



EUROCAE BROADCAST

THE EUROPEAN ORGANISATION FOR CIVIL AVIATION EQUIPMENT
L'ORGANISATION EUROPEENNE POUR L'EQUIPEMENT DE L'AVIATION CIVILE
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NEW WORKING GROUPS:
WG 105 AND WG 106



SAVE THE DATE: 54TH EUROCAE
SYMPOSIUM & GENERAL ASSEMBLY
27-28 APRIL 2017, LONDON



IMPORTANT DEVELOPMENTS
PRESENTED BY THE COUNCIL
CHAIR, DAVID HAWKEN



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Christian Schleifer-Heingärtner
 Secretary General
 +33 1 40 92 79 30
 christian.schleifer@eurocae.net

Adrian Cioranu
 Technical Programme Manager
 +33 1 40 92 79 31
 adrian.cioranu@eurocae.net

Raphaël de Courrèges
 Office Support Manager
 +33 1 40 92 79 28
 raphael.decourreges@eurocae.net

Luc Deneufchâtel
 Technical Secretary - Expert
 luc.deneufchatel@eurocae.net

Alexander Engel
 EUROCAE Liaison
 alexander.engel@eurocae.net

Anna von Groote
 Technical Programme Manager
 +33 1 40 92 79 26
 anna.vongroote@eurocae.net

Elodie Lanniel
 Executive Assistant
 +33 1 40 92 79 30
 elodie.lanniel@eurocae.net

EUROCAE
 Future address early 2017:
 Le Triangle, 9-23 Rue Paul Lafargue
 93200 Saint Denis
 www.eurocae.net



Dear reader of our EUROCAE Broadcast,

I don't know how you see that, but one of our employees told me in May: "Christian, we will work on that during the summer holiday

period, it is normally quiet during that time and many things will be done over summer when we do not have so many WG meeting and other activities". She was so wrong! I do not recall a single day this year where the agenda was not full. This had and has many reasons. Our members and stakeholders have clearly more demand for standards than ever. These standards need to be coordinated regionally and internationally to ensure interoperability and harmonisation. We have more active WGs than ever. We also have more members joining than ever.

The remarkable part is that our team is not getting tired to accept the everyday challenges. Standards are the key to enable activities from performance based regulations bringing Unmanned Aircraft Systems (UAS) into the daily operations and our lives. Industry standards address safety initiatives to keep aviation as an ultra-safe mode of transport and enable efficiency gains in our ATM modernisation programmes.

An aviation standard developing organisation like EUROCAE never stands still and settles down- we always adapt to the demand of the aviation community. The Council and the General Assembly have therefore paved the way for a new and sustainable EUROCAE structure to react quickly, efficiently and effectively to the need of our members and to minimize at the same time overlapping activities, while minimizing the administrative burden and maximizing the technical experts' efficiency.

In the following lines and pages of this magazine you can read more on how EUROCAE is addressing our members' needs and about the visionary approach of David Hawken, the Council Chair together with his Council team, who have made the necessary changes to keep EUROCAE at the forefront of aviation standards.

EUROCAE follows an open and transparent process aimed to increase safety and market potential, to facilitate interoperability and to encourage technological development, all in the interest of our European and global aviation stakeholders.

We are proud to acknowledge that our members – who are all specialised in one or several technical fields of aeronautics – are considered to be among world's leaders in their domain.

We have recently passed the 200 member-mark when IATA joined EUROCAE in July this year. IATA has also nominated a member on the Technical Advisory Committee (TAC) to represent the airspace user interests and therefore completed the team, which is advising the Council on technical matters.

The strengthened collaboration with the airline community will be very beneficial for the technical standardisation activities but also for the EUROCAE organisation as a whole to complete the set of stakeholders, with the airspace users and in particular the airlines view. The recently signed Memorandum of Understanding between EUROCAE and IATA will greatly facilitate this objective (please read more inside the Broadcast).

