

ELENDILMIR: SATELLITES – THREATS OR THE THREATENED?

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ABSTRACT

Military satellite technology has rapidly evolved beyond the existing framework of international space law. A blitz of anti-satellite weapons has sprung up in response to the myriad military applications of satellites. The various space law documents did not envision the volatile détente between the military applications of, and threats to, artificial satellites.

In this context, this article discusses the inadequacy of the existing legal framework relating to satellites. It deals with the blurring of the distinction between civilian and military satellite technology. It also discusses the impact of commercialisation. Suggestions are made on how to update and build upon the existing legal regime relating to satellites in the military context.

CONTEXT

27 January 1967 saw the birth of new horizons of peace and achievement. The

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Outer Space Treaty¹ heralded a fresh era of international co-operation and affirmed the peaceful use of outer space.² The foundation and heart of space law is the law of peace.³

This evolution was diametrically opposite to the evolution of space technology. The phoenix of space technology rose from the ashes of wartime missile technology.⁴ The earliest military satellite programme focused on reconnaissance. In 1959, the Corona series was launched amid great secrecy.⁵ Beyond reconnaissance, early satellites also carried missile warning systems⁶, military communications equipment,⁷ and military navigation systems⁸. It is ironic that the law of peace should govern the sciences of war.

This historical paradox must be seen in the prevailing climate of global instability and political tension after the tragic events of 11 September 2001 in the United States. The horrific attacks made the international community realise that peace cannot be taken for granted. Against this backdrop of the war against terrorism and the global struggle for peace, a legal framework is desperately needed to maintain outer space for exclusively peaceful uses. In particular, this paper argues for a legal framework to regulate and protect satellites from being threatened, and from being threats themselves.

This paper moots that the existing framework of international space law is inadequate to regulate and protect satellites from increasing military activity in space. It argues that the international laws of war are applicable equally to the space arena, in accordance with the Outer Space Treaty. It then focuses on the principles of discrimination and proportionality in the international law of war. This paper will propose that, absent a utopia of complete peace in space, a legal framework should be set up to protect and regulate military activities against and pertaining to satellites. To set a background for the proposal, it will first review the significance of satellite applications in space activities as well as the existing framework of international space law.

WHY THE FOCUS ON SATELLITES

Significance of Satellites

It is important to establish a legal régime for military threats to and by satellites. There are several reasons for this. Firstly, satellites have emerged as the foremost use of space-based technology. Myriad applications have sprung out of satellite systems. Remote sensing, direct broadcasting, navigation and telecommunications satellites pepper the Earth's orbits. It is thus important to have a proper legal framework that protects and regulates these systems.

Secondly, satellite applications affect the lives of many people around the world. Remote sensing satellites provide disaster-monitoring constellations that help in natural disaster management. Navigation satellites such as the Global Positioning System (GPS) and Galileo are used by millions everyday. A total

breakdown in satellite telecommunications would bring the entire world to a standstill. Threats against satellites can potentially impact the world in many ways.

Thirdly, the use of space technology in warfare has already occurred. Satellites have provided the U.S. military with data and imagery since the Vietnam War. Satellite communications were used in the 1983 Grenada invasion and in Operation Eldorado Canyon in Libya in 1986. In 1988, the Global Position System (GPS) provided navigational support for mine sweeping operations in the Persian Gulf. Operation Desert Storm in 1991 involved the full might of military space systems. Some sixty military and civilian satellites provided support, data, communications and imagery to the Allied war effort against Iraq.⁹ This shows a growing reliance on space-based technology. The space environment will eventually become a distinct area of military operations.¹⁰

With so much at stake, it is clear that the existing legal framework relating to threats to and by satellites is grossly inadequate. A new legal régime is needed. This new framework must account for threats caused by satellites. It should however acknowledge that not all military usage of satellites constitutes a threat. It must also consider the threats to satellites and protect against those threats.

