INTERNATIONAL INSTITUTE FOR THE UNIFICATION OF PRIVATE LAW
INSTITUT INTERNATIONAL POUR L'UNIFICATION DU DROIT PRIVE

UNIDROIT COMMITTEE OF GOVERNMENTAL EXPERTS FOR THE PREPARATION OF A DRAFT PROTOCOL TO THE CONVENTION ON INTERNATIONAL INTERESTS IN MOBILE EQUIPMENT ON MATTERS SPECIFIC TO SPACE ASSETS
Second session
Rome, 26/28 October 2004

UNIDROIT 2004
C.G.E./Space Pr./2/W.P. 5
Original: English

THE PRELIMINARY DRAFT PROTOCOL TO THE CAPE TOWN CONVENTION ON INTERNATIONAL INTERESTS IN MOBILE EQUIPMENT ON MATTERS SPECIFIC TO SPACE ASSETS: AN OPPORTUNITY FOR REPRESENTATIVES OF GOVERNMENT AND INDUSTRY TO COMPARE NOTES

(A colloquium organised by UNIDROIT in co-operation with the Malaysian National Space Agency and the Space Working Group, Kuala Lumpur, 22 / 23 April 2004):

SUMMARY REPORT

(prepared by the UNIDROIT Secretariat)

I. INTRODUCTION

(a) Background to the colloquium

1. A colloquium on the preliminary draft Protocol to the Convention on International Interests in Mobile Equipment, opened to signature in Cape Town on 16 November 2001 (hereinafter referred to as the *Convention*), on Matters specific to Space Assets established by the Space Working Group and revised by a UNIDROIT Steering and Revisions Committee as reviewed by a UNIDROIT Committee of governmental experts at its first session, held in Rome from 15 to 19 December 2003 (Study LXXIIJ - Doc. 13 rev.) (hereinafter referred to as the *preliminary draft Protocol)*, was held in Kuala Lumpur, at the invitation of the Malaysian National Space Agency, on 22 and 23 April 2004. This colloquium was organised by UNIDROIT in co-operation with the Malaysian National Space Agency and the Space Working Group. It was intended to provide representatives of Government and the international commercial aerospace and financial communities in Asia and the Asia-Pacific region with an opportunity to compare notes on the practical implications of the key issues raised by the Convention as implemented by the preliminary draft Protocol. In particular, it was designed, first, to permit representatives of a cross-section of Asian and Asia-Pacific countries to evaluate the relevance of the proposed new international regimen for Asia and the Asia-Pacific region, secondly, to permit representatives of the key sectors involved in commercial space activity (manufacturers, operators and financiers)

in Asia and the Asia-Pacific region to assess the Convention and the preliminary draft Protocol from their different points of view, thirdly, to permit representatives of Government, the Space Working Group and the space industry to discuss critically the key provisions of the preliminary draft Protocol and, finally, overall, to assist the formulation of Asian and Asia-Pacific Governments' policy in relation to the ongoing intergovernmental consultation process.

(b) Opening of the colloquium

2. After speeches of welcome from *Mr Martin Stanford*, Principal Research Officer, on behalf of UNIDROIT - in which he expressed that Organisation's deep appreciation of the kindness of the Government of Malaysia, and in particular the Malaysian National Space Agency, in hosting the colloquium - and *Ms Mazlan Othman*, Director-General, on behalf of the Malaysian National Space Agency, the colloquium was opened by *Mr Jamaluddin Jarjis*, Minister of Science, Technology and Innovation of Malaysia. In his opening address, Mr Jarjis laid emphasis on the need for the financing of such capital intensive projects as those covered by the preliminary draft Protocol to be supported by a sound legal regimen. This was essential if such financing projects were to function effectively and efficiently and the costs inherent in the risks associated with such projects were to be reduced. Moreover, in the case of assets like satellites which were located several thousand kilometres in the sky it was also essential that the rules governing the taking of security over, the retention of title in and the leasing of such assets should be internationally accepted. Noting that the objective of the Convention as implemented by the preliminary draft Protocol was precisely the establishment of such an international legal regimen, he observed that this would bring commercial financing for the acquisition of space assets within the reach of countries at all stages of development, in particular those, like Malaysia, for which it had hitherto been inaccessible. His Government strongly supported the project, believing that space should ultimately become accessible to all States, given its potential as an engine for economic growth.

3. The colloquium was attended by representatives of the Governments of eight States from Asia and the Asia-Pacific region, [1] two intergovernmental Organisations, [2] one international non-governmental Organisation [3] and the world aerospace industry and financial community and others. [4]

4. It was chaired by *Mr Stanford*, who, in his opening remarks, explained the thinking behind UNIDROIT's decision to organise a programme of colloquia on the preliminary draft Protocol in the run-up to, and the early stages of the intergovernmental consultation process. Given the extreme novelty of the issues involved in commercial space financing for virtually all Governments and a good many banks too, not to mention the considerable technical complexity of these issues, it was considered desirable to familiarise the different parties involved in the

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[1] Australia, the People's Republic of China, India, Indonesia, Japan, Malaysia, the Republic of Korea and Saudi Arabia.

[2] UNIDROIT and the United Nations Office for Outer Space Affairs.

[3] Space Working Group.

