

Are There Rules for Conflict in Outer Space ?

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More appropriately,
Are There Rules for Military Activities in Outer Space?

short answer = “YES”

but ... there is no consensus on the rules.

Outer Space is unique domain, activities are recent, and we have not yet had to face these questions.

Sources of Law

- Sources of Law for Military Activities in Outer Space
 - General International Law (incl. UN Charter)
 - International Space Law
 - International Humanitarian Law (IHL), Law of Armed Conflict (LOAC)
- Application in the space domain can lead to conflicts in the interpretation of the law
 - What are the appropriate interpretations that balance the differing rights and obligations flowing from different sources of law?
 - Normally “lex specialis” prevails over “lex generalis”, but what if we have multiple “lex specialis”

Outer Space Treaty

- Outer Space Treaty Preamble recognizes *“the common interest of all mankind in the progress of the exploration and use of outer space for peaceful purposes”*
 - ...but the Articles of the treaty do not follow through explicitly
- International Law Applies in Outer Space (Article III)
 - *States shall carry on activities in the exploration and use of outer space in accordance with international law, including the Charter of the United Nations, in the interest of maintaining international peace and security and promoting international cooperation and understanding.*

Outer Space Treaty does not address military use in detail

- Article IV prohibits the placement of **nuclear weapons or weapons of mass destruction** in orbit around the Earth or on celestial bodies
 - ...but does not prohibit any other type of weapon or military capability
 - ... it does however state that the Moon & celestial bodies shall **be used exclusively for peaceful purposes** and forbids military bases & weapons testing on the Moon & celestial bodies
- Article IX obliges States to conduct space activities *with due regard to the corresponding interests of all other States*

What restrictions, if any, are imposed on military space activities by the Outer Space Treaty and other instruments of international law ?

Questions abound

- What constitutes “use of force” in space?
 - Use of force is prohibited [UN Charter, art 2-4]
- What is an armed attack in space?
 - An “armed attack” gives rise to individual and collective self-defence [UN Charter, art 51]
- What is “harmful interference” in space and when is it a breach of international law?
- What objects may be targeted in a conflict? [IHL]
- How do you account for impact in the civilian population? [IHL]
- Status of commercial service providers to the military?
- Status of dual use satellite systems?
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Particular technical challenge in determining the impact of military actions.
- Ex. impact on civilian society of interfering with GPS? or COMSATS?

Lack of clarity entails risks

- No consensus on rights and obligations of States related to military uses of outer space
- No agreements limitations of permissible military uses of outer space
 - Can lead to misinterpretation of actions & escalations
- Use of private space infrastructure by States for military purposes raises questions
 - All commercial space activities are national activities

Why the need now ?

- Military space missions have been conducted since the beginning of the space age
 - USSR and US developed kinetic ASAT capabilities during the 1970s & 1980s
 - Both nations relinquished those capability (By mid 1990s, no kinetic ASAT)



- In 2007, China conducted a destructive ASAT test against one of their old satellites (FY-1C)
 - Created significant debris, much of it will remain in orbit for decades
- In 2008, the US used a anti-ballistic missile system to destroy a defunct satellite (USA-193)
 - Created very little debris due to low altitude of interception

From Strategic to Tactical Space

Technology enabled space to evolve from a strategic to a tactical role

Strategic use of space is a stabilizing influence on international security

- Verifies arms control treaties
- Provides early warning of nuclear attack
- Keeps nuclear deterrent credible (submarine launched ballistic missiles)
- Enables strategic command & control

Tactical use of space can arguably be seen as a destabilizing force (threat)

- Track and target mobile assets (ships), provide immediate intelligence on ops
- Guide precision weapons
- Enable UAV operations
- Intercept communications and locate transmissions

The tactical utility of space is driving the perceived need for countermeasures.

The background of the slide is a photograph of Earth from space, showing the blue and white clouds of the planet against the blackness of space. A white rectangular text box is centered over the image.

*Manual on International Law
Applicable to
Military Uses of Outer Space
(MILAMOS)*

MILAMOS - Overview

- Led by McGill's Institute of Air and Space Law, the MILAMOS project brings together an international group of experts to address the lacunae of international law with respect to military activities in outer space.
- **Objective:** develop a widely-accepted manual (McGill Manual) that clarifies the fundamental *lex lata* rules applicable to military uses of outer space in times of peace, in periods of rising tensions and in times of armed conflict.
- **Anticipated Impact:**
 - McGill Manual will become a handbook & reference for a wide audience (academics, government lawyers, policy-makers, decision-makers and military space operators).
 - Expected to spark debate among a range of international institutions and the public.

MILAMOS - Organisations

Founding
Institution



Centre for Research in Air and Space Law
Centre de recherche en droit aérien et spatial

Partner Institution



北京理工大学
BEIJING INSTITUTE OF TECHNOLOGY

Partner Institution

Institute of Air and Space Law
University of Cologne



Supporting Institutions

Collaborating Institutions



Government
of Canada

Gouvernement
du Canada

SSHRC  CRSH

Social Sciences and Humanities Research Council of Canada
Conseil de recherches en sciences humaines du Canada



