

BRAZIL-USA AGREEMENT ON ALCANTARA LAUNCHING CENTER

José Monserrat Filho
Brazilian Society of Aerospace Law (SBDA)
Brazilian Society for the Advancement of Science (SBPC)
Rio de Janeiro, Brazil
Valnora Leister, LL.M., DCL
Attorney
Arlington, Virginia, USA

"Will there be free and fair trade in commercial space launch services?"
H. Peter van Fenema (1)

1. Introduction

This is a very rigorous agreement, born out of a conflict; but today it may be a springboard for debate over legal principles affecting the control of technologies used in outer space. We are referring to the "Agreement between Government of the Federative Republic of Brazil and the Government of the United States of America on Technology Safeguards associated with the US participation in launches from the Alcantara Spaceport" (hereinafter called "the Agreement"). This instrument was signed in Brasilia, on April 18, 2000, by the Brazilian Minister of Science and Technology, Ronaldo Sardenberg and by the Ambassador of the USA in Brazil, Mr. Anthony S. Harrington.

The difficult negotiation of the Agreement was even discussed in a meeting in Washington, between the Presidents of both countries, Fernando Henrique Cardoso and Bill Clinton. In crucial moments there was the participation of the Assistant Secretary for National Security in the US, Sandy Berger, and the Secretary of State, Madeleine Albright, as well as the Brazilian Minister of External Relations, Luiz Felipe Lampreia, and the Secretary General of the Brazilian Ministry of External Relations, Luiz Felipe de Seixas Correia, the Under

Secretary for Political Affairs, Ivan Canabrava and two ambassadors of Brazil in the US, Paulo Tarso Flecha Lima and Rubens Barbosa.

The main purpose of the Agreement was to preclude any and all unauthorized transfer to Brazil of technologies from the USA rockets and satellites, during commercial launching services at the Brazilian Alcantara Spaceport. In summary: avoid the theft of advanced space technologies.

This goal is clearly stated in Article I of the Agreement: "This Agreement is entered into for the purpose of precluding unauthorized access to or transfer of technologies associated with the launching of Launch Vehicles, Spacecraft by means of Space-Launch Vehicles or Launch Vehicles, and Payloads by means of Launch Vehicles from the Alcantara Spaceport."

The final text of the Agreement with 10 articles — all with a lot of details — demanded complex negotiations, which took several months.

The initiative to reach the Agreement originated in Brazil. The Brazilian Government perceived, in a dramatic moment, that, without the participation of the US industry, the world leaders in the commercial satellite sector, the Alcantara Spaceport would not enter the international launching market.

The USA Government resisted accepting the Brazilian proposal to conclude an agreement on technology safeguards. It only agreed to sign the Agreement by adopting very strict conditions, in accordance with its own

national security standards, non-proliferation of rocket technology and controls on advanced technology—and opposing the Brazilian project VLS (Vehicle for Launching Satellites).

Notwithstanding the American restrictions, the Brazilian Government considered the Agreement a victory, an “historical event”, in the words of the Minister Ronaldo Sardenberg. In the signing ceremony, he explained the reason for his enthusiasm: “With this instrument we have created conditions for Brazil to offer services in the international satellite launching market, a dynamic market, with rapid growth and requesting advanced technology, in which we have participated, up to this moment, as consumers.”

The present paper aims to examine the origins, the main rules and the spirit of this controversial Agreement. In the first place we present some basic information on Alcantara Spaceport, as it is the object of the Agreement.

2. Alcantara Spaceport perspectives

The Alcantara Spaceport is located in the State of Maranhão, in the north of Brasil, only 2.18 south of the Equator, offering advantageous position for launchings into the Geostationary Transfer Orbit. This location permits: a) launches to the East with great fuel savings thanks to the Earth’s rotation in relation to the tangential velocity of the vehicle, and b) excellent condition for equatorial and polar launch.

Construction of the Alcantara Spaceport began in 1983, with the first satellite launching six years later, after nearly US\$ 300 million had been spent on roads, electricity, a command center, an airport and other infrastructure. Since then, 276 satellites and rockets have been launched from Alcantara Spaceport, including 36 by NASA, though the great majority of these were suborbital rockets. (2)

The Alcantara Spaceport occupies an area of 620 sq. km. and an infrastructure able to hold many launch pads and area available to install new commercial launch sites for space vehicles. Now it has around 580 employees.

