

## BRAZILIAN-UKRAINIAN AGREEMENT ON LAUNCHING CYCLONE-4 FROM ALCANTARA: IMPACT ON BRAZILIAN LEGISLATION

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*“If all activities connected with outer space are to be conducted for the benefit of all and to the detriment of none, international co-operation is essential, and if all the possibilities opened up are to be used in a responsible manner, the conduct of States in regard to outer space must be submitted to the rule of law.”*

*Manfred Lachs (1)*

### Introduction

The Brazilian and Ukrainian Governments signed a treaty “on Long-term Co-operation in Utilization of the Cyclone-4 Launch Vehicle at the Alcantara Launch Center” in October, 2003. It established the first international legal framework for the commercialization of space launches from the Alcantara Launch Center, in the Brazilian State of Maranhao in the Northeast of the country. Under the agreement, a joint venture company, “Alcantara Cyclone Space” was created, defined by the treaty as “an international entity for economic and technical purposes”. The new binational enterprise, as the treaty also fixes, shall have its headquarters in Brasilia and will be registered in Brazil. It will be the first international space company to be registered in Brazilian law.

This paper presents a general overview of the treaty and its impact on Brazilian legislation.

### An auspicious event

The “Treaty between the Federative Republic of Brazil and Ukraine on Long-Term Co-operation in Utilization of the Cyclone-4 Launch Vehicle at the Alcantara Launch Center” (hereinafter referred

as the Treaty) was signed on October 21, 2003, in the Presidential Palace of the Planalto in Brasilia by the then Brazilian Minister of Science and Technology, Roberto Amaral, and by the Ukrainian Minister of Foreign Affairs, Kostiantyn Gryshchenko. (2) Present in the ceremony were the Presidents of Brazil and the Ukraine, respectively, Luiz Inácio Lula da Silva and Leonid Kuchma.

On the same occasion, the Brazilian Space Agency (AEB) and the National Space Agency of the Ukraine (NSAU) signed a “Memorandum of Understanding on Future Bilateral Projects”, expressing “their commitment to expand their co-operation further, through the exploration of additional fields of collaboration and the commitment to the joint development of new technological endeavours and projects, such as those related to the areas of liquid propulsion both for satellites and launchers, systems of guidance and control and upgrading of launch vehicles”.

Both documents – the Treaty and the Memorandum – reflect the commitment of top Brazilian and Ukrainian authorities to joint efforts whenever possible to carry out a broad cooperative space program.

The Treaty – composed of a preamble and 17 articles – is the result of a long and complex process of bilateral negotiation, initiated in 1997, which did not always count on a favorable international climate or support. Nonetheless, if it now succeeds, it may well bring some beneficial changes to the world commercial launching market, offering a competitive and reliable alternative to existing launch options.

Brazilian authorities decided to call this text a treaty, not agreement, in Portuguese (tratado, not acordo), in order to clearly associate the new endeavor with the successful binational treaty of Itaipu, signed in 1975 by Brazil and Paraguay for the construction of the great Hydroelectric Dam

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and power grid, now functioning for 20 years on the border of both countries. (3)

The current Treaty was approved by the Ukrainian Supreme Council (Parliament) on February 4, 2004. The President of the Ukraine signed the Law on Ratification of the Treaty on February 24, 2004. The Brazilian House of Representatives and Senate approved the Treaty, respectively, on August 10 and on September 17, 2004.

However, the success of the undertaking depends above all on the regular flow of funds for the construction of the necessary infrastructure in Alcantara. It is a crucial issue. There is, therefore, no full guarantee that the Cyclone-4 Space Launch System in Alcantara will be operative by December 30, 2006, as the treaty stipulates.

### Background

Brazil and the Ukraine established diplomatic relations on February 11, 1992, less than two months after the official dissolution of the Soviet Union (USSR), on December 26, 1991. The Ukraine was, until then, one of the 15 Soviet Republics. The first Brazilian-Ukrainian agreement was the Treaty on Friendship Relations and Co-operation, signed on October 25, 1995, about four years after the proclamation of the Ukrainian independence.

The Brazilian national territory of 8,5 million km<sup>2</sup> is 14 times bigger than the Ukrainian one of 604 mil km<sup>2</sup>, while the Brazilian population of 180 million is just a bit more than three times the Ukrainian population of 52 million. From the territorial point of view, Brazilian demands for space technology and activities could be considered much larger than Ukrainian ones. However, Brazil has not advanced as much as the Ukraine has in space affairs. As part of the Soviet Republic, it played a significant role in USSR space military industrial developments, mainly in rocketry and intercontinental ballistic missile technology.

