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'PROJECT 2001': CONCLUSIONS AND RECOMMENDATIONS OF THE 'WORKING GROUP ON PRIVATISATION' WITH REGARD TO ISSUES OF INTERNATIONAL SPACE LAW

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ABSTRACT

Within its scope of work, the '*Project 2001 Working Group on Privatisation*' inter alia considered status quo and possible developments of international space law against the background of space activities by 'private' entities. In this regard, it mainly discussed questions of maintaining and implementing the principles of international space law with respect to private space activities.

Thus, it is – as a main recommendation - axiomatic that in the first place (possibly harmonised) national legislation should implement and exact the national authorisation requirements and supervision for non-governmental entities foreseen in Art. VI Outer Space Treaty.

Because of a certain - whether real or perceived - ambiguous wording of the core provisions and issues of international space law, it was also found that some clarification of terms (in particular '*national activities*', '*appropriate State*', and '*launching State*') might be useful to elucidate the exact prerequisites of provisions, e.g. in the exercise of jurisdiction on private entities and the international protection of victims with regard to these very activities. Ongoing discussions within the Project however showed a general difference in views on whether clarification was really needed and, if yes, how it should be achieved.

Areas where the Working Group also reached recommendations include the establishment of international safety standards, finding an agreement on the exploitation of resources on celestial bodies, as well as establishing a binding mechanism of dispute settlement, in particular strengthening dispute settlement with regard to liability claims.

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'RESEARCH PROJECT 2001'

'*Project 2001 - Legal Framework for the Commercial Use of Outer Space*' represents a joint research initiative by the Institute of Air and Space Law and the German Aerospace Center (DLR) established to examine the status quo of the law and to identify regulatory needs in view of increased commercialisation and privatisation with regard to activities in outer space.[1] Research work within the project comprised altogether six areas: '*Launch and Associated Services*', '*Remote Sensing*', '*Telecommunication*', '*Space Stations*', '*Privatisation*', and '*National Space Legislation*[2]'. For each area, a Working Group with expert members from all over the world was established and managed by two Working Group Coordinators. Besides other activities, an international Workshop was held with respect to each area of research, where the emerging legal issues were examined on the basis of discussion papers. Based on these contributions and

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discussions reports have been drafted for each area of research in a joint effort by the respective Working Group Coordinators and expert members. The reports depict procedure, conclusions on the status quo of the law as well as recommendations ensuing from the research work done. These were presented and discussed in an international colloquium in May 2001 in Cologne, Germany. The full reports will be published together with papers of the speakers in Colloquium Proceedings.[3] Summaries of the reports of most of the Working Groups will be presented during this IISL Colloquium.

SCOPE OF WORK 'PRIVATISATION'

Research work within the project's 'Working Group on Privatisation' reflected that the notion of privatising space activities raises two main branches of questions: Firstly, the general impact of increased private activity with regard to the framework of existing international space law and, secondly, the actual process of privatisation as well as development of trends and model structures used in privatisation and commercialisation policies by governments.

Since examination of issues was divided into these two main blocks, in the following the Working Group's conclusions and recommendations with regard to issues of international space law and the respective related discussions at the May Colloquium shall be summarised, while a summary on the conclusions with regard to the actual process of privatisation by governments will be part of a separate presentation.[4]

CONCLUSIONS & RECOMMENDATIONS

A plethora of issues may and has been raised with respect to international space law and the increased emergence of private space activities, and these have already led to a great number of publications.[5] The Working Group, whose work was mainly based on the contributions and discussions at its international Workshop alongside UNISPACE III in 1999 in Vienna,[6] concentrated on core issues, which seemed particularly pressing. For the purpose of this rather succinct summary these may be divided into four main blocks: (1) Issues of State responsibility and liability, (2) the exploitation and appropriation of outer space by private parties, (3) intellectual property rights in outer space and (4) dispute settlement.

Responsibility and liability issues, their interpretation and implementation

Art. VI Outer Space Treaty[7] (OST) responsibility

Concurring with a wide view in doctrine,[8] there was general agreement among the members of the Working Group that Art. VI 1st sentence OST ('*States Parties .... shall bear international responsibility for national activities in outer space ... whether such activities are carried on by governmental agencies or by non-governmental entities, and for assuring that national activities are carried out in conformity with the provisions set forth in the present Treaty.*') infers responsibility of a State party for any breach of international law that might be brought about by a respective non-governmental entity with the consequence of that state's obligation to provide reparations. It was emphasised in this context that a state's responsibility according Art. VI 1st sentence OST is not discharged by taking authorisation and supervision measures,[9] but that any occurring

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breach automatically triggers a state's responsibility as a result.

While general principles of international law concerning State responsibility, as these are currently subject to an effort of codification by the United Nations International Law Commission,[10] do not attribute acts of persons who are not acting more or less on behalf of the State and its organs to that State,[11] the Working Group members were in agreement that Art. VI OST prevails over such principles as *lex specialis*. In consequence, it was supported that any codification of State responsibility by the ILC should for clarification contain an explicit and general *lex specialis* proviso (also concerning the very establishment of State responsibility).[12]

As regards the interpretation of the term *'national activities'*, i.e. the identification of those activities for which States bear international responsibility, the Working Group concurs with the views in literature[13] and practice,[14] that this term encompasses all activities as to which a state has personal or territorial jurisdiction. It is however also suggested not to forget as an additionally recognised criterion the quasi-territorial jurisdiction of a state over ships, aircraft and spacecraft of its registry. Since the latter aspect is sometimes neglected,[15] it was found useful to clarify that a state is responsible for all activities as national activities, on which that state has the possibility to exercise jurisdiction and control, i.e. in case either territorial, personal or quasi-territorial jurisdiction are established.

