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AD HOC COMMITTEE ON THE PEACEFUL USES OF OUTER SPACE

RELATIONSHIP BETWEEN MISSILES, SATELLITES ROCKETS AND CONVENTIONAL AVIATION

(Draft working paper submitted by the delegation of Italy)

The Italian delegation to the United Nations has always shown its keen interest in the legal problems arising from humankind's new ventures in outer space. Just as a matter of fact, during the debates of the XIII General Assembly on 12 November 1958, our delegate stressed the importance of a legal frame within which the Organization itself may deal with the questions of the peaceful use of outer space. And the Italian representative to the United Nations sketched during the meeting of the Ad Hoc Committee on the peaceful uses of outer space on 7 May some considerations on the opportunity of exploring, among other things, the inter-relationship between existing international rules and possible concrete developments in the field of astronautics. In particular it had been deemed opportune to point out that a useful purpose could be served in sorting out from the set of rules on aviation or maritime matters those applicable to astronautics, in order to pave the way in turn to the singling out of those problems which might require a completely new approach and therefore also a new set of rules in the international field.

In fact, among the many technical and juridical problems raised by modern missiles and by the exploitation of space above the atmosphere, and beside the vital question of sovereignty and its possible limitation, there is another problem of great practical importance which has seldom been emphasized: that of the regulations to which rockets and missiles should be subjected when employed, for instance, for transport through and above the air, or when they are launched into the space above the atmosphere, to return to the earth or otherwise. Such transport

is not just a theoretical hypothesis since rockets and missiles, at the present stage of technical development, can quite well be used for transport of goods and of mail.

There is no doubt that during the time when rockets or missiles are lying on the ground or are flying in the air, they have some affinity and may also interfere with conventional aircraft which is already crowding the skies.

The question then arises of knowing if and how far these new flying machines - which, however, greatly differ from ordinary aircraft - may be subjected to the rules which control present day flying and to what extent necessity is felt of different technical and juridical regulations.

With regard thereto, it can be said that rockets and missiles can be considered akin or assimilated to aircraft, especially when they fly for the greater part of their journey through the air and only for a small stretch through the space above the atmosphere. This of course would entail all inherent consequences, in particular the application to them of a large part of the regulations which control aviation. During the part of the journey effected above the atmosphere, such vehicles would be subject to rules and regulations relating to that space if and when they will be made. As regards the dual set of regulations to which such vehicles would be subject, one can refer in present day flying boats which, as pointed out by K.P. Ray, are subject, when on the sea surface, to the same rules as ships, concerning collision at sea.

With regard to the application of regulations controlling aircraft to rockets and missiles used for transport from one point of the earth to another through and above the air, no obstacle should be found against this in the definition of the Chicago Civil Aviation Convention of 1944, of the word "aircraft", according to which aircraft are machines which can fly owing to air reactions (that is, machines which are supported during their flight by the reactions of the air). This does not happen in the case of rockets or missiles. Therefore it is more rational to consider as aircraft all the machines which fly in the air space, whether or not supported by air reactions.

This, in fact, is a provision of German law which, in listing the various kinds of aircraft, states: "...und ähnliche für eine Bewegund im Luftraun bestimmte Geräte" (... and other similar machines destined to move in the airspace).

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The considerations and elements listed hereunder are meant to bring a first practical contribution to the study of the reglementation of such aircraft, inasmuch as they are trying to outline new fields of activity which might require appropriate and specific rules:

(a) The new flying machines (rockets, missiles or artificial satellites) must be rendered identifiable just like other vehicles such as cars, ships, aircraft and so forth, so that it may be possible to determine the identity of their owners or users and the purpose for which they are to be used in order to control their fitness for flying and the specific purposes for which they can be employed (if it were not but for enforcing the prohibition of their use for military purposes, such identification would be necessary).

(b) It should appear moreover indispensable to establish who (private, individual or public Body) shall be authorized to launch them into the space, the localities and locations from which they can be launched, as well as the rules of their driving and of their trajectory, in order to avoid collision, with other rockets, missiles or aircraft.

(c) Linked with the above is the problem of the responsibility of owners or users of these machines for damage caused through collision or otherwise to persons or property on our planet (for the time being on our planet only), a problem which has been already discussed by nearly all writers on this subject.

(d) Another problem which should be solved with a certain urgency and on which discussions of substance should be started before long, is the one related to the agreement for assigning to these new flying machines special frequency ranges for radio communication.

For all the above reasons, which are not the only ones but the most urgent and evident ones, the current technical and juridical international regulations may be examined, if not in respect of their individual provisions, at least for the principles on which they are based, and it is for this reason that the Chairman of the Juridical Committee of the International Civil Aviation Organization, acting with the aim of ensuring rules and regulations for the safety and development of air traffic, has already asked the Board of the said Organization to begin a survey of the questions related to this matter.

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In any case, should the United Nations - as we deem it advisable - decide to tackle this problem, they might find it useful to ask for the co-operation of an organization, such as ICAO, fully competent and capable to study the problem and submit for adoption the technical and juridical regulations required.

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AD HOC COMMITTEE ON THE PEACEFUL USES OF OUTER SPACE

RADIO AND TELEVISION COMMUNICATIONS IN OUTER SPACE

(Draft working paper submitted by the delegation of Italy)

Various questions relative to radio and television communications through outer space have arisen since the launching of the first artificial satellites.

A first series of questions concerns the transmission by radio of information and data recorded by scientific instruments with which artificial satellites, in orbit around the earth, are equipped.

A second series of questions concerns the possible utilization of satellites to solve the problems of transmission by radio and television from one point to the other of the earth surface.

A third series of questions relates to communications, originating from earth, to satellites in outer space and to spaceships.

1. Satellite-to-earth transmission of data recorded by scientific instruments installed on board satellites.

One of the most urgent questions relates to the choice of frequencies to be used for such transmissions. In making such a choice it is felt that the following considerations are of the utmost relevance:

(a) such transmissions should not interfere with radio services already in existenee for different purposes, such as radio aids to navigation and all other radio broadcasts.

Accordingly it would appear useful to earmark, for such transmissions from satellites, portions of frequency bands presently reserved to meteorological services (radiosonde). It appears quite natural to consider this problem as an extension of the problem of examining the atmosphere by radiosonde, as is done by