

HITEC LUXEMBOURG ANNOUNCES THE LAUNCH OF THE HITEC ANTENNA TRACKING SIMULATOR

HITEC ANTENNA TRACKING SIMULATOR (HATS)



Mamer, August 9th, 2021 - The HATS (HITEC Antenna Tracking Simulator) is a simulator for ground station antenna motion as well as open- and closed-loop satellite tracking and is fully compatible with HITEC's ACU (Antenna Control Unit).

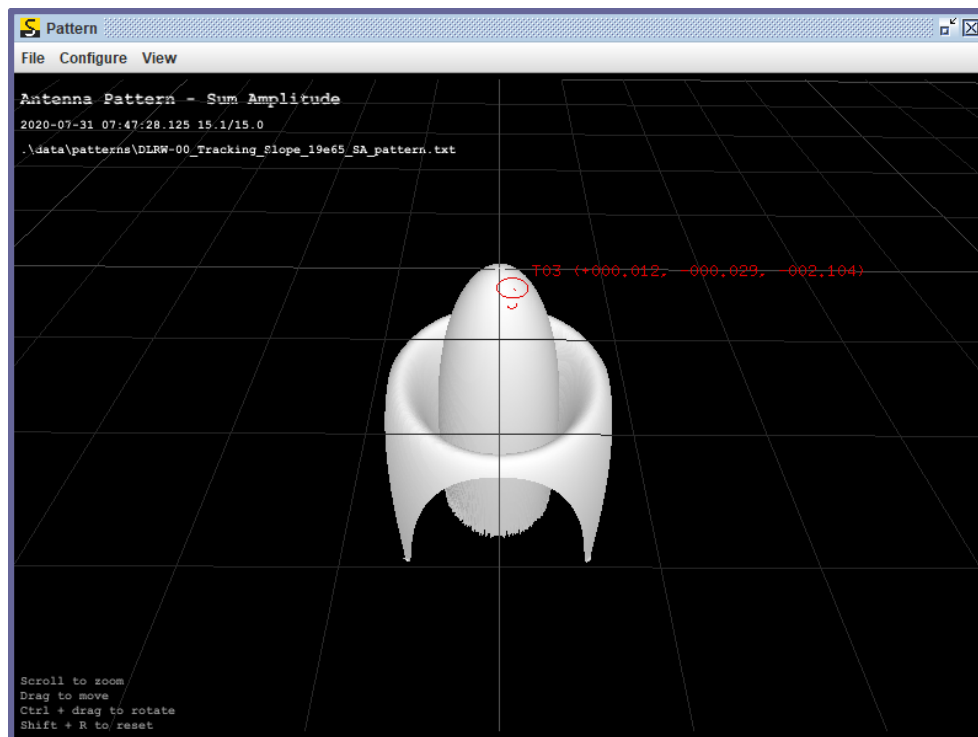


The RF signal simulation takes into account the full RF path from the satellite to the tracking receiver to offer realistic tracking behavior for both step-track and monopulse modes. It comprises a whole set of subsystems emulating satellite trajectories and their imperfections, the evolution of the RF signals (atmospheric attenuation and ray bending) as they travel from the satellite to the ground station, the impact of the antenna pattern and the downlink chains, the dynamical behavior of the servo system and the antenna's mechanical structure, the mechanical imperfections of the antenna mount, as well as the behavior of components such as the SCU, the ACU and the tracking receiver. In addition to evaluating the antenna tracking performance, the simulator can be used as a testbed for the behavioral verification of existing or new functionalities in one of the subcomponents, such as for example the tracking algorithms in the ACU. Furthermore, it can be used for educational or training purposes or for demonstrating the underlying principles of the tracking concept or of one of the subsystems.

Tom Mathes, Manager Electrical Engineering – Space & Satellite Systems, retraces the history of the simulator: *"Its development started as a small side-project and was born out of the need to be able to do in-house testing of the ACU functionalities during the early ACU development phases. Over the years, its functional scope has constantly increased, and it has now become an integral part of HITEC Luxembourg's motion control product family. It is an immensely valuable and versatile tool not only for testing, but also for explaining and illustrating fundamental antenna motion and satellite tracking concepts and for training people on the ACU."*

HITEC Luxembourg has also obtained the label "Made in Luxembourg" for the HATS.

More technical details can be found on hitec.lu.



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About HITEC Luxembourg S.A.

HITEC Luxembourg S.A., a 100%-owned Luxembourg company, has developed its business activities in the field of innovative and quality products and services. The company is ISO 9001 certified for engineering, analysis, consulting, manufacturing, maintenance and sales of systems in mechanics, electronics, physical measuring techniques as well as information and communication technologies. The Luxembourg ESR label for corporate social responsibility (CSR) certifies the commitment by HITEC Luxembourg to monitor and promote an approach to CSR with respect to economic, social and environmental dimensions of its stakeholders. In addition, HITEC Luxembourg has obtained in 2021 the label “Responsibility Europe”. The company has been awarded with the SuperDrecksKëscht fir Betriber label for its contribution to an environmental friendly waste management. The label is certified in accordance with the ISO 14024 standard. HITEC Luxembourg is also a signatory of the Charte de la Diversité Lëtzebuerg.

HITEC Luxembourg offers high technology solutions covering different business areas: satellite ground segment technology; customer specific and standard equipment for testing and measuring of physical properties; engineering; consulting; software & ICT development and project management. HITEC Luxembourg serves private and public sector customers at a national and international level. Its business objectives, as a specialized high technology provider are to achieve a strong sustainable market position; to expand its activities at an international level as well as to promote the Luxembourg site through the realization of innovative high quality value-added products and services.

More information: www.hitec.lu