Threats Caused by Satellites

Not all military usage of satellites is bad. Satellites are used to keep the peace via disarmament verification and missile attack detection systems. Military satellite systems such as the GPS also

serve many useful civilian purposes. However, some military usage of satellites may cause concern. These include¹¹:

- (1) Anti-Satellite (ASAT) Satellites: Satellites placed in orbit for the purposes of military manoeuvres against other satellites.
- (2) Espionage & Reconnaissance: Satellites that passively collect data (through photography or radio and electronic emission monitoring) and computer-“hacking” satellites.
- (3) Missile Tracking / Disabling
- (4) Direct Broadcasting for Propaganda

Due to these threats, perceived or real, caused by satellites, information operations can have a devastating effect on a State’s infrastructure.

Threats to Satellites

In response to the threats caused by satellites, many countermeasures have been initiated against satellites. These include:

- (1) ASAT Weapons: Weapons that blind or destroy the satellite’s capabilities. These include electromagnetic, radiation, kinetic energy, hypervelocity, particle beam, explosive proximity and “soft-kill” weapons.
- (2) ASAT Satellites: Satellites that act as ASAT weapons.
- (3) Software-based / Information based Weaponry: These weapons aim to shutdown satellite operations via access to the satellite’s control programming.

Problems with the Development of a Legal Framework for Satellites

The development of a legal framework for satellite raises several difficult issues. These include:

- (1) Dual-Use Technology: Many satellites employ dual-use technology for both civilian and military purposes.¹² Military reconnaissance satellites can be used for remote sensing.¹³ Weather and telecommunications satellites may be used simultaneously to support both military and civilian purposes.¹⁴ This raises the issue as to whether such satellites can be considered military threats and lawfully targeted.¹⁵ This question is compounded in light of the commercialisation of civilian satellite systems that can be used for military purposes.¹⁶

- (2) ASAT Satellites: Satellites occupy a unique position. They can easily become the very perpetrators of the offences the law intends to protect them from. Any legal framework that aims to protect satellites must also recognise and deal with this issue.

- (3) Pace of Technology Advancement: Satellite application technology is among the fastest growing field of science. A legal framework for satellites must ensure that it is not inward looking and narrow. This prevents it from becoming obsolete in the face of new technology.

- (4) Information Warfare: A legal framework for satellites must take into account the fact that military threats to and by satellites cover the entire spectrum from hardware-based to software-based threats.

(5) Legal Vacuum: There is no existing legal framework that specifically deals with the military threats to and by satellites. There are only two United Nations (UN) General Assembly resolutions that deal specifically with satellite use: remote sensing¹⁷ and direct broadcasting¹⁸. However, these two resolutions are not binding, and also do not specifically deal with military satellite activities.

EXISTING LEGAL REGIME FOR THREATS BY AND AGAINST SATELLITES

Existing Space Law Framework

There is no United Nations (UN) treaty or declaration that specifically addresses military satellite applications in space. However, there are several provisions in the existing framework of space treaty law that apply.

The Outer Space Treaty

Article IV of the OST directly addresses the militarisation of outer space:

States Parties to the Treaty undertake not to place in orbit around the earth any objects carrying *nuclear weapons or any other kinds of weapons of mass destruction*, install such weapons on celestial bodies, or station such weapons in outer space in any other manner.

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 manoeuvres

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.¹⁹

Much has been written about what constitutes “peaceful purposes”, one of restrictions on State uses of outer space. The former Soviet Union and some other States have maintained the view that “peaceful” means “non-military”. However, the rest of the international community has disagreed. Thus, the present view seems to be that “peaceful” means “non-aggressive”. Space activity that is in the beneficial interest of all countries is considered “peaceful”.²⁰

Article IV(2) restricts the use of the moon and other “celestial bodies” to peaceful purposes. The issue here is whether the “peaceful purposes” restriction applies in outer space away from celestial bodies. Christol points out that several States within COPUOS objected to the omission of “outer space” from Article IV(2). This is particularly given the inference that this would allow outer space to be used for non-peaceful purposes. However, the American and Soviet view that “peaceful purposes” apply only to the moon and celestial bodies won out.²¹ Thus, “peaceful purposes” does not apply to activities conducted away from celestial bodies.²² Nonetheless, Article 2(4) of the UN Charter, applicable to space law via Article III of the OST prohibit “non-peaceful” uses of space where this means the aggressive use of force.²³ This

points to a limited demilitarisation of outer space and a total demilitarisation of celestial bodies.²⁴

Article IV also relates to the legality of ASAT satellites. ASATs deviate from the non-aggressive quality of other satellites. They seem to breach the non-aggressive mandate that is required of all space activities under the “peaceful purposes” restriction.²⁵ However, the OST does not prohibit conventional weaponry in space, including ASATs. The specific prohibition on weapons of mass destruction and nuclear weapons suggests a differentiation between those weapons and conventional weapons.²⁶

Article VI of the OST establishes that States bear “international responsibility for national activities in outer space . . . whether such activities are carried on by governmental agencies or by non-governmental entities.”²⁷ This extends State responsibility, making the State responsible for the space activities of its private citizens or organisations.