On November 1, 1996, the Ministry of Aeronautics, as the administrator of Alcantara Spaceport, the Brazilian Space Agency, as the monitor of the Brazilian space activities and Infraero Enterprise signed an agreement for the International commercialization of the Alcantara Spaceport. To deal with the

commercialization of the Alcantara Spaceport, Infraero created the Aerospace Development Department, with headquarters in Brasília.

Since it undertook the commercialization of Alcantara Spaceport, Infraero had seventeen enterprises interested in using it. Among them the most important are:

1) FiatAvio/Yuznoye (Italia/Ucrânia), a consortium interested in launching the rocket Cyclone-4;

2) Lockheed Martin (USA), interested in negotiating the temporary installation of a platform for the launching of its rocket Athena;

3) Orbital Sciences Corporation (USA) interested in launching its rocket Pegasus and in installing a platform for the launching of its rocket Taurus;

4) Mart Macron Space (France/Israel), interested in launching the French-Israeli rocket Leolink;

5) Boeing (USA), interested in installing a complex for launching its rocket Delta IV;

6) Beal Aerospace (EUA), requesting conditions and costs for the implementation of a launching site for its rocket BA-2;

7) International Launching System (USA/Russia) interested in installing a launching site for its rocket Angara/Atlas V;

8) Mitsubishi (Japan), interested in the installation of a launching site for its vehicle J-II.

3. The origins of the Agreement

In December 1997, the Brazilian State Company Infraero, in charge of the commercialization of the Alcantara Spaceport, was negotiating with the Italian Corporation Fiat Avio an agreement for a program of launchings. On April 7th, 1998, Infraero had signed a Memorandum of Understanding with Fiat Avio and the Ukrainian Enterprises Yuzhnoye and Yuzhny, for the launching of the Ukrainian rocket Tsyklon-4 (a liquid-fuel, three-stage rocket based on the Soviet SS-9 ballistic missile). Before this event, Fiat Avio and Yuzhnoye, on behalf of the two Ukrainian enterprises, signed a strategic Agreement, creating a joint venture for the commercialization of the Tsyklon-4 rocket launchings. They estimated that this rocket would be an efficient vehicle for launching satellites, being reliable, economic and therefore, competitive. Fiat Avia saw an excellent opportunity for a global cellular telephone company. Thus, the interest in having

an Agreement with Infraero.

The American enterprise Motorola, asked by Fiat Avio to participate in the business with its own satellites, consulted the US Government on the subject, in accordance with the US legislation. Then, the US Government sent a "non paper" to the Italian Government recommending that an agreement with Infraero on Brazilian spaceport should not be concluded.

This non-paper stopped completely the negotiations between Fiat Avio and Infraero. Both the Italian and Ukrainian companies lost interest, because they sensed that the deal was not welcome by the US State Department.

At this stage, the Brazilian diplomacy had been mobilized to try to overcome the obstacle placed in the first opportunity for an international business using the Alcantara Spaceport. The US blocked the first diplomatic attempts because the Brazilian VLS project. The US only would accept to start negotiation on this matter if Brazil would give up the VLS project. Then, the former Minister Ronaldo Sardenberg contacted the National Security Counsel of the White House, trying to convince the US to be more flexible.

The first positive results of the Brazilian efforts were on June 11, 1999, during an official visit of the Brazilian President Fernando Henrique Cardoso to the US, when a Brazilian delegation was received in the State Department, and the US non-paper was included in the official conversations. On June 12, 1999, the National Security Council received the same delegation.

As a result of these initiatives on July 26, 1999 the first meeting for the preparation of the agreement took place. The meeting had the participation of the president of the Brazilian Space Agency, Gylvan Meira Filho and the Lieutenant Brigadier Reginaldo dos Santos, as representative of the Brazilian Ministry of Aeronautic. The diplomat Antonio Guerreiro, representative of the Brazilian Ministry of External Relations, could not be present at the first meeting, but he also participated in the negotiations for the Agreement. The head of US negotiation team was Vann van Diepen, Director of Missile, Chemical and Biological Non-Proliferation at the State Department. After this first meeting further compromises took place by correspondence between the parties. A follow up meeting took place on January 10 and 11 when a preliminary draft of the agreement was finalized – but the final

draft was ready in March. On April 18, 2000 the Agreement was signed, and is now pending ratification by the Brazilian Congress to enter into force.

Trying to create a favorable climate for the acceptance of Alcantara, on November 11, 1999, the Governments of Brazil and Ukraine signed an Agreement on Space Cooperation, fixing inter alia the purpose of "commercial utilization of Alcantara Spaceport to launch vehicles developed in Ukraine." (3)

It is important to note that Brazil had a quite weak negotiating position, as it needed the Agreement far more than the US. We can remember a similar situation when China and Russia wanted to enter the launch market and had to sign an agreement like this with US.