[4] Representatives of the following companies and firms from Asia and the Asia-Pacific region attended the colloquium: Asia Satellite Telecommunications (AsiaSat), Astronautic Technology (M) Sdn. Bhd., BNP Paribas (Singapore), Boeing Capital Corporation, Essor Aerospace, Malene Insurance Brokers Sdn. Bhd., Measat / Binariang Satellite Systems Sdn. Bhd., Milbank, Tweed, Hadley & McCloy L.L.P. (Singapore), P.I.C.C. Holding Company, Shukor Baljit & Partners, Standard Chartered Bank Malaysia Bhd., Sterling Insurance Brokers Sdn. Bhd. and Willis (Malaysia) Sdn. Bhd. In addition, the colloquium was attended by the following individuals: Mr Arthur Dula (Heinlein Prize Trust), Mr Bucknor Hightower (Heinlein Prize Trust), Mr Abu Bakar Munir (University of Malaya), Mr Ei Sun Oh (University of Malaysia Sabah) and Ms Che Zuhaida Saari (International Islamic University of Malaysia).

process with the essential nature and objectives of the project. It was also essential that the intergovernmental consultation process produced an international instrument that was both commercially viable - that is, one that responded to the practical needs and requirements of the world aerospace industry and financial community - and politically acceptable to the international community at large - that is, in particular, one that took due account of the existing body of international space law. This was the background to UNIDROIT's invitation to the representatives of both sides, Government and industry, to compare notes and thus, through dialogue, not only to explain their respective concerns but also to advance the intergovernmental consultation process.

(c) Structure and business of the colloquium

5. The colloquium was made up of four parts. The first part comprised an introduction to the Convention itself (from Mr Bryan Welch, Legal Director, Department of Trade and Industry of the United Kingdom), some information on the status of the Convention and background to the preparation of the preliminary draft Protocol (from Mr Stanford) and an introduction to the role of the Space Working Group in organising the position of the space industry in relation to the Convention and the preliminary draft Protocol (from Mr Peter D. Nesgos, Partner, Milbank, Tweed, Hadley & McCloy L.L.P., New York and co-ordinator of the Space Working Group). In the second part, representatives from a cross-section of Asian and Asia-Pacific countries (Mr Justice Peter Jacobson, Federal Court of Justice, on behalf of the Government of Australia; Mrs Liu Xiaohong, Division Director, China National Space Administration, Ministry of Foreign Affairs, on behalf of the Government of the People's Republic of China; Mr Rajeev Lochan, Director, INSES and Assistant Scientific Secretary, Indian Space Research Organisation, on behalf of the Government of India; Ms Setsuko Aoki, Professor in the Department of Policy Management, University of Keio, Japan and Ms Sharifah Anisah Syed Omar, Senior Legal Counsel, Astronautic Technology (M) Sdn. Bhd., on behalf of the Government of Malaysia) gave individual assessments of the relevance of the preliminary draft Protocol to their particular countries. In the third part, representatives of the key sectors involved in the space industry gave their own assessments of the practical interest of the preliminary draft Protocol from the points of view of their different sectors: speaking for manufacturers, Mr Robert W. Gordon, Vice President, Space & Defense, Boeing Capital Corporation, assessed the fundamentals of asset-based financing from the perspective of a lender/lessor; Ms Farah Suhanah Ahmad Sarji, General Counsel, Measat and Ms Catherine Chang, Legal Counsel, AsiaSat, assessed its practical interest from the perspective of operators and Mr Sandeep Aggarwal, Director, Media & Telecoms Finance Group Asia Pacific, BNP Paribas, and Mr David Koay, Head, Large Local Corporates, Corporates & Institutions, Standard Chartered Bank Malaysia Berhad, from that of financiers. The final part of the colloquium was structured as a round table for discussion of specific issues of particular importance under the preliminary draft Protocol. It was chaired by Mr Nesgos. Mr Souichirou Kozuka, Professor of Law in Sophia University, Tokyo, acted as moderator. The round table focussed on four specific issues, first, the definition of space assets, under Article I(2)(g) of the preliminary draft Protocol, secondly, the definition of debtor's and related rights, under Article I(2)(a) and (f), thirdly, the identification of space assets, under Article VII, and, fourthly, remedies, *inter alia* in the context of space assets providing a public service, under Articles IX to XVI. Discussion on the first item was led by Mr Peter van Fenema, Adjunct Professor of Law, Institute of Air and Space Law, McGill University, that on the second item by Mr Alfons Noll, Of Counsel, Baker & McKenzie, Geneva, that on the third item by Mr Michael Gerhard, Senior Research Assistant, Project Administration and Controlling, German Aerospace Centre, and that on the fourth item by Mr Rolf Olofsson, Partner, White & Case, Stockholm.

6. The presentations made during the first part of the colloquium are reported on in Part II of this report, *infra*. The presentations made during the second part of the colloquium are

reported on in Part III of this report. The presentations made during the third part of the colloquium and the discussion that they gave rise to are reported on in Part IV of this report. The presentations made during the round table and the discussion that they gave rise to are reported on in Part V of this report. The text of the presentations given by Mr Justice Jacobson and Ms Anisah and copies of the slides and power point presentations used by Mr Welch, Mrs Liu, Mr Lochan, Ms Aoki, Mr Gordon, Ms Suhanah, Ms Chang, Mr Aggarwal and Mr Koay, Mr Kozuka and Mr Gerhard are reproduced in appendices to this report.

