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The availability of a new form of financing for commercial space activities: the extension of the Cape Town Convention to space assets

MJ Stanford*

The third and latest Protocol to the Cape Town Convention, on Matters specific to Space Assets, was opened to signature in Berlin on 9 March 2012, at the conclusion of a diplomatic Conference held at the kind invitation of the Government of Germany. Three of the 40 States represented at the Conference, namely Burkina Faso, Saudi Arabia and Zimbabwe, signed the Protocol at the closing ceremony of the Conference. The new Protocol will enter into force – and, with it, the Cape Town Convention as applied to space assets – on the later of the date of the deposit of the tenth instrument of ratification, acceptance, approval or accession and the date of the deposit by the Supervisory Authority with the Depositary of a certificate confirming that the International Registry for space assets is fully operational. In this article the author, first, reports on the Berlin Conference, focusing in particular on the principal issues that fell to be resolved at the Conference, secondly, recounts the history of the project, thirdly, explains the basic legal and economic assumptions underpinning UNIDROIT's preparation of the Protocol and, fourthly, introduces the key features of the Protocol. Finally, he essays some preliminary conclusions, focusing in particular on the benefits that it is hoped the Protocol may bring to not only emerging and developing economies, start-up companies and smaller operators but also manufacturers and financiers, as these see their markets significantly broadened as a result of the increased availability of asset-based finance as an alternative and, on balance, cheaper method of financing.

1. Introduction

The Convention on International Interests in Mobile Equipment opened to signature in Cape Town on 16 November 2001 (hereinafter the 'Convention') provides the general rules governing the taking of security in those classes of high-value mobile equipment by their nature moving regularly across or beyond national frontiers. Originally, it was intended that the Convention would embody all the rules governing such classes of equipment. However,

at the third session of the UNIDROIT Study Group for the preparation of uniform rules on international interests in mobile equipment, held in Rome from 15 to 21 January 1997, it became clear that considerably more time would be needed to develop the rules specific to those classes of equipment other than air-frames, aircraft engines and helicopters, whereas the aviation community was already reasonably clear as to the rules specific to aircraft objects that would need to be embodied in the future Convention. It was, therefore, decided to establish a dual structure for the future international regimen comprising, on the one hand, a Convention to carry the general rules applicable to all those classes of equipment which it covered

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and, on the other, equipment-specific Protocols to carry the special additional rules that would be needed to adapt these general rules to the specific pattern of financing for each such class of equipment. The first such Protocol, on Matters specific to Aircraft Equipment (hereinafter the ‘Aircraft Protocol’),¹ was opened to signature in Cape Town on 16 November 2001, at the same time as the Convention, with the other two Protocols contemplated by Article 2(3) of the latter, on Matters specific to Railway Rolling Stock (hereinafter the ‘Rail Protocol’) and on Matters specific to Space Assets (hereinafter the ‘Space Protocol’) falling to be finalised subsequently: the Rail Protocol was opened to signature in Luxembourg on 23 February 2007 and the Space Protocol in Berlin on 9 March 2012. Moreover, under Article 51(1) of the Convention, it is open to UNIDROIT, as Depositary, to propose the preparation of additional Protocols.²

The present article is designed as an introduction to the Space Protocol and to provide a report on the diplomatic Conference held in Berlin from 27 February to 9 March 2012. In a first section we shall report on the Conference. In Section 3 we shall examine the history of the project and the legal and economic assumptions underpinning UNIDROIT’s preparation of the Space Protocol. Section 4 will be devoted to an analysis of some additional key features of the Space Protocol other than those touched on in Section 2. And in Section 5 we shall essay some preliminary conclusions.

2. Adoption and opening to signature of the Space Protocol

(a) Background to, and participation in the Berlin diplomatic Conference

The Berlin diplomatic Conference, held at the kind invitation of the Government of the Federal Republic of Germany, had before it a draft Protocol finalised by a UNIDROIT Committee of governmental experts (hereinafter the ‘Committee’). This draft Protocol had been transmitted to the diplomatic Conference for adoption pursuant to a decision taken by the UNIDROIT Governing Council, at its 90th session, held in Rome from 9 to 11 May 2011. At that session, the Governing Council had endorsed the conclusion reached by the Committee at its fifth and final session, held in Rome from 21 to 25 February 2011, that the draft Protocol as improved during that session was ripe for such adoption. All UNIDROIT member States were invited to the diplomatic Conference, as well as, pursuant to Resolution No 3 adopted by the Cape Town diplomatic Conference, all member States of the United Nations. Invitations were also extended, as observers, to the relevant international Organisations and, as technical advisers, to those representatives of the international commercial space, financial and insurance communities having participated in the development of the draft Protocol.

40 States³ participated in the diplomatic Conference, 34 of which presented credentials in due and proper form. The Conference was also attended by one Regional Economic Integration Organisation,⁴ four intergovernmental

¹ At the time of writing (22 June 2012), the Convention counted 51 Contracting Parties and the Aircraft Protocol 45. As of 31 May 2012, approximately 337,248 registrations had been made in the International Registry for aircraft objects, against 86,573 aircraft objects since its entry into operation (on 1 March 2006).

² UNIDROIT is currently considering the case for preparing a fourth Protocol, on Matters specific to Agricultural, Construction and Mining Equipment; see Resolution No 5 passed by the diplomatic Conference for the adoption of the Rail Protocol.

³ Albania, Brazil, Burkina Faso, Canada, the People’s Republic of China, Colombia, the Czech Republic, Denmark, France, Germany, Ghana, India, Indonesia, Iraq, the Islamic Republic of Iran, Ireland, Italy, Japan, Latvia, Luxembourg, Madagascar, Malawi, Mexico, Moldova, Nigeria, the Islamic Republic of Pakistan, Portugal, the Republic of Korea, the Russian Federation, Saudi Arabia, Senegal, Slovenia, South Africa, Spain, Sudan, Turkey, the United Kingdom, the United States of America, Yemen and Zimbabwe.

⁴ The European Union.

Organisations,⁵ five international non-governmental Organisations⁶ and a certain number of technical advisers,⁷ as well as a number of special invitees of the Government of Germany⁸ and Mr R Cowan, Managing Director of Aviareto Limited, the Registrar of the International Registry for aircraft objects. Altogether, the Conference was attended by 186 participants.