Article IX of the OST also provides:

If a State party to the Treaty has reason to believe that an activity or experiment planned by it or its nationals in outer space, including the moon and other celestial bodies, would cause potentially harmful interference with activities of other States Parties in the peaceful exploration and use of outer space, including the moon and other celestial bodies, it shall undertake appropriate *international consultations before proceeding* with any such activity or experiment.²⁸ (emphasis added)

Article IX does not differentiate between military and civilian space activities. Thus, it applies to military space operations.²⁹ If a hostile act could harmfully interfere with a third party State’s assets, Article IX requires that the State be consulted. Further, Article IX specifies a timeframe: consultations must occur “before proceeding with any such activity or experiment.” Such consultations could notify the belligerent State of the expected offensive. Thus Article IX could create a disincentive to an act of armed conflict. Equally, this could be a disincentive for States to abide by Article IX, so to preserve the element of surprise. Nonetheless, Article IX acts as an obstacle to such hostile acts once “consultations” have occurred, even if the third-party State objects.

The Liability Convention³⁰

The Liability Convention unveils a tacit admittance that intentional destruction of space objects might occur under certain circumstances. Article II of the Liability Convention subjects States Parties to absolute liability for damage caused by its space objects on the earth’s surface, or to aircraft in flight.³¹ Article III imposes fault liability on States for damage by its space object to the space object of another State “caused elsewhere than on the surface of the earth.”³² However, Article VI provides exemption from absolute liability in cases where either the claimant State, or the natural or juridical persons it represents, caused the damage wholly or partially by gross negligence, or an act or omission done with *intent to cause damage*.³³ The exemption for intentional damage caused by a claimant State presumes the possibility that such

intentional damage will happen. Despite the prescription of the OST for the “peaceful” use and exploration of space, the Liability Convention clearly recognises the possibility that States intentionally harm space objects. This does not mean that the Convention endorses such actions.³⁴ However, it suggests that the international community expected that a claimant State might take action for the intentional damage of a space object.

The Registration Convention³⁵

Article IV of the Registration Convention specifies that launching States must provide the following information: (a) name of launching State or States; (b) an appropriate designator of the space object or its registration number; (c) date and territory or location of launch; (d) basic orbital parameters (e) general function of the space object. The Convention allows registration to be amply vague. This allows a State to hide the true nature of a military mission. Two provisions of Article IV allow for this: firstly, that the information be provided “as soon as practicable”. This allows launching States leeway to delay the registration of the object following the launch.³⁶ Secondly, it requires the disclosure only of the space object’s “general function”. This allows States to protect the identity of their military space objects.

The Moon Agreement

The Moon Agreement prohibits the placement of weapons of mass destruction, including nuclear weapons, on the moon itself, in orbit around the moon, or on trajectories to and around the moon, and on other celestial

bodies.³⁷ However, the Agreement’s provisions limit its restriction only to weapons of mass destruction. The Agreement’s language reflects Article IV of the OST. It requires that the use of the moon be “exclusively for peaceful purposes”, and prohibits “any threat or use of force or any other hostile act or threat of hostile act on the moon”.³⁸

Other Applicable International Treaties

Treaty Banning Nuclear Weapons in the Atmosphere, In Outer Space and Under Water (Limited Test Ban Treaty)³⁹

The Limited Test Ban Treaty was adopted before any of the space treaties. It provided the first treaty provision governing the use of outer space. The Treaty forbids

nuclear weapon test explosion[s], or any other nuclear explosion[s]... (a) in the atmosphere; beyond its limits, *including outer space*; or under water, including territorial waters or high seas; or (b) in any other environment if such explosion causes radioactive debris to be present outside the territorial limits of the State under whose jurisdiction or control such explosion is conducted.⁴⁰