II. INTRODUCTION TO THE CONVENTION, ITS STATUS, THE BACKGROUND TO THE PRELIMINARY DRAFT PROTOCOL AND THE ROLE OF THE SPACE WORKING GROUP

7. *Mr Welch*, introducing the Convention, explained that the primary purpose of the new international regimen was to improve the availability of secured financing for categories of high-value mobile equipment which either moved regularly, or were altogether beyond national frontiers. Normally, the law that would be applied to determine the rights of the person who lent money to purchase such equipment and the rights of the debtor was the law of the place where the equipment was situated at the time. However, the inherent mobility of the types of asset covered by the Convention across national frontiers was such as to make the enforceability of the lender's rights dependent on the vagaries of many different national laws. The more the legal rules governing these rights were uncertain, the higher the cost of financing the acquisition of such assets was going to be and the harder it was going to be to obtain such financing. The Convention was basically designed to provide rules that would remove such sources of uncertainty and improve transparency on a global basis.

He explained that the Convention was designed to provide the basic rules governing such categories of equipment with equipment-specific Protocols adapting those rules to the specific patterns of financing for each such category.

He emphasised the importance of the flexibility built into the new international regimen, via a system of declarations, as a means of enabling individual Contracting States to decide how far they were prepared to depart from their national law in order to improve their access to commercial financing.

He noted the important role reserved for the exercise of freedom of contract under the Convention. This was justified by the extremely large amounts of money involved in the transactions covered and the high level of legal and financial advice that the parties involved would have access to in making their choices regarding the structuring of their transactions.

Transparency was provided under the Convention by the establishment of an electronic international registry for the registration of the types of interest covered by the new international regimen. This registry would permit someone wishing to know about the level of financing already granted in respect of a given asset, simply by making a search on-line, to discover the exact situation in respect of that asset. The effect of registration was to preserve the registering party's priority in respect of a particular asset over anybody else lending money on the same asset either not having registered or registering subsequently.

He explained that the international interest in mobile equipment created by the Convention could take one of three different forms: it could be an interest granted by the chargor under a security agreement, an interest vested in a person who is the conditional seller under a title reservation agreement or one vested in a person who is the lessor under a leasing agreement.

In indicating the conditions for the creation of an international interest, he emphasised the special importance attaching to the unique identifiability of the object subject to the interest. It

was for each Protocol to spell out the criteria for the identification of each category of equipment.

He indicated that the only connecting factor laid down for the application of the Convention was that the debtor was situated in a Contracting State at the time the relevant agreement was concluded.

He illustrated the roles of the Supervisory Authority and the Registrar in relation to the operation of the International Registry for each category of equipment. He emphasised that registration under the new international regimen was for the purpose of giving notice to third parties and not for establishing validity. He added that, in addition to international interests, prospective international interests, assignments of international interests and subordinations could be registered in the International Registry, as also any categories of non-consensual right or interest specifically declared by a Contracting State.

Finally, while noting the importance of the basic remedies given to the chargee in the event of the chargor's default (the taking of possession or control of the object, the sale or lease of the object or the receipt of the income or profits from use of the object) and the fact that these remedies were stated to be exercisable in accordance with the security agreement, he drew attention to the key safeguard that the Convention afforded those borrowers who might be in an economically weaker position than their lenders by providing that a chargee's remedies were only enforceable under the Convention to the extent that they were exercised in a commercially reasonable manner and that a remedy was to be deemed to be so exercised where it was exercised in conformity with a provision of the security agreement that was not manifestly unreasonable.

8. *Mr Stanford* informed participants that the Convention had entered into force on 1 April 2004, albeit only technically for the time being, in that its entry into force in respect of a given category of equipment was suspended until the entry into force of the Protocol governing that category. He explained that this was a reflection of the Convention/Protocol structure of the new international regimen, under which, without the rules applicable to the specific categories of equipment embodied in individual Protocols, the scope for the application of the general rules contained in the Convention was minimal. He added that it was more or less certain that the first Protocol to enter into force would be the Protocol on Matters specific to Aircraft Equipment (hereinafter referred to as the *Aircraft Protocol*), opened to signature on the same day as the Convention. Both the Convention and the Aircraft Protocol counted 28 signatory States [5] and four Contracting States. [6] With the number of additional Contracting States expected over the remainder of the year, the Aircraft Protocol - and thus the Convention as applied to aircraft objects - was likely to enter into force early in 2005.

He explained that the initial work on the preliminary draft Protocol had been done by an industry working group (the Space Working Group) organised and co-ordinated, at the invitation of the President of UNIDROIT, by Mr Nesgos, one of the world's leading authorities and practitioners in the field of space financing. At the specific request of the President of UNIDROIT, Mr Nesgos had organised the Space Working Group in such a way as to bring together not only representatives of the principal players in the space industry (manufacturers, operators, financiers and insurers) but also representatives of the different international Organisations and

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[5] Burundi, Canada, Chile, the People's Republic of China, Congo, Cuba, Ethiopia, France, Germany, Ghana, Italy, Jamaica, Jordan, Kenya, Lesotho, Nigeria, Panama, Saudi Arabia, Senegal, South Africa, Sudan, Switzerland, Tonga, Turkey, Ukraine, the United Kingdom, the United Republic of Tanzania and the United States of America.

[6] Ethiopia, Nigeria, Pakistan and Panama.

governmental agencies involved in the regulation of space and the development of space law. Behind the President's decision to give the Space Working Group such a major role in the development of the preliminary draft Protocol was the thought that the technical complexities of the issues involved were such as to militate strongly in favour of giving the parties familiar with the day-to-day practice of commercial space financing transactions an early opportunity to show what sort of rules would be needed to make asset-based financing - the type of financing covered by the Convention - more widely available for commercial space activities.