The President of the Conference was Mr JHE Kronke (Germany). The Vice-Presidents of the Conference were Mr HS Burman (United States of America), Mr M Gourdault-Montagne (France), Mr IE Manylov (Russian Federation), Rev M Stofile (South Africa) and Mr Tang Wenhong (the People's Republic of China). The Chairman of the Commission of the Whole was Mr S Marchisio (Italy). The Deputy Chairman of the Commission of the Whole was Mr V Kopal (Czech Republic). Sir Roy Goode (United Kingdom) was appointed Reporter. The Chairperson of the Final Clauses Committee was Ms N Chadha (India). The Chairman of the Credentials Committee was Mr E Zoungrana (Burkina Faso). The Chairman of the Drafting Committee was Mr M Deschamps (Canada). Mr JA Estrella Faria,

⁵ The European Space Agency, the Intergovernmental Organisation for International Carriage by Rail (OTIF), the International Civil Aviation Organization (ICAO) and the International Telecommunication Union (ITU).

⁶ The Aviation Working Group (AWG), the European Satellite Operators Association, the International Bar Association, the International Institute of Space Law (IISL) and the Rail Working Group.

⁷ Mr H Baumann (Munich Re Insurance Company), Mr M Borello (Thales Alenia Space), Mr S Devouge (Marsh SA), Mrs C Dubreuil (Astrium), Ms NJ Eskenazi (SES SA), Mr O Heinrich (BHO Legal), Ms M Leimbach (Legal Risk Consultants), Mr M Lemaire (Eutelsat Communications), Ms P Meredith (Zuckert Scoutt Rasenberger LLP), Ms M Petitjean (Eutelsat Communications), Mr B Schmidt-Tedd (German Space Agency) and Mr J-C Vecchiato (EADS).

⁸ Mr U Grude (Norddeutsche Landesbank Girozentrale), Mr J Meincke (Association of German Pfandbrief Banks), Mr M Reuleaux (Norddeutsche Landesbank Girozentrale) and Ms A Richter-Mendau (Association of German Pfandbrief Banks).

Secretary-General of UNIDROIT, acted as Secretary-General of the Conference.

(b) Principal problems dealt with by the Conference

(i) Need for the Space Protocol

An initial problem that fell to be dealt with at the outset of the Conference was the continuing insistence by certain sectors of the space industry that the draft Protocol was not needed, that it would create an unnecessary layer of supranational law and that it would raise, rather than lower the costs of commercial space financing, principally by reason of the complexity of the text.⁹ The representatives of four States attending the Conference supported these arguments, claiming that the draft Protocol was not ripe for finalisation. However, the vast majority of delegations represented at the Conference made clear their conviction that the draft Protocol was to be expected in general to benefit developing and emerging markets and in particular to assist smaller operators and start-up companies, as well as to broaden access to the commercial space market. Once the decision to finalise the draft Protocol had been taken, it is to be noted that all delegations worked constructively together toward the production of the best possible text.

(ii) Physically linked space assets

In the light of the decision to include high-value components, such as transponders, in the definition of 'space asset', the Conference had to decide what should be done in those situations where conflicts of interests might arise at the time of a creditor's exercise of its default remedies in respect of a space asset that was physically linked to another asset belonging to a non-defaulting third party, such as a transponder, potentially impacting negatively on that third party.

There had long been a division of opinion

⁹ DCME-SP – Doc 6, 5ff.

within the Committee as to the most appropriate solution to this problem: on the one hand, there were those arguing that this was an issue on which the draft Protocol should be silent, with the issue being left to be resolved by inter-creditor agreements, and, on the other, those who claimed that, whilst it was right that inter-creditor agreements should, in principle, govern such potential conflicts, a default rule should be provided for those cases where no inter-creditor agreement was actually made.

However, on the basis of negotiations in the run-up to the Conference, the two delegations that had been principally involved in the discussions on this issue were able to lay a joint proposal before the Conference for a new Article XVII(3).¹⁰ Under this proposal, what the parties agreed on the issue in their inter-creditor agreements would in all cases prevail but, in the event of the parties failing to reach such agreements, a creditor would not be able to enforce a security interest in a space asset that was physically linked with another space asset so as to impair or interfere with the operation of the other space asset if an international interest or sale had been registered with respect to the other space asset prior to the registration of the security interest being enforced. It is important to note that this substantive rule was thus only intended to serve as a fall-back rule in what was generally recognised to be the unlikely event of the parties failing to make inter-creditor agreements on this issue. This proposal was accepted.

(iii) Limitations on remedies

(A) Preservation of powers of Contracting States

From the beginning, those preparing the Space Protocol had been clear in their minds that nothing in the Protocol was intended to affect the exercise by Contracting States of their authority to issue licences, approvals, permits or authorisations for the launch or operation of space assets. However, at the final session of the Committee one Government put forward

a proposal for amending the provision of the draft Protocol under which Contracting States were permitted, through the lodging of a declaration, to restrict or attach conditions to the exercise of default remedies where such exercise would involve or require the transfer of controlled goods, technology, data or services or would involve the transfer or assignment of a licence, or the granting of a new licence.¹¹

Intensive negotiations during the Conference produced a redrafting of the provision in question, as a result of which it is now made explicit in Article XXVI of the Protocol, first, that the Space Protocol does not affect the exercise by Contracting States of their authority to issue licences, approvals, permits or authorisations for the launch or operation of space assets or the provision of any service through the use, or with the support of space assets and, secondly, that it is not to be read as requiring Contracting States to recognise or enforce an international interest in a space asset where such recognition or enforcement would conflict with its laws or regulations concerning the export of controlled goods, technology, data and services or national security.

(B) Public service

Another problem that had dogged the inter-governmental negotiations right up until the Conference concerned how to strike the most appropriate balance between, on the one hand, the interests of a creditor seeking to exercise remedies against a space asset performing a ‘public’ service in the event of its debtor’s default, and, on the other, those of one or more organs of the State anxious to ensure the continuity of the performance of the particular ‘public’ service notwithstanding that default.

The kernel of a solution to this problem was found at the final session of the Committee when it was agreed that any creditor seeking to exercise a default remedy that would interrupt a service designated in the future International Registry as a public service would have to give six months’ notice of its intention to exercise

¹⁰ DCME-SP – Doc. 17.

¹¹ CGE/Space Pr/5/WP 14 rev.

such remedy to the affected Government or Government agency, with the Government or Government agency during that time being invited to be directly involved in any proceedings of the regulatory authority of the licensing State of the asset that the defaulting debtor might also take part in, whether or not the creditor or debtor was located within that State.

