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Manfred Lachs Space Law Moot Court Competition 1994

Case Concerning the Use of a Space Station

Alpha v. Gamma

OBJECTIVE

To challenge the participants' understanding and application of international law with respect to outer space using four factual scenarios: (1) the unauthorized use in outer space of an invention covered by a valid patent granted by the government of a State; (2) the exercise of authority by a facility commander in outer space; (3) an unprovoked physical attack on a person in outer space causing serious bodily injury of the person, damage to the property of a government, and risking the safety of all the facility's inhabitants and; (4) the crash of a return capsule on the territory of a State.

STATEMENT OF FACTS

The GALACTICA Space Facility

GALACTICA is a space station consisting of a permanently occupied space facility in orbit 300 miles above the surface of the Earth. This space facility has been established and is operating for scientific purposes, by three States: Alpha, Beta and Gamma. For this purpose, a Treaty has been signed among the said States, and they all have fully implemented this Treaty as part of their respective municipal laws.

GALACTICA is composed of three parts:

- the core components, e.g., human habitation module, life support systems, and a space science laboratory module affixed to the central facility core. Both of these elements have been financed and constructed, and are owned, by Alpha. They all have been notified to the United Nations and are carried on the national registry of Alpha, as space objects of Alpha, pursuant to the Convention on the Registration of Objects Launched into Outer Space.

- a space science laboratory module, attached to the Alpha station core facility and serviced from and through the core facility. This module has been financed and constructed, and is owned by

Beta. It has been notified to the United Nations and is carried on the national registry of Beta, as a space object of Beta, pursuant to the Convention on the Registration of Objects Launched into Outer Space.

- another space science laboratory module, with the same characteristics as the one of Beta, has been financed and constructed, and is owned by Gamma. It has been notified to the United Nations and is carried on the national registry of Gamma, as a space object of Gamma, pursuant to the Convention on the Registration of Objects Launched into Outer Space.

The three parts of GALACTICA have been designed to be complementary and not supplementary, to certain major research objectives of the intergovernmental undertaking. Therefore, an effort has been made by the parties to avoid duplication of equipment in the modules and strengthen their cooperation in view to sharing the use of the said equipment.

The Crew and the Commander

The entire station complex is capable of supporting, at any given time, 12 people, the crew members. The three States have agreed to divide this capability equally among their nationals. Each national crew has a crew chief. A Space Facility Commander is the supreme authority aboard GALACTICA. Pursuant to the Treaty between the three States, the Space Facility Commander is entrusted with overall authority over the facility and its inhabitants. The prime objective of the commander is to ensure accomplishment of the overall facility mission consistent with crew safety within the terms of the Treaty. Pursuant to the provisions of this Treaty, Alpha is entitled to appoint the commander, and this has indeed been done.

Activities Aboard GALACTICA

Since the modules were designed to be complementary, each State has certain pre-agreed utilization rights to the laboratory modules of the other States. The utilization rights consist of time-slots during which the using State has exclusive use and control of the module facility as well as the responsibility to return control of the module facility to the owner State in the same condition as when control was assumed at the beginning of the time-slot. Jurisdiction, however, remains at all times in the State supplying the module. Under this arrangement, Alpha was given a series of time-slots including:

- in the Gamma module: September 1 - October 31, 2005
- in the Beta module: June 1 - July 31, 2007.

One of the main life sciences research project carried out on the station was directed at finding a remedy for a form of cancer prevalent throughout the populations of the Earth.

The discovery

On October 1, 2005, a national of State Alpha, Dr Zarkov, employed by a private research laboratory incorporated and headquartered in Alpha, while performing research in the Gamma module, discovered what has since become the medically-accepted remedy for this form of cancer. As a result, Dr Zarkov and his company have received worldwide acclaim and recognition, and receive substantial royalties based on patents obtained in a number of countries.