The text of the preliminary draft Protocol prepared by the Space Working Group, over five sessions held between 1997 and 2002, was laid before the UNIDROIT Governing Council for consideration and, following fine-tuning by a UNIDROIT Steering and Revisions Committee, was transmitted to Governments. A first session of a UNIDROIT Committee of governmental experts was held in Rome from 15 to 19 December 2003. A fair number of the 39 Governments [7] represented came from Asia and the Asia-Pacific region. A second session of the Committee was to be held in Rome from 26 to 28 October 2004. One of the principal issues to be discussed on that occasion would be the proposals tabled by the Space Working Group at the first session of the Committee dealing with the application of the Convention and the preliminary draft Protocol to debtor's rights and related rights.

He finally informed participants of the ongoing process for the choice of the Supervisory Authority of the future international registration system for space assets, stressing the important role the Supervisory Authority had to play in determining the credibility of that system with potential users. He indicated that, while a number of other options were also being considered, the Legal Subcommittee of the United Nations Committee on the Peaceful Uses of Outer Space (U.N./COPUOS) was currently looking at the possibility of the United Nations serving as Supervisory Authority, although a number of difficulties remained to be resolved before a conclusion could be recommended by the Legal Subcommittee to its parent body.

9. *Mr Nesgos* expressed the gratitude of the Space Working Group to the Government of Malaysia, and in particular the Malaysian National Space Agency and the Ministry of Science, Technology and Innovation, and UNIDROIT for organising the colloquium. He also thanked those representatives of the Space Working Group who had taken the time to attend.

He saw the importance of the preliminary draft Protocol to the commercial space industry in the reduction of certain risks associated with the financing and acquisition of space assets through the establishment of clear, substantive, harmonised and commercially oriented international rules governing such transactions, as a result of which it was to be expected that the cost of financing would be lowered and the structuring complexity of, and the duration of negotiations concerning financing transactions would be reduced.

He saw the preliminary draft Protocol as benefitting, first, satellite operators, both investment-grade operators desiring the flexibility to finance satellites on a project- or stand-alone basis and early stage operators requiring asset-based financing in order to acquire satellites, secondly, aerospace manufacturers, including satellite manufacturers and launch service providers, and, thirdly, financial institutions requiring the protection and benefits of secured financing to support transactions that were not sustainable on a balance-sheet basis.

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[7] Algeria, Argentina, Australia, Austria, Belgium, Brazil, Bulgaria, Canada, the People's Republic of China, the Czech Republic, France, Germany, Greece, India, Indonesia, Ireland, Italy, Japan, Kenya, Luxembourg, Malaysia, Mexico, Morocco, Nicaragua, Nigeria, Pakistan, the Republic of Korea, the Russian Federation, Slovakia, South Africa, Spain, Sweden, the Syrian Arab Republic, Thailand, Tunisia, Turkey, Ukraine, the United Kingdom and the United States of America.

He saw the preliminary draft Protocol as being necessary to redress the situation under which the legal regimes of many countries did not at present provide clear, enforceable and protective systems for the creation, perfection, priority and enforcement of security interests, non-possessory pledges, mortgages or hypothecs over space equipment, such as satellites, and their component parts, such as transponders. In order to facilitate the financing of space equipment that was manufactured, transported for launch and ultimately located outside the jurisdiction of the country, there was a need for clear rules under the law governing the granting of security where the collateral was located and where the borrower had its place of business. To date the absence of such clear rules had made satellite financing more difficult and more expensive for satellite operators to secure.

The benefits that would accrue under the future Space Protocol would be, first, the reduced cost and simplification of satellite financing, secondly, the ability to attract more financial institutions to satellite financing, thirdly, the provision of uniform rules to cover the period right through from the start of manufacturing to launch and thereafter, fourthly, the provision of protection for more than just the satellite, fifthly, the provision of protection for contracts of sale in addition to security agreements, title retention agreements and leasing agreements and, finally, the provision of expeditious and reliable remedies.

He saw the adoption of the Convention and the Aircraft Protocol as affording a unique window of opportunity for the space community to promote a Protocol for space assets that would facilitate satellite financing.

Finally, he explained that the mission of the Space Working Group was to ensure that the perspectives of satellite operators, aerospace manufacturers, financial institutions and the insurance industry were duly taken into consideration in the preparation of the future Space Protocol. He warned, however, that, unless the space industry and financiers played an active and vocal role in its formulation, Governments would simply move forward in what they perceived to be the public interest. The Space Working Group could not achieve its purpose without the active input of the interested participants. The challenges that it faced should not therefore be underestimated.

III. ASSESSMENT OF THE RELEVANCE OF THE PRELIMINARY DRAFT PROTOCOL TO ASIA AND THE ASIA-PACIFIC REGION

10. *Mr Justice Jacobson* noted that Australia had 37 years earlier become only the third country to launch an indigenous satellite and that the Australian Government's space engagement policy was currently user- and market- rather than supply-driven, with a key objective of this policy being to obtain secure and economic access to the considerable benefits to be derived from the use of space. A central element in Australia's policy framework for space engagement involved participating in and supporting global co-operative and trading arrangements to achieve strategic, economic and social results. Promoting the availability of commercial financing for space activities could encourage the development of Australia's and the region's domestic space industries and assist in broadening the accessibility of telecommunications and information services and in furthering scientific research. He noted that Australia had a proud history of contributing to the exploration of space and the development of space-related technologies. It had competitive advantages in the ground segment aspects of space infrastructure. These circumstances had led to Australia hosting major ground station facilities in support of most Western endeavours in space, from astronomy to manned space programmes and deep space explorations and from Earth observation to telecommunications. The Australian space industry was primarily centred around providing technological, operational and research services, including niche areas like signal and data processing, instrumentation, debris tracking and some propulsion technologies.