It however does not prohibit non-nuclear weapons such as conventional, biological, chemical, or high energy laser weapons. The Treaty prohibits nuclear explosions for both testing and non-testing purposes. Thus, the Treaty prohibits an electromagnetic pulse in space via a nuclear detonation, particularly as an ASAT weapon.⁴¹

Anti-Ballistic Missile (ABM) Treaty

The ABM Treaty limits the deployment, testing, and use of missile systems designed to intercept incoming strategic ballistic missiles.⁴² Article V(1) provides that “each party undertakes not to develop, test, or deploy ABM systems or components which are sea-based, air-based, *space-based*, or mobile land-based.”⁴³

Article XII is significant to the long-term military use of space. Article XII(1) codifies the “open skies” principle and formally sanctions the legality of space-based military surveillance as an “essential component of the international arms-control regime.”⁴⁴

Need to Expand Upon Existing Principles

Satellites as Space Weapons

Despite the rapid militarisation of space, the term “space weapon” is undefined in international law. One proposed definition of “space weapon” is:

A space weapon is a device stationed in outer space (including the moon and other celestial bodies) or in the earth environment *designed to destroy, damage, or otherwise interfere with* the normal functioning of an object or being in outer space, or a device stationed in outer space designed to destroy, damage, or otherwise interfere with the normal functioning of an object or being in the earth environment. Any other device with the *inherent capability* to be used as defined above will be

considered as a space weapon.⁴⁵
(emphasis added)

The second sentence especially acknowledges that space objects not designed as weapons may become weapons if they can “be used” as such. This leaves the definition broad enough to include any object at all. Orbiting objects travel at speeds approximating 17,000 miles per hour. This gives them the “inherent capability” to destroy or interfere with an “object or being in space” or in the “earth environment”.⁴⁶

An interesting question arises with respect to the question of dual-use satellite technology. Would a satellite with both civilian and military capabilities be considered a “space weapon”? The situation is complicated if the satellite were owned by civilian entities, or were used by both friendly and belligerent States. Under the law of war, an otherwise inviolable object or person may become a legitimate target for attack if used for military purposes. Similarly, an otherwise inviolable object owned by a neutral becomes legitimately subject to attack if used by a co-owner for belligerent purposes. This would apply to the space assets co-owned by intergovernmental and commercial organisations.

Inadequacy of the Existing Framework of International Space Law

The existing framework of international space law is inadequate to deal with the military use of satellite systems. A complete enunciation of the legal standards applicable to space warfare is needed beyond the existing framework of space law. These standards should

state the *jus ad bellum* restrictions on the use of force in space. Matte has observed that space law, including the Limited Test Ban Treaty and the ABM Treaty, seems to “permit, indeed to endorse, the arms race, including the militarisation of space.”⁴⁷

There is insufficient specific mention to the laws relating to space warfare, and to the military applications and threats to satellites. Absent such legal standards, the permissive character of international law allows threats to and by satellites with no mechanism for international State responsibility.

Threats to and by satellites are related to the law regulating the use of force. Under the OST a State Party “on whose registry an object launched into outer space is carried shall retain jurisdiction and control over such object.”⁴⁸ *Prima facie*, this means that a State will retain jurisdiction and control over a satellite registered by itself. A complicated situation arises if that State uses the satellite intentionally and wrongfully to disable another State’s satellite. Assuming that doing so amounts to an “armed attack” under the UN Charter, the latter State may disable the former’s satellite in self-defence.⁴⁹ The law of war allows belligerents to destroy their adversary’s weaponry. This means that the latter State can lawfully capture or destroy the former State’s satellite, Article VIII of the OST notwithstanding. Hence, the only way that a State can assuredly protect its space assets is to ensure compliance with international law, including space law and the *jus ad bellum*.⁵⁰

It can thus clearly be seen that the law applicable to military threats to and by

satellites is governed by a mishmash of international law principles. It is submitted that the existing framework of international space law should be developed to provide a more specifically applicable legal framework for satellite systems.

APPLYING THE LAW OF WAR TO OUTER SPACE

Justification for Applying the Law of War to Outer Space

Two arguments sustain the conclusion that the existing law of war does apply to space warfare: Article III of the OST and the UN Charter, and Martens’ clause.

