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High-Speed Integrated Satellite Data Systems For Leading EU Industry

The Hi-FLY project began in January 2018 and with a duration of 42 months will be complete in June 2021. The project has funding of 6.9M€ from the EU under the Horizon 2020—COMPET-2017 call. This project consists of 12 partners from across Europe with a range of expertise. These partners



include Airbus Defence and Space GmbH, Airbus Defence and Space SAS, Tesat-Spacecom GmbH & Co.KG, Deutsches Zentrum fuer Luft und Raumfahrt E.v., STAR-Dundee Limited, University of Dundee, Integrated Systems Development S.A, Kongsberg Spacetec AS, Erzia Technologies SL, Universitat Autònoma De Barcelona, Ethniko Kai Kapodistriako Panepistimio Athinon and Modus Research and

Innovation Limited.

The Hi-FLY project aims to develop and validate innovative technologies to remarkably improve space on-board data handling and transfer capabilities, primarily for Earth Observation and partly also for Telecom future missions. To achieve this goal, Hi-FLY will make substantial advances in all major elements of the data chain including inter-satellite and on-board network, payload processing, data compression, protection, storage and transmission.

Hi-FLY Website

The Hi-FLY website has launched! The website contains general and background information about Hi-FLY. Check out the news page to keep up to date with the project.

www.hi-fly.eu

A screenshot of the Hi-FLY website. The header features the Hi-FLY logo and navigation links: Home, About the Project, Project Partners, Project News, and Contact Us. The main content area has a title "Hi-FLY - High-Speed Integrated Satellite Data Systems For Leading EU Industry" and a sub-header "Hi-FLY - High-Speed Integrated Satellite Data Systems For Leading EU Industry". Below this is a paragraph of text: "The Hi-FLY project aims to develop and validate innovative technologies to remarkably improve space on-board data handling and transfer capabilities, primarily for Earth Observation and partly also for Telecom future missions." To the right of this text is an image of a satellite in orbit. Below the paragraph is another paragraph: "To achieve this goal, Hi-FLY will make substantial advances in all major elements of the data chain including intersatellite and on-board network, payload processing, data compression, protection, storage and transmission." At the bottom is a final paragraph: "The Hi-FLY project will provide a comprehensive demonstration incorporating all the critical elements of the payload data chain from instrument to ground-station; aiming to substantially increase the payload data-rates that can be supported in future space-based data networks and Earth Observation missions. It will allow an aggregate instrument data-rate of at least 50 Gbps to be supported in the near term, together with a roadmap to achieve an even higher performance in the future." The email address "Email: hi-fly@modus.td" is visible in the top right corner of the website screenshot.

Why Hi-FLY?

The European and world-wide trend is to mature application-oriented technologies in the domains of Earth observation (EO), satellite navigation and satellite communications (SatCom), which are expected to underpin competitiveness and contribute to the integration of space in society and economy.

The overarching objective of Hi-FLY, is to improve the performance of satellite systems and to establish new competitive high performance satellites, instruments and ground systems.

The steady increase of performance can be seen today already in examples like OneWeb intending to implement a worldwide internet coverage, GlobeNet as the “backbone” for satellite communication, observation satellites with higher and higher resolution or Internet of Things (IOT) based data exchange solutions with manifold users. End-users (institutional and commercial) continuously need better ground resolution, lower revisit periods through wider swaths and multiple satellites, satellite downsizing and lower costs. While today space Earth observation Systems (EOS) compete with many different schemes like drones, planes, balloons etc.

These permanently growing mission requirements need an answer at system and equipment level, by further miniaturization, integration and technological break-through.



First Hi-FLY Consortium Meeting!

The first Hi-FLY consortium meeting took place on the 23rd and 24th of January 2018. Airbus Defence and Space GmbH hosted the consortium at their facilities near Munich, Germany. Presentations were given by each partner and a brief overview of the full project given.