He saw the Convention as implemented by the preliminary draft Protocol as tending to reduce the uncertainty and risks associated with the financing and acquisition of space assets through the establishment of transparent, substantive and commercially relevant international rules. Referring to the three types of agreement covered by the new international regimen, he noted that Australian law drew a distinction between security and title-type agreements, notwithstanding the developments on this score that had occurred in North America and New Zealand: Australia treated the conditional seller and lessor as full owner, whereas in Canada, New Zealand and the United States they were treated as holders of security interests.

The rich tapestry of provisions that Australia had regarding the registration of security interests in goods, company assets and real property meant that Australian participants in business, finance and the law were very familiar with the concepts of registrable interests and priority underpinning the Convention and the preliminary draft Protocol. While there were some differences between the Australian system and the new international registration system, they shared the great benefit that priority was solely and transparently based on the sequential ordering of registrations and that the risk to a subsequent registrant should be comparatively slight.

He welcomed the new international regimen's innovative use of a system of declarations to build flexibility into its application to each Contracting State. The benefit of this approach was that it would permit greater acceptance and domestic implementation of an international regimen which might otherwise conflict with national policy considerations. It was however possible that, if Australia decided to implement the Convention and future Space Protocol, it would not, to a large extent, avail itself of the optional declarations permitting the registration of various non-consensual rights and interests and giving priority to other such rights and interests without registration, since Australian law afforded a wide measure of protection to chargees of corporate property.

He however noted that the emphasis laid on freedom of contract had the potential to lessen the degree of harmonisation actually achieved.

He noted that, while the true value for creditors in seeking constructive possession of a space asset lay in the core related rights rather than the physical object itself, the general inability freely to assign such rights seemed to raise a problem. In particular, there were legitimate concerns that some of these rights constituted public resources that should not be concentrated in the private sector and be freely transferable, with the relevant States having little ability to restrict their assignment to parties off-shore. Article XVI(2) of the preliminary draft Protocol, enabling Contracting States to place restrictions on the assignment of related rights as well as technology and data, could, however, provide the necessary degree of flexibility.

Whilst Australia recognised the need for a strong degree of predictability and uniformity if the costs and risks at present limiting the availability of asset-based financing for space financing were to be sufficiently reduced to make it a more attractive proposition, it saw that the preliminary draft Protocol might need also to provide appropriate protection for debtors, the launching State and, potentially, other States investing in other facilities tied to the space asset. In particular, he noted the liability concerns of launching States which found themselves no longer having jurisdiction over a creditor that had taken control of a space asset from a defaulting debtor. He was not sure that Article XXI*bis* adequately tackled the problem. He suggested that the granting of an indemnity to the launching State by the creditor gaining control might constitute an appropriate solution in commercial terms but this still left the problem as to how the payment of such an indemnity could be enforced.

Australia welcomed the excellent work done to date and looked forward to the Convention as implemented by the preliminary draft Protocol having a positive effect on the availability of asset-based financing in the Asia-Pacific region.

11. *Mrs Liu* indicated that the People's Republic of China's space programme went back to 1956. In that time it had established a comprehensive space research, design production and testing system. It had three launching centres. It had established a complete telemetry, tracking and command system. It had developed 12 types of launch vehicle. It had launched telecommunication satellites, a remote sensing satellite, two meteorological satellites, navigation test satellites and space scientific satellites. It had cultivated seeds returned from space, which had given a 25% or more increase in the production of crops. It had conducted a number of tests for a manned space flight, culminating in the sending of an astronaut into space in 2003.

From the difficulties that a Chinese telecommunication satellite company, the Sino-Sat Communication Company Ltd., set up in 1993, had experienced in implementing an international financial lease, guaranteed by Kreditanstalt für Wiederaufbau, that it had concluded in order to acquire a satellite, she drew a number of important lessons. The first was the need for an effective policy setting, the second the need for appropriate domestic laws and regulations, the third the need for financial instruments that were capable of adaptation for Government and private-sector participants alike, and the fourth the difficulty that financial institutions might face in effectively monitoring space assets in which they had an interest. She also noted the potential difficulties in the exercise of a creditor's rights over space assets, particularly for communication satellites which might have limited transmission spectrums or be affected by national laws regulating media and media content.

12. *Mr Lochan* provided an overview of the Indian Space Programme, which had three major facets: the INSAT satellite system (the basis for telecommunications, broadcasting and meteorological services), the Indian remote-sensing satellite system and launch capabilities. The programme, which operated on a budget of approximately US$450 million per annum, had focussed on applications for space technology rather than the development of space technology itself and had a strong element of international co-operation. The programme had a particularly important role to play in addressing development problems, as exemplified by the use of remote-sensing satellites to identify underground water resources, the agricultural potential of land and potential fishing zones. Satellite-based communications were also assisting with the delivery of professional training and health services to remote areas and with management of natural disasters. The programme had pursued a policy of self-reliance which, while requiring larger financial commitments, higher risks and a longer gestation period, would enable India to have a self-reliant space industry. Future plans would focus on increasing launch capabilities, increasing the number of satellites and further developing high-technology applications.