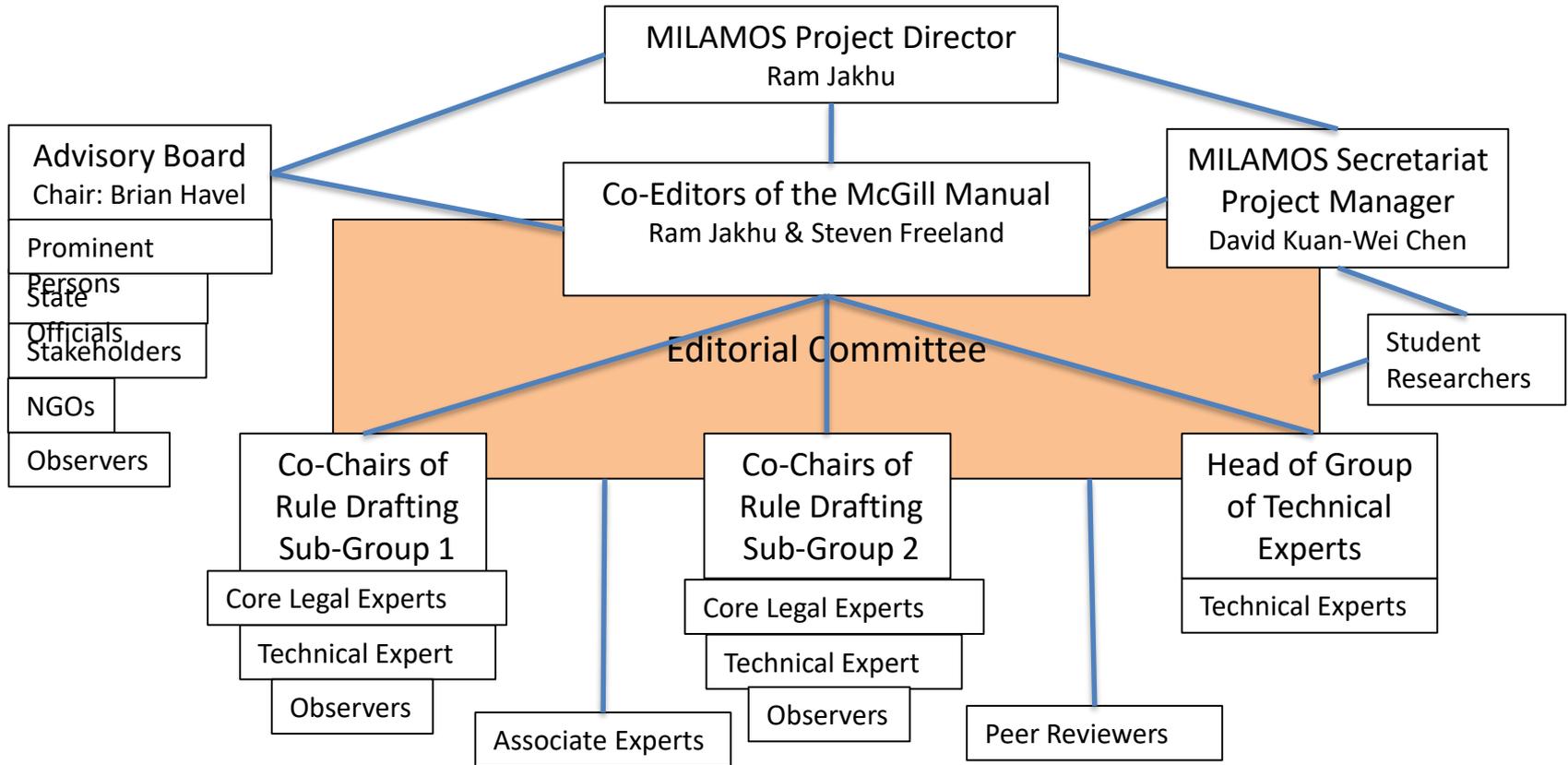
MILAMOS - History

- **Genesis:** Duncan Blake developed the concept in 2014 (LLM thesis of McGill IASL)
- **Launch:** Oct 2016 by founding institutions McGill & Adelaide University (Exeter U)
- **Timeline:** 3 year project (completion in 2019)
- **Perturbation:** Feb 2018 – withdrawal by Adelaide & Exeter
 - Why? Differing views on the focus (former partners to focus more on conflict scenarios to ensure that the Manual is appropriate to be used in operational settings).
- **Recovery:** Phase II launched with McGill and new partners, Cologne Institute of Air and Space Law & the Institute of Space Law at Beijing Institute of Technology
- **Timeline:** Unchanged, goal is to complete the McGill Manual in 2019.

MILAMOS - Participants

- Team of internationally recognized experts, balanced by domain, expertise and geography
 - International Law, Space Law, International Humanitarian Law, Cyber Law, Military Law, Space Technology & Military Operations
 - All expert are acting in their personal capacity
 - Academics & practitioners (including military lawyers)
 - Expert from several countries
- MILAMOS project is supported a secretariat for administration and research

MILAMOS Project Structure



Examples of Rules

Law Applicable in Times of Peace

- Use of Outer Space for Peaceful Purposes
- Delimitation of Outer Space
- Responsibility for National Space Activities
- Applicability of International Law
- Use of Electromagnetic Spectrum
- Technical Means of Verification

Law Applicable in Times of Rising Tensions

- Harmful Interference & Intervention
- Spectrum-Based Interference
- Prohibition of Threat of Use of Force
- Use of Force less than Armed Attack
- Non-State Actors
- Permissible Countermeasures

Law Applicable During Armed Conflict

- Application of IHL in Outer Space
- International Armed Conflicts
- Individual Criminal Responsibility
- Proportionality
- Neutrality
- Weapons
- Precautions



“We cannot solve our problems with the same thinking we used when we created them.”

Albert Einstein

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