

SPACE DEBRIS SYMPOSIUM (A6)

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ENHANCEMENT OF THE ITALIAN CAPABILITIES FOR PROTECTING SPACE ASSETS FROM
SPACE DEBRIS**Abstract**

Telespazio is one of the world's leading players in satellite systems development and related services management and relies on an international network of space centers and teleports. The company, headquartered in Rome, Italy, operates worldwide through its many subsidiaries in Europe, South and North America. The company's experience is also drawn from the management of space systems and infrastructure - including the Fucino Space Centre, the world's largest civilian teleport - as well as from its involvement in major space programmes, including Galileo, EGNOS, GMES, COSMO-SkyMed, SICRAL, promoted and supported over the years by the Italian Space Agency and Italian Ministry of Defence. From this perspective, the Space Situational Awareness constitutes a key interest, in terms of design and deployment of a Space Surveillance and Tracking (SST) national system, integrated and interoperable with a transnational SST network to contribute for the mitigation of the impact risk of space debris with critical assets. The operational procedural impact and associated changes in the framework of the recently undersigned agreement for the sharing of Space Situational Awareness Services with the Department of Defense of the United States of America, will be described. Moreover in consideration of this important element of large breath strategy, the company also intends to investigate the possibility of re-using existing assets to enhance the national SST capabilities and improve the risk evaluation process and thus the operability as well as the service availability, avoiding, as an example, as much as possible useless, if not harmful, collision avoidance maneuvers. The current investigation foresees a possible implementation of SST specific observing modes on existing assets. Telespazio is currently investigating in collaboration with Italian research institutions innovative and challenging technological solutions for cost effective approaches to upgrade existing 1 meter class telescopes, to be employed for Space Debris Objects tracking, in order to reduce orbit determination errors. is envisaged. The paper reports on the status of the initiatives mentioned above and discusses the feasibility of the proposed approaches.