Outcome statement

Operating in space: current multilateral policy issues and challenges

Tuesday 14 – Wednesday 15 January 2020 | WP1758

Held in Singapore

In association with the Australian Government, New Zealand Ministry of Foreign Affairs and Trade and Secure World Foundation

Participants representing 18 states across the Indo-Pacific region (Australia, Cambodia, China, India, Indonesia, Japan, Laos, Malaysia, Myanmar, New Zealand, Pakistan, Philippines, Republic of Korea, Singapore, Thailand, United Kingdom, United States, Vietnam) met in Singapore to discuss the growing importance of measures such as norms of responsible behaviour and other confidence building measures in order to maintain outer space as a safe, secure and sustainable environment.

Participants acknowledged that all states were increasingly reliant upon space systems for their prosperity and security, and highlighted the urgent need to intensify the dialogue on responsible space behaviours, including appropriate protocols on communication as a key contribution to risk management.

Participants acknowledged the democratisation and commercialisation of outer space (while uneven) and the development of new technologies, had stimulated a wave of new opportunities. However, this was also causing new challenges for governments and private operators. In particular, this included growth in real and perceived threats to the operation of space systems in the outer space environment, such as increased congestion in orbit, space debris, proximity operations and counterspace capabilities. These threats were amplified by the dual-use nature of a growing number of space assets, which meant it was difficult for operators to determine the intent of certain behaviours. This increase in real and perceived threats in outer space would contribute to a higher risk of miscalculation by operators.

The nature of the current threat environment was illustrated by a presentation demonstrating real examples of satellite behaviour in orbit using animations produced by commercial space situational awareness (SSA) technology. This included some examples, such as proximity manoeuvres, that participants noted could raise concerns in the absence of communication between operators.

Organised in partnership with:

The presentation highlighted that SSA technology could provide operators with an impressive degree of fidelity. However, absent clear communication between operators, or established norms of behaviour, even clear information was insufficient to determine the intent of a space operator. That was key to determining whether there was a potential threat to a space object.

A further presentation identified that the outer space environment was subject to both peacetime and strategic-competition related risks. In mitigating these risks, the *2013 Report of the Group of Government Experts on Transparency and Confidence Building Measures*[1] remained a useful starting point, although it was important that the international community take further action. In discussion that followed, there was strong support voiced by the majority of participants for the need to develop internationally agreed responsible space behaviours and other confidence building measures for outer space in order to reduce further the impact of some of these emerging risks. Such measures represented the most pragmatic and practical option available. Some participants expressed the view that the development of norms or rules of responsible space behaviours could be complemented by the development of legally binding commitments, although some other participants were sceptical about the practical feasibility of such an approach in the medium term.

Many participants pointed to the Long-Term Sustainability Guidelines, adopted by consensus at United Nations General Assembly in November 2019, as an important foundation that the international community should continue to build upon. A number of participants noted that it would be important, in taking this work forward, to retain a distinction between the development of normative frameworks relating to the peaceful uses of outer space, and those relating to space security.

Within the context of developing responsible space behaviours, participants focussed upon the importance of communication by and between operators in order to reduce risk of miscalculation. There was strong support for improving transparency and communication relating to space activities from and between states and operators, whether they were government or civilian actors. Participants noted that behaviours such as providing pre-notification for launch activities, close encounters and proximity operations, exchanging orbital data, and maintaining open lines of communication between operators should be explored further as options to reduce the risks to space systems.

Participants identified a number of possible mechanisms through which communication could be effected. At the state level, this included multilateral, regional and bilateral approaches. Some participants suggested that communications systems and protocols used in other domains, such as in civil aviation and international maritime activities, could provide useful insights.

Participants noted that there were multilateral mechanisms and procedures already in place that facilitated a degree of communication, such as the Hague Code of Conduct, the UN OOSA registration system, and the SpaceTrack database, which should be leveraged or expanded upon where it was appropriate to do so. However, there was general agreement that the existing mechanisms and procedures had limitations and were not adequate for the scale and nature of space activities.

---

[1] Report of the Group of Governmental Experts on Transparency and Confidence-Building Measures in Outer Space Activities (2013), UN Doc 68/189.

Some participants expressed a view that new platforms or mechanisms to facilitate or enable improved communication between operators were necessary. To that end, some participants expressed the view that a comprehensive, universal point of contact database for space systems operators should established and maintained. Other participants suggested an international framework for the sharing of data, or a universal space situational awareness database.

Participants expressed the view that states should continue to lead the development of a normative framework, but acknowledged the importance of the space industry, which would likely develop best practice behaviours and norms independent of states.

Some participants suggested that proposals aimed at addressing some of these challenges should take into account the varying capabilities and access to technology between states, and in particular the interests of developing countries. In this context, consideration should be given to appropriate capacity building for less technologically advanced states, including on communication.

On reflection, after the event, the organisers felt that the conference would have benefitted from more work and discussion on the threats to space systems. In addition, the future process on how to define the responsible space behaviours needed to be clearer. They would take these away as action points.