Thus, Brazil and the Ukraine have accumulated quite different space experiences that have followed distinct trajectories due to differing government goals. Nevertheless, in the 90's the two countries were able to define strategic cooperative projects of mutual interest which have opened the door to new opportunities of promising bilateral and multilateral undertakings, in particular in the field of space launchings.

The Brazilian and Ukrainian approximation in space affairs began in 1997. That year, the Italian enterprise Fiat Avio imagined an international consortium to launch Cyclone-4 from Alcantara. Brazil and the Ukraine immediately backed the idea. Fiat Avio perceived, on the one hand, the privileged localization of the Alcantara Launch Center, only 2,18 degree South Equator, capable of launching satellites in polar and equatorial orbits, and, on the other hand, the high reliability of the Cyclone-4, an upgrade of the Cyclone-3, which accounted for more than 200 successful launchings. In December, 1997, the Brazilian state *company*, Infraero, which manages all the Brazilian civil airports, started negotiations with Fiat Avio on the *consortium* project as the representative of the Brazilian Government. The plan included the participation of the Ukrainian companies Iujnoie, of Industrial Design Projects, and Iujnyi, of rocket and space equipment construction. On April 7, 1998, Infraero, Fiat Avio, Iujnoie and Iujnyi signed a Memorandum of Understanding, establishing the directives of a Joint Venture to commercialize space launchings from Alcantara, using Cyclone-4. At the time, there was already a first potential client for the services of the intended consortium: the American Motorola corporation.

However, consulted by the Motorola whether it could launch its satellites from Alcantara, the USA State Department not only denied it but also recommended to the Italian Government, thought a so called "non-paper", the adoption of the same decision. From the American authorities' point of view, Brazil is a potential agent of missile technology proliferation because it insists on the construction of the VLS-1 (First Satellite Launch Vehicle). They do not take into account that Brazil has already adopted the export control legislation on space and other sensitive equipment, nor that Brazil has been a member of the MTCR (Missile Technology Control Regime) since 1995. Nevertheless, the American decision made Fiat Avio abandon the consortium project with Brazilian participation. The negotiations were canceled.

However, the Brazilian Government did not give up on the project. A special diplomatic effort was launched within the White House, including direct talks between the Presidents of the United States of America and Brazil, Bill Clinton and Fernando Henrique Cardoso, leading to a USA agreement to overcome the barriers through the signature of a safeguard technology agreement.

After about eight months of difficult negotiations, initiated in August of 1999, the agreement was signed on April 18, 2000, thus overcoming a second semester 1999 impasse.

Encouraged by the new perspectives, Brazil and the Ukraine reestablished contact. On November 18, 1999, they signed a framework agreement on co-operation in peaceful uses of outer space. This instrument covers and stimulates practically all kinds of space initiatives and projects. (See <[www.aeb.gov.br](http://www.aeb.gov.br)>)

Its Article 3°, § 1°, presents an exhaustive list of fields where Brazil and Ukraine can cooperate; and if something has been left out of the list, the § 2° allows for the definition of new fields “under mutual agreement between the Parties”. Brazil and Ukraine thereby guaranteed all possible avenues for bilateral space co-operation, including the more sensitive areas.

Three areas of the list relate directly to launching activities: systems of space transport; joint project(s) for space research and development, construction, production, launching, operation and utilization of launch vehicles, satellites and other space systems; and ground infrastructure of space systems, including launch centers.

Article 4° on “Models of Co-operation” is also noteworthy, as it lists different ways of co-operation, facilitating and encouraging understanding and bilateral undertakings. Two of its topics have a direct link to the project of commercial utilization of the Alcantara Launch Center, namely: e) “development of industrial and commercial programs in areas of study and utilization of space systems and launch services”; and f) “utilization of launch vehicles and other space systems to carry out united activities.”

Article 5° allows for the establishment of complementary adjustments not only between the Executive Agencies of the agreement – Brazilian Space Agency and Ukrainian National Space Agency –, but also “other designated institutions”. It also allows for the adoption of “Specific Cooperative Programs”, which “shall determine principles, rules and proceedings concerning organization, execution and, if necessary, funding of such programs”. Moreover, under Article 5°, both Governments, the Executive Agencies and “other institutions” involved “shall indicate the participation of private and public organizations, enterprises and natural persons of third countries in the Cooperative Programs carried out under the current Agreement”.

