

ALCÂNTARA CYCLONE SPACE: A NEW JOINT VENTURE IN THE SPACE MARKET

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ABSTRACT

On 05/Dec/2007, the Brazilian-Ukrainian Company “Alcântara Cyclone Space” (ACS) was officially inaugurated. ACS is in charge of developing the launching vehicle Cyclone-4 that will launch satellites from the Alcântara Launching Center in the Northwest of Brazil. The Company was created according to the articles 2 and 3 of the Treaty signed on 21/Oct/2003, between the Governments of Brazil and Ukraine entitled: “Long-Term Cooperation in Utilization of the Cyclone-4 Launch Vehicle at the Alcântara Launching Center”. This Treaty established the first international legal framework for the commercialization of space launches from the Alcântara Launching Center. Under the agreement, ACS was defined as “*an international entity for economic and technical purposes*”. It was not the first bi-national endeavor of Brazil, because in 1975 a Treaty between Paraguay and Brazil for the construction of a hydroelectric dam was signed. At the 47th Colloquium on the Law of Outer

Space, held in Vancouver / Canada, from 4 to 8 October 2004, the Brazilian Professor José Monserrat Filho presented his paper “Brazilian-Ukrainian Agreement on Launching Cyclone-4 From Alcântara: Impact on Brazilian Legislation”, where the legal issues derived from the Treaty were duly analyzed. The purpose of this paper is to analyze the main articles of the ACS Statute, which was approved by the Directive # 559, of 31/Aug/2006, from the Brazilian Ministry of Science and Technology. There are many legal issues in the ACS Statute, such as applicable law, liability to third parties, and intellectual property rights, which will be presented in this paper. Current activities and future projects of ACS will also be presented.

INTRODUCTION

On 21/Oct/2003, the Ukraine and Brazil signed a “Long-Term Cooperation in Utilization of the Cyclone-4 Launch Vehicle at the Alcântara Launching Center”¹ which established the first international legal framework for the commercialization of space launches from the Alcântara Launching Center. Under the agreement, a joint venture

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company, “Alcantara Cyclone Space” was created. On the same occasion, the Brazilian Space Agency and the National Space Agency of Ukraine signed a “*Memorandum of Understanding on Future Bilateral Projects*”, expressing “*their commitment to expand their cooperation further, through the exploration of additional fields of collaboration and the commitment to the joint development of new technological endeavors 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*”.

The Treaty states in its Article 5 that Brazil is in charge of developing the general infrastructure of the Alcântara Launching Center (ALC), in order to provide technical conditions for the launching of Cyclone-4. On the other hand, Ukraine shall develop Cyclone-4, its assembly, integration, and tests procedures, especially its electrical injection fuel system, as well as the qualification of the first flight-model.

According to Article 3 of its Statute, the objective of ACS is to develop and operate the place of launching of Cyclone-4, established in the Alcântara Launching Center, in the State of Maranhão, Brazil, including the infrastructure for the launching of Cyclone-4, as well as the preparation and integration of spaceship, auxiliary systems and equipments, in order to carry out launching services for Brazil, Ukraine, and other public or commercial customers.

The Cyclone-4’s technology is based on the Cyclone-3 rocket, which has been widely and successfully used by the Russian Federation for the launching of several satellites.

On the other hand, the Alcântara Launching Center has a privileged

geographical location, placed at 3 degrees in the south of the Equator Line. Experts say that launchings from the Alcântara Launching Center, due its strategic position, can provide 30% of fuel saving. Beyond that, favorable weather conditions, which permit launchings all over the year, and the low demographic density in the Region, are also other factors that contribute to choose the Center as one of the best places for carrying out space launchings.

Currently, Ukraine has launched its rockets from plants located in the Russian Federation or in maritime platforms of the Sea Launch Company, a joint venture among companies from Ukraine, Russian Federation, United States and Norway.

