10th MANFRED LACHS SPACE LAW MOOT COURT COMPETITION 2001

The Case Concerning Access To ESI-1 Data (Soliscalor v. Cornucopia)

PART A: INTRODUCTION

The 44th Colloquium hosted the tenth Manfred Lachs Space Law Moot Court Competition, and for this occasion a prestigious new "Manfred Lachs Trophy" was introduced. It was sponsored by two generous members and arranged by Leslie Tennen. The trophy carries the names of the nine previous winning universities. The three winners of the regional rounds held in the Asia-Pacific region, USA and Europe competed again in the international rounds. They were the National University of Singapore (Celina Chua Mei Yen and Gerardine Goh Meishan), the University of North Carolina (Charles C. Kyles and J. Patrick Haywood), and the University of Dijon, France (Nicolas Bauch Labesse and Jamel Rbah, with Séverine Ros as Alternate). The teams from France and the USA met in a semi-final round, judged by Prof. Hobe, Prof. Gabrynowicz and Prof Andem. The American team won that round and moved on to face Singapore in the final round before three judges of the International Court of Justice; President Guillaume and Judges Koroma and Vereshchetin. The National University of Singapore was victorious and took the trophy home, and the US team won the Eilene M. Galloway Award for Best Brief and the Sterns and Tennen Award for Best Oralist (Chip Kyles). The case was written by Dr. Frans von der Dunk. The briefs of the three teams had been judged by Prof. Bin Cheng, Dr. Peter van Fenema, Dr. William Wirin, Ms Patricia Sterns, Prof. VS Mani and Prof. Chia-jui Cheng. Many thanks are due to all of them for their help! Thanks are also expressed to Dr. Jean-Jacques Runavot of the Local Organizing Committee, who arranged for two outstanding locations for the Final and the Dinner, namely the historic Hôtel-Dieu St. Jacques (a former monastery) and the elegant "Salle des Illustres" of the Capitole. The "Mairie de Toulouse", the "Société Française de Droit Aérien et Spatial" (SFDAS), the "Association pour le Développement du Droit de l'Espace en France" (ADDEF), the University of Toulouse 1, the Local Organizing Committee for the IAF Congress, the Association of US Members of the IISL (AUSMIISL), the European Centre for Space Law (ECSL) and NASDA (Japan) sponsored the 2001 Moot Court Competition in various ways and their help and support has been greatly appreciated.

PART B: THE PROBLEM

1. Cornucopia is a rich Western state with a liberal economic system, and one of the strongest economic powers on the globe. For decades it has run its own space programme, encompassing the full range from scientific and exploratory activities to such commercial activities as satellite launching and satellite communications. For example, its space-borne remote sensing system SatView, consisting of four satellites in polar orbits with optical sensors capable of 4m (monochromatic)/10m (panchromatic) resolution operations, has been operated by the Cornucopian National Space Agency (CNSA) very successfully since 1986. The CNSA is a public entity, under the ultimate control of the President of Cornucopia and his Space Council involving a number of Ministers serving his Government.

2. The SatView system provides unenhanced data of the whole globe. These data are provided for free to the Cornucopian Government as well as to scientific users with Cornucopian nationality, as determined by the CNSA. Non-scientific users from Cornucopia, as well as any user not of Cornucopian nationality are entitled to obtain unenhanced data at the "cost of fulfilling user request". This formula resulted in prices ranging from 150 Cornucopian dollars in 1986 to 250 Cornucopian dollars in 1999 per scene of 40 x 120 km. Enhanced data were made available to customers by the CNSA at standard prices ranging from 2,000 (1986) to 3,000 (1999) Cornucopian dollars per 40 x 120 km scene. In addition, various considerable discounts were available for large data sets or frequent customers.

3. From the outset, the Cornucopian Government had reserved its right to prohibit the sales of any particular data sets either regarding a specific area or to a specific state and its entities, in case such sales would "be prejudicial to the security interests of Cornucopia". This was done by means of Governmental Decree 97 of 1985. Decree 97 also referred to Article 7 of the Constitution of Cornucopia, stating that "international law binding upon the State of Cornucopia shall be considered as the law of the land, and to the extent applicable supersedes any Cornucopian legislation or other legal action not in conformity with it". Throughout the years, some 49 foreign Governments or their agencies, in addition to 127 private institutions and commercial entities, purchased SatView data from the CNSA. With one exception, to be dealt with in detail further below (see para. 5), none of them had ever protested against the data distribution policy of the CNSA outlined above, which had been made widely available.

4. Soliscalor is a large equatorial state, a major part of which consists of the infamous Nogobi desert. Consequently, it is a rather poor state, depending for its survival upon agricultural products grown in the coastal regions, as well as a few minerals extracted from open-air mines in the Nogobi. The state is ruled by a powerful

authoritarian regime based on a one-party system, often blaming especially the state of Cornucopia for "neo-imperialist behaviour" when in economic trouble. Such actions however never went beyond such propagandistic talk, and usually led to reactions from Cornucopia in a similar vein.

5. For a long time, there had been indications that the Nogobi desert might contain much more valuable deposits of minerals and oil than currently known. Until the latest exchange of unfriendly propaganda in the summer of 1996, the Soliscalori Government had from time to time acquired data on Nogobi in an effort to substantiate such suspicions – to no avail. It did so whilst, as the sole exception referred to above (see para. 3), protesting against the applicable data dissemination policy. In particular, the Soliscalori Government took the position that this "discriminatory behaviour of CNSA in requiring higher prices for data regarding Soliscalori territory from non-Cornucopian entities than from Cornucopian entities was especially loathsome since Soliscalor, as a sovereign state, should have exclusive rights of access to any data regarding its national territory".

6. The exchange of unfriendly propaganda resulted inter alia in Soliscalor becoming the first – and so far only – state to be blacklisted under Cornucopia's Governmental Decree 97. This drove the Government of Soliscalor, in close conjunction with its military establishment and without seeking any help from outside, to try to develop its own remote sensing satellite and launch it into an orbit capable of surveying the Nogobi. After the military had claimed to have succeeded in upgrading military rockets to the standard necessary for launching a satellite in the desired orbit, three actual attempts were made with home-made satellites. On the first two occasions, however, the launch vehicle exploded on the launch platform; the third time (in May 1999) the satellite – the Solarstar 3 – was delivered into outer space, but in a completely useless orbit. The Solarstar 3 was claimed to have a 3m (monochromatic)/8m (panchromatic) resolution. Thereafter, Soliscalor suspended its space programme for lack of funding.

7. In June 1999, the CNSA announced at a press conference that a major break-through in its engineering laboratories had resulted in development of Very High Resolution (VHR) satellite sensors with the capacity of providing images of 0.2m monochromatic/1.5m panchromatic resolution. Also, the CNSA announced its decision through Decree 161 of 1999 to offer this technology to three major aerospace companies, for the purpose of commercialising it, in view of the perceived potentiality of a mass-market arising for such VHR-products. All three had been crucially involved in the research program. The companies concerned – Ewing Space Industries, Stockbeat Space and Harley Harrietta Satellite Applications, all of them incorporated in Cornucopia and majority-owned by Cornucopian nationals – had already prepared plans for building, launching and operating their own satellites with the new technology on a commercial basis. By means of Decree 161 they were now given the formal approval to go ahead with their plans.

8. Ewing Space Industries was the first – and so far the only one – to come up with a substantive product. At a press conference early December 1999, it announced that it had teamed up with other industries to build the ESI-1, launch it into a polar orbit during 2000, and start offering enhanced VHR-data soon thereafter. Under the Cornucopian Space Act of 1995 (see Annex 1 for the relevant Articles of the Cornucopian Space Act), the CNSA had been appointed the licensing authority. Ewing had been given the necessary licenses by the CNSA just five days prior to the press conference (end November 1999). The spokesman of Ewing expressed confidence that the potential for a mass-market was sufficiently large to justify the hundred-million-dollar project. Equally, such a mass-market could be tapped beneficially even while adhering to the conditions provided by the Act. The spokesman declined to explain in any detail what pricing policies Ewing would implement with a view to the 'non-discrimination' principle following from the United Nations Principles Relating to Remote Sensing of the Earth from Space of 3 December 1986. His refusal to be specific extended also to other relevant international obligations relating to data dissemination.

9. The launch of ESI-1 took place, as planned, on 21 June 2000, by Ewing's subsidiary Ewing Space Transportation Systems, from Cornucopian territory. As of the next day, the ESI-1 was declared operational, with Ewing's ground-station in Cornucopia receiving the first data. By that time, Ewing had also concluded three commercial agreements with foreign countries that were interested in hosting a ground-station capable of receiving ESI-1 data. The first of these ground-stations, at Lumino in the state of Wizzaly, started its operations two weeks after the satellite became operational. All ground stations would be entitled to receive data directly from the satellite during the overpass of the satellite, in other words: data regarding the region where the ground-station was located. Also, ground-stations would have the option to download data stored onboard the satellite for the period when no direct contact with the satellite was possible (i.e. of areas outside the region). The Lumino ground station was the only one to have chosen to include this second option in its commercial agreement.

10. As of July 1, 2000, enhanced data sets could be ordered through Ewing's web-site, which allowed for some summary browsing, in accordance with the price lists published on the web. Also, the pricing policy was outlined. It provided that a typical 15 x 45 km cloud-free scene of enhanced quality (the 'standard scene') could be obtained from Ewing directly at the cost of 4,500 Cornucopian dollars, with substantial discounts for large data sets and frequent customers. In the alternative such a scene could be obtained from any of the ground-stations with which Ewing had commercial agreements in force. Similarly, an unenhanced scene regarding the same area

could be obtained from Ewing directly at the cost of 500 Cornucopian dollars.

11. The commercial agreements all provided for a non-exclusive right of Ewing's respective contract partners to use, market and sell all ESI-1 data which could be received directly, either unenhanced or after local enhancement, for a fixed annual fee of 500,000 Cornucopian dollars per ground-station. In addition, in the contract with the Lumino ground-station, it was provided that it could buy stored unenhanced data (down-linked at whichever overpass), at the reduced price of 300 Cornucopian dollars per 15 x 45 km scene. With regard to any unenhanced data as such, Lumino had the right under the agreement only to use them for its own purposes or to deliver them to scientists and scientific entities with the nationality of Wizzaly. With regard to enhanced data, Lumino had the non-exclusive authority to sell such data, whether enhanced from directly received or from stored unenhanced data, at its own prices. However, any purchase of enhanced data by entities or persons not having the nationality of Wizzaly, would be bound to a minimum price of 50,000 Wizzalian lira (which equalled 5,000 Cornucopian dollars), whereas such purchases by Wizzalian nationals were not conditioned on any minimum price. The other two commercial agreements concluded by Ewing contained the same clauses, albeit only applicable to data directly received from the satellite.

12. Soliscalor was following these developments quite closely. In a reaction to the press conference by the CNSA of June 1999 and the publication of Decree 161, the Soliscalori Minister of Foreign Affairs expressed his confidence that any activities following from the Decree would remain in conformity with applicable principles and rules of international law. This included most particularly the principle of 'non-discriminatory' access to data resulting from any remote sensing activities, as well as the duty to respect the sovereignty of so-called 'sensed states'.

13. When Ewing announced its intention in December 1999 to conclude commercial agreements with foreign ground-stations, the same Minister was quick in initiating discussions on a commercial agreement regarding a ground-station in Soliscalor. After some preliminary exchanges however, the talks broke down at the end of February 2000. The Soliscalori Government insisted that, as part of the commercial agreement, no data on Soliscalor and in particular related to the Nogobi, could be sold by Ewing or any of the other ground-stations without specific consent from the Soliscalori Government. This was totally unacceptable to Ewing, which found itself supported on this issue by the CNSA and the Cornucopian Government.

14. Once ESI-1 had become operational, from Ewing's web-site summary browse option it became clear to Soliscalori civil servants that by August 2000 several cloud-free sets of enhanced data on Nogobi and other areas of Soliscalor had been made available. The Soliscalori Government immediately approached the Lumino ground-station, trying first to obtain an exclusive contract to all data on Soliscalori territory. Such data could not be received directly from the ESI-1, but Lumino had the option of buying them at a reduced rate. The Wizzaly Government (which was directly responsible for the ground-station) responded that it did not intend to create such a precedent, even if it would have had the possibility to prevent Ewing from also selling such data. (Such a possibility, however, did not exist in view of the non-exclusivity of the commercial agreement.) Soliscalor, like any other interested state or entity, could only purchase any enhanced data it desired at the standard Lumino price of 60,000 Wizzalian lira per standard scene. In addition, the Soliscalori Government demanded that these scenes be provided unenhanced at a price of at most 3,000 Wizzalian lira per scene. The argument was that this was the price which Lumino itself had to pay for such data and would thus be obliged under the 'non-discrimination' principle to quote to Soliscalor. The Wizzaly Government refused to accept this demand.

