Statement by Mr. Kevin Conole, United States
Agenda Item 7, "Space Debris"
February 9, 2023

Thank you, Chair. The year 2022 set another historic record for new space activities. A total of 179 successful launches deployed more than 2,300 spacecraft into Earth orbits and increased the number of operational spacecraft in the near-Earth space environment to more than 7000. We also observed four on-orbit fragmentation events in 2022, including a major breakup of an upper stage that generated more than 500 large trackable debris and hundreds of thousands of debris too small to be tracked but large enough to threaten human spaceflight and robotic missions as they decay through low-Earth orbit. Such fragmentation events and the rapid increase of space activities in recent years further underline the urgency and importance of managing risks from orbital debris for the safe, stable, and sustainable space activities in the near-Earth space environment.

The four guiding principles of orbital debris migration are: (1) to control the release of mission-related debris; (2) minimize accidental explosions; (3) reduce the probability of accidental collisions; and (4) conduct timely post-mission disposal. These principles are proven, effective means to limit the generation of new, long-lived debris. Orbital debris mitigation best practices based on these guiding principles have been developed by organizations such as the Inter-Agency Space Debris Coordination Committee (IADC) and this Subcommittee, which established the UNCOPUOS Space Debris Mitigation Guidelines in 2007. Together with the 21 Guidelines of the Long-Term Sustainability of Outer Space Activities, they play a central and critical role in the global battle against orbital debris. Unfortunately, not all global satellite operators have followed these guidelines and best practices at a satisfactory level. On-orbit fragmentations persist. Spent upper stages and retired spacecraft are left at altitudes with very long orbital lifetimes in low Earth orbit. High risk uncontrolled reentries continue to occur. These are just some examples. We call on all space-faring nations, emerging space nations, international organizations, and non-governmental organizations to implement these guidelines and best practices to slow down the orbital debris population increase and to mitigate risks from orbital debris.

Chair, the United States acknowledges the contributions on orbital debris mitigation from the IADC, the technical authority on orbital debris recognized by

the international community. The thirteen member space agencies of the IADC continue to explore improvements to its very specific, quantitative, and measurable space debris mitigation guidelines, such as investigating new post-mission disposal options for structures operating in the Global Navigation Satellite Systems region and evaluating new measures to better understand and mitigate risks from orbital debris. As a founding member of the IADC, NASA, on behalf of the United States, has actively participated in all major IADC activities in the past, and we are committed to continuing our contributions to the IADC in the future.

Chair, to better characterize risks from orbital debris, the United States continues to improve its object tracking and characterization capabilities and shares the data and mission assessment tools with the global community. To illustrate, the Department of Defense's Space Surveillance Network, with the relatively recent addition of the Space Fence, is detecting and tracking nanosatellites and debris measuring less than 10 centimeters -- sometimes capturing debris the size of a marble -- which were previously untracked. The tracking data and other improved services such as collision warning information, are shared with the global community via the space-track website. NASA, using additional ground-based radars and telescopes, continues to characterize debris below the tracking limit and update orbital debris impact risk assessment tools.

Shortly after the Russian anti-satellite test that destroyed Cosmos 1408 in November 2021, NASA led efforts to collect timely radar measurement data on the ASAT fragments. NASA then used the measurement data to update the orbital debris environment model and released the new model in March 2022, less than five months after the Russian ASAT test, to help global operators better assess risks from the new orbital debris environment.

Additionally, the United States has increased its attention to the remediation of debris. The United States will work with commercial and international partners to pursue active debris removal as a necessary long-term approach to ensure the safety of flight operations in key orbital regimes. International efforts on active debris removal should not detract from continuing to advance international cooperation on space debris mitigation. This work has been highlighted in four White House strategies and action plans: the 2021 National Orbital Debris R&D Strategy, the 2022 National Orbital Debris Implementation Plan, and the 2022 In-Space Servicing, Assembly, and Manufacturing National Strategy and

Implementation Plan. In support of these policies, the United States is beginning to fund development of some concepts to remove space debris, performing economic and social research related to the value of remediation, and identifying the most cost-efficient approaches to remediate the risks posed by orbital debris.

These are just a few examples of our contributions to the space community in 2022. The United States will continue to monitor the ever-changing orbital debris environment with improved measurement capabilities and share updated orbital debris risk assessment tools to help operators better protect their missions from orbital debris.

Thank you, Chair.