



# MUNLAWS 2022

FACULTY OF LAW, UNIVERSITY OF LJUBLJANA

## COURT OF CONCILIATION AND ARBITRATION

Organization for Security and Co-operation in Europe

### CASE STUDY



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Faculty of Law, University of Ljubljana

**COURT OF CONCILIATION AND ARBITRATION,**  
ORGANIZATION FOR SECURITY AND CO-OPERATION IN EUROPE

**CASE STUDY**

*Ljubljana, September 2022*

# THE CASE CONCERNING SPACE ACTIVITIES AND ARTIFICIAL INTELLIGENCE

REPUBLIC OF ANTLIA v. THE KINGDOM OF RUCHBAH

1. The Republic of Antlia (hereinafter: Antlia) has a population of 80 million people. The State's capital and largest city is Ankaa. Antlia operates a large number of communications and remote sensing satellites making it one of the leading space-faring nations. Space-related industries provide Antlia with nearly 15 % of its total GDP.
2. On the north, Antlia is bordered by the Kingdom of Ruchbah (hereinafter: Ruchbah), home to approximately 100 million people. Ruchbah attaches great importance to participation in international economic organisations and plays an active role in international security and technology development.
3. Antlia and Ruchbah enjoy special and strong bilateral diplomatic relations established during World War II. The two states cooperate in the fields of energy, security, culture and tourism and are major trading partners, both in exports and imports. In 1996, they concluded an agreement to establish a common strategy for the development of space technology (hereinafter: the Ankaa Agreement) and building a major space technology centre financed by both parties.
4. The Space technology centre was built in the capital of Ruchbah, Rinka and its main goal was, as agreed under the 1996 Ankaa Agreement, to develop artificial intelligence (AI) – software that would be able to operate satellites autonomously without any human input.

5. Over the span of the next 20 years the Space technology centre became the best and the most advanced space institution in the world. It employed a number of world-renowned scientists in the space field. In 2010, there was the first breakthrough when it came to introducing AI to space. The scientist Maia Uranova developed and successfully installed a new software (later named the Uranoglobe) into one of the satellites. The software was programmed to make adjustments in the satellite's orbital altitude to avoid space debris and collisions with other satellites. As the technology was new and unproven, the first version of the software was programmed to require verification by human experts before the software could make changes in altitude.
  
6. The Uranoglobe software's calculations were based on the data provided by the Arocco Space Surveillance Network (hereinafter: ASSN) stationed in Antlia. The ASSN is controlled by the Antlian government and is tasked to provide identification and cataloguing of space objects, space debris, including their orbital parameters, satellite attack warning, timely notification to Antlia and Ruchbah's forces of satellite fly-over, space monitoring, as well as scientific and technical intelligence gathering. The accelerated growth of the number of satellites and space debris, including the increasing diversity in launch trajectories, non-standard orbits, and geosynchronous altitudes, necessitates continued modernization of the ASSN to meet existing and future requirements. To meet the evolving standards the ASSN required additional funding that has been provided by Ruchbah since 2012.
  
7. In 2015, the two governments decided that it was time to make improvements to Uranoglobe. The goal was to make it more secure and accurate so it could provide precise calculations without any human interference. A team of 10 scientists from both States was assembled for that purpose and both States agreed to request additional funding from the Naboo Space Agency, an international organisation with an objective of promoting space technology development and providing more efficient space research programmes with a coordinated cooperation of all member states.

- 8.** In 2017, reports started to surface in the media that the team was close to completing the software and installing it into all Ruchbah and Antlia's satellites. The chatter was immediately rejected by a representative of the Republic of Antlia's Space Department, who, in an interview for the national TV, stated that after a discussion with the scientists and designated officials from both States, it was decided that the software is not yet able to make the correct decision in the majority of the scenarios and will thus not be installed until further notice.
- 9.** In 2020, a report came out that the government of Ruchbah, unsatisfied with the decision to postpone the instalment, was looking for a way to test the software. By the end of 2021, the head of the Space Department in Ruchbah announced on national TV that the Space Centre has successfully installed the new and improved software into one of their satellites that was going to be launched into space on the 1<sup>st</sup> January 2022. On that same occasion, he thanked the Republic of Antlia for all its contribution to this major achievement. The government of Antlia did not respond.
- 10.** On 1<sup>st</sup> January 2022, Ruchbah organised an event in honour of the launch and has invited members of the Anatlia's government to participate. Only the head of the Antlian Space Department arrived at the event. At 10 am the satellite was launched into space, which was live streamed on national TV of Ruchbah.
- 11.** On 20<sup>th</sup> October 2022, Antlia's National Space Agency intercepted news that two satellites orbiting the Earth collided. The preliminary findings showed that the collision constituted a major space debris producing event. The government started its own investigation and the news were inundated with the reports on how and why this happened and who was responsible.