15. The Government of Soliscalor then approached Ewing directly once more, demanding to be sold the desired unenhanced data at the price of at most 300 Cornucopian dollars per 15 x 45 km scene. Ewing refused. In answering this demand, Ewing's spokesman quoted a Presidential Decree of 2 May 2000 prohibiting the sale of VHR-data, whether unenhanced or enhanced, by any Cornucopian entity to a list of fifty-five states. The reasons given for inclusion on the list were "proven hostility to Cornucopian interests, a political climate hostile to humanitarian interests, and general economic problems making trade relations a hazardous affair". Soliscalor was one of these fifty-five states.

16. Then, the Government of Soliscalor approached the Government of Cornucopia directly with its complaints. It referred to the 'non-discrimination' principle of the United Nations Resolution of 1986 and other principles and rules of international law. Further, it demanded that Cornucopia require Ewing to sell its unenhanced data of Soliscalor to the Government of that state at the price of 300 Cornucopian dollars per 15 x 45 km scene, the same price which it had also demanded from the Lumino ground-station. The Government of Cornucopia flatly refused to discuss this for several months, repeatedly stating that the Cornucopian Space Act of 1995, Decree 161, the license given to Ewing and the Presidential Decree of 2 May 2000 were elements of its national sovereignty to devise its space policies as desired. Consequently, it saw no reason to allow, let alone force, Ewing, which it considered to be a private company without any government control and not in any way violating international law, to sell the desired data to Soliscalor as requested.

17. Finally, Soliscalor on 21 September 2000 took the step of bringing a claim against Cornucopia before the International Court of Justice.
In particular, it asks the Court to adjudge and declare:

1) that the principle of 'non-discriminatory' access to remote sensing data constitutes a rule of international law binding upon Cornucopia; and consequently
2) that Cornucopia has violated its international obligations towards Soliscalor by not allowing Ewing Space Industries to sell any unenhanced ESI-1 data relating to Soliscalori territory to Soliscalor at the price of 300 Cornucopian dollars per 15 x 45 km scene; and
3) that Cornucopia discharge its obligations under international law by requiring Ewing Space Industries to sell immediately all unenhanced ESI-1 data relating to Soliscalori territory which were requested by Soliscalor at a maximum price of 300 Cornucopian dollars per 15 x 45 km scene.

18. Cornucopia filed its counterclaim with the International Court of Justice on 7 October 2000.
In particular, it asks the Court to adjudge and declare:
1) that in the absence of binding force of the United Nations Principles Relating to Remote Sensing of the Earth from Space of 3 December 1986 or any other relevant rule of international law, and in the absence of any consistent state practice, Cornucopia was under no obligation towards Soliscalor to adhere to any principle of 'non-discrimination' regarding the access to remote sensing data;
2) even if the Court were to declare the existence of a principle of 'non-discrimination' regarding the access to remote sensing data binding upon Cornucopia under international law,
   a) that Cornucopia would still have the right to prohibit Ewing Space Industries to sell the requested data to Soliscalor under such principle, or
   b) that Cornucopia could not be obliged to force Ewing Space Industries to change its data policy in such a way as to offer the requested data to Soliscalor at any specific price; and
3) that all claims of Soliscalor to the contrary be rejected.

19. Both states have accepted the jurisdiction of the International Court of Justice without any relevant condition; no issues of exhaustion of local remedies or of the jurisdiction of the Court are therefore subject to debate. Both states are members of the United Nations and parties to the Outer Space Treaty. Both states are also members of the International Telecommunication Union; however, no issues of orbit or frequency assignment or co-ordination are at stake. Representatives of Cornucopia and Soliscalor took part in the discussions within the United Nations General Assembly on the Principles Relating to Remote Sensing of the Earth from Outer Space of 1986, which were adopted by consensus. Furthermore, neither state took any outspoken or extreme positions with regard to the Principles during these discussions.

ANNEX 1
Excerpts Cornucopian Space Act, 1995

Introduction
This Act is enunciated subject to the following paramount considerations:
(1) The continuous collection and utilisation of land remote sensing data from space are of major benefit in studying and understanding human impacts on the global environment, in managing the Earth's natural resources, in carrying out national security functions, and in planning and conducting many other activities of scientific, economic, and social importance.
(...)
(3) The national interest of Cornucopia lies in maintaining international leadership in satellite land remote sensing and in broadly promoting the beneficial use of remote sensing data.
(...)

(10) Regardless of management responsibilities for the SatView programme or other programmes in which the Cornucopian National Space Agency has a major role to play, Cornucopia's broad civilian, national security, commercial, and foreign policy interests in remote sensing will best be served by ensuring that SatView and other Cornucopian systems remain unclassified programmes that operate according to the principles of open skies and non-discriminatory access.
(...)

(13) To maximise the value of Cornucopian remote sensing programmes to the Cornucopian public, unenhanced satellite data should be made available, at a minimum, to the Cornucopian Government, to global environmental change researchers, and to other researchers who are financially supported by the Corncuopian Government, at the cost of fulfilling user requests, and unenhanced SatView data should in addition be made available to all users at the cost of fulfilling user requests.
(14) To stimulate development of the commercial market for unenhanced data and value-added services, the Cornucopian Government should adopt a data policy for Cornucopian remote sensing activities which allows competition within the private sector for distribution of unenhanced data and value-added services.
(...)

Chapter VI, on Remote Sensing and Related Activities
(...)
Art. 69 – Definitions regrading Chapter VI
In this chapter, the following definitions apply:
(1) The term "Agency" means the Cornucopian National Space Agency.
(2) The term "cost of fulfilling user requests" means the incremental costs associated with providing product generation, reproduction, and distribution of unenhanced data in response to user requests and shall not include any acquisition, amortization, or depreciation of capital assets originally paid for by the Cornucopian Government or

other costs not specifically attributable to fulfilling user requests.
(...)
(6) The term "data preprocessing" may include -
(A) rectification of system and sensor distortions in land remote sensing data as it is received directly from the satellite in preparation for delivery to a user;
(B) registration of such data with respect to features of the Earth; and
(C) calibration of spectral response with respect to such data, but does not include conclusions, manipulations, or calculations derived from such data, or a combination of such data with other data.
(...)
(8) The term "land remote sensing" means the collection of data which can be processed into imagery of surface features of the Earth from an unclassified satellite or satellites, other than an operational Cornucopian Government weather satellite.
(...)
(10) The term "non-commercial purposes" refers to those activities undertaken by individuals or entities on the condition, upon receipt of unenhanced data, that -
(A) such data shall not be used in connection with any bid for a commercial contract, development of a commercial product, or any other non-Cornucopian Government activity that is expected, or has the potential, to be profit-making;
(B) the results of such activities are disclosed in a timely and complete fashion in the open technical literature or other method of public release, except when such disclosure by the Cornucopian Government or its contractors would adversely affect the national security or foreign policy of Cornucopia or violate a provision of law or regulation;(...)
(...)
(13) The term "unenhanced data" means land remote sensing signals or imagery products that are unprocessed or subject only to data preprocessing.
(...)

Art. 74 – Responsibilities of the Agency
The Agency shall be responsible for -
(1) SatView procurement, launch, and operations;
(2) ensuring that the operation of the SatView system is responsive to the broad interests of the civilian, national security, commercial, and foreign users of the SatView system; and
(3) ensuring that all unenhanced SatView data remain unclassified and that, except if in conflict with the national interests or international obligations of Cornucopia, no restrictions are placed on the availability of unenhanced data;
(...)

Art. 76 - Authority to contract
The Agency may enter into contracts with the private sector for services such as, but not limited to, satellite operations and data preprocessing, as long as in conformity with this Act and the international obligations binding upon Cornucopia.
(...)

Art. 79 – Data policy for SatView
With respect to data derived from SatView operations, the Agency shall ensure that -
(1) unenhanced data shall be provided, at a minimum, to the Cornucopian Government and its affiliated users at the cost of fulfilling user requests, on the condition that such unenhanced data are used solely for non-commercial purposes;
(2) instructional data sets, selected from the SatView data archives, will be made available to educational institutions exclusively for non-commercial, educational purposes at the cost of fulfilling user requests;
(3) SatView data users are able to acquire adequate data necessary to meet the needs of global environmental change researchers and national security users;
(4) the Cornucopian Government and its affiliated users shall not be prohibited from reproduction or dissemination of unenhanced data to other agencies of the Cornucopian Government and other affiliated users, on the condition that such unenhanced data are used solely for non-commercial purposes;
(...)

Art. 79-bis – Data policy for VHR-data under Decree 161
With respect to data derived from VHR operations resulting from Decree 161, the Agency shall license private entities, in conformity with Art. 121, to provide such data under the conditions that -
(1) unenhanced data are available to all users at the cost of fulfilling user requests;
(2) any data dissemination conforms to international obligations binding upon Cornucopia.
(...)

Chapter VIII – Regulating the involvement of private entities in Cornucopian space activities
(...)

Art. 121 –. General licensing authority
The Agency has the authority to license any private entities, if incorporated under Cornucopian law and majority-owned by Cornucopian nationals, to undertake the following space and space-related activities in conformity with the respective Chapters of this Act:
(...)

Art. 127 – Licensing VHR-data satellite operators
(1) In consultation with other appropriate Cornucopian Government agencies, the Agency is authorised to license private entities to operate private remote sensing space systems in accordance with the following provisions.
(2) No license shall be granted by the Agency unless the Agency determines in writing that the applicant will comply with the requirements of this chapter, any regulations issued pursuant to this chapter, and any

applicable international obligations and national security concerns of Cornucopia.
(...)

Art. 129 –. Conditions for operation
No person who is subject to the jurisdiction or control of Cornucopia may, directly or through any subsidiary or affiliate, operate any private remote sensing space system without a license pursuant to this Act and relevant Decrees.
Any license issued pursuant to this subchapter shall specify that the licensee shall comply with all of the requirements of this chapter and shall -
(1) operate the system in such manner as to preserve the national security of Cornucopia and to observe the international obligations of Cornucopia;
(2) make available to the government of any country (including Cornucopia) unenhanced data collected by the system concerning the territory under the jurisdiction of such government as soon as such data are available and on reasonable terms and conditions;
(. . .)

PART C: WINNING BRIEFS

A. MEMORIAL FOR SOLISCAOR

AGENTS

Gerardine Goh Meishan and Celina Chua Mei Yen
National University of Singapore

ARGUMENT

Cornucopia is internationally responsible to Soliscalor for its actions in prohibiting Soliscalor from obtaining access to unenhanced remote sensing data on its own territory.

The principle of non-discriminatory access is implicit in the general principles governing outer space activities that are set out in the 1967 Outer Space Treaty.

Cornucopia is a signatory to the Outer Space Treaty[1], one of the seminal agreements governing the use and exploration of outer space. Signed by 91 members of the international community, it establishes the rights and duties of both States with space capabilities as well as those who do not have spacefaring capabilities. Agreeing that outer space was the collective 'province of mankind'[2], member States sought to pursue a policy of mutual cooperation rather than individual gain. Article 1 of the Outer Space Treaty requires that space activities be 'carried out for the benefit and in the interests of all countries, irrespective of their degree of economic or scientific development, and shall be the province of all mankind'.[3] It recognizes the importance of conducting such activities 'without discrimination of any kind, on the basis of equality'. It further demands that States 'facilitate and encourage international co-operation'.
The theme of free access and international co-operation is indicated by duties such as sharing of information[4] and assistance to all astronauts, cooperation in the recovery and return of objects launched into space by State parties[5] and to share the use of any 'stations, installations, equipment and space vehicles' which are on the moon or other celestial bodies[6]. These treaty obligations indicate that State parties clearly envisaged the Outer Space Treaty ensuring that the benefits of space shall be freely accessible to all States.
Although the Treaty does not make specific reference to the duties of States in conducting remote sensing, the general principles enshrined by the Treaty imply that ensuring non-discriminatory access to remote sensing data is one of them. Reference can also be made to subsequent General Assembly resolutions as well as state practice. Remote sensing data, as an outer space activity, is clearly a benefit gained from the use of space[7]; it is widely used to map terrain and to search for minerals on land and at sea[8].. In accordance with the Outer Space Treaty's general principles of free access and international cooperation, remote sensing data should be provided on a non-discriminatory basis. This ensures the necessary equitable distribution of space benefits, in keeping with the spirit and purpose of the Outer Space Treaty and its principles. As a signatory to the treaty, Cornucopia is therefore obliged to ensure the non-discriminatory dissemination of data.

Declarations of the General Assembly provide that the principle of non-discriminatory access applies to remote sensing data.

The 1986 Principles Relating to Remote Sensing establish that the principle of non-discriminatory access applies to remote sensing data.

