SPACE LAW/SPACE WARC: AN ANALYSIS OF THE SPACE LAW ISSUES RAISED AT THE 1985 ITU WORLD ADMINISTRATIVE RADIO CONFERENCE ON THE GEOSTATIONARY ORBIT

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INTRODUCTION

For almost six weeks during the summer of 1985, delegates from over one hundred countries[1] met in Geneva for the initial session of the International Telecommunication Union's[2] (ITU) World Administrative Radio Conference (WARC) on the use of the geostationary-satellite orbit (GSO).[3] The GSO is one of the most economically important resources of outer space.[4] Due to the increasingly intensive use being made of the

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The opinions expressed in this article are solely those of the author and do not necessarily represent the official views or policies of any agency of the U.S. Government.

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1. For a list of countries and delegations, see International Telecommunication Union, WARC on the Use of the Geostationary-Satellite Orbit and the Planning of the Space Services Utilizing It, First Session, Geneva, 1985, Doc. 364 [hereinafter all official documents of this Conference are cited as ORB-85]. One hundred and twelve nations participated. *See* International Telecommunication Union, WARC on the Use of the Geostationary-Satellite Orbit and the Planning of Space Services Utilizing It, First Session, Geneva, 1985, Report to the Second Session of the Conference (Sept. 14, 1985) at 151-52 [hereinafter cited as Report to the Second Session].

2. The ITU is a specialized agency of the United Nations. For a discussion of the role and organization of the ITU, see generally G. CODDING & A. RUTKOWSKI, THE INTERNATIONAL TELECOMMUNICATION UNION IN A CHANGING WORLD (1982). The first session of this conference lasted from August 8 to September 16, 1985. The second session is scheduled for 1988.

3. A geostationary satellite orbits the earth directly above the equator at an altitude of about 36,000 km (22,300 mi), where it has a period of revolution approximately equal to that of the earth. Because the satellite and the earth revolve at the same rate, the satellite appears stationary when viewed from the earth. The path it follows is the geostationary-satellite orbit (GSO). The GSO is used by the vast majority of the world's telecommunication satellites. *See* Efficient Use of the Geostationary Orbit, U.N. Doc. A/CONF. 101/BP/7, at 4 (1981); Physical Nature and Technical Attributes of the Geostationary Orbit, U.N. Doc. A/AC.105/203 (1977).

4. Of all the applications of space technology, the most widely used—and the one that

GSO by communication satellites, concerns have been expressed regarding the future availability of access to the GSO.[5] The essential objective of this conference, known as the Space WARC, was to "guarantee in practice, for all countries, equitable access to the GSO and the frequency bands allocated to the space services utilizing it. . . ."[6] In the process of addressing this objective, several important issues of space law were considered.[7]

This article examines the space law issues raised at the Space WARC. Parts I and II address the claim to sovereignty over GSO areas asserted by various equatorial countries and principles associated with that claim. Part III reviews proposals to establish a new legal regime for the GSO. Part IV examines a proposition related to the peaceful use of outer space. Finally, Part V addresses the issue of space debris in the GSO.

Before considering the substance of these issues, it is useful to review the basic structure and procedure of the Conference. The Space WARC

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has become the most routinely operational—is satellite communication. *See* Report of the Second United Nations Conference on the Exploration and Peaceful Uses of Outer Space, U.N. Doc. A/CONF. 101/10, at 35 (Vienna, Aug. 9-21, 1982) [hereinafter cited as UNISPACE 82]. The 1985 global communication satellite market was estimated at $4 billion. AEROSPACE INDUSTRIES ASSOCIATION OF AMERICA, INC., A CURRENT PERSPECTIVE ON SPACE COMMERCIALIZATION 8 (1985).

5. *See* Arnopoulos, *The International Politics of the Orbit-Spectrum Issue,* 7 ANNALS AIR & SPACE L. 215 (1982).

6. International Telecommunication Union, World Administrative Radio Conference on the Use of the Geostationary-Satellite Orbit and the Planning of the Space Services Utilizing It, (Administrative Council Resolution No. 895, May, 1983) [hereinafter cited as Space WARC Agenda]. For background on the Space WARC, see Smith, *Space WARC 1985: The Quest for Equitable Access,* 3 B.U. INT'L L.J. 229 (1985); Du Charme, Bowen & Irwin, *The Genesis of the 1985/87 ITU World Administrative Radio Conference on the Use of the Geostationary-Satellite Orbit and the Planning of the Space Services Utilizing It,* 7 ANNALS AIR & SPACE L. 261 (1982).

7. The focus of the Space WARC was on the ITU's regulatory regime for the GSO. This detailed regulatory regime for radiocommunication services operating from the GSO is set out in the ITU Radio Regulations. *See* International Telecommunication Union, *Radio Regulations* (1982) [hereinafter cited as 1982 *Radio Regulations*]. The 1982 *Radio Regulations* are extremely detailed provisions of more than 1,700 pages, which are created and revised at ITU Administrative Conferences. Although the portions of these regulations relating to the GSO might be considered a part of the body of international space law, the term "space law" as used in this article does not include purely ITU regulatory issues. For a broader overview of the Space WARC results, see U.S. DEPT. OF STATE, REPORT OF THE UNITED STATES DELEGATION TO THE FIRST SESSION OF THE ITU WORLD ADMINISTRATIVE RADIO CONFERENCE ON THE PLANNING OF THE GEOSTATIONARY-SATELLITE ORBIT AND THE SPACE SERVICES UTILIZING IT (1986); Smith, *Space WARC 1985—Round One Ends,* 2 AIR & SPACE L. 1 (1986); Staple, *The New World Satellite Order: A Report from Geneva,* 80 AM. J. INT'L L. 699 (1986). For more information on the ITU regulatory regime for the GSO, see Jakhu, *The Evolution of the ITU's Regulatory Regime Governing Space Radiocommunication Services and the Geostationary Satellite Orbit,* 8 ANNALS AIR & SPACE L. 381 (1983). That regime is often referred to as "first come, first served." *Id.* at 406.

was an Administrative Conference of the ITU.[8] The main decision-making body was the Plenary.[9] During its first meeting, the Plenary established seven committees.[10] The key committee was Committee 5, on Planning,[11] which created two working groups, 5A and 5B. Working Group 5A had responsibility for making recommendations on decisions relevant to the services[12] and bands[13] to be planned, and on the type of plan.[14] Working Group 5B had responsibility for associated regulatory procedures.[15] Each delegation to the WARC could participate in each committee and working group. In addition, *ad hoc* groups on specific issues were established as needed.[16] Membership on these groups, however, was sometimes restricted.[17] Reports from the working groups were forwarded first to their respective committees, and then, to the Plenary where final decisions were taken and a report to the Space WARC second session was approved.[18]

Most space law issues at the Conference were initially raised in Working Group 5A. That group's responsibility for devising a planning method included the establishment of planning principles upon which

8. ITU Administrative Conferences are convened by the ITU to "consider specific telecommunication matters." International Telecommunication Convention, Final Protocol, Additional Protocols, Optional Additional Protocols, Resolutions, Recommendations and Opinions, 1982, art. 7(2) [hereinafter cited as 1982 ITU Convention].

