

COOPERATEUS STATUS AS OF THE END OF MARCH 2011

**(Co-operation between EU and the USA on
Aeronautics research is a Must)**

(by Alain Garcia – ACARE)



Concept aircraft points to future of flight

Reminder: COOPERATEUS, What ?

**a European project for aeronautics research co-operation
between EU and the USA**

2 key principles:

- ✓ Non competitive research only
- ✓ No overlap/interference with on going EU-USA ventures

Started mid August 2010, in a stepped approach

Phase 1: explain, analyse, prepare, express
recommendations

Phase 2: focus, pave the ground for new
enhanced research EU-USA win-win ventures

Reminder: COOPERATEUS Why ?

- **Europe & USA are natural allies**, with common culture
- **Shared leadership in aviation** with shared values in safety, quality and IPR principles
- **A worldwide market** with largely common supply chain and customers
- **Significant common challenges**
 - Time and expense of developing new technologies
 - Diminishing and more costly resources; looming shortage of engineers
 - Increasing pressure on the need for safety, security and environmental improvements
 - Increasing pressure from emerging aviation nations

Failure to collaborate may jeopardize USA-EU global aviation leadership!

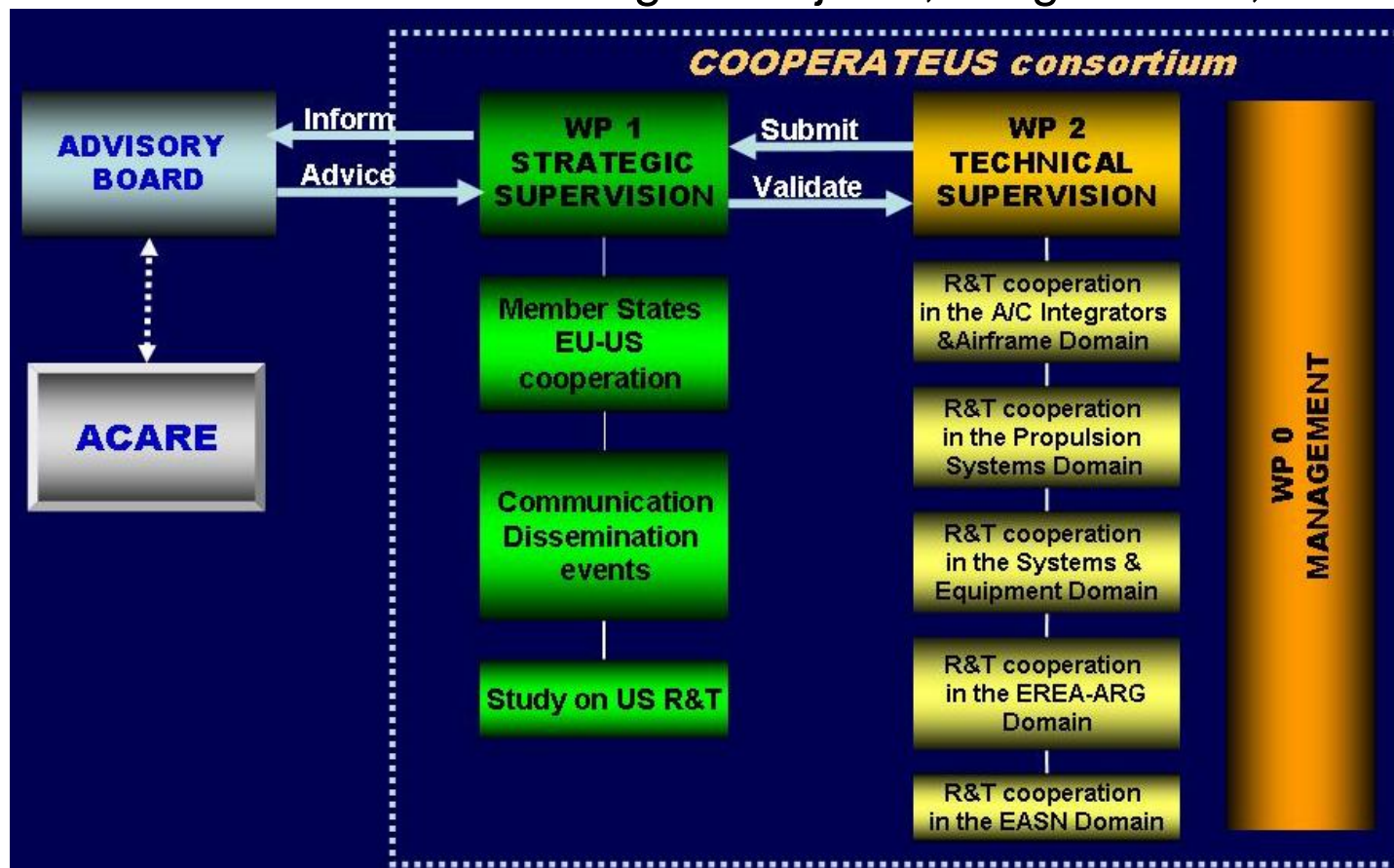
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Reminder: COOPERATEUS, How ?

coordination and networking of Projects, Programmes, or Policies



International Collaboration – USA

➤ ***M o C NAT-I-9406 between USA and EU now signed:***

“establishes the terms and conditions for mutual cooperation in the promotion and development of civil aviation research and development“

SESAR – NextGen is Annex 1, **more can follow**

➤ ***Funding:***

“each Party shall bear the costs of the activities it performs”