4. General characteristics of the Agreement

In the first paragraph of the Agreement' Preamble, the Government of US and Brazil stress their desire "to expand the successful cooperation carried out under the Framework Agreement on the Cooperation in the Peaceful Uses of Outer Space of March 1, 1996", signed by them. In fact, as we will see, the Agreement is not exactly an instrument of cooperation, but of technological safeguards. It would be a true instrument of cooperation if it would provide some technological transfer, training human resources or contribution to the development of the Brazilian national space program. That is not the case. However, Brazil will benefit from this agreement if the US enterprises will enter into further agreements for launching from Alcantara Spaceport, taking advantage of its positioning and security.

Formally we can divide the Agreement in four parts:

- 1) Purpose and definition, in Articles I and II;
- 2) General Provisions, in Article III;
- 3) Provisions on different phases of technological control, in Articles IV to X;
- 4) Provisions on Implementation, Entering into force, Amendments and Termination, in Articles IX and X.

The main purpose of the Agreement, as we said, is to prevent all unauthorized US vehicle and satellite technology transfer to Brazilian institutions and enterprises at the Alcantara Spaceport.

That is an important US concern. It

particularly aims at the VLS Brazilian program, since the US never accepted the VLS program. To the US, the VLS could be used for military purposes. In 1988, the US led the Missile Technology Control Regime - MTCR (4) to block the construction of VLS. Since 1994, Brazil took steps to approach the MTCR, creating the needed dual technology export control legislation. In October 1995, Brazil's membership in the MTCR was approved unanimously at the regime's 10th plenary meeting in Bonn, Germany. Acceptance in the MTCR was the outcome of a series of policy changes initiated by Brazil in early 1994 to address international missile proliferation concerns. The measures adopted by the Brazilian Government in this matter were considered a firm compromise not to produce and not to export any means of delivery (missiles) of mass destruction armaments. In February 1994 Brazil created the Brazilian Space Agency of civil character and in 1995 the Brazilian National Congress approved of control of export of dual technology. Moreover, Brazil closed definitely its projects of ballistic missiles (SS-300, SS-600 e SS-1000) and reiterated the purpose of using outer space exclusively for peaceful purposes. (5) But, apparently the Brazilian condition of member of MTCR does not guarantee to Brazil a more trustworthy and flexible treatment by the US.

The Agreement also can be divided in two kinds of provisions: those related to technology safeguards, and those that exceed these safeguards.

1) The most important technology safeguards provisions are:

- Article IV, paragraph 3: "For any Launch Activities, the Parties shall take all necessary measures to ensure that US Participants retain control of Launch Vehicles, Spacecraft, Related Equipment and Technical Data... To this end the Government ... of Brazil shall make available at the Alcantara Spaceport segregated areas for the processing, assembly, mating, and launch of Launch Vehicles and Spacecraft by US Licensees and permit persons authorized by the Government of the United States of America to control access to such areas..."

- The Article VI, paragraph 2: "The Parties shall ensure that only persons authorized by the Government of the United States of America shall, on a 24-hour basis, control access to Launch Vehicles, Spacecraft, Related

Equipment, Technical Data and the segregated areas referred to in Article IV, paragraph 3 throughout equipment/component transportation, construction/installation, mating/demanding, test and checkout, launch preparations, Launch Vehicles/Spacecraft launch, and return of Related Equipment and Technical Data to the USA or other location approved by the Government of the USA."

- Article VI, paragraph 3: "Officials of the Government of the USA present at the Alcantara Spaceport in connection with Launch Activities shall have unimpeded access at all times to inspect Launch Vehicles, Spacecraft and Related Equipment in the segregated areas referred to in Article IV, paragraph 3, and at facilities that are exclusively set aside for work with Launch Vehicles and Spacecraft, and to check, at these areas and facilities, the Technical Data that is provided by the US Licensees (American enterprises) to the Brazilian Representatives. The Government of the USA will endeavor to give timely notice of such inspections and checks to the Government of Brazil or Brazilian Representatives. Such inspections and checks nevertheless may occur without prior notice to the Government of Brazil or Brazilian Representatives. The Government of USA shall have the right to inspect and monitor, including electronically through a closed-circuit television system and other electronic devices compatible with conditions for preparation and launch of Launch Vehicles and compatible with launch safety requirements: the segregated areas referred to in Article IV, paragraph 3, and all areas as set forth in the Technology Control Plans where Launch Vehicles, Spacecraft, Related Equipment and Technical Data are located, including the 'especially clean' portion for working with Spacecraft after Spacecraft are mated with Launch Vehicles..."

