This keynote speech assesses the political and policy hurdles currently faced in effectively implementing legally and politically binding commitments for outer space security. This speech will provide an international policy context for achieving wider implementation of existing agreements.

- Much more complex geopolitical situation now than during the previous era where most major agreements were signed (no longer mostly polarized along Cold War lines)
- There are now many more spacefaring nations, with a spectrum of experience in space operations and activities, along with a diverse range of wants and needs that together make it harder to come to consensus
    - When trying to carry out international agreements, numbers do matter. But to be blunt, there are some major spacefaring nations whose participation is extremely important to the success of these agreements and if they do not agree with the goals included within, these agreements will not be thoroughly implemented
    - Different priorities shape these international agreements. For example, some countries believe that debris mitigation is key, while others view those efforts with suspicion and concern that space debris mitigation would limit their ability to utilize space. This will affect the implementation of these agreements
    - Also question of how balance interests of traditional and current space actors with those of new/future actors
- Still many aspects of the original space agreements that lack definitions, so in some cases, there is not even agreement on what the agreements already in existence mean
    - This does not help when there is debate over terminology in current international initiatives. For example, the inclusion of "self-defense" has caused a lot of debate over its utility to the draft International Code of Conduct. This phrase shows up in section 2, which discusses "the responsibility of states to refrain from the threat or use of force against the territorial integrity or political independence of any state, or in any manner inconsistent with the purposes of the Charter of the United Nations, and the inherent right of states to individual or collective self-defence as recognised in the Charter of the United Nations."[i] It makes another appearance in section 4.2, which calls for subscribing states to "refrain from any action which brings about,

directly or indirectly, damage, or destruction, of space objects unless such action is justified: by imperative safety considerations, in particular if human life or health is at risk; or by the Charter of the United Nations, including the inherent right of individual or collective self-defence; or in order to reduce the creation of space debris."[ii]

- This has prompted concern by some who worry that its inclusion allows for a de facto weaponization of space, as they argue that anything can be justified by a very loose interpretation of being for self-defense. That, however, is unlikely and would be going against the spirit of the language, if not the letter of it. The right to collective self-defense is enshrined in many international agreements, including the United Nations Charter, so this wording here is not ground-breaking. In fact, because this language is already present in the UN Charter, it is not necessary to repeat in the CoC for the legal principle of self-defense to be part of the legal regime in outer space. However, some countries believe that it is crucial to reiterate the legal concept of self-defense, in part to satisfy domestic critics. Thus, adding it does not introduce any new concepts and removing it may impact their ability to sign onto the CoC.

- There is a disconnect between what various participants believe that the international agreements are intended to cover. Does it include all activities that constitute responsible behavior in space? If so, then security-related issues like acknowledging the right to self-defense can reasonably be argued to belong to such a document. But some believe that the CoC should only focus on peaceful uses of space, echoing the language used to bifurcate space issues in the United Nations, where the Committee on Peaceful Uses of Outer Space (COPUOS) deals with civil (or non-security) space issues, while the Conference on Disarmament (CD) has been relegated to handle security space issues. This differentiation may have made sense during the Cold War when there were very distinct usages of satellites, but given how much the line has blurred today on satellites which are intended for national security purposes and those intended for other uses, it seems an outmoded way to look at the world. However, there are some who never have been comfortable with the CoC being a non-legally binding document and may use this issue as a back-door to attempt to

force efforts to work on a legal treaty on this aspect of space sustainability – the security elements of space – even though such efforts would almost inevitably fail.

- COPUOS LTS efforts had a dispute about what should be included for long-term sustainability guidelines. Would it be best practices for space activities that currently exist or should they include upcoming activities that could potentially affect the long-term sustainability of outer space, like active debris removal or rendezvous and proximity operations? There has also been discussion about whether a best practice is a goal to be achieved or a preferred way of accomplishing a goal. In the end, the decision was made to go with best practices that have evolved over years of activities, so upcoming activities are not necessarily going to be covered. However, LTS efforts do provide a base for understanding of what goals are for space sustainability and have laid the groundwork for future discussions about best practices as they evolve

- Most space actors still have little to no information about what's actually going on in space including both environmental threats (space weather, debris) and potentially hostile activities
- Space faring countries have diverging views on the best forum and the best process to tackle these challenges, which adds to the challenges of reaching consensus. For example, for the emerging nations, the UN may be viewed as THE one and only forum to address these issues and that solutions should be pursued via binding treaties. Efforts to pursue other kinds of strategies -- even while still engaging in the treaty discussion -- are sometimes viewed as a way to undermine the process.
- These agreements are being negotiated at the state level. While these are not officially treaties, and very deliberately not designed to be one, selected experts are being used to ensure that the current discussions represent a wide variety of viewpoints. This does give some momentum to the discussions, as they are being pounded out at the state level, and thus gains whatever prestige a top-down type of agreement can garner internationally. This is particularly helpful, given that the end products are not a legally-binding treaty and their success depends on a widespread acceptance of their content among all actors in space.

- Being negotiated at the state level can also be a weakness. This is not a fatal flaw, but something to keep in mind. It is being discussed at the state level, partially because this is how the international system is set up to deal with issues like space that cross national borders, and partially to reflect that many new actors to space will do so via national programs. However, space has changed since the days of the Cold War when practically the only actors were nation-states. Commercial entities play an increasingly important role in the security and stability of the space domain and in establishing norms of behavior. Yet they are not officially represented in the CoC discussions. Many countries are striving to incorporate their input in their national representation, but this is not guaranteed. It is also is a residual effect from how the existing space treaties determine responsibility for space assets: at the national level. In the end, states are responsible for actors within their territories. Article VI of the 1967 Outer Space Treaty spells it out fairly succinctly: "States Parties to the Treaty shall bear international responsibility for national activities in outer space, including the moon and other celestial bodies, whether such activities are carried on by governmental agencies or by non-governmental entities, and for assuring that national activities are carried out in conformity with the provisions set forth in the present Treaty."[iii] As well, it is possible that were commercial entities to be included in these discussions, countries without large commercial space sectors might perceive this a way of weighting the discussions toward the more dominant space powers. But it is something to keep in mind when determining what the best practices are for a responsible space actor. The commercial sector has much value that it can add to these discussions.
- Domestic politics can affect the implementation of these agreements
    - Compliance with these agreements often relies upon self-reporting or naming and shaming
    - There is a tradeoff between having extremely strong monitoring mechanisms which may affect the willingness of countries to sign onto the agreement and having more voluntary mechanisms that are not as clear or strongly written but increase the interest of countries to become part of the agreement
- Question about how these international agreements should interface with other international initiatives or bodies also working on space sustainability

- Most of these have overlapping interests, so this should not be difficult, but occasionally there is a sense of competition between various options or ownership of one version versus another, resulting in a quid pro quo negotiations on which version to support
- Still, agreements' success depends on how well they fit into the overarching political environment and existing regimes and institutions

- In the end, these international agreements are just that – a set of agreed-upon behaviors. It does no good if a document is generated that is promptly ignored. What is going to determine their legacy is how well its norms are carried out over the long term. Hence, it is important to use this process as a way in which to build consensus on those rules of the road that are most crucial to allow for the continued access of and use of space, so that all may continue to benefit from it.

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[i] *Draft International Code of Conduct for Outer Space Activities*, Version 16 September 2013, p. 3

[ii] *Draft International Code of Conduct for Outer Space Activities*, Version 16 September 2013, p. 6

[iii] *Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies*, http://www.unoosa.org/oosa/en/SpaceLaw/gares/html/gares_21_2222.html