9. *Id.* art. 77.

10. The following committees were established: (1) Steering Committee, (2) Credentials Committee, (3) Budget Control Committee, (4) Technical Parameters and Criteria Committee, (5) Committee on Planning Principles and Criteria and Regulatory and Administrative Procedures, (6) Committee on Matters Relating to the Broadcasting Satellite Service in the 12 GHz Band, and (7) the Editorial Committee. ORB-85, *supra* note 1, Doc. 79.

11. The concept of "planning" was central to the Space WARC. Developing nations generally asserted that the most effective way to guarantee equitable access to the GSO was through establishment of an *a priori* plan which would partition the GSO orbit and the radio frequency spectrum, and allot portions to each nation. Such planning was resisted by developed countries. For a further discussion of planning, see Smith, *supra* note 6, at 247-51, and citations contained therein.

12. The term "service" is defined as "the transmission, emission and/or reception of radio waves for specific telecommunication purposes." 1982 *Radio Regulations, supra* note 7, art. 1, No. 20. Some 38 different radiocommunication services, including 17 space services, are defined. *Id.* art. 1, Nos. 21-57. The fixed satellite service (FSS) was the focus of concern leading to the Space WARC. It is the service in which the ITU classifies satellites which provide point-to-point telecommunication services. *Id.* art. 1, No. 22. The FSS is by far the most widely used space service. *See* Report to the Second Session *supra* note 1, at 3.

13. The ITU allocates specific frequency bands to the various radiocommunication services. *See* 1982 *Radio Regulations, supra* note 7, art. 8.

14. *See* ORB-85, *supra* note 1, Doc. 79, at 6.

15. *Id.*

16. *See, e.g., infra* note 61 and accompanying text.

17. A delegate of Iraq inquired about the Chairman's authority to so restrict membership. The ITU Secretary-General replied that the Chairman "had authority to propose the list of members of the *Ad Hoc* Group" and that delegates "should allow the Chairman's initiative to produce results before commenting further." *See* ORB-85, *supra* note 1, Doc. 220, at 2.

18. Report to the Second Session, *supra* note 1.

the plan would be based.[19] States advancing provisions relating to space law often characterized them as planning principles, although that characterization was criticized.[20]

I. THE SOVEREIGNTY CLAIM AND ASSOCIATED PRINCIPLES

The most significant issue of space law raised at the Space WARC was the claim to sovereignty over areas of the GSO. International space law provides that outer space is not subject to national appropriation by any means, including claim of sovereignty.[21] One might expect that the GSO, at an altitude of about 22,300 miles,[22] would be considered part of outer space[23] and thus be subject to the law of outer space.[24] A previous challenge to this proposition, however, was reasserted at the Space WARC by several equatorial countries.

This challenge was initiated in 1976 when eight equatorial states meeting in Bogota, Colombia, issued a Declaration claiming sovereignty over areas of the GSO above their national territory.[25] The Bogota Declaration was premised on an assertion that the GSO is not a part of outer space, because the GSO's existence depends exclusively on the earth's gravity.[26] In the ten years since this Declaration was issued, the equatorial states have received little, if any, support for their proposition that

19. *See* ORB-85, *supra* note 1, Doc. 79, at 6.

20. Colombia, for example, characterized its orbital sovereignty claim and other space law related provisions as planning principles. *Id.* Doc. 106 add. 2. The subworking group appointed by the Chairman to analyze and organize all planning principles was unable to agree that such provisions were planning principles. *See infra* note 41 and accompanying text.

21. Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space Including the Moon and Other Celestial Bodies, Jan. 27, 1967, 18 U.S.T. 2410, T.I.A.S. No. 6347, 610 U.N.T.S. 205, art. 2 (*entered into force* Oct. 10, 1967) [hereinafter cited as the Outer Space Treaty].

22. *Supra* note 3.

23. Although the location of the boundary between air space and outer space has not been agreed upon, it is generally accepted that objects which orbit the earth are located in outer space, and there is growing acceptance of the proposition that the boundary between air space and outer space begins at the altitude of 100 km above sea level. *See* C. CHRISTOL, THE MODERN INTERNATIONAL LAW OF OUTER SPACE 505 (1982); Gorove, *The Geostationary Orbit: Issues of Law and Policy,* 73 AM. J. INT'L L. 444, 447 (1979). Many views on the boundary between air space and outer space have been asserted. *See* Cheng, *The Legal Regime of Airspace and Outer Space: The Boundary Problem Functionalism versus Spatialism: The Major Premises,* 5 ANNALS AIR & SPACE L. 323 (1980); Qizhi, *The Problem of Definition and Delimitation of Outer Space,* 10 J. SPACE L. 157 (1982); C. CHRISTOL, *supra,* at 502-11.

24. For an overview of international space law and a discussion of its fundamental principles, see CENTER FOR RESEARCH OF AIR & SPACE LAW, SPACE ACTIVITIES AND EMERGING INTERNATIONAL LAW (N.M. Matte ed. 1984).

25. Declaration of the First Meeting of Equatorial Countries, signed in Bogota, Colombia, December 3, 1976, by Brazil, Colombia, Congo, Ecuador, Indonesia, Kenya, Uganda, and Zaire [hereinafter cited as the Bogota Declaration]. For an English translation of this document, see II MANUAL ON SPACE LAW 383-87 (N. Jasentuliyana & E. Lee ed. 1979).

26. In relevant part, the Bogota Declaration provides that:

> [The GSO] is a physical fact linked to the reality of our planet because its existence depends exclusively on its relation to gravitational phenomena generated by the

the GSO is not a part of outer space. The 1982 United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE) acknowledged that most nations considered the GSO to be a part of outer space.[27] Most nations have viewed the Bogota Declaration primarily as a political act directed against the developed countries using the GSO.[28] Its factual basis,[29] as well as its legal basis,[30] has been vigorously assailed.

Prior to the Space WARC some equatorial states appeared to be moderating, if not abandoning, their earlier position.[31] At a 1983 ITU conference the sovereignty claim was raised, but it was not forcefully asserted.[32] Nevertheless, at the Space WARC several equatorial countries, in reasserting their prior proposition, argued strongly for specific recognition of their claim to sovereignty over areas of the GSO above their territory and for other proposals associated with that claim.

