Disarmament and International Security Council (DISEC)

Hello DISEC ’15 Delegates!

Let us be the first to extend an early welcome to MITMUNC 2015—Steven and I are excited to share with you all a weekend full of compromises, caucuses, and convivial debate! We’ve picked topics that we think you will find appealing and relevant. These are, by no means, easy issues: both topics are either currently being or were recently debated by U.N. General Assembly’s First Committee (DISEC). Still, from all of our prior chairing experiences, we both know that MITMUNC delegates are a bright bunch. Steven and I hope that you will find these topics challenging but achievable over the course of a weekend, and we look forward to hearing your innovative and nuanced approaches come February.

In the meantime, here is some information about us to keep you satiated before the conference: *Steven Holcomb* is a junior in mechanical engineering and pre-med. He is a midshipman in Navy ROTC, and is also an EMT on the MIT ambulance. He is excited to be your chair at this year's MITMUNC and can't wait to hear some exciting debate! Your other chair, *Sabina Maddila*, is a senior in electrical engineering here at MIT. In addition to MITMUNC, Sabina is an active member and DJ at WMBR, MIT’s Campus-Community radio station, and enjoys audio editing in her free time. She is always game to talk circuits, music, radio, or any combination of those things; just stop by the dais some time during the conference. Both of us have chaired MITMUNC for a couple years now, so we both can confidently say you’re in for a great weekend filled with, yes, lots of work, but lots of fun as well!

MITMUNC is a valuable exercise in debate *and* problem solving: expect to use both of these skills often. As we get closer to the conference, all of you should think about your negotiating terms (note: this does *not* mean bringing in a draft/final resolution as they are **not** permissible at MITMUNC). Because of the speed of the debate, many of you may find it difficult to reflect on your terms during MITMUNC if you do not develop them beforehand. Think: what can I offer other nations? Who can offer me what I want and how? Where can I concede or negotiate? Where can I not? How much leeway do I have with my home government? What promises can I make? You should come to MITMUNC able and ready to compromise but also recognize when to stand firm.

Making the distinction is one of the most vital skills you can learn and develop at MITMUNC, so take advantage of it!

Good luck with your research, and see you all in February,

Sabina Maddila & Steven Holcomb
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Topic A: Preventing an arms race in outer space

Almost every country today is dependent on space to satisfy at least some of their current communication and information needs. This is not immediately clear, as there are only a handful of space-faring nations. For those of you who might find it difficult to research this topic, it will be useful to look at your country's current communications capabilities. How do your residents connect to information (such as the internet)? How prevalent are consumer satellite devices (such as television sets or satellite phones) in your country? Are foreign agents using satellite technology in your country? Has your country made any recent treaties or worked with other nations to send satellites or other equipment into space? Does your country use satellite data for military and/or civilian operations? Does your country manufacture or trade raw materials used in space-faring vehicles? Does your country have a space program or plan on starting a space program of its own in the future? These considerations, among others, will help your research. We can't cover all of the ramifications of space on global security in this introductory background guide, so it will be up to you to find what is missing and how that will affect your position paper and resolutions.

Introduction

The space age started roughly 60 years ago with the launch of the first man-made satellite, Sputnik I, by the U.S.S.R. in 1957[1]. The next year, U.S. president Dwight Eisenhower outlined the primary guiding principle of 'peaceful uses of space' that still governs outer space international relations[2]. Eisenhower's 'peaceful uses of space' were generally understood to exclude introducing weapons and targeting systems in space but did not preclude installing military surveillance or other peaceful, i.e. systems that do disrupt the space environment, military systems[3]. There are now more than 1,200 satellites in orbit since the start of the space age[4], 50 of which were

[1] Cain, Fraser. 2013. "How Many Satellites are in Space?" *Universe Today*. October 24. http://www.universetoday.com/42198/how-many-satellites-in-space/.

[2] UNIDIR. 2002. "Outer Space and Global Security Conference Proceedings." *United Nations Institute for Disarmament Research*. November 27. http://www.unidir.org/files/medias/pdfs/conference-report-eng-0-39.pdf.

[3] (UNIDIR 2002)

[4] Union of Concerned Scientists. 2014. "Union of Concerned Scientists." *UCS Satellite Database*. July 13. http://www.ucsusa.org/nuclear_weapons_and_global_security/solutions/space-weapons/ucs-satellite-database.html#.VHn5_YvF-So.

launched within the past four months[5]. Satellites are used for a variety of civilian and military applications, including GPS, television and other communications technologies, and surveillance.

However, as the number of commercial and military applications for space grows, so do the risks to these orbiting vehicles. Practical orbits, that is the orbits that are feasible with existing technology and are thus used for on-the-ground applications, have become increasingly congested with satellites[6] and 60 years' worth of other kinds of space-age debris[7]. Additionally, since the end of the Cold War, space-faring nations have been less inclined to maintain the Cold War status quo. In 2003, The U.S. withdrew from the Anti-Ballistic Missile (ABM) Treaty, with elements within the U.S. Department of Defense pushing to expand the weapons capabilities of American satellites[8]. Due to the wide-ranging applications of satellites currently and their potential for further innovations, the U.N., particularly the Disarmament and International Security Committee (DISEC), is concerned with possible disruptors of the space environment and space-based services[9].