The 1986 Principles Relating to Remote Sensing[9] (hereafter the 1986 'Principles') was drafted by the members of the Committee on Peaceful Uses of Outer Space (COPUOS), which was given the role of developing space law by the General Assembly. COPUOS, as a specialised body, was deemed best able to engage in the detailed and technical process of developing space law through its Scientific and Legal Sub-Committees[10]. The need to establish a framework for remote sensing activities resulted in the 1986 UN General Assembly Resolution, representing a landmark compromise between the developed and developing states in the field of remote sensing[11].
The formulation of the Principles was characterized by the divergent interests held by the developed and developing States. States with remote sensing satellites ('sensing states') such as the United States and the United Kingdom wanted to freely employ their satellites and to sell the remote sensing data obtained.[12] However, the developing states, having no remote sensing capabilities,

wanted to have exclusive control of the data concerning their own territories. States such as Chile[13], India[14] and Mexico[15] wanted a requirement of prior consent before they were to be scanned by satellites.
Member States struggled to surmount the obstacle posed by their conflicting interests. Finally, after 16 years, they agreed on a compromise which would best serve their differing interests. It was agreed in the resolution that the developed states could freely employ their remote sensing satellites, 'with due regard to the rights and interests...of other States'.[16] In particular, remote sensing activities 'shall not be conducted in a manner detrimental to the legitimate rights and interests of the sensed state'.[17] This was manifested most clearly in Principle XII, which publicists consider to be the 'heart of the ...[1986] resolution'[18]. This stated that 'the sensed State shall have access to ... [data concerning territory under its jurisdiction]... on a non-discriminatory basis and on reasonable cost terms'. This ensures that even if the sensed state had no remote sensing satellites, they had a guarantee that they would be able to receive data on their territory if other sensed states received data on their territory. (chedck!!!). These principles thus cumulatively affirm the rule of non-discriminatory access to remote sensing data, particularly by a sensed state[19].

The 1996 Outer Space Benefits declaration affirms the principle of non-discriminatory access.

The Declaration on International Cooperation in the Exploration and Use of Outer Space for the Benefit and in the Interests of All States, Taking into Particular Account the Needs of Developing Countries[20] (hereafter the 'Outer Space Benefits Declaration') further affirms the principle of non-discriminatory access. Echoing Article 1 of the Outer Space Treaty, the Outer Space Benefits Declaration emphasizes the importance of international cooperation in the use of space[21], implying the need for States to provide free access to space benefits. It further states that 'particular attention should be given to the benefit for and the interests of developing countries and countries with incipient space programmes'[22], in accordance with the nature of the compromise reached in the 1986 Principles[23]. This implies that the principle of non-discrimination should apply generally to State's activities in outer space and specifically, to the dissemination of remote sensing data. To interpret the declaration otherwise would be to defeat the purpose of acting 'in full compliance with the legitimate rights and interests of the parties concerned'[24].

The 1986 and 1996 declarations are evidence that the principle of non-discriminatory access to remote sensing data is binding under international law.

Article 1 of the Outer Space Treaty should be interpreted in light of the 1986 and 1996 declarations.

The Outer Space Treaty makes no specific reference to a sensing state's obligations in the dissemination of data. However, Article 1 implicitly requires sensing states to ensure that remote sensing data should be disseminated in a non-discriminatory fashion. Article 31(3)(b) of the Vienna Convention on the Law of Treaties[25] states that 'any subsequent practice ... regarding the interpretation of the treaty or the application of its provisions' can be referred to in interpreting a treaty. Thus Article 1 of the Outer Space Treaty can be interpreted in light of the subsequent practice of the states that is reflected in the work of COPUOS.
The 61 member states of COPUOS drafted the 1986 Principles and the Outer Space Benefits Declaration, reflecting what Article 1 of the Outer Space Treaty meant in the context of remote sensing. As explained above[26], the content of the resolutions affirm the obligation to ensure non-discriminatory access by sensing states to remote sensing data, consistent with the principles of free access and international cooperation in Article 1. Discrimination against states, particularly a sensed state, in the dissemination of remote sensing data is therefore a breach of Article 1.

The 1986 Principles Relating to Remote Sensing affirm Cornucopia's obligation under general international law to provide Soliscalor with non-discriminatory access to remote sensing.

Cornucopia is bound by the principle of non-discriminatory access because Principle XII of the 1986 Principles has entered into customary international law. This Court has taken cognizance of international custom as a source of law under Article 38(1)(b) of its Statute.[27] The principle of non-discriminatory access satisfies both prerequisite elements of *opinio juris* and state practice to enter into customary law.[28]
The 1986 Principles Relating to Remote Sensing[29] are in the form of a United Nations General Assembly resolution. Schwebel writes that United Nations General Assembly resolutions can have an important effect in crystallising and even progressively developing international law.[30] This has been affirmed by this Court in the *Legality of the Threat or Use of Nuclear Weapons Advisory Opinion*[31], where it was noted that resolutions 'can.... establish the existence of a rule or the emergence of an *opinio juris*. To establish whether this is true... it is necessary to look at its content and the conditions of its adoption; it is also necessary to see whether an *opinio juris* exists as to its normative character'[32]. This has been the case for the 1986 Principles Relating to Remote Sensing regarding the duties of a sensing State to the international community.[33]
The conditions in which the resolution was created suggests that the parties to the negotiations intended it to

have legal effect. Several features show that the resolution is evidence of *opinio juris*. Firstly, the Principles were adopted by consensus instead of by vote, attesting to the belief by all members of the COPUOS of their unanimous support of the terms of the Principles. Included amongst them was Cornucopia, who voiced no dissent against its adoption.[34] The adoption of the 1986 Principles by consensus without fundamental objections can be interpreted as evidence of *opinio juris*.[35] This Court in the *Nicaragua case* opined that *opinio juris* could be deduced from the attitude of the Parties and the attitude of States towards General Assembly Resolutions[36], stating that '[t]he effect of consent to the text of such resolutions ... may be understood as an acceptance of the validity of the rule or set out of rules declared by the resolution themselves.'[37] Cornucopia's consent is thus an acceptance of the validity of the principle of non-discriminatory access set out in the 1986 Principles.

Secondly, it is significant that the member States of COPUOS were finally able to reach a consensus on the Principles in 1986 after 16 years of negotiation. [Legality of Nuclear Weapons quote] Representing a broad spectrum of interests and backgrounds[38], the unanimity that led to the successful adoption of the 1986 Principles constitutes important evidence of the *opinio juris* of the seriously affected States and the other interested States.[39] The extended debate indicated that negotiating parties envisaged the Principles to act as a legal framework for remote sensing activities.[40] If the resolution were to have no binding effect, there would not have been a need for States to push their respective agendas.

Finally, the language is declaratory, demanding that States' activities '*shall*'[41] be conducted in a manner not 'detrimental to the legitimate rights and interests of the sensed state'[42], and that the sensed state 'shall have access to [data on their own territory] on a non-discriminatory basis'.[43] Although States were divided on the issue of the terms of access regarding prior consent and nature of dissemination[44], the fact that access to remote sensing data should be on a non-discriminatory basis was not an issue of contention. Both the developed and the developing countries decided that the best compromise on this issue would be to provide sensed states access to remote sensing data on a non-discriminatory basis.[45] This reflected the belief by many States, even though they had divergent interests, that this was the most equitable arrangement regarding the duties and interests of all States.[46]

The practice of States since 1986 confirms that the principle of non-discriminatory access to remote sensing data is a rule of international law

There has been extensive and virtually uniform state practice since 1986 supporting the principle of non-discriminatory access. This consistent adoption of the policy of non-discriminatory access is evidenced through States' conduct with each other as well as internal matters such as domestic legislation. Such conduct and legislation is evidence of international custom[47].

The Principles have been repeatedly cited as authority in domestic, bilateral and multilateral legal documents[48]. Since 1994, Canada's RADARSAT policy has provided that remote sensing data is 'acquired for users in an open and non-discriminatory basis, in compliance with the UN Resolution 41/65'[49]. The United States has demonstrated its compliance with the policy of non-discriminatory access by entrenching it twice in the legislation governing the distribution of LANDSAT data[50]. France's national space agency has an agreement with the private company SPOTImage which includes non-discriminatory access for users[51]. In the absence of their own legislation on remote sensing, the PRS is 'treated as a substantial source of law for remote sensing' in Japan.[52] The ESA, comprising of Germany, Belgium, Denmark, Spain, France, Italy, Norway, the Netherlands, the United Kingdom, Sweden, Switzerland and Canada, have a data access policy incorporating the principle of non-discriminatory access[53]. Finally, Cornucopia itself has acknowledged the validity of the non-discriminatory access principle by including it the Cornucopian National Space Act.[54](citation)

The PRS has been widely negotiated, adopted and practised for more than 25 years.[55] Given the widespread and consistent state practice of the most affected States to the PRS, the non-discriminatory access principle can now be considered as being part of customary international space law.[56]

Cornucopia breached its obligation to ensure non-discriminatory access when it prohibited Soliscalor from obtaining access to data concerning its territory.

The principle of non-discriminatory access demands that Soliscalor should be entitled access to remote sensing data. By passing the Presidential Decree of 2 May 2000, Cornucopia has knowingly prevented Soliscalor from accessing any of Ewing's data on Soliscalori natural resources. Soliscalor's denial of access was based on its apparently having 'proven hostility to Cornucopian interests, a political climate hostile to humanitarian interests, and economic problems making trade relations a hazardous affair'.[57] This blatant refusal to conform to the principle of non-discrimination is a clear violation of Cornucopia's apparent adherence to it in the Cornucopian National Space Act as well as its obligations under international law.

The prohibition of the sale of data to Soliscalor cannot be justified on the grounds of national security.

The right of a state to non-discriminatory access was developed to facilitate the benefiting of all mankind, and as such should not be casually infringed.[58] Only an unequivocal threat to national security and international peace warrants the broad denial of remote sensing data by a sensing State. State practice has shown that sensing States have only ever restricted remote sensing data in the limited situation where national security in a military sense has been threatened. This is so even if the State passes legislation giving it the discretion to restrict data

access on the grounds of national security without limiting it to only military threats.
One of the rare instances of data denial was carried out by the US and France during the Gulf War.[59] This conflict was striking for the grave threat which Iraq's hostile invasion of Kuwait posed to international security. The potential for the conflict to escalate required the co-operation of the UN and key States such as the US and the UK to suppress hostilities with their combined efforts. Short of threats of such scale, the right of a state to deny access has very seldom been exercised.
Cornucopia's denial of ESI-1 data to Soliscalor is a clear breach of its international obligations. On the facts, any claims by Cornucopia on this ground are completely unfounded. There is no evidence that Soliscalor has the potential to pose a military threat to the richer, industrialized state of Cornucopia. Even during the summer of 1996, when relations between the two states was at a low, Soliscalor never went beyond mere propagandistic talk, with Cornucopia often retaliating in kind.[60] Any claim to bar Soliscalor's access on such grounds seems patently absurd given that the last such unfriendly exchange occurred almost 4 years before the Presidential Decree was passed. Furthermore, Soliscalor seeks to obtain ESI-data only *on its own territory* from Cornucopia.[61] This makes it impossible for Cornucopia to claim that Soliscalor wishes to obtain such data for the purposes of hostile reconnaissance of Cornucopia activities.

The prohibition of the sale of data to Soliscalor cannot be justified on any other grounds.

Cornucopia must not impose constraints on the free development and use of the space potential.[62] The foundation of space law rests on the presumption that all States will use or explore outer space for the benefit of mankind, seen in the enunciation of the province of mankind principle.[63] Restriction of space benefits for the betterment of mankind, if at all, must be restricted and narrow.[64]
The grounds for prohibition in the Presidential Decree are not legitimate exceptions to the principle of non- discriminatory access to remote sensing data. Cornucopia claims that Soliscalor has 'proven hostility to Cornucopian interests, a political climate hostile to humanitarian interests, and a general economic problems making trade relations a hazardous affair'. However, it has been clearly shown through subsequent state practice that none of these grounds are valid exceptions to the principle of non-discriminatory access. Neither the Outer Space treaty nor the Principles allow for a state to derogate from its obligation to share the benefits of spacefaring activity. The limited national security exception stands as the only valid exemption from the policy of non-discriminatory access.
Even if the grounds listed in the Presidential Decree were valid exceptions to the principle, there is no reasonable basis for Cornucopia's actions. Although Soliscalor is non-democratic, this in itself does not imply that its administration undermines humanitarian interests. The facts disclose no evidence that Soliscalor is conducting trade in a manner making such relations 'a hazardous affair'. Soliscalor's only economic problems are that it still remains a poor state, which is hardly reason to prevent them from buying data sets from Ewing. In fact, to deny them the data sets would be counter-productive as the data would help Soliscalor exploit more lucrative minerals in its Nogobi desert[65], thereby brining in more revenue to the cash-strapped country and providing a potential trading partner to the state of Cornucopia.

The nature of VHR technology did not alter the principle that States should provide non-discriminatory access to remote sensing data unless it is a significant risk to their national security.

