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LEGAL PRINCIPLES OF EXPLORATION AND USE OF OUTER SPACE: PAST ACHIEVEMENTS AND FUTURE CHALLENGES

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ABSTRACT

In the rivalry environment of years 1962 and 1963, right after Yuri Gagarin became the first ever man in earth orbit, Soviet Union and USA, the two space superpowers of the time conducted intensive negotiations regarding the course of activities in space. In coming up with an agreement, each side did its best to hinder the other sides' activities and to free its own hand in making use of outer space particularly keeping in mind its own military advantage in coming years. The end result was the presentation of Declaration of Legal Principles of States Activities in the Exploration and Use of Outer Space, presented to UN General Assembly and eventually its approval in December 1963. Even though the freedom of exploration and use of space by all states for the benefit of mankind were the main achievements of the Declaration, however there was no mention of "only peaceful use of outer space". This was a green light to the superpowers to start a cold war race in space.

The situation now, is different. Even though the Soviet Union is no longer in existence, however the Russian Federation does not seem to have given up the glories she has inherited,

Europe is marching ahead, new comers like China, India, and to some degrees Brazil and Australia are going to become serious players in space activities.

The space exploration is advancing in different aspects with unprecedented rate. Space technology is getting into everyday usage, in particular communication and remote sensing. Commercialization of space activities and involvement of private sector in developing business from space technology achievements are new dimensions in space activities.

In this paper after presenting a brief review of the development leading to approval of the Declaration of the Legal Principles, and making some points on its shortcomings, the current situation in legal regime of space activities is studied, and some points to be noted in future developments are discussed.

INTRODUCTION

The development of the space law is closely related to evolution of space activities. Moreover, the growth of space exploration and its use has been dictated by a number of factors including technological capabilities, states policy and economic considerations. It is important to note that, in the past, whenever there have been new frontiers to explore, and the rule of law has been lacking, the evolution of legal principles has responded to the perceived interests of

participating states. One needs only to recall the development of the rule of freedom of the high seas as a response, in part, to the commercial pursuits of states. Comparatively, in order to gain a clear understanding of future challenges of space law, it is necessary to analyze the evolution of space activities, and the future effect of these activities in space¹.

In 1967 when the Treaty on Principles Governing the Activities of States, Including the Moon and other Celestial Bodies was adapted in United Nations General Assembly, commonly referred to Outer Space. At the time, space activities were conducted mainly by two great space powers. During the cold-war era, the United States and the Soviet Union debated over which military activities in space should be allowed and which should be prohibited. Each side sought to legitimize a strategic military advantage through the formulation of a rule that favored its own military interests or hindered rival interests.

Until the beginning of 1970, space activities were conducted only by government entities and were restricted to governmental activities. The military potential of outer space had influenced the development of every aspect of satellite technology. Many space technologies possess a dual capacity: military and nonmilitary uses. Consequently, the policies of the two major space powers have always been characterized by the simultaneous desire to:

- 1) Encourage, under the auspices of the United Nations a legal regime for space to facilitate and promote international co-operation, and
- 2) Develop space technologies to advance military strategies and goals².

As space activities moved from the era of exploration by the two original space powers to commercial utilization by many nations, the U.S.S.R. and the U.S.A. found it more difficult to impose their views and

policies on the world community in a changing international political system. While the period from 1963 to 1968 witnessed the predominance of the duo pole in the development of space law, such domination has since had to yield to the interests of the world community as a whole.

THE TECHNOLOGICAL TREND

Space technologies in terms of launching systems, transportation, telecommunications, remote sensing, environmental control, education, and health services have been improved sharply since the first space flight. Now much larger and more sophisticated stations can be built in orbit with possibility of living of men for years in orbit. Shuttles a reusable launch vehicle, as a mean of transportation can carry human and equipments to space and support them to carry out their mission.

Day to day life on earth, without telecommunication via satellites seems impossible and many people rely on the services, which somehow relate to space technology. Billions of data transmitted from one part of the world to another part with in few seconds.

Earth can be sensed from outer space for urban planning, mining, agriculture, environmental protection, meteorology and natural disaster control. Material can be made and laboratory tests can be performed, new and better medicine can be produced, taking advantage of microgravity. Even, energy can be generated in space and transmitted to earth.

CONVERSION OF MILITARY TECHNOLOGY

Due to the dual nature of space technology and related industrial infrastructure, which supports the outer space activities in both military and non military usage, many of these system such

as satellites, launch vehicles and ground stations are used for both purposes.

After the end of cold war, many of these equipments for military purpose were redundant and had to be converted to non-military usage. On the base of disarmament agreements between two super powers many of ballistic missiles were useless and had to convert to civilian usage or to be destroyed. Infact safe keeping of these ballistic missiles or defusing them proved to be costly and very expensive. With some modification, these ballistic missiles are changed to civilian launcher which economic benefit of them specially for Russian Federation was significant. Development of private sector investment is crucial for success of this program³.

