

SPACE DEBRIS

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The Legal Subcommittee of COPUOS appears to be close to starting the very necessary debate on space debris. Some encouraging indications have already been received; however working methods remain to be defined, and a list compiled of specific, detailed issues to be examined in the context of existing space law, taking into account the work that has been done by other bodies and the regulatory mechanisms that have been studied (and adopted) at the national and international level. My impression (for the time being it is no more than that) is that the time is ripe for work to begin, that the necessary consensus is within reach. As we said here above detailed and specific legal questions need to be formulated, questions that arise from an examination of the technical work that has already been done. The broadly exploratory phase is ending, and we now have a better idea of the direction to follow and guidelines to observe. It is time for the lawyers to strike out in that direction; the groundwork has been done, as the documentary record and recent works show. It is not my intention to review those achievements, nor is this necessary. Instead, I wish to present a report that I delivered to the Legal Subcommittee at its April session. The issues addressed in it struck a chord, to judge by the reactions at the meeting.

This paper will also describe some possible procedures to be considered, and the form and contents of legal texts that might be produced.

Section 1: The ECSL report

This report was distributed at the 41st session of the Legal Subcommittee as A/AC.105/C.2/2002/CRP.5, dated 27 March 2002. It was discussed as a CRP (Conference Room Paper) under the agenda item entitled "Information on the activities of international organizations", which recently has become a regular item in Legal Subcommittee meetings. Even though there is no specific item on the Subcommittee's agenda entitled "space debris", at least now the issue (which concerns all countries, whether they are party to the Outer Space Treaty or not) has been discussed and debated in this form.

The report examines the responses to a questionnaire (copy attached) that was designed by the ECSL and widely distributed to ECSL members and some non-members. It considers past analysis and proposals put forward in the Legal Subcommittee, the Scientific and Technical Subcommittee and at international colloquiums (such as those organised by the International Institute of Space Law, the International Academy of Astronautics, the International Bar Association, Committee Z, and the Academy of

¹ Represents only the personal views of the author and does not commit the organisation to he belongs.

International Law, Space Law Committee). The report also examines work of the Inter-Agency Space Debris Coordination Committee (IADC) presented to the Scientific and Technical Subcommittee, the results of national research, and existing national regulations and policies.

Against the background of this documentation, concrete, fundamental legal questions can be formulated, such as: what do the existing instruments (I would certainly include technical regulations, and indeed give them a certain priority) address already, what do they cover incompletely, and what are the important issues not addressed to date?

Elaborating a generally accepted legal definition of the term “space debris” is frequently seen as the place to start, to judge by the amount of ink that has been spilled on the subject. However, none of the instruments in force (1967 Outer Space Treaty and others) so much as use the term, let alone provide a definition. It is worth asking if the search for a generally agreed definition is perhaps the wrong place to start; should it be allowed to impede? Next, what type of legal instrument is required? Should the Outer Space Treaty be amended, along with the other treaties, or should a ‘special instrument’ be adopted along the lines of the proposal which the Institute of International Law brought forward at Buenos Aires in 1994?

To continue the list of questions: does a piece of space debris (or orbital debris) constitute a space object, or a component of a space object? Is it subject to registration? What happens when space debris causes damage in outer space, in the air, or on the ground (knowing that a large proportion of

objects, mostly debris, falls into the South Pacific Ocean)? A related question is, what are the consequences of the transfer of ownership of a space object or component in space (including debris) at a time when commercialisation and privatisation of space activities are becoming widespread, particularly if the owner, operator or commercial user goes bankrupt? These are some of the issues that need to be addressed. In attempting to do so, the legal expert needs a measure of humility to realise that the answers to questions and concerns that are perfectly legitimate (particularly in the light of Article I paragraph 1 of the Outer Space Treaty) will be conditioned by increasingly sophisticated and varied technical responses, so that a definitive, ultimate settlement is likely to remain elusive. Scientists and engineers, on the other hand, need to recognise that this means that obligations and duties need to be solidly anchored in legal instruments that are universally enforceable, under both international treaties and national space law (drafted specifically to accommodate future technical progress). In this connection I am thinking particularly of the process for granting launch licenses, insurance and technical regulations.

It is important to resist the temptation to seek a simple answer to these questions in an inherently fluid situation. The legal complexity of space objects (see the aerospace objects calls for a suitably nuanced response. The starting point should be those concerns that existing law clearly fails to address: abandonment of a space object in orbit (recognition? liability?); transfer of ownership of a space object; recovery of a space object; the basis for liability in case of damage in outer space (collision), in airspace and on the

ground. Should the distinction between “active” satellites and others be formalised? What is the appropriate way of handling environmental or health hazards associated with space objects (e.g. nuclear power sources) appropriately taken into account?

The ECSL report concludes that items of space debris constitute space objects, and that existing space law already provides some answers and guidelines. It is reasonable therefore to start by examining the questions of whether and to what extent existing technical and legal provisions address the concerns of the international community.

Section 2: Proposals

First, how can the existing texts and procedures be used more fully?