The General-Director of ACS nominated by the Ukrainian Government, Mr. Olexander Serdiuk, states that the partnership between Ukraine and Brazil will be very fruitful for both sides: for Ukraine, which has the opportunity to put its new and promising Cyclone-4 vehicle into the world market; and for Brazil, which is advancing in its strategic plan to introduce the Alcântara Launching Center as an attractive and competitive site for launchings into outer space. He is convinced that ACS is a new highly competitive choice in the space market, because it may provide launchings in a safe and economic way.²

ACS’s STATUTE

The ACS’s Statute was approved by the Directive # 559, on 31/Aug/2006, from the Brazilian Ministry of Science and Technology.

At the United Nations/Ukraine Workshop on Space Law, held in Kiev, Ukraine, in 2006, Prof. José Monserrat Filho made a presentation entitled

“Development of Brazilian-Ukrainian Space Cooperation”, where he mentioned that there was an impasse for the approval of ACS’s Statute. It is important to remember that the Treaty between Brazil and Ukraine was signed on 21/Oct/2003 and ACS’s Statute was only approved on 31/Aug/2006. Prof. Monserrat reports that *“there was a long legal discussion between two points of view: 1) By-Laws has to be approved by the National Congress³, as it has financial implications; 2) By-Laws has not to be approved by the National Congress, since the Congress had approved the Treaty, in accordance to which the Company was created”*. As the end, it was decided that the approval of the Brazilian National Congress was not needed.

The main dispositions of ACS’s Statute will be presented in this topic.

ACS is a Bi-national company, established in Brasília, Brazil, which is represented, by the Brazilian Ministry of Science and Technology, the Brazilian Space Agency, the Ukrainian Fund for State Property, and the Ukrainian National Space Agency.

The Company has the following structure: a) General Assembly, which is the company’s summit; b) Administration Board, which is composed by the Administrative Council; General Directors, Executive Directors, and Deputy Directors; and c) Survey Board, which is composed by Fiscal Council and Internal Audit. The Statute also foresees the need of an independent Auditor, who will prepare a final report to be submitted to the Administrative Council within 30 days after the end of the fiscal year⁴.

The General Assembly should have one annual ordinary meeting but it can be installed extraordinarily whenever it is necessary or by a request from the Administrative Council.

Eight members compose the Administrative Council (4 Brazilians and 4 Ukrainians) and it is in charge of supervising the company’s activities, as well as to fulfill the guidelines of the Treaty established between Brazil and Ukraine.

There are two General Directors, one Brazilian and one Ukrainian, and they are in charge of coordinating, organizing, and managing the Company’s usual activities, as well as to represent it on the administrative and judicial levels.

The Company also has four Executive Directors and four Deputy Directors as follow: for the Brazilian side – Executive Administrative Director, Executive Financial Director, Deputy Technical Director, and Deputy Supply and Quality Director. For the Ukrainian side – Executive Technical Director, Executive Supply and Quality Director, Deputy Administrative Director, and Deputy Financial Director. The Executive and Deputy Directors shall implement the General Directors’ decisions.

Two auditors nominated by the General Directors compose the Internal Audit. It is subordinated to the Administrative Council.

Four effective members and four substitutes compose the Fiscal Council. Each part – Brazil and Ukraine – shall nominate 2 effective members and 2 substitutes who will act in the absence of the effective member. The Fiscal Council shall survey the acts of the Directors and evaluate financial reports of the Company.

According to Article 6 of ACS’s Statute, the Company has an initial social capital of US\$ 4,500,000.00. It is also established in the Statute (Article 21) that the Company will use the currency of the United States of America – US dollars - in its commercial and financial operations.

The decision making process within ACS is regulated by Article 13. The following steps should be observed: a) Any member of the Administrative Council or Directorate may submit a proposal to be considered by the Administration Board; b) The General Directors present their conclusive opinion on the proposals to the Administrative Council in ten days; c) The proposal is approved only when both General Directors agree with it and there are at least five favorable votes of the Administration Board; d) In case of a dissenting opinion of a General Director, six favorable votes of the Administration Board are required to approve the proposal; and e) Proposals on modification of the number and responsibilities of the Executive Directors and Deputy Directors shall be approved by eight votes of the Administration Board.

