Id.*

China. The European Union and the United States have entered into an agreement providing that the United States will have jurisdiction over the launch and operations that take place within the European Union. On the other hand, the Chinese government did not enter into any agreement with the United States and has full jurisdiction over the launch and operations that take place in China. After having approached Euro Space, space tourist is informed that Euro Space will not be able to offer the space travel until it obtains a CSLA license from the U.S. government.[191] *Unhappy, space tourist contacts China Universe and is informed that the Chinese company is ready to make space tourist's life's dream come true at his convenience, as China Universe does not need to obtain a license from the U.S. government.*[192] *Satisfied with the response, space tourist pays $200,000 to China Universe and enters into a contract with the Chinese company to be transported into space.*

As shown in Example 2, China Universe has a competitive advantage over Euro Space because the Chinese space tour company can readily provide space transportation services to tourists who wish to be transported into space. Euro Space, on the other hand, is adversely affected by the U.S. CSLA because it needs to obtain a CSLA license before it can provide space transportation services to its customers.[193] Therefore, the United States may have violated the WTO most-favored-nation treatment obligation because, by requiring Euro Space to obtain a CSLA license to provide space transportation services, the U.S. accorded to

[191] Here, 49 U.S.C. § 70104(a)(4) requires that Euro Space obtain a license because "there is an agreement between the United States Government and the government of the foreign country providing that the United States Government has jurisdiction over the launch or operation or reentry."

[192] Indeed, 49 U.S.C. § 70104(a)(4) requires a license only if "there is an agreement between the United States Government and the government of the foreign country providing that the United States Government has jurisdiction over the launch or operation or reentry."

[193] In other words, the CSLA modified the conditions of competition between the European Euro Space company and the Chinese space tour company.

the European service supplier treatment less favorable than that it accorded to the Chinese company.[194] Indeed, under WTO law,

> "with respect to any measure [i.e., the CSLA], each Member [i.e., the United States] shall accord immediately and unconditionally to services and service providers [i.e., Euro Space] of any other Member [i.e., the European Communities] treatment no less favourable [i.e., requiring a CSLA license] than that it accords to like services and service suppliers [i.e., China Universe] of any other country [i.e., China]."[195]

Under the facts of Example 2, the CSLA licensing requirement is a GATS measure "affecting" space tourism services supplied by a European service supplier to a Brazilian consumer within the territory of the European Union.[196] Indeed, by requiring that the European company, and not the Chinese service supplier, obtain a CSLA license to launch space vehicles from the location of the launch site, the U.S. statute limits the European service supplier's ability to compete against China Universe.

Therefore, as the CSLA seems to accord to space transportation services and service suppliers of a WTO Member treatment less favorable than that it accords to space transportation services and service suppliers of other countries, the U.S. statute may be found to be inconsistent with the GATS general obligation of most-favored-nation treatment where it imposes licensing requirements under 49 U.S.C. Sec. 70104(a)(3) and (4).[197]

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[194] Under the facts of Example 4, Chinese Universe does not need to obtain a license through Space Tour in order to provide space transportation services.

[195] GATS Art. II.1.

[196] *See* GATS Art. I.2.b. Under the facts of Example 2, both Brazil and the European Communities are WTO Members.

[197] In addition to the requirements set forth under GATS Arts. II and XVII, space transportation services may also be subject to the obligations of GATS Art. VI. In particular, under GATS Art. VI.1, the United States must ensure, "[i]n sectors where specific commitments are undertaken . . . that all measures . . . affecting trade in services are administered in a reasonable, objective and impartial manner." Although the CSLA licensing requirements may be easily deemed to fall within the class of authorizations covered by GATS Art. VI.3, this

5.3 GATS Exceptions

Under Art. 14, the GATS provides general exceptions that may be used by WTO Members which have taken measures inconsistent with their GATS obligations. In particular, the GATS "general exceptions" provision sets forth a relatively flexible approach that allows WTO Members to take policy goals into account when implementing measures affecting trade in services.[198] Under this exception clause, a Member may not be prevented from adopting and enforcing GATS-inconsistent measures if, among other things, the measures (i) are "necessary to protect human, animal or plant life or health[;]"[199] (ii) are not applied in a manner which would constitute a means or arbitrary or unjustifiable discrimination between countries where like conditions prevail;[200] and (iii) are not disguised restrictions on trade in services.[201] According to U.S. space transportation law, CSLA licensing requirements are imposed to "protect the public health and safety, safety of property, and national security and foreign policy interests of the United States . . ."[202] Although it may seem that the above mentioned purpose would satisfy the GATS general exceptions' goal of protecting human life, Congress failed to explain how the licensing requirements provided by 40 U.S.C. Sec. 70104(a)(3) and (4) would fit into the GATS Art.XIV exception. As previously mentioned, a

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paper will not address the compatibility of the CSLA licensing requirements with GATS Art. VI. Indeed, GATS Art. VI.1 applies only to measures affecting services where commitments have been undertaken. However, as previously explained, the United States failed to make any specific commitments in the Space Transport sub-sector and in the sub-sectors most likely to cover space transportation services.