The circumstances of the discovery

Subsequently, it became known that the particular laboratory instrument, the use of which was essential in enabling Dr Zarkov to make his discovery in the Gamma module, was purchased by his employer from a private company incorporated and headquartered in Gamma. The assembled instrument, as well as each of the three major components, incorporated inventions covered by the claims of valid patents issued by the government of Alpha during the year 2004 for a term of 17 years. These patents are owned by a company incorporated and headquartered in Gamma.

Two of the three major components comprising the instrument were air-shipped from Gamma to the space launch complex in Alpha and from there eventually transported to GALACTICA by an Alpha launch vehicle carried on the registry of Alpha.

The Alpha launch vehicle docked directly with the Alpha core component of GALACTICA, and from there the components were transferred via the core to the Gamma module.

The third component of the instrument was transported from the territory of Gamma directly to GALACTICA by a launch vehicle carried on the registry of Gamma, and which docked directly with the Gamma module. From that point, the component was transferred directly into the Gamma module where the three major components were assembled into the instrument.

After the cure was discovered, the instrument was disassembled and each of the three major components returned to Alpha by an Alpha space recovery vehicle and stored there at an Alpha Government Facility.

Controversies...

In view of the importance which the laboratory instrument had played in Dr Zarkov's discovery, and the fact that the Gamma company which owned the patents received no credit (or royalties), considerable political controversy developed between Alpha and Gamma as well as among their respective space science communities, including their respective crews. As tensions increased on GALACTICA, the Commander of the station, an Alpha civilian government employee, imposed summary restrictions on the movement within GALACTICA of the Alpha and Gamma crews, including the fact that neither was to go into the other's laboratory module. Although this restriction did not affect the use of the Beta module, it did prohibit Alpha crew members from entering the Beta module while being utilised by the Gamma crew and vice-versa. These restrictions in effect temporarily interrupted the schedule of rights of cross-utilisation of each other's laboratory module by Alpha and Gamma.

Despite this action, tensions continued to increase to the point where, on June 30, 2007, a Gamma crew member entered the Beta module and confronted the Alpha crew chief scientist. An argument developed and a physical scuffle ensued during which the Alpha scientist was shoved by the Gamma crew member with great force across the module and into some laboratory equipment. As a result, he was seriously injured and Alpha laboratory equipment and experiments temporarily in the Beta module sustained damage in the amount of \$10 million. Subsequent investigation showed that \$4 million dollars worth of this Alpha government equipment was not properly secured in accordance with agreed procedures annexed to a Protocol to the Treaty for the securing and storage of laboratory equipment.

The Gamma perpetrator returned immediately to the Gamma module. The Gamma crew chief, on orders from the Government of Gamma, refused the demand by the GALACTICA commander that the perpetrator be turned over immediately to the custody of the Commander for interrogation and return by recovery vehicle to Alpha for possible criminal prosecution. The Gamma crew chief, instead, on orders from his government promptly returned the perpetrator in the Gamma return capsule. However, while flying over the territory of Delta, a neighbour State of Gamma, the Gamma capsule experienced trouble and crashed on the soil of Delta. The authorities of Delta found the capsule and the crew member who was severely injured but alive. The crew member was sent to a hospital and recovered. Delta being a party to the Agreement on Rescue of Astronauts, its government wished to ensure that no claim would be brought against Delta for violation of this Agreement. After lengthy negotiations, an exchange of letters was performed among the States Alpha, Gamma and Delta providing that, since the case would be brought to the International Court of Justice, the astronaut would be allowed to remain in the territory of Delta until the Court decides to which State Delta should return him. Then, Delta would perform its duty to return the astronaut.