Cornucopia's obligations to provide non-discriminatory access to remote sensing data are not altered by the higher resolution offered by ESI-1 data. The principle of non-discriminatory access was formulated at a time where VHR data was already used by States. By 1962, there were satellites capable of producing data with resolutions as high as 2m[66], which is classified as very high resolution or 'super high resolution' data[67] – the same classification as Cornucopia's ESI-1 data. This was initially classified data, but in recent years, the trend has been for States to release selected archives of remote sensing data from their so-called spy satellites for commercial sale[68].
The non-discriminatory access provision in the 1986 Principles was therefore formulated with the recognition by States' that remote sensing technology could be capable of producing data of resolution comparable with ESI-1 data. The advancement of VHR technology for commercial sale cannot be said to have been outside the scope of the drafters' contemplation when they enunciated the non-discriminatory access principle. In fact, barely a year after the 1986 Principles was unanimously adopted, the then Soviet Union introduced 5m-resolution remote sensing data was released for commercial sale.[69]
Even though the drafters of the 1986 Principles knew about VHR remote sensing technology, it is striking that the 1986 Principles makes no mention of any exceptions to its scope of application based on data resolution. Echoing this, the US Land Remote Sensing Commercialisation Act of 1984[70] does not define the permissible resolution capability of commercial scanners. Therefore States recognise that exceptions to the principle of non-discriminatory access cannot be made based on the resolution of the data.[71]
ESI-1 data, although of a resolution higher than data commercially available, cannot be exempt from the principle of non-discriminatory access purely on the basis that it is of a particularly high resolution. The background of the 1986 Principles demonstrate that the obligation to provide non-discriminatory access was formulated under the recognition that characteristically rapid developments in space technology would inevitably produce data paralleling ESI-1 data to be made commercially available. Therefore Cornucopia remains bound by its obligations to Soliscalor.

Cornucopia is internationally responsible to Soliscalor for failing to ensure that it was given access to remote sensing data on its own territory at no more than 300 Cornucopian dollars per 15 x 45 km scene.

Cornucopia was obliged under international law to ensure that Soliscalor was given access to remote sensing data on its own territory at reasonable cost terms.

Soliscalor is a developing State that requires information about the mineral resources within its territory in order to develop its economy.

Satellite remote sensing in outer space provides complete information on a country's natural resources. This allows the proper development and management of the natural resources necessary for economic development. Remote sensing information is particularly valuable for mineral exploitation.[72] This is especially important to the developing countries.[73] Developing countries such as Soliscalor do not have the facilities necessary for successful remote sensing of their own resources. They are forced to rely on developed States with remote sensing capabilities for data to manage its natural resources.[74]

Soliscalor is a poor State. A major part of it consists of the Nogobi desert. Soliscalor depends heavily upon the negligible resources in open-air mines in the Nogobi for its survival.[75] Soliscalor is struggling to develop its own economy through its own resources. Soliscalor's right to development is dependent on its ability to make an inventory of its natural wealth and the potential use of its land.[76] There have been indications that there may be more valuable deposits of minerals and oil in the Nogobi than Soliscalor is currently aware of. The Soliscalori Government has tried repeatedly and unsuccessfully to locate these resources. Access to ESI-1 data will greatly increase the chance of finding these resources.[77] The only way in which the 'needs and interests of developing countries'[78] such as Soliscalor's can be effectively taken into account is through access to unenhanced ESI-1 data on its own territory and natural resources at reasonable cost terms.

Cornucopia has an obligation to give due regard to the rights and interests of Soliscalor, a developing State whose territory and natural resources were sensed.

International space law intends that space benefits should fully enhance developing countries' right to development. Article I of the Outer Space Treaty obliges Cornucopia to co-operate with other State parties such as Soliscalor to ensure that its space activities are

> 'carried out for the benefit and in the interests of all countries, irrespective of their degree of economic or scientific development'.[79]

This is reinforced in Paragraph 3 of the 1996 Declaration on Space Benefits:

> 'All States, particularly those with relevant space capabilities...should contribute to promoting and fostering international co-operation on an equitable and mutually acceptable basis. In this context, particular attention should be given to the benefit for and the interests of developing countries...'[80]

Article IX of the Outer Space Treaty requires space-faring States to

> 'be guided by the principle of co-operation and mutual assistance and shall conduct all their activities in outer space...with due regard to the corresponding interests of all other States Parties...'[81]

Just as in other shared spaces, e.g. the high seas[82], international watercourses and lakes[83], the deep sea bed[84], freedom of use and exploration of the outer space is not absolute. This freedom is limited by the obligation of due regard. This is an obligation to consider the corresponding interests of other States in the conduct of a State's activities.[85] This duty arises from the initial planning stages to the performance and termination of any activity.[86]

The duty to give due regard to the interests of other States is particularly vital in the area of remote sensing. Principle II of the PRS reiterates the other international space law documents which require that

> '[r]emote sensing activities shall be carried out for the benefit and in the interests of all countries...and taking into particular consideration the needs of the developing countries'.[87]

In particular Principle XII of the PRS obliges Cornucopia to take

'into account the needs and interests of the developing countries.'[88]

This is especially since remote sensing data is of such vital importance to the development of developing States such as Soliscalor.[89]

Soliscalor has a right of permanent sovereignty over its natural resources. This right can only be meaningfully exercised with ESI-1 data on its own territory. States' right of permanent sovereignty over their natural resources has been reiterated in numerous UN General Assembly Resolutions.[90] This principle is the cornerstone of international legal relations[91] and has entered into the body of international law.[92] Principle IV of the PRS reiterates the obligation of the sensing State to conduct its space activities:

> 'on the basis of respect for the principle of full and permanent sovereignty of all States and peoples over their own wealth and natural re-

> sources, with due regard to the rights and interests...of other States...Such activities shall not be conducted in a manner detrimental to the legitimate rights and interests of the sensed State.'[93]

Soliscalor's right of permanent sovereignty over its territory and resources extends to obtaining information about those resources.[94] States such as France and Russia recognized in the joint draft of the PRS that States have an 'inalienable right to dispose of their natural resources and of information concerning those resources.'[95] Thus, Cornucopia is obliged to ensure that Soliscalor has access to the ESI-1 data as a developing country whose territory and natural resources were sensed.

Cornucopia breached its obligation to ensure that the Government of Soliscalor was provided timely access to unenhanced data on its territory on reasonable cost terms.

As of July 1, 2000, Ewing began selling unenhanced ESI-1 data at 500 Cornucopian dollars per scene. Ewing also entered into commercial agreements that allowed its partners to build ground-stations that could receive data for a fixed annual fee. These agreements additionally provided that Ewing's partners could buy unenhanced ESI-1 data at the preferential price of 300 Cornucopian dollars per scene. Soliscalor approached first Ewing, and then Cornucopia, to buy unenhanced data on Soliscalori territory at the preferential rate of 300 Cornucopian dollars. Both Ewing and Cornucopia flatly refused to sell the data to Soliscalor at 300 Cornucopian dollars per scene.

Principle XII of the PRS states that Cornucopia is to provide Soliscalor with timely access to data:

> '[a]s soon as the...data concerning the territory under its jurisdiction are produced, the sensed State shall have access to them on a non-discriminatory basis and on reasonable cost terms.'[96]

This obligation was the very essence of the consensus achieved at the negotiations leading to the adoption of the PRS to alleviate the concerns of sensed States. Further, the PRS have entered into customary international law.[97] Soliscalor's right to development includes the right to timely access to information about the natural resources within its territory.[98] Developing countries like Soliscalor need remote sensing data at reasonable cost to encourage their development.[99] Principle XII obliges Cornucopia to provide access to data on Soliscalori territory to Soliscalor in a timely fashion and on reasonable cost terms.

Soliscalor is not asking for ESI-1 data to be provided *gratis*, but for provision of the data on reasonable cost terms. Soliscalor recognizes that the PRS does not impose an obligation to give free access to the data.[100] Space-faring States are not obliged to give other States a 'free ride' on the fruits of their labor.[101] However, providing developing sensed States with unenhanced data about their own territory on reasonable cost terms was in fact the consensual bargain struck in the PRS between the developed space-faring States and the developing sensed States. The developing sensed States allowed remote sensing of their territories without prior consent or exclusive rights in return for access to the data on reasonable cost terms.

Cornucopia is taking pictures of Soliscalori territory and then selling it at a profit at 500 Cornucopian dollars per scene. Cornucopia should not be allowed to charge Soliscalor the same market price for data on Soliscalori territory it charges other commercial entities and multinational companies. This would allow Cornucopia to circumvent the compromise struck in the PRS.

Selling the data to poor developing countries such as Soliscalor at the market price of 500 Cornucopian dollars may also place the data out of the reach of the developing countries. This creates an aberrant situation where a mercenary enterprise seeking to exploit the natural resources can afford such data, but the State with permanent sovereignty over the same resources cannot. This information gives commercial entities an unfair advantage in negotiations for contracts to exploit natural resources in developing countries.[102] There is a real danger that such information will be used to the detriment of Soliscalor's national economic interests.[103] Hence Cornucopia is obliged to ensure provision of the data on Soliscalori territory to Soliscalor on reasonable cost terms of no more than 300 Cornucopian dollars per scene.

In the present case, reasonable cost terms would be no more than 300 Cornucopian dollars per 15 x 45 km scene.

'Reasonable cost terms' has to take into account the developing status of the sensed state Soliscalor.

The PRS do not provide guidelines for the quantification of 'reasonable cost terms'. It is however important to note that Principle XII refers to 'reasonable cost terms'. It does not use the phrase 'market rates' or 'normal rates'. This strongly indicates that Cornucopia's obligation to provide access to unenhanced ESI-1 data on Soliscalori territory to Soliscalor does not end by providing this data at market rates.

Prior to the summer of 1996, Cornucopia has extended unenhanced SatView data to Soliscalor at the cost of fulfilling user requests. This amounted to between 150 and 250 Cornucopian dollars per scene.[104] Cost of production can be interpreted as the 'cost of fulfilling user requests' under the Cornucopian Space Act[105]. Under Article 69 of the Act, 'cost of fulfilling user requests' means:

> 'the incremental costs associated with providing product generation, reproduction and distribution of unenhanced data in response to user request and shall not include any acquisition, amortization, or depreciation of capital assets...'[106]

Soliscalor recognises that 'reasonable cost terms' for a private entity such as Ewing would be different from the governmental calculation of the 'cost of fulfilling user request'. 'Reasonable cost terms' for a private entity such as Ewing may include acquisition, amortization and depreciation of capital assets, which were not considered in the governmental calculation of cost. Nevertheless, 'reasonable cost terms' should include only the cost of the data. This is also in line with Professor Sgrosso's recent statement that 'reasonable costs terms' under Principle XII of the PRS entails only 'production cost'.[107]

Alternatively, 'reasonable cost terms' could be determined to be 300 Cornucopian dollars, which is the price at which unenhanced data was provided to the 'most favored nation', Wizzaly.

'Reasonable cost terms' could be alternatively calculated based on the cost that Ewing offers its ESI-1 data to another third State. This is consistent with Professor Sgrosso's statement that reasonable cost can be alternatively calculated based on 'a formula similar to the clause of the more [sic] favored nation'.[108]

Most-favored-nation treatment means 'treatment not less favorable than that extended by the granting State to any third State'.[109] This Court recognized in the *United States Nationals in Morocco Case* that the intention of most-favored-nation treatment is 'to establish and maintain at all times fundamental equality without discrimination among all of the countries concerned'.[110] The most-favored nation treatment is consistent with classical economic theory. It guides international trade along lines of efficiency by ensuring non-discrimination.[111]

A declaration by this Court that Soliscalor is entitled to most-favored-nation treatment would be consistent with Cornucopia's obligation to give effect to Soliscalor's right of permanent sovereignty over its natural resources as a developing country.[112] The most-favored-nation treatment is incorporated in various international agreements such as UNCTAD and GATT to assist the development of developing countries.[113]

Currently, Ewing extends unenhanced ESI-1 data to Wizzaly at a cost of 300 Cornucopian dollars. As Ewing is a profit-making private entity, this indicates that this rate allows Ewing to make a profit from the sale of unenhanced ESI-1 data to Wizzaly. Further, there is no cap on the number of pictures Wizzaly may purchase at this price. This suggests that Ewing is not selling the data at a loss.

The 500,000-Cornucopian-dollar annual fee paid by Wizzaly is immaterial to the present case. This fee bought Wizzaly the right to 'use, market and sell' ESI-1 data obtained from the Lumino ground-station at a profit[114]. Wizzaly can also receive unenhanced ESI-1 data regarding territory outside its national boundaries at the reduced price.[115]

Soliscalor intends to buy data only about its own natural resources[116] as an end-user. Soliscalor does not intend to profit from the unenhanced ESI-1 data through its sale to a third party. Therefore, it is reasonable to grant Soliscalor access to unenhanced ESI-1 data on its own territory on reasonable cost terms. On the facts, this is no more than 300 Cornucopian dollars per scene.

Cornucopia breached its obligations to Soliscalor by failing to ensure that Ewing Space Industries sold enhanced data on its territory to Soliscalor at reasonable cost terms.