**12.** After a week it was discovered that its Antarex satellite was hit by satellite Ralter, registered by the Kingdom of Ruchbah, that, for a yet unknown reason, has changed its orbit. On 30<sup>th</sup> October 2022, the Falcon, the leading scientific journal in Antlia, published an extensive piece on the accident, claiming that the satellite, which caused the collision, was in fact the one launched into space at the beginning of the year, equipped with the new software.

**13.** Consequently, the Republic of Antlia was quick to accuse the Kingdom of Ruchbah of breaching the space agreement signed by the two countries. On 31<sup>st</sup> October 2022, the President of Antlia made an official statement:

*[...] In the light of recent media speculation about the relations between the Republic of Antlia and the Kingdom of Ruchbah, the government of Antlia would once again like to reiterate that our strong economic relationship shall continue and emphasise the importance of the diplomatic relations established over 50 years ago.*

*However, Antlia is deeply disappointed with the actions of Ruchbah and is expecting a formal and public apology and expects the government of Ruchbah to take full responsibility for the damages caused by the software malfunction being a consequence of their rushed decision to install it without the consent of both states.*

*Moving forward, Antlia is looking forward to holding discussions with Ruchbah to work together in partnership rebuilding the trust damaged in this unfortunate event of Ruchbah disregarding the Ankaa Agreement that was based on collaboration and cooperation. [...]*

**14.** On 1<sup>st</sup> November 2022, an international non-profit organisation NetLeaks published on its website a classified report made on the 15<sup>th</sup> of May 2019 by one of the scientists working on the project. According to the report the technology worked with 100% accuracy during its testing and was ready to be installed on a satellite. The government of Antlia strongly denied the existence of any such report and further accused Ruchbah of forging the document to shift the public's opinion on responsibility.

**15.** On the morning of 2<sup>nd</sup> November 2022, the Ruchbah's authorities released a statement regarding the crash and a detailed description of how the events unfolded. Although Ruchbah did not deny the decision to install the new and improved software into the satellite, it reported that the main cause for the explosion was the database on which the satellite operated:

*[...] On this occasion, the Kingdom of Ruchbah would like to emphasise the authenticity of the report made on 15<sup>th</sup> May. The authorities of Ruchbah are deeply offended by the accusations of forging the documents and disregarding the Ankaa Agreement.*

*According to Ankaa Agreement both states are liable for any damage caused by the satellites that are installed with the software programs developed in the Rinka Space technology centre.*

*Additionally, the software was developed to work with 100% accuracy if the provided date is reliable. Consequently, the cause of the collision is the faulty data provided by ASSN and not the software itself. [...]*

**16.** On 7<sup>th</sup> November 2022, representatives of the governments of Antlia and Ruchbah met at the headquarters of the Naboo Space Agency in an attempt to amicably settle the dispute. When the negotiations fell through, Antlia decided to act. At the next assembly of the Naboo Space Agency on 8<sup>th</sup> November 2022, it publicly accused Ruchbah of contractual unfaithfulness, demanded that Ruchbah be expelled from the Naboo Space Agency and unilaterally withdrew from the Ankaa Agreement.

**17.** Upon the special request by the High Commissioner of the Naboo Space Agency, whose wish was to settle the dispute amicably and peacefully, the parties agreed to the final meetup. At the meeting on 9<sup>th</sup> November 2022, both Heads of States have decided to submit the dispute to arbitration within the Court of Conciliation and Arbitration within the Organisation for Security and Co-operation in Europe (hereinafter: OSCE), as both States are parties to the 1992 Convention on Conciliation and Arbitration within OSCE.

**18.** Both Antlia and Ruchbah are States parties to all relevant treaties, including the 1967 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, the 1972 Convention on International Liability for Damage Caused by Space Objects, and the 1969 Vienna Convention on the Law of Treaties. Both States are also members of the United Nations.

**19.** The two States agreed that the following claims are to be decided by the arbitral tribunal:

The Republic of Antlia requests the tribunal to find that:

- I. Kingdom of Ruchbah violated international law by installing Uranoglobe and launching it into space and is liable for the loss of Antarex and the lost revenues from the destruction of Antarex, and
- II. Republic of Antlia acted in accordance with international law and is not liable for the loss of Ralter and the lost revenues from the destruction of Ralter.