Article 22 deals with profits, losses and Reserve Fund of ACS. Brazil and Ukraine have an equal share in the net profits and losses of the Company. Unless otherwise decided by the General Assembly, share in profits shall be paid out in 30 days upon approval of the Annual Report. The Company shall establish a Reserve Fund composed by up to 10% of the Company annual profit, until the investment made by the Parties into development of the Launch Site is fully repaid.

The Company will be solved, as stated in Article 23, in two cases: (a) extinction of the Treaty between the Brazilian and Ukrainian Governments; and (b) by the unanimous decision of the General Assembly.

Regarding intellectual property, Article 26 states that the Company will ensure the ways to protect previous rights of the Parts, as well as new inventions jointly developed.

Article 28.1 foresees that the Brazilian Law will be applicable in cases between the Company and: (a) Brazilian citizens and residents in Brazil; (b) Brazilian entities; and (c) foreigners, residents abroad, and international entities. On the other hand, the Ukrainian Law will be applicable in cases involving the Company and: (a) Ukrainian citizens and residents in Ukraine; and (b) Ukrainian entities.

In the case of conflict between the Brazilian side and the Ukrainian side, the Statute establishes in its Article 29 that the divergences should be solved in a good will manner, attending the principles of good faith and transparency. Beyond that, the practices and experiences of other international joint ventures or bi-national companies should also be considered in such situations.

Article 30 states that in case of disputes either regarding the Statute or the Company's activities, both Parts should do the best to solve them in a friendly way. If an agreement could not be reached, the dispute will be submitted to the Brazilian and Ukrainian Governments.

According to Article 34, the employees may receive their salaries in the currency of the Parts, depending on where the working-contract was signed. There is also the possibility of receiving salaries in US dollars, through a decision of the Administrative Council. The principle of wage equality, related to works with the same nature, time, and efficiency, will be applicable despite of nationality, sex, race, religion, or civil status.

The last disposition, i.e. Article 36.3, establishes that the Administrative Council is in charge of solving doubts regarding the application and interpretation of ACS's Statute.

ACS'S LEGAL NATURE

As a Bi-national company, ACS has many particularities that require a different legal approach. On this regard, it is interesting to know how Brazilian jurists have deal with another bi-national company called "Itaipu", a hydroelectric dam constructed in the seventies as a partnership between Brazil and Paraguay.

Luiz Rafael Mayer, former Brazil's General Legal Consultant, states that Itaipu is a new legal person in the field of International Public Law and its specific goal is to carry out commercial activities. He considers that Itaipu is submitted to the International Law regime and, as a consequence, constitutional or administrative domestic laws are not applicable to it.⁵

Prof. Miguel Reale, talking about Itaipu's employees, states that Brazilians and Paraguayans carry their personal rights, as well as their civil and penal responsibilities, according to the laws of their respective countries. The Brazilian or Paraguayan laws, depending on how it is established in the working-contract, will regulate the rights of foreigner employees.⁶

Prof. Paulo Salvador Frontini draws the attention to the fact that there are international institutions created by the initiative of particulars. The Red Cross is an example of such institutions. It is international because it has a worldwide range, but it is not an international organism, because it was not created by sovereign States. It is submitted only to the laws of one State, which is the one where it was established. Itaipu was created by Brazil and Paraguay and has legal and financial capacity. Despite its bilateral origin, its legal capacity is not limited to Brazil and Paraguay. Itaipu is Bi-national Company

due to its origin, but it is international in its legal capacity.⁷

Turning to ACS, there are no doubts that it is an international company with a particular legal regime, where neither Brazilian nor Ukrainian laws are applicable, except in the cases foreseen in Article 28. Otherwise, ACS could not have fiscal benefits, for instance, because the Brazilian Constitution does not allow such privilege. Beyond that, if Brazilian domestic laws were applicable to ACS, the Statute could not have established that the currency would be the US dollars, or that the employees could receive their salaries in a foreigner currency. It should be emphasized that domestic laws will only be applicable to persons, employees or members of the Company's Board, where the subject is their civil or penal responsibilities, or even their particular rights.