If there are more than one States responsible for a non-governmental entity, the issue of clarification of the term '*appropriate State*', is raised, in order to identify the state *obliged* to require authorisation and to exercise continuous supervision according to Art. VI 2nd sentence OST. Since authorisation requirements and continuous supervision procedures however do not exonerate a state from its general responsibility under Art. VI 1st sentence OST for private activities, it was found that where the term is unclear, such clarification should be provided on a case by case basis by agreement among the very states involved. These have a factual possibility to agree on which state should – as a matter of procedure – authorise and supervise the activity as the (most) '*appropriate state*', while all states linked to an activity by terms of '*national activities*' remain substantively responsible for this space activity and the observance of international law when carrying it on. It is emphasised in this regard that in view of the general State responsibility under Art. VI 1st sentence OST, Art. VI 2nd sentence OST does not *prohibit* any other (responsible) State to (also) exercise its jurisdiction, where and when it chooses to do so for its own purposes.[16]

Implementing Art. VI OST responsibility

In view of their international responsibility and the fact that authorisation and continuing supervision of non-governmental entities' activities in outer space is required by at least one State responsible, it is more than clear that states should pass national space laws in order to implement their international obligations. Since many states involved in space activities have no clear regulation on non-governmental entities' space activities,[17] this has very quickly crystallised as a strong recommendation of this Working Group, but also a main recommendation of other Working Groups within '*Project 2001*'.[18] In order to support this obvious need in more detail and to identify basic contents of such laws, an additional '*Working Group on National Space Legislation*' has been created within the project. The results of this Working Group will also be presented in this session.[19]

In the context of implementing international space law responsibilities, the possibility of numerous or various regulatory requirements by diverse national states leads to some con-

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cern of creating several repeated procedures of similar technical scrutiny thus possibly suffocating space activities by non-governmental entities. Especially in Europe it may be expected that states apply the same or at least very similar technical standards, and projects are conducted on a cross-European level.[20] In connection with authorisation and licensing requirements, the Working Group therefore supports in particular for European states to establish a co-ordinated procedure for the exercise of authorisation and supervision among different states involved.[21]

With regard to international responsibility, the definition of the nationality of multinational enterprises has been of some concern. In order to avoid jurisdictional '*forum shopping*', it was thus proposed in the WG's report that criteria for determining a corporation's nationality should also refer to the majority holders of stock in addition to the place of incorporation or the place of main operational headquarters of an enterprise.[22] The debate on how to adequately regulate activities of transnational enterprises however is not a new one and has also been discussed for some time. Based on respective discussions in the United States,[23] it was thus pointed out at the Project 2001 Colloquium that the traditional approach of the three commonly used criteria to determine the nationality of multinational enterprises may not be adequate anymore in particular as regards the operations of sensitive high-technology industries in global markets. Accordingly, also in space law the proposal to introduce an 'economic commitment test' for multinational enterprises should be further considered.[24]

The 'launching State' liability

Concurring with the discussions in other forums, the term of the 'launching State' and its legal implication of liability for damages for these states according to Art. VII OST and the Liability Convention,[25] has been rather touchy also within the work of the '*Project 2001*' and its Working Groups. In connection with the '*Sea Launch*'-project, concerns had been raised with regard to the international space law liability system for damages, within which until then the territorial aspect had been strongly emphasised, and its application to launches that are not anymore linked to a territory, but only to a platform in the air or the high seas, whose flag might be chosen by the launch provider.[26] With regard to its academic and legal technical interpretation, the issue of '*launching State*' liability is complicated by the different wording used in Art. VI and Art. VII OST with no further explicit reference from the one provision to the other, resulting in various views how these provisions have to be interpreted, when activities are carried on by non-governmental entities.[27] On the practical side some states are more recently expressing certain uneasiness with regard to being held liable for damages ensuing from activities that they cannot control, in particular when national non-governmental entities are involved in the procurement of more complex launch arrangements.[28] Against the background of the different views on the term's interpretation, the '*Working Group on Privatisation*' had suggested to clarify the interpretation of the term '*launching State*', by e.g. explicitly clarifying and recognising among the States parties to the treaties the elements of a state's jurisdiction (i.e. the same elements constituting '*national activities*'), in particular its quasi-territorial and personal jurisdiction on a launch activity as constituent(s) for the term '*launching*' or '*procuring the launching*' of a space object by that state within the liability concept. The discussions however showed that an attempt to clarification – instead of strengthening the international law concept of liability – on the contrary might result in jeopardising the current achieved system of responsibility and liability and the protection of the victim (State) as established by this system.[29] This