Differences of opinion, however, were evidenced at the Conference as to the appropriate length of notice to be given by the creditor of its intention to exercise its remedies. On the one hand, some Governments felt that to extend this period of time beyond three months would have the effect of limiting the availability of credit, whilst, on the other, a significant number of States, particularly those hailing from the developing and emerging worlds, indicated that three months would simply not be long enough for the putting in place of the arrangements necessary for the maintenance of the public service in question. However, again on the basis of negotiations in the run-up to the Conference, the two delegations principally involved in the discussion of these issues, were able to lay a joint proposal before the Conference for a new Article XXVII(3) and (4).¹² Under this proposal, as amended, the length of the period of notice was made subject to a declaration that each Contracting State would have to make upon ratification, acceptance, approval of, or accession to the Space Protocol. Each State would thus be able to specify the time-period that it preferred, with this period neither exceeding six months from the time of the creditor's indication of its intention to exercise its remedies nor being less than three months from the same date. This proposal, as amended, met with unanimous approval.

(c) Adoption by the Conference of the Space Protocol and Resolutions

The Space Protocol was adopted by the Conference on 7 March 2012.

The following day five Resolutions were passed by the Conference. Resolution No 1 provided for the establishment of the Preparatory Commission which will have the task of setting up the future International Registry for space assets. Reflecting the interest expressed by the Secretary-General of the International Telecommunications Union ('ITU') in his Organisation considering becoming Supervisory Authority of the Registry, Resolution No 2 invited the governing bodies of the ITU to consider that Organisation becoming Supervisory Authority. Reflecting the desirability of those consulting the future International Registry in respect of physically-linked assets being able at the same time to view not only the asset that they are searching against but also those other assets physically linked thereto, the Conference under Resolution No 3 invited the future Supervisory Authority to ensure that, so far as practicable, any search of the future Registry relating to physically linked assets reveal all international interests registered against such assets, as also any rights assignments, acquisitions by subrogation and rights reassignments recorded as part of the registration of those assets. Reflecting the broad participation in the Conference of developing and emerging economies, Resolution No 4 encouraged all Contracting States and international, national and private financing institutions to assist developing Contracting States by providing them with reasonable discounts or rebates on exposure rates or similar charges levied by such financing institutions.¹³ In line with the success enjoyed by the Official Commentaries on the Convention and Aircraft Protocol and on the Convention and Rail Protocol prepared by Sir Roy Goode, Resolution No 5 invited the latter to prepare an Official Commentary on the Convention and Space Protocol.

¹³ The importance attached to this Resolution by the developing and emerging economies acknowledges the considerable part played by the decision of the Export-Import Bank of the United States of America to reduce by one-third its exposure fee on the export financing of large commercial aircraft for buyers in Contracting States to the Convention and the Aircraft Protocol.

¹² DCME-SP – Doc 18.

At the closing ceremony of the Conference, held on 9 March 2012, 25 States and one Regional Economic Integration Organisation signed the Final Act of the Conference and the Space Protocol was opened to signature, three States (Burkina Faso, Saudi Arabia and Zimbabwe) signing the Protocol on that day. The Space Protocol will remain open for signature until such time as it enters into force.¹⁴

3. Development of, and economic assumptions underpinning the Protocol

(a) The preparation of the draft Space Assets Protocol

It is a special feature of the international instruments prepared by UNIDROIT that they must respond to the needs and expectations of the commercial parties involved in the activity envisaged by the instrument in question. And the preparation of the Aircraft Protocol demonstrated the usefulness of a first draft being prepared by a working group made up essentially of leading manufacturers, operators and financiers of the types of aircraft object designed to be covered by that Protocol: the Aviation Working Group ('AWG'), jointly organised by Airbus and the Boeing Company, provided a first draft of what aviation and aviation finance circles considered, on the basis of practice, to be required to fit the intended Convention regimen to the particular patterns of aviation financing. This first draft proved to be of inestimable importance in the development not only of what was to become the Aircraft Protocol but also of the Convention itself.

It was thus that it was decided by the President of UNIDROIT that a similar first draft of what was contemplated as a Protocol designed

to extend the benefits of the Cape Town Convention regimen to space financing should be entrusted to a working group made up of leading players in the space industry, notably manufacturers, operators, launch service providers, financiers and insurers, as well as the relevant international Organisations.¹⁵ It was the preliminary draft Space Assets Protocol prepared by the Space Working Group, organised by Mr PD Nesgos, a leading expert in the commercial space financing world,¹⁶ which, following consideration by a UNIDROIT Steering and Revisions Committee,¹⁷ provided the basis for the intergovernmental negotiations which got under way in December 2003. In keeping with Resolution No 3 adopted by the Cape Town diplomatic Conference, the intergovernmental consultation process was opened up to include also member States of the United Nations Committee on the Peaceful Uses of Outer Space (UN/COPUOS).¹⁸

¹⁵ The Space Working Group brought together representatives of such major players as Alcatel, Aenia Spazio, ANZ Investment Bank, Argent Group, Ariane-space, Assicurazioni Generali, Astrium, BNP Paribas, the Boeing Company, Crédit Lyonnais, Deutsche Morgan Grenfell, DIRECTV, EADS, FiatAvio, GE American Communications, Hughes Electronics Corporation, Hughes Space & Communications Company, ING Lease International Equipment Finance, Lockheed Martin Finance Corporation, Lockheed Martin Global Telecommunications, the Long Term Credit Bank of Japan, the Mitsubishi Trust and Banking Corporation, Motorola Satellite Communications Group, PanamSat, La Réunion Spatiale, Space Systems/Loral, SpaceVest and TelecomItalia.

¹⁶ Study LXXIIJ – Doc 9.

¹⁷ Study LXXIIJ – Doc 10 rev.

¹⁸ UN/COPUOS, moreover, played a most important role in continuing to monitor the draft Protocol throughout its development by the Committee, notably through its Legal Subcommittee. The primary focus of this monitoring was, of course, to ensure full compatibility with the United Nations Treaties and Principles on Outer Space. Initially, though, the Legal Subcommittee also examined the case for the United Nations assuming the role of Supervisory Authority of the future International Registry for space assets (Report on the 41st session of the Legal Subcommittee (Vienna, 2/12 April 2002) (A/AC105/787) §§ 108–12 and Annex III (Conclusions of the consultations undertaken through

¹⁴ For the text of the Space Protocol as verified by the UNIDROIT Secretariat, under the authority of the President of the diplomatic Conference, see www.unidroit.org. The text of the Space Protocol is reprinted in full in this issue of the *Cape Town Convention Journal*, see page 124.