As a DISEC delegate and as a committee, you should weigh the risks of aggravated disruptions from weaponized space and environmental disruptions from congested space as you write your position paper and prepare for debate. Any kind of disruption to the outer space environment can have significant consequences on the livelihoods of the billions of people who live on the surface. It will be up to you as a committee to determine the scope of your debate once you come to conference, as each aspect of space security will require different problem-solving approaches. In your research, you should critically think about current and proposed 'solutions': what actions can DISEC take that are feasible in the current political climate but are also effective? What kind of existing framework or precedence already exists that you can build upon? How 'invasive' of action should and can DISEC take? How can DISEC weigh the autonomy and expertise

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[5] 2014. "Latest Satellite Launches." *Real Time Satellite Tracking and Predictions*. November 23. http://www.n2yo.com/satellites/?c=latest-launches.

[6] David, Leonard. 2011. "Ugly Truth of Space Junk: Orbital Debris Problem to Triple by 2030." *SPACE.com*. May 9. http://www.space.com/11607-space-junk-rising-orbital-debris-levels-2030.html.

[7] NASA. 2013. "Space Debris and Human Spacecraft." *NASA News: Research & Technology*. September 27. http://www.nasa.gov/mission_pages/station/news/orbital_debris.html#.VHoDuIvF-So.

[8] (UNIDIR 2002)

[9] UNIDIR. 2014. "The Evolving Space Security Regime: Implementation, Compliance, and New Initiatives." *UNIDIR Space Security 2014 Conference*. March 20. http://www.unidir.org/files/publications/pdfs/space-security-2014-en-614.pdf.

of national space agencies with the global need for collective action? How will the U.N. be able to implement any of your resolutions effectively?

History of space weaponization

Early international policy largely did not regard space as a domain for weaponization, though this was originally not the case[10]. Both the United States and U.S.S.R. made initial inquiries on the weaponization of space in the 1940s and 50s[11]. However, in both cases, scientists did not believe ballistic missiles or nuclear bombs dropped from space were feasible or even a practical use of resources given the technologies of the time[12]. They instead recognized military reconnaissance and surveillance could be a few of many other peaceful applications of artificial satellites in outer space[13]. Soon after the Sputnik I launch in 1957, the Eisenhower administration adopted the policy of 'peaceful uses of space' early, reaping the politic benefits of such a move internationally, and established NASA as a civilian agency, setting a global precedent[14].

In 1967, both the United States and U.S.S.R., the two dominant space-faring nations of the time, signed the Outer Space Treaty. This treaty banned participants from placing nuclear weapons in the Earth orbit or on the moon[15]. The Anti-Ballistic Missile (ABM) Treaty, in 1972, further restricted signatories, in particular the U.S. and U.S.S.R., to two anti-missile launch sites to defend the national capitol and a single ICBM launch base[16]. However collectively, these treaties had a major loophole: neither treaty prevented signatories from 'investigating' space-based defense systems. This loophole was the fundamental legal basis for U.S. President Ronald Regan's infamous Strategic Defense Initiative (SDI) (nicknamed "Star Wars" by skeptics at the time), and the resulting counter-program launched by the U.S.S.R., Polyus-Skif and Kaskad[17].

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[10] Roberts, Darryl. 1988. "Space and International Relations." *The Journal of Politics* (The University of Chicago Press) 50 (4): 1075-1090. http://www.jstor.org/stable/2131393.

[11] (Roberts 1988, 1077)

[12] Teitel, Amy. 2013. "The laser-toting Soviet satellite that almost sparked a space arms race." *Wired UK*. May 16. http://www.wired.co.uk/news/archive/2013-05/16/soviet-laser-satellite.

[13] (Teitel 2013)

[14] (Teitel 2013)

[15] (Teitel 2013)

[16] (Teitel 2013)