➤ ***IPR:***

“Proprietary rights in any intellectual property jointly developed by the Parties shall be shared by the Parties”

Opportunity to agree different IPR and funding terms inside any future Annex

US Contacts after the 49th AIAA Aerospace Sciences Meeting

- 70 formal contacts at AIAA Conference last Jan. stated their interest for COOPERATEUS initiative, with mention of areas of interest
- 54 identified within COOPERATEUS scope were re-contacted by one WP2 Leader. 6 of them already replied by early March: 2 for airframe, 3 for universities and 1 for research institutes
- In addition, USA contacts other than the AIAA ones have been activated within COOPERATEUS: Weber, Jeppesen, IMDC
- EU stakeholders communities have more USA contacts in identification

We have started: creating and consolidating a network should amplify throughout phase 2

ResearchTopics of interest

- Actions are being carried out actively on both EU and USA side on **bio fuels**. This topic in itself might develop into a new chapter of the now ratified EC-FAA MOC
- **Elimination of dangerous substances and components**, in application of REACH as regards Europe, is another domain of potential untapped R&T co-operation.
- This bottom up collection, summarized on next slides, reflects proposed themes by EU stakeholders, and sometimes first exchange of views with the USA

Research Topics of interest (cont^d)

- **High altitude ice crystals**
- **Aviation environmental impact and green flight operations**
- **Self Healing polymer composites for aero applications**
- **Weather information management (Selex)**
- **Multifunctional materials**
- **Composite damage detection & health monitoring**

Research Topics of interest (cont^d)

- **Harmonizing USA and European regulation and preparing future Electronic Flight Bag concepts (Thales)**
- **Aircraft damage tolerance to small explosive devices (Meggit)**
- **Integrated volcanic ash observation (Selex)**
- **System wide info management, a continuation of the successful EU-USA FP6 SWIM project (Boeing, etc)**
- **Aircraft seat comfort and safety (Zodiac-Weber Aircraft, etc)**
- **Recyclable aircraft (Meggit)**

EU Member States Support to EU-USA Cooperation

On going EU – USA cooperation

“High Level” initiatives enable and foster cooperation activities:

- **Memorandum of Cooperation on Civil Aeronautics Research NAT-I-9406 (Budapest, 3 March 2011)**
- **Bilateral Aviation Safety Agreement (BASA),**
- **Memorandum of Cooperation between EUROCONTROL and the FAA,**
- **EU-USA Joint Declaration on Aviation Security,**
- **EU Science Counsellor Network in the USA,**
- **BILAT-USA, Link2US projects.**

EU Member States Support to EU-USA Cooperation

On going EU – USA cooperation (Contd)

➤ **Within EU or Bilateral Aeronautic Programmes:**

- **FAA: 3 participations (CREDOS, ATC WAKE and RESET)**
- **NASA: 3 participations (ATC WAKE, Icing Research and Human Factors Research)**
- **BOEING Research and Technology Europe (BRTE): 3 participations (SUPRA, TITAN and RESET)**

➤ **Seminars and International Conferences:** USA/Europe ATM R&D Seminar; International Conference on Research in Air Transportation; Aviation Noise and Emissions Reduction Symposium (ANERS), etc.

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Questionnaire distributed to Airtn Members, ETNA and ACARE MSG

ACTIVITY	AREA	THEMES OF COMMON EU-US INTEREST
The Greening of Air Transport	Green aircraft	Alternative fuels for aviation Emissions
	Ecological production and maintenance	
	Green air transport operations	Energy efficiency Air transport impact on climate change Environmental standards
Increasing Time Efficiency	Aircraft systems and equipment for improved aircraft throughput	
	Time efficient air transport operations	Intelligent transport systems
Ensuring Customer Satisfaction and Safety	Passenger friendly cabin	
	Passenger friendly air transport operations	
	Aircraft safety	
	Operational safety	Integrated safety and security
Improving Cost Efficiency	Aircraft development cost	
	Aircraft operational cost	
	Air Transport system operational cost	
Protection of Aircraft and passengers	Aircraft security	Double hull tankers
	Operational security	Integrated safety and security
Pioneering the Air Transport of the Future	Breakthrough and emerging technologies	New sources of propulsive power
	Step changes in air transport operation	Operational doctrines and procedures ATM interoperability Regulation and communication protocols
	Promising pioneering ideas in air transport	

According to FP7 research objectives

**Highlights Phase II: Areas and themes
of common EU-US interest**

Analysis of Barriers to Collaboration

- ***Transatlantic R&T collaboration is viewed as difficult.
An analysis of USA programme terms has been undertaken,
especially addressing:***
 - IPR clauses in USA programmes
 - Limits on 'Research' undertaken by non-USA entities
 - Funding limitations for non-USA participants
 - ITARS constraints (Both 'product' and 'knowledge')
- ***Equally, EC Programmes can have similar constraints***
- ***Guidelines for successful collaboration are being developed***
 - 'Services' and 'Access to Facilities' are allowable.
 - SME's can undertake sub-contracts (Not 'research' necessarily)
 - The existence of a 'high level' agreement is advantageous

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*the Aeronautical R&T cooperation
framework*










COOPERATEUS aims to establish and foster communication and cooperation between US and EU research in civil aeronautics. It will identify R&T areas of mutual interest. This future R&T cooperation will reinforce US-EU global aviation leadership, minimizing redundancies and ensuring complementarity. COOPERATEUS will establish a framework and network to facilitate and improve cooperation, including the definition of the cooperation processes.







COOPERATEUS contacts at www.cooperateus.com



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THALES