

IISL COLLOQUIUM ON THE LAW OF OUTER SPACE (E7)
A new look at (how far are we with) Space Traffic Management (3)

Author: Mr. Marc Becker
DLR (German Aerospace Center), Germany, marc.becker@dlr.de

Mr. Pascal Faucher
CNES, France, pascal.faucher@cnes.fr

Ms. Maria Antonia Ramos Prada
Centre for the Development of Industrial Technology (CDTI), Spain, mariaantonia.ramos@cdti.es

EUROPEAN UNION SPACE SURVEILLANCE AND TRACKING (EU SST) – STATE OF PLAY AND
PERSPECTIVES IN THE CONTEXT OF SPACE TRAFFIC COORDINATION AND MANAGEMENT

Abstract

EU Space Surveillance and Tracking (EU SST) is the European Union's operational capability for safeguarding space infrastructure and contributing to global burden-sharing in the domain of Space Situational Awareness (SSA). Implemented by a consortium of seven EU member states in cooperation with the EU Satellite Centre, EU SST serves 100 user organizations with free services, including Collision Avoidance for more than 210 satellites, Fragmentation Analysis, and Re-entry Analysis services.

EU SST operates a growing sensor network that relies on contributions from both civilian and military stakeholders and currently comprises 50 assets for surveillance and tracking, including radars, telescopes, and laser ranging stations. The sensors remain under the authority of the member states, reflecting the dual dimension of the SSA domain. In a unique multilateral approach to SSA data sharing, measurements and orbit data from the contributing sensors are shared through a dedicated platform, the EU SST Database, and will be used to populate a forthcoming European Catalogue of space objects.

Under the upcoming EU Space Programme, EU SST will mature into a fully-fledged programme component while maintaining its particular governance model, which allows to address and preserve the sovereign security interests of the participating member states within a civilian framework. In view of the contemporary debate on Space Traffic Management, EU SST is also exploring additional services and synergies to improve the coordination of space traffic in Europe and beyond.

This paper reports on recent and emerging developments in the implementation of EU SST. It highlights the unique multilateral collaboration between civilian, military and security actors, the model and policy for data sharing, and EU SST's operational contribution to ensuring the safety and sustainability of operations in the orbital environment.