Multibody Advanced Airship for Transport

Fact Sheet

Project information

MAAT

Grant agreement ID: 285602
Status
Closed project

Funded under:
FP7-TRANSPORT
Overall budget:
€ 5 071 720,77
EU contribution
€ 3 767 000

Coordinated by:
UNIVERSITA DEGLI STUDI DI MODENA E REGGIO EMILIA
Italy

Objective

"The MAAT project aims to investigate aerial transportation possibility by airship based cruiser-feeder system. MAAT is composed by tree modules:
- the cruiser, named PTAH, (acronym of Photovoltaic Transport Aerial High altitude system);
- the feeder, named ATEN (Aerial Transport Elevator Network feeder), is a VTOL system (Vertical Take Off and Landing) which ensure the connection between the cruiser and the ground;
- the vertical airport hub, named AHA (Airport Hub for Airship feeders).

The feeder can lift up and down by the control of buoyancy force and displace horizontally to join to cruiser. The project aims to:
1. identify and design the best type of propulsion for the PTAH, a discoid innovative airship able to remain airborne for long periods and to travel great distances, in order to reduce the environmental impact against the present sys-tem, as fuel consumption is null, both cruiser and feeder are energetically autonomous by photovoltaic energy and innovative electric propulsion.
2. study the different possible ways of approaching and joining between ATEN and PTAH, and consequently, the re-lease of ATEN from PTAH.
3. design the best procedure of docking operations thus identified in order to obtain the minimum disruption to pas-sengers and the maximum safety for themselves and for goods
4. study the different architectures of PTAH and Athens, in such a way that:
5. the lift up capacity guaranteed by the buoyancy force, may be accompanied by the power of the engines;"
6. effective and safe procedures for docking;
7. ATEN can land and take off from Airport Hubs named AHA located in major populated centres
8. PTAH satisfies the better possible aerodynamic performances possible for the dimensions and the operative mission.

To study the transfer operations between ATEN and PTAH of goods and people and vice versa, to:
• minimize distress conditions for passengers,
• maximize performances especially for goods;
• enhance safety of these operations to maximum possible level.
The objectives described are congruent with each other and to achieve this the study of the system and components must be highly structured.

Programme(s)

FP7-TRANSPORT - Specific Programme "Cooperation": Transport (including Aeronautics)

Topic(s)

AAT.2011.6.2-1. - Novel air transport vehicles
AAT.2011.6.3-1. - The cruiser/feeder concept

Call for proposal

FP7-AAT-2011-RTD-1
See other projects for this call

Funding Scheme

CP-FP - Small or medium-scale focused research project

Coordinator

UNIVERSITA DEGLI STUDI DI MODENA E REGGIO EMILIA
Address
Via Universita 4
41121 Modena
Italy
EU Contribution
€ 825 039,20

Website
Contact the organisation
Administrative Contact
Eugenio Dragoni (Prof.)

Participants (11)
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<tr>
<th>Organisation</th>
<th>EU Contribution</th>
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<td>LogisticNetwork Consultants GmbH</td>
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<td>€ 315 500</td>
<td>Bolshaya Sadovaya 105 344006 Rostov On Don</td>
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<tr>
<td>ENGYS LTD</td>
<td>United Kingdom</td>
<td>€ 272 750,80</td>
<td>The Green 1 Tw9 1pl Richmond Surrey</td>
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<tr>
<td>UNIVERSITY OF LINCOLN</td>
<td>United Kingdom</td>
<td>€ 357 750</td>
<td>Brayford Pool Ln6 7ts Lincoln</td>
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<tr>
<td>ALMA MATER STUDIORUM - UNIVERSITA DI BOLOGNA</td>
<td>Italy</td>
<td>€ 122 000</td>
<td>Via Zamboni 33 40126 Bologna</td>
</tr>
<tr>
<td>EDL S.A.</td>
<td>Uruguay</td>
<td>€ 262 750</td>
<td>Boulevard EspaÑA 2300 11300 Montevideo</td>
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<td>VRIJE UNIVERSITEIT BRUSSEL</td>
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<td>€ 387 000</td>
<td>Pleinlaan 2 1050 Brussel</td>
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<tr>
<td>POLITECNICO DI TORINO</td>
<td>Italy</td>
<td>€ 157 500</td>
<td>Corso Duca Degli Abruzzi 24 10129 Torino</td>
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**Administrative Contact**

- Nik Claesen (Mr.)
- Emilio Cafaro (Prof.)

**Website**

**Contact the organisation**

**Record number:** 99650

**Last update:** 2 August 2019