



Trash in the Skies II: Industry Perspectives on Dealing with Space Debris

Monday, July 10,, 2017

Rayburn House Office Building, Room 2325

Speaker Biographies

Mr. Jonathan Goff, President and CEO, Altius Space Machines

Jonathan is an entrepreneur, inventor, and space technologist, with a track record in envisioning the future and working to make it reality. Previously, as a co-founder of Masten Space Systems, Jonathan participated in building that company into one of the leading competitors in the suborbital RLV industry, and as their Lead Propulsion Engineer, he played an important role in Masten's victory in the Northrop Grumman Lunar Lander Challenge. Jonathan left Masten in 2010 to found Altius Space Machines, and has since led Altius's business operations, business development, fundraising, and technology research and development efforts. Jonathan was one of the lead inventors on Altius's patented Sticky Boom™ technology, and has also been one of the main technical architects behind Altius's spacecraft capture, satellite servicing, and on-orbit refueling technologies.

In addition to his work as a space entrepreneur at Masten and Altius, Jonathan is a published space technologist, with papers on space technology development, orbital propellant depots, and space architectures, as well as being proprietor of the Selenian Boondocks space technology and policy blog. Jon's educational background includes a BS in Manufacturing Engineering (1999) and a MS in Mechanical Engineering (2007), both from Brigham Young University in Provo, UT.

Ms. Lauri Newman, Conjunction Assessment Manager, NASA

Ms. Newman manages the NASA Conjunction Assessment Risk Analysis (CARA) effort, which provides safety of flight services for NASA's unmanned missions. She is also the Agency point of contact for Space Situational Awareness (SSA) for unmanned missions, serving on the Agency's Space asset Protection Working Group. Previously, Ms. Newman spent 15 years as a Flight Dynamics Engineer, designing orbits and managing Flight Dynamics ground systems for a diverse set of spacecraft. She holds Master and Bachelor of Science degrees in Aerospace Engineering from the University of Maryland, College Park.

Dr. Tim Maclay, Director of Mission Systems Engineering, OneWeb

OneWeb is a company preparing to bridge the digital divide with affordable internet access by creating the world's largest, satellite-based communications network. In this role, he leads a team focused on the network's space system architecture and provides technical and policy support to OneWeb's regulatory activities.

With 30 years of experience in orbital debris research, operations, and policy, Dr. Maclay has chaired conferences on debris; has served on the board of the Hypervelocity Impact Society; and has been a member of orbital debris technical committees for the National Research Council, NASA's Engineering Safety Center, the AIAA, and the IAA.

Prior to OneWeb, Dr. Maclay was the VP of Systems Engineering at Orbcomm, where he spent nearly twenty years in various leadership roles in constellation design and operations. His tenure there spanned two generations of their low-Earth-orbit satellite constellation, including nine launch campaigns and the development, launch, and operation of 60 satellites. He began his career with Kaman Sciences working in the area of space safety research after earning MS and PhD degrees in Aerospace Engineering Sciences from the University of Colorado in the fields of astrodynamics, debris environment modeling, and hypervelocity impact physics.

Dr. James Vedda, Senior Policy Analyst, Center for Space Policy and Strategy, the Aerospace Corporation

Dr. Vedda, had been the Senior Policy Analyst at the Aerospace Corporation's Center for Space Policy & Strategy since 2004, performs research and analysis of civil, commercial, and national security space issues for a variety of customers. Previously, he spent six and a half years assigned to the Office of the Secretary of Defense working on space policy and homeland defense issues. Before that, he was an associate professor in the Department of Space Studies at the University of North Dakota, where he taught graduate courses on civil, commercial, and military space policy.

He has a Ph.D. in political science from the University of Florida and a master's degree in science and technology policy from George Washington University. His many publications include two books: *Becoming Spacefarers: Rescuing America's Space Program* (June 2012) and *Choice, Not Fate: Shaping a Sustainable Future in the Space Age* (December 2009).

Mr. Mike Vinter, Executive Vice President, AON Risk Solutions

Michael Vinter is an Executive Vice President of International Space Brokers, a division of Aon Risk Services. Mike has spent the last twenty years dedicated exclusively to the space industry. His duties include the design and placement of insurance programs for a wide variety of space sector clients. In this role, Mike has worked with many of the leading satellite operators, manufacturers and launch vehicle providers to deliver innovative risk management and insurance solutions.

Mike received his B.S. in Business Management from Virginia Tech and has also earned the Chartered Property Casualty Underwriter (CPCU) and Associate in Risk Management (ARM) designations from the Insurance Institute of America.

About Aon

Aon plc (NYSE:AON) is a leading global professional services firm providing a broad range of risk, retirement and health solutions. Our 50,000 colleagues in 120 countries empower results for clients by using proprietary data and analytics to deliver insights that reduce volatility and improve performance.

Moderator: **Dr. Brian Weeden**, Director of Program Planning, Secure World Foundation

Dr. Weeden is the Director of Program Planning for Secure World Foundation and has 17 years of professional experience in space operations and policy.

Dr. Weeden directs strategic planning for future-year projects to meet the Foundation's goals and objectives, and conducts research on space debris, global space situational awareness, space traffic management, protection of space assets, and space governance. Dr. Weeden also organizes national and international workshops to increase awareness of and facilitate dialogue on space security, stability, and sustainability topics. He is a member and former Chair of the World Economic Forum's Global Agenda Council on Space, and is also a member of the Advisory Committee on Commercial Remote Sensing (ACCRES) to the National Oceanic and Atmospheric Administration (NOAA).

Prior to joining SWF, Dr. Weeden served nine years on active duty as an officer in the United States Air Force working in space and intercontinental ballistic missile (ICBM) operations. As part of U.S. Strategic Command's Joint Space Operations Center (JSpOC), Dr. Weeden directed the orbital analyst training program and developed tactics, techniques and procedures for improving space situational awareness.