Going forward, the importance of EUROCAE standards is expected to increase given the tendency for performance-based regulation and because our standards are foreseen to be used as means to demonstrate compliance with regulatory requirements. At the same time, given the wide application of our standards, global interoperability is one of the major considerations of EUROCAE activities.

In this context, quality management is very important – as it has always been for EUROCAE. We use a proven process to develop and deliver our industry standards. This process is consensus driven, and all interested stakeholders are invited to become EUROCAE members and actively shape the contents of these specifications. A second layer of validation is the open consultation process, which follows the consensus driven development part, to invite all members and stakeholders to comment on the draft ED, which gives our EUROCAE documents (EDs) the global flavor of an international acceptance.

To continue and further contribute to the development of standards fully aligned with all aviation domains/ stakeholders, we have launched two new Calls for participation and established two new working groups: WG-105 Remotely Piloted Aircraft Systems / Unmanned Aircraft Systems (UAS) and WG-106 – Electronic Flight Bag Software Applications.

We ask for your contribution, your expertise and your participation to develop the standards our aviation community needs!

Please enjoy reading our magazine and find more interesting topics inside the Broadcast.

Christian Schleifer-Heingärtner
Secretary General



EUROCAE – Meeting your current and future needs

A key priority for the EUROCAE Council to make sure we are able to meet both the current and future needs of our members.

Last year we completed a detailed review of all our governance arrangements and a set of changes to the constitution and financial structure were agreed at the General Assembly in May 2016.

One area that was changed was the level of membership fees. This was necessary because of the record expansion of our activities which are all driven by members needs. Sustaining such demand required a different financial structure and also more efficient operation and ways of working. The changes approved at the General Assembly altered the way that membership fees are calculated and introduced a new sliding scale which varies according to the income, or budget, of the members' organisation. This did mean that the fees for some members have increased, but it also brings our fee structure into line with similar organisations. The new arrangements will provide EUROCAE with firm financial foundations for the future and allow us to invest to improve the services we provide to members.

The table below summarises the new membership fee structure which vary according to member organisations' revenues:

Full members:

Annual Revenue K €* [*]	Membership fee
< 500 K	€ 800
> 500 K	€ 1.500
> 1 Mio	€ 2.000
> 5 Mio	€ 3.000
> 10 Mio	€ 4.000
> 50 Mio	€ 5.000
> 100 Mio	€ 6.500
> 500 Mio	€ 11.000
> 1 Billion	€ 14.000

^{*} For the purposes of calculating membership fees, Annual Revenue is defined as:
 - Total income for the organisation declared in last annual accounts
 - Total annual budget for Regulators, Business Units, Government organisations, Institutes and similar organisations

The fees for other classes of membership are:
 Limited members: 950€ / Individual members: 700€
 Universities: 1,100€

The Council is committed to ensuring the benefits from the new fee structure are delivered. Workstreams have been established to deliver benefits to members in the following areas, which we will continue to report on in future editions of Broadcast:

- ▶ Efficient and effective WG meetings;
- ▶ Best service level for members and WGs experts;
- ▶ Shorter lead time to set up a WG and kick off a work item;
- ▶ Shorter document approval and publishing process; and
- ▶ Reduced resources and costs for members.

It is early days, however you should have already seen a step change improvement in communications with frequent NEWSBlogs, email notifications and this Broadcast magazine. The website has also been redesigned to be more useful and relevant to members. Further improvements are planned for the near future including providing members with the facility to download EUROCAE publications themselves.

Another improvement that will benefit members is in regard to hosting and supporting working group meetings. The Secretariat is planning to move to new offices in Paris next year. These will be located in an area with quicker access to airports and transport links and will provide improved meeting facilities and IT support. Improved IT support and electronic workspaces will also support virtual meetings and on-line collaboration which will also increase the efficiency of working group activities for members.

Finally, the Council have assigned a tasks force to look at how we can reduce the lead time to start working groups and to publish documents when they are complete.

