**Follow up to the European Parliament non-legislative resolution on an EU approach for Space Traffic Management - an EU contribution addressing a global challenge**

1. **Resolution tabled pursuant to Rule** 136(5) **of the European Parliament's Rules of procedure**
2. **Reference numbers:** 2022/2641 (RSP) / B9-0432/2022 / P9\_TA(2022)0355
3. **Date of adoption of the resolution:** 6 October 2022
4. **Competent Parliamentary Committee:** Committee on Industry, Research and Energy (ITRE)
5. **Brief analysis/ assessment of the resolution and requests made in it:**

Overall, the resolution of the European Parliament supports the Joint Communication of the Commission and the High Representative on ‘An EU Approach for Space Traffic Management – An EU contribution addressing a global challenge’ (hereafter the Joint Communication), adopted on 15 February 2022. It encourages the Commission to adopt measures aiming to ensure a safe and sustainable space environment.

Given the increasing risks linked to space debris and collision, it stresses the need to continue investing in the improvement of Space Surveillance and Tracking (SST) capabilities. It equally calls for increasing data collection, applying new technologies, and boosting research and innovation in Space Traffic Management (STM).

In addition, the European Parliament calls on the Commission to work on a regulatory framework for space activities paving the way to legislation on STM before 2024. It stresses the need to develop a set of rules, standards, technical specifications and guidelines at the EU level. To establish a similar approach at international level, it suggests that the Commission promotes a common definition of STM and steps up political and diplomatic efforts with international partners, including the United Nations (UN).

Paragraphs 9, 10 and 14 relate to activities that the Joint Communication assigns both to the Commission and to the High Representative.

1. **Response to the requests in the resolution and overview of the action taken, or intended to be taken, by the Commission:**

The Commission welcomes the resolution and looks forward to continuing the dialogue with the European Parliament. It is timely and echoes the initiative of the other co-legislator, which adopted Council Conclusions on STM in June 2022[[1]](#footnote-1).

The Commission shares the view of the European Parliament that the EU is well positioned to act, being able to identify needs, aggregate requirements, synthesise stakeholders’ views, leverage technology and coordinate external engagement. The EU approach on STM, as laid out in the Joint Communication, will build on four avenues: assessing the STM civilian and military requirements and impacts of STM for the EU; strengthening the EU’s operational and technological capability to detect and track spacecraft and space debris; setting out an appropriate normative and legislative framework; and establishing international partnerships on STM and engaging at a multilateral level.

**As regards the need to address automated collision avoidance and the use of new technologies** (paragraphs 3 and 4), the Commission points out that it is already supporting collision avoidance through the activities of the EU SST Consortium composed of seven Member States set out by Decision No 541/2014/EU of the European Parliament and of the Council of 16 April 2014 establishing a Framework for Space Surveillance and Tracking Support. Operational services are provided to more than 300 European Satellites. Currently, these services are composed of collision avoidance, which supports spacecraft operators in managing conjunctions of their satellites during routine and special operations, and the analysis of uncontrolled re-entry and fragmentation of space debris.

The Commission shares the opinion of the European Parliament that the development of automatic collision avoidance services and the use of artificial intelligence and quantum technology should be accelerated to cope with the increased number of space objects and EU SST users. The surge of operators in general calls for a decrease of the false alarm rate (number of false collision warnings) to focus on the most problematic conjunctions.

The Commission agrees with the European Parliament that the development of new technologies and sensors has to make the best use of civilian and defence synergies. The capability to observe space objects efficiently is related directly to the geographical positioning of the assets (radars, telescopes and lasers). To date, EU assets are mostly located in continental Europe. To the extent possible, coverage of the sky should be enhanced with EU-controlled assets located outside the European continent.

In this context, the Commission would like to recall that the EU SST Consortium will soon be replaced by the EU SST Partnership in accordance with Regulation (EU) 2021/696 establishing the Union Space Programme (‘Space Regulation’). This new Partnership will include more Member States and will provide additional services for European and international users. The Space Regulation allows for the SST Partnership to act in the field of mitigation and remediation[[2]](#footnote-2). As a result, specific activities will be developed in this field at operational and research level.