Colombia, the leader of these equatorial countries, introduced a document summarizing its planning proposals for use of the GSO.[33] One proposal asserted that "equatorial states exercise sovereignty over the corresponding segments of the [GSO] and regard them as an integral part of their territories."[34] This language was taken almost directly from the Bogota Declaration.[35] Two other proposals were advanced which would have served to bolster claims of sovereignty over the GSO. One declared that equatorial countries have "rights of preservation" to the GSO arcs

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> earth, and that is why it must not be considered part of the outer space. Therefore, the segments of [GSO] are part of the territory over which Equatorial states exercise their national sovereignty.

MANUAL ON SPACE LAW, *supra* note 25, at 383.

27. UNISPACE 82, *supra* note 4, at 70.

28. *See* Report of the Canadian Delegation to the Regional Broadcasting-Satellite Conference (Region 2) at 13 (Geneva, June 13-July 15, 1983).

29. The Declaration asserts that the existence of the GSO is due exclusively to the earth's gravity and for that reason it is not a part of outer space. Bogota Declaration, *supra* note 25. Factually, that proposition is incorrect. It is well established that numerous forces act upon an object in the GSO, only one of which is the force of the earth's gravity. *See* Physical Nature and Technical Attributes of the Geostationary Orbit, *supra* note 3, at 4-6. Moreover, the force that is provided by the earth's gravity is a result of the entire mass of the earth, not just that of the equatorial countries.

30. The GSO, as a part of outer space, is not subject to national appropriation by claims of sovereignty. Outer Space Treaty, *supra* note 21, art II. *See also* Jakhu, *The Legal Status of the Geostationary Orbit,* 7 ANNALS AIR & SPACE L. 333, 340 (1982).

31. *Id.* at 343-44.

32. At the 1983 ITU Regional Administrative Radio Conference, Colombia and Ecuador asserted their claim for the record, but it was "generally ignored by the other participants" and took only a few minutes of the Conference's time. U.S. DEPT. OF STATE, REPORT OF THE UNITED STATES DELEGATION TO THE ITU REGION 2 ADMINISTRATIVE RADIO CONFERENCE ON THE BROADCASTING-SATELLITE SERVICE 51 (1983).

33. ORB-85, *supra* note 1, Doc. 106 add. 2 (Colombia).

34. *Id.* at 3.

35. *See supra* note 26.

above their territory.[36] The other asserted that "prior authorization" is required before another state may place a space object in the GSO arc above an equatorial state.[37] Documents submitted by two other equatorial countries, Kenya and Ecuador, supported these proposals.[38] Notwithstanding this support, the proposals made little progress in Working Group 5A.

In order to structure the discussions regarding planning principles, the Chairman of Working Group 5A appointed a sub-working group to analyze and systematically organize the many proposals.[39] The group's report placed the various proposals within fourteen broad categories of planning principles.[40] The group was unable to agree, however, whether nine Colombian proposals were actually planning principles,[41] although they were denominated as such by Colombia.[42] These nine proposals were referenced in the report, but were not listed as planning principles.[43] Included in these nine proposals were those regarding orbital sovereignty and prior authorization.[44] The proposal regarding preservation of GSO

36. ORB-85, *supra* note 1, Doc. 106 add. 2, at 3 (Colombia).

37. *Id.* In a Plenary session, Colombia made a vociferous statement relating to the sovereignty claim and the prior authorization principle. *See* ORB-85, *supra* note 1, Doc. 263 (Minutes of the Fifth Plenary Meeting, Sept. 5, 1985). In a statement supposedly directed against breaches of the ITU Radio Regulations, a Colombian delegate, the Colombia Minister of Communications, chastised the United States for failing to comply with the ITU coordination requirements. *Id.* at 6. This alleged failure related to a U.S. satellite positioned above Colombia in the GSO. In response, Ambassador Dean Burch, the head of the United States delegation, pointed out that the United States had attempted to comply with the ITU coordination requirements. At that point, however:

> The coordination process was broken off by a Colombian Ministry representative on the basis of Colombian equatorial sovereignty claims. The Colombian representative stated that it would be necessary to request the permission of Colombia to launch and operate a satellite in their sovereign airspace. We refused to request such permission because we, and nearly every other country in this room, have refused to recognize sovereign claims to the GSO. In view of the inability to achieve technical agreement, the United States proceeded to launch and operate the satellite in 1983.

Id. at 7. *See also, id.* Doc. 358, at 16-18.

38. *See* ORB-85, *supra* note 1, Doc. 63 (Kenya); *id.* Doc. 215 (Ecuador).

39. Many of the countries represented at the Space WARC submitted proposed planning principles. The chairman of Working Group 5A recognized that discussion of these proposals would be greatly facilitated if they were organized and categorized under various topics. The subworking group charged with this responsibility was chaired by Mr. Ian Hutchings of New Zealand. *See* ORB-85, *supra* note 1, Doc. DT/48; *id.* Doc. DT/48 add. 1.

40. The categories of planning principles were: (1) Guarantee of access and equitability, (2) Sharing with other services, (3) Reservation of resources, (4) Duration of the plan, (5) Special geographical situations, (6) Provision for multi-administration networks, (7) Accommodation of existing systems, (8) Different planning solutions in different circumstances, (9) Flexibility, (10) Usage of allotments, (11) Efficiency, (12) Provisions for multi-service and multi-band networks, (13) Sharing of inconveniences, and (14) Others. *Id.* Doc. DT/48, at 1-2; *id.* Doc. DT/48 add. 1, at 1.

41. *Id.* Doc. DT/48, at 1.

42. *Id.* Doc. 106 add. 2, at 1 (Colombia).

43. *Id.* Doc. DT/48, at 1.

44. *Id.* In a later meeting of Working Group 5A, Colombia inquired about the fate of their nine proposals which the sub-working group had not reported as planning principles.

arcs above equatorial countries was included in the report as a possible planning principle within the category "Reservation of Resources."[45]

The Report of the sub-working group formed the basis for discussion of planning principles within Working Group 5A. Although the proposals regarding orbital sovereignty and prior authorization were not specified as planning principles in the report,[46] discussion in Working Group 5A of the "preservation" principle was immediately broadened by Kenya to encompass the more general issue of orbital sovereignty.[47]

Two primary objections to the proposals relating to orbital sovereignty, prior authorization, and preservation were voiced. First, most participants at the Space WARC considered any proposals relating to orbital sovereignty to be legal issues and not true planning principles. Within Working Group 5A, the debate on this matter centered primarily on whether the Space WARC was an appropriate forum to address the substance of these proposals. Several delegations contended that the legal subcommittee of the United Nations Committee on the Peaceful Uses of Outer Space (COPUOS), and not the Space WARC, was the appropriate forum.[48] Colombia countered that the United Nations had previously indicated that the ITU was an appropriate forum.[49] The United Kingdom delegation challenged this assertion, arguing that the United Nations had stated only that COPUOS should take no action which would "prejudice . . . the role of the [ITU]."[50]

The second problem plaguing the sovereignty claim and its associated principles was that they were viewed as directly conflicting with the primary goal of the Conference[51]—guaranteed equitable access to the GSO for all countries.[52] Any exercise of sovereignty, or of sovereign

However, no discussion of the proposals was entertained by the Chairman. Author's notes of Working Group 5A (Aug. 31, 1985) (No official minutes were prepared for meetings of working groups.).