All of these initiatives and improvements are aimed at ensuring EUROCAE is able to help you, as members, make the standards making processes as good as it can be. The Council and Secretary General would welcome any feedback or comments on how we can achieve this for you. You can send these via the contact tab on the website.

David Hawken
EUROCAE Council Chair

WG-80

Hydrogen Fuel Cell Systems



▲ Combined AE7/ WG-80 and ARC Teams in front of a Fuel Cell bus

EUROCAE WG-80 was established in 2008, in collaboration with SAE AE-7AFC, to develop guidelines to support qualification and certification of Hydrogen Fuel Cell Systems in various aircraft applications.

Today, aircraft vehicle systems are energised by three separate - but locally optimised - power sources: pneumatic, hydraulic & electric. Among these, electricity has the greatest potential to bring new benefits to the aircraft and allow for a global rationalisation and optimisation, along with a reduced environmental footprint.

In this context of More Electric Aircraft, new technologies can be used to replace, or complement, the conventional systems. Fuel cells are one of these, as they may be used as on-board electrical power generators for various applications. With the onset of these hydrogen fuel cell systems, new mechanical and electrical system safety design parameters will need to be provided for aircraft developers.

The initial objective of the joint EUROCAE WG-80 and SAE AE-7AFC team was to identify the specific safety criteria which should guide the integration of fuel cell systems into aircraft.

After a 4-year effort, the group released the joint document ED-219/AIR-6464 "Aircraft Fuel Cell Safety

Guidelines" in 2013, which describes the technical guidelines for the safe integration of Proton Exchange Membrane (PEM) Fuel Cell Systems (FCS) (*), including the fuel, the fuel storage system, the fuel distribution and the appropriate electrical systems, into the aircraft.

This document provides introductory mechanical and electrical system safety guidelines that should be considered when designing fuel cell power systems for use on FAR/CS, Part 25 aircraft applications. It focuses on the overall design, construction, operation and safety of the sub-systems which contain potentially hazardous parts or fluids.

The Working Group is now working on the review of the fuel cell technology maturity with respect to aviation requirements and the thorough definition of future onboard fuel cell applications.

In this context, the team is currently developing a joint document Minimum Aviation System Performance Specification (MASPS) / Aviation Specification (AS) that defines the technical guidelines for the safe development, testing, integration, validation and certification of PEM fuel cell systems, including fuel storage, fuel distribution and the integration of electrical systems into large (CS-25) aircraft.

Three target application examples (Medical Evacuation, Galley and Emergency Power) are included to support the development of aircraft integration aspects. The fuel cell system was considered as functional subgroups.

Requirements specific to one functional group are included in the one of the following sections: Fuel Storage and Distribution, Oxidant Storage and Distribution, Fuel Cell Module, Balance of Plant, Thermal Management, Controller / System Interface, Sensors, Electrical Power Conditioning, Power Storage, Heat Rejection, Electrical Power Interface. Requirements that apply to all functional groups are included in one of the following sections: Safety, Proof and Burst,

Material Compatibility, Environmental, Particular Risk Analysis, Maintenance.

Most of the technical concepts and approaches covered by this MASPS/AS represent current industry "best practice". Others require specific approval from the procuring activity before use. This requirement for approval is not intended to prohibit their use; but rather to ensure that the prime contractor has fully investigated their capability to perform reliably and to be sufficiently durable under the required conditions and that the prime contractor can present substantiating evidence for approval before the design is committed to.

The MASPS/AS has been submitted for open consultation as ED-245/AS6858 "Installation of Fuel Cell Systems in Large Civil Aircraft", and is due for publication in early 2017.

In the course of this activity, an FAA's Aviation Rulemaking Committee (ARC) was created to address airborne regulations for new Energy Supply Devices (ESD), with a strong focus on fuel cells (April 2015). The objective of this ESD ARC is to identify the rules for installing fuel cells on-board aircraft (in terms of design, certification, maintenance and test) via the creation of a Notice of Proposed Rulemaking (NPRM) that will be recommended to the FAA in April 2017.