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seems in particular relevant in view of the fact that scholars' interpretations of the OST and Liability Convention,[30] motives of national space legislation[31] as well as the practice in registering space objects in accordance with the Registration Convention[32] and Art. VIII OST[33] are increasingly supporting and perceived as already supporting an interpretation which includes a 'national' non-governmental activity within a state's activity of '*launching*' or '*procuring the launching*'.[34] During the colloquium discussions, it has thus in view of these discussions also been proposed, that the issues of interpretation could also be clarified by way of an advisory opinion by the International Court of Justice.[35]

With regard to the victim-oriented concept of liability of the one or more 'launching State(s)' of Art. VII OST and the Liability Convention, discussions within the Working Group have also considered the question of the extent of liability for 'launching States' solely connected to the process of actual launching against the background of their possible loss of control over the later operation of a space object by transfer of title or control via private law principles. Indeed in most cases the state connected by a liability link to the launch process, has the possibility to adequately react on this liability by passing on at least some of the financial risks through its scope of territorial or personal jurisdiction and scope of factual involvement, i.e. via national laws and/or the launch contracts of the actual launch provider. Questions however arise for the future, when the transfer of assets might become more and more frequent. As a relatively new issue in this context mention be made of the Draft [UNIDROIT] Convention on International Interests in Mobile Equipment[36] and the Preliminary Draft Protocol on Matters specific to Space Property [Assets].[37] According to Art. 7 of this Draft Convention and subject to the declarations of the Contracting States at the time of signature, ratification, acceptance, approval of, or accession to the Protocol,[38] the chargee[39] under a security agreement to which (or to whom) an object is charged in the event of default may e.g. be able to (a) take possession or control of the object charged to it, (b) sell or grant a lease on such object or apply for a court order authorising or directing any of the above acts. In accordance with its objective to reduce financing costs the purpose of the Convention is to give readily exercisable default remedies.[40] It thus eases the transfer of possession and control of assets. In view of the increased private law relevance in the transfer of actual control and operations on space objects, the Working Group has also considered, that *in the long term*, it might be useful to find a possibility to exonerate those '*launching States*' merely connected to the launch process or provider after the successful completion of the launching phase. In order to maintain the protection of potential victims, it was however found that such a relief would be only possible, if it were complemented by an effective, clear and absolute international liability for damages of those states which were not involved in the space activity at the time of launching, but which are responsible for it due to the subsequent transfer of the space object and the various links of being actually able to exercise jurisdiction. It is clear, that for the same reason such an approach would also imply that no '*flags of convenience*' can exist by which a non-governmental entity and its responsible State would be able to withdraw from technical supervision requirements or its liability. For these very reasons – in particular against the background of the victim-oriented approach of the liability concept – and also in view of a wide scepticism towards such a development in the ongoing discussions[41] it appears thus rather doubtful whether at present it would be viable to in any way restrict the existing '*launching State*' liability system.

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International technical requirements and safety standards

In view of generally increased space activities, as well as the responsibility and liability schemes of international space law, the Working Group – as was also proposed in other forums – however clearly recommends the formulation of substantive international technical requirements and safety standards for space operations under the auspices of the Scientific and Technical Subcommittee of UNCOPUOS. International technical standards would provide for a certain harmonisation on the level of governmental authorities' supervision of private space activities where more than one jurisdiction is involved and thus ease the observance by private enterprises of technical authorisation requirements by governments. Also the technical risks of space activities as such could be reduced by a concerted and co-operative action of states. Moreover, '*flags of convenience*' as regards the national technical authorisation requirements of States responsible for a space activity could be rather avoided, since technical standards would also help in further defining the international law parameters for space activities[42] and the '*fault*' prerequisite regarding certain liability provisions of the Liability Convention.

Exploitation and appropriation of outer space by private parties

With the involvement of private parties in outer space activities, the debate on use and exploitation of outer space increasingly also focuses on uses and appropriation by non-governmental entities for commercial purposes. This issue has been discussed frequently, also in the IISL and – as is well known – mainly concerns interpretation of Arts. I and II OST as well as the Moon Agreement[43]. In this context, it may be pointed out that many authors in space law doctrine seem to agree, that the general prohibition of national appropriation according to Art. II OST[44] intrinsically includes the prohibition of appropriation of outer space (including the moon and other celestial bodies) by private entities since such appropriation would imply the assertion of national 'appropriation' by a de facto exclusion of other states and their citizens.[45] The question remains whether and, if yes, under which conditions the taking away of resources would be allowed.[46] The Moon Agreement, which has been accepted by only some states, explicitly prohibits the appropriation of resources 'in place' and foresees for the exploitation of resources the establishment of an international legal regime, but may not necessarily place a moratorium on the exploitation of natural resources.[47] It seems however that in view of the impeding effects of the present deadlock[48] by purporting different views on the Moon Agreement and its legal implications as a legal technical issue, a co-operative discussion on the actual ways and means for exploitation of resources on celestial bodies and actual benefits might help. Therefore it was suggested that negotiations between parties to the OST should be opened, where consideration could also be given to the fact that such exploitation might be undertaken by private parties. Such a discussion would concur with principles of international law where disagreements should be settled by negotiations, enquiry, mediation and conciliation etc. and the principle of co-operation and mutual assistance in the exploration and use of outer space.[49] Since the Moon Agreement is open to review, this could be done under an UNCOPUOS agenda item that could also include the review of the Moon Agreement.