ECONOMIC EVOLUTION

In 1957 when space race was started as a result of successful launch of sputnik by Soviet Union there were only two players, namely U.S.A and U.S.S.R., which in effect they were ready to pay virtually any price to succeed and hinder the rival side. In fact, space activities were the matter of prestige and national security. Economic factors were the secondary issues.

However, after the end of the cold war and reducing the tension between two super powers, public opinions were not in favor of spending the tax money in costly and ambitious space programs.

However the space activities have an enormous economic and social impact on the world. Telecommunications satellites, for example, provided a number of social services. Educational programs and health information, now concentrated in urban areas in both developed and developing countries.

A key element for space activities to succeed is to reduce the price of these activities in order to become more available and more affordable to the people of world in both developed and developing countries.

Reduction in price means more investment and more research and development.

It is obvious that limited resources, which the Governments can allocate for investment and R&D, cannot meet the necessary funds, which are required to meet new challenges.

Private sector investment is crucial for future development of space activities, which mean, the activities must be based on profit making, for invest. For many space-related services and products there are many possibilities of large-scale commercialization.

Annual revenues that are possible from space applicant can reach more than hundreds of billions of dollars from telecommunication, transportation, tourism, medical facilities, solar power, data transmission, and material processing.

THE EVOLUTION OF POLICY AND LAW

A prime function of law is to promote social order. The value of a rule in the social system should be measured by the degree to which it succeeds in maintaining and fostering social order.

Factors, which help to determine the value of a rule, include:

- 1) The reasons for its adoption;
- 2) The degree of community support for the rule
- 3) The degree to which the rule is respected
- 4) The degree to which the rule continues to be appropriate as circumstances change⁴.

If we elaborate on the circumstances which have been changed since the adoption of the Outer Space Treaty of 1967 we will be in better position to know what need to be done in the future.

The military potential of outer space had a great influence on formation of the Outer Space Treaty of 1967. Although this

role has not diminished, however its significant has much reduced.

Only two major players were active in outer space, therefore the outer space treaty of 1967 was tailored mainly to the interest of these two players. Since then, the circumstances have changed dramatically. Many new players are actively present in space arena.

As a result of ending the cold war the notion of prestige and national security have less importance and with the limited resources which are available, all activities must have economic justification, that means less role for government, and more active roles for entrepreneurs.

Growing concerns over environmental protection means more regulations and control specially when the number of players increase and private sectors get involved in space activities (International Regulatory Body).

Commercialization and privatization means more secrecy over the information, this means collecting the strategic information about natural resources and other valuable information from states and selling them according to their commercial interest, which is certainly not in the merit of the Outer Space Treaty.

The notion of intellectual and property rights can diminish the notion of the exploration and use of outer space should be carried out for the benefit of all peoples irrespective of the degree of their economic or scientific development.

With respect to developing countries and ensuring the equal access to the benefits of space technology for all countries. Taking into account that in the era of information we call the earth as "global village" which obviously means that information

passes through the world in such speed that seems there is no distance between north to south and east to west. The same way as when anyone comes to a village, immediately everybody in the village knows about it.

But a village has its own definition and its own characteristics, which seems to have been forgotten or ignored in this global village of ours. The people in a village are used to know each other very well and call each other by first name. They care for each other, they are happy when their neighbors are happy and sad when they are sad. The life style and the standards of living of the people of a village more or less are the same.

However, in our global village not only we do not know each other, but also there are more than two billions of us, who are hungry, with no education and no health services. In terms of space technology, more than one billion of us have never even made even a single telephone call in their entire lifetime. Forget about mobile phone, computer and Internet. This is the reality of our global village

Someone may argue that these have nothing to do with space law which in some degree I agree with. However, it should be noted that using the space technology is the quickest and cheapest mean to overcome the pain that the people of the global village are suffering from the lack of education and health services.

Conclusions

During the first twenty years of Committee on Peaceful Uses of Outer Space, five space treaties and four sets of legal principles were negotiated and adopted. In recent years the process of space law making has become extremely slow and complex. With

changing of space technology and as a result the benefits of new technology and its application, space faring nations are interested to address new subjects such as commercialization and privatization of space activities, intellectual and property rights, rather than issues in the general public international law principles, that were promulgated at the beginning of COPUOS.

Many of these new subjects such as outer space environmental control, debris, harmful contamination, safety of space operation, manned space flight, and space navigation need to be regulated.

It seems that the time is right for international community through COPUOS to establish an international organization such as ICAO, WMO or IMO for setting standards and recommended practices of more technical nature for space activities.

This international organization not only helps the safe and smooth

operation of space activities but also by supplementing the existing space law treaties can fill gaps and weakness to accommodate new subjects and rapidly changing technology.

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