45. As reported by the sub-working group, this proposed principle provided that "equatorial states shall preserve the corresponding segments of the [GSO] superjacent to their territories for the opportune and appropriate utilization of the orbit by all states, particularly the developing countries." ORB-85, *supra* note 1, Doc. DT/48, at 5. This language was taken from the Kenyan proposal. *Id.* Doc. 63, at 4 (Kenya). It was, however, very similar to the Colombian proposal regarding "rights of preservation." *Id.* Doc. 106 add. 2, at 3 (Colombia).

46. *See supra* notes 39-44 and accompanying text.

47. When the "preservation" proposal was raised in Working Group 5A, Kenya broadened the discussion by asserting that the GSO was not part of outer space, but a part of the territory of equatorial states. Author's notes of Working Group 5A (Aug. 27, 1985).

48. The United Kingdom, the Federal Republic of Germany, Italy, the United States, and France stated that COPUOS was the appropriate forum. *Id.*

49. *Id.*

50. *Id.* This statement of a delegate from the United Kingdom quoted a U.N. document setting the agenda for the COPUOS Legal Sub-Committee's twenty-fourth session. *See* International Co-operation in the Peaceful Uses of Outer Space, U.N. Doc. A/39/713, at para. 4(c) (1984).

51. Author's notes of Working Group 5A (Aug. 27, 1985).

52. *See supra* note 6 and accompanying text.

rights such as preservation and prior authorization, would have granted exclusive rights of control to equatorial countries. It was difficult to perceive how equitable access for all countries could be guaranteed by providing equatorial countries with control over segments of the GSO.[53] Although Colombia asserted that equatorial countries would exercise their rights in order to "preserve" the GSO,[54] exercise of those rights would have been unencumbered by any criteria.[55] Thus, equatorial countries could have "preserved" their GSO arcs by demanding monetary payment, political concessions, or other exactions prior to granting permission for their use. One delegation pointed out that accepting any of these proposals would indicate that some countries were "more equal than others."[56]

In light of these two strong objections, no consensus was reached in Working Group 5A regarding the sovereignty related proposals.[57] In fact, except for the equatorial countries, there was a general lack of support for any of these proposals.[58] Therefore, the preservation proposal was reported to Committee 5 in brackets, indicating that no consensus had been reached.[59] The sovereignty claim and the prior authorization proposal, however, were not even referenced in the reports of Working Group 5A to Committee 5.[60]

Before these matters were tabled for discussion in Committee 5, a significant decision regarding sovereignty claims was made in another group. The chairman of the first session of the Conference, Dr. Ilija Stojanovic (Yugoslavia), had established the Chairman's *Ad Hoc* Group

53. Author's notes of Working Group 5A (Aug. 27, 1985).

54. *See* ORB-85, *supra* note 1, Doc. 106 add. 2, at 3 (Colombia).

55. *Id.*

56. Author's notes of Working Group 5A (Aug. 27, 1985) (Statement of U.S. delegation).

57. In spite of the politics present at the Space WARC, the quest for consensus was a striking factor. The developing countries had a majority of the vote, yet few votes on significant issues were taken and then only near the end of the Conference. The emphasis on consensus had its basis primarily in two factors. First, interference-free communications have always depended to a great extent on cooperation among countries. This has been one of the primary reasons for the very existence of the ITU. Second, without the participation of the majority of developed countries, any plan selected would have been an illusion.

58. The equatorial countries of Ecuador, Colombia, and Kenya spoke in favor of the "preservation" proposal and orbital sovereignty in general. The sole nonequatorial state indicating some support was Somalia, which made a brief statement in support of Kenya. The following states spoke out against this proposal and any proposals based on orbital sovereignty: the United Kingdom, the Federal Republic of Germany, Italy, the United States, Japan, France, and Sweden. Author's notes of Working Group 5A (Aug. 27, 1985).

59. *See* ORB-85, *supra* note 1, Doc. 214, at 1. This action was based on a recommendation by the chairman of Working Group 5A. Author's notes of Working Group 5A (Aug. 27, 1985). The procedure of placing items in brackets when consensus could not be reached was followed in working groups and committees. It enabled the Conference to progress through agreement on noncontentious issues. This procedure, however, also resulted in decisions on the most significant issues being delayed until late in the Conference, in Plenary session.

60. ORB-85, *supra* note 1, Doc. 140; *id.* Doc. 214.

to seek a consensus solution on the issue of planning.[61] He considered this action necessary because progress had been slow and willingness to compromise had often been lacking.[62] The Chairman's *Ad Hoc* Group succeeded in settling certain issues and in narrowing the differences on others.[63] Although the sovereignty issue was not resolved, the Group considered it to be a legal matter and their report indicated that the Plenary would decide whether the Space WARC was competent to address the issue substantively.[64] Due to the action taken by the Chairman's *Ad Hoc* Group, Committee 5 did not address the sovereignty claim. The preservation proposal remained in brackets and was also sent to the Plenary without discussion.[65]

The sovereignty claim and the preservation proposal were finally resolved in Plenary session late in the Conference. In accordance with the earlier action of the Chairman's *Ad Hoc* Group, the Plenary had to decide whether the Space WARC was competent to address the substance of the sovereignty-related claims.[66] The majority of the nations speaking on this matter opined that the Conference was not competent.[67] Only four equatorial countries spoke in favor of the Space WARC's competence.[68] During the course of the debate, the Secretary-General of the ITU was called upon for a legal opinion on the competency issue.[69] His opinion focused on the Space WARC Agenda[70] and concluded that sovereignty-related issues were not encompassed within the Agenda and, therefore, the Conference was not competent to address them.[71]

Ultimately, the Conference Chairman pointed out that most states agreed with the Secretary-General.[72] He suggested that the Space

61. *See id.* Doc. 220, at 2. The Chairman's *Ad Hoc* Group included the Conference Chairman and Vice-Chairmen as well as delegates from certain key countries. *Id.* Colombia, notably, was selected for membership. *Id.* Informal discussions indicated that Colombia was placed on this group due to two factors. First, Colombia was perceived to be the leader of the equatorial countries with regard to sovereignty matters. Certainly Colombia was the most vocal. Second, many participants recognized that matters relating to sovereignty claims had to be resolved so that more important issues could be addressed. Colombia's cooperation, or at least acquiescence, would help conclude this matter in minimum time.