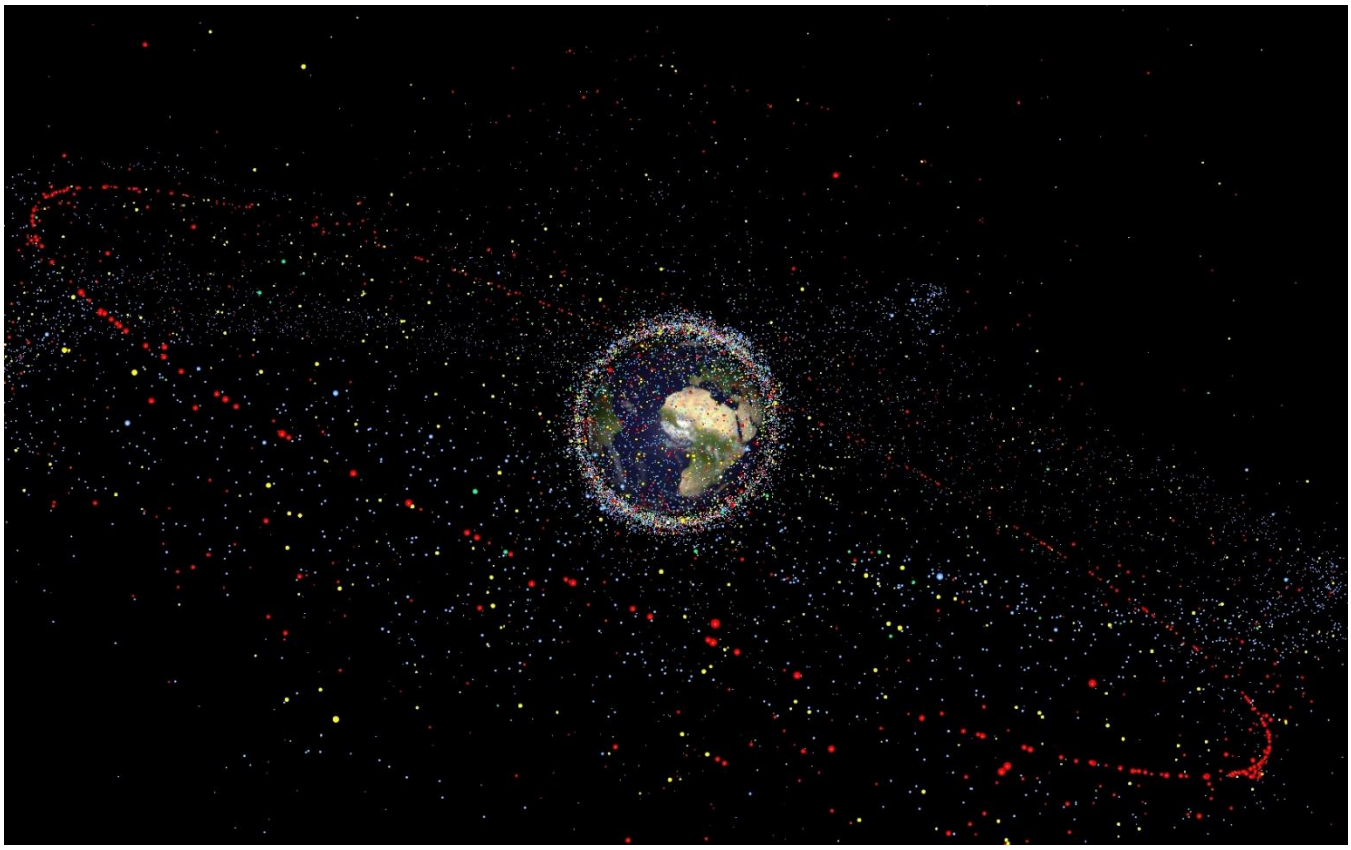
[17] (Teitel 2013)

At Soviet insistence, the U.N. General Assembly adopted two resolutions in order to officially react to the American-Soviet outer space arms race developing in the early 1980s[18]. This would later become the proposed Prevention of an Arms Race in Outer Space (PAROS) international agreement. The ad-hoc committee formed for PAROS in 1985 met until 1994, when it was not renewed due to objections from the United States: the U.S. preferred negotiating bilateral talks directly with the U.S.S.R. (later the Russian Federation by 1994)[19]. Under the draft treaty submitted by the Russian Federation later in 2008, PAROS would reaffirm many of the tenants previously outlined in the Outer Space Treaty of 1967, primarily that states would refrain from placing any type of weapon in orbit, installing weapons on any celestial bodies, and using force, or threatening to use force, against any object currently in outer space[20].

[18] Meyer, Paul. 2011. "The Conference on Disarmament and the Prevention of an Arms Race in Outer Space." *UNIDIR Resources*. April. http://www.unidir.org/files/publications/pdfs/the-conference-on-disarmament-and-the-prevention-of-an-arms-race-in-outer-space-370.pdf.

[19] Inventory of International Nonproliferation Organizations and Regimes. 2012. "Proposed Prevention of an Arms Race in Outer Space (PAROS) Treaty." *The James Martin Center of Nonproliferation Studies*. December 3. http://cns.miis.edu/inventory/pdfs/paros.pdf.

[20] (Inventory of International Nonproliferation Organizations and Regimes 2012)



Meanwhile, since the start of the space-age in 1957, the upper atmosphere and commonly used outer space Earth orbits have become incredibly congested. There are now over 1,200 operational operating artificial satellites, less than half of which are American[21]. Of the 512 U.S. satellites in orbit, 214 are dedicated to commercial purposes[22]. Additionally, more than 500,000 pieces of space debris, travelling at speeds up to 17,500 mph, are being tracked in orbit currently[23]

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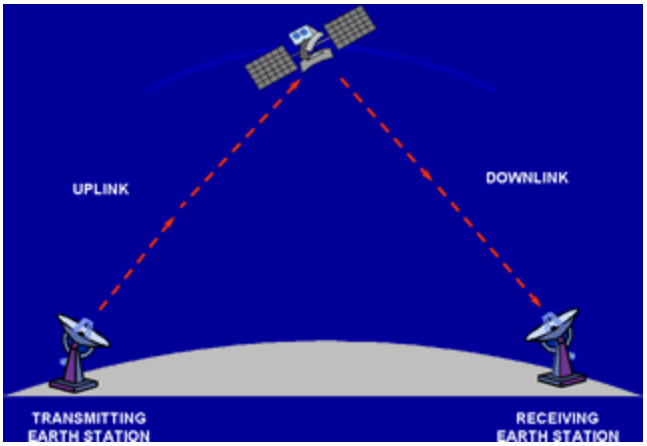
[21] (Cain 2013)
[22] (Union of Concerned Scientists 2014)
[23] (NASA 2013)

I. Assets in space and their interaction with the ground

A. Requirements for satellite operation



Satellites communicate with the ground by transmitting and receiving radio frequency signals to and from ground stations on the surface.