It clearly confirms the highest official decision to open all avenues for the development of space co-operation. In this sense, the inclusion of a special article, Article No. 7 on “Participation of the Private Sector”, favoring the co-operation between “businesses or industrial and commercial organizations, public or private, of both countries” as integral parts of the joint space programs is symptomatic.

On January 16, 2002, about two years after the signature of the Framework Agreement, Brazil and the Ukraine signed the “Declaration on the Deepening of Friendship Relations and Co-operation” and, a day after, on January 17, the Technology Safeguards Agreement, indispensable in the joint plan to attract global clients, especially from the USA, for the use of the Cyclone-4 for commercial launchings from Alcantara Center.

The Declaration, signed in Kiev by Ukrainian and Brazilian Presidents, Leonid Kutchma and Fernando Henrique Cardoso, stresses the decision of both countries “to intensify and to deepen bilateral relations” in areas of political, economic, scientific and technological co-operation, health co-operation, among others. It emphasizes, in particular, both countries’ determination “to stimulate co-operation in advanced technology and, especially, to give effective governmental incentive and support in areas of advanced technology, rendering special attention to the collaboration in peaceful uses of outer space, with emphasis in the establishment of appropriate bilateral mechanisms for the utilization of Ukrainian launch vehicles in space activities from Alcantara Launch Center”.

The Brazil-Ukraine technology safeguards agreement – approved by the Brazilian House of Representatives on July 23, 2003, as well as by the Senate some months later on October 15, repeated practically all the major provisions of the Brazil-USA technology safeguards agreement. (4) The basic difference between the two agreements is that the Brazil-USA agreement does not aim at any form of co-operation. Its central purpose is to prevent the possibility of unauthorized transfer of technology. It also seeks to impede the development of the VLS-1 (First Brazilian Launch Vehicle). That is the sense of its Article III § 1.E, according to which Brazil shall “not use funds obtained from Launch Activities object of the Agreement, 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)". It refers to the funds obtained from the launch activities carried out from the Alcantara Center with vehicles, satellites and equipment of USA enterprises. This provision was required by the USA in accordance with its rigid policy relating to non-proliferation of means of transport and launching of mass of destruction weapons, which was adopted back in 1987.

However, such a provision seems to be ineffective, given the impossibility of distinguishing among numerous funds deposited in the Brazilian National Treasury, from the sum coming from the USA enterprise in payment of Alcântara Center services. Brazil certainly accepted this controversial restriction for two main reasons: 1) the insurmountable political difficulties in avoiding a compulsory guideline of non-proliferation as an integral part of USA policy, and 2) the benefits as a whole stemming from the USA enterprises' access to Alcantara Center services, which would surely be much more advantageous than the eventual negative effect of the funding restriction, given it is more diplomatic and formal than practical and real.

At any rate, considering that Brazil is members of the Missile Technology Control Regime (MTCR), one might expect it could be much more trusted and respected by developed countries, mainly by the USA, founder of MTCR.

In contrast, the Brazil-Ukraine technology safeguards agreement does not reject the VLS-1. On the contrary, it views this Brazilian project with affinity. Both countries have reiterated their common conviction that as much as each of them can develop competence in space technology, it will be better for both. They agree that the fruitful bilateral relationship should be enhanced and strengthened with the promotion of mutually beneficial initiatives and undertakings, and have decided to cooperate as much as possible together and with other countries and private business. This determination has given rise to the complex and ambitious bilateral project to offer a new, competitive, yet reliable option for launching in the world market, but it does not stop here. It includes other important plans in various scientific and technological fields.

To a certain extent, all this can be explained by the fact that Brazil and Ukraine have been confronted serious financial difficulties in financing their development programs which they hope to overcome through joint efforts and innovative

solutions to meet world market demands.

Not by chance, practically at the same time as the Brazil-Ukraine technology safeguards agreement, the "Memorandum of Understanding between the Brazilian Space Agency and the National Space Agency of Ukraine on the Utilization of Ukrainian Launch Vehicles at the Alcantara Launch Center" was signed on January 16, 2002.