ACS's PERSPECTIVES

The development of ACS's activities is currently linked to the solution of two main difficulties: 1) the improvement of the Alcântara Launching Center's (ALC) infrastructure; 2) the establishment of a technological safeguard agreement between the Governments of Brazil and the United States of America, for the utilization of ALC. Both difficulties have to be solved by the Brazilian Government.

According to the Treaty between Brazil and Ukraine, Brazil is in charge of providing a suitable infrastructure in ALC, in order to enable launchings of space objects from that Center. The Brazilian Space Agency has been putting its best efforts to become ALC operational as soon as possible. ALC is not property of ACS, so it is subjected to the Brazilian laws, especially the Law # 8.666, of 21/Jun/1993, which regulates

biddings and contracts of the Brazilian Federal entities. The Brazilian Space Agency is committed to promote public biddings related to ALC. The winners of these biddings will provide equipments and services for the improvement of ALC's infrastructure. Unfortunately, the legal procedures established in Law # 8.666 are not as expedite as expected. Furthermore, competitors may present complains to judicial or even administrative courts, which may decide to interrupt biddings. Another impasse is the existence of a "quilombola" community in ALC. "Quilombolas" are descendents of African slaves who live in communities protected by the Brazilian law. The Brazilian Government has already identified another area for replacing the one that is in ALC. However, some "quilombolas" are reluctant to leave ALC. The Brazilian General Advocacy has created a working-group to define, in cooperation with "quilombola" communities, areas – not only in ALC but also in other regions of Brazil - where they might be placed. Despite of these obstacles, it should be affirmed that the efforts of the Brazilian Space Agency have been well succeeded.

As a company, ACS is obviously interested in catching the North-American market, because it is the leader in the field of space activities. However, this goal can only be reached when Brazil and the United States signed a technological safeguard agreement for the utilization of ALC as the launching base of North-American space objects. In 2001, Brazil and the United States had their first attempt of signing an agreement of this nature. At the time, many voices against the agreement were heard. Favorable and unfavorable opinions were well reported by Wálteno Marques da Silva, current Head of Legal Department of the Brazilian Space Agency, and Prof. Altair

Stemler da Veiga, in their article "Technological Safeguard Agreement between Brazil and the United States: Why Do Not Sign It?"⁸.

According to the draft presented by the United States, the agreement's most polemical points were the follows: 1) Brazilians, civil or military, are not allowed to enter in the North-American ground station placed in ALC; 2) Revenues from the launchings in ALC could not be used by the Brazilian Government for the development of a space vehicle; and 3) ALC could not be used by States that have not adhered to the Missile Technology Control Regime – MTCR.

According to those who were against the agreement, the Brazilian authorities could and should enter into the North-American ground station, since it was placed in the Brazilian territory. They considered that, in theory, the United States could use ALC as its base for military or spy operations and, in this case, Brazil would connive with such actions. They also considered that Americans did not have the power to control the Brazilian revenue and, furthermore, one of the aims of the Brazilian Space Program was the development of a space-launching vehicle. Finally, those criticizers remembered that China, the most important international partner of Brazil in its space endeavors, had not adhered to MTCR. So, if the technological safeguard agreement was signed, the China-Brazil Earth Resources Satellite – CBERS – would never be launched from ALC.

However, favorable opinions draw the attention to the nature of the agreement: it was not an instrument of cooperation, but a technological safeguard instrument. In this context, it was obvious that North-American space technology should be protected. Hence,

the restricted access to the North-American ground station in ALC was fully justified. They also consider normal that revenues from launchings of North-American space objects in ALC could not be used for the development of a Brazilian space-launching vehicle. Just a few groups of States in the world have the technology of developing a space-launching vehicle. Of course, the United States do not want to support other potential competitors in this narrow market. But this revenue could be used for other purposes, such as the improvement of ALC's infrastructure. Besides that, Brazil had a specific budget for the development of its space-launching vehicle, and the project would not be cancelled. Regarding the fact of China had not adhered to MTCR, the enthusiasts for the agreement stated that according to the CBERS Program, all satellites would be launched from the Chinese Center, in Taiyuan.

