

IAF SYMPOSIUM ON SECURITY, STABILITY AND SUSTAINABILITY OF SPACE ACTIVITIES
(E9)Policy, Legal, Institutional, Economic and Security Aspects of Debris Mitigation, Debris Remediation and
STM (1-A6.8)Author: Dr. Mariel Borowitz
United StatesMs. Cristina Pérez Hernández
Spanish Space Agency, Spain
Ms. Aurelie Gillet

Centre National d'Etudes Spatiales (CNES), France

Ms. Morgane Jouis

Centre National d'Etudes Spatiales (CNES), France

Mr. Pascal Faucher

CNES, France

ADVANCING CONCEPTS FOR GLOBAL COORDINATION ON SSA

Abstract

The European Union Space Surveillance and Tracking Partnership (EU SST) and the United States Traffic Coordination System for Space (TraCSS) have both recognized the importance of coordination among independent national and regional SSA providers in order to minimize the provision of conflicting information to operators and support spaceflight safety and sustainability. The present study will seek to advance concepts for global coordination in the domain of Space Situational Awareness, taking coordination between TraCSS and EU SST as a case study. Given the sensitive nature of SSA information, the study will first define the type of information that may be shared between the two systems, with the objective to ensure global coordination and improve space safety and sustainability. In a second step, the study will identify scenarios for which information sharing is necessary. This requires the performance of a technical comparison of a few selected services provided both by TraCSS and EU SST. In particular, a comparison of the processes behind those services in each system will be performed to explain the differences in outcomes and understand when and how both systems can best coordinate in view of those differences. This comparative analysis will inform the identification of scenarios under which TraCSS and EU SST should interface to discuss a conjunction event. The third step of the study will consist in analyzing how, practically-speaking, interoperability and compatibility of TraCSS and EU SST can be ensured to ease information sharing across the two systems. In a last step, the paper will provide insights regarding how to involve the other governmental actors as well as the private sector in global SSA coordination. The results of this study will provide guidance for future coordination between EU SST and TraCSS, and potentially for coordination with the existing and developing SSA systems in the different regions of the world, as well as with commercial SSA providers.