According to item 4 of this document, the two agencies along with their respective Governments have pledged themselves to try their best in order to solve the question of financing the project of utilization of the Ukrainian launch vehicle at the Alcantara Center, as it "represents a heavy onus for both countries today".

In 2002 and 2003, they staged new negotiations, to further develop plans of joint action. In 2002, they designated a work group to study the technical conditions and infrastructure needed for the creation of a joint venture to manage and operate the project, including the construction of an appropriate launching site for Cyclone-4 in the Alcantara Center. The group had to face these main tasks: to estimate the project costs in detail; to define the obligations of each country; to evaluate the world launch market and the projected return on investments; to examine the legal issues involved and the documents required to create and register the joint venture, with the participation of State enterprises of both countries.

These, then, were the main events leading up to the signature of the Brazil-Ukraine Treaty on October 21, 2003.

### **General characteristics of the Treaty**

The Brazil-Ukraine Treaty is a special type of international bilateral agreement, negotiated and concluded in solemn procedure and subject to ratification by both sides, with the objective of creating joint venture companies. A typical example of this kind of agreement is the treaty signed by Brazil and Paraguay on April 26, 1973, founding the Itaipu Bilateral Company to build and operate the Itaipu Hydroelectric Plant on the Parana River where it borders the two countries. Not by chance, the Itaipu Treaty served as inspiration and direct reference for the elaboration of the Brazil-Ukraine Treaty to create the bilateral "Alcantara Cyclone Space" Company.

The Brazil-Ukraine Treaty is particularly

noteworthy due to its unequivocal commitment to International Space Law. Its Preamble lists the international treaties both countries have committed themselves to respect during their cooperative undertaking: the 1967 Outer Space Treaty, the 1972 Liability Convention and the 1975 Registration Convention. (5)

Moreover, Article 16, entitled “Respect for Legislation”, establishes that “no obligation of this Treaty may imply a violation of the current legislation of each Party together with international rules and regulations, including provisions of the Outer Space Treaty, the Liability Convention, and the Registration Convention.”

The Preamble of the Treaty takes into account as well “provisions of other multilateral treaties and agreements related to research and uses of outer space”. In the following paragraph, the Parties confirm “their obligations as members of the Missile Technology Control Regime (MTCR)”, which is not an agreement in the sense of the 1969 Treaty Law Convention. (6)

It is remarkable that Brazil agrees to be bound to the Registration Convention, even though it is not a Party of this agreement. In fact, the Brazilian Government has already decided to adhere to it. The required act of adherence is on the docket of the Brazilian Senate, where it surely will be approved without any difficulties.

Moreover, it can be said that the Brazil-Ukraine Treaty is in perfect harmony with the “Declaration on International Co-operation for the Exploration and Use of Outer Space for the Benefit and in the Interest of All Countries, Taking Into Account the Needs of Developing Countries”, approved by the United Nations General Assembly as part of its Resolution 51/122, from December 13, 1996. As the Declaration recommends, Brazil and the Ukraine have freely defined on an equitable and mutually acceptable basis all aspects of their participation in the cooperative project; the terms of the agreed program are fair and reasonable, in full compliance with the legitimate rights and interests of each side, including in the sensitive field of intellectual property rights protection, which are assured in the Article 12 of the Treaty. Still in accordance with the Declaration, both countries are conducting their co-operation in the modes they consider most effective and appropriate to promote the development of space science and technology and of its applications, as well as the development of relevant and appropriate space capabilities, and the exchange of expertise

and technology between them on a mutually acceptable basis.

### The “raison d’être” of the Treaty

According to its Article 2, “the purpose of this Treaty is to define conditions for long-term co-operation between the Parties for the development of the Cyclone-4 Launch Site at the Alcantara Launch Center, and provision of launch services for the national space programs of the Parties, as well as the commercial customers.” That is the treaty’s general objective. The treaty’s specific objective is stipulated in Article 3: the creation of a binational enterprise, the Alcantara Cyclone Space, “an international entity of economic and technical nature”, for the operation and launching of the Cyclone-4 Launch Vehicle from the Alcantara Launch Center. The company main task is to define which conditions are indispensable for developing bilateral co-operation and rendering the launch services. It seems clear, in the name of conciseness, that the part of Article 3 on the creation of a company could be incorporated into Article 2 on the purpose of the Treaty. This way, the Treaty’s general and specific objectives would be put together in Article 2, and Article 3 could be entirely dedicated to guidelines for the elaboration of the new entity’s By-laws.