62. *Id.* No firm decisions on bands to plan or on planning methods had been made after almost four weeks of the Conference.

63. *See id.* Doc. DT/70 (Rev. 1), at 6-7.

64. *Id.* at 7.

65. *Id.* Doc. 330, at 7; *id.* Corrigendum 1 to Doc. 324, at 1.

66. *See supra* note 64 and accompanying text.

67. ORB-85, *supra* note 1, Doc. 353, at 6-9. The following states spoke against competence: Papau New Guinea, Sweden, Italy, the United Kingdom, the Netherlands, the Soviet Union, the Federal Republic of Germany, the United States, and Canada. *Id.*

68. Colombia, Ecuador, Indonesia, and Kenya asserted that the Space WARC was competent to address the sovereignty claims. *Id.*

69. *Id.* at 8.

70. Space WARC Agenda, *supra* note 6.

71. *See* ORB-85, *supra* note 1, Doc. 353, at 8.

72. *Id.* at 9.

WARC declare itself not competent to address the sovereignty-related claims of the equatorial countries, including the "preservation" proposal, and that this decision be reported to the United Nations.[73] His suggestion was adopted without objection.[74] Thus, the Space WARC made no substantive decisions regarding the claims of orbital sovereignty and rights of preservation. Nevertheless, the failure of equatorial countries to secure backing for substantive discussion of their claims may be interpreted as a lack of support for those claims.

The Conference Chairman's suggestion to report the decision on competency to the United Nations resulted from an agreement made in the Chairman's *Ad Hoc* Group.[75] Since there are no minutes of this Group's meetings, the rationale for reporting this decision to the United Nations is not on record. The issues of the definition and delimitation of outer space and of the character and utilization of the GSO, however, were already on the agenda of the COPUOS legal subcommittee.[76] Therefore, the mere reporting of the Space WARC's decision on competency to the United Nations cannot be viewed as advancing the legal status of the sovereignty claim.

II. THE SOVEREIGNTY CLAIM—AN INDIRECT APPROACH

One proposal introduced jointly by Colombia and four other Andean region nations related to the sovereignty claim in an important, but indirect, manner.[77] It was presented directly to Committee 5 by Venezuela[78] and provided that "[a]ny planning method must be based on the relevant procedures and rules and on appropriate technical, economic, and legal factors."[79] This proposal was based upon a similarly worded recommendation that had been adopted at the United Nations 1982 UNISPACE Conference.[80]

In spite of its background, this proposal was not well-received in Committee 5. States opposing the proposal indicated that the UNISPACE Conference had a status quite different from that of the Space

73. *Id.*

74. *Id.* The decision on competence applied only to the Space WARC and not to either the ITU in general or to other ITU Conferences. *Id.* at 6–9.

75. *See id.* Doc. DT/70 (Rev. 1), at 7.

76. *See* International Co-operation in the Peaceful Uses of Outer Space, *supra* note 50.

77. ORB-85, *supra* note 1, Doc. 206 (Bolivia, Colombia, Ecuador, Peru, and Venezuela).

78. *See id.* Doc. 330, at 2. This proposal was supported in Committee 5 by Venezuela, Algeria, Colombia, Nigeria, and Ecuador. *Id.* and Author's notes of the Ninth Meeting of Committee 5 (Sept. 17, 1985) (Author's notes are more extensive than the ITU summary record on this point.).

79. ORB-85, *supra* note 1, Doc. 206 (Bolivia, Colombia, Ecuador, Peru, and Venezuela).

80. *Id.* Doc. 330, at 2. *See also* UNISPACE 82, *supra* note 4, at 71 ("[A]ny solution to the use of GSO should be both equitable and flexible and take into consideration the economic, technical, and legal aspects.").

WARC.[81] Moreover, much of the proposal was simply unnecessary. The reference to procedures and rules was an obvious statement of fact. Any plan would clearly have to be based on relevant procedures and rules, and the Space WARC was charged with establishing them.[82] The proposal's reference to technical and economic factors was also innocuous, because planning principles had already been adopted which provided for those elements.[83]

Use of the term "legal factors," however, was quite another matter. Many nations saw a connection between the term "legal factors" and the sovereignty claim. They asserted that such legal questions had been covered by the report of the Chairman's *Ad Hoc* Group which referred the sovereignty issue to Plenary for a decision on competence.[84] Although this link between the term "legal factors" and the sovereignty issue seemed clear to many countries, Ecuador argued that the term was not "directly linked" to the claims of sovereignty which were "not necessarily" included in the proposal.[85] After this short debate, Algeria called for a vote on the proposal.[86] In the first vote taken in Committee 5 on any issue, the proposal was defeated by a tally of sixteen countries in favor and thirty-one countries against, with many abstentions.[87] Few non-equatorial countries voted for this proposal.[88] In fact, most developing nations abstained.[89] On the other hand, most developed countries voted against the proposal.[90]

Significantly, the votes in favor did not constitute an endorsement of the sovereignty claim, but rather, merely an approval of the ambiguous term "legal factors," which had been previously used in the UNISPACE

81. ORB-85, *supra* note 1, Doc. 330, at 2. The UNISPACE Conference was convened by the United Nations to allow wider participation by states in outer space matters and to assess new developments, exchange information, and examine the effectiveness of institutional and cooperative methods for realizing the benefits of space technology. UNISPACE 82, *supra* note 4, at 2. The Space WARC, on the other hand, was an administrative conference of the ITU. *See supra* note 8. It had a specific objective related to the GSO and the space services using it. *See supra* note 6 and accompanying text.

82. *See* Space WARC Agenda, *supra* note 6, at para. 2.3 ("establish the principles, technical parameters, and criteria for the planning . . . ").

83. *See* ORB-85, *supra* note 1, Doc. 214, at 2 ("Any planning method should . . . be capable of accommodating advances in technology and . . . not prevent the use of technologies which are well proven and widely accepted.").

84. *Id.* Doc. 330, at 2. For information on the Chairman's *Ad Hoc* Group, see *supra* notes 61-65 and accompanying text.

85. Author's notes of Ninth Meeting of Committee 5, *supra* note 78.

86. ORB-85, *supra* note 1, Doc. 330, at 2.

87. *Id.*

88. The Summary Record of this meeting of Committee 5 does not specify which countries voted, or how they voted. *See id.* These observations are recorded in Author's notes of Ninth Meeting of Committee 5, *supra* note 78.