- Article VII, paragraph 1, letter B: "Any Launch Vehicles, Spacecraft, Related Equipment and/or Technical Data transported to or from the territory of the Federative Republic of Brazil and packed in appropriately sealed containers shall not be opened for inspection while in the territory of the Federative Republic of Brazil. The appropriate Brazilian authorities shall be provided by the Government of the USA with a written statement of the contents of the aforementioned sealed containers."

- Article VIII, paragraph 3, letter B: "The Government of Brazil shall ensure that a US Participants-controlled 'debris recovery site' for the storage of identified Launch Vehicle, Spacecraft and /or Related Equipment components and/or debris is located at the Alcantara Spaceport and/or another location agreed to by the Parties. Access to this (these) location (s) shall be controlled as provided in Article VI of this Agreement, as appropriate. The Government of Brazil shall ensure the immediate return of all identified Launch Vehicle, Spacecraft and/or Related Equipment components and/or debris recovered by Brazilian Representatives to US Participants without such components or debris being studied or photographed in any way."

- Article III, paragraph 1, letter F: "The Federative Republic of Brazil shall conclude legally binding agreements with other governments having jurisdiction or control over entities substantially involved in Launch Activities (of US vehicles and/or satellites in Alcantara spaceport). The substantive scope and provisions of such agreements shall be equivalent to those of this Agreement, except for this Article and as otherwise agreed between the Parties. In particular, such agreements shall obligate such other governments to require their Licensees to abide by arrangements substantively equivalent to the Technology Control Plans that the Government of the US shall ensure that US Participants abide pursuant to paragraph 4 of Article IV of this Agreement."

Concerning to the Article VII, paragraph 1, letter B, it is clear that the Brazilian side must totally believe in the written statement of the US, although reciprocally there does not seem to be the same level of confidence in the Agreement as a whole.

It is also very clear that the compliance with the Article VII, paragraph 3, letter B provision can be hindered by a case of liability for damage caused by mentioned components or debris, which would be material evidence before a Brazilian Court of Justice. Moreover, by the same provision Brazilian side transfers to the US side the control of the operations to eliminate possible danger of the debris in the Brazilian territory. However, according to the Article 5, paragraph 5, of the 1968 Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space, ratified by both States, Brazil could maintain such operations under its

direction and control.

2) Restrictive provisions others than technological safeguards:

- Paragraph 1, letter B: The Federative Republic of Brazil shall "not permit significant quantitative or qualitative inputs of equipment, technology, manpower or funds into the Alcantara Spaceport from countries that are not Partners (members) of the MTCR, except as otherwise agreed between the Parties".

- Paragraph 1, letter E: The Federative Republic of Brazil shall "not use funds obtained from Launch Activities (of US vehicles and/or satellites in Alcantara spaceport) for programs for the acquisition, development, production, testing, deployment or use of rocket or unmanned air vehicle systems (either in the Federative Republic of Brazil or other countries)..."

The provisions in letter B could constrain Brazil from launching Chinese and Indian vehicles and satellites from Alcantara, as China and India are not MTCR members. Brazil accepted this provision certainly because these both countries are hardly likely to be a client for Alcantara. However, Brazil and China have had an important space cooperation agreement for more than ten years. It includes the Chinese-Brazilian Earth Resources Satellite (Cbers) Program, which already has launched the Cbers-1 last year and is preparing the launch of the Cbers-2 for the next year. Last September 21, Ministers of Foreign Affairs of both countries signed a Protocol of Intention for the construction of two more remote sensing satellites (Cbers-3 and Cbers-4).

The letter E provision embodied the anti-VLS US policy. It is a clear US attempt to interfere and impede Brazil's Government in applying to the VLS program the funds gained from American enterprise utilization of Alcantara Spaceport. It has been unofficially explained that the US — in harmony with its old non-proliferation policy — has demanded this provision. It was argued that this policy could not be changed rapidly to comply with the Agreement. The Brazilian side certainly accepted such a demand, as it is impossible to know the destiny of a determined financial resource once incorporated to the National budget. Therefore, this provision may be seen as a non-effective one. Its meaning is more political than legal.