Article VI of the Outer Space Treaty places Cornucopia under an

> 'international responsibility for national activities in outer space...whether such activities are carried on by governmental agencies or by non-governmental entities...The activities of non-governmental entities...shall require authorization and continuing supervision'.[117]

Principle XIV of the PRS further states that

> 'In compliance of Article VI of the [Outer Space Treaty], States operating remote sensing satellites shall bear international responsibility for their activities and assure that such activities are conducted in accordance with these principles and the norms of international law, irrespective of whether such activities are carried out by governmental or non-governmental entities...'[118]

Dr. von der Dunk has written that private space activities are equated to the activities of states.[119] States should take legislative action to that its private entities conform to its international obligations. Failure to do so would render the States internationally responsible for the breach of international law by its private entitles.[120]

The VHR technology was transferred to Ewing in 1999. Nevertheless, Cornucopia retained the obligation and power to ensure that Ewing's remote sensing activities comply with Cornucopia's obligations under international law. Cornucopia ensured this with its own Cornucopian Space Act. Under Article 79-bis(2) of the Cornucopian Space Act, the CNSA is to ensure that

> 'any data dissemination conforms to international obligations binding on Cornucopia'.[121]

Article 127(2) of the Act also provides that

> '[n]o license shall be granted by [the CNSA]...the applicant [complies] with...any applicable international obligations...of Cornucopia.'[122]

Further, Article 7 of the Cornucopian Constitution states that international law is binding on Cornucopia and 'supercedes any Cornucopian legislation...not in conformity with it'.[123]

The CNSA is the licensing authority for the private entities operating VHR satellites in Cornucopia.[124] The CNSA is a public entity under the ultimate control of the

President of Cornucopia and his governmental Space Council.[125] The CNSA is therefore an agent of the Cornucopian Government. It has the obligation and power to ensure that Ewing complies with Cornucopia's obligations. However, the CNSA failed to ensure that Ewing provides Soliscalor, a developing sensed State, timely access to ESI-1 data at reasonable cost. The CNSA's failure to ensure that Ewing's ESI-1 data policy conforms to Cornucopia's international obligations is a breach attributable to the State of Cornucopia.

Cornucopia's failure to ensure that Ewing should sell data to developing sensed States at reasonable cost terms, through the CNSA's commercial agreement with Ewing, constituted a failure to discharge its international obligations. Cornucopia is therefore internationally responsible to Soliscalor.[126] Consequently, Cornucopia is under an obligation to make full reparation for the internationally wrongful act[127]. A declaration by this Court for Cornucopia to ensure that Ewing provides unenhanced ESI-1 data to Soliscalor at reasonable cost of no more than 300 Cornucopian dollars will enforce Cornucopia's and Ewing's obligations under Cornucopian domestic legislation as well as in international law.

The most appropriate remedy would be to order Cornucopia to ensure that Ewing make the unenhanced ESI-1 data on Soliscalori territory available to Soliscalor at the reasonable cost terms of no more than 300 Cornucopian dollars per 15 x 45 km scene.

The purpose of reparation is to "as far as possible, wipe out all the consequences of the illegal act and re-establish the situation which would in all probability, have existed if the act had not been committed."[128]

The unenhanced ESI-1 data on Soliscalori natural resources is unique. [129] Monetary or other reparations in lieu of its provision cannot replace the data. Further, the superior resolution of the ESI-1 satellite means that such data can ***only*** be obtained from Ewing. This superior resolution of ESI-1 data will greatly aid in the management of Soliscalori natural resources.[130] Data from other satellites would not provide equivalent information regarding potential mineral and other deposits in Soliscalori territory.

Soliscalor thus seeks a declaration that Cornucopia is obliged to ensure that Soliscalor is provided access to unenhanced ESI-1 data on reasonable cost terms. On the facts, 'reasonable cost terms' is no more than 300 Cornucopian dollars.

III. Prayer for Relief

For the foregoing reasons, the Government of Soliscalor, the Applicant, respectfully requests the Court to adjudge and ***declare*** that:

1. The principle of non-discriminatory access to remote sensing data is a rule of international law binding on Cornucopia;
2. Cornucopia violated its international obligations towards Soliscalor by failing to ensure that Soliscalor had access to ESI-1 data at reasonable costs of not more than 300 Cornucopian dollars per scene;
3. Cornucopia fulfills its international obligations by ensuring that its licensing agreements with Ewing Space Industries enable the sale of unenhanced ESI-1 data to Soliscalor at a maximum price of 300 Cornucopian dollars per 15 x 45 km scene.

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[1] Treaty on the Principles Governing the Activities of States in the Exploration and Use of Outer Space Including the Moon and Other Celestial Bodies (1967) 610 U.N.T.S. 205.

[2] Christol C.Q., "Important Concepts for the International Law of Outer Space" (1997) 40 Proc. Coll. L. Outer Sp. 73 at 75; Art. I, Outer Space Treaty, *ibid.*

[3] *Supra* note 1.

[4] *ibid,* Article V

[5] *supra* note 1, Article VIII

[6] *supra* note 1, Article XIII

[7] 2 Encyclopedia of Public International Law 468 (1995)

[8] Okolie, C.C., *'International Space Law Norms Regulating Remote Sensing of the Earth from Outer Space'.* 30 Proc. Coll. L. of Outer Space 366, *c.f.* Principle IV, 1986 Principles Relating to Remote Sensing of the Earth from Outer Space, G.A. Res. 41/65, U.N. GAOR. 95th Plenary Meeting, 3 Dec. 1986

[9] 1986 Principles Relating to Remote Sensing of the Earth from Outer Space, G.A. Res. 41/65, U.N. GAOR. 95th Plenary Meeting, 3 Dec. 1986

[10] Sgrosso, G.C., ' *Remote Sensing: Legal Aspects of Commercilaization of Space Activities',* Proceedings of the 2000 IISL/ECSL Symposium, UN Doc. A/AC.105/C2/2000/CRP.6

[11] von Kries, W., ' The UN Remote Sensing Principles of 1986 in Light of Subsequent Developments, '(1996) German Journal of Air and Space Law, Vol. 4, Jahrgang 1996

[12] UN Doc. A/AC. 105/C2/SR.273 para. 17 and UN Doc. A/AC. 105/C2/SR.269, para. 21

[13] UN Doc. A/AC.105/C2/SR.269, para. 4

[14] UN Doc. A/AC.105/C2/SR.270, para. 32

[15] UN Doc. A/AC.105/C2/SR.271, para. 14

[16] *supra* note 9, Principle IV PRS

[17] *ibid,* emphasis added

[18] DeSaussure, H. "Remote Sensing, The Interaction of Domestic and International law" (1987) 30 Proc. Coll. L. of Outer Sp. 295 at 298

[19] Feder H., "The Sky's the Limit? Evaluating the International Law of Remote Sensing" (1991) 23 N.Y.U.J. of Int'l Law & Politics 599 at 615.

[20] Declaration on International Co-operation in the Exploration and Use of Outer Space for the Benefit and in the Interests of All States, Taking into Particular Account the Needs of Developing Countries, UN Doc. A/AC.105/L.211, 11 June 1996

[21] *ibid,* paragraphs 1, 2, 3, 4

[22] *supra* note 20, paragraph 3

[23] see above, Memorial, I.B.1, at page 4
[24] *supra* note 20, paragraph 2
[25] 1155 U.N.T.S 331 (1969)
[26] *ref* Memorial, I.B, at pages 4-6
[27] *Asylum* case, (1950) ICJ Rep. 276 at 277 and *North Sea Continental Shelf* cases, Feb. 20, 1969, *ICJ Reports,* (1969) 3.
[28] Jennings R. and Watts A., eds., *Oppenheim's International Law Volume I,* 9th ed., (1992) at 27 [hereinafter, 'Oppenheim']; Akehurst, "Custom as a Source of International Law" (1974) 47 B.Y.I.L. 1
[29] *supra* note 9
[30] Schwebel S.M., "The Legal Effect of Resolutions and Codes of Conduct of the United nations" in *Justice in International law: Selected Writings of Judge Stephen M. Schwebel,* (1994) 499 at 502. [hereinafter, 'Schwebel'.]
[31] *Legality of the Threat or Use of Nuclear Weapons,* Advisory Opinion [1996] ICJ Rep.
[32] *ibid,*. Para 70.
[33] Gaggero, E.D., "Remote Sensing, in the United Nations: Reforming to the Way of Consensus" (1987) 30 Proc. Coll. L. of Outer Sp. 312 at 312
[34] Compromis ¶ 19.
[35] Suy E., "Rôle et signification du consensus dans l'élaboration du droit international", *Yearbook,* (1997) Institute of International Law, Pedone, Paris, Session of Strasbourg 1997, at .33
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B. MEMORIAL FOR CORNUCOPIA

AGENTS

Charles C. Kyles and J. Patrick Haywood
University of North Carolina

ARGUMENT

I. THERE IS NO OBLIGATION IN INTERNATIONAL LAW THAT A SENSING STATE DISTRIBUTE REMOTE SENSING DATA IN A NON-DISCRIMINATORY MANNER.

A state may ordinarily take any action in its own national interest that is not otherwise prohibited by international law.[1] Restrictions on the independence of states cannot be presumed.[2] The burden to prove any rule exists in international law always rests on the party seeking to benefit from the purported rule.[3] Therefore, it is incumbent upon Soliscalor to prove to the satisfaction of this Honorable Court that any principle of non-discrimination exists in positive international law.

The International Court of Justice may decide cases before it based upon conventional law in force, customary international law, and the general principles of law recognized by civilized nations.[4] Furthermore, this Honorable Court may consider the teachings of international law scholars as a "subsidiary means for the determination of rules of law."[5]

A. Resolution 41/65 is not a source of international law.

On 3 December 1986, the 41st General Assembly of the United Nations adopted by consensus Resolution 41/65, "Principles Relating to Remote Sensing of the Earth from Space" (hereinafter "Resolution 41/65).[6] The content of Resolution 41/65 came out of years of debate in the Committee on Peaceful Uses of Outer Space (hereinafter "COPUOS").[7] Resolutions from the General Assembly have no independent legally binding force. Resolution 41/65 is no exception to that general rule. Finally, Resolution 41/65 is not instant customary international law. Rather, Resolution 41/65 is a paradigm example of "soft law" which has no legally binding force.

1. United Nations General Assembly resolutions are not binding upon any state.

The General Assembly of the United Nations has no legislative power.[8] To the contrary, a proposal to grant legislative power to the Assembly was rejected.[9] The United Nations Charter grants the General Assembly the power to discuss international issues, initiate studies, and make recommendations.[10] The power to legislate, to create rules of international law, is conspicuously absent.

The status of General Assembly resolutions was debated in the 6th Committee of the General Assembly from 1970 to 1974.[11] The result was an understanding that resolutions were not a new source of international law in addition to those listed in Article 38 of the Statute of the International Court of Justice (hereinafter the "Statute").[12] General Assembly resolutions are not even identified "as a subsidiary means of determining international norms."[13] Therefore, resolutions are not legally binding on states.[14]

2. Resolution 41/65 is no exception to the general rule that General Assembly resolutions are not binding upon any state.

By its own terms, Resolution 41/65 purports to be only a recommendation creating no legal obligations regarding remote-sensing activities.[15] Resolution 41/65 is no more than aspirational language expressing the "desire of the U.N. to achieve international harmony and coordination in this specific activity."[16]

The aspirational language of Resolution 41/65 lacks the specificity necessary to reflect any obligation in international law. The Resolution requires no uniformity in the regulation of remote-sensing activities, leaving each state "virtually unfettered discretion to establish its own remote-sensing regime."[17] As long as a state promulgates laws to govern its own territory or citizens, international consistency of practice is simply not required.[18] In fact, there is no consistent state practice with regard to the municipal regulation of remote-sensing activities. Existing practice ranges widely from that of Canada, which has no legislation to regulate the use of its RadarSat system;[19] to that of France, which has little regulation of its commercially operated Spot Image system;[20] to that of Argentina, which operates almost solely by executive decree;[21] to that of the United States, which has a complex and detailed system of statutes and regulations.[22]

Cornucopia has enacted domestic legislation sufficient to ensure compliance with its international obligations and consistent with accepted state practice.[23] The Cornucopian Space Act of 1995 (hereinafter the "Act") expressly incorporates the principle of non-discriminatory access.[24] Further, the Act creates a licensing scheme designed to ensure compliance not only with domestic regulation, but also with Cornucopia's international obligations.[25] Finally, the Act expressly reserves Cornucopia's right to limit space activities to protect its own national security interests.[26] By enacting and enforcing its domestic legislation, Cornucopia has satisfied its obligations pursuant to the non-discrimination principle.