89. Author's notes of Ninth Meeting of Committee 5, *supra* note 78.

90. *Id.*

Report.[91] The votes against the proposal, however, should be viewed as a repudiation of the sovereignty claim since the only controversial aspect of the proposal was the potential link between "legal factors" and the sovereignty issue.[92] The defeat of this proposal takes on added import because it was the first occasion in which the sovereignty claim, in either a direct or indirect manner, came to a vote in an international forum.[93]

III. PROPOSALS TO CREATE A NEW LEGAL REGIME FOR THE GSO

Colombia proposed several planning principles aimed at creating a new legal regime for the GSO. One proposal called for establishment of a "specific legal regime."[94] A legal regime for all of outer space had already been provided by the Outer Space Treaty and other applicable space law treaties.[95] If, however, the GSO is not a part of outer space, as asserted in the Bogota Declaration,[96] then a new legal regime is needed to govern those areas not subject to the sovereignty of an equatorial state, i.e., those areas of the GSO above the high seas. Thus, this proposal also had a relationship to the sovereignty claim.

Several of Colombia's other proposals for a new legal regime had their origin in the Outer Space Treaty,[97] although Colombia is not a party to that treaty.[98] Article I of the Outer Space Treaty provides that "the exploration and use of outer space . . . shall be carried out for the benefit and in the interest of all countries. . . ."[99] One Colombian proposal was titled "Use for the Benefit of All Mankind."[100] It provided that "[t]he ultimate objective of activities in the GSO should be the same as outer space and related science and technology activities, namely, to improve the welfare of mankind as a whole."[101] Although worded poorly in the English text, the intent of this provision seemed to be that activities in the GSO should be for the benefit of mankind. Use of the phrase

91. *See supra* note 80.

92. *See supra* notes 84-85 and accompanying text.

93. U.N. COPUOS operates on a consensus basis and does not take votes. *See* CENTER FOR RESEARCH OF AIR & SPACE LAW, *supra* note 24, at 197. Other international fora, such as UNISPACE 82, generally operate in a similar manner. *See supra* note 4.

94. ORB-85, *supra* note 1, Doc. 106 add. 2, at 3 (Colombia).

95. Outer Space Treaty, *supra* note 21. For an overview of the treaties applicable to outer space, see MANUAL ON SPACE LAW, *supra* note 25; CENTER FOR RESEARCH OF AIR & SPACE LAW, *supra* note 24.

96. *See supra* note 25 and accompanying text.

97. Outer Space Treaty, *supra* note 21.

98. *See* ORB-85, *supra* note 1, Doc. 106, at 7 (Colombia).

99. Outer Space Treaty, *supra* note 21, art. I.

100. ORB-85, *supra* note 1, Doc. 106 add. 2, at 2 (Colombia).

101. *Id.*

"the same as [in] outer space. . ."[102] was an obvious attempt to distinguish the GSO from outer space, as is done in the Bogota Declaration.[103] Colombia also proposed several planning principles regarding responsibility and liability for activities in orbit.[104] These proposals were derived from the Outer Space Treaty[105] and the Liability Convention,[106] with some change in wording.[107]

Finally, Colombia proposed a planning principle regarding the remote sensing of a country's territory and natural resources from the GSO.[108] Among other things, this principle called for establishment of an international regime to "safeguard each State's sovereignty over its natural resources. . . ."[109] Although no similar provisions were contained in existing space law treaties, the issue of remote sensing of the earth from space was already on the COPUOS agenda.[110] Moreover, the

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102. *Id.*

103. *See supra* note 26.

104. Proposal CLM/106/45 provided that:

> Each State must be internationally responsible for its activities in the geostationary orbit, irrespective whether they are carried out by governmental bodies or nongovernmental entities. When States pool forces and operate through an international organization the responsibility will fall on the organization and its participating States.

ORB-85, *supra* note 1, Doc. 106 add. 2, at 4 (Colombia).

Proposal CLM/106/46 provided that:

> When two or more States jointly launch a space object, "they shall be jointly or severally liable for any damage caused" (Article V of the Convention on International Liability for Damage Caused by Space Objects). The international organizations will not be authorized to submit claims for damage caused to them; only a State Member of the organizations having signed the above Convention may do so.

Id.

Proposal CLM/106/47 provided that: The geostationary orbit should not be considered as an area for private enterprise without due authorization and continuous supervision on the part of the States concerned. *Id.*

105. Outer Space Treaty, *supra* note 21, arts. 6, 7.

106. Convention on International Liability for Damage Caused by Space Objects, March 29, 1972, 24 U.S.T. 2389, T.I.A.S. No. 7762 (*entered into force* Oct. 9, 1973).

107. For example, one Colombian proposal uses the term "private enterprise." *See supra* note 104, Proposal CLM/106/47. The Outer Space Treaty, however, uses the term "non-governmental entities." Outer Space Treaty, *supra* note 21, art. 6.

108. CLM/106/44 provided that:

> The Conference should decide that the [orbit/spectrum resource] must be used by satellites which do not threaten the security of States, i.e. the steps and measures taken to protect their nationals not only from physical and direct attack but also any other activities such as exploration of their territories is to acquire knowledge benefiting exclusively the State using the exploratory artefacts or third States, to the detriment of the States observed. It is particularly important for the developing countries that an equitable international agreement should be concluded which safeguards each State's sovereignty over its natural resources, respecting the confidential nature of the information obtained by means of remote observation. [This quotation is exact as worded.]

ORB-85, *supra* note 1, Doc. 106 add. 2, at 3-4 (Colombia).

109. *Id.*

110. *See* International Co-operation in the Peaceful Uses of Outer Space, *supra* note 50, at para. 3(a).

issue of remote sensing is quite controversial[111] and could have consumed much Conference time if examined at the Space WARC.

In general, the proposed planning principles relating to a new legal regime for the GSO received little support at the Space WARC. The substance of most of these proposals was in the Outer Space Treaty[112] and, therefore, already applicable to all outer space, including the GSO. The proposal for a "specific legal regime"[113] for the GSO was associated with the sovereignty claim, and the proposal regarding remote sensing[114] was a controversial issue already being addressed in COPUOS. Due to the above factors, none of these proposals were reported out of Working Group 5A;[115] neither was their substance discussed in Committee 5 or the Plenary.[116]

IV. EXCLUSIVELY PEACEFUL PURPOSES

The concept of the peaceful use of outer space is a well-established principle of space law. The Preamble to the Outer Space Treaty, in two separate paragraphs, refers to "the exploration and use of outer space for peaceful purposes."[117] The United States has recognized this principle in domestic legislation[118] and in official policy statements.[119] Nevertheless, it was a matter of concern to many nations when Colombia introduced a planning principle providing that "the [GSO] must be used *exclusively* for peaceful purposes, and its planning must thus rule out any consideration contrary to those purposes."[120]

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111. One author noted that:

> For over a decade, within and outside of the United Nations framework, those interested in developing a legal framework for the uses of space technology have been attempting to agree on the appropriate principles to govern the acquisition of information about the earth's surface by the use of sensors placed on orbiting spacecraft, i.e., by remote sensing.