The WG80/AE-7AFC has closely cooperated with this committee since its beginning and meetings have been organised conjointly, as many members are common to both groups.

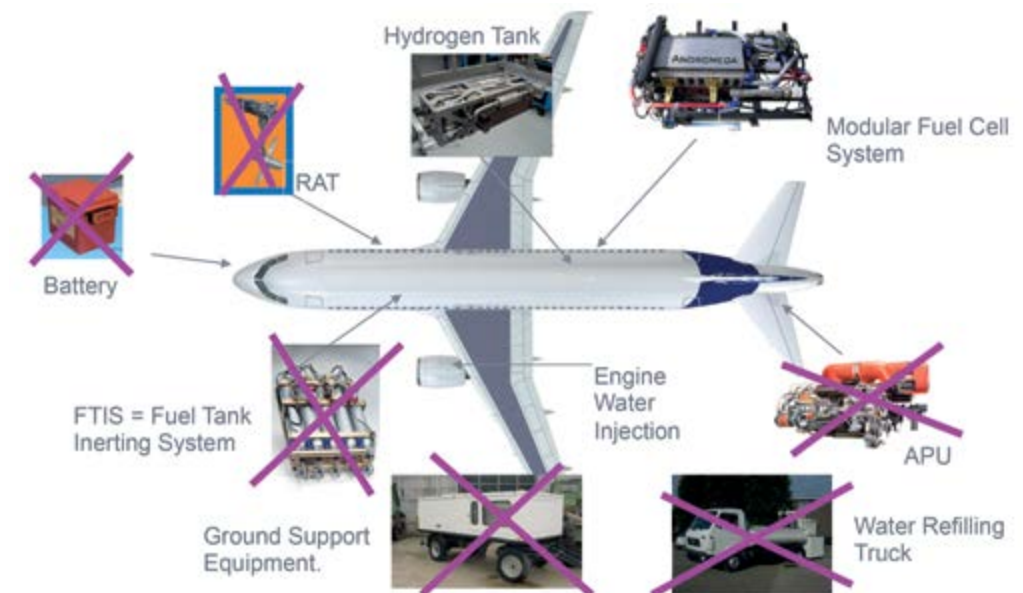
In the future, subsequent activities of WG80/AE-7AFC may include the development of a new joint MASPS/AS that defines the technical guidelines for the safe development, testing, integration, validation and certification of fuel cell systems which operate from other types of hydrogen source:

1. Liquid Hydrogen (LH2)
2. Onboard reforming
3. Material based storage of Hydrogen

The report would therefore include related considerations on fuel storage and fuel distribution.

(*) Note: Today PEM systems and hydrogen storage represent the most mature FCS technology and form the basis for this standard. Other types of FCS and fuel sources (including reforming technologies and electrolyzers), may be covered by a further update of this document.

By Olivier Savin, WG-80 Chairman and Tony Fallon, WG-80 Secretary.



WG-82

New Air-Ground Data Link Technologies

WG-82 is tasked with the development of standards of new air-ground data link technologies. These technologies can be considered a successor of today's VDL implementation providing more capacity to the user for upcoming ATS applications such as 4DTRAD.

AeroMACS MASPS describes the relevant operational and technical requirements from a system point of view. It further on deals with the AeroMACS network architecture based on WiMAX Forum definition and work. In that context also the airborne architecture is discussed which might have a significant impact on the implementation of ATS services. This work is actually continued in the according AEEC forum. Major input for the document development and completion has

been given by SESAR SJU project P15.2.7 and P9.16. P15.2.7 defined an operational scenario to investigate and validate technical aspects of the system based on a comprehensive simulation effort. Other items relevant for an implementer of AeroMACS, which are dealt with are interoperability and compatibility, coverage and capacity aspects, cell dimensioning and planning. Finally a section dealing with test cases to complete the test set provided by the WiMAX Forum has been added.

In total the AeroMACS MASPS shall be used as a baseline standard for implementers providing also guidance in describing a concrete implementation case.