The OST & The UN Charter

Article III of the OST clearly provides that international law applies to space warfare:

States Parties to the Treaty shall carry on activities in the exploration and use of outer space, including the moon and other celestial bodies, in accordance with *international law*, including the *Charter of the United Nations*, in the interest of maintaining *international peace and security* and promoting international co-operation and understanding.⁵¹ (emphasis added)

Article III applies the restrictions of all international law to outer space activities. This includes the *jus ad bellum*, due to the specific reference to the UN Charter. This provides the strongest evidence that the law of war has been incorporated into military space operations by virtue of the OST.

The UN Charter clearly prohibits the “threat or use of force against the territorial integrity or political independence of any state, or in any other manner inconsistent with the Purposes of the United Nations”.⁵² However, the actual scope of this prohibition remains unclear. The popular view is it absolutely prohibits the use of force. The sole exceptions are self-defence and authorisation by the Security Council. The alternative argument is supported by the NATO air strikes in Kosovo. It argues that the prohibition relates only to the use of force for purposes inconsistent with the Charter.⁵³ A State’s interpretation of this prohibition on the use of force will have great influence on its use of force in space.

The requirement that a State’s use of outer space be “in the interest of maintaining international peace and security” echoes the same wording in the UN Charter.⁵⁴ This assumes that military force is lawfully permissible to ensure international order.

Under Article 2(4) of the UN Charter, States may neither use force in international relations, nor threaten it. The Charter’s significant focus on force rather than war reflects a considered effort to outlaw all types of armed conflict. Included in the prohibition are cases of both direct military force and indirect military force.

Martens’ Clause

The second justification of the application of the laws of war to military space operations relates to the “Martens’ Clause”. This clause appears in several

law of war documents, including the 1907 Hague Convention:

Until a more complete code of the laws of war has been issued, the high contracting parties deem it expedient to declare that, in cases not included in the Regulations adopted by them, the inhabitants and the belligerents remain under the protection and the rule of the *principles of the law of nations*, as they result from the usages established among *civilised peoples*, from the *laws of humanity*, and the dictates of the *public conscience*.⁵⁵ (emphasis added)

The clause reminds States Parties that Treaty prohibitions do not supersede general prohibitions operating by way of principles of the law of nations. The clause covers customary international law and also all rules and principles of the general law of nations.⁵⁶

The continuing applicability of the Martens’ Clause is especially significant for space warfare. This is because it is the most technologically innovative form of warfare. The doctrine impliedly envisions the need to regulate means of warfare developed through technological advances. Thus, it is extremely important in the legal framework of space warfare.⁵⁷

The Applicable Law of War

Through history, warring States have developed customary practices seeking to lessen the devastating effects of war. This was summarised by Article 22 of the Second Convention adopted by the 1899 Hague Peace Conference: “The right of belligerents to adopt means of injuring the enemy is not unlimited.”⁵⁸ The principles distilled from the large

corpus of customary international law amount to very few: military necessity, discrimination, proportionality, and humanity.⁵⁹ These principles are recognised in subsequent treaty law. They limit the means available for conducting armed conflicts. Of these, two principles in particular concern the scope of this article: Discrimination and Proportionality.

Discrimination

Discrimination requires diligence in the selection of methods, weaponry and targets. This embodies several concepts. The most significant is the distinction between combatants and non-combatants. The law of war prohibits attack of any person deemed a “non-combatant”. This means that the lawfulness of the use of force under international law presumes attack only of those qualifying as combatants. The requirement to differentiate rests on the more fundamental principle of military objective.⁶⁰ This requires that armed attacks be limited to targets that are military in nature. The destruction of these targets must be to advance the attacker’s tactical, operational, or strategic position. Such targets would certainly include inanimate objects.