### How to define the new enterprise

The Alcântara Cyclone Space is described in Article I (on Definitions) as “the binational Brazil-Ukraine joint venture created by this Treaty”, and in Article 3 as “an international entity of economic and technical nature... created... for operation and launches of the Cyclone-4 Launch Vehicle from the Alcantara Launch Center”.

These references are complementary and may be divided into three parts:

1) The affirmation of the international character of the new enterprise, created by two States, subject to Public International Law, through an agreement, concluded in conformity with the principles and norms in force;

2) The definition of the new enterprise as a joint venture “of economic and technical nature”, which, therefore, has a limited sphere of action.

3) The specification of its economic and technical activities as the activities related to the operation of the Alcantara Center for launches of the Launch Vehicle Cyclone-4.

## **Guidelines for the creation of the new Company**

The Alcantara Cyclone Space By-laws, which will regulate the control procedures for the management and functioning of the company, are at this moment being created on the basis of 15 guidelines set down in Article 3 of the Treaty:

1) First of all, Alcantara Cyclone Space is entrusted with the development and operation of the Cyclone-4 Launch Site at the Alcantara Launch Center. Nothing else.

2) Alcantara Cyclone Space will have its headquarters in Brasilia, Brazil;

3) Brazil and the Ukraine have equal rights and obligations in Alcantara Cyclone Space, as well as equal participation in its capital stock and profits;

4) The capital of the enterprise will be formed by resources from its Brazilian and Ukrainian stockholders or obtained by the stockholders or from private businesses by means of loans;

5) Companies from other countries can be admitted as stockholders of the new enterprise upon mutual agreement between Brazil and the Ukraine, but it shall not affect the equal rights and obligations of the founder Parties in Alcantara Cyclone Space;

6) The new company shall be managed by a General Stockholders Meeting, a Board of Directors and an Executive Directorate, the two latter bodies composed of an equal number of members appointed by each of the Parties;

7) The Company is granted the exclusive right to provide commercial launch services of the Cyclone-4 Launch Vehicle;

8) It shall ensure development of the Launch Site at the Alcantara Launch Center;

9) It shall have the exclusive right to use the Launch Site for the term of this Treaty;

10) It shall not lease, sell or in any way assign the Launch Site to any firm, country or entity;

11) The Parties entrust Alcantara Cyclone Space with the integrated testing of the Cyclone-4 Space Launch System and the first flight launch of the Cyclone-4 Launch Vehicle from the Alcantara Launch Center;

12) The company must take out liability insurance against damages to third parties resulting from its activities;

13) The company shall comply with Brazil's current national legislation and international obligations, defining safety rules and regulations in

order to ensure protection of personnel, equipment and environment during preparation for and performance of launches of the Cyclone-4 Launch Vehicle from the Alcantara Launch Center;

14) When defining launching price, the company will also take into account the funds necessary for the Launch Site investment amortization;

15) It shall ensure the protection of intellectual property rights created within the scope of its activities carried out under this Treaty.

The State Company Infraero—Brazilian Airports ([www.infraero.gov.br](http://www.infraero.gov.br)) will be the Brazilian stockholder, investing financial resources from the National Treasury, not its own. The Ukrainian stockholders will be the Yangel Yuzhnoye State Design ([www.yuzhnoye.dp.ua](http://www.yuzhnoye.dp.ua)) and Yuzhmash—M. Makarov Yuzhny Machine Building Plant ([www.yuzhmash.com](http://www.yuzhmash.com)). The Brazilian Space Agency (AEB) and the National Space Agency of the Ukraine (NSAU) are appointed, in Article 4, as the “Competent Authorities” responsible for long-term co-operation in the use of the Cyclone-4 Launch Vehicle at the Alcantara Center. As such, they may make agreements to achieve the objectives of the treaty, in accordance with the internal rules and procedures, as well as provisions of the treaty and the 1999 Framework Agreement. In the same sense, they may establish additional special joint groups.

## **Common and individual obligations**

Article 5 of the Treaty is devoted to the common and individual duties of both sides in the construction of the Cyclone-4 Space Launch System in the Alcantara Launch Center. Brazil and the Ukraine shall test and get this system into operation by December 30, 2006.