CLAIMS

As a result of this series of incidents and accidents, the following claims were presented and demands made:

- 1) *by Gamma* on behalf of the owners of the patents for appropriate compensation based on infringement of the Gamma patents by Dr Zarkov, his employer and the Government of Alpha;
- 2) *by Alpha* for compensation from Gamma for damage to the Alpha equipment;
- 3) *by Alpha* for refusal of Gamma to surrender custody of the Gamma assailant for prosecution by Alpha for
 - a) ignoring the summary restriction imposed by the Alpha station commander and thereby endangering the lives of the station crew and
 - b) for the assault on the Alpha chief scientist; and
- 4) *by Gamma and Alpha*, which are seeking to determine their rights to the astronaut as between each other. Delta has already agreed, through an agreement signed with Alpha and Gamma, to be bound by the ICJ's decision as to who has the better right as between Alpha and Gamma. Intergovernmental consultations to resolve these claims have been unsuccessful.

Alpha and Gamma have taken their claims to the International Court of Justice, and the Court has agreed to decide the issues of:

- 1) Jurisdiction with respect to making and use of inventions in outer space, i.e, to what extent may a State consistent with international law prescribe or otherwise extend his patent laws to activities occurring in outer space; in this case on GALACTICA;
- 2) The legality of the Alpha Station Commander's restriction order, the demand of Alpha for the surrender to it of the custody of the Gamma perpetrator, the refusal of Gamma to surrender

custody, and the subsequent events, including the accident of the return capsule.

3) The Alpha claim for damage.

INSTRUCTIONS

The participants will brief and argue the merits of these issues on behalf of Alpha and Gamma using the scenario as set forth above and the attached excerpts from the Treaty as well as other relevant sources of law as may appropriately be applied by the International Court of Justice. For the convenience of having municipal law frames for reference for purposes of the briefs and arguments, the participants may refer to any relevant municipal laws, provided those laws are as of 31 December 1992. Also, the participants should assume that Alpha, Beta and Gamma are members of the United Nations and parties to the Outer Space Treaty, the Liability Convention, the Registration Convention and the Astronaut Rescue and Return Convention. As noted, Delta is only a Party to the 1967 Outer Space Treaty. As regards the patent claim, the issues briefed and argued should be confined to ones of jurisdiction and not substantive patent law. The participants should assume that all patents are valid and their claimed inventions used where so stated in the scenario. Finally, participants should also assume that the code of conduct provided for by article XII of the Treaty between the governments of Alpha, Beta and Gamma, has not yet been developed.

EXCERPTS FROM THE

Treaty Between the Governments of Alpha, Beta, and Gamma for the Establishment, Operation and Utilization of a Permanently Inhabited Space Facility, done in Gamma, February 28, 1998.

Article V

Registration, Jurisdiction and Control

- 1.- In accordance with Article II of the Registration Convention, each State Party shall register as space objects the flight elements including attached modules which it provides.
- 2.- Pursuant to Article VIII of the Outer Space Treaty and Article II of the Registration Convention, each State Party shall retain jurisdiction and control over the elements it registers in accordance with paragraph 1 above and over personnel in or on the Space Facility who are its nationals. The exercise of such jurisdiction and control shall be subject to any relevant provisions of this Treaty.

Article VI

Ownership of Elements and Equipment

- 1.- Each State Party shall own the flight elements (including attached modules) that they respectively provide, except as otherwise provided for in this Treaty. The States Parties shall notify each other regarding the ownership of any equipment in or on the Space Facility.
- 2.- The transfer of ownership of the flight elements or of equipment in or on the Space Facility shall not affect the rights and obligations of the States Parties under this Agreement.
- 3.- The ownership of equipment or material provided by a user shall not be affected by the mere presence of such equipment or material in or on the Space Facility.
- 4.- The ownership or registration of elements or the ownership of equipment shall in no way be deemed to be an indication of ownership of material or data resulting from the conduct of activities in or on the Space Facility.
- 5.- The exercise of ownership of flight elements (including attached modules) and equipment shall be subject to any relevant provisions of this Treaty, including any mechanisms for sharing of utilization.