The uplink and downlink satellite feeds can serve several specialized functions, such as video or communications feeds: many commercial and military satellite functions exploit the high altitude and quick speeds when circumnavigating the Earth for a variety of these applications. Given the delicate and precise nature of remote spaceflight, a dedicated uplink and downlink frequency band is required for each satellite in order prevent cross-talk with other satellites. Additionally, because satellites fly at tens of thousands of miles per hour in order to remain in orbit, dedicated orbiting altitudes (or orbits) are needed to minimize the chance of collision. The satellite orbit altitudes can be broadly categorized into the following classes:

- **Low Earth Orbit (LEO)** is used for spy and observation satellites due to proximity to the surface; the majority of satellites are in LEO, including the International Space Station (ISS)
- **Medium Earth Orbit (MEO)** is used for navigation, communications, and science satellites
- **Geosynchronous Orbit (GEO)** is used for weather and communications satellites; these satellites move such that they appear in same position of the sky to an observer on the surface

Both orbits and frequency bands are allocated by the International Telecommunications Union (ITU), which is a specialized U.N. agency formed for this expressed purpose.

Current military and civilian applications for satellites

The military currently uses satellites for monitoring purposes. This can include encrypted communication networks, nuclear monitoring, observing enemy movements, eavesdropping on surface-bound radio links, radar imaging, and photography. Civilian applications include weather monitoring, communications and broadcast systems, navigation and rescue operations, science, and earth observation. For those of you who would like to learn more about how satellites operate, we would encourage you to check out the following link: http://science.howstuffworks.com/satellite.htm. We highly recommend that you give the article a look before coming to the conference to get some insight on the technical aspects of this topic.

Weaponized applications

Satellites are and have been vulnerable to terrestrial anti-satellite (ASAT) systems since the late 1980s[24]. However, there is currently a trend towards launching such systems into space directly. Since the Bush administration, the U.S. has long made it clear that space weaponization will be a reality in the coming century[25]. The United States' withdrawal from the Anti-Ballistic Missile (ABM) Treaty in 2002 has since allowed the U.S. to move forwards with space-based missile defense systems[26]. A number of nations have already begun to launch weaponized satellites into outer space. In October 2013, the People's Republic of China, who has never been a signatory to the ABM treaty, tested a weaponized satellite capable of capturing other satellites while in orbit[27]. Prior to that, China demonstrated the ability to hit and destroy an orbiting satellite with a missile in 2007[28]. A number of other nations have also demonstrated or working on ASAT strategies located and originating in outer space, in particular the U.S.[29]

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[24] (Teitel 2013)

[25] Shah, Anup. 2007. "Militarization and Weaponization of Outer Space." *Global Issues*. January 21. http://www.globalissues.org/article/69/militarization-and-weaponization-of-outer-space.

[26] Neilan, Terence. 2001. "Bush Pulls Out of ABM Treaty; Putin Calls Move a Mistake." *The New York Times*. December 21. http://www.nytimes.com/2001/12/13/international/13CND-BUSH.html.

[27] Estes, Adam Clark. 2013. "Why Is China Testing Satellite-Hijacking Space Weapons?" *Gizmodo*. October 3. http://gizmodo.com/why-is-china-testing-satellite-hijacking-space-weapons-1440744006.

[28] (Estes 2013)

[29] RT. 2013. "Pentagon preps new anti-satellite weapons program." RT. May 8. http://rt.com/usa/pentagon-anti-satellite-weapons-013/.

Legal precedence for regulating outer space

Outer space is primarily regulated by informal industry standards, unofficial U.N. guidelines, and by a number of bilateral agreements that mitigate or prevent collisions with other satellites and/or space debris[30]. As the space age has progressed, space law has evolved as well from primarily international treaties (1950s-1979) to situation-specific U.N. resolutions (1980-1995) to reinterpreted treaties reformulated as U.N. resolutions (1995-present)[31]. The following details some of the current resolutions and guidelines in place today:

U.N. Space Debris Mitigation Guidelines

The Inter-Agency Space Debris Coordination Committee (IADC) began developing the U.N. Space Debris Mitigation guidelines in 1999[32]. In 2007, the guidelines were later adopted by the U.N. Committee on Peaceful Uses of Outer Space (COPUOS) and endorsed by the General Assembly [33]. The guidelines do not 'outlaw' any particular activities, but rather outlines established codes of conducts to minimize harmful by-products of space activity[34]. Additionally, the guidelines are non-binding[35]. As a result, the guidelines were not designed as comprehensive "one-stop shop" solution to mitigate the threat of space debris.

