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### LEGAL ASPECTS OF FRANCO RUSSIAN COMMERCIAL AND INDUSTRIAL COOPERATION IN SPACE

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#### ABSTRACT

In this paper, I describe and analyze the legal framework of commercial space cooperation between France and Russia. The first part is devoted to an analysis of the institutional framework of space cooperation taking the example of CNES, the French Space Agency, which has had a successful partnership with Russia for more than 35 years. Cooperation between Russia and the European Space Agency, in which France plays an important role, will then be discussed, followed by focus on the beginning of the partnership between Russia and the European Union which is strongly based on space matters. The second part of this paper will focus on the two models of industrial and commercial cooperation between private entities: the case of the EADS company and that of the Starsem company, a joint company created in August 1996 under French law. The latter is in charge of commercialisation and industrial operation of the Soyuz launching systems. The creation of the company was followed by the signing of an agreement between France and Russia on 26 November 1996 relating to cooperation in space. I conclude that Russia is bound to start a new cooperation with the Western countries since space activities depend more and more on relations with foreign partners regardless of whether it is inter-agency or industrial cooperation.

#### Introduction

Russia and France have more than 35 years of experience in international cooperation with one another. Space cooperation between France and the USSR had its historical starting point with the visit of General de Gaulle to the Soviet Union in 1966. Franco-Soviet space cooperation incontestably produced substantial advantages for France making it possible for the country to implement an independent space policy and later to contribute to the

emergence of an important European space industry. For the USSR, space cooperation with France made it possible to counteract American leadership in space.

While the first twenty years of this cooperation focused on the field of space sciences, this focus gradually widened to include other aspects of space activities, in particular Earth sciences. Since 1967, joint actions related to the study of the magnetic field of the Earth using sounding rockets. This research was continued thanks to instruments placed

on satellites (study of the interaction between solar wind and the terrestrial magnetosphere: experiment ARCADE of 1973). Franco-Soviet space cooperation has incontestably benefited the French scientific community through granting it unparalleled opportunities to take part in primary space missions.

Further association with the Soviet lunar program made it possible for French laboratories to work, as of 1970, on samples of rock brought back to Earth (a Soviet probe had been equipped for the first time with Western laser reflectors to carry out measurements between the Moon and the Earth). In 1972, one of the first French satellites (SRET 1) was launched by a Soviet rocket. That same year, the French experiment SIGNS installed on a Soviet satellite, recorded for the first time a gamma solar emission at the time of an eruption. Thus a long-lasting cooperation in the field began with astronomy, in which France acquired an international reputation. In the same way, the possibility for the scientists to profit from the enormous potential of the USSR continued in the field of planetology, with the participation in the VEGA mission to study Venus and the mission to study Halley's Comet.

In 1982, the French cosmonaut Jean-Loup Chrétien was the first Western cosmonaut to fly with a Soviet crew on board the station Salyut 7. Consequently, manned flights (missions PVH in 1982, ARAGATS in 1988, ANTARES in 1992, ALTAIR in 1993, CASSIOPEE in 1996, PEGASE in 1998) became an essential element of Franco-Soviet space cooperation. Their political connotation, in the context of the increasing opening of the USSR since the end of the

Brezhnev era, deserves to be underlined. This dimension arises very clearly from the additional protocol to the agreement of 1996, concluded on July 4, 1989 during the Mitterrand-Gorbachev summit in Paris.

This text, which points out the "mutually advantageous" character of the bilateral space cooperation, has as its main aim the participation of French cosmonauts in a common program of scientific and technical assistance on board Soviet orbiting stations. This program includes the installation of French instruments on board Soviet space stations and the "periodic visit of French cosmonauts" for the realization of experiments relating primarily to the study and use of microgravity.

In addition to the diversification of the fields of research conducted under the Franco-Soviet space cooperation, the protocol of 1989 expressly provides for its legal basis. Thus it envisages the conclusion of contracts on a commercial basis between organizations and industries of the two countries, and invites the two Parties to facilitate the entry and the stay, on their territories, of "people responsible for the achievement of the common tasks".