Intellectual property and non-appropriation issues

Closely linked to the question of non-appropriation is the more recently discussed issue of patent protection on whole constellations or certain orbits, which implies to exclude other entities from the use of outer

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space in a certain specified area of that space.[50] In this context it was the view of the Working Group that it might be useful to clarify these issues through UNCOPUOS and WIPO in particular to spell out limits between the necessary and justified protection of intellectual property and free use of outer space.

Dispute Settlement

With regard to implementation of international space law provisions, it is widely recognised that the procedure for dispute settlement is not very strongly developed.[51] In view of the fact that the intention of the rather wide and holistic launching-State-liability and responsibility concept of the OST and Liability Convention was to have a victim-oriented approach involving all the states somehow concerned with the launching of a space object, the lack of a binding dispute settlement may appear rather astonishing. The Working Group on Privatisation thus joins the voices,[52] that in order to obtain a mechanism for binding dispute settlement regarding international liability claims, states should examine accession to the Liability Convention and as parties to this Convention the possibility of a declaration described in § 3 of UN Resolution 2777 (XXVI) of 29 November 1971, that they will recognise as binding, in relation to any other state accepting the same obligation, the decision of the Claims Commission concerning any dispute to which it may become a party.[53]

Also, an effective dispute settlement procedure of more general terms was seen as desirable, as has already been recommended by the IISL/UNOOSA Workshop on Space Law in the Twenty-first Century.[54]

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[1] For more background information cf. the present author's: *Project 2001: Shaping a legal framework for the commercial use of outer space,* in: Space Policy 1999, 109-112, as well as the Interim Reports of the project's Working Groups presented at the Forty-second IISL Colloquium on the Law of Outer Space in Amsterdam.

[2] The Working Group on National Space Legislation had been added during the course of research work.

[3] Edited by Prof. Karl-Heinz Böckstiegel and to be published in spring 2002.

[4] Cf. Paper contributed to this Colloquium by Dr. Bernhard Schmidt-Tedd, *Project 2001: Recommendations and Results concerning the Process of Privatisation and Issues of Economic Law,* IISL01-IISL.01.02.

[5] Cf. e.g.: Karl-Heinz Böckstiegel, *Reconsideration of the Legal Framework for Commercial Space Activities,* IISL 1990, 3-10; id., *The term "Appropriate State" in international space law,* IISL 1994, 77-79; Stephen E. Doyle, *The Status of Space Law (Current Status of Space Law),* in: Egan, John, *Space Commerce,* Proceedings of the Third International Conference on the Commercial and Industrial Uses of Outer Space, Montreux/Switzerland 1990, pp. 9-17; G.C.M Reijnen, *Future legal rules in respect to private enterprise in outer space,* IISL 1981, 63-71, Jerzy Rzymanek, *Some Legal Aspect of Commercialization of Outer Space,* IISL 1987, 246-250; Frans von der Dunk, *The Illogical Link: Launching, Liability and Leasing,* IISL 1993, 349-359; id., *Commercial Space Activities: An Inventory of Liability - An Inventory of Problems,* IISL 1994, 161-170; id., *Private Enterprise and Public Interest in the European 'Spacescape' - Towards Harmonized National Space Legislation for Private Space Activities,* Leiden 1998, Chapter II and III.

[6] Project 2001 Workshop on Privatising Space Activities on 19 July 1999. Within these discussions, the discussion paper by Dr. Frans von der Dunk, *Public Space Law and Private Enterprise: The fitness of international space law instruments for private space activities,* was of particular relevance with regard to issues on international space law. The paper is published in the Workshop Proceedings: Institute of Air and Space Law and Chair of International Business Law, Cologne/Deutsches Zentrum für Luft- und Raumfahrt (DLR), *Legal Framework for Privatising Space Activities, Proceedings of the Project 2001 Workshop on Legal Issues of Privatising Space Activities, 19 July 1999, Vienna, Austria,* Cologne, Germany, 1999, ISSN 1616-7262, 12-39.

[7] Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and other Celestial Bodies, entered into force on 10 October 1967.

[8] Horst Bittlinger, *Private Space Activities: Questions of International Responsibility,* IISL 1988, 191-196, 191, 192; Frans von der Dunk, *Liability versus responsibility in space law: Misconception or Misconstruction ?,* IISL 1991, 363-371, 366/367; Armel Kerrest, *Remarks on the Responsibility and Liability*

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for Damages Caused by Private Activity in Outer Space, IISL 1997, 134, 138-139; Elmar Wins, *Weltraumhaftung im Völkerrecht*, Berlin, 2000, 142-149. Bin Cheng, *Article VI of the 1967 Space Treaty Revisited: "International Responsibility", "National Activities", and "the Appropriate State"*, Journal of Space Law 26 (1998), 7-32 also considers responsibility for breaches of municipal civil and criminal law. A different view appears to be taken by Edward A. Frankle; E. Jason Steptoe, *Legal Considerations Affecting Commercial Space Launches From International Territory*, IISL 1999, 297-307, 313 who propose an approach where *'the inherent limits of state responsibility'* might be acknowledged.