57 States,¹⁹ representing a cross-section of the industrialised, emerging and developing worlds, and a considerable number of intergovernmental and international non-governmental Organisations, as well as leading representatives of the commercial space, financial and insurance communities,²⁰ participated in the work

the *ad hoc* consultative mechanism); Report on the 42nd session of the Legal Subcommittee (Vienna, 24 March/4 April 2003) (A/AC.105/805) §§ 105–20 and Annex III (Report of the Chairman of the Working Group); Report on the 43rd session of the Legal Subcommittee (Vienna, 29 March/8 April 2004) (A/AC105/826) §§ 74–89 and Annex III (Report of the Chairman of the Working Group); Report on the 44th session of the Legal Subcommittee (Vienna, 4/15 April 2005) (A/AC.105/850) §§ 86–90, 92, 94–103, 111–114 and Annex II (Report of the Chairman of the Working Group); Report on the 45th session of the Legal Subcommittee (Vienna, 3/13 April 2006) (A/AC105/871) §§ 111–113, 115, 117–19 and 124–25; Report on the 46th session of the Legal Subcommittee (Vienna, 26 March/5 April 2007) (A/AC105/891) §§ 114–15 and Report on the 48th session of the Legal Subcommittee (Vienna, 23 March/3 April 2009) (A/AC105/935) §§ 107–08). However, while there was considerable support within the Legal Subcommittee for this idea, consensus could not be reached, notably because it was felt that such a proposal would be incompatible with the United Nations' fundamental mandate.

¹⁹ Albania, Algeria, Argentina, Australia, Austria, Belgium, Brazil, Bulgaria, Burkina Faso, Canada, the People's Republic of China, Colombia, the Czech Republic, France, Germany, Greece, Hungary, India, Indonesia, the Islamic Republic of Iran, Ireland, Italy, Japan, Kazakhstan, Kenya, Latvia, Luxembourg, Malaysia, Mexico, Morocco, Nicaragua, Nigeria, the Islamic Republic of Pakistan, Paraguay, Peru, the Philippines, Portugal, the Republic of Korea, Romania, the Russian Federation, Saudi Arabia, Senegal, Slovakia, Slovenia, South Africa, Spain, Sudan, Sweden, Syria, Thailand, Tunisia, Turkey, Ukraine, the United Kingdom, the United States of America, Uruguay and Venezuela.

²⁰ Alcatel, Arianespace, the Boeing Capital Corporation, Calyon, EADS, EADS Astrium, EADS Space Transportation, Eutelsat Communications, the German Space Agency, Groupe Crédit Agricole, Hermes, Intelsat, JSAT Corporation, KfW, Marsh SA, Munich Reinsurance Company, SES SA, SpaceX, Telespazio, Thales Alenia Space and Thuraya Satellite Telecommunications, as well as law firms advising such parties, including Baker & McKenzie, BHO Legal, Herbert Smith, Lovells, Milbank, Tweed, Hadley & McCloy,

of the Committee.²¹ The Committee was chaired by Mr S Marchisio (Italy), the three deputy Chairmanships being held by Mexico, South Africa and the Czech Republic.

A few issues proved to be of particular difficulty and this is why there was a hiatus in the work of the Committee following its second session, held in October 2004. This hiatus was *inter alia* used to gather information on one of these particular issues, namely public service.²² The time was also used to focus on issues specific to the future international registration system for space assets, notably the criteria necessary to identify such assets for registration purposes.²³

Following joint Government/industry meetings,²⁴ which attracted representative participation from the Governments of the leading space-faring nations²⁵ and all sectors of the commercial space, financial and insurance communities²⁶ and at which these and related

Mizrak & Gant, White & Case and Zuckert Scoutt & Rasenberger.

²¹ The Committee held five sessions, the first held in Rome from 15 to 19 December 2003, the second in Rome from 26 to 28 October 2004, the third in Rome from 7 to 11 December 2009, the fourth in Rome from 3 to 7 May 2010 and the fifth in Rome from 21 to 25 February 2011.

²² Report on the second session of the Committee (CGE/Space Pr/2/Report) § 41.

²³ Ibid § 51.

²⁴ The first such meeting, 'The Crucial Role of Industry in Finalising an Expansion of the Cape Town Convention to Cover Space Assets', was hosted by the Royal Bank of Scotland in London on 24 April 2006, the second, 'The Views of Industry and Government on How Best to Finalise an Expansion of the Cape Town Convention to Cover Space Assets', by Milbank, Tweed, Hadley & McCloy in New York on 19 and 20 June 2007.

²⁵ The People's Republic of China, France, Germany, India, Italy, Japan, Mexico, Nigeria, the Republic of Korea, the Russian Federation, Spain, the United Kingdom and the United States of America.

²⁶ ABN Amro Bank NV, Alcatel Alenia Space France, Alcatel Alenia Space Italia, Arianespace, BNP Paribas, the Boeing Capital Corporation, Calyon Groupe Crédit Lyonnais, Commerzbank AG, Crédit Agricole, SA, EADS, EADS Astrium, the European GNSS

issues were considered in depth, the UNIDROIT General Assembly at its 61st session, held in Rome on 29 November 2007, decided upon the establishment of a Steering Committee to draw conclusions from these consultations regarding the text of the preliminary draft Space Protocol having come out of the first session of the Committee.²⁷

At the second such Steering Committee meeting,²⁸ it was considered that the progress made by the Steering Committee in building on the conclusions reached by the Government/industry meetings, notably regarding the key outstanding issues, was such that it was time to reconvene the Committee. This view was endorsed by the UNIDROIT Governing Council²⁹ and it was thus that the third session

Supervisory Authority, Eutelsat Communications, the Galileo Joint Undertaking, the German Space Agency, HellasSat SA, Hispasat, JSAT Corporation, ManSat, Marsh USA Inc, the Royal Bank of Scotland, SES Astra, SES Global, Space Systems/Loral Inc, SpaceX, Telespazio and Virgin Galactic (as well as representatives of the following law firms advising such clients: Baker & McKenzie, Brödermann & Jahn, Freshfields Bruckhaus Deringer, Lovells, Milbank Tweed Hadley & McCloy, Herbert Smith, White & Case, and Zuckert Scoutt & Rasenberger).

²⁷ Report on the session (AG 61 (8)).