It is thus undeniable that France was the first Western partner to benefit, both scientifically and diplomatically, from space cooperation with the USSR. In addition, the successive flights of French cosmonauts within the framework of the missions carried out with the Russians made it possible for French teams to develop competences appreciated and used by NASA from the perspective of the international space station. In the same way, the French scientific community acquired an international

reputation in the field of cardiovascular physiology and the neurosciences thanks to the participation of French cosmonauts in manned flights.

## **I. Analysis of the institutional framework**

### **A. Cooperation with CNES**

Placed under the aegis of the space agencies, the French National Space Agency and the Russian Space Agency, the cooperation between France and Russia has been the beginning of the scientific and technical activities jointly undertaken since the signature of the Franco-Soviet intergovernmental agreement of space cooperation of June 30, 1966. Initially scientific, its profile has changed these last years to benefit from the possibilities offered in the industrial and commercial field. In the scientific field, the principal projects currently carried out within the framework of the Franco-Russian cooperation relate to missions of scientific research using the Russian satellites and to the manned flights.

To carry out programs of interest to the international scientific community, CNES develops experiments in bilateral cooperation with Russia, like Scarab for the study of the environment or Interball for the study of the terrestrial magnetosphere. Industrial and commercial activities began at the time of the creation of the company DERSI, a subsidiary of the CNES, whose vocation is the development of relations between France and the countries of the CIS. This has had concrete results, for example, in

the field of the telecommunications satellites.

Launchers are the second possible subject of cooperation. To support economic development of space activities, CNES, in association with public organizations, space industries and investors, set up companies such as Arianespace for the ARIANE launchers or Spot Image for the products of the Spot satellites.

The Arianespace company had to diversify its commercial offer to respond, on the one hand to the increase in competition, and on the other hand to the diversification of governmental satellites. Although ARIANE 5 is well adapted to military communications satellites and Galileo, Earth observation requires small satellites.

Arianespace had to develop a family of launchers able to be used for all types of missions. Apart from ARIANE 5, which is specialized in heavy dual-payload launches, it is planned to use Soyuz for medium sized launches and Rockot for light launches. However to develop a range of launchers requires cooperation. Arianespace thus called upon the services of the Russian launcher Soyuz for complementary missions to those of ARIANE. The Franco-Russian company STARSEM, created in 1996, aims at encouraging the marketing of this launcher. The creation of this company, which ensures the exclusive operational exploitation of Soyuz and its activities on the international market, constitutes a commercial, financial and industrial stake meeting the need for launching of small satellites to low orbit.

At the beginning of 2001, Russia officially asked France and Europe to

open the doors of the Kourou launch base in Guyana which is more favorable than Baïkonour, because of its equatorial position, for launchings of Soyuz. The question was discussed with the ministerial Council of the ESA which made a favorable decision in Montreal in June 2002. The financial arrangement has yet to be realized. The construction of a new launch pad for Soyuz would amount to between 250 and 300 million euros. The first launching of Soyuz from Kourou is planned for 2006.

### **B. Launchers, the privileged axis of cooperation between Russia and ESA**

ESA is a European organization created in 1975 by a convention which gives it the mission of ensuring and of developing for exclusively peaceful purposes, cooperation between European States in the fields of space research and technology, scientific use of space and operational space applications systems. ESA thus has a natural role in the definition of a European space strategy, even if it does not belong to the EU as such. The cooperation between ESA and the USSR initially and then Russia became extensive some years after the political decision of General de Gaulle, made in 1966, of launching France into large-scale space cooperation with the USSR. The cooperation between France and Russia from the very start was based on an agreement between the governments. The European Organization of Space Research, ESRO, which preceded ESA, had an agreement in the form of an exchange of letters with the Academy of Science of the USSR which came into effect on February 12, 1971.