[9] Comment by Working Group member Dr. Frans von der Dunk.

[10] On latest developments of the work of the International Law Commission (ILC) on State responsibility cf. ILC Web-site at www.un.org/ilc/ which also contains an electronic archive including the reports of the Commission, the Drafting Committee and Special Rapporteur.

[11] Cf. Art. 1, 2, 4-11 *Draft Articles adopted by the International Law Commission* in 2001, United Nations Report of the International Law Commission on its Firty–third session (23 April-1 June and 2 July-10 August 2001), UN Doc. A/56/10). Art. 11 *ILC Draft Articles on State Responsibility 1996,* in: United Nations, International Law Commission, *Report on the work of its forty-eighth session, 6 May to 26 July 1996* (UN-Doc. No.: A/51/10) had even explicitly excluded the attribution of a private person's act to a state.

[12] Part One of the ILC Draft 1996 (*cf. note 11*) had explicitly excluded the attribution of private acts to states and, contrary to an explicit and respective provision in Part Two of the ILC Draft 1996 (in Art. 37), contained no *lex specialis* proviso. Only in the year 2000 a more general lex specialis provision was introduced in the new draft articles provisionally adopted by the Drafting Committee in 2000, in Article 56: '*These articles do not apply where and to the extent that the conditions for the existence of an internationally wrongful act or its legal consequences are determined by special rules of international law.*' Cf. United Nations, International Law Commission, *Report on the work of its fifty-second session*, 1 May – 9 June and 10 July – 18 August 2000), UN Doc. No. A/55/10, 119 et seq., 139 and: United Nations General Assembly, International Law Commission Fifty-second sesssion, *Third report on State responsibility by Mr. James Crawford, Special Rapporteur Addendum*, UN Doc. No. A/CN.4/507/Add.4 paras. 415-421.

[13] This view is shared by: Horst Bittlinger, *Hoheitsgewalt und Kontrolle im Weltraum*, Köln, et.al. 1988, 36 et seq. [but: restriction of national activities by the criterion 'appropriate state']; Stephan Hobe, *Die rechtlichen Rahmenbedingungen der wirtschaftlichen Nutzung des Weltraums*, Berlin 1991, 155, fn. 393; Wassenbergh, H.A., *Principles of Outer Space Law in Hindsight,* The Hague 1991, 23, at note 5; Wins, Elmar, *Weltraumhaftung im Völkerrecht*, Berlin 2000, 145-149; cf. Frans von der Dunk, *op. cit. n. 6 supra*, 16, 20. A different view is taken by H.L. van Traa-Engelman, *Commercial Utilization of Outer Space*, 1993, 281-282 ['launching state criterion' as qualification for 'national activities'].

[14] As may be seen from enacted national space laws. With regard to licensing requirements the Swedish Act on Space Activities 1982:963 refers to activities carried out from Swedish territory and to space activities carried on by Swedish natural or juridical persons. The U.S. provisions on commercial space launch activities (i.a. Commercial Space Launch Act of 1984 as amended and 49 U.S.C. 70101 et seq.) are similarly structured. The U.K. Outer Space Act 1986 (Section 2 and 3) refers only to 'nationals' of the U.K. (including Scottish firms and bodies incorporated under the law of any part of the United Kingdom) since at the time of drafting it was not assumed that space activities are carried on from the territory of the U.K.

[15] E.g. in national space laws' licensing and authorisation requirements aspects of all kinds of jurisdiction (including quasi-territorial jurisdiction) are – besides the elements of activities of nationals and activities from the respective territory – explicitly encompassed in: Section 301 of the U.S. Communications Act of 1934 as amended; Section 202 (a) U.S. Land Remote Sensing Policy Act 1992; and Art. 9 of the R.F. Law on Space Activity of 1993, as amended on 4 October 1996.

[16] Cf. Frans von der Dunk's discussion paper during the WG Workshop, *op. cit. fn. 6*, 16.

[17] Among the states, which are well known to have specific national laws on space activities are: Argentina (to some extent), Australia, Japan (to a limited extent), Norway, Russian Federation, South Africa, Sweden, U.K., Ukraine, and the USA. It may however doubted how secured this knowledge is, since during research in an other area the present author 'found' another such national law, the *Outer Space Ordinance (Chapter 523) of the Special Administrative Region of Hong Kong*.

[18] Report of the Working Group on Launch and Associated Services, in connection with the launching state issue; cf. for this colloquium Philip S. Makiol/Christian Kohlhase, *Project 2001: Final Results of the Working Group Launch and Associated Services*, IISL-01-IISL.1.03, at C.II.; and Wulf von Kries/Isabel Polley, *Report of the Working Group on*

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Remote Sensing, to be published in the Project 2001 Colloquium Proceedings, at D.I.3.

[19] Cf. Michael Gerhard, Kai-Uwe Schrogl, *Project 2001: Recommendations of the Working Group on National Space Legislation,* IISL-01-IISL.1.21.