Logsdon & Monk, *Remote Sensing From Space: A Continuing Legal Policy Issue,* 8 ANNALS AIR & SPACE L. 409 (1983). *See also* C. CHRISTOL, *supra* note 23, at 729-57.

112. Outer Space Treaty, *supra* note 21.

113. *Supra* note 94.

114. *Supra* note 108.

115. These proposals were among the nine that ran into difficulty in the sub-working group formed by Working Group 5A. *See supra* note 41 and accompanying text.

116. The proposal for a specific legal regime was briefly mentioned by a delegate of Colombia during the Plenary discussion of competence to address the sovereignty claim. *See supra* notes 66-74 and accompanying text. He declared that the GSO was the common heritage of all countries, not just the technological powers, and that this was "one reason why a *sui generis* legal system for the [GSO] orbit/spectrum resource must be discussed at the Conference." ORB-85, *supra* note 1, Doc. 353, at 6.

117. *See* Outer Space Treaty, *supra* note 21.

118. *See* National Aeronautics and Space Act of 1958, § 102(a), 42 U.S.C. § 2451 (1982) ("[A]ctivities in space should be devoted to peaceful purposes. . . .").

119. United States space policy includes a commitment "to the exploration and use of space by all nations for peaceful purposes. . . ." 18 WEEKLY COMP. PRES. DOC. 872 (July 4, 1982).

120. *See* ORB-85, *supra* note 1, Doc. 106 add. 2, at 3 (Colombia) (emphasis added).

The Colombian proposal was notable for three reasons. First, the expression "peaceful purposes" has never been formally defined. Two interpretations have been advocated. A number of Socialist countries maintain that "peaceful purposes" means "nonmilitary."[121] This interpretation would prohibit any military use of space, including use by military weather, communication, and surveillance satellites.[122] Such an interpretation clearly does not reflect state practice of the space powers. Moreover, it implies the total demilitarization of space, which is only possible under a comprehensive disarmament treaty. Most Western nations, including the United States, assert that "peaceful purposes" means "nonaggressive" uses;[123] thus, the peaceful purposes principle permits all nonaggressive military activities in space other than those which are specifically prohibited.[124]

Another problem was posed by use of the term "exclusively." The phrase "exclusively for peaceful purposes" is used in two treaties which associate this language with a legal regime prohibiting weapons tests of any type and certain specific military activities.[125] Inclusion of a principle with such potential arms control connotations would have drawn the ITU into very sensitive political issues.

The final difficulty with the proposal was that if it were adopted, the ITU would have had to insure that planning ruled out considerations contrary to exclusively peaceful purposes.[126] This would have involved the ITU in defining which proposed uses were peaceful. Such actions would be contrary to the ITU Convention, since the stated purposes of

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121. Vlasic, *Disarmament Decade, Outer Space and International Law,* 26 McGILL L.J. 135, 171 (1981).

122. *Id.*

123. *Id. See also* Smith, *Legal Implications of a Space-Based Ballistic Missile Defense,* 15 CAL. W. INT'L L.J. 52, 71-73 (1985).

124. The question is not whether a particular space activity is military or nonmilitary, but whether it comports with the Outer Space Treaty, the U.N. Charter, and other international law prohibiting acts of aggression.

125. This phrase is used in the Outer Space Treaty which provides that:

> The moon and other celestial bodies shall be used by all States Parties to the Treaty exclusively for peaceful purposes. The establishment of military bases, installations and fortifications, the testing of any type of weapons and the conduct of military maneuvers on celestial bodies shall be forbidden. The use of military personnel for scientific research or for any other peaceful purposes shall not be prohibited. The use of any equipment or facility necessary for peaceful exploration of the moon and other celestial bodies shall also not be prohibited.

Outer Space Treaty, *supra* note 21, art. 4.

A nearly identical provision is contained in the Moon Treaty. Agreement Governing the Activities of States on the Moon and Other Celestial Bodies, Dec. 5, 1979, art. 2, U.N. Doc. A/RES/34/68, 18 ILM 1434. *See also* Antarctic Treaty, Dec. 1, 1959, art. 1, 1 U.S.T. 794, T.I.A.S. No. 4780, 40 U.M.T.S. 71 (*entered into force* June 23, 1961).

126. *See supra* note 120 and accompanying text.

the ITU do not include arms control functions.[127] Moreover, the Convention generally avoids ITU involvement in miltitary matters and specifically provides that members retain their freedom regarding military radio installations.[128]

In spite of the problems presented by the proposal on exclusively peaceful purposes, states opposing it were in a delicate situation. Any argument against this proposal would need to be phrased quite carefully to avoid the implication that a state desired or intended to use the GSO for nonpeaceful purposes. Such an implication could have been exploited for propaganda purposes in other, more political, arenas. Given this sensitivity, the discussions on this proposal at the Space WARC were rather brief. Many nations apparently elected to remain silent when the issue was raised, and hoped for a favorable outcome.

In Working Group 5A the proposal regarding exclusively peaceful purposes was briefly considered for selection as a planning principle.[129] Senegal noted that no state should be against the peaceful use of the GSO.[130] Colombia asserted that peaceful use is a basic "*raison d'etre*" of the Outer Space Treaty.[131] Nevertheless, after the United Kingdom stated that this proposal should not be considered a planning principle, the Chairman of Working Group 5A was quick to suggest placing it in brackets.[132] His suggestion, in all likelihood, was premised upon an appreciation of the political sensitivity it presented. No objections to the Chairman's suggestion were advanced[133] and the proposal on exclusively peaceful purposes was reported to Committee 5 in brackets.[134]

Committee 5 handled this proposal with a similar approach. The Committee Chairman indicated that it was a "legal issue and would best be dealt with in the Plenary."[135] Again, no objections were asserted,[136] and the proposal was reported to the Plenary in brackets.[137] In the Plenary, the peaceful purposes proposal retained its characterization as a

127. 1982 ITU Convention, *supra* note 8, art. 4.
128. *Id.* art. 38.
129. The sub-working group of Working Group 5A had listed this proposal in its report on planning principles under the category of "Others." *See* ORB-85, *supra* note 1, Doc. DT/48 add. 1, at 4-5.
130. Author's notes of Working Group 5A (Aug. 29, 1985).
131. *Id.*
132. *Id.*
133. *Id.*
134. *See* ORB-85, *supra* note 1, Doc. 214, at 2.
135. *Id.* Doc. 330, at 7.
136. *Id.*
137. *Id.* Doc. 324, at 4.

legal issue and was combined with the issues surrounding the orbital sovereignty claim.[138] The Plenary decision regarding the lack of competence of the Space WARC to address such issues of space law[139] encompassed this issue, and apart from one brief comment, it was never addressed separately in the Plenary.[140] Thus, the "exclusively peaceful purposes" proposal came to a quick and quiet end at the Space WARC.