3. RESOLUTION 41/65 IS "SOFT LAW" WHICH IS NOT BINDING ON ANY STATE.

Resolution 41/65 is best regarded as "soft law." The term "soft law" is actually a misnomer because it does not describe law. Rather, the concept of soft law encompasses flexible resolutions or agreements that are designed to foster adjustment to changing technological circumstances.[27] These concepts are expressions of values and goals espoused to guide the development of bind-

ing treaty obligations or to move states toward the eventual formation of customary international law.[28] Thus, soft law inherently provides a forum for states to express good intentions while still negotiating the actual process towards creating legal norms.[29] Topics in international law that are the subject of soft law are characterized by continuing debate and re-negotiation, indicating that the status of treaty law or customary international law has not been reached.[30]

Soft law is sometimes mistaken for a theoretical phenomenon a few scholars have labeled as "instant customary international law." Scholars arguing in favor of the existence of instant customary international law generally rely on the language of multilateral treaties to provide *opinio juris*.[31] According to those scholars, instant customary international law, unlike customary international law, does not require any particular state practice for its formation.[32] This theoretical approach to the formation of international law has been rejected by the International Court of Justice.[33]

The initial response to any argument purporting to establish the existence of instant customary international law is that "at a minimum customary law requires the existence of a custom, if only to retain a semantic integrity for the term 'customary'."[34] This Court has not hesitated to give substance to that semantic response. In the North Sea Continental Shelf Cases of 1969, this Court noted the "indispensable requirement" that at least some time pass to establish the formation of customary international law.[35]

Further, in the Military and Paramilitary Activities Case of 1986, this Court implicitly rejected instant customary international law.[36] "The mere fact States declare their recognition of certain rules is not sufficient for the court to consider these as being part of customary international law . . .. Bound as it is by Article 38 of the Statute . . . the Court must satisfy itself that the existence of the rule in the *opinio juris* of States is confirmed by practice."[37]

The conclusion drawn from this Court's decisions must be that there can be no customary law without confirmation of the rule in state practice.[38] Equally obvious from this Court's perspective is that such confirmation cannot come by means of a declaration, devoid of state practice in space and time.[39]

Resolution 41/65 is just such a declaration. It represents neither *opinio juris* nor state practice. Instead, Resolution 41/65 is a paradigm example of soft law which facilitates dialogue between governments, international organizations, and private entities regarding their evolving duties and responsibilities. Such an approach is particularly appropriate in the area of space law where advancements in technology can quickly render any regulatory regime obsolete. States therefore have chosen to enter few binding agreements regarding space law and instead have opted for a soft law approach that fosters the later development of more formalistic law.[40] For example, General Assembly Resolution 1962, "Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space," discussed principles that were later incorporated into the five binding space treaties.[41] Similarly, Resolution 41/65 provides a road map for the development of future law that states may aspire to implement but does not legally bind them to those aspirations.

B. No principle of non-discrimination can be derived from any other source of international law.

1. The non-discrimination principle has not risen to the level of customary international law.

This Court may apply principles of customary international law to the resolution of international disputes.[42] Customary international law has two distinct elements: *corpus*, the material element often referred to as state practice; and *animus*, the conviction on the part of states that a rule is binding, often referred to as *opinio juris*.[43] The existence of a rule of customary international law depends on the existence of both elements.[44] The purported rule of non-discrimination is not supported by *opinio juris* or by state practice.

a) The non-discrimination principle is not supported by *opinio juris*.

In the absence of *opinio juris*, no amount of state practice is sufficient to establish customary international law.[45] Soliscalor may argue that Resolution 41/65 is indicative of *opinio juris* held by Members of the General Assembly that a duty of non-discrimination or other duties pertaining to remote-sensing already existed in customary international law by 1986. Such an argument is fundamentally flawed in at least three ways.

First, Resolution 41/65 was the product of a seventeen-year conflict between states with polarized viewpoints regarding the legality of "disseminating imagery of sovereign states without their permission."[46] States were also polarized as to whether even sensing another state without its prior consent was legal.[47] Such division on those two issues, among others, clearly signals that the international community did not recognize the existence of any customary international law regulating remote-sensing activities.

The apparent denouement of the debate can be interpreted in either of two ways. One interpretation is that Resolution 41/65 was similar to a contract, where each side made a concession in the expectation that some benefit would be gained.[48] Such a bargained-for-exchange is inconsistent with the *opinio juris* necessary for the formation of customary international law. A second interpretation is that Resolution 41/65 can be seen as aspirational language by states recognizing that the establishment of a legal regime would be beneficial to the development of remote-sensing technology. Resolution 41/65 therefore would represent the desire of states to formulate new law in the future. Such aspirational language is entirely consistent with soft law, discussed above, but is entirely inconsistent with the *opinio juris* necessary for the formation of customary international law.

Second, the lack of *opinio juris* with regard to the non-discrimination principle is demonstrated by the continuing debate among remote-sensing states. For example, the Soviet Union and France proposed the concept of the "inalienable right" of states to control and dispose of their own natural resources and information regarding those resources.[49] The United States, however, has opposed this position, pointing to practical problems and to the humanitarian concern of infringing on the freedom of information.[50] Writing in 1997 on the topic of remote sensing, international law scholar Malcolm Shaw reiterated that there is no general agreement regarding the dissemination of information gathered by satellites.[51] Other issues relating to remote-sensing, such as technology transfer, also remain unsettled in the international community. The Economic and Social Council of Asia and the Pacific produces resolutions which routinely urge "the developed countries to share more of their technical capacity in remote sensing with the developing countries."[52]

Although Resolution 41/65 reflects that sensed states are to have access to primary and processed data upon a "non-discriminatory basis" and "reasonable cost terms," the debate continues in international organizations as to what that language really means. COPUOS has considered the problem for many years and agreement remains "elusive."[53]

Third, a General Assembly resolution cannot substitute for a multilateral treaty as an indicator of *opinio juris*, even if adopted by consensus. States seeking to prove the existence of a rule of customary international law often look to widely-accepted multilateral treaties as evidence from which the existence of *opinio juris* may be derived. In its examination of the evidentiary value of such treaties, this Court considers whether there are reservations to the treaties.[54] Significant reservations present in a treaty indicate that signatory states feel no binding obligation to the treaty provisions that is not created by the treaty itself.[55] Thus, a treaty containing significant reservations cannot constitute evidence of the *opinio juris* necessary to establish customary international law.[56]

For example, in North Sea Continental Shelf, this Court distinguished the articles of the 1958 Geneva Convention on the Continental Shelf which were subject to reservations from those which were not.[57] This Court held that "any treaty provision subject to reservations by states cannot be said to be formative of customary international law."[58] The Court's holding is logically consistent: any treaty provision that states are allowed to consider as inapplicable to themselves cannot be binding on other states as a part of customary international law because those states would then not have a similar opportunity to reject the provision.[59]

The same logic demonstrates why Resolution 41/65 is not indicative of the *opinio juris* necessary for the formation of a customary international law of non-discriminatory access. Because all states know that a General Assembly resolution in and of itself is not binding on any state, Resolution 41/65 is no more evidence of *opinio juris* than would be a treaty subject to far-reaching reservations. That is to say that the acquiescence of a state to a non-binding resolution is not evidence the state already believed itself to be bound.

b) The non-discrimination principle is not supported by consistent state practice.

Principle XII of Resolution 41/65 calls for sensed states to have access to remote-sensing data on a "non-discriminatory basis" and "reasonable cost terms."[60] States disagree as to how to resolve those two requirements.[61] Accordingly, state practice varies.

For example, the French Spot Image Corporation sells its data worldwide at prices created by the commercial market, gaining a profit return on the investment in the satellite system.[62] Somewhat differently, the European Space Agency (hereinafter "ESA") charges commercial market prices to some users while offering reduced rates to others. The ESA distributes the remote-sensing data gathered by its ERS satellites according to a 1994 pricing policy that distinguishes between internal users, who receive data for free, and external users, who pay for data.[63] Commercial users are charged a commercial price for data.[64] Researchers receive data either for free or at a reduced price, according to the level of approval their projects have been given by the ESA.[65]

By contrast, the United States distributes Land-Sat data at the cost of consumer request, not including any amortization of the cost of developing the satellite system.[66] Such a generous policy is possible only because the United States government sustains the cost of developing, building, and launching the satellites.[67] The generosity of the United States government may be explained by the well-demonstrated principle that investment in space technology has a multiplier effect of seven on the gross national product.[68] That means every dollar invested by the government in space technology produces an increase of seven dollars in the nation's economy.

The state practice among the space-faring powers with regard to the distribution of remote-sensing data varies widely. Where there is no consistent state practice, no principle of non-discriminatory distribution can arise in customary international law. Accordingly, Cornucopia cannot be found to be in violation of customary international law with regard to its distribution of the ESI-1 data.

2. None of the space law treaties contain any provision requiring non-discriminatory distribution of remote-sensing data.

There are five major space law treaties. None of them contain any provision requiring the non-discriminatory distribution of remote-sensing data.

The United Nations created the *ad hoc* Committee on the Peaceful Uses of Outer Space in 1958, later transforming it into the permanent committee, COPUOS, in 1959.[69] COPUOS initiated the creation of a multilateral legal regime for outer space. The "Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies" (hereinafter "Outer Space

Treaty") came into force in 1967 and provides the "foundation of the international legal order in outer space."[70]

> WITH THE EXCEPTION OF ARTICLE I, WHICH THIS BRIEF WILL DISCUSS AT LENGTH BELOW, THE REMAINDER OF THE OUTER SPACE TREATY IS RELATIVELY STRAIGHTFORWARD. THE OUTER SPACE TREATY CONTAINS NOTHING REGARDING THE DISTRIBUTION OF REMOTE-SENSING DATA. NANDASIRI JASENTULIYANA, PRESIDENT OF THE INTERNATIONAL INSTITUTE OF SPACE LAW, SUMMARIZES THE CONTENTS OF THE OUTER SPACE TREATY AS FOLLOWS:
>
> The first three articles provide the framework for the peaceful exploration and use of outer space. From these articles the basic legal elements of space law are derived: application of international law and the United Nations Charter to space activities; recognition of common interest of all humankind in space exploration and use of outer space; and, prohibition of national appropriation or territorial claims in outer space, making outer space an area *res communis*. . . ..
>
> The rest of the fourteen articles, specially Article V through IX, refer to State conduct, that is, how they should carry out their space activities to ensure that the first three principles of the Outer Space Treaty are embodied in all space activities, whether they are carried out by government or a private company. These Articles forbid States to place in Earth orbit weapons of mass destruction or to install military installations on celestial bodies; require States to regard astronauts as special international envoys and to render them assistance in the event of an accident; inform States that, by launching or procuring the launch of a space object, they will bear international liability for damage their object causes; extend jurisdiction to the State that registers a space object; command States to conduct their space activities, including activities on celestial bodies and on the Moon, so as to avoid harmful contamination to the Earth's environment; and, instruct States to inform the Secretary-General of the United Nations of the nature, conduct, location, and results of such activities. [Citations omitted.][71]

The Outer Space Treaty thus laid the groundwork for the remaining four major space treaties, each of which expands on basic principles contained in the Outer Space Treaty.[72] None of those treaties address the distribution of remote-sensing data. The absence of any provision, in any of the five treaties, requiring the non-discriminatory distribution of remote-sensing data is both conspicuous and meaningful in light of the extensive negotiations regarding remote-sensing that were taking place in COPUOS while the treaties were negotiated. The clear implication is that no agreement existed in the international community regarding any regulation of the distribution of remote-sensing data.

3. The common heritage principle expressed in the Outer Space Treaty cannot be interpreted to require the non-discriminatory distribution of remote-sensing data.

Both Cornucopia and Soliscalor are parties to the Outer Space Treaty. The treaty does not directly address remote-sensing activities.[73] Soliscalor may nevertheless assert that Article I of the Outer Space Treaty, often referred to as the "common heritage principle," has implications for remote-sensing activities. The common heritage principle states that "the exploration and use of outer space . . . shall be carried out for the benefit and in the interests of all countries irrespective of their degree of economic or scientific development, and shall be the province of all mankind."[74] Article I of the Outer Space Treaty thus requires the use of outer space be for the benefit of all countries.[75] The scope and meaning of Article I has been subject to much debate.

The Vienna Convention on the Law of Treaties (hereinafter "Vienna Convention") addresses the proper way to interpret the meaning of language in a treaty.[76] Article 31 of the Vienna Convention mandates that the meaning of the common heritage principle must be determined according to its plain language and in light of its underlying purpose, stating in paragraph 1, "A treaty shall be interpreted in good faith in accordance with the ordinary meaning to be given to the terms of the treaty in their context and in light of its object and purpose."[77] Article 31 is recognized as customary international law.[78] As such, it is binding upon states whether or not they are parties to it.[79] Furthermore, because the Vienna Convention is customary international law, it applies retroactively to treaties that predate the Vienna Convention.[80]

The wording of Article I of the Outer Space Treaty has been criticized as too vague to create a binding commitment of any kind.[81] On its face, the language lacks the minimum of precision expected from a legal document.[82] Worse still, the language strikes broadly enough to cripple the "cardinal norm of the Treaty—that of freedom of outer space."[83] If not restricted in its scope, Article I might be read to prohibit any single state from utilizing space resources at all.