Article IX

Utilization

- 1.- Alpha shall retain the use of the station core and user elements it provides, except as otherwise provided in this paragraph and paragraph 3 below. Alpha shall provide to Beta and Gamma resources derived from the Space Facility infrastructure it provides to operate and use the manned base. In exchange for Alpha providing such resources, Beta and Gamma shall provide to Alpha a fixed percentage of the use of their respective attached modules on an agreed time share basis.
- 2.- In addition, Alpha shall share the use of its laboratory module with Beta and Gamma pursuant to an agreed tim sharing mechanism.
- 3.- Any utilization by one State Party of another's laboratory module shall be on an exclusive basis, and the module shall be under the control but not jurisdiction, of such using Party for the duration of its utilization by that Party.
- 4.- Each State Party may use and select users for its allocations for any purpose consistent with the object of this Treaty.
- 5.- In its use of the Space Facility, each State Party shall avoid causing serious adverse effects on the use of the Space Facility by any other State Party.
- 6.- Each State Party shall assure access to and use of its Space Facility elements to the other State Parties in accordance with their respective utilization allocations.

Article X *Operation*

The States Parties shall have the responsibilities in the operation of the flight elements (including attached modules) they respectively provide, in accordance with the relevant provisions of this Treaty, including Article IX (3). The States Parties shall develop and implement procedures for operating the Space Facility in a manner that is safe, efficient, and effective for Space Facility users and operators. Further, each State Party shall be responsible for sustaining the functional performance of the elements it provides.

Article XII *Crew*

Each State Party has the right to provide and equal number of qualified personnel to serve as Space Facility crew members, including scientific experimenters. Each crew shall have a crew chief. The Space Facility commander shall be designated by Alpha.

The Code of Conduct for the Space Facility crew will be developed by the States Parties.

Article XX *Treatment of Data and Goods in Transit*

Recognizing the importance of the continuing operation and full international utilization of the Space Facility, each State Party shall, to the extent its applicable laws and regulations permit, allow the expeditious transit of data and goods of another State Party and its users. This Article shall only apply to data and goods transferring to and from the Space Facility, including but not limited to transit between its national border and a launch or landing site within its territory, and between a launch or landing site and the Space Facility.

Article XXI ***Intellectual Property***

1.- For the purposes of this Treaty, "intellectual property" is understood to have the meaning of Article 2 of the Convention Establishing the World Intellectual Property Organization, done at Stockholm on 14 July 1967.

2.- Subject to the provisions of this Article, for purposes of intellectual property law, an activity occurring in or on a Space Facility flight element (including attached modules) shall be deemed to have occurred only in the territory of the State Party of that element's registry. For avoidance of doubt, participation by a State Party or its users in an activity occurring in or on the other State Party's Space Facility flight element (including attached modules) shall not in and of itself alter or affect the jurisdiction over such activity provided for in the previous sentence.

3.- The temporary presence in the territory of a State Party of any articles, including the components of a flight element, in transit between any place on earth and any flight element (including attached modules) of the Space Facility registered by another State Party shall not in itself form the basis for any proceedings in the first State Party for patent infringement.

Article XXII ***Criminal Jurisdiction***

In view of the unique and unprecedented nature of this particular international cooperation in space:

1.- Alpha, Beta, and Gamma may exercise criminal jurisdiction over the flight elements (including attached modules) they respectively provide and over personnel in or on any flight element who are their respective nationals, in accordance with Article V(2).

2.- In addition, Alpha may exercise criminal jurisdiction over misconduct committed by a non-Alpha national in or on a non-Alpha element of the manned base or attached to the manned base (e.g., laboratory module) which endangers the safety of the manned base or the crew members thereon; provided that, before proceeding to trial with such a prosecution, Alpha:

- (a) shall consult with the State Party whose national is the alleged perpetrator concerning the prosecutorial interests of both States; and
- (b) shall have either

(1) received the concurrence of such State Party in the continuation of the prosecution; or

(2) if such concurrence is not forthcoming, failed to receive assurances from such State Party that it intends to prosecute its national or commensurate charges supported by the evidence.