The Kingdom of Ruchbah requests the tribunal to find that:

- I. Republic of Antlia violated international law by not providing accurate identification and cataloguing of space objects and space debris, including their orbital parameters, and is liable for the loss of Ralter and the lost revenues from the destruction of Ralter, and
- II. Kingdom of Ruchbah acted in accordance with international law and is not liable for the loss of Antarex and the lost revenues from the destruction of Ralter.



## APPENDIX 1

# **Agreement between the Republic of Antlia and the Kingdom of Ruchbah on the establishment of a common strategy for the development of space technology**

**The REPUBLIC OF ANTLIA**

and

**the KINGDOM OF RUCHBAH**

hereinafter referred to as "*the Parties*",

CONSIDERING that this Agreement shall not extend to the subject-matter covered by other Regulations, Conventions or Agreements that apply to the Parties,

RECOGNISING, that the provisions incorporated into this Agreement must, where necessary, be adapted to take account of the Parties' position with the acknowledgment of the contracts signed by the Parties,

CONVINCED that it is necessary to include a mechanism in this Agreement that provides for consistency with the development of the Naboo Space Agency community acquis, in particular concerning the matters referred to in Article II and Article V of the NSA Convention.

RECOGNISING, that it is necessary for the sake of good order and transparency that the Parties cooperate in good faith during the information and consultation phase with a view to facilitating the functions of the Space Technology Development Centre according to this Agreement.

HAVE AGREED AS FOLLOWS:

### **Article 1**

The provisions of the NSA Convention and the decisions of the Council set up by Article XI of the NSA Convention shall be taken into consideration when applying the rules of this Agreement.

Where the rules of this Agreement contradicts the decisions of the Council referred to in paragraph 1, the Parties shall comply with the decisions of the Council.

The Parties shall request the assistance of the Naboo Space Agency as regards to the Article IX of the NSA Convention solely in case of a mutual decision made by both Parties.

[...]

### THE OBJECTIVE

#### **Article 3**

The Parties shall, in accordance with the objectives of the Agreement, commit to:

- developing a new advanced satellite technology;
- providing the means to establish a new space technology development centre;
- acknowledging that both Parties shall have the right to all technology developed as a result of this Agreement;
- ensuring all decisions shall be made in partnership and with each party's knowledge and consent.

### CO-OPERATION BETWEEN THE CONTRACTING PARTIES

#### **Article 4**

The Parties shall agree and commit to follow the strategy for the development of space technology, in accordance with the terms of this Agreement, as determined in cooperation and in regards to a common objective of developing an advanced satellite technology that will operate without human input.

[...]

## **Article 6**

The Parties shall be obligated to provide financial and substantial resources required for achieving the objectives of this Agreement, in particular in relation to matters in Articles 12 and 13.

### PROTECTION OF INTELLECTUAL PROPERTY

## **Article 7**

The Parties shall ensure adequate and effective protection of intellectual property created or furnished under this Agreement or any other project being part of the space technology development centre established under this Agreement.

*[...]*

### ESTABLISHMENT OF A SPACE TECHNOLOGY DEVELOPMENT CENTRE

## **Article 12**

To achieve the objectives of this Agreement, a space technology development centre shall be established in the territory of the Kingdom of Ruchbah.

*[...]*

### ESTABLISHMENT OF A SPACE SURVEILLANCE NETWORK

## **Article 13**

In order to facilitate the implementation of this agreement, Kingdom of Antlia is to establish a Space Surveillance Network with a task of providing identification and cataloguing of space objects and space debris, including their orbital parameters.

## **NSA Convention and Council Rules of Procedure**

### **INTRODUCTORY NOTE**

At the end of the Conference, held in Ankaa on 30 May 1975, the Convention for the establishment of a Naboo Space Agency was opened for signature by the States attending the Space Conference, until 31 December 1975.

The Final Act of the Conference and the associated Resolutions established conditions for signature of the Convention and for the functioning of the Naboo Space Agency.

On 30 May 1975, the Convention was signed by: the Republic of Antlia, the Kingdom of Amidala, the Gunghan Republic, the Republic of Alderaan, the Kingdom of Coruscant and the Republic of Korriban.

On 31 December 1975, the Convention was signed by the Kingdom of Ruchbah.

The Convention entered into force on 30 October 1980.