According to the Vienna Convention, Article I cannot be interpreted in a way that interferes with the basic purpose of the Outer Space Treaty to ensure the development of space resources. Therefore, it is not surprising that major space-faring nations were quick to limit the reach of Article I. Yuri Kosolov, the Soviet delegate to COPUOS, expressed the Soviet Union's view, stating, "[T]he principle of international cooperation in exploring and using outer space for peaceful purposes is given body through the conclusion of specialized treaties by States and international organizations. This is understandable, since the character and degree of participation of States in international space projects depend, ultimately, on their will."[84]

Similarly, speaking before the United States Senate prior to ratification, Ambassador Arthur Goldberg, the chief United States negotiator of the Outer Space Treaty, assured the Senate that Article I was merely a

statement of general goals and that separate international agreements would be required to cover the use of particular satellites.[85] Statements by the United States Senate prior to the ratification of the Outer Space Treaty clearly indicate that its interpretation of Article I precluded any non-discrimination principle. The United States Foreign Relations Committee insisted on attaching an understanding in its report stating, "It is the understanding of the Committee on Foreign Relations that nothing in Article I, paragraph 1 of the Treaty diminishes or alters the right of the United States to determine how it shares the benefits and results of its space activities."[86]

Since the Outer Space Treaty came into force, no state has relied on its language to assert claims to results obtained by another country through its space activities.[87] Russian scholar V.M. Postyshev of the USSR Academy of Sciences stated that Article I "cannot be reduced at the present stage to the distribution of anything."[88] Clearly, the aspirational language of the treaty does not create a duty to distribute remote-sensing data in a non-discriminatory manner.

Continuing debate surrounding the meaning to be given to the common heritage principle further undermines any attempt to find binding language in Article I. When COPUOS finished debating Resolution 41/65, it began consideration of a new item entitled, "Consideration of the legal aspects related to the application of the principle that the exploration and utilization of outer space should be carried out for the benefit and in the interests of all States, taking into particular account the needs of developing countries."[89] As the title indicates, that item is an attempt to find meaning in the common heritage principle.[90] The very length of the title indicates that the members of COPUOS had difficulty agreeing even on the parameters of the debate.[91]

The inclusion of that item on the agenda must be viewed as an admission that the Outer Space Treaty did not create any affirmative duty to share the benefits of space activities, including remote-sensing data. Jasentuliyana comments that the developing nations "seem to say that they have lost their confidence in the moral appeals as embodied in the spirit of Article I of the Outer Space Treaty, and that remedy lies in the establishment of an international legal framework regulating space cooperation and requiring the developed countries to cooperate within specified limits."[92] The day may come when states are legally bound to share remote-sensing data, but Article I does not create such a duty.

II. THE MANNER IN WHICH CORNUCOPIA CONDUCTED THE ESI-1 PROJECT WAS IN COMPLIANCE WITH INTERNATIONAL LAW.

Assuming *arguendo* that the non-discrimination principle as expressed in Principle XII of Resolution 41/65 is a rule of international law, Cornucopia has not breached any duty established by that principle.

A. The non-discrimination principle does not require any particular price or pricing structure for remote-sensing data.

Principle XII requires that states have access to remote-sensing data on a "non-discriminatory basis" and on "reasonable cost terms."[93] The ordinary meaning of that language has been the source of continuing debate.[94] The phrases "non-discriminatory" and "reasonable cost" can be seen as conflicting, perhaps even as mutually exclusive.[95] As discussed above, states have reached differing conclusions as to implementation of so-called non-discriminatory data distribution policies. The ESA purports to require non-discriminatory distribution and yet openly treats different classes of users to different prices.[96] The United States originally defined non-discrimination to mean "without preference, bias, or any other special arrangements (except on the basis of national security concerns . . .) . . . which would favor one buyer or class of buyers over another."[97] Later, the United States changed its policy to allow certain researchers and agencies to acquire data more cheaply than other users.[98]

Because there is no apparent plain meaning of Principle XII, an analysis of its underlying purpose is required. The lengthy negotiations in COPUOS leading up to the adoption of Resolution 41/65 clarify that participating states sought to create a system that would foster the development of remote-sensing technology. Full development of remote-sensing technology and the remote-sensing industry depends upon a regulatory regime that creates certainty for investors.[99] A fully developed remote-sensing industry would benefit all mankind by gathering information that could be used to improve the quality of decision-making in areas ranging from national defense to urban planning.[100] Better information gathered through remote-sensing could enable further development of natural resources, better land management, more accurate terrain mapping, and more complete climactic and environmental observation.[101] Space-faring powers such as the United States, Russia, Canada, Europe, Japan, and India already apply their remote-sensing technology to those purposes and emerging space-faring nations consider remote-sensing to be essential for economic development.[102]

Resolution 41/65 moves toward the achievement of those noble goals by guaranteeing that states and private entities who invest the enormous capital required to develop new technology, build satellites and ground stations, and launch satellites into orbit will be able to make use of those satellites.[103] Governments and corporations alike would find the level of investment risk prohibitive without assurances that remote-sensing satellite operators would be free to gather data and distribute it advantageously.[104] Therefore, COPUOS and the General Assembly adopted Resolution 41/65 to create a stable and predictable regime that would foster the development of remote-sensing.

In light of that underlying purpose, Principle XII cannot be read to require sensing entities to donate expensively acquired data.[105] Further, sensing entities

must be allowed to recoup research and development costs and to generate a profit from their investment.[106] To interpret Principle XII otherwise would effectively cut off investment in remote-sensing technology and thereby frustrate the purpose underlying Resolution 41/65. An interpretation that frustrates the underlying purpose is contrary to the rules of the Vienna Convention. Principle XII, therefore, requires only that remote-sensing data be distributed on commercially reasonable terms.

B. The pricing structure chosen by Ewing does not illegally discriminate against Soliscalor.

The pricing structure about which Soliscalor complains licenses ground-stations around the world to receive ESI-1 data, enhance it, and sell it to other customers. The licensing agreement structure is not *per se* discriminatory. The United States relies on the identical procedure for the distribution of its data from commercial satellites such as Orbimage-2.[107] Further, Soliscalor was itself eligible to host a ground-station and, indeed, negotiated with Ewing to place a ground-station in Soliscalor. Those negotiations failed because Soliscalor insisted on commercially unreasonable and preferential treatment contrary to the legal position taken by Soliscalor before this Court.

The pricing structure created by Ewing is commercially reasonable. The $200 per scene reduction in the price of unenhanced stored data that Ewing affords to Wizzaly is a direct effect of the Lumino license. That price reduction cannot be evaluated outside of the context in which it occurs. First, Wizzaly pays Ewing $500,000 per year for its license. Second, Wizzaly was required to build a very expensive ground-station in order to take advantage of the license. A similar ground-station in 1998 cost approximately $500,000 U.S.[108] Third, although Lumino was the only ground-station to elect the option of downloading stored data, that option was offered to all of the ground-station operators. The context of the $200 per scene discount clarifies that the discount is part of a commercially reasonable pricing structure that treats similarly situated customers in a similar way. Soliscalor is not similarly situated to Wizzaly and therefore may be treated differently.

C. The Presidential Decree of 2 May 2000 does not violate the principle of non-discrimination.

The non-discrimination principle is subject to a national security exception. The concept of sovereignty in international law dictates that states may employ otherwise unavailable means when national security is at stake.[109] Sovereignty further dictates that each state alone has the power to determine what constitutes its own national security interests.[110]

France restricts the distribution of remote-sensing data by Spot Image for national security reasons.[111] The Council of the European Communities explicitly authorized Member States to refuse requests for remote-sensing data based on concerns regarding "international relations and national defence."[112] Similarly, the original United States definition of "non-discriminatory basis" made an explicit reservation for national security concerns.[113] Current United States policy recognizes the tension between national security interests and the importance of widely available access to remote-sensing data and attempts to strike a balance between the two.[114] For example, the "shutter clause" allows for the suspension of remote-sensing data gathering and distribution during sensitive times.[115]

Despite the recognition of the tension between widespread data dissemination and national security, states continue to maintain for themselves the sovereign right to determine the scope of their own national security interests. The United States remote-sensing legislation and regulations thereto do not define the term "national security" anywhere.[116] The United States has expanded its concept of national security to protect its allies.[117] At the request of Israel, the United States refused to allow the private Orbital Science Corporation to cooperate in the Eyeglass Project with a private Saudi Arabian firm to construct a remote-sensing satellite.[118] Furthermore, in the modern post-Cold War era, national security increasingly incorporates economic security.[119] Accordingly, the United States has further expanded its definition of "national security to include humanitarian, economic, political, and military concerns."[120]

Other states also reserve for themselves the right to define the scope of their own national security interests. Many examples can be found in the interpretation of the Security Exceptions provision of the General Agreement on Tariffs and Trade (hereinafter "GATT").[121] Article XXI of the GATT provides that no state shall be prevented "from taking any action which **it considers** necessary for the protection of its essential security interests." (Emphasis added.)[122] The Preparatory Committee gave a great deal of thought as to the breadth of the national security exception and ultimately drafted language that left each state the freedom to decide its own national interests.[123] Subsequently, the resolution of disputes surrounding Article XXI, such as the boycott of Portuguese goods by Ghana in 1961, clarified that each contracting party was the sole judge of its own essential security interests.[124] Similarly, in the discussion of Czechoslovakia's 1949 complaint about the refusal of the United States to even identify the strategic commodities that were subject to export controls, it was stated that "every country must be the judge in the last resort on questions relating to its own security."[125]

Similar to the Security Exceptions in GATT, the scope of the national security exception to the principle of non-discriminatory distribution is left to the individual determination of states. The Presidential Decree of 2 May 2000 prohibiting the dissemination of ESI-1 data to Soliscalor falls within that national security exception. The Decree states on its face that Soliscalor has proven its hostility to Cornucopian interests. Furthermore, while Cornucopia has the sovereign right to define its own national interests in any way it desires, the defi-

nition chosen is not beyond the scope of that chosen by the United States.[126] Nevertheless, if Cornucopia is required to justify its prohibition of the sale of ESI-1 data to Soliscalor, it need only point to Soliscalor's harsh rhetoric aimed at Cornucopia.

D. The common heritage principle in the Outer Space Treaty requires Cornucopia only to refrain from interfering with Soliscalor's access to space resources.

Soliscalor may assert that the common heritage principle in the Outer Space Treaty requires Cornucopia to share its remote-sensing data in some particular fashion. As discussed above, the common heritage principle creates no such duty of wealth-sharing. The widespread rejection of the Moon Treaty proves that the common heritage principle does not require wealth sharing. On its face the Moon Treaty purports to clearly define what is meant by the term "for the benefit . . . of all countries."[127] The provisions of the treaty represent "the apex of the philosophy of forced wealth sharing."[128] This interpretation of the common heritage principle so narrowly restricts the rights of states that only nine relatively minor states ratified the treaty. Further, the United States and the Soviet Union, the only two states to make a lunar landing, openly opposed the treaty.[129]

More recently, the working paper submitted by France and Germany at the 1995 Session of the Legal Subcommittee of COPUOS articulated the concerns that developed nations, like Cornucopia, have in regard to space cooperation and sharing of resources. The paper has two basic premises: "[F]irst, that States are free to determine all aspects of their cooperation, whether it is bilateral or multilateral or whether it is commercial or non-commercial, including of course development cooperation; second that States shall choose the most efficient and appropriate mode of cooperation in order to allocate resources efficiently."[130]

Finally, COPUOS closed its debate on the common heritage principle with the "Declaration on International Cooperation in the Exploration and Use of Outer Space for the Benefit and in the Interests of All States, Taking into Particular Account the Needs of Developing Countries" (hereinafter the "1996 Declaration").[131] That document declares explicitly that "[s]tates are free to determine all aspects of their participation in international cooperation in the exploration and use of outer space on an equitable and mutually acceptable basis."[132] The 1996 Declaration suggests that space-capable states "should" contribute to international cooperation to assist developing states, but does not purport to require such cooperation.[133]

Cornucopia has done nothing to limit Soliscalor's freedom to develop its own space program to access the common resources of outer space. The common heritage principle of the Outer Space Treaty does not require any more.

E. Cornucopia has complied with all relevant duties found in other international instruments.

1. CORNUCOPIA HAS COMPLIED WITH THE OBLIGATIONS IN RESOLUTION 41/65.

SOLISCALOR MAY ASSERT THAT RESOLUTION 41/65 OPERATES TO CREATE A RANGE OF DUTIES ON CORNUCOPIA IN ADDITION TO THE NON-DISCRIMINATION PRINCIPLE PREVIOUSLY DISCUSSED. FOR ALL THE REASONS DISCUSSED ABOVE, THAT RESOLUTION IS NOT A BINDING INSTRUMENT OF LAW. ASSUMING *ARGUENDO* THAT THIS COURT FINDS THAT CORNUCOPIA IS BOUND BY RESOLUTION 41/65, CORNUCOPIA HAS COMPLIED WITH ALL THE OBLIGATIONS CONTAINED THEREIN.