After sporadic beginnings in the field of space science during the Seventies, the cooperation between ESA and the Soviet Union increased with the opening up of the latter from 1985. It was at that time that the United States and the USSR signed a new space cooperation agreement. The field of cooperation widened in the field of life sciences, with ESA undertaking experiments on Russian recoverable capsules.

The new nature of this cooperation was recognized by the conclusion of a space cooperation agreement between ESA and the Government of the USSR which came into effect on April 25, 1990, and of which the rights and obligations were transferred to the Federation of Russia (diplomatic note of the Embassy of Russia in France of April 28, 1992). The first concrete expression of a political good-will in favor of space cooperation between ESA and Russia may be found in two of the resolutions adopted by the Council of ESA sitting at ministerial level in Grenada on the 10 November 1992. In addition, ESA is preparing a new program of launchers of the future (FLPP) for which cooperation with Russia is being considered.

### **C. The first steps of cooperation with the European Union**

A dialogue on space between the EU and Russia has existed since 1997 in accordance with article 67 of the Agreement of partnership and cooperation EU - Federation of Russia signed on December 1, 1997. It associates representatives of the space agencies, institutes of research, public authorities, operators and industry. The purpose of the dialogue is to intensify the bonds of co-operation between the European Union and Russia in the field

of research on space and to develop projects of cooperation.

The EU supports space Research and Development in Russia via the International Center for Science and Technology (CIST) instituted by the treaty signed on November 27, 1992 between EU, Japan, Russia and the United States. This center, based in Moscow, is regarded as "the instrument (...) to re-orientate the activities of the scientists specialized in the past in the military field towards peaceful activities". In parallel, Russia signed, in 1992, outline agreements on space with the majority of the Member States of the EU.

Thus, there is a long tradition of space co-operation between France and the Soviet Union, founded by the agreement of Gaille-Brezhnev in 1966, restricted initially to scientific research then extended to the flights of French spationauts on the Soviet stations. The cooperation has been reinforced considerably with the arrival of Mr. Putin. Russia expressed the wish to look further into the scientific and technological cooperation with the European Union. The new European Strategy for space, adopted on November 2000 by the Research Council of the European Union and the Council of ESA, gave new momentum to the cooperation between the European Union, ESA and Russia. This new momentum, impelled by the new European strategy for space, made it possible to strengthen the cooperation between ESA and the Russian Space Agency in three fields: launch services; the development of the Global Monitoring for Environment and Security (GMES) Initiative and related

activities of information derived from remote sensing; and, the development of the satellite navigation system, Galileo.

In October 2001, an EU-Russia collaboration agreement in the field of energy and space research was signed between Philippe Busquin, European Commissioner in charge of research, and Yuri Koptiev, General Director of the Russian Space Agency, a document which provides the legal basis for the Euro-Russian space partnership. Within the framework of this agreement, efforts will concentrate on systems of navigation by satellite such as Galileo and Glonass, the European initiative of Global Monitoring for Environment and Security (GMES) and launch services, in particular the launching of the Soyuz rockets from the European Space Center of Kourou, in French Guiana. These fields could all profit from the reinforcement of collaboration between the EU and Russia. Cooperation on these topics is promising not only from the economic point of view, on the level of the world market, but also from a technological, strategic and political point of view. The partnership will also imply new activities related to the space program, including manned missions, planetary exploration, development of future systems of transport and the use of the International Space Station (ISS).

With the occasion of the 10<sup>th</sup> EU-Russia summit on November 11, 2002, the European Commission stressed that the satellite navigation systems of Galileo and Glonass, the development of reusable launchers and the relevant installations and GMES remained a priority of the EU-Russia partnership in

the space field. The European Police chief also invited Russia to take part in the Board of management of GMES and become a member of the Task force of the EU set-up to prepare a summit on the observation of the ground which took place in the United States in June 2003. For the moment, the priority for Europeans is to identify the part which Russian industry could play in the Galileo program. The political discussions started to date could imply Russian participation in the "Galileo Joint Undertaking". The communication of the European Commission on GMES underlines the need for an international cooperation for the development of this project and indicates that this opens an important sector with broad prospects for collaboration with Russia.