Brazil shall prepare the general infrastructure of the Alcantara Launch Center for launching the Cyclone-4, while Ukraine shall ready the launch vehicle, including parts manufacturing and assembly, by performing integrated testing, developing manufacturing capabilities, and producing the Cyclone-4 electric fuelling model for testing as well as the first qualification flight model.

In accordance with its domestic legislation, Brazil ensures the licensing of the new company to carry out activities associated with launching the Cyclone-4, and the contractual provision of services by the Alcantara Center necessary for this launching.

The Ukraine ensures the certification of the

Cyclone-4 adapted to the launch site and general infrastructure of the Alcantara Center, meeting launch safety standards and technical specifications of the launch vehicle. It also ensures the contractual supply of the Cyclone-4 to the new enterprise, as well as the provision of maintenance and launch preparation services together with technical information necessary for its operation. Brazil and the Ukraine shall maintain a coordinated policy in space equipment certification in order to guarantee launch safety and quality of the mutually supplied Cyclone-4 Space Launch System components.

The Competent Authorities will mutually recognize the certification results and certificates of compliance, issued by the respective national authorities for the space equipment supplied by Brazilian and Ukrainian companies for development of the Cyclone-4 Space Launch System at the Alcantara Center.

They also will engage in harmonization process of their national space certification systems, and supply each other with normative documentation on space equipment certification. It is a quite valuable legal collaboration.

### **Financing**

In accordance with Article 8, each Party finances its obligations under Article 5. Brazil finances the development of the general infrastructure of the Alcantara Center for the operation of the Cyclone-4 Space Launch System. The Ukraine finances the Cyclone-4 development, its units and assemblies, manufacturing capabilities, and integrated testing. Brazil and the Ukraine, jointly or separately, directly or indirectly, depending on the agreements, shall guarantee credit operations upon request from Alcantara Cyclone Space and/or their respective stockholders beginning in 2004. The same procedure applies to necessary currency exchange operations in order to pay for obligations assumed by the Company. The Competent Authorities shall outline the mechanism for any return on investments to be reinvested in building the Launch Site in a separate agreement.

### **Property rights**

Brazil and the Ukraine retain equal property rights for the jointly developed Cyclone-4 Launch Site at the Alcantara Center (Article 6). However, this does not create any Ukrainian property rights or jurisdiction upon land and unremovable

infrastructure on any part of the Brazilian territory. In its operation the Company may use the Alcantara Launch Center facilities and equipment. Brazil shall provide ground area for building the Cyclone-4 Launch Site at the Alcantara Launch Center. The Competent Authorities shall define size of this ground area upon request by Alcantara Cyclone Space. The Company shall pay Brazil the rent for using this ground area. Brazil pledges not to alter or change the ground area rent conditions while this Treaty remains in force. It also shall provide protection for the Ukrainian property according to Brazilian legislation. Such property shall consist of funds and property contributions to the development of the Cyclone-4 Launch Site at the Alcantara Launch Center.

### **Privileges of the Company**

Article 9 of the Treaty reiterates the terms of Article 11 of the 1999 Framework Agreement on the customs clearance of transient equipment with the aim of mutual co-operation. Brazil and Ukraine grant considerable privileges to Alcantara Cyclone Space:

1) Exemption from any taxes or duties on materials and equipment forwarded to the Company for the express purpose of providing launch services;

2) Exemption from any taxes or duties on materials, equipment and technical data imported by the enterprise from Brazil or the Ukraine or a third country for construction work at the Cyclone-4 Launch Site or its auxiliary facilities, or any subsidiary work. The same applies to Alcantara Cyclone Space's activities related to these materials, equipment and technical data. Such materials and equipment have access to the territories of both countries.

3) Exemption from any taxes or duties on revenues of Alcantara Cyclone Space and its payments to any individual or legal entity in case that it is legally liable for making such payments;

4) Waiver of any fiscal limits on the Company's assets capitalized under the Treaty;

It is worth noting that these fiscal privileges face considerable difficulty in practice, because Article, § 2º, of the Brazilian Constitution points out that "State enterprises and companies with mixed capital may not benefit from special tax privileges not extended to the private sector." How shall Brazil solve this problem? Given the relevance of the undertaking, the most practical and rapid

solution probably would be to pass a specific law, exempting the Company from all federal taxes. The same remedy could be used in relation to State and Municipal taxes, with the respective exemption depending on the local Administrations.

