

CONFIDENCE BUILDING MEASURES USING SPACE RESOURCES¹

by S. E. Doyle²

Introduction

Many nations are acquiring the technological know-how and capability to conduct activities in outer space. Many of the technologies involved provide dual capabilities when considered from the points of view of military versus civilian uses. Because of these dual capabilities, space technologies can have an inherently threatening aspect when viewed by nations without comparable capabilities or defences against the perceived threats. This paper addresses the established need for increased confidence building measures and considers how space based systems might help in this regard. This paper also discusses some legal aspects of the use of space resources for confidence building.

The United Nations Conference on Disarmament has been dealing with the issue of confidence building measures for decades. In addition, proposals initiated outside the UN have been discussed, and in recent years at least some measure of progress has been achieved in Western Europe. One thing has become clear. Humanity's progress in astronautics now requires that the global community begin to think seriously about and to organize an institutional structure to provide viable and acceptable confidence building measures addressed to emerging space

technologies and the expanding number of space users.

Proposals for International Monitoring

In 1978, the Government of France proposed to the United Nations the creation of an International Satellite Monitoring Agency (ISMA).¹ The French proposal was studied by an international group of experts, and the study was reported to the United Nations General Assembly.² The report contained three major sections dealing, in turn, with: (1) technical considerations of an ISMA, (2) legal implications of an ISMA, and (3) the financial aspects of an ISMA. Existing systems were summarily described, including relevant, US and Soviet, civil and military systems, Chinese, French, Indian and Japanese national systems, and the European Space Agency (ESA) system for remote sensing. Remote sensing data receiving and processing centers in 16 countries were described. In terms of applications of the ISMA capability, the technical section identifies nine international arms regulations and disarmament agreements, established between 1925 and 1977, which an ISMA could support.

In the second chapter, dealing with legal implications, the report presents general legal considerations relating to monitoring by satellite, including: (a)

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the international legal regime governing remote sensing, (b) observation of the Earth, and (c) conclusions relating to monitoring by satellite under international law. The chapter also evaluates legal implications of the functions of an ISMA, use of an ISMA as a "National Technical Means" of treaty compliance verification, use in monitoring bilateral, regional and other agreements, and use in monitoring international crises. One section discusses legal aspects of the establishment and functioning of an ISMA and its activities, including processes for initiation of ISMA action. Aspects of the organization, membership, financing, and means for dispute settlement are presented.

The report's third chapter describes the financial implications of the proposed organization's development in three phases, including: (1) establishing and using data processing systems, (2) data management sub-systems, and (3) data analysis and interpretation subsystems. Costs proposed for each phase involve millions of dollars. It is most likely the cost that defeated the early serious consideration of the ISMA proposal. Despite the elaboration in detail of all aspects of a logical and phased development, by the end of 1992 there was still no visible emergence of a consensus involving the major operating states favoring creation of an ISMA.³

Considering the value of opening up visibility into the conduct of states in the massing of arms and armies, it appears inevitable and desirable that the international community will eventually put into service space-based monitors to increase visibility of military activity and to facilitate crisis monitoring. This would appear to be one of the most effective international

confidence building measures that could be implemented.

In recent years the UN Conference on Disarmament and other forums have addressed outer space issues, including suggestions to modify existing space treaties to strengthen military proscriptions, to add provisions to enhance security, and to establish new institutional structures to strengthen the maintenance of peace.

Following are alternative proposals that have been offered with little success in the past decade.

International Space Inspectorate (ISI)

In March 1988, the USSR proposed to the Conference on Disarmament (CD) the creation of an international space inspectorate to verify the non-deployment of weapons of any kind into outer space. The proposal was based upon the principle of on-site inspections before space objects were to be launched. Permanent teams of inspectors would be located near launch sites, and the inspectors would have access to the payloads of all proposed launches. Launching states would have to provide sufficient evidence that the space object would be neither a weapon nor be equipped with weapons.

States would provide the ISI inspectors with the instruments, equipment, materials, transport and a suitable site for carrying out their inspections. Questions were raised about aspects of the proposal and obviously politically motivated objections were introduced by the United States. The United States offered the untenable view that the proposed inspectorate was not needed because of existing treaties limiting military activities in space. However, existing relevant treaties are not universally subscribed and they do not

address all military activities or weapons in space. There is no present treaty structure that would offer the confidence building measures that the proposed ISI would offer.