²⁸ The Steering Committee held two meetings, the first, at the invitation of the Government of Germany, in Berlin from 7 to 9 May 2008 and the second, under the auspices of the European Centre for Space Law, in Paris on 14 and 15 May 2009. It attracted participation from the Governments of Canada, the People's Republic of China, France, Germany, Greece, Italy, Japan, Mexico, Nigeria, the Russian Federation, South Africa, Spain, the United Kingdom and the United States of America and, representing the commercial space, financial and insurance communities, Arianespace, the Boeing Capital Corporation, Coface, Commerzbank AG, Crédit Agricole SA, EADS, EADS Astrium, the European GNSS Supervisory Authority, Finmeccanica, the German Space Agency, JSAT Corporation, ManSat, Marsh SA, SCOR Global P&C, Sky Perfect JSAT Group, Space Communication Corporation, SpaceCo, SpaceX, Telespazio SpA, Thales Alenia Space France, Thales Alenia Space Italia, as well as representatives of the following law firms advising such clients: Baker & McKenzie, Gide Loyrette Nouel, Heinrich Kanzlei and Zuckert Scoutt & Rasenberger.

²⁹ Report on the 88th session of the Governing

of the Committee was held in December 2009. An alternative version of the preliminary draft Protocol, reflecting the intersessional work carried out, provided the basis for the deliberations of the reconvened Committee.³⁰ A fourth session was held in May 2010³¹ and, following intersessional meetings – at which significant progress was made on the definition of the term ‘space asset’ and the issues of public service³² and components³³ – and consultations with representatives of the commercial space and financial communities,³⁴ all held in October 2010, the Committee at its final session, held in February 2011, established the text of a preliminary draft Protocol with the recommendation that the UNIDROIT Governing Council authorise the transmission of this text to a diplomatic Conference, for adoption.³⁵

(b) The legal assumptions underpinning the Space Protocol

In common with the Convention and the other two Protocols thereto, the Space Protocol is designed, notably through the International Registry for space assets to be established pursuant thereto, to provide those contemplating advancing credit against assets of a kind that will clearly be moving beyond national frontiers in the ordinary course of business with a degree of legal certainty not otherwise normally avail-

Council (CD (88) 17)) § 138.

³⁰ Report on the third session of the Committee (CGE/Space Pr/3/Report).

³¹ Report on the fourth session of the Committee (CGE/Space Pr/4/Report).

³² Report on the intersessional meeting of the Informal Working Group of the Committee on limitations on remedies (CGE/Space Pr/5/WP 6).

³³ Report on the intersessional meeting of the Informal Working Group of the Committee on default remedies in relation to components (CGE/Space Pr/5/WP 5).

³⁴ Report on the intersessional consultations with representatives of the international commercial space and financial communities (CGE/Space Pr/5/WP 4).

³⁵ Report on the fifth session of the Committee (CGE/Space Pr/5/Report) § 134.

able, given that it is the *lex rei sitae* which is traditionally applicable to disputes concerning the validity, enforceability and priority ranking of security and analogous interests constituted in such assets and that, once in Earth orbit, such assets do not particularly lend themselves to repossession.³⁶

As has been the experience with the Aircraft Protocol, it is expected that the availability of a uniform and predictable regimen designed to facilitate asset-based financing of space assets will reduce the risks inherent in such transactions and thus the cost of such credit. In this context, it is worth recalling what has already been reported above regarding the one-third reduction that the Export-Import Bank of the United States of America has granted on its exposure fee in respect of the export financing of large commercial aircraft for buyers in Contracting States to the Cape Town Convention and the Aircraft Protocol.

(c) The economic assumptions underpinning the Protocol³⁷

(i) Current and likely future rates of growth in the commercial space sector

In assessing the likely economic benefits to be reaped under the Space Protocol, it is important, first, to focus on the extraordinary vibrancy of the commercial space sector even in the midst of the current recession – as evidenced by that sector's search for ever more innovative methods of obtaining financing, and in particular the recourse increasingly being had to the use of hosted payloads – and, secondly, the

³⁶ *Draft Convention of the International Institute for the Unification of Private Law on international interests in mobile equipment and preliminary draft protocol thereto on matters specific to space property* (Report of the Secretariats of the United Nations Office for Outer Space Affairs and UNIDROIT – A/AC105/C.2/L.225) § 4.

³⁷ The author acknowledges his deep debt of gratitude to Mr DA Porras, until recently Associate Officer of UNIDROIT, for the research that went into the preparation of this sub-section of his paper.

shift that is likely in the pattern of this sector's future development.

Looking first at the current rate of development of the commercial space sector, global space revenues grew by 12% in 2011 to total US\$289.77 billion, with commercial satellite service revenues alone totalling US\$110.53 billion, representing an increase of 9% over the previous year and 38% of the total revenue generated by global space activity.³⁸ However, it was the growth within the commercial space infrastructure sector (including manufacturing and launch-service providers) which accounted for the greatest amount of growth in the space economy in 2011, generating US\$106.46 billion, an increase of 22% over the previous year, representing a further 37% of that economy.³⁹ Much of this growth was attributed to personal navigation devices, a form of technology that is spreading rapidly among individual end-users in developing and emerging markets and, simultaneously, insulating the commercial space sector from the wider global economic recession.

In terms of future developments, it is worth noting that, while these figures are expected to continue growing – and in particular in emerging markets, such as South-East Asia and the Middle East and despite recessionary environments in the United States and Europe⁴⁰ – the

³⁸ *The Space Report 2012* (Space Foundation 2012) 32.

³⁹ Ibid.

⁴⁰ PI Galace, 'Strong Demand Driving Asia-Pacific Market', *Satellite Markets and Research* 4 June 2012; P Koh, 'Demand from Asia-Pacific Region Leading Satellite Industry Boom', *ChannelNewsAsia.com* 19 June 2012; 'SES Gathers Momentum in Asia-Pacific with Further Significant Fleet Investment', *Space Daily* 21 June 2012 (where it is noted in particular that 'SES is ramping up investment activities in Asia-Pacific to meet the increasing demand for satellite capacity') and the United States Federal Aviation Administration Commercial Space Transportation (AST) and the Commercial Space Transportation Advisory Committee (COMSTAC), *2012 Commercial Space Transportation Forecasts* (May 2012) 17–18 (where it is noted in particular that it 'is anticipated that over the next ten years, relaxed regulation in the Middle East, Africa, Southern

rate of growth for manufacturers and launch service providers as a whole has now reached a plateau and will probably stay at that level for the rest of the decade, most notably in the commercial sector.⁴¹ For example, whilst it is true that there were more launches in 2011 than in any of the last five years, the high levels of launches have been driven in large part by the replacement of particular constellations, such as ORBCOMM and Globalstar, and some new constellations.⁴² The level of growth seen in the launching and manufacturing sectors is expected to be significantly reduced as these replacements are completed by 2017, unless, of course, further 'unforeseen developments' conspire to produce increased demand for satellites and launches.⁴³ At the same time, though, the supply of launch vehicles, such as the Falcon 9 rocket developed by SpaceX, is increasing, despite only a marginal increase in the demand for launches.⁴⁴ It will, therefore, be important for new entrants to the commercial space field to be able to find the financial resources to launch their ventures in order to bolster the various sectors that supply space-based services, such as new launch service providers.