Thus, Article 48 of the 1977 Protocol I to the 1949 Geneva Conventions states:

In order to ensure respect for and protection of the civilian population and civilian objects, the Parties to the conflict shall at all times *distinguish* between the civilian population and combatants and *between civilian objects and military objectives* and accordingly shall direct their

operations *only against military objectives*.⁶¹ (emphasis added)

Subsequently, Protocol I defines “military objective” relating to objects as being

limited to those objects which by their nature, location, purpose or use make an *effective contribution* to military action and whose total or partial destruction, capture or neutralisation, in the circumstances ruling at the time, offers a *definite military advantage*.⁶² (emphasis added)

Proportionality

The rule of proportionality requires that the use of military force be proportional to the legitimate military objective. This requires a balancing of anticipated military advantage against anticipated damage caused. It prohibits collateral damage to civilians and property that is disproportionate to the military value of the objective.⁶³ Proportionality applies to a response to a grievance, in relation to the adversary’s military actions and to the anticipated military value or the State’s own actions, including reprisals.⁶⁴

Articles 48 to 58 of Protocol I to the Geneva Conventions regulate military activity. Those articles define, *inter alia*, the rule of distinction, “attack”, “civilians”, the rule protecting civilian objects, the rule establishing necessary precautions to be taken in the event of attack and the rule establishing precautions to be taken against the effects of attack.⁶⁵

The general rule allows destruction of targets if it is proportionate to the military objective sought by the destruction. For example, infrastructure targets were lawfully destroyed during the 1991 Persian Gulf War that provided electricity both to the civilian populations and to the Iraqi military.⁶⁶ The same rationale applies to dual-use satellites. To the extent a satellite is used for the support of a military purpose, it becomes a military objective and is lawfully subject to attack. This however assumes that the space asset is actually used for such military purpose. It is insufficient that it merely has the potential to be so used.

PROPOSAL: THE DISCRIMINATION / PROPORTIONALITY PRINCIPLE

In a perfect world, space would be used for exclusively peaceful purposes. In the world we live in today, space is already a battlefield. It is crucial for international law to recognise and deal with the military threats to and by space activities, especially in the context of satellite applications.

It is with this necessary pragmatism in mind that this paper proposes the following treaty régime for the regulation and protection of satellite activity in space. This paper does not in any way condone the use of space for non-peaceful uses. The proposed régime is based upon the basic premise that outer space is to be used for exclusively peaceful purposes.

However, in limited exceptional circumstances, States may be forced to threaten the disabling of or actually disable satellites. These exceptions should be limited to the following:

- (1) Times of declared war
- (2) Self-defence as defined under Article 51 and Chapter VII of the UN Charter, and
- (3) Necessity.

Additionally, these exceptions should apply only after all reasonable international consultation and diplomatic efforts have been employed, and have failed.

Before the exceptions can be exercised however, the State intending to disable a satellite should take all reasonable precautions to investigate if such actions would potentially be harmful to a third party State's space assets. If such action can possibly cause harmful interference with the third party State's assets, international consultation in accordance with Article IX of the OST must be initiated. The third party State's concerns and views must be taken into account before any action by the State is taken. The State intending to disable the satellite must state its rationale for doing so, and provide the third party State with any and all reasonable assistance to minimise the damage that could potentially arise as a result of its actions.

Military action against the satellite should take place only upon the strict fulfilment of a two-fold test:

- (1) Discrimination
This part consists of three stages:
 - (a) There must be no other alternative action reasonably feasible but the attack on the satellite.
 - (b) The disabling of the satellite must be of urgent necessity.
 - (c) The attack on the satellite in question must be for the

furtherance of the military objective of the State.

Military action should only be *prima facie* legally permissible if these three conditions are strictly met. However, the military action against the satellite will only be considered legal under international law if the second part of the test is fulfilled:

(2) Proportionality

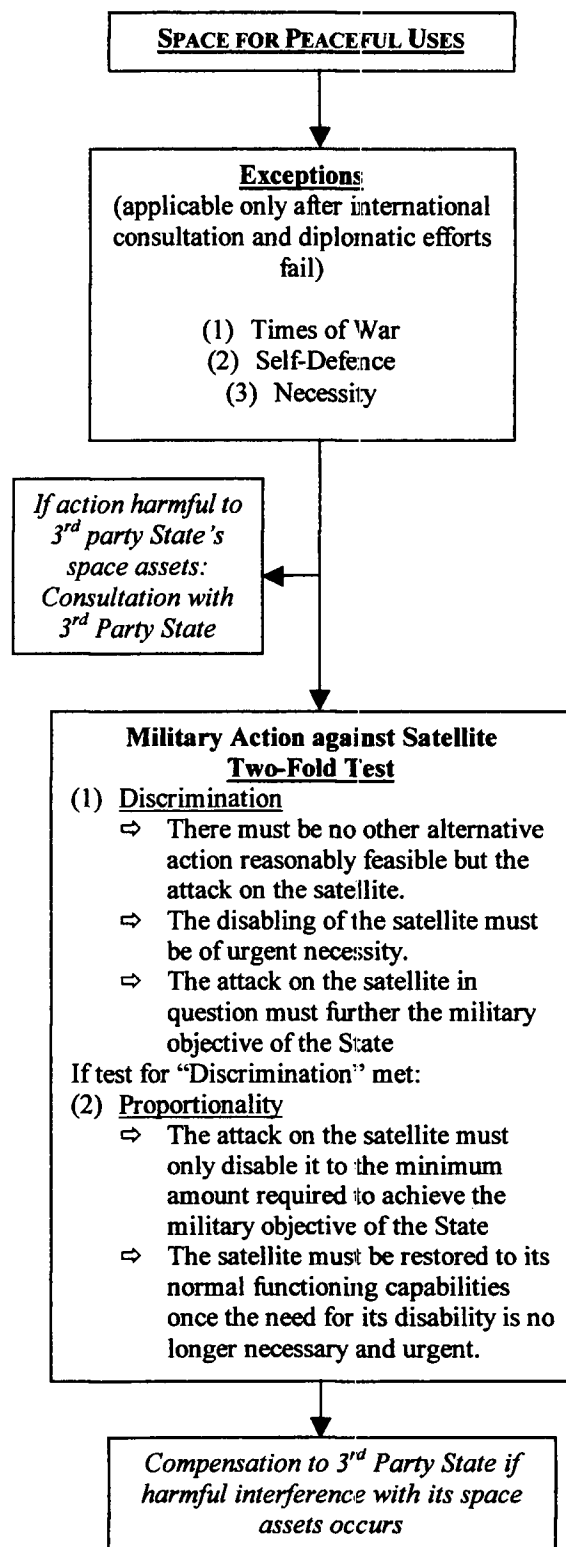
- (a) The attack on the satellite must only disable it to the minimum amount required to achieve the military objective of the State.
- (b) The satellite must be restored to its normal functioning capabilities once the need for its disability is no longer necessary and urgent.

The State intending to take such action against the satellite must provide compensation and assistance to any third party State whose space assets were harmfully interfered with during the operations. It must also provide compensation and assistance to any party who was adversely affected by the disabling of the adversary State's satellite. Further, it must ensure that the disabled satellite is restored to normal functioning capability.

The important thing to note is that the adversary State's satellite cannot be permanently disabled or destroyed. This is because the State intending to disable the satellite must be internationally responsible for returning the satellite to its original functioning capacity once the need for its disabling is no longer necessary and urgent.

Diagram A illustrates the two-fold test in pictorial form.

Diagram A. Two-Fold Test for Military Action Against Satellites



A legal framework that protects and regulates satellites is urgently needed. Attacks by and against satellites can potentially cause an unprecedented degree of harm. Although general principles of international law already exist to regulate the use of force, the need for a specific framework for satellites cannot be overstated.

It is also important to note that the legal framework for space disarmament need not be all-encompassing at once. Small steps are likely to be more palatable to States and the international community. This ensures that a legal framework set up will be more likely to be acceptable to States. This prevents the complete lack of support from space-faring nations that turned the Moon Agreement into little more than a dead-letter.⁶⁷

However, this framework relates to an important area of space activity – satellite applications. This initiative could be the first in a series of declarations or treaties that elaborate upon the exclusively peaceful uses of outer space. It relates to an extremely important area of space activities, both in the sense of military security as well as economic well being. Hence the protection and regulation of satellites is a first step in the correct direction for space law.

More importantly, this area of space law is extremely time-sensitive. It is submitted that this is the best time to push forward an international legal régime for the protection and regulation of military satellite activity. Given the uneasy political climate and the rapidly evolving technology of today, there is more political urgency and practical

need for such a régime. This may provide a strong impetus for States to accept such a framework via a declaration in the UN General Assembly. This would provide the groundwork necessary to consolidate the framework into a treaty-based régime. This would then provide the foundation for further initiatives to protect the peaceful nature of outer space.