[198] *See* GATS Art. XIV. *See also* Thomas Cottier, Panagiotis Delimatsis & Nicolas F. Diebold, *Article XIV GATS, in* WTO - TRADE IN SERVICES (RUDIGER WOLFRUM, PETER-TOBIAS STOLL & CLEMENS FEINAUGLE EDS., 2008) AT 290-291.

[199] GATS Art. XIV.b

[200] *See* GATS Art. XIV. More specifically, the *chapeaux* test requires that the measures at issue be not applied in a discriminatory manner which is arbitrary or unjustifiable in character between WTO Members where like conditions prevail. *See United States – Import Prohibition of Certain Shrimp and Shrimp Products*, ¶ 150, WT/DS58/AB/R (Oct. 12, 1998); *United States – Standards for Reformulated and Conventional Gasoline*, 23, WT/DS2/AB/R (Apr. 29, 1996); *US – Gambling* Panel Report, ¶ 6.578.

[201] *See* GATS Art. XIV.

[202] 49 U.S.C. § 70101(b)(3). *See also* 40 U.S.C. §§ 70104(c) and 70105.

person operating a launch site or launching a space vehicle under Sec. 70104(a)(3) and (4) needs to obtain a CSLA license because, in the circumstances articulated by subsections (3) and (4), the United States could be held liable for damages caused by the launch or operations.[203] If the purpose of requiring a CSLA license under the particular circumstances of Sec. 70104(a)(3) and (4) were to fulfill the goals set forth under 49 U.S.C. Sec. 70101(b)(3),[204] it would make no sense to abandon these goals and not to require the same license where the launch of a space vehicle and site operations take place (i) in a foreign country that has no agreement with the U.S., or (ii) outside of any country's jurisdiction.[205] If the United States were committed "to protect human, animal or plant life or health" where there exists an agreement providing for U.S. jurisdiction over the launch, the United States would also be committed to protect the same interests where such agreement does not exist. Therefore, considered that (i) the purpose of the CSLA licensing requirements under 49 U.S.C. Sec. 70104(a)(3) and (4) is to protect U.S. interests with regard to liability issues, and that (ii) GATS Art. XIV does not provide for an exception from GATS obligations in order to achieve this goal, it follows that the CSLA may be deemed to have violated the GATS most-favored-nation treatment obligation.

VI. Conclusion

Long are gone the days when space tourism used to be exclusively the subject of visionary filmmakers. The private industry has finally realized that current technology is advanced enough to make many (wealthy) people's space travel dreams come true, and is increasingly investing in the commercial space transportation field to take advantage of this still pristine and extremely lucrative niche. Although, as of today, U.S.-based private entities appear to be

[203] *See* KAYSER, *supra* note 15, at 97; HERMIDA, *supra* note 27, at 92; DIEDERIKS-VERSCHOOR & KOPAL, *supra* note 6, at 107-108.
[204] That is, to "protect the public health and safety, safety of property, and national security and foreign policy interests of the United States . . . ."
[205] *See* 49 U.S.C. §70104(a)(3) and (4).

the main and, maybe, only players in this recently started commercial space race, it should not surprise if private industries from other space-faring countries will soon join their American counterparts and enter the commercial space transportation business. In such a scenario, however, legal claims as to the legitimacy of applicable U.S. law will certainly arise within the international trade regime where, due to treaties between some foreign nation and the United States, potential space tourists will seek space transportation services from one country's service providers rather than another's. Differently from most WTO disputes, however, these complaints will be raised by the private space transportation industry of the same country that previously entered into the space treaty with the United States. Consequently, although it is possible for one of these nations to cede to the domestic space transportation industry's demands and "turn its back" on the United States, it is more plausible that WTO disputes will be brought by other WTO Members, not necessarily space-faring countries, under the pressure of foreign private industries.[206] Therefore, in anticipation of potential international trade litigation before the WTO's dispute settlement bodies, the United States ought to modify its current space transportation licensing requirements or it will likely be found in violation of WTO law.

[206] According to GATS Art. XXIII.1, "[i]f *any* Member should consider that *any* other Member fails to carry out its obligations or specific commitments under [the GATS], it may . . . have recourse to the DSU" (emphasis added).