Moreover, it was more convenient for Brazil to accept this clause of difficult application, rather than to eliminate the VLS project, as proposed by the US in the beginning of negotiations – this proposal was totally rejected by the Brazilians. A US diplomat asserted during the negotiations that: “Brazil has the right to build the VLS project, but the US has the right to contribute nothing to it”. In practical terms, this was the US acceptance of the Brazilian VLS project, with the only restriction accepted by Brazil during the negotiations to not invest in the VLS project the resources earned from the US satellite launchings from Alcantara.

5. Some conclusions

In the signing ceremony for the Agreement, the US Ambassador Anthony Harrington emphasized that Brazil was distinguished by “a noteworthy performance in controlling the proliferation of sensitive technologies and weapons of mass destruction, [acting] as a model in this regard for the world.”

In fact, Brazil for several years has been taking the necessary measures to be a trustworthy country, particularly with regard to the United States government, so that it can gain access to technology for its space program.

But if the Brazilian non-proliferation efforts are “noteworthy”, as proclaimed by the U.S. Ambassador, how does one explain the excessive rigidity and far-reaching nature of the Agreement? Are the requirements indeed reasonable?

In order to allow launching from Kourou, French Guiana, of the GE-7 satellite (made by US-based Lockheed Martin for GE American) by Europe’s Ariane-5 rocket, which occurred successfully on September 15, 2000, did the US require that France observe the same conditions as Brazil? There is a Technology Safeguards Agreement between the U.S. and France, of course. It is normal. But is this Agreement so rigorous as those signed with Brazil? Hardly.

We continue to live in times of differential treatment. Countries need to be strong and rich to receive fair treatment. This is especially clear in the area of space activities, which use strategic technologies. It is not easy to have access to the world market, even when you have a good product to offer. Many States – and not only the “rogue” ones – are objects of

suspicion and distrust, which often are part of a good business strategy. We are in the pre-history of space cooperation. The law of the stronger is disguised in gentle diplomatic words to improve the appearance of realities that are hard to swallow.

Nevertheless, it is possible that, if the US follows through with its unique positive commitments regarding the Alcantara Spaceport in the Agreement – “It will be the intention of the Government of the United States of America, assuming consistency with United States laws, regulations, official policies, and the provisions of this Agreement, to approve the export licenses necessary to conduct Launch Activities”, although “nothing in this Agreement shall restrict the authority of the Government of the United States of America to take any action with respect to export licensing...”, as said in Article III, paragraph 3 – Brazil would have favorable conditions to become a competitive option in the world market for commercial launching, because for the Brazilian side this is the more important provision of the Agreement.

Brazil may have also the advantage that the Agreement does not establish quotas or limitations for the number of launchings taking place, as it has been established in the launch agreements with China and Russia.

All this, clearly, is more an issue of politics than law. Its legal framework – a bilateral agreement between sovereign countries – reflects only an anomalous monopolistic situation, and a paranoiac distrust that often imposes artificial and unjust limitations.

However, sooner or later, this situation shall be overcome even if it is difficult to predict how. There are, however, several reasons for changes to take place, among which are:

1) The majority of countries and the public opinion want that space activities take place “for the benefit and in the interest of all countries, irrespective of their degree of economic or scientific development” (Article I of 1967 Outer Space Treaty);

2) The majority of countries and the public opinion prefer that each State conduct its space activities “with due regard to the corresponding interests of all other States” (Article IX of the same Treaty);

3) The majority of countries and the public opinion is fully conscious of the need to promote development of cooperation in space, specially the essential activities, such as

launching, search for better economic results, better security and larger number of beneficiaries, and

4) The possibility that one day the international community will have more strength than today to reach its goals is not excluded – so that it will have better conditions to participate with equity in the developmental process. The advancements in the process of globalization can open a path to this end.

References

1) Fenema, H. Peter van, in "The International Trade in

Launch Services", International Institute of Air and Space Law, Faculty of Law, Leiden University, Leiden, The Netherlands, 1999, p. 301.

(2) Rother, Larry, A Developing Nation on the Frontiers of Space, The New York Times, May 23, 2000.

(3) Brazilian Space Agency news of November 18, 1999. <http://www.agespacial.gov.br/12novembro1999-Ucrania.htm>.

(4) "The Missile Technology Control Regime". US State Department Report <http://www.state.gov/www/global/arms/factsheets/exptcon/mtr96.html>. See also "Missile Technology Control Regime (MTCR) Documents". *Stockholm International Peace Research Institute Report*. http://projects.sipri.se/expon/mtr_documents.html

(5) "Brazil's Accession to the MTCR". *The Non Proliferation Review*, Spring-Summer 1996. <http://cns.miis.edu/pubs/npr/bowen.htm>