Security system for manned and unmanned aerial vehicles

Summary

Profile type
Technology offer

Company's country
Germany

POD reference
TODE20230620015

Profile status
PUBLISHED

Type of partnership
Research and development cooperation agreement
Investment agreement

Targeted countries
• World

Contact Person
Rita ELSTE - TOMSONE

Term of validity
20 Jun 2023
19 Jun 2024

Last update
20 Jun 2023

General Information

Short summary

A German university developed a system that can avoid collisions between aircraft, whether manned or unmanned. The university offers license and/or a technology cooperation agreement.

Full description

After drones or unmanned aerial vehicles (UAV) used to be used either as a toy earlier or reserved for the military, their use wins rapidly. UAVs are supposed to bring packages, measure the environment or take over monitoring tasks. The UAVs are getting bigger, more powerful and their numbers are rapidly increasing, as well as the danger of collisions with manned or unmanned aerial vehicles.

A German university devoloped a system that can avoid collisions between aircraft, whether manned or unmanned. For this purpose, the UAVs are clearly identified and provided with a machine-readable label. The position data of one UAV can then be forwarded to neighboring UAVs. Since a UAV usually also has components on the ground that are in constant contact with the aircraft, the ground station always has the relevant flight data of the UAV. These can then be quickly transferred to other systems such. B: FLARM or ADS-B are passed. At the same time, this can automate the keeping of a logbook.

With the aid of the invention it is possible to avoid collisions between UAVs and manned aircraft in any combination.

Thus, the system enables a safe, daily use of UAVs in civil airspace. Possible application areas include geoinformation, inspection of power transmission lines, wind turbines, oil rigs, logistics applications and many other areas.

The university offers aerospace & defense and electrical engineering & computing companies a licensing agreement. If there is interest in further development of the process, the university also offers technological cooperation.

Advantages and innovations

The main advantages of this invention, also with regard to recent applications, are:
- Cross- system collision avoidance
- Predictive flight planning
- Spreading informations to other aircrafts and UAVs

Technical specification or expertise sought

Stage of development

Lab tested

Sustainable Development goals

• Goal 9: Industry, Innovation and Infrastructure

IPR Status

IPR granted

Partner Sought

Expected role of the partner

The university offers aerospace & defense and electrical engineering & computing companies a licensing agreement. If there is interest in further development of the process, the university also offers technological cooperation.

Type of partnership

Type and size of the partner

Research and development cooperation agreement

Investment agreement

- **SME <=10**
- **SME 11-49**
- **Other**
- **Big company**
- **SME 50 - 249**

Dissemination

Technology keywords

- **01003022 - Smart Appliances**
- **01003008 - Data Processing / Data Interchange, Middleware**
- **01003003 - Artificial Intelligence (AI)**

Market keywords

- **03001006 - Controllers**
- **09001004 - Mail and package shipment**
- **03001005 - Microprocessors**
- **08002004 - Robotics**

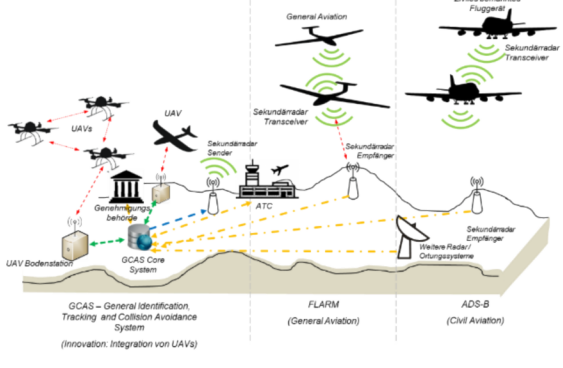
Targeted countries

- **World**

Sector groups involved

Media

Images



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