In this context, it is interesting to note as a feature of the current recession how banks are become increasingly hesitant about making high-risk investments, not least of all in new start-up ventures in the developing world, and, of course, there are few investments riskier

and Eastern Asia and South America will account for more than 60% of new transponder and bandwidth demand globally').

⁴¹ 2012 *Commercial Space Transportation Forecasts*, *ibid* 2.

⁴² The United States Federal Aviation Administration *Commercial Space Transportation: 2011 Year in Review* (January 2012) 17; 2012 *Commercial Space Transportation Forecasts* (n 40) 3; J Amos: 'The Big Rockets Jostle for Market Share', *BBC News Blog: Spaceman*, 10 September 2010, www.bbc.co.uk/blogs/thereporters/jonathanamos/2010/09/the-big-rockets-jostle-for-mar.shtml, accessed 28 July 2012.

⁴³ 2012 *Commercial Space Transportation Forecasts* (n 40) 3.

⁴⁴ *Commercial Space Transportation: 2011 Year in Review* (n 42) 18.

than space ventures. Experts note that, '[e]stablished companies with robust balance sheets are largely not experiencing problems securing debt, while those companies with more unpredictable business plans have less access to financing, and have to turn to project financing or export credit agency backing'.⁴⁵ One can clearly see a significant increase in the activity of export credit agencies in support of the commercial space sector over the last few years, such activity having jumped from an investment of US\$300 million in 2008 to one of US\$3 billion in 2009⁴⁶ and US\$2.7 billion in 2010.⁴⁷ This trend continued throughout 2011 and is expected to continue doing so.⁴⁸ And it is interesting to note that, in the same way as the potential of asset-based financing continues to be greatly undervalued in the commercial space field, up until fairly recently this was also the case for export credit, in the past usually reserved for weaker players looking to secure finance by alternative means. However, in the

⁴⁵ 2012 *Commercial Space Transportation Forecasts* (n 40) 25; J Hill, 'Private Equity in a Post-ECA World: Where Does it Stand?', *Satellite Today* 1 June 2012; W Ferster, 'Capitalizing Space: An Interview with Dara Panahy, Partner, Milbank, Tweed, Hadley and McCloy LLP' *Space News* 3 October 2011.

⁴⁶ PB de Selding, 'More Satellites Getting Built with Export Credit Backing' *Space News* 8 September 2010.

⁴⁷ S Kaufman, M Wiss and R Segal, 'Business Strategy: Satellite Finance Finds an Ally: How can Satellite Projects Find Financing in Today's Financial Climate?' [2011] *Global Media and Communications Quarterly* November; *The Space Report 2011* (Space Foundation 2011) 127 and OD Kurtin, 'Export-Credit Agency Financing and the MSS Resurgence', *Via Satellite* 1 December 2010 (in which he notes that, as of the time of the writing of his article, export credit agencies had already committed more than US\$2 billion in financing to the commercial space sector). It is particularly worthy of note that in 2010 Iridium Communications received from Coface a guarantee for its second-generation constellation of 72 in-orbit satellites worth US\$1.8 billion.

⁴⁸ 'Inmarsat Secures \$700M US Ex-Im Financing' *Space Business Review* (Milbank, Tweed, Hadley & McCloy LLP May 2011); 'HISPASAT obtains EUR 165 million for new projects' (Hispasat Press Release, 1 August 2011) and 'Azerspace/Africasat-1a Coface Financing' *Space Business Review* (Milbank, Tweed, Hadley & McCloy LLP October 2011).

wake of the credit crisis, export credit has become a popular tool, even being employed by the cash-rich/low-debt players who would not ordinarily use such forms of finance.⁴⁹

Another sign that the commercial space sector is seeking alternative means to finance growth is the significant emergence of hosted payloads, namely secondary payloads which can be accommodated by commercial satellite missions.⁵⁰ Such arrangements are particularly useful because ‘the total price of the satellite and launch services is shared, thereby offsetting the primary payload’s costs while providing affordable space for the hosted payload’.⁵¹ And while the contractual arrangements stand to pose significant challenges for parties involved in such missions, not least of all for technical reasons, the popularity of this new type of payload strongly indicates that new forms of financing – including ones which take hosted payloads into account – are in demand by the commercial space sector.

Whilst allowing for the uncertainty that necessarily clouds the question as to when one may expect to see the current economic recession end, it seems reasonable to anticipate that one significant result of this growing trend will be to diminish the ability of many manufacturers and launch service providers to respond to such new orders as there may be in the post-2012 period and another to restrict the chances of new market entrants finding the financing necessary to enter the commercial space market.

(ii) Parties most likely to benefit from the new international regimen

From the outset of its preparation of the Space Protocol, UNIDROIT has always been aware that the Protocol may well not, at the present

time, be seen as necessary by those triple A parties operating in the commercial space field for whom the obtaining of funding has not been, and continues not to be a problem. This was, after all, the experience we lived through in the preparation of the Aircraft Protocol, where certain major airlines all along took the view that the problem of funding for which that Protocol was designed to provide an answer was not in fact a problem for them.

It was always recognised that where the new asset-based financing regimen of the Cape Town Convention was currently needed was not among such triple A companies⁵² but rather among those start-up companies and smaller operators all too often deprived of access to the capital markets without which their chances of mounting a commercial venture were extremely limited.⁵³ The goal of the new

⁵² A propos of the space sector it is thus worth noting the report by PB de Selding in his article ‘Cash-flush Satellite Operators See Divergent Paths to Greater Profits: SES Still Hungry for Acquisitions’, *Space News* 30 July 2010 that ‘SES on July 30 said it is weighing expansion in Latin America, Asia and even Canada and has not ruled out using its huge cash flow starting in 2012 to purchase growth, whether by acquisition or by securing new orbital slots’ and the same author’s report in his article ‘Eutelsat Revenue and Profit Post Double-digit Gains’, *Space News* 30 July 2010, that ‘Satellite fleet operator Eutelsat on July 30 reported double-digit growth in revenue and gross profit for the year ending June 30, saying recently launched satellites over Europe, the Middle East and Africa have booked business faster than expected’.