[20] At the *Project 2001 Workshop on National Space Legislation*, 5/6 December 2000, Munich, Germany *Mr. Hermann Ersfeld* of Astrium particularly pointed out, that in view of the standards already applied by the space agencies, redundant technical scrutiny by several European states may be inadequate on the European level; cf. Hermann Ersfeld, *National Space Legislation: Industry Views,* in: Institute of Air and Space Law and Chair of International Business Law, Cologne/Deutsches Zentrum für Luft- und Raumfahrt (DLR), *Need and Prospects for National Space Legislation, Proceedings of the Project 2001-Workshop on National Space Legislation, 5/6 December 2000*, 39-51, 48.

[21] From the point of view of international space law, it is however understood that administrative co-ordination or harmonisation would not exonerate any of the states involved from their international responsibility under Art. VI 1st sentence OST.

[22] Thus, e.g. in the US Commercial Space Launch Act 1984 as amended by the Commercial Space Launch Act Amendments of 1988 in Section 4 (12)(C).

[23] In particular referring to an article by Linda A. Mabry in: Georgetown Law Journal, Vol. 87, 1999, 563-673.

[24] Panel presentation by Prof. Malanczuk to be published in the Project 2001 Colloquium Proceedings. Prof. Malanczuk further suggested to consider possible direct liability of multinational corporations under international law (in particular referring to discussions in connection with proceedings in the United States under the Aliens Tort Claims Act) and the question of legal standing under various international agreements.

[25] Convention on International Liability for Damage Caused by Space Objects, entered into force on 1 September 1972.

[26] E.g. Armel Kerrest, *Launching Spacecraft from the Sea and the Outer Space Treaty: The Sea Launch Project*, IISL 1997, 264-270, 225 et seq.; Kai-Uwe Schrogl, *Is the legal concept of "launching State" still adequate ?,* in: ESA/ECSL, *International Organisations and Space Law: Their Role and Contributions*, 3rd ECSL Colloquium, Perugia, Italy, 6-7 May 1999, 327-329 327; Frans von der Dunk, *op. cit. fn. 6*, 19 et seq.; more recently: statement of some delegations within the UNCOPUOS Legal Subcommittee meetings of the Working Group on agenda item 9 "Review of the concept of the 'launching State'", cf. United Nations General Assembly Committee on the Peaceful Uses of Outer Space, *Report of the Legal Subcommittee on its fortieth session*, held in Vienna from 2 to 12 April 2001, UN Doc. A/AC.105/763 Annex II, at para. 20.

[27] Some do not equal the terms 'a State that launches or procures the launching' with all kinds of national activity of non-governmental entities of such a State; cf. Wassenbergh, H.A., *Principles of Outer Space Law in Hindsight,* The Hague 1991, 91; Frans von der Dunk, *op. cit. fn. 6*, 19 et seq.; further: "But the treaty does not equate Article 6 responsibility with legal liability": Edward A. Frankle; Jason E. Steptoe, *Legal Considerations Affecting Commercial Space Launches From International Territory*, op. cit. fn. 8, 66 et seq.; Affirmative that the registration of a ship fulfils the criterion '*whose facility*' Karl-Heinz Böckstiegel, *The term "Launching State" in International Space Law*, IISL 1994, 80-83; rather frequent seems the view that a state authorising a certain activity is to be considered a state '*procuring the launch*', cf. e.g. Carl Q. Christol, *The Modern International Law of Outer Space*, New York et. al. 1982 and cf. UN-GA, Committee on the Peaceful Uses of Outer Space, *Report of the Legal Subcommittee on its thirty-ninth session*, held in Vienna from 27 March to 6 April, 2000, para. 83; that a '*state which launches*' also includes *'a state whose nationals launch*': Armel Kerrest, *Special need for national legislation: the case of launching*, in: Need and Prospects for National Space Legislation - Proceedings of the Project 2001 Workshop on National Space Legislation, 5/6 December 2000.

[28] Cf. presentation by the representative of the United Kingdom of Great Britain and Northern Ireland at the UNCOPUOS Legal Subcommittee meetings of the Working Group on agenda item 9 "Review of the concept of the 'launching State'" summarised in: United Nations General Assembly Committee on the Peaceful Uses of Outer Space *Report of the Legal Subcommittee on its fortieth session*, held in Vienna from 2 to 12 April 2001, UN Doc. A/AC.105/763, Annex II at para 12; statement of some delegations within the same meetings, cf. *ibidem*, at para. 18.

[29] Cf. *Panel Working Group on Privatisation. Closing remarks* by the chairman Vladlen S. Vereshchetin, to be published in the Project 2001 Colloquium Proceedings.

[30] Cf. Armel Kerrest, *Sharing the risk of space activities: three questions, three solutions*; on the discussions during the Project 2001 Colloquium also cf. Judge Vladlen S. Vereshchetin, *Panel Working Group on Privatisation: Closing remarks* and Philip Makiol, *Panel Working Group on Launch and Associated Services: Summary of general discussion*; the latter all to be published in the Project 2001 Colloquium Proceedings; further cf. William B. Wirin,

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Practical Implications of Launching State – Appropriate State Definitions, IISL 1994, 109-117, 113; Glenn H. Reynolds/Robert P. Merges, *Outer Space: Problems of Law and History* 1989 (1997), 345.