**As regards the promotion of an internationally recognised definition of STM** (paragraph 6), the Commission concurs with the European Parliament that such a definition is needed to ensure a common understanding of all parameters.

Various definitions have been proposed in several political, academic and international forums. At the same time, the complexity for defining STM has increased with new concepts emerging. Based on an exhaustive study of definitions and approaches and to progress at EU level, the Joint Communication defines STM as the means and rules to access, conduct activities in, and return from outer space safely, sustainably and securely.

According to the Joint Communication, STM relates to the following elements: Space Situational Awareness (SSA) activities, including Space Surveillance and Tracking (SST); orbital debris mitigation and remediation; management of space orbits and radio spectrum; the entire life cycle of space operations including launch phase, in-orbit operations of spacecraft, and end-of-life de-orbit operations; and re-entry phase of spacecraft into the airspace (both controlled and uncontrolled).

The Commission considers that **the development of a common set of rules and standards at EU level** (paragraph 7) would have a tangible effect on the shaping of the future global STM system.

In this vein, the Commission and the High Representative depending on the EU competences involved and in close collaboration with the Member States will by end of 2023 establish an EU forum to ensure effective information and coordination on standards and guidelines developed at the international level. The forum, with the support of the EU SST Partnership, EU industry and the European Space Agency (ESA), will also contribute to the development of new European and international standards and promote selected standards and guidelines at the EU level.

The Commission also intends to develop a toolbox based on identified STM standards and guidelines, which could help Member States when they grant licences requested by satellite operators for the provision of services over their territory. The objective is to ensure that risks related to space traffic are identified and mitigated. The approach would be similar to the EU toolbox for 5G security[[3]](#footnote-3).

The Commission in close collaboration with Member States also intends to identify possible incentive measures and a certification mechanism towards the implementation of STM standards and guidelines.

**Concerning the consideration of civil and defence/ security needs** (paragraph 9), the Commission and the High Representative, within their respective competences, will set up a process of consultation and discussion with all relevant EU stakeholders to assess the needs and impact of STM on the various policy areas of the EU, The findings will be aggregated by early 2023 to formulate the civilian and military requirements for an EU STM approach. A regular dialogue on STM-related developments covering both civilian and military needs will be maintained. The European Defence Agency (EDA) will act as interface to Member States to identify military requirements.

Furthermore, the Commission reiterates its commitment to enhance the Union SST services for collision avoidance, re-entry and fragmentation analyses and to develop the EU SST database, as the European Parliament resolution suggests (paragraphs 11 and 12). The EU industry’s potential needs to be exploited building on the public services delivered by EU SST. This should also include New Space, which mostly consists of start-ups and small and medium-sized enterprises (SMEs) that develop novel space technologies and applications. SST Data could constitute a real opportunity for EU industry. The Space Regulation foresees the development of an EU SST catalogue by end of 2024 using EU SST sensors. This catalogue will be based on the work performed in recent years by a new EU SST data-sharing platform (EU SST database), parts of which will be made accessible to industry by 2023.

**Regarding investment in research and the use of funding opportunities** (paragraph 13), the Commission also agrees with the European Parliament that the EU should make the best use of the EU’s capabilities and innovation in the field of SST. This should take the form of actions initiated by the EU SST Partnership to benefit from the EU industry’s innovation potential. Specific measures could include, for example, regular Industry Days where companies have the opportunity to present new technologies and innovations, or within the framework of the CASSINI initiative can participate in dedicated hackathons for SMEs and start-ups, calls, grants, prize, etc. These measures, while stimulating innovation, will feed the EU SST Partnership with the latest technological developments. The Commission will initiate specific actions in the framework of CASSINI to reap the full innovation potential of start-ups.

Moreover, the Commission welcomes the suggestion of the European Parliament to mobilise available funding opportunities at Commission and Member States level, including synergy of Union programmes co-funding of EU and national funds.