⁵³ Hill (n 45) where the author notes that ‘[i]n North America, the satellite industry is led by large FSS operators and service providers that have a variety of opportunities to access debt capital with the most attractive absolute rates available in the world. ... This is not the same case for smaller satellite companies, according to [Thomas Watts, chairman of the investment management firm Watts Capital Partners], who notes that credit markets have improved for investment grade issuers, but lower quality companies still face significant challenges in finding capital.’ See also Ferster (n 45) in which Mr Panahy states that ‘[c]ompanies such as DirecTV, EchoStar, SES and Eutelsat, given their strong balance sheets, generally have no problems obtaining debt in this market. Companies with weaker balance sheets or which are more speculative have to resort to either ECA backing or project financing. In some cases,

⁴⁹ Kurtin (n 47).

⁵⁰ 2012 *Commercial Space Transportation Forecasts* (n 40) 20–22. and M Buzdugan, ‘Satellite Financing through Hosted Payloads: Benefits and Challenges’ (2011) 36(2) *Air and Space Law* 139, 140 and 160. See also *The Space Report 2012* (n 38) 137–38.

⁵¹ 2012 *Commercial Space Transportation Forecasts* (n 40) 20.

regimen was, as mentioned earlier, to promote the asset-based financing technique in this area precisely because of its proven economic benefits, the essential element of which consists in the creditor's ability to go against the asset in the event of his debtor's default. It was interesting in this context to hear representatives of major airlines attending the annual aviation conference on the Cape Town regimen held in Fort Lauderdale in February 2008 niggling about the additional costs of that regimen and to realise that it was start-up airlines, like JetBlue, that recognised its full benefits.

Satellite industry analysts, moreover, take the view that the cost and quality of future global space-based services – including manufacturing, operating and launch services – will be largely influenced by emerging industry players. At the same time, one leading international analyst has expressed the opinion that '[t]he future competitive environment and trends in capacity prices will largely be defined by the number of operators in service, local regulations limiting market access, procurement decisions for new satellites and the emergence of local leading operators in most regions.'⁵⁴ And nearly all analysts agree that '[t]he next generation of space activity will include non-traditional stakeholders, sometimes referred to as the 'NewSpace

financing may not be available' and 2012 *Commercial Space Transportation Forecasts* (n 40) 26, where it is noted that '[s]mall-fleet regional operators face some risk in obtaining reasonably priced credit going forward since they do not have the revenue streams of the larger operators'.

⁵⁴ 'Satellite sector revenue grows a record [since 2000] 11% despite economic crisis: strong but slowing revenue growth ahead for satellite operators' (Euroconsult EC, 28 July 2009) and Futron's 2010 *Space Competitiveness Index: A Comparative Analysis of How Countries Invest In and Benefit from the Space Industry* (Futron Corporation 2010), 100, where it is reported that 'three major commercial satellite operators currently operat[e] about 75% of the commercially available capacity' and that all three are 'now based in Europe', adding that 'because of th[e] highly structured environment [in Europe], there is less of an emphasis on entrepreneurial space, a sector which could help drive down the cost of access to space and space products and services in general'.

community': small private companies, new entrepreneurial space ventures, and non-profit Organisations.⁵⁵

This puts policy-makers, and in particular States, in a unique position to provide incentives, through the creation of a conducive regulatory environment, for such new commercial space players. As one analyst stated, '[t]he space products and services that are used every day would not be available without a space economy in which innovation is rewarded and capital is available to support promising business prospects.'⁵⁶ The Space Protocol, it is submitted, has an important role to play in this process, given the substantial reduction that it is expected to produce in the costs faced by those new players wishing to enter the commercial space sector, through greater use of the asset-based financing technique.

4. Some additional key features of the Space Protocol⁵⁷

(a) Sphere of application

(i) 'Space asset'

The most important way in which the Convention is completed by each asset-specific Protocol is in the definition of the types of asset covered. The way in which this decision has come out in each case reflects, first and foremost, an assessment as to whether the Protocol should have a broader or narrower substantive sphere of application: given the inevitable time-lag between the time when an international instrument is completed and the date of its entry into force, it is clearly desirable for its substantive sphere of application to be drawn as broadly as possible, consistently with the requirements of legal certainty.

⁵⁵ 2010 *Space Competitiveness Index*, ibid 107.

⁵⁶ *The Space Report 2011* (n 47) 140.

⁵⁷ Other key features of the Space Protocol are illustrated in Section 2(b)(i)–(iii) above.

In the case of the Space Protocol, the decision was taken to go for a reasonably broad sphere of application, anticipating future developments in the classes of space asset that may be the subject of separate financing. However, at the same time there was concern lest any high-value component, such as a transponder – as indeed any other component deemed bankable at the time – should be capable of falling within the definition. In particular, it was felt important that low-value components, in particular those not deemed bankable, should be excluded from the sphere of application of the Space Protocol so as to avoid the future International Registry being cluttered up with countless registrations of international interests in simple nuts and bolts.

Thus, it was decided that the future Protocol should essentially apply to any man-made uniquely identifiable asset in space or designed to be launched into space (a ‘space asset’) and, specifically, any ‘spacecraft’, ‘payload’ or part of a spacecraft or payload, such as a transponder.⁵⁸ The term ‘spacecraft’ is intended to cover any satellite, space station, space module, space capsule, space vehicle or reusable launch vehicle. The term ‘payload’ is intended to cover any telecommunications, navigation, observation, scientific or other payload in respect of which a separate registration may be made in accordance with regulations to be made by the future Supervisory Authority. The application of the Space Protocol to any part of a spacecraft or payload is likewise posited on the premise that a separate registration may be made in respect of such a part in the International Registry in accordance with the regulations. The requirement of separate registrability for parts is notably designed to deal with the concern adverted to above, namely avoiding the Registry being cluttered up with registrations of international interests in mere nuts and bolts. The particular significance of the coverage of

payloads lies in the growing use being made of hosted payloads.⁵⁹

(ii) Debtor's rights

Under Article 8(1)(a) of the Convention, one of the creditor’s remedies in the event of default by his debtor is to take possession or control of any object charged to him. It has all along been recognised that, apart from the physical difficulties inherent in taking possession of an asset in outer space, already mentioned above,⁶⁰ it is not the value of a space asset as such that a creditor will be looking to in such a situation but rather the revenue stream generated by use of such an asset.⁶¹

The sphere of application of the Convention, through the Space Protocol, to space assets has, accordingly, been broadened to cover debtor’s rights, understood as ‘rights to payment or other performance due or to become due to a debtor by any person with respect to a space asset’,⁶² with the creditor being entitled to record such rights as part of his international interest registered in the space asset in question.

