PROJECT

REALISE GroLaS

Runway independent automatic launch and landing system for civil UAV based on GroLaS

Funding: European (Horizon 2020)

Duration: Jun 2015 - Nov 2015

Status: Complete with results

Total project cost: €71,429

EU contribution: €50,000

Call for proposal: H2020-SMEINST-1-2015

CORDIS RCN : 197051

Objectives:

mb+Partner have developed and patented a technology to take-off and land UAV using a mobile ground-based landing gear system (GroLaS). The use of GroLaS reduces the weight, fuel consumption and CO2 emission of airborne vehicles by dispensing the need for the undercarriage and increases operational flexibility by being independent of existing runway infrastructure. These aspects result in competitive advantages for UAV operators/users (less costs and higher flexibility). The GroLaS technology has recently become a key technology listed in IATA's Technology Roadmap aimed at describing the means how the aviation sector can meet its environmental goals. It is also included in the European Union research strategy and in Airbus' vision for future flying.

The project REALISE GroLaS (phase 1-3) will focus on the entry of the GroLaS-technology into the high volume market of unmanned aerial vehicles (UAV) in civil applications. As patent holder, an established strong business network and the commitment of industry partners to the GroLaS technology mb+Partner is uniquely positioned to grow with the rapidly developing UAV market currently worth $6,4 billion p.a. and expected to almost double within the next ten years. The ground-based landing gear system has already been demonstrated successfully at small scale. The objective of REALISE GroLaS (phase 1) is to enable mb+Partner to develop a focused business strategy for the identified key market and (phase 2) moving the GroLaS technology from TRL 6 to 9. mb+Partner is aiming thereby to offer/sell the first operationally feasible combined ground-based launch and landing system for airborne vehicles, as yet unseen in the aerospace industry. Upon completion of phase 2 a market-ready mobile launch and landing system for the market segment of Mini UAV (UAV-market share: 12%) and in phase 3 market entry in the segment of Medium UAV (28% share) is envisaged. The offering of product related services will complement the business model.

Parent Programmes:

H2020-EU.3.4. - Horizon 2020: Smart, Green and Integrated Transport
H2020-EU.2.3. - Horizon 2020: INDUSTRIAL LEADERSHIP - Innovation In SMEs

Institute type: Public institution

Institute name: European Commission

Funding type: Public (EU)

Lead Organisation:

Ingenieure Marquardt & Binnebesel, Partnerschaft

Address:
HARBURGER SCHLOSSSTRASSE 6-12
21079 HAMBURG
Germany

EU Contribution: €50,000

Technologies:

Aircraft operations and safety
Automated systems

Development phase: Demonstration/prototyping/Pilot Production

Key Results:

Periodic Reporting for period 1 - REALISE GroLaS (Runway independent automatic launch and landing system for civil UAV based on GroLaS)

mb+Partner (MBP), founded in 2008, is a SME located in the aviation innovation hub of Hamburg, Germany. The company offers specialist services for development of advanced technologies for aircraft design. MBP has developed and patented a technology to enable Unmanned Aerial Vehicles (UAVs) to take-off and land using a mobile ground-based landing gear system (GroLaS) thereby dispensing with the need for an undercarriage. This reduces the weight of the UAV enabling extra payload, and reduction in fuel consumption and CO2 emissions. It also increases operational flexibility for UAVs by enabling them to operate independent of existing runway infrastructure.

As patent holder with an established business network and the commitment of significant industry partners to the GroLaS technology, MBP is uniquely positioned to grow with the rapidly developing UAV market currently worth $6.4 billion p.a. and expected to almost double within the next ten years.

STRIA Roadmaps: Cooperative, connected and automated transport

Transport mode: Air transport

Transport sectors: Passenger transport, Freight transport

Transport policies: Environmental/Emissions aspects

Geo-spatial type: Other