One particular area of interest related to the interaction between the programme and the legal fraternity, including the acceptance by the Indian legal system of evidence gathered by remote sensing satellites in enforcing environmental laws. India had a long history of productive participation in U.N./COPUOS, and had been a party to all five United Nations space treaties for over two decades, and at the grass-roots level, was promoting student participation in space law studies.

In relation to the preliminary draft Protocol there were a number of potential difficulties to overcome. First, there was the need to ensure that the preliminary draft Protocol did not unduly displace the principles underlying the United Nations space treaties, particularly the requirements of those treaties that rights and obligations be exercised primarily by their State parties. Secondly, there was the need to avoid the possibility that satellites used for essential national development purposes be transferred to other, more profitable uses in cases of default. Thirdly, there was the need to consider whether rights granted to States, such as orbital slots

and frequencies, should be able to be transferred to private financial institutions in cases of default. Fourthly, there was a question about the proportionality of possible default remedies, bearing in mind that the value of on-the-ground technology and infrastructure was usually much greater than the value of satellites and other objects in space. Fifthly, there was the difficulty of harmonising regulation of the ground segment of the space industry, which was usually achieved through national laws, and regulation of outer space, which was achieved through international treaties. Finally, there was a likelihood that privately-financed activities in space would remain relatively limited, which raised questions about the viability of funding the operations of the International Registry for Space Assets from user fees.

In conclusion he noted that the preliminary draft Protocol would not be of great immediate significance to India while the Indian Space Programme remained Government-funded but that this would change as private-sector investment emerged.

13. *Ms Aoki* began by noting that the process of developing the preliminary draft Protocol had been met with great interest in Japan, owing to the recognition of the need for uniform rules governing security interests in space assets and the growth of the commercial satellite industry. There had also been relevant developments in the domestic legal framework, including the preparation of legislation that would recognise hypothecation rights in movable property. She noted that a number of issues and concerns about the preliminary draft Protocol had been raised in Japan. First, it had been noted that international legal instruments were not always successful in attracting large numbers of ratifications. Secondly, although the development of the preliminary draft Protocol had highlighted the need for inclusion of optional clauses and restrictions on default remedies, these could limit the preliminary draft Protocol's ultimate effectiveness. Thirdly, there would be difficulty in achieving an appropriate balance between the established regimen of public international space law and the need for the preliminary draft Protocol to be effective in facilitating the financing of space activities.

Japan's support for the preliminary draft Protocol had grown during the preliminary draft Protocol's development, and Japan believed that it would be possible to resolve any conflicts between the preliminary draft Protocol and the United Nations space treaties, provided States duly implemented their obligations under Article VI of the Outer Space Treaty and enacted appropriate laws dealing with information technology, telecommunications and business issues. She noted that, with or without the preliminary draft Protocol, the transfer of ownership of space assets would occur more frequently and it would be necessary for States to conclude agreements providing for the State of the new owner's nationality to assume responsibility under international law and for apportionment of liability. This indicated that the United Nations space treaties did not adequately address all aspects of current commercial space activities.

She noted that there would be important issues about how to construct an effective international registry and which organ of the United Nations should be the Supervisory Authority under the preliminary draft Protocol. On the latter issue, Japan did not hold any strong preference but believed that whichever organ was chosen, it would be necessary to provide full immunity for the Supervisory Authority in order to avoid difficult legal problems.

14. Ms Anisah began by outlining the history of Malaysia's space activities, which began with the launch of two satellites in 1996, and the launch of Malaysia's first satellite in 2000. Malaysia's space activities were undertaken and implemented by the Government's Astronautic Technology Sdn Bhd (ATSB) agency. ATSB was in the final stages of development of the Government's second satellite. Malaysia's commitment to developing its space activities had been further demonstrated by the formation of the National Space Agency. Malaysia's space activities were currently wholly owned, and funded, by the Government. However, it was obvious that future space activities would inevitably require introduction of non-Government funding, as had occurred in other countries. The National Space Agency had conducted a

national workshop to discuss the technical and financial aspects of space investments. One issue that had been identified in the workshop was the need to define "space assets" in the preliminary draft Protocol. Another important issue would be the ability of Contracting States to modify or exclude, by declaration, the operation of some remedies and to ensure that any limits on the scope of declarations would not conflict with national policies.

15. *Mr Nesgos* noted that the presentations had highlighted important issues, including the relationship between the preliminary draft Protocol and existing public international space law and concerns with respect to the exercise of remedies. The desirable outcome would be an instrument that was properly reflective of the interests of national Governments and protected national laws and which was practical and workable from the perspective of industry.

IV. ASSESSMENT OF THE POTENTIAL INTEREST OF THE PRELIMINARY DRAFT PROTOCOL FROM THE POINTS OF VIEW OF MANUFACTURERS, OPERATORS AND FINANCIERS

16. *Mr Gordon* traced the development of the geosatellite industry and noted that it had grown to become a US$55 billion industry, with 220 geosatellites worth US$250million each, on average. However, some States had a limited ability to attract the investment capital necessary to participate in the industry and therefore suffered from more limited access to the internet, telemedicine, remote natural disaster management and modern communications technologies. Neither Governments nor satellite manufactures had sufficient resources to create complete global communications systems and it would be necessary to access the global capital markets in order to fully develop the geosatellite industry. The preliminary draft Protocol would create the legal foundation for this.