A principal consequence of the disappearance of the USSR on Russian space activities was a reduction in the influence of the military-industrial complex, compared to the Soviet time during which the space policy of the USSR took on a strategic dimension and one of obvious prestige. The increasing influence of the civil authorities on Russian space policy has resulted, since 1992, in the creation of a Russian Space Agency which, in the long term, will manage the whole of the Baïkonur Cosmodrome while the strategic site of Plesetsk, close to Arkhangelsk, is intended to remain under military supervision. Taking into account the influence of the United States in Russian space policy, the cooperation with France is today of unprecedented importance. This is also true today for Russia which places great importance on the cooperation with Europe in space, in which France plays a decisive role.

## **II. The models of industrial cooperation between private entities**

### **A. EADS, the European initiative in favour of cooperation**

EADS (European Aeronautic Defence and Space Company) was created to react to the difficult economic situation: the production markets are falling; the civil institutional markets are stagnant, even decreasing; the implementation of projects such as Galileo or GMES has slowed down even if the budgets remain stable; and the military market is not very active. Vis-a-vis the unpredictability of the market (with the evolution of the mass of the satellites, the market is composed today of two thirds heavy satellites and one third small satellites), EADS subscribes to the need for having a range of launchers. However, Europe does not presently have the means of financing the development of a complete family of launchers and hence their interest in agreements with Russia. The amplification of cooperation with Russia also meets another aim: to prevent it from joining with another foreign partner (in particular the United States) and becoming a competitor for Europe.

EADS, in collaboration with Airbus, proposed to the Russian authorities the long term development of a program of industrial cooperation. A draft-agreement signed in 2001 with the Russian Space Agency envisages six fields of cooperation: space, civil aircraft, military transport aircraft, fighter aircraft, helicopters and training of personnel. The negotiations led to the signature of a strategic partnership

agreement on July 2, 2001. This agreement envisages the widening of Russo-European programs managed by the founding partners of EADS, Aerospatiale Matra, Dasa and CASA, gathered under this denomination, but also the formation of new joint ventures. According to Philippe Camus, director of EADS, "the partnership will make Europe and Russia even more powerful on the world market by bringing together their experience, their know-how and their markets".

## **B. Starsem, Franco-Russian joint venture**

The Starsem company was created in a competing context marked by an explosion of requests for new capacities of launchers. Moreover the global launch market saw an important evolution in the mid nineties with a strong growth in the number of satellites launched as well as the development of "multi-media" satellite constellations in low and medium orbit.

It is in this context that the joint company was created under French law in August 1996. The legal status of Starsem is a limited company with a board of directors (Article 1 of the statutes of Starsem).

The company has as an aim: "all space activities in the field of research, study, development, production and marketing of launchers, payloads of launchers, systems of launching and launching as well as all means of space exploration...." (Article 2 of the statutes of Starsem).

The alliance rests on a partnership between the various participants:

- EADS (35%)
- Space Russian Agency (25%)
- Space Center of Samara (TsSKB-Progress) (25%)
- Arianespace (15%)

The company is in charge of the marketing and the industrial exploitation of the systems of Soyuz launching.

The creation of the Starsem company is the fruit of a political good-will. Indeed, Europe did not really have a suitable launcher to place satellites in low or medium orbit. Consequently, Starsem was created to answer the needs of the launch market and global competition.

The creation of the company was followed by the signature of an agreement between France and Russia relating to cooperation in the space field on November 26, 1996. An additional protocol relates to the exemption from taxes and customs duty of the imported goods from France for a launch carried out from a Russian launch pad and vice versa.

### **1. The legal basis of the cooperation**

The purpose of this 1996 Agreement between France and Russia was to develop cooperation in the industrial and commercial field whereas previously this cooperation had been of a scientific nature.