[31] The *possibility* to be (held) liable for damages caused by objects launched by non-governmental entities and the creation of clear legal grounds of a certain (if also sometimes limited) recourse, is said to be one of the main motives by States to enact national space legislation and authorisation requirement as well as supervision procedure and to include indemnification provisions; cf. e.g. Roger Close, *Outer Space Act 1986: Scope and Implementation (Speech),* in: Institute of Air and Space Law/Deutsches Zentrum für Luft- und Raumfahrt (ed.), *Proceedings of the Project 2001 – Workshop on National Space Legislation, 5/6 December 2000,* Cologne 2001, 141-147, at 141; an explicit recognition of 'launching State liability' for launches procured by non-governmental entities can be found in: The Parliament of the Commonwealth of Australia, The Senate, *Space Activities Bill Explanatory Memorandum* in 'Purpose of the Bill', reprint in: Institute of Air and Space Law of Cologne University/Deutsches Zentrum für Luft- und Raumfahrt, *Proceedings of the Project 2001 Workshop on Legal Issues of Privatisation Space Activities*, p. 340-347, at page 242.

[32] Convention on Registration of Objects Launched into Outer Space, entered into force on 15 September 1976.

[33] Art. II of the Registration Convention of 1975 provides that a space object shall be registered by the or one of the '*launching State(s)*'. The state of registry shall retain jurisdiction and control over such object (Art. VIII OST). A practice that the State whose non-governmental entities procure the launch rather than the State whose entities provide the launch registers a space object as a 'launching state' may be concluded from the United Nations Office for Outer Space Affairs' Online Index of Objects Launched (a searchable index developed from the UN Register) available at http://registry.oosa.unvienna.org/oosa/ index/index.stm. Registrations of States whose non-governmental entities have procured the launch of a space object from a different country and that have registered such object in the year 2000 according to this index were e.g. the United Arab Emirates (for Thuraya-1, Sea launch; Reg. Doc.: ST/SG/SER.E/ 389) and the United Kingdom (for EuropeStar 1, launched in Kourou; Reg. Doc.: ST/SG/SER.E/390). In spite of this practice, however, also several space objects owned by commercial operators with launches procured abroad have not been officially registered with the UN by the State of the procuror, e.g. *Brazilsat B4*, *Nilesat 102*, both launched by Arianespace on 17 August 2000 (neither Brazil nor Egypt are parties to the Registration Convention), *Hispasat 1C (launched Feb. 2000), Garuda 1* launched 12 Feb. 2001 (Spain and Indonesia are parties to the Registration Convention).

[34] At least this may be concluded from the Colloquium discussions; also cf. note 30 supra.

[35] Cf. Report by Michael Gerhard: *Panel on International Law Making and Harmonisation of National Laws: Summary of general discussion,* to be published in the Project 2001 Colloquium Proceedings.

[36] UNIDROIT/ICAO DCME Doc No. 3 6/4/01, submitted for adoption to the Diplomatic Conference to adopt a Mobile Equipment Convention and an Aircraft Protocol in Cape Town, 29 October – 12 November 2001, available at http://www.unidroit.org.

[37] UNIDROIT 2001 Study LXXIIJ – Doc.6, Rome July 2001, available at http://www.unidroit.org. According to deliberations within the Working Group establishing this protocol the term '*property*' will be replaced therein by the term '*asset*'.

[38] At the time of signature, ratification, acceptance, approval of, or accession to the Protocol, a Contracting State shall declare whether or not any remedy available to the creditor under any provision of the Convention which is not there expressed to require application to the court may be exercised only with leave of the court (Art. 52 para. 2 Draft [UNIDROIT] Convention on International Interests in Mobile Equipment). Art. 41 of the Draft Convention however provides for the possibility of free a choice of forum by the parties among the Contracting States; the courts of the Contracting State chosen then shall have exclusive jurisdiction in respect of any claim brought under the Convention.

[39] Usually is the creditor of the secured finances.

[40] Cf. Herbert Kronke, *Overview of the Draft Convention on International Interests in Mobile Equipment and the Draft Protocol on Aircraft Equipment,* presentation at the Regional Seminars on the Draft Convention in Singapore, 23 May-25 May 2001 and Nairobi, 29-31 August 2001, p. 3, available at www.unidroit.org.

[41] Cf. Armel Kerrest, *Sharing the risk of space activities: three questions, three solutions,* to be published in the Project 2001 Colloquium Proceedings; Judge Vladlen S. Vereshchetin, *Panel Working Group on Privatisation: Closing remarks,* to be published in the Project 2001 Colloquium Proceedings.

[42] As pointed out *supra*, according to Art. VI States are responsible that national activities are conducted within the limits of international law.

[43] Agreement Governing the Activities of States on the Moon and other Celestial Bodies, entered into force on 11 July 1984.

