More Affordable Aircraft structure through eXtended, Integrated, and Mature nUmerical Sizing

Fact Sheet

Project Information

MAAXIMUS
Grant agreement ID: 213371
Status
Closed project
Start date 1 April 2008
End date 30 September 2016

Funded under
FP7-TRANSPORT

Overall budget
€ 65 103 342,58
EU contribution
€ 40 199 771

Coordinated by
AIRBUS OPERATIONS GMBH
Germany

This project is featured in...

RESEARCH*EU MAGAZINE
Archaeology, history and heritage: a civilisation discovered in Libya’s desert
NO. 9, FEBRUARY 2012

Objective

Even though composite materials are more and more used in modern airframes...
Even though composite materials are more and more used in modern airframes, many significant improvements are still achievable. Firstly, the substitution of the assembly of many small composite parts by a single one-shot large part provides additional weight reduction. Secondly, the final assembly line process must be adapted to composite properties (lack of ductility, stiffness). Thirdly, if the appropriate level of confidence and cycle time was available, Simulation-based design would provide a faster and less expensive path to find the optimal structures than the current development process, which relies on physical tests. Lastly, more conductive composites are necessary to avoid additional weight for system protection. The aim of MAAXIMUS (More Affordable Aircraft structure through eXtended, Integrated, & Mature nUmerical Sizing) is to demonstrate the fast development and right-first-time validation of a highly-optimised composite airframe. The MAAXIMUS objectives related to the highly-optimised composite airframe are: 50% reduction of the assembly time of large composite sections; 10% reduction of manufacturing & assembly recurring costs; 10% reduction of the structural weight. The MAAXIMUS objective related to a faster development is to reduce by 20% the current development timeframe of aircraft structures and by 10% the corresponding cost. The MAAXIMUS objective related to the right-first-time structure is to additionally reduce the airframe development costs by 5% through the delivery of a predictive virtual test capability for large composite structures with a quantified level of confidence, to avoid late and costly changes. This will be achieved through coordinated developments on a physical platform, to develop and validate the appropriate composite technologies for low weight aircraft and a virtual structure development platform, to identify faster and validate earlier the best solutions through major improvements in airframe Simulation-base design.

Field of science

/field of science/engineering and technology/materials engineering/composites
/field of science/engineering and technology/mechanical engineering/vehicle engineering/aerospace engineering/aircraft

Programme(s)

Topic(s)

Call for proposal
FP7-AAT-2007-RTD-1

Funding Scheme

CP-IP - Large-scale integrating project
Coordinator

AIRBUS OPERATIONS GMBH

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Kreetslag 10
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Activity type
Private for-profit entities
(excluding Higher or Secondary Education Establishments)

EU contribution
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Participants (59)

ISIGHT SOFTWARE EURL

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EU contribution
€ 334,067.76

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EU contribution
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EU contribution
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EU contribution
€ 498 814,50

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EU contribution
€ 1 957 367
Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)
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EU contribution
€ 411 332
Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)
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Activity type
Public bodies (excluding Research Organisations and Secondary or Higher Education Establishments)
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DEUTSCHES ZENTRUM FUR LUFT - UND RAUMFAHRT EV
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EU contribution
€ 4,363,206

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EU contribution
€ 2,135,181.50

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€ 220,030
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Contact the organisation

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Activity type
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(excluding Higher or Secondary Education Establishments)

Website
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Yazid Hammoumraoui (Dr.)
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ISRAEL AEROSPACE INDUSTRIES LTD.

Israel
EU contribution
€ 230 030

Address
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70100 Lod

Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)

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Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)
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EU contribution
€ 205 130

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Piazza Leonardo Da Vinci 32
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Activity type
Higher or Secondary Education Establishments

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SAMTECH SA

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EU contribution
€ 1 426 371
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<td>Peter Horst (Prof.)</td>
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<td>David Newport (Dr.)</td>
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**DASSAULT SYSTEMES UK LTD**
United Kingdom
EU contribution
€ 92,843

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Activity type
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**LEONARDO - SOCIETA PER AZIONI**
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Last update: 16 July 2019
Record number: 89907

Permalink: https://cordis.europa.eu/project/id/213371/

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