In their article, Da Silva and Da Veiga advocates the signature of technological safeguard agreement between Brazil and the United States due the following reasons: a) the agreement does not hurt neither the Brazilian sovereignty nor the Brazilian Space Program; b) the agreement's dispositions are in accordance with the international legal framework, especially with the Outer Space Treaty, and the Agreement on the Rescue of Astronauts; c) the strategic position of ALC as well as its infrastructure should be better exploited by Brazil; and d) the agreement will bring financial resources and social benefits to the region.

At the end, the Brazilian Government decided not to send the agreement to the National Congress, because it was well known that it would not be approved there.

Dr. Joao Azevedo, Director of ACS, nominated by the Brazilian Government, has emphasized that the Brazilian Government, through its Ministry of Foreign Affairs and the Brazilian Space Agency, has already started discussions with the North-American authorities, in order to establish a new technological safeguard agreement for the utilization of ALC⁹. Of course, at this time, the Brazilian representatives, during the discussion process, will try to avoid the difficulties that were faced at the first occasion.

CONCLUSION

ACS has the necessary skills to be well succeeded in its activities. On one side, it has the technological experience in developing space-launching vehicles, provided by the Ukrainian expertise; on the other side, it has the privileged location of ALC, where launchings may be carried out practically all year over.

The Company's objectives, decision-making process, administrative and financial procedures, and the Brazilian and Ukrainian responsibilities are perfectly defined in the Treaty and in ACS's Statute.

Regarding ACS's legal nature, there is no doubt that the Brazilian and Ukrainian domestic laws, even its respective Federal Constitutions, are not applicable to the Company, except in those cases foreseen in Article 28.

The partnership with Ukraine strengths the Brazil's position as a space-faring country, as well as endorses the feasibility of cooperation between two developing countries. On this regard is always valid to remember that the first Brazil's partnership with a developing country, i.e., the one established with China for the development of CBERS satellites, has been considered worldwide

as an example of a well succeeded cooperation.

Brazilians and Ukrainians expect that current impasses involving ACS, such as “quilombolas”, biddings promoted by the Brazilian Space Agency, and the signature of a technological safeguard agreement with the United States, can be solved soon. Then, hopefully, ACS will become one of the most important suppliers of space-launchings around the world.

kindly provided information regarding ACS’s projects. Notwithstanding, the views expressed in this paper reflect exclusively the author’s opinion.

¹ The Brazilian Decree # 5.436, on 28/Apr/2005, approved the Treaty.

² Data obtained from “Jornal da Ciência”, published by the Brazilian Society for the Advancement of Science – SBPC – on 13/Nov/2006.

³ According to the Brazilian Constitution, any agreement celebrated between Brazil and a foreigner country, which involves financial resources from the Brazilian Treasury, should be approved by the National Congress.

⁴ According to Article 21.1 of the Statute, the fiscal year starts on January 1st and ends on December 31st of each year.

⁵ In his Advice L-208, issued on 22/Sep/1978, approved by the Brazilian President on 17/Oct/1978.

⁶ In his article “The Legal Structure of Itaipu”, published in the Brazilian Magazine “Problemas Brasileiros”, Aug/1974, pages 3 to 8.

⁷ In his article “Itaipu Bi-national: A New Kind of Company”, published in the Brazilian Magazine “Direito Mercantil” #15/16, 1974.

⁸ Published by the Brazilian Association of Air and Space Law – SBDA – in its website www.sbda.org.br/revista/Anterior/1725.htm

⁹ The author would like to express his gratitude to Dr. Joao Azevedo, Director of ACS, for the Brazilian side, which