Moreover, this agreement established in particular the applicable provisions with regards to liability; it specifies the applicable principles as regards legal

responsibility, of safety, safeguard, registration, certification and controlling authority. Consequently, the agreement includes many stipulations aimed at facilitating exchanges in the space field between France and Russia.

It should be noted that the Agreement covers only goods relating to the activities of the Starsem company. Moreover, the agreement was negotiated "to measure" to make it possible for the Starsem company to conclude its mission.

However, the stipulations negotiated in 1996 did not prove sufficiently precise to make it possible for the companies concerned to profit easily and quickly from the customs and tax exemptions envisaged. Thus, the Committee of the Russian customs interpreted the agreement of 1996 in a very restrictive way, in particular relating to the nature of the goods which it agreed to include within the framework of the agreement.

Following difficulties related to the inaccuracy of the customs and tax system applicable to the exchanges, the Protocol to the agreement between the Government of the French Republic and the Government of the Federation of Russia relating to cooperation in the field of the exploration and the use of space for peaceful purposes was signed on January 2, 1999.

This protocol supplemented the Franco-Russian agreement of November 26, 1996 on space cooperation by defining with precision the nature of the exonerated goods and the nature of these exemptions.

The protocol has been elaborated more particularly to profit from tax and customs exemptions on the imports to Russia conducted by the Starsem company.

The protocol provides that:

- the principle of exemption from tax and customs charges is reaffirmed explicitly (Article 1)
- the concept of "launch equipment" is defined in an extensive way: it includes all the tangible or intangible property necessary for the launching of a satellite, from the launcher to the software used for its operation (Article 2)
- the agreement also applies to goods imported from a third country (Article 4)

This protocol makes it possible to give a stable framework to Franco-Russian exchanges relating to the space industry. Moreover, the protocol will enable positive exploitation of the competitiveness of the commercial offer of the Starsem company and also increase the effectiveness of other industrial cooperation which may emerge between Russia and France in the future.

It should be also noted that the protocol makes it possible for French industry to profit in Russia from a customs system and tax similar to that which is applied to the American industry.

Russia, in the sector of the aeronautical and space cooperation, is determined to engage in new cooperation with the Occident.



## Acronyms

<b>EADS</b>	European Aeronautic Defence and Space Company
<b>ESA</b>	European Space Agency
<b>ESS</b>	European Space Strategy
<b>ISS</b> Station	International Space Station
<b>FLPP</b>	Future Launcher Preparatory Program
<b>GLONASS</b>	Global Navigation Satellite System
<b>GMES</b>	Global Monitoring for Environment and Security
<b>GTO</b> Orbit	Geostationary Transfer Orbit
<b>MTCR</b>	Missile Technology Control Regime
<b>RKA</b>	Russian Space Agency (Rossiskoye Kosmitcheskoye Agentsvo)

## Bibliography

- BZHILIANSKAYA, L., «Russian launch vehicles on the world market : a case – study of international joint ventures», *Space Policy*, vol. 13, n° 4, 1997, p. 323-338
- CABART RENARD, I., «Perspectives de coopération entre l'Europe, la France et la Russie dans le domaine spatial», *La lettre diplomatique*, n° 58, 2002, p.32-33
- COURTEIX, S., dir., *Le cadre institutionnel des activités spatiales des Etats*, Paris, Pedone, 1997, 384 p.
- KAMENETSKAYA, E.,  
VERESHCHETIN, V., ZHUKOVA, E.,  
«Legal Regulation of Space activities in Russia», *Space Policy*, n° 2, 1993
- PASCO, X., SOURBES -VERGER, I.,  
MALAVIALLE, A-M., *Espace et Puissance*, Paris, Ellipses, 1999, 204 p.
- ROMER, J.-C., *Géopolitique de la Russie*, Paris, Economica, 1999, 186 p.
- Regulations on licensing activity,  
décision du gouvernement fédéral n°  
104, 2 février 1996