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[44] Art. II OST reads: *'Outer Space, including the moon and other celestial bodies, is not subject to national appropriation by claim of sovereignty, by means of use or occupation or by any other means'*

[45] Cf. Edward Finch, *Commercial Space Development in the Millennium 2000,* Journal of Space Law 1999, 161-170, 168; Carl Q. Christol, *Article 2 of the 1967 Principles Treaty Revisited,* AASL, 1984, 217 et seq. with references to the history of the Article; C. Wilfred Jenks, *Space Law,* 1965, 201, Georg W. Rehm, *Das Aneignungsverbot, in: Karl-Heinz Böckstiegel (Ed.):* Handbuch des Weltraumrechts, Köln et. al. 1991, 103-118, 114; Winfried Heymer, *Rechtsfragen der Nutzung des Weltraums und der Himmelskörper durch Privatunternehmen,* Festschrift für Alex Meyer, Köln, 1975, 319, 325 et seq.; Stephan Hobe, *op. cit. note 13,* 78 et seq. who distinguishes between (a state's) claim of territorial 'sovereignty' and the wider term of 'appropriation'; Kai U. Pritzsche, *Die Nutzung natürlicher Resourcen,* in: Karl-Heinz Böckstiegel, *Handbuch des Weltraumrechts,* Köln et al. 1991, 557-578, fn. 24&25, 566; similarly Hanneke L. van Traa-Engelman, *Clearness Regarding Property Rights on the Moon and other Celestial Bodies,* IISL 1997, 38, 42; also cf. Vladimír Kopal, *What kind of institutional arrangements for managing outer space mineral resource activities should be done in a foreseeable future ?,* IISL 1998, 12, 15.

[46] In particular as regards the taking away of pieces and resources on celestial bodies, different views have been taken in legal publications with respect to the permissibility of such action as well as with respect to its permissibility subject to the sharing of benefits. Cf. Florencia G. Rusconi, *Regime of the Property of the Natural Resources on the Moon and Other Celestial Bodies,* IISL 1969, 185, 188; *Maureen S. Williams,* The Principle of Non-Appropriation Concerning Resources of the Moon and Celestial Bodies, IISL 1970, 146 et seq.; Eugene Brooks, *Control and Use of Planetary Resources,* IISL 1968, 339-350, 346; Carl Q. Christol, *Article 2 of the 1967 Principles Treaty Revisited, op. cit. note 45,* 220 et seq.; Stephan Hobe, *op. cit. note 13,* 78 et seq.

[47] On the issue of a moratorium cf. Hanneke L. van Traa-Engelman, *Clearness Regarding Property Rights on the Moon and other Celestial Bodies,* IISL 1997, 38, 41 et seq.

[48] Which in economic terms seems mainly be based on Art. 11(7)(d) Moon Agreement which only makes reference to the sharing of benefits among states. On the other hand it should be considered that also under general principles of modern international law and its history (e.g. 'Antarctica') simple occupation of not inhibited lands can barely be considered as lawful anymore

[49] Cf. e.g. Arts. 2(3) & 33 UN Charter and Art. IX 1st sentence OST.

[50] On the discussion cf. Böckstiegel/Krämer/Polley, *Patent Protection for the Operation of Telecommunication Satellite Systems in Outer Space ?,* ZLW 1998, 3-17&166-178, 17; Sa'id Mosteshar, *Satellite Constellation Patent Claim: Some Space Law Considerations,* Telecommunications and Space Law Journal, Vol 4, 251-255, 253 et seq.

[51] Karl-Heinz Böckstiegel, *Beilegung weltraumrechtlicher Streitigkeiten,* in: *Handbuch des Weltraumrechts,* Köln 1991, 805-825; Peter Malanczuk, *Summary of the Presentation to the Session entitled 'Possible International Regulatory Frameworks, Including Legal Conflict Resolution in Expanding Space Commercialization',* in: Proceedings of the IISL/ UNOOSA Workshop on Space Law in the Twenty-first Century, New York 2000, ST/SPACE/2, 182-184; Nicholas M. Poulantzas, *The Judicial Settlement of Disputes Arising out of Space Activities: Returning to an Old Proposal,* IISL 1997, 150-154.

[52] In 1998, Austria suggested to strengthen the scope of application of the Liability Convention, an initiative, which has found a positive response also with regard to the acceptance of the compulsory competence of the Claims Commission; cf. Karl-Heinz Böckstiegel, *Statement as the representative of the International Law Association (ILA) before the UNCOPUOS at its 41st Session,* June 1998, Vienna, German Journal of Air and Space Law (ZLW) 1998, 334 et seq.; Marietta Benkö, Kai-Uwe Schrogl, *The UN Committee on the Peaceful Uses of Outer Space,* German Journal of Air and Space Law (ZLW) 1998, 523, 525 et seq.; *ESA Council Resolution ESA/C/CXL.VI/Res.3 (Final) on Additional Declaration concerning Claims Commission awards under the United Nations Convention on International Liability for Damage Caused by Space Objects,* adopted on 21 June 2000.

[53] UN General Assembly, Resolution 2777 (XXVI) § 3 of 29 November 1971. Such a declaration has been made by Canada, Denmark, Greece, Ireland, New Zealand, Sweden, Austria, Norway, and The Netherlands.

[54] Cf. *Conclusions and proposals of the IISL/UNOOSA Workshop on Space Law in the Twenty-First Century,* organized by the International Institute of Space Law, in: Proceedings of this Workshop, UN-Doc. No. A/CONF.184/7, 2/3 at para. 6: *'The General Assembly should consider the development of effective mechanisms for the settlement of disputes arising in relation to space commercialization'* and that *'those mechanisms should take into account existing arbitration rules used in international practice for dispute settlement.'*