Code of Conduct for Outer Space Activities

The European Union (E.U.) published a draft for a Code of Conduct for Outer Space activities in 2008, later revised in 2012, in order to minimize accidents harming peaceful space exploration, particularly in regards to space debris[36]. Though the code is not legally binding[37], the E.U., with the assistance of the U.N., spent most of 2011 trying to add space-faring and non-space-faring signatories beyond the E.U. member states and opened up participation to all

[30] Zenko, Micah, and Douglas Dillon Fellow. 2011. "A Code of Conduct for Outer Space: Policy Innovation Memorandum No. 10." *Council on Foreign Relations*. November. http://www.cfr.org/space/code-conduct-outer-space/p26556.
[31] Hobe, Stephan. 2009. "Legal Analysis of the UN Space Debris Mitigation Guidelines." *McGill University*. May 9. https://www.mcgill.ca/iasl/files/iasl/Session_2_Stephan_Hobe.pdf.
[32] IADC. n.d. *Inter-Agency Space Debris Coordination Committee*. http://www.iadc-onlin e.org/.
[33] (Hobe 2009)
[34] (Hobe 2009)
[35] (Hobe 2009)
[36] (Zenko and Fellow 2011)
[37] (Zenko and Fellow 2011)

nations in 2012[38]. One of the major criticisms for the original E.U. Code of Conduct was that major space-faring and non-space-faring nations, especially emerging space powers China, India, South Africa, and Brazil, were excluded from original negotiations[39]. Additionally both the United Nations and Russian Federation have expressed concerns and objections with E.U. Code of Conduct regarding transparency and confidence building measures (TCBMs)[40].

International treaties and outer space legal principles

We highly recommend that you look further into the following treaties as the establish much of the legal precedence for outer space. More information concerning the status of international agreements can be found at the following link: http://www.oosa.unvienna.org/oosa/en/SpaceLaw/treaties.html. The following lists represents the major treaties that constitute international outer space law[41]:

1. *Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies* (Outer Space Treaty, 1967)
2. *Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space* (Rescue Agreement, 1968)
3. *Convention on International Liability for Damage Caused by Space Objects* (Liability Convention, 1972)
4. *Convention on Registration of Objects Launched into Outer Space* (Registration Convention, 1975)
5. *Agreement Governing the Activities of States on the Moon and Other Celestial Bodies* (Moon Agreement, 1979)

[38] Listner, Michael J. 2012. "Geopolitical Challenges to Implementing the Code of Conduct for Outer Space Activities." *E-International Relations*. June 26. http://www.e-ir.info/2012/06/26/geopolitical-challenges-to-implementing-the-code-of-conduct-for-outer-space-activities/.

[39] (Listner 2012)

[40] (Listner 2012)

[41] Committee on the Peaceful Uses of Outer Space. 2014. "Status of International Agreements relating to activities in outer space as at 1 January 2014." *United Nations Office of Outer Space Affairs*. January 1. http://www.oosa.unvienna.org/pdf/limited/c2/AC105_C2_2014_CRP07E.pdf.

The following are related treaties also used in determining outer space law[42]:

6. *Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and under Water* (1963)
7. *Convention Relating to the Distribution of Program-Carrying Signals Transmitted by Satellite* (1974)

These treaties establish the international legal principles of (1) non-appropriation (or no personal property) by any one country, (2) arms control (or the prevention of an arms race in outer space), (3) freedom of exploration, (4) liability for damage by space objects, (5) the safety and rescue of astronauts and spacecraft, (6) the restriction of harmful interference in the space environment or other space activities, (7) the registration and notification of space activities (or total transparency with placing objects in space and which objects can be placed in space), (8) the scientific investigation and exploitation of natural resources in outer space, and (9) the settlement of disputes[43]. The underlying sentiment behind each of these treaties are to promote outer space as state-less domain that relies on international cooperation.

Public policy methods

As you determine possible resolutions to this topic and the next, you should consider several public policy mechanisms that are at your disposal. In international law, there must be significant, if not majority, political support in order for any right or obligation to be effective. Law depends on consensus and reciprocation between the affected members—this is important to consider as you formulate your resolutions. Also keep in mind that compliance and enforcement of international law tends to be weaker than with domestic law. The United Nations is the closest entity currently to enforce international law, but it does not necessarily have the power to do so. This isn't meant to discourage you, but to present you with the actual barriers the United Nations faces when it tackles issues of global interest. Keep this challenge in mind as you write your position papers and prepare for the conference.

[42] (Committee on the Peaceful Uses of Outer Space 2014)

[43] UNOOSA. n.d. "United Nations Treaties and Principles on Space Law." *United Nations Office of Outer Space Affairs*. http://www.oosa.unvienna.org/oosa/en/SpaceLaw/treaties.html.

Transparency and confidence building measures (TCBMs)

Transparency and confidence building measures (TCBMs) are voluntary protocols that states choose to abide by. These measures are typically not verified or are legally-binding, but are quick and easy to negotiate ad implement, especially in treaty negotiations. TCBMs are typically implemented as codes of conduct or guidelines. Famous examples of TCBMs include the Hague Code of Conduct for Missile Proliferation and the Incidents at Sea and Prevention of Dangerous Military Activities Agreement. TCBMs may help promote dialogue between interested parties but do not necessarily provide a long-term solution or become a global norm. Similarly TCBMs can distract from creating longer-term solutions, though they can be useful when complementing legally binding options.