Cornucopia has not breached any duty to assist Soliscalor because Soliscalor never sought assistance from Cornucopia. The strongest formulations of the duty to cooperate in the development of technology, located in Resolution 41/65, predicate such a duty on the request for assistance.[134] At the time that Soliscalor was attempting to build its own remote-sensing satellite system, it purported to have technology superior to that of Cornucopia. Soliscalor announced that the Solarstar 3 had an optical resolution of 3m/8m. At that time, Cornucopia had only the SatView system, with an optical resolution of 4m/10m.

Cornucopia did not breach any duty to consult with Soliscalor or to allow Soliscalor the opportunity to participate in the ESI-1 project. Cornucopia did engage in consultations with Soliscalor concerning the ESI-1 project and did offer to allow Soliscalor's participation in the project. Ewing engaged in negotiations with Soliscalor for that state to host a ground-station. Those negotiations failed because Soliscalor insisted on commercially unreasonable terms and preferences contrary to the legal position Soliscalor argues before this Court.

Finally, as discussed above, Cornucopia's ban on the sale of ESI-1 data to Soliscalor falls within a recognized national security exception applicable not only to the non-discrimination principle but also to any duties to cooperate or allow participation in remote-sensing activities.

2. Cornucopia has complied with the obligations in the International Telecommunication Union.

Cornucopia and Soliscalor are both members of the International Telecommunication Union (hereinafter "ITU"). Article 1 of the Constitution of the ITU contains language reflecting the common heritage principle discussed above.[135] That Article, however, limits the purpose of the ITU to improving international telecommunications.[136] The definitional section of the Constitution does not include remote-sensing activities within the

definition of telecommunications.[137] In any event, for all the reasons discussed above, Cornucopia has complied with any reasonable understanding of the common heritage principle and Soliscalor has not complained of any violation of any obligation created by the ITU.

III. THE INJUNCTIVE RELIEF SOUGHT BY SOLISCALOR IS NOT AVAILABLE FROM THIS HONORABLE COURT.

It is well established in customary international law that a state incurs international responsibility when it fails to exercise due diligence to prevent a citizen from breaching international law.[138] A corporation is a juridical citizen of the state in which it is incorporated.[139] Therefore, Cornucopia could be held liable if Ewing had committed any violation of international law. However, the injunctive remedy sought by Soliscalor is simply not available.

A. Permanent injunctive relief is beyond the power of this Court.

The International Court of Justice grants judgments that are final, without appeal, and binding upon the parties before the Court.[140] The Statute defines the procedure by which judgments are reached, but does not prescribe the remedies that the Court may award.[141] The International Court of Justice may and does grant temporary injunctive relief, called provisional measures, to maintain the status quo between the parties until final judgment on the merits is reached.[142] Such a power is granted expressly by Article 41 of the Statute.[143] The Court has formulated for itself a set of rules to determine when and how provisional measures are to be indicated.[144]

No analogous provision of the Statute authorizes the issuance of permanent injunctive relief at the time that a final determination on the merits is reached. The Court therefore has not formulated any analogous set of rules to prescribe when and how permanent injunctive relief would be issued. The granting of permanent injunctive relief may be beyond the power of any international tribunal.[145] Accordingly, this Honorable Court has never in the past issued permanent injunctive relief.

B. This case is not appropriate for the imposition of injunctive relief.

This case does not warrant the extension of this Honorable Court's power so as to award a novel remedy. This Court's ordinary judicial function is to declare the state of international law and the relative rights of the parties before it.[146] This Court presumes as a matter of law that a state against which a binding and definitive judgment has been made will comply with that judgment.[147]

Although instances of non-compliance with this Court's judgment are not unheard of, most states have complied. With only one exception, all instances of non-compliance were on the part of states brought unwillingly before this Court.[148] In that single exception, the Corfu Channel Case, the judgment was ultimately satisfied, albeit over 40 years later.

By contrast, examples of compliance abound. Perhaps the best example is the Territorial Dispute Case between Chad and Libya.[149] In that case, this Court resolved an old boundary dispute between Chad and Libya. Libya had militarily occupied the Aouzou Strip, claimed by Chad, for 20 years. When this Court ruled in 1994 the Aouzou Strip properly belonged to Chad, it did not order Libya to withdraw nor did it attempt to design methods for the transfer of the land in question.[150] Instead, the parties implemented their own plan for the peaceful transfer of the Aouzou Strip with the assistance of the United Nations.[151]

The facts of this case do not present any reason to deviate from this Court's usual practice as demonstrated in the Territorial Dispute Case. Cornucopia has willingly come before this Court, making no protest concerning jurisdiction. Cornucopia's willingness to abide by its international obligations is exemplified by its incorporation of international law into its domestic legislation. Therefore, this Court has every reason to presume that Cornucopia will comply with international law as this Court declares it.

SUBMISSIONS TO THE COURT

For the foregoing reasons, the Government of Cornucopia, the Respondent in this matter, respectfully requests that this Honorable Court:

1) ADJUDGE AND DECLARE that Cornucopia is under no obligation to adhere to any principle of non-discrimination regarding the access to remote-sensing data;

2) ADJUDGE AND DECLARE, in the alternative only, that Cornucopia has in no way violated the principle of non-discrimination with regard to Soliscalor; and

3) ADJUDGE AND DECLARE, in the further alternative, that Soliscalor is not entitled to the injunctive relief sought.

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[3] Shabtai Rosenne, The Law and Practice of the International Court (3rd ed.) 1083 (1997).

[4] Statute of the International Court of Justice, June 26, 1945, art. 38, 59 Stat. 1055, T.S. No. 993 [hereinafter I.C.J. Statute].
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[6] See Principles Relating to Remote Sensing of the Earth from Space, G.A. Res. 41/65, U.N. GAOR, 41st Sess., Supp. No. 21, at 115, U.N. Doc. A/Res/41/65 (1986) [hereinafter Resolution 41/65].
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[20] Gabriella Catalano Sgrosso, Sharing of Remote Sensing Data Concerning Environmental Protection for Public Benefit, Proceedings of the 39th Colloquium on the Law of Outer Space 94, 98-99 (Oct. 7-11, 1996) (1998).
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[24] See Cornucopian Space Act, supra note 23, Introduction, para. 10.
[25] See Cornucopian Space Act, supra note 23, Chapter VII.
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[121] General Agreement on Tariffs and Trade, Oct. 30, 1947, 61 Stat. A-11, T.I.A.S. 1700, 55 U.N.T.S. 194 [hereinafter GATT].
[122] Id. art. XXI.
[123] GATT, Analytical Index: Guide to GATT Law and Practice 554 (6th ed. 1994) (citing EPCT/A/PV/33, 20-21 and Corr. 1; EPCT/A/SR/33, 3).
[124] GATT, Analytical Index: Guide to GATT Law and Practice 554 (citing SR.19/12, 196).
[125] GATT, Analytical Index: Guide to GATT Law and Practice 554, 555-556 (citing GATT/CP.3/SR.22, Corr. 1).
[126] Symes, supra note 120, at 609-610.
[127] See Moon Treaty, supra note 72, art. 4, 11.
[128] Ezra J. Reinstein, Owning Outer Space, 20 Nw. J. Int'l L. & Bus. 59, 68 (1999).
[129] Id.
[130] Jasentuliyana, supra note 89, at 385.
[131] Declaration on International Cooperation in the Exploration and Use of Outer Space for the Benefit and in the Interests of All States, Taking into Particular Account the Needs of Developing Countries, U.N. Doc. A/AC.105/L.211 (June 11, 1996) [hereinafter 1996 Declaration]. See Benko & Schrogl, supra note 91.
[132] 1996 Declaration, supra note 131, art. 2.
[133] See Benko & Schrogl, supra note 91. See 1996 Declaration, supra note 131.
[134] Resolution 41/65, supra note 6, Principle IX, Principle XIII.
[135] Constitution of the International Telecommunication Union, art. 1 (1992).
[136] Constitution of the International Telecommunication Union, art. 1.
[137] Constitution of the International Telecommunications Union, Definitions.
[138] Jude Ibegbu, Fundamentals of Intenational Law, 141 (1999).
[139] Robert Jennings & Arthur Watts (eds.), Oppenheims International Law 859-860 (9th ed. 1996).
[140] I.C.J. Statute, supra note 4, art. 59, 60.
[141] I.C.J. Statute, supra note 4, art. 54–58.
[142] Rosenne, supra note 3, at 1420. See Land and Maritime Boundary Between Cameroon and Nigeria (Cameroon v. Nig.), 1996 I.C.J. 13, 21 (Provisional Measures) (Order of March 15, 1996).
[143] I.C.J. Statute, supra note 4, art. 41.
[144] Rosenne, supra note 3, at 1421. See International Court of Justice Rules of Court (1978), as amended on Dec. 5, 2000, art. 73–78.
[145] Patricia W. Birnie & Alan E. Boyle, International Law and the Environment 150-151 (1992).
[146] Rosenne, supra note 3, at 203-204.
[147] Rosenne, supra note 3, at 206.
[148] Rosenne, supra note 3, at 203.
[149] Territorial Dispute Case (Chad v. Libya), 1994 I.C.J. 6 (Judgment of Feb. 3).
[150] Territorial Dispute Case, 1994 I.C.J. 6, para. 77.
[151] Malcom N. Shaw, A Practical Look at the International Court of Justice, in Remedies in International Law 11, 18, n.33 (1998).

DISCUSSION SESSION

by Dr. Olivier Ribbelink

Before the start of the discussion session, the chairs of sessions 3, 4, and 1 gave a short summary presentation of their sessions, as well as the Rapporteur of session 2. Their remarks were then summarized by the President of the IISL, who chaired the session. The discussion focused on the following topics:

Remote sensing:

The first intervention was by **Joanne Gabrynowicz** (USA) who commented on the issue of dual use of remote sensing satellites. Since the UN Principles do not include military satellites, nor commercial satellites, COPUOS has no authority to discuss issues that involve national security. The question was brought up whether the UN indeed has no jurisdiction on military issues. **Luc Dufresne** stated that commercial and private systems – commercial activities directly or indirectly undertaken by states fall outside the scope of the UN 1986 Remote Sensing Principles. He is in favor of law-making for private enterprise to act like states in this respect. **Prof. Andem** stressed that the above-mentioned problem emphasizes the important role of private international law and that we have to make a distinction between public and private international law. Also, there is a need for the harmonisation and unification of national laws. **Dr. Ribbelink** pointed out that this debate involves the disctinction between acts iure imperii and acts iure gestionis, and thus of sovereign immunity and various jurisdictional issues. This could be, and maybe should be, a topic for further and more detailed discussion in the future.
Dr. Bourbonniere referred to the fact that market structures will determine the future. We should consider in future discussions what is the supply side and what is the demand. **Dr. Rao** recalled the rapid technological changes and the much overlooked question that the user must be known. We need a good definition of "user", because the question "who is the user?" refers to a very important aspect of the matter, whether the producer also uses the data or whether that is someone else. **Prof. Christol** stated that the gathering of intelligence information involves not only space law but also international law in general and international humanitarian law. The issue is the legality of the unilateral gathering of reconnaissance information in order to maintain self-defence. He warned that we should beware of the tyrany of labels; we must think in broader terms.

Dr. Perek commented on the paper by **V. Pop**. According to him there is no problem with the present definition of celestial bodies. That definition worked well for several decades. Dr Perek also commented on the paper by **J. Steptoe** on space debris. He agreed that there is a need for a treaty, and that we should begin discussions on that legal instrument now, because it takes so long to reach agreement (start now, if we want to adopt a document within forty years...)

Military uses of outer space:

Dr. Haeck asked Dr. Achilleas whether he thought that human rights law would apply in time of war. **Dr. Achilleas** pointed out that on the one hand there are references to times of war in the human rights texts and that on the other hand there is a certain possibility that the full exercise of human

rights in times of war will be restricted and/or limited.

Dr. Van Fenema commented on **Dr. Frankle's** paper. He agreed with Dr. Frankle, but added that nevertheless a certain link exists between the treaties as some states did not ratify the Rescue Agreement prior to the finalisation of the Liability Convention and the Registration Convention. He gave the example of The Netherlands as one of the countries which only ratified the Rescue Agreement after these two other Conventions had entered into force. However, one should keep in mind that the launching state under the Registration convention is not automatically also the launching state under the Liability Convention. **Dr. M.M. Esquivel de Cocca** reminded that the state of registry is one of the launching states under the Liability Convention. According to **Prof. Christol** the issue of proof should not be too difficult here. **Prof. Andem** recalled the law of nationality, and analogies with maritime law, because if there is any accident with an aircraft one looks at the nationality of the aircraft. In terms of liability the nationality aspect should be taken into account.