V. SPACE DEBRIS

The issue of space debris has been a matter of concern for quite some time among space lawyers and engineers.[141] At the 1982 UNISPACE Conference, it was recognized as a problem "that is likely to become more serious in [the] future."[142] It is not surprising, then, that this issue was broached at the Space WARC.

Four delegations introduced documents regarding space debris. In general terms, Algeria, Iraq, and Kenya called for the removal of satellites from the GSO at the end of their lifetime.[143] The United Kingdom proposed that the Conference adopt a recommendation urging states and other satellite operators "to ensure that at the end of their useful lives [satellites] will present no residual sources of interference to other satellites in the orbit."[144] The United Kingdom's primary concern was interference due to space debris.[145]

Although the Space WARC adopted no resolution or recommendation regarding space debris, it did urge the ITU to take further action. The Report to the Second Session of the Space WARC called upon the

138. *Id.* Doc. 353, at 6-9.

139. *See supra* notes 66-74 and accompanying text.

140. Kenya briefly commented on the peaceful purpose proposal. They could not understand "why any administration should consider the use of the [GSO] for peaceful purposes only, to be irrelevant to the work of the Conference." ORB-85, *supra* note 1, Doc. 353, at 8.

141. For a discussion of the issue of space debris, see generally, Olmstead, *Orbital Debris Management: International Cooperation for Control of A Growing Safety Hazard,* 34TH CONGRESS OF THE IAF, (Oct. 1983); Gordon, *Toward International Control of the Problem of Space Debris,* PROCEEDINGS OF THE TWENTY-FIFTH COLLOQUIUM ON THE LAW OF OUTER SPACE 63 (1982); Diederiks-Verschoor, *Harm Producing Events Caused by Fragments of Space Objects (Debris),* PROCEEDINGS OF THE TWENTY-FIFTH COLLOQUIUM ON THE LAW OF OUTER SPACE 1 (1982).

142. UNISPACE 82, *supra* note 4, at 70.

143. An Algerian proposal simply stated that satellites should be able "to leave the [GSO] as soon as they are no longer used." ORB-85, *supra* note 1, Doc. 75, at 4 (Algeria). Kenya proposed that "States and/or international organizations operating their space objects in the GSO shall take necessary action to remove nonoperational or unutilized space objects from the orbit." *Id.*, Doc. 20, at 5 (Kenya). Iraq expressed concern over the increasing probability of collision in the GSO and concluded that "the removal of dead satellites from the GSO orbit must be made obligatory for all future satellite networks and hence proposes that the Conference should adopt an appropriate Resolution to this effect." *Id.*, Doc. 87, at 5 (Iraq).

144. ORB-85, *supra* note 1, Doc. 18, at 16 (United Kingdom).

145. *Id.* at 15.

ITU to study the issue during the intersessional period to increase understanding of the issue, identify the relevant factors, evaluate the risks, and recommend a solution.[146] The second session of the Conference was also invited to "review the progress" of the studies.[147]

The decision to call for further studies instead of adopting a resolution or recommendation was based primarily on three factors. First, the delegates recognized that, at present, the risk of physical interference caused by space debris was "very low."[148] Second, requiring the removal of satellites from the GSO could entail significant economic costs by reducing the operational life of the satellites.[149] Third, after some discussion, most delegations realized that it was too soon to adopt any specific provisions because so many factors were unknown.[150]

CONCLUSION

Several important issues of space law were raised at the Space WARC. The most significant of these was the sovereignty claim and its related principles. It is apparent that the vast majority of countries do not desire to address this issue, or any of its variants, at least within the framework of the ITU. The vote on the issue of "legal factors" for planning the GSO and the decision that the Space WARC was not competent

146. The relevant section of the Report to the Second Session provides:

> In the geostationary-satellite orbit there is a risk of collision with active spacecraft and blockage of beams of operational satellites due to the presence of uncontrolled man-made objects. At present, the probability for such physical interference is very low, though the number of satellites is expected to increase over time. It is advisable, therefore, to urge the CCIR to develop, in the intersessional period, a better understanding of this physical interference process leading to:
>
> —an identification of the relevant factors of what is thought at present to be a theoretical problem,
>
> —an evaluation of the risks that this phenomenon could present in the future, and
>
> —a recommendation for a solution to the problem should the study results justify further action.

Report to the Second Session, *supra* note 1, at 45.

147. *Id.*

148. *Id.*

149. The proposal of the United Kingdom recognized that:

> Increasingly, the lifetime of a space station is limited not by the performance of its electronic and electrical systems but by the quantity of propellant it can carry. If a mandatory commitment was to be imposed such that a minimum quantity of propellant had to be reserved for the purposes of removing a defunct satellite from the orbit this could significantly reduce the operational life of that satellite.

ORB-85, *supra* note 1, Doc. 18, at 15.

150. Telephone interview with Mr. Dean Olmstead, U.S. Department of State (Oct. 24, 1985). Mr. Olmstead was a U.S. delegate to the Space WARC and was in charge of the space debris issue for the U.S. delegation.

to address the sovereignty claim both underscore the general lack of support for these matters. Developed countries are strongly against the sovereignty claim. Although developing countries, for political reasons, generally do not speak out against the equatorial countries, they realize that they would also be adversely affected if the sovereignty claim was accepted.

The Space WARC demonstrated that Colombia, in particular, is not prepared to let the sovereignty claim be forgotten. Colombia is motivated by at least three factors. First, Colombia's claim to sovereignty over the GSO arc above its territory has become a domestic political issue. Second, although Colombia probably realizes that the sovereignty claim will never receive significant international support, it may believe that it will receive some concessions or compromises as a result of its forceful advocation of the claim. Finally, Colombia may perceive that it derives some political prestige from being the spokesperson for this issue. Thus, Colombia can be expected to advocate the orbital sovereignty claim and related principles whenever the opportunity is present. It appears that the sovereignty claim is destined to occupy the time of international conferences related to space law or the GSO for the foreseeable future.

Two other significant issues of space law were raised at the Space WARC. The issue of exclusively peaceful purposes is a sensitive political/legal issue which does not belong in the ITU. It was recognized as such at the Space WARC and treated accordingly. The issue of space debris, on the other hand, is a significant legal/engineering problem that will remain active. Thus, space lawyers, in conjunction with engineers and scientists, will eventually have to deal with this issue in a definitive manner. In this case, the ITU may be an appropriate forum, and depending on the result of intersessional studies, space debris may again become an issue at the 1988 session of the Space WARC.