Article 10 further stipulates that Brazil and the Ukraine shall facilitate the entry, stay and departure from their territories of persons and their property that are involved in activities, programs and projects under the Treaty. And Competent Authorities shall make sure that these persons and their families are informed of specific healthcare procedures, recommended or compulsory, before entry into the Alcântara Launch Center. When staying in the Brazilian or Ukrainian territory, such persons must abide by all local laws and regulations.

Both countries commit themselves to the creation and implementation of mechanisms to simplify the obtaining of visas for the personnel of Alcântara Cyclone Space and personnel involved in its activities. The visas shall be given upon demand by the Company.

Whenever possible, personnel, whether specialized or not, equipment and materials from both countries will be employed on a parity basis.

### **Exchange of information and data**

Article 11 establishes the principle of a wide and prompt exchange of information and data pertinent to co-operation, including the information and data obtained outside the scope of the Treaty. Brazil and the Ukraine shall facilitate information exchange between themselves and their Competent Authorities. These Authorities may sign a special agreement, outlining rules and regulations on such information and data exchange. Confidential information and data may be subject to exchange in case of necessity, according to the rules and procedures established by the Brazil-Ukraine Technology Safeguards Agreement.

Neither country shall disclose or transfer the information and data received from the other Party without its prior authorization. They shall use the information and data for cooperative purposes in compliance with restrictions imposed by the other Party. They shall exchange only such information and data to which they have appropriate disclosure rights.

The exchange of information and data has special relevance in this case, since the Treaty and the new joint venture deal with space launch activities, which involve sensitive technology.

These activities are considered highly strategic from both an international and a national security viewpoint as well as from the commercial one. The Brazilian and Ukrainian Governments, as well as their respective Competent Authorities and Alcântara Cyclone Space may not withhold fundamental information and data on facts and tendencies relating to the world economic and space launch market. That is why their co-operation in this area is absolutely essential.

### **Intellectual property rights**

Under Article 12, § 2, the Company must assure protection of the intellectual property rights of whatever is created during the activities stipulated in the Treaty. However, § 1 states that there shall be a legal exception extended to intellectual property rights registered by either country that pertain to activities outside the Treaty or that precede the Company's legal existence. These remain unchanged, and nothing in the Treaty can be construed as a concession or expectation of a concession of rights on inventions, patents or anything else covered by intellectual property right laws. As for intellectual property rights registered during the Treaty's implementation process and during the Company's functioning, the provisions on intellectual property contained in the Addendum to the General Agreement of 1999 are applicable. If necessary, the competent authorities may establish complementary norms by means of special agreements.

### **Export and import control**

As members of the Missile Technology Control Regime (MTCR), Brazil and the Ukraine, are obligated to exert strict control on export and import of so called sensitive technologies, according to their national legislation and international obligations. Article 13 states: "No provision of this Treaty shall be interpreted as obliging one of the Parties to permit exportation or importation of any goods, information, data or technology subject to control according to an international agreement, law or regulation. The Parties shall make sure that transfers of export or import documentation, information, data and technology correspond to the periods of co-operation activities." It means that the Treaty should not be used to by-pass international and domestic obligations on the matter. That is why



the transfers of export or import documentation, information, data and technology must coincide with the periods of cooperative activities. It is a commitment of both countries.

### **Liability to third parties**

“Any legal framework aimed at governing launch services must necessarily address the issue of the allocation of risks and assignment of liability”, Julian Hermida writes. (7)

In Article 14, Brazil and the Ukraine define their liability for damages to third parties in accordance with the 1972 Liability Convention, which both countries have ratified, taking joint liability for damages to third parties caused by the launch of Cyclone-4. Both countries commit themselves to engaging in immediate bilateral consultations about demands for compensation for losses and about all lawsuits, using the 1972 Liability Convention as their legal basis.

They agree to bear the cost of compensation for losses caused to third parties by the launch of Cyclone-4 equally. The Company, in turn, must compensate both countries with an amount to be established through a special agreement between both countries. In like manner, any Brazilian or Ukrainian citizens, or other aliens present during the launch of the Cyclone-4 who suffer damages must be compensated.

In light of the current status of the Brazilian legislation, the Treaty does not adopt a cross-waiver clause, which prevents individuals or legal entities that are participating in the Project from filing lawsuits for damages, especially contractors and subcontractors.