CONCLUSION

The appalling events of 11th September 2001 in the United States is a grim reminder that we live in a deeply divided world. As a law of peace, space law represents the idealistic ambition for a peaceful world. The ascendant security standard of the space-faring nations is to maintain the “violent peace” on earth and in space. The next two decades will be a time of critical challenge and change for international space law in creating an enduring, peaceful world order.

Seen from the Earth, satellites sparkle on the velvet dark of the night sky like stars. For the star-lovers on earth, satellites should always remain what they were when they were first dreamt up – starlight in the sky that shines our way to greater achievement and peace.

*“A light when all other lights go out!
Aiya Eärendil Elenion Ancalima!”⁶⁸*

¹ Treaty on the Principles Governing the Activities of States in the Exploration and the Use of Outer Space, Including the Moon and Other Celestial Bodies (1967) 610 U.N.T.S 205 [hereinafter “OST”]

² para. 4, Preamble to the OST, *ibid.*

³ de Cocca, M.M.E., “Peace: The Only Way to Return Lawfulness to Space Activities” (1989) 32 Proc. Coll. L. Outer Sp. 317 at 317, Busák,

“Les Aspects Juridiques des Satellites D’Application” (1978) 20 Proc. Coll. L. Outer Sp. 186

⁴ Ramey, R.A., “Armed Conflict on the Final Frontier: The Law of War in Space” (2000) 48 A.F.L. Rev. 1 at 3, see generally, Keegan, J., *A History of Warfare* (1993) at 5

⁵ see generally Peebles, C., *The Corona Project: America’s First Spy Satellites* (1997)

⁶ Peebles, C., *High Frontier: The U.S. Air Force and the Military Space Program* (1997) at 41, Shukman, D., *Tomorrow’s War: The Threat of High-Technology Weapons* (1996)

⁷ Kutyna, D.J., “Indispensable: Space Systems in the Persian Gulf War” in Hall, R.C. & Neufeld, J. (eds.), *The U.S. Air Force in Space: 1945 to the Twenty-First Century* (1995) 103 at 117

⁸ *ibid.*

⁹ Spires, D.N., *Beyond Horizons: A Half Century of Air Force Space Leadership* (1998) at 244 – 245

¹⁰ Gray, C.S., *American Military Space Policy: Information Systems, Weapon Systems and Arms Control* (1982) at 49

¹¹ Wingfield, T.C., “Legal Aspects of Offensive Information Operations in Space”, (1998), online at

<<http://www.usafa.af.mil/dfi/documents/wingfield.doc>> (Last updated: 2 September, 1998)

¹² Mintz, J., “U.S. Suspends Boeing-Ukraine Rocket Launch”, (August 8 1998) Wash. Post. At A14

¹³ *supra* note 5 at 266

¹⁴ Christol, C.Q., *The Modern International Law of Outer Space* (1986) at 28

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²¹ *supra* note 9

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²⁵ Jankowitsch, P., “Legal Aspects of Military Space Activities”, in Jasentuliyana, N., *Space Law: Development and Scope* (1992) at 143 and 150

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³⁰ Convention on International Liability for Damage Caused by Space Objects, (Mar. 29, 1972) 24 U.S.T. 2389, 961 U.N.T.S. 187 [hereinafter Liability Convention]

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³² Article III, Liability Convention, *supra* note 30

³³ Article IV, Liability Convention, *supra* note 30

³⁴ Article VI(2), Liability Convention, *supra* note 30

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⁴⁹ Article 51, UN Charter, *supra* note 52

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⁵¹ Article III, OST, *supra* note 1

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⁵³ Vlasic I.A., *Negotiating and Drafting Agreements Relating to Outer Space*, in Matte, M.M. (ed.), *Arms Control and Disarmament in Outer Space: Towards a New Order of Survival* (1991) 203 at 211

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⁵⁵ Convention (IV) Respecting the Laws and Customs of War on Land, (Oct. 18, 1907), (1908 Supp.) 2 Am. J. Int'l L. 90 [hereinafter Hague Convention (IV)].

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