## **CONVENTION FOR THE ESTABLISHMENT OF A NABOO SPACE AGENCY**

The States parties to this Convention,

CONSIDERING that the magnitude of the human, technical and financial resources required for activities in the space field is such that these resources lie beyond the means of any single country,

CONSIDERING the Resolution adopted by the Space Conference on 20 December 1972 and confirmed by the Space Conference on 31 July 1973, which decided that a new organisation, called the 'Naboo Space Agency', would be formed for the Development and Construction of Space Vehicle Launchers, and that the aim would be to integrate the different national space programmes into a Naboo space programme as far and as fast as reasonably possible,

DESIRING to pursue and to strengthen cooperation between the signatories, for exclusively peaceful purposes, in space research and technology and their space applications, with a view to their being used for scientific purposes and for operational space applications systems,

DESIRING, in order to achieve these aims, to establish a single space organisation to increase the efficiency of the total of space efforts by making better use of the resources at present devoted to space and to define a Naboo space programme for exclusively peaceful purposes,

HAVE AGREED as follows:

## **Article I**

### ESTABLISHMENT OF THE AGENCY

1. An organisation, called the 'Naboo Space Agency', hereinafter referred to as 'the Agency', is hereby established.
2. The members of the Agency, hereinafter referred to as 'Member States', shall be the States which are parties to this Convention in accordance with Articles XX and XXII.
3. All Member States shall participate in the mandatory activities referred to in Article V, 1 a, and shall contribute to the fixed common costs of the Agency, referred to in Annex II.
4. The Headquarters of the Agency shall be situated in the Ankaa area.

## **Article II**

### PURPOSE

The purpose of the Agency shall be to provide for and to promote, for exclusively peaceful purposes, cooperation among Member States in space research and technology and their space applications, with a view to their being used for scientific purposes and for operational space applications systems:

- a. by elaborating and implementing a long-term space policy, by recommending space objectives to the Member States, and by concerting the policies of the Member States with respect to other national and international organisations and institutions;
- b. by elaborating and implementing activities and programmes in the space field;
- c. by coordinating the Naboo space programme and national programmes, and by integrating the latter progressively and as completely as possible into the Naboo space programme, in particular as regards the development of applications satellites;
- d. by elaborating and implementing the industrial policy appropriate to its programme and by recommending a coherent industrial policy to the Member States.

[...]

## Article V

### ACTIVITIES AND PROGRAMMES

1. The activities of the Agency shall include mandatory activities, in which all Member States shall participate, and optional activities, in which all Member States participate apart from those that formally declare themselves not interested in participating therein.

a. With respect to the mandatory activities, the Agency shall:

- i. ensure the execution of basic activities, such as education, documentation, studies of future projects and technological research work;
- ii. ensure the elaboration and execution of a scientific programme including satellites and other space systems;
- iii. collect relevant information and disseminate it to Member States, draw attention to gaps and duplication, and provide advice and assistance for the harmonisation of international and national programmes;
- iv. maintain regular contact with the users of space techniques and keep itself informed of their requirements.

b. With respect to the optional activities, the Agency shall ensure, in accordance with the provisions of Annex III, the execution of programmes which may, in particular, include:

- i. the design, development, construction, launching, placing in orbit, and control of satellites and other space systems;
- ii. the design, development, construction, and operation of launch facilities and space transport systems.

2. In the area of space applications the Agency may, should the occasion arise, carry out operational activities under conditions to be defined by the Council by a majority of all Member States. When so doing the Agency shall:

- a. place at the disposal of the operating agencies concerned such of its own facilities as may be useful to them;
- b. ensure as required, on behalf of the operating agencies concerned, the launching, placing in orbit and control of operational application satellites;
- c. carry out any other activity requested by users and approved by the Council. The cost of such operational activities shall be borne by the users concerned.

3. With respect to the coordination and integration of programmes referred to in Article II c, the Agency shall receive in good time from Member States information on projects relating to new space programmes, facilitate consultations among the Member States, undertake any necessary evaluation and formulate appropriate rules to be adopted by the Council by a unanimous vote of all Member States. The objectives and procedures of the internationalisation of programmes are set out in Annex IV.

[...]

## **Article VII**

### **OBLIGATIONS OF MEMBER STATES**

In order to promote international cooperation in the peaceful exploration and use of outer space, States Parties to the NSA Convention conducting activities in outer space, including the Moon and other celestial bodies, agree to inform the Council as well as the public and the international scientific community, to the greatest extent feasible and practicable, of the nature, conduct, locations and results of such activities. On receiving the said information, the Council should be prepared to disseminate it immediately and effectively.

[...]

## **Article XVIII**

### **NON-FULFILMENT OF OBLIGATIONS**

Any Member State which fails to fulfil its obligations under this Convention shall cease to be a member of the Agency on a decision of the Council taken by a two-thirds majority of all Member States. The provisions of Article XXIV shall apply in such a case.