A United Nations International Trajectory Center (UNITRACE)

In July 1989, France proposed establishing within the United Nations, possibly as part of the UN Secretariat, an international trajectory center. The Center would study trajectories of objects in Earth orbit. Membership in the Center would be open to all states owning or using satellites. The Center would have no regulatory functions, but it would: (1) collect data for updating space object registration, (2) monitor actual orbits of space objects, (3) maintain the capacity to conduct real-time calculation of trajectories of space objects. The Center would have the capacity to warn parties of potential intersecting trajectories or of expected close passes of space objects in one-another's vicinity.

The Center would have dealt only with states directly involved in spaceflight conflict situations and the records would be kept in a secure manner. The proposal was not seriously considered and lacked sufficient support.

A Satellite Image Processing Agency (SIPA)

The second French proposal, tabled at the Conference on Disarmament in 1989, suggested the creation of a satellite image processing agency which could be the preliminary phase of development of an agency to do international satellite imaging. This proposed low-cost agency would be able to: (1) collect and process data from existing systems; (2) disseminate information to member states as

appropriate; (3) serve as a clearing house for exchanges of data and the establishment of certain facts, such as force estimates, in advance of the consideration of disarmament agreements; (4) collect information to facilitate verification of disarmament agreements; (5) monitor compliance with disengagement agreements in limited conflicts; and (6) assist governments and institutions in coping with natural disasters, as well as development programs. In 1991, France submitted to the Conference on Disarmament a working paper elaborating the idea of creating regional agencies responsible for transparency of various activities of states.⁴

Emergence of a European Satellite Data Interpretation Center

The Council of Ministers of the Western European Union decided on June 27, 1991 to create a European center for the processing and interpretation of satellite imagery for the verification of disarmament agreements. The Union committed 38 million ECUs (US\$ 43.4 million) to begin organizing the center and to operate it for the first three years (1992-1994). It was anticipated that the center would initially comprise a working staff of about 30 persons and that it would be fully operational by 1994. This regional project has been advanced with some problems of funding and continuing questions of its viability. It remains to date the only successful effort undertaken on an international cooperative basis to arrange international institutional provision of remote sensing services as a confidence building measure.

Endnotes

Concluding Observations

When the legal aspects of international confidence building measures are examined objectively, there are a number of obvious conclusions one can draw. (1) There is no structural or legal prohibition to creation of international cooperative remote sensing activity intended for confidence building. The applicable law in place supports more than hinders such an undertaking. (2) Where there may be national sensitivities to the broad release of information collected by or derived from remote sensing activity, it appears practical and feasible to provide for confidential and controlled treatment of certain classes of data and information. (3) Actions of the United Nations Committee on the Peaceful Uses of Outer Space to date have placed no impediments in the way a realizing international cooperation in remote sensing intended to strengthen the maintenance of international peace.

The tools provided to the international community by astronautics do not and cannot eliminate international tension and international conflicts, but they do offer substantial assistance in reducing tension and avoiding military conflict. What is needed is a collective will of states to use the available tools in constructive ways. In the final analysis, the wills of the major space faring states will determine the timing and extent of the use of effective remote sensing systems for confidence building. The sooner realistic and forthright discussion is devoted to these purposes, the sooner these unique and attractive tools can be made available to the international community.

¹ The original French proposal was transmitted in a *Note Verbal*, dated May 30, 1978, from the Permanent Mission of France addressed to the Secretariat of the United Nations. The proposal is contained in *Official Records of the General Assembly, A/S-10/AC.1/7*, 1 June 1978, containing records of the First United Nations Special Session on Disarmament (UNSSOD 1) held in June 1978. Among other descriptions and evaluations of the ISMA, see Gasparini Alves, *Prevention of an Arms Race in Outer Space* 117-122, UNIDIR/91/79, United Nations publications Sales No. GV.E.91.0.17, New York, 1991.

² The report, including its history and the background leading up to its submission, are contained in UNGA Doc. No. A/AC.206/14, which has been separately published as Department of Disarmament Affairs, Report of the Secretary-General, *The Implications of Establishing an International Satellite Monitoring Agency*, United Nations publications Sales No. E.83.IX.3, Disarmament Study Series 9, United Nations, New York, 1983.

³ For detailed analysis of the French ISMA proposal and an assessment of possible reasons why it failed, see Doyle, S. E., *Civil Space Systems: Implications for International Security*, 173-175, Dartmouth Publishers, Aldershot, UK, 1993; and see Jasani, B., "A Regional Satellite Monitoring Agency," in *Environmental Conservation*, vol. 10, no. 3a, 1983, pp. 255-56.

⁴ See conference document CD/1092: CD/OS/WP.46, 1 August 1991, a working paper entitled "Prevention of an Arms Race in Space: Confidence Building Measures and Transparency." The paper offers several approaches, concluding with discussion of regional agencies' responsibilities for transparency.