Legally-binding options

Many states are in favor of implementing legally-binding multilateral treaties in order to address the question of outer space security. Legally binding options, though providing a more effective long-term solution, are extremely difficult to negotiate and implement and, in many cases, can directly come in opposition to state sovereignty. There is only a handful of examples of international, legally binding measures, each of which are not fully binding but presents elements of such: the Convention on Biological Diversity, the U.N. Convention on Climate Change (UNFCC), and (most relevant for the purposes of this topic), the Constitution and Convention of the International Telecommunications Union (ITU).

Institutions and key players

The following provides a list of key players and institutions involved with this topic. As mentioned earlier, all nations have a vested and unique interest in the maintenance of space as a domain for science, discovery, and technological applications. As a result, there are too many individual and bloc positions to cover in succinctly but with nuance in this background guide. It is your responsibility as a delegate to further research the institutions and bloc positions integral to debate, in particular those that will provide potential allies or objectors to your country's stance. In determining which nations to research further, consider the institutions who will most likely implement or may provide insight on whatever your resolution may be, nations who can provide

scientific and technical collaboration or other contributions, and industry leaders. Also keep in mind that the first session at MITMUNC will likely be a good opportunity to inform your colleagues of your country's positions and help you learn and clarify other delegates' positions. Prepare to inform others of your bloc position as you should prepare to inform yourself.

United Nations and Non-governmental Organizations (NGOs)

U.N. Committee on the Peaceful Uses of Outer Space (COPUOS)

The U.N. Committee on the Peaceful Uses of Outer Space (COPUOS) was initially set up as an ad-hoc committee in 1958, soon after the launch of Sputnik I, later formally set up by the General Assembly in 1959[44]. COPUOS oversees the implementation of the five major outer space U.N. treaties (listed above). Additionally, COPUOS oversees the scope of and encourages international cooperation for the peaceful use of space and studies the legal implications of outer space exploration[45].

U.N. Council on Disarmament (CD)

Since the early 1980s, the U.N. Conference on Disarmament (CD) has housed and developed proposals for outer space disarmament, in particular the Prevention of an Arms Race in Outer Space (PAROS) proposal[46]. Currently, the CD is operating under a mandate by the Secretary-General to study outer space transparency and confidence-building measures (TCBMs)[47]. Generally, the CD supports member states with their efforts to prevent an arms race in outer space.

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[44] UNOOSA. n.d. "United Nations Committee on the Peaceful Uses of Outer Space." *United Nations Office of Outer Space Affairs*. http://www.oosa.unvienna.org/oosa/en/COPUOS/copuos.html.

[45] (UNOOSA n.d.)

[46] UNODA. n.d. "Outer Space." *United Nations Office of Disarmament Affairs*. http://www.un.org/disarmament/topics/outerspace/.

[47] (UNODA n.d.)

International Telecommunications Union (ITU)

The International Telecommunications Union (ITU) regulates information and communications technologies that operate on the global radio spectrum and in satellite orbits[48]. As the number of communication devices and information sharing systems continues to increase worldwide, the communication frequency spectrum and geostationary orbit positions used for the operation of these commercial and military systems in becoming an increasingly scarce resource—this is where the ITU is of particular importance. The ITU coordinates between satellites to prevent communication errors and to avoid harmful interference, or even collisions, between satellites by allocating satellite communication frequencies and/or orbital positions[49].

Inter-Agency Space Debris Coordination Committee (IADC)

The Inter-Agency Space Debris Coordination Committee (IADC) was established by the U.S., Russian, Japanese, and European space agencies in 1993 to exchange information about space debris research, review the cooperative activities, and identify debris mitigation options[50]. The IADC now consists of 12 member agencies total: CNSA (China), CNES (France), ISRO (India), UKSA (United Kingdom), DLR (Germany), ASI (Italy), SSAU (Ukraine), and CSA (Canada) in addition to the founding agencies—ESA (Europe), JAXA (Japan), NASA (United States), and RosCosmos (Russian Federation)[51]. The IADC contributes publically available data, findings, and reports that are often published in U.N. reports[52]. The U.N. also frequently sends requests to the IADC for technical support and inquiries on space debris and outer space sustainability[53].

Space-Faring Nations

Established space powers

Established space powers constitute nations who were able to launch their first artificial satellite by 1979 and are listed as the following: Russian Federation (at the time, the U.S.S.R.),

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[48] Koenig, Christian, and Martin Busch. 2013. "Regulation in Outer Space." *University of Bonn*. http://www.zei.uni-bonn.de/dateien/aufsaetze-und-fallbearbeitungen/402.pdf.

[49] (Koenig and Busch 2013)

[50] Inter-Agency Space Debris Coordination Committee. 2014. "United Nations Office of Outer Space Affairs." 20 Years of IADC. February. http://www.oosa.unvienna.org/pdf/pres/stsc2014/tech-32E.pdf.