WG-83

Foreign Object Debris Detection Systems

Following the approval of the updated Terms of Reference by the EUROCAE TAC, WG-83 has engaged in its next activity, the development of an OSED (Operational Services and Environment Description) for FOD Detection Systems. The Kick-Off meeting took place at the EUROCAE premises in Malakoff (France) on 2 November 2016.

Having published ED-235 (Minimum Aviation System Performance Specification for FOD Detection Systems) the members of WG-83 realised that the performance of such systems very much depends on the local operational and environmental conditions. In order to provide guidance on the impact such conditions may have and how to assess them, it was decided to create an OSED covering those aspects.



For this activity EUROCAE is encouraging airports experts with operational experience in FOD management as well as manufacturers of FOD Detection Systems to participate. To do that, just contact us at eurocae@eurocae.net.

WG-97

Interoperability of Virtual Avionic Components



Physical test-benches used in the aircraft development are complex platforms with high initial and recurrent costs. Virtual testing is the key to increase cost efficiency and to optimise testing tasks.

WG-97 is finalising now the Technical Specification document VISTAS-WG#97, which provides a framework to facilitate the development of simulator and full or Hybrid avionic test benches. In particular, this framework implements on standard Ethernet bus a light and efficient way to virtualize the different types of avionic signal exchanges between the components (analogue, discrete, ARINC 429, CAN, etc.). The standard also covers the mechanisms allowing the simulation of different failures.

When used in the core of an avionics development process, this standard will completely change test bench architecture. It permits simultaneously improved real bench maturation as well as cost optimisation by

avoiding real wiring and reducing the use of expensive input/output interface hardware. Furthermore, VISTAS-WG#97 brings genericity, scalability and versatility to hybrid test bench leading to further improvements and maintenance simplification.

A major benefit VISTA-WG#97 brings stems from the fact that even the exchange of signals between components such as avionic buses is also virtualised. This allows simulation at speeds greater than 1, which is expected to become unavoidable to secure the validation and verification process, challenged by the tremendous number of test scenarios, given the growing avionics complexity. The aim is to "do it right the first time" during standard bench testing.

In parallel with these technical benefits, VISTAS-WG#97 could be an efficient enabler for the necessary fusion of the simulation and test benches worlds.

WG-100

Remote and Virtual Towers

ED-240 'MASPS for Remote Tower Optical Systems', developed by the 'Remote & Virtual Tower' (RVT) EUROCAE WG-100, pertains to remote tower systems, which in their basic implementation level focus on optical sensors only.



The group was launched in July 2014 under the Chair of the German Aerospace Center - DLR, and EUROCONTROL in the Secretary role. These group heads were desired by the industry to have market neutral experts in this distinctive leading position. Right in the beginning the group split into two sub-groups (SG) in order to more efficiently analyse existing operational requirements and assess the current technology state of the art to agree on the scope of ED-240.

The **'operational' SG1** (led by LFV) recognised very soon that operational requirements existed yet (nearly exclusively formulated by the SESAR remote tower projects), but that, except of two requirements, nearly no quantitatively defined requirements were among them. In addition, it was recognised that the operational needs and their linked operational requirements extremely vary due to different air traffic characteristics, physical orography of the aerodrome, airspace characteristics, aerodrome infrastructure, or by heterogenic operator roles and local procedures.

Thus, it became evident, that for several performance parameters it would not be possible to provide a singular value but instead guidance on how to specify and verify a certain parameter.

The most dominant example with this dilemma was the definition of the minimum performance of the 'video update rate'. None of the ED-240 performance parameters was discussed more intense and in a more

critical and emotional manner. In the end it turned out that, although there is already one remote tower system in operation, which operates at 30 frames per second and was approved by the Swedish regulator, insufficient test results with sound research / scientific rationale were available to decide without doubt on a singular quantitative value here. Further problem is, the parameter is not independent from other system parameter settings like contrast, video compression, bandwidth, codex, etc. Further, also the variety of operational applications is rather high. There are, for instance, different types of