He noted that from a lender's perspective there would be three critical issues in assessing the efficacy of the preliminary draft Protocol. The first question was whether the lender would have a legal, valid and binding security interest in all of the integral components of the space system. The preliminary draft Protocol's definition and identification of "space assets" would be critical to this. To be a practical financing tool, the Protocol would not be able to exclude assets critical to the lender. The second question was whether there would be a clearly defined set of contractual rights and associated legal remedies. He referred to the preliminary draft Protocol's remedies provisions and noted that, in order to be a practical financing tool, the preliminary draft Protocol would need to provide financiers with a clear pathway to space assets. The third question was whether there would be an international public registry that would document the security interests of lenders and which would be recognised by judicial systems. It would be important that financiers have certainty that their rights would not be superseded and in this regard the preliminary draft Protocol's registry and priority provisions would be critical. He noted that the preliminary draft Protocol must strike an appropriate balance between the needs of Governments and the needs of the global capital markets and that an imbalance favouring either side would create an ineffective document.

17. *Ms Sarji* provided an overview of MEASAT's experiences in financing transactions. Requirements for the financing of space assets typically included a debenture over all assets (including the satellites), an assignment of all cash flows, an assignment of all key contracts, an assignment of insurance proceeds, a corporate guarantee and debt-service recovery accounts. In the Malaysian context, there were a number of laws that regulated the enforcement of security interests over space assets, including laws that regulated changes in their ownership. In relation to the preliminary draft Protocol, issues of relevance for satellite operators would include the system for recognising the priority of claims, the local regulatory framework and its capacity to enable enforcement, public policy considerations relating to the ownership and use of space assets and access to controlled or restricted information and data.

18. *Ms Chang* outlined the financing mechanisms that had been used in relation to AsiaSat's satellites and which included term loan facilities, fixed and floating charges, shareholders' guarantees and restrictive covenants. In relation to term loan facilities, issues that had arisen included the status of the company, consent and approval requirements of regulatory authorities, manufacturer's export controls, insurance and relationships with the customer. It was hoped that the preliminary draft Protocol would simplify the financing process by reducing costs, by simplifying the process and enabling a greater range of financing options and by enabling speedy and effective access to judicial remedies. The issues that would require resolution included the difficulty in obtaining the agreement of the operator's Government to a transfer of the right to use a space asset, restrictions on the transfer of technical data, the limited number of potential buyers for space assets and the uncertain value of a security provided by a transponder agreement.

19. *Mr Nesgos*, in response to questions about the possible implications for the exercise of remedies, noted that the preliminary draft Protocol recognised the significance of export controls in the exercise of remedies over space assets but would not seek to change or override national laws and would recognise that any assignment be consistent with such laws. Although this might affect the expediency of remedies, States had been very clear that it was important to retain national control over licensing. It was likely that a financier exercising its remedies would look, in the first instance, for another owner or operator prepared to operate the space asset under the terms of the existing license, or for an operator able to use the space asset in another orbital position or using different frequencies but that the availability of these options would depend on national laws and regulations. The preliminary draft Protocol would not be intended to change or disrupt the regimen of liability for space objects under existing international space law.

20. *Mr Aggarwal* noted that there had traditionally been fewer sources of funding for space assets than for other commercial activities. In Asia, most of the recent satellite financing arrangements had been in the form of support by the relevant national export credit agency. It had proven difficult for financiers to arrange appropriate security, as in the case of Thailand, where Government regulations required operators to transfer ownership of a satellite and associated assets to the Government as soon as they commenced commercial operations. Nevertheless, it was expected that demand for satellite financing would increase in coming years. Financiers would be happy to see the preliminary draft Protocol finalised and ratified by as many Governments as possible.

21. *Mr Koay* addressed a number of issues of practical issues of potential concern to financiers. It was important that the preliminary draft Protocol defined space assets in such a way that they could include intangible rights, such as the right to use an orbital slot. It was important that the International Registry for Space Assets established under the preliminary draft Protocol would be able to track changes in the orbital path and the sale of some (but not all) of the transponders on a satellite. There might be difficulties in putting in place appropriate insurance, particularly if the insurance industry had limited capacity in the event of a claim. Insurance would be the third largest of space asset project costs after the satellite cost and launch cost.

22. *Mr Nesgos* noted that a discussion about the low representation of financial institutions on the Space Working Group had indicated that the current infrequency of satellite financings had limited the development of specialised space asset financing expertise within the financial community. A discussion about the importance to space asset financing of intangible assets, such as rights to use orbital positions and insurance proceeds, noted the particular importance to financiers of ensuring that the space assets could generate sufficient cash flows to service the debt. It was also suggested that in cases where a State was dependent upon a

satellite for essential public services and the operator of the satellite was in default, a possible solution for avoiding the loss of that State's essential public services would be to require that the State be given the right of first refusal to purchase the satellite. It was also noted that although most private financing would be provided for satellites with purely commercial objectives, it was possible to obtain private financing for satellites with social or scientific objectives.