Moreover, the Commission welcomes the suggestion of the European Parliament to mobilise available funding opportunities at EU and Member States level, including synergy funding or blending of EU and national funds.

The budget currently allocated by the Space Regulation to SST will be implemented in synergy with the budget under cluster 4 ‘Digital, Industry and Space’ of Horizon Europe. Activities developed by the EU SST Consortium also require Member States to co-finance capital expenditure.

In addition, the activities related to SSA under other programmes and initiatives of the EU (e.g. European Defence Fund, CASSINI) will be monitored to ensure complementary financing of activities related to SST capabilities.

**The Commission and the High Representative agree that the EU approach on STM should favour a multilateral STM approach in the framework of the UN, as the Parliament suggest under paragraphs 10, 14 and 15 of the resolution**. As part of the EU STM approach, the EU will seek to foster the discussion on STM in the relevant UN forums in particular the Committee on the Peaceful Use of Outer Space (COPUOS), but also in the Conference of Disarmament with the objective to table a discussion at the UN General Assembly. The EU will identify and engage with the relevant UN bodies, which could support or contribute to such activities. This includes the International Civil Aviation Organization, which is involved in the development of standards in the areas where space operations interact with civil aviation.

The international rules applicable to space activities are included in five international conventions, commonly referred to as the ‘five United Nations treaties on outer space’, which currently do not recognise the participation of international organisations. The Rescue Agreement, the Liability Convention and the Registration Convention allow such a participation, although not at equal footing with State parties. Considering the parallel competence that the Union enjoys in the area of space alongside its Member States, EU participation in the Rescue Agreement, the Liability Convention and the Registration Convention is currently being explored while safeguarding the specific interests of the Union related to the implementation of the Space Programme.

Despite notable achievements at UN level, the development of a comprehensive approach at international level is facing considerable diplomatic and political hurdles. The rapid and unregulated deployment of mega-constellations of satellites add to the urgency to act. The Commission and the High Representative, depending on the EU competence involved, will engage with key partners including the United States and other third counties, including Japan and Canada, to promote cooperation across regional actors with STM capabilities in this context. The Commission will also encourage operational safety and sustainability with international partners, for instance by promoting access to STM-relevant services of the EU Space Programme available to non-EU users (e.g. collision avoidance).

**The European Parliament calls for a STM legislation before 2024 in its resolution** (paragraph 16). The Commission intends to make a legislative proposal in the field of STM. Such an initiative will be based on the EU stakeholders’ needs and identified rules and standards. It will build on a consultation process with Member State, and with all the interested stakeholders. This legislative proposal should aim at developing a common level playing field in the EU. It should also guarantee that EU operators are not disadvantaged compared to operators established outside the EU that benefit from less stringent standards in their country of origin, for instance by imposing equal treatment to all satellite operator intending to provide services within the EU.

On making a European law on the use of outer space and STM a priority, the Joint Communication already sets out an ambitious deadline for a first draft as early as 2024. As recalled by the Commission during the European Parliament plenary debate of 6 October 2022 on STM, it is important to get the scope right, which requires consultation with Member States who have so far been the primary actors when it comes to space law and have been exercising their sovereign rights over their airspace. Furthermore, it is important to have a holistic approach by ensuring that there is good coordination between STM on the one side and air traffic management on the other side.

1. 9395/22 EU approach to space traffic management - Council conclusions (adopted on 10/06/2022): [st10071-en22.pdf (europa.eu)](https://www.consilium.europa.eu/media/56974/st10071-en22.pdf) [↑](#footnote-ref-1)
2. Space debris mitigation aims to reduce the generation of space debris in the future and space debris remediation aims to develop methods to manage the existing space debris [↑](#footnote-ref-2)
3. [Cybersecurity\_toolbox\_factsheet\_20210525\_dr6KfDWH74hjA1CgjgmL6oE8rc0\_64577.pdf](file:///C%3A%5CUsers%5Cbartede%5CDownloads%5CCybersecurity_toolbox_factsheet_20210525_dr6KfDWH74hjA1CgjgmL6oE8rc0_64577.pdf) [↑](#footnote-ref-3)