From Articles 14, § 1, e 17, § 2, of the Treaty, it can be inferred that this cross-waiver clause, which is commonly applied in bilateral and multi-lateral space agreements, has been omitted because the Parties trust they will be able to decide any such question by means of prompt bilateral consultation. However, this may not be the best approach. It seems to be a weak point of the Treaty.

The Ukraine ratified the 1975 Registration Convention. Brazil has not, although, as has been mentioned before, the Brazilian Senate will certainly approve the protocol of adherence to the Convention. Thus, both countries have agreed to abide by the Convention, registering all space objects launched by Cyclone-4 from the Alcantara Launch Center. This decision is justified because,

presumably, such registration deals for the most part with commercial launches of a great variety of payloads.

### **Application of laws**

Article 15 of the Treaty adopts a logical, adequate and fair system of application of Brazilian and Ukrainian laws. Brazilian laws shall be applied to all agreements and disputes between the Company and Brazilian citizens, persons residing in Brazil, and Brazilian organizations. In such cases, the lawsuits and arbitration procedures shall be under the jurisdiction of the Federal Supreme Court of Brazil. Ukrainian laws shall likewise be applied to the agreements and disputes between the Company and Ukrainian citizens, persons residing in the Ukraine, and Ukrainian organizations. And the lawsuits and arbitration procedures shall be under the competent Ukrainian judicial authorities.

Brazilian law also shall apply to agreements and disputes between the Company and citizens, residents, and organizations of other countries, falling once again under the jurisdiction of the Federal Supreme Court of Brazil.

### **A long term partnership**

According to the final Treaty provisions, Brazil and the Ukraine may make changes in the Treaty by means of a mutual written agreement in the form of a protocol, thus facilitating the introduction of modifications and, thereby, lending greater flexibility to the document. Both countries have opted to settle disputes involving diverging interpretations and application of the Treaty by means of mutual consultation. Neither arbitration nor any other legal means shall be considered.

This is indicative of the high level of understanding and co-operation existent between the two countries.

Finally, it should be noted that Brazil and the Ukraine have decided to maintain the Treaty in force for an unlimited period of time, which further highlights their mutual expectation that co-operation and the joint venture will be of such a long duration that a time bound would be inappropriate.

### **Impact on Brazilian legislation**

Brazil is hereby required to adhere to the Registration Convention and to create a competent

national registration system of objects launched into outer space from the Alcantara Launch Center.

Brazil also needs to enact a specific law to guarantee all tax privileges stipulated in the Treaty.

It is necessary to restudy the lack of a cross-waiver clause in the operation of Alcantara Cyclone Space, in view of the functional difficulties and financial loss its absence might provoke.

It is advisable that Brazil develops an all-embracing national space legislation as soon as possible, taking into account this Treaty, as well as the possibilities and opportunities of new space projects and business that it certainly may bring in the near future. The Brazilian Space Agency Administrative Edicts on licensing (June 20, 2001) and authorization (February, 21, 2002) procedures for private space launching from national territory may not be considered a sufficient solution, because of certain limitations: namely that the Agency cannot draft or set a budget of governmental expenses, since this is an exclusive prerogative of the National Congress. (8) The new comprehensive Brazilian space legislation – to be approved by the National Congress – should regulate on large scale a numerous crucial issues as authorization and supervision of space activities, registration of space objects, indemnification regulation, insurance and liability related questions, patent law and other international property issues, dispute settlement, among others. (9)

## Conclusions

The Treaty has all the elements needed to consolidate the Brazil-Ukraine partnership to set up the legal basis for the creation, development and operation of the binational Company, Alcantara Cyclone Space, making it feasible to negotiate and operate commercial launches using the Cyclone-4 from Alcantara Launch Center.

Brazil and the Ukraine have overcome numerous obstacles to achieve the present-day mutual understanding commitment. The treaty is notable for its legal quality, therein providing both countries with a promising and mutually advantageous treaty on binational co-operation in the essential field of commercial launchings, where demands for reliable and competitive alternatives tend only to grow.

With this historic undertaking, Ukraine has the opportunity to offer to the world market its new and promising launch vehicle Cyclone-4 and to count on the privileged Brazilian Alcantara Launch

Center. And Brazil has advanced in strategic plan to introduce the Alcantara Launch Center to commercial launch world market – something exceptional and stimulant for a developing country.

However, to be up to this achievement it is still necessary for Brazil to move forward in the formulation of comprehensive domestic space legislation.

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