[51] (Inter-Agency Space Debris Coordination Committee 2014)

[52] (Inter-Agency Space Debris Coordination Committee 2014)

[53] (Inter-Agency Space Debris Coordination Committee 2014)

United States, France, Japan, the People's Republic of China, United Kingdom, and Europe (ESA) (India launched her first satellite in 1980). Of these nations, only two of these—the Russian Federation and the People's Republic of China—still maintain crewed space missions. Additionally, only the People's Republic of China and the United States have demonstrated lunar landing capability. Finally, the Europe (ESA), Indian, Italian, Japanese, and South Korean space agencies all currently maintain extraterrestrial space probes.

Emerging space powers

The following constitute all remaining nations with space-faring capability (or the ability to launch and maintain a satellite in orbit), with their first successful satellite launch occurring on or after 1980: India, Israel, Ukraine, Iran, the Democratic People's Republic of Korea (North Korea), the Republic of Korea (South Korea), and the Asia-Pacific Space Cooperation Organization (APSCO). Brazil has yet to successfully launch a satellite independently, though has suffered from three failed attempts, the most recent of which being in 2003. Costa Rica, Mexico, Algeria, Azerbaijan, Venezuela, Brazil, Bulgaria, Canada, Colombia, Singapore, Australia, Thailand, Germany, Hungary, Greece, Spain, Kazakhstan, Malaysia, Egypt, Argentina, Indonesia, Taiwan, Nigeria, Norway, Pakistan, Turkey, Saudi Arabia, Viet Nam, and Saudi Arabia all do not have launch capability but operate satellites of their own. Note that this list does not constitute all remaining nations with a funded space program nor will all these countries be present at MITMUNC.

Non-space-faring Nations

Remaining nations with current or future space programs

The following nations have already established space agencies but do not operate any satellites of their own: Belarus, Uruguay, Austria, Belgium, Bolivia, Croatia, the Czech Republic, Denmark, Peru, Mongolia, Tunisia, Uzbekistan, Netherlands, Portugal, Romania, Egypt, Morocco, Sri Lanka, Bangladesh, Poland, South Africa, Switzerland, and Turkmenistan. It should be noted, though, that some of these nations are member states of the European Space Agency (ESA). There are also a number of space agencies that are in their proposal stages. They are, in large part,

international space agencies: the Pan-Arab Space Agency, the African Space Agency, the South American Space Agency, and the Philippine Space Agency.

Nations with abandoned space launch programs

The following nations have abandoned space launch program: Canada, Germany, South Africa, Iraq (*alleged*), Argentina, Egypt, and Spain. Note that many of these nations currently maintain their own satellites even if they do not have launch capability currently.

Closing remarks

As you prepare your position papers and your research materials for debate, be sure to consider the core issues that involve dealing with space. Outer space is a peculiar domain because it requires a high threshold of technological knowledge to reach. Throughout the conference you will need to consider themes of (1) territorial claims and imperatives, (2) changes in technology, (3) the challenges intrinsic to high risk and high priority missions in outer space, (4) the role of the state in space exploration and maintenance, (5) the militarization and weaponization of space, (6) the role of international law, (7) the effect of outer space on the international political economy, and finally (8) the role of war and space and the reasons for the current surge in weaponizing outer space[54]. We recognize that outer space security can be a vast and fairly technical area of intense academic study, so feel free to email us if you have any questions on how to approach your position paper or approach general research for the conference. We look forward to see how you all will interpret and tackle the issues presented in this background guide and beyond. Good luck!

[54] (Roberts 1988, 1076)

Topic B: Preventing small arms trade to non-state organizations

Background

Before delving into the global issue of small arms trafficking to non-state organizations, it is important to make a distinction between the official and the illicit small arms trade. Small arms trade is the sale of personal weaponry, which are infantry weapons including personal guns, RPGs, and grenades. The small arms trade is a trillion dollar multi-national industry, with sales of some kind occurring on six continents and in almost every country. The largest exporters of small arms are the United States, Russia, China, France, and the United Kingdom; however almost every nation that has a military is involved in the trade, either as a producer or as a destination for weapons. The trade is recognized and sanctioned, albeit monitored, by the international community. However, the distinction is drawn when weapons are traded to non-state organizations which are not bound or monitored by treaty agreements or international oversight. Such trade is widespread and allows most rebel and terrorist organizations to operate, sometimes independently and sometimes with support of a state.

The trade of small arms has existed for as long as nation-states have: most nations around the world maintain a trained standing army which requires equipment including small arms. However, not every nation possesses the capabilities to produce their own weapons, and for that reason the trade of small arms must take place in order for armies to remain supplied. While this may appear simple, small arms trade is complicated when the trade expands to non-state groups. In some cases, nations will only sell weapons to other nations that follow similar ideologies. This occurrence was common during the Cold War, when the United States and the Soviet Union each equipped nations in their spheres of influence in order to allow them to promote their ideology. Unfortunately, arms suppliers also began the practice of supplying non-state organizations that supported their ideology. The Soviet Union equipped Communist rebel groups in Cuba, Angola, Vietnam, and many other nations that fought against the US-supported regimes in each of those nations. In retaliation, the US supplied weapons to Afghan rebels who opposed the Soviet invasion of the nation in 1979. This ongoing civil war in Syria as well as the prevalence of terrorist

organizations throughout the Middle East and Africa underscores the continued importance of this issue.