V. SPECIFIC ISSUES OF PARTICULAR IMPORTANCE UNDER THE PRELIMINARY DRAFT PROTOCOL

23. *Mr Kozuka*, reporting on the results of the first session of the UNIDROIT Committee of governmental experts, noted that the preliminary draft Protocol's definition of space assets included the phrase "intended to be launched", which recognised the reality that space financing took place before satellites were launched into space. It would also be important that an international interest already existing over a space asset not be lost merely because of the return of the asset to Earth. The preliminary draft Protocol would also need to recognise debtor's rights and related rights to reflect the realities of financing arrangements. However, it would be important that the preliminary draft Protocol not interfere in a State's decisions about the issue or transfer of licences. The preliminary draft Protocol's definition of space asset also recognised that some financing arrangements might relate to some parts only of a satellite, such as its transponders. In cases where there were two creditors with an interest in a space asset, such as where two creditors each had security over a different set of transponders on the same satellite, the first session of the UNIDROIT Committee of governmental experts had suggested that any conflicts could be resolved by resort to the priority rules, while permitting the creditors to reach agreement and facilitate solutions between themselves. Another issue that had been raised at the first session of the UNIDROIT Committee of governmental experts was whether Contracting States under the preliminary draft Protocol should be able to declare the extent to which remedies could be exercised in relation to space assets used for public purposes.

24. *Mr van Fenema* noted that there had never been a need for a universally recognised definition of space assets, nor of outer space, but financing and security contracts needed to be very specific. A simplified definition of space assets, covering only hardware, might create complications in the application of the preliminary draft Protocol as regards intangible rights. It would be appropriate that physical ground installations not be covered by the definition, as these were more appropriately the preserve of national law.

25. *Mr Nesgos*, referring to the phrase "intended to be launched and placed in space", noted that there was an issue whether a space asset that was launched without the intention that it spend time in space would be covered by the preliminary draft Protocol. He also noted that it had been intended that manufacturers of launch vehicles requiring construction financing would be able to avail themselves of the preliminary draft Protocol.

26. *Mr Noll* noted that the definition of space assets contemplated the future granting of licences, frequencies and assignments by, in addition to national Governments, international bodies and intergovernmental bodies. He also noted that the use of declarations should be prudent and limited, and that Contracting States should be prepared to be flexible in their application of the preliminary draft Protocol.

27. *Mr Nesgos* noted, in response to a question regarding the application of the definition of "space assets" to transponders, that the key element would be whether the components of the transponder were separately identifiable and the fact that some components of a transponder might be shared with components of another transponder would not prevent it being a space asset within the definition.

28. *Mr Gerhard* discussed issues related to the identification of space assets. He noted that criteria for identification should not be able to be left solely to agreement between the

creditor and the debtor but should always require notification to the Registrar. He noted that identification criteria should not be left to regulations but should be dealt with in the preliminary draft Protocol itself, because identifiability was not an operational issue but would be an essential element in determining the application of the preliminary draft Protocol. He noted that the preliminary draft Protocol was capable of dealing with a wide variety of assets, which made it difficult to develop identification criteria.

29. *Mr Nesgos* noted that there would be advantages in setting forth identification criteria in the preliminary draft Protocol, but that in the event that additional useful criteria were identified in the future they might be able to be dealt with in regulations. The preliminary draft Protocol was not intended to be limited in its application to large space assets.

30. *Mr Olofsson* noted that any security interest would require four elements to be effective: a clear definition of what creditors would be eligible to benefit from; a clear definition of the assets that could be charged; simple and efficient perfection mechanics so that the security interest could be known to third parties; and efficient remedies. He noted that, in relation to remedies, there would be a number of potential issues relating to the nationality of the chargee, such as export controls, and requirements for approval by licensing authorities. He noted that Governments would typically require a licence for the operation of a satellite and for allocation of orbital slots and frequencies. He noted that the need for protection of essential public services would not necessarily require the preliminary draft Protocol to specify a limitation on the exercise of remedies but could be addressed by Governments obtaining a security interest in a space asset and registering that interest as an international interest.

` 31. *Mr Nesgos* noted that the categories of asset to which the preliminary draft Protocol could apply should not necessarily be limited to exclude space assets that might not be regarded as "equipment" as that word was used in the preamble. He noted that the expectation would be that, by creating a legal framework to provide harmonised and clear rules, financiers would begin to focus more on the intrinsic value of tangible space assets. On the issue of declarations, he noted that the preliminary draft Protocol would enable States to make declarations but the making of a declaration by a Contracting State might mean that some of the inherent benefits of the preliminary draft Protocol might not be as readily available to it, and this might in turn serve to impede speedy financing.

VI. CONCLUSIONS AND CLOSING OF THE COLLOQUIUM

32. *Mr Panahy*, indicating the conclusions to be drawn from the colloquium, noted that additional thought could be give to the scope of the definition of "space assets" and whether the criteria were sufficiently clear. He noted that the definitions of debtor's rights and related rights provided additional clarity in describing the rights that a creditor might have with respect to a debtor and the underlying assets being financed. There appeared to be significant consensus that it would be preferable to re-insert within the text specific criteria for the identification of space assets and to determine, in consultation with financiers, whether those criteria would be sufficiently inclusive to enable effective searches to be made. He noted that one of the most important features of the preliminary draft Protocol would be to provide prompt, transparent and effective remedies that were commercially reasonable and which respected sovereign sensibilities and that the preliminary draft Protocol would provide declarations to enable different legal regimes and different sovereign rights to be accommodated.

33. *Mr Herbert Kronke*, Secretary-General of UNIDROIT, thanked Mr Jarjis; Ms Othman and the Malaysian National Space Agency for their gracious and effective hosting of the colloquium. He also thanked the Space Working Group and all speakers and participants.

34. *Ms Othman* thanked all participants and speakers for making the colloquium a success.