- Inform the international community: immediate notification of any event giving rise to space debris (including degradation of an existing space object into space debris), providing full information, including a forecast of re-entry time and place and any special procedures for dangerous or harmful objects, with continuous updates.
- Cooperation and technical assistance (cf. Article XI of the Outer Space Treaty), coordinated use of tracking, observation and recovery systems. None of these measures require new legal instruments to be adopted or existing ones to be amended.
- Preventive measures, in particular by means of launch licensing, insurance etc.
- Debris reduction measures (e.g. passivation of launcher stages) have been identified by the IADC and the

Scientific and Technical Subcommittee and taken up in certain national space legislations. These evolving technical provisions need the broadest possible legal recognition.

Second, what options are open if, for the reasons discussed above, no basis is found for a new legal category to deal with space debris, nor for formally amending the existing space treaty?

- First of all, gather up in a high-level policy document those technical measures that have been defined by the stake-holders, operators and launching authorities, which are already being followed by and large. One way to do this would be by way of a resolution of the UN General Assembly. This will obviously not make the Scientific and Technical Subcommittee of the COPUOS redundant, any more than the IADC or the International Academy of Astronautics. On the contrary, such a step will provide top-level validation of their work. Such a resolution would call on countries to apply existing instruments more fully, in particular the Convention on Registration of Space Objects, and to use article VI of the Outer Space Treaty to adopt appropriate national legislation (launch licensing). It would also outline the Legal Subcommittee’s working objectives and the concrete items requiring legal work.
- Concerning the Legal Subcommittee’s plan of work: on the basis of current procedure, the Legal Subcommittee is obliged to wait until the Scientific and Technical Subcommittee has produced enough documents and closed out its deliberations. This is a

patently unrealistic requirement; for one thing, there is a perpetual need for some ongoing review and refinement. Certainly, the Legal Subcommittee needs to be briefed on the technical issues before commencing its work, but how should this briefing process be organised, and who should be involved? Compiling required documentation will be a preliminary task but is not the answer. A dialogue is needed between the two subcommittees, with the participation of the IADC. This might take the form of a one or two-day joint session, in the framework of an ordinary Legal Subcommittee meeting. Each delegation would be accompanied by its counterpart from the Scientific and Technical Subcommittee, and the STS Chairman would be in attendance. The Legal Subcommittee could then commence its own work the following year by identifying pressing legal problems dealt with inadequately or not at all at present. In doing so, it would draw on presentations from a range of legal experts from the International Institute of Space Law, the Academy of International Law etc. As for the form of the international 'instrument' (which in no way makes national legislation redundant), various options might be considered. At the present time, the form that appears most appropriate is a declaration of principles; this is a solemn form used by the UN for particularly grave matters, like the Declarations of 1963 and 1996. Representatives of member states at that time affirmed their will to abide by the Declarations even though the latter lacked formal treaty character.

- Several delegations expressed their appreciation of the ECSL's report before the Legal Subcommittee and COPUOS. Some, such as the French delegation, proposed that draft principles be prepared, in the same way as was done, for example, with the Principles Relevant to the Use of Nuclear Power Sources in Outer Space.

This appears to me to be the most reasonable approach. The international community cannot wait any longer for legal deliberations to be started by the body of experts it has set up for the purpose. The technical groundwork has been done, and the time is ripe for a consensus to be sought.

I trust that the ECSL report and the proposals that have come out of it will be useful in putting the finishing touches on a road map that will allow us finally to start to move in the direction we all know we must take.

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Space Debris Questionnaire

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I. Definition/status

1. Do you believe that a legal definition of the notion of "space debris" is needed?
If yes, please explain.
2. Do you have an idea what such a definition should look like?
3. Do you believe that the existing space law texts are adequate on this point?
(cf. draft instrument adopted by the International Law Association at Buenos Aires in 1994)
4. What legal form should an instrument take?
 - amendment to existing instruments
 - additional protocol
 - separate agreement
 - adoption of the principles by a resolution of the General Assembly of the UN
 - solemn interpretation by the states party to the treaties in question

II. Contents

1. What should go into the legal instrument (apart from the definition, international assistance, prevention, and technical details on specific categories of object)?
2. What measures, if any, should be taken on recovery, in your view?
3. What role can/should the COPUOS play, in your view? Is an information and consultation mechanism necessary? What would be the implications for the launching state?
4. Should an international register be established? Should this be done by a solemn interpretation by the states parties to the treaties in question? Should such a registry include 'military' space objects?
5. What provisions do you believe are required in cooperation agreements and launch contracts? What recommendations should be made to manufacturers of space objects?

III. What should be the future role of the IADC under the authority of COPUOS? Should IADC membership be extended to non-space faring nations?

IV. National licensing systems

Should national launch licensing systems include specific obligations on the applicant?

V. Should the measures agreed by the United Nations (via COPUOS) automatically apply to the private sector?

1. If you said “yes,” what legal means would you suggest?
2. How far should the competence of the state having jurisdiction (launching state) extend, and what obligations should this entail? (Insurance? How high?)

VI. Other remarks (or comments or proposals) you may wish to make?