The precedent set during the Cold War, arming non-state groups who share ideologies, continues to this day in multiple forms. In one form, a nation will directly supply arms to groups. This can be seen through Iran's patronage of Hezbollah, the Lebanon-based Shiite group that has received funding and weapons from Iran for several decades. Another example of direct supplying is Russian support for Ukrainian rebels in Crimea and Eastern Ukraine. While the Russian federation denies having supplied weapons to the rebels, the rebel groups have been seen utilizing Russian-made small arms on a large scale. Another form of supplying small arms to rebel groups, the form that is most common today, is much more nebulous. It can involve multiple levels of transaction and trade, where the group providing the weapons may channel them through other nations and groups. Often the group supplying weaponry is not the actual producer of weapons. Many of the rebel and mercenary groups operating in Africa have no direct benefactor, and instead purchase small arms from nations who in turn obtain them from large weapon-producers. A final method of weapons trafficking to non-state organizations involves the theft of weaponry. Military depots or convoys can be raided in order for groups to acquire new caches of small arms. This method can be even more difficult to address because no state is directly at fault, but instead the supply chain bringing legally-purchased weapons to a state fails to function properly. When addressing the complex and widespread issue of small arms trafficking to non-state organizations, it is important to consider the history of the issue and the varied means through which it takes place.

United Nations Actions

The U.N. is heavily involved in the global small arms trade. The trade is legal and widespread, but is also susceptible to hijacking by non-state organizations, and for that reason the U.N. has taken numerous measures to ensure that small arms trade occurs as safely as the nature of the trade allows. In March 2010 Deputy Secretary General Asha-Rose Migiro said that arms trafficking in developing countries "not only leads to conflict, but also to a number of other criminal activities, which undermine U.N. efforts to promoter social justice and foster the rule of

law." Migiro called on developing nations, especially those in Central Africa, who are extensively affected by the arms trade, to take actions to decrease their purchases of foreign arms in order to "increase their overall stability and decrease the amount of illegal activities occurring as a result of the arms trade".

In 2006, the United Nations approved resolution A/61/394, initiating discussions about a possible Arms Trade Treaty to regulate the trade of small arms. Later, in 2008, resolution A/63/389 was passed, which further advanced discussions concerning an Arms Trade Treaty. In addition, this resolution created the Open-Ended Working Group concerning Arms Trade, which is a group that is working to draft a treaty regulating international arms trade. Unfortunately, this group has yet to reach a treaty that substantially resolves the issue of arms trade, but it has made progress on reaching a conclusion.

In addition to these, several other draft resolutions have been presented to the General Assembly proposing increased transparency in arms transactions as well as further international regulation of the industry. These include resolutions A/C.1/64/L.50, A/C.1/64/L.21, and A/C./64/L.26. A resolution similar to these may be an effective method of reducing the problems resulting from the arms trade.

A major step toward improving the safety of the global small arms trade was the passing of the Arms Trade Treaty on April 2nd, 2013. The treaty has been signed by 123 nations, and ratified by an additional 54, and took full effect on December 24th, 2014. The treaty mandates increased monitoring of cross-border arms shipments, and also standardizes import and export regulations among signatories. The goal of the treaty is to more effectively monitor international small arms trade, both to keep track of the actual weapons being traded, but also to keep nations accountable. Although it was passed by the UN General Assembly, it has also undergone criticism. Many are opposed to its sole international trade focus, as the treaty does not address domestic trade or trafficking of small arms. Some nations also fear that the treaty infringes on the sovereignty of both arms exporters and importers, and decreases their military capabilities. Ensure that you are aware of your nation's stance on this treaty and involvement in these past UN actions, and study which have been effective and ineffective in order to create a comprehensive solution to this persistent problem.

Bloc Positions

A great deal of diversity exists among various groups with respect to the trade of small arms and its relation to non-state organizations. The following are some general positions, based on past actions and involvement.

For the most part, most European nations were strongly in favor of the Arms Trade Treaty as well as increased regulation of small arms trade. France and the United Kingdom, as two of the largest producers of small arms, have in the past been concerned with allowing the free trade of weapons among states while taking measures to prevent weapons from falling into the hands of non-state organizations. The United States, the largest producer of weapons worldwide, shares a similar view.

In general, Russia and China have favored less regulation of small arms trade, asserting that it is the responsibility of individual nations to police their own small arms shipments.

Many African and South American nations import small arms from larger weapon-producing nations, but many have also suffered detrimental results of the trade, as rebel groups and terrorists have received arms and funding as a result, so their policies must take both of these sides of the conflict into account.

East and Southeast Asian nations were divided in their positions on the ATT. Many have unique histories of violence and revolution, so these must be taken into account when addressing the problem.

Please research your individual countries' past involvement in the issue, especially in relation to the ongoing conflicts throughout Iraq, Syria, and Africa. We are looking forward to hearing some exciting debate at the conference!