

# IAF Committee Briefs

November 2021

## IAF TECHNICAL COMMITTEE ON SPACE TRAFFIC MANAGEMENT (STM)

### 1. Introduction

The IAF Technical Committee on Space Traffic Management aims at providing a contribution to the joint Reference Paper prepared together with IISL and IAA, following the MOU signed between the three organizations in Bremen in 2018, with the objective to “develop comprehensive approaches and proposals for STM to be addressed to decision-makers on national and international level”.

### 2. Summary

The work of the Committee has been initially subdivided into 29 thematic Working Groups. The first phase of the work, led in 2021, focused on the first 9 subjects; the second phase, started in Dubai in October 2021, added 5 subjects. One additional one has been merged with existing one, 4 have been postponed probably to end of 2022, and 4 are not yet started, but could turn out to be merged with ongoing topics.

The following table describes the Working Groups currently ongoing.

	1st Phase	2nd Phase	Merged	Postponed	Not yet started
1.	Terminology - Common understanding and Definitions				
2.1	Improving the knowledge - New technical means of space objects monitoring				
2.2	Improving the knowledge - Improve trackability and identification of small objects				
2.3	Improving the knowledge - Data fusion - Merging of information - Shared catalog				
2.4	Improving the knowledge - Improvement of orbital data precision and accuracy				
2.5	Improving the knowledge - Improvement of the UN registration				
2-6	Improving the knowledge - Shared Catalog (merged with 2-3)				
2.7	Improving the knowledge - Hazards associated with reentry				
3.1	Space capacity management				
3.2	Management of RF interferences				
3.3	Improvement of the collision avoidance process				
3.4.1	Future operations - Spacetrugs, IOS, IOM, IOR				
3.4.2	Future operations - Large constellations				
3.4.3	Future operations - Sub-orbital activities				
3.4.4	Future operations - Ground support activities such as spaceports				
3.4.5	Future operations - Transits through airspace				
3.4.6	Future operations - Impact of constellations on Astronomical observations				
3.5	Future operations - Preparation of future activities				
3.6	Future operations - Traffic from orbit to Moon (and Mars)				
4.1	Technical regulations - Current references				
4.2	Technical regulations - New activities				
4.3	Technical regulations - Effective compliance to Technical Regulations				
5	Outreach				

The aim of each Working Group is to provide a 10 pages report + Annexes + 1 page Executive Summary. The collection of all these inputs, merged by the coordinators, completed by a couple of pages introduction, will constitute the Final Report, expected for IAC 2022 in Paris.

The work of TC26 is structured following the dedicated web zone on the IAF web site <https://iafastro.directory/iac/folder/tc/spacetraffic/#file.5090>

### 3. Highlights

The Technical Committee currently regroups 134 Members, Friends, Experts, coming from 24 different countries, following very well the 3G motto from IAF, Gender, Generation, Geography.

Each Working Group followed its own agenda, meeting regularly to prepare their draft Final Report for IAC 2021. The 9 initial Working Groups have globally been very efficient and in line with the objective planning. A general review of the progress has been done on Oct. 24<sup>th</sup> in Dubai, followed by a Special Session on Oct. 26<sup>th</sup>, recalling the general frame of the effort, presenting the progress of each Working Groups and recalling the perspectives for the following periods. This progress can be seen on the dedicated page set in place by IAF secretariat: [Space Traffic Management Committee \(iafastro.org\)](https://iafastro.org/space-traffic-management-committee)

### 4. Future Outlook

As explained, 5 new Working Groups have been kicked-off in Dubai, involving 54 members, each WG being co-chaired by 2 coordinators. We currently witness the setting in place of these groups, the first meetings, and can be very optimistic on the progress that should take place in the coming 6 months. We expect all the draft Reports by May 2022, followed by general merging and polishing of the complete file, cross-read, comments,

amendments... and final issue by September 2022 under a form which is still TBD (White Paper; Special Publication...).

One point nevertheless remains open and source of worry: the progress made by the “parallel” entities involved in the MOU (IAA and IISL) is unknown, and we hope their contributions will arrive in due time for the finalization of the common report.

## **5. Committee activities**

The IAF TC26 Coordinators, Darren Mc Knight and Christophe Bonnal, the TC Secretary Serge Platard, and the IAA-IISL Liaison Officer Didier Alary wish to warmly thank the IAF secretariat for the wonderful job done in assisting our Technical Committee; thanks to this support, we are very confident in the success of the initiative.