

IAF SPACE TRAFFIC MANAGEMENT COMMITTEE

1. Introduction/Summary

The IAF TC.26 was founded in the frame of a general MOU between IAA-IISL and IAF, signed during the Bremen IAC in 2018, aiming at developing comprehensive recommendations for behaviours and proposals for STM to be addressed to decision-makers at national and international level.

To that extent, IAF has set in place a dedicated Technical Committee aimed at preparing the IAF contribution to this joint work.

The following organization is fully available on the dedicated TC 26 page on the IAF website.

2. Latest Developments

As of today, the TC welcomes some 105 active members and 68 observers who are just in copy of the main findings. The active membership follows as much as practical the IAF 3G motto (Generation, with numerous members coming from Space Generation, Gender, Geography with 22 different countries).

Some 21 topics have been identified, out of which 9 were selected for the initial activities.

- 1 Terminology - Common understanding and Definitions
- 2.1 Improving the knowledge - New technical means of space objects monitoring
- 2.4 Improving the knowledge - Improvement of orbital data precision and accuracy
- 2.7 Improving the knowledge - Hazards associated with reentry
- 3.3 Improvement of the collision avoidance process
- 3.4.1 Future operations - Space tugs, IOS, IOM, IOR
- 3.4.6 Future operations - Impact of constellations on Astronomical observations

- 4.2 Technical regulations - New activities
- 4.3 Technical regulations - Effective compliance to Technical Regulations

Each topic is organized as a dedicated Working Group with some 8 to 12 members, expert in the domain. The goal for each Working Group is to produce a 10 pages' report (plus a 1-page executive summary, and potential appendixes) describing the current status of their topic, the identified missing points, and associated proposals. Each Working Group has its own agenda with frequent Progress Meetings, typically 1 hour every 2 weeks, with participation varying between 50 and 75% of the members. The YC26 Coordinators invited themselves to several such meetings and can testify that they are in general well managed, interesting, and providing significant progress.

The first complete draft of the 9 Working Groups is expected by June 15th, 2021. Nevertheless, it can be noted that some 3 or 4 Working Groups have already finished their assignments.

3. Breakthroughs

It is still a bit too early to talk about breakthroughs, as the outcomes of the Working Groups have not yet been analyzed.

4. Action plan for the year

Once all the inputs will be available from the Working Groups, the coordinators of the TC will concatenate them and arrange the global report in order to avoid duplications and harmonize the general content and layout. Then, they will go back to the Working Groups, probably through a virtual assembly of their chairs, to polish and finalize the document.

This Final Draft devoted to the first 9 topics should be available by IAC 2021 in Dubai.

It will be presented in a Special Session taking place on Wednesday morning and be part of a GNF together with IAA and IISL. Some specific topics are also identified as technical papers in ad-hoc sessions, such as the impact of large constellations.

In parallel, we hold frequent status points with IAA and IISL to try to converge on a joint final document, but so far it still remains very fuzzy as the general perception of the topic is not completely shared among the 3 organizations.

We will also start, beginning of June 2021, the identification of the following topics to be worked at and set in place the new corresponding Working Groups. The

first one appears to be 3.1 Space Capacity Management. This second set of topics should run in the second half of 2021 and would probably converge into a finalized draft by the IAF Spring Meetings in 2022.

Last the Final document, produced by IAA-IAF-IISL, should be ready in its finalized, approved, version, ready for dissemination, by IAC 2022 in Paris.

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