Upon taking control of a space asset, the creditor can, through an assignment to it of the debtor’s claims against third parties, be sure that this will not be a space asset generating revenue for a third party and this will reduce the amount of legal protection otherwise needed by potential creditors and enable them to pass on the resultant savings to their clients. This will, in turn, reduce the high cost of commercial space financing for those smaller, less established players who would ordinarily be disadvantaged by reason of the risk involved in extending credit to them.

⁵⁹ M Buzdugan (n 50). See also ‘Australian Defence Force Extends Hosted Payload Contract on Intelsat 22’ (2010) 20(5) *Wireless Satellite and Broadcasting Newsletter* 1 May 2010.

⁶⁰ Text to n 36.

⁶¹ DA Panahy, ‘The preliminary draft Protocol on Matters specific to Space Assets: an overview of its objectives and key provisions’ (CGE Space Pr/1/WP5) 4.

⁶² Space Protocol, Article I(2)(a).

⁵⁸ Space Protocol, Article I(2)(l).

It is true that this rather departs from the traditional system of remedies contemplated under asset-based financing transactions and, indeed, may be considered to take the Space Protocol into the area of project financing but it is, nevertheless, wholly in line with the underlying philosophy of the Cape Town regimen according to which the international interests on the International Registry must be linked to a physical asset.

(b) Identification criteria for registration purposes

The international registration system to be established pursuant to the Cape Town Convention as applied, through the Space Protocol to space assets being asset-based in nature, in order to be registrable in the future International Registry for space assets a space asset needs to be uniquely identifiable. It proved difficult during the negotiations to work out such unique identification criteria for all the different categories of space asset potentially covered by the Space Protocol, not least because it emerged that serial numbers were not always used on space assets. It was, therefore, ultimately decided to provide maximum flexibility by leaving the unique identification criteria for each category of space asset to be established in the regulations to be promulgated by the Supervisory Authority.

(c) Demarcation between the Space Protocol and the Aircraft Protocol

Concern was voiced regarding a potential overlap between the Space Protocol and the Aircraft Protocol, especially in view of the broad application already enjoyed by the latter. The solution found in the Space Protocol was to provide, on the one hand, that the latter would not in principle apply to objects falling within the definition of 'aircraft objects' given in the Aircraft Protocol except in cases where such objects were primarily designed for use in space, in which cases the Space Protocol would apply even while the objects in question were

not in space⁶³ and, on the other, that the Space Protocol would not apply to a particular aircraft object merely because it was designed to be temporarily in space.⁶⁴

(d) Conditions for the entry into force of the Space Protocol

Like the Rail Protocol, the Space Protocol provides that it – and, thus, the Cape Town Convention as applied to space assets – should enter into force on the later of a date following the deposit of a certain number of instruments of ratification, acceptance, approval or accession and the date of the deposit by the Supervisory Authority with the Depositary⁶⁵ of a certificate confirming that the International Registry for space assets was fully operational.⁶⁶ The number of instruments of ratification, acceptance, approval or accession required to bring the Space Protocol into force is ten.

(e) Establishment of the future International Registry for space assets

As reported above,⁶⁷ the Berlin Conference decided to establish, pending the entry into force of the Space Protocol, a Preparatory Commission to act with full authority as Provisional Supervisory Authority of the future International Registry.

All the more so given the uncertainty regarding the identity of the future Supervisory Authority – and in particular whether the governing bodies of the ITU decide to accept the Conference's invitation to that Organisation – the Conference felt that the technical and financial implications of this decision were such as to make it necessary that the operations of the Preparatory Commission be under the control of States: it was, therefore, decided that

⁶³ Space Protocol, Article II(3).

⁶⁴ Space Protocol, Article II(4).

⁶⁵ UNIDROIT was designated Depositary under Article XLVIII(1) of the Space Protocol.

⁶⁶ Space Protocol, Article XXXVIII(1).

⁶⁷ Section 2(c) above.

the Preparatory Commission should operate under the guidance of the UNIDROIT General Assembly.

In line with the proportion of negotiating States fixed by the Cape Town diplomatic Conference, in Resolution No 2, the Conference decided that the Preparatory Commission should be composed of experts nominated by one-third of the negotiating States in Berlin. It will be for the UNIDROIT Secretariat, in consultation with the President of the Conference, to make the appropriate choice as regards the composition of the Preparatory Commission, notably bearing in mind the desirability of ensuring geographical representation. ITU, ICAO, OTIF and representatives of the space industry and other interested parties will be invited to participate in the work of the Preparatory Commission, as observers. In the event of the governing bodies of ITU deciding that the latter should not become Supervisory Authority, the Conference decided that it would be for the General Assembly of UNIDROIT to appoint another international Organisation or entity to serve as Supervisory Authority upon or after the entry into force of the Protocol.

5. Conclusions

To quote once more from the analyst cited earlier, '[a] stable business environment underpinned by clearly codified legal guidelines and regulatory transparency is essential for the successful development of commercial space products, services and spin-offs' and '[s]upportive regulation reduces uncertainty, which helps attract investment'.⁶⁸ The Space Protocol is designed to contribute to the creation of just such an environment, through not only the clear and certain substantive legal rules that it embodies but also the enhanced degree of transparency that the establishment of the future International Registry will bring to commercial space financing transactions.

The new international regimen will, it is further submitted, benefit not only its principal intended beneficiaries, namely the emerging and developing economies, start-up companies and smaller operators, but manufacturers and financiers too, as these also see their markets significantly broadened as a result of the increased availability of asset-based finance as an alternative and, on balance, cheaper method of financing, not to mention the enhanced transparency just referred to.

The broadly-based participation in the preparation of the Space Protocol of not only the Governments of nations at all levels of development⁶⁹ but also leading representatives of the commercial space, financial and insurance communities⁷⁰ provides eloquent testimony of the potential benefits that may, it is to be expected, be reaped by all parties involved in commercial space activities. Moreover, it testifies to the determination of UNIDROIT to ensure that, in line with the procedure followed with the Convention and the Aircraft Protocol, the Space Protocol be duly responsive to the essential needs and requirements of business practice, whilst, at the same time, being in line with the United Nations Treaties and Principles on Outer Space, as well as other international instruments in force in this area. ■

⁶⁸ *The Space Report 2011* (n 47) 29.

⁶⁹ See n 13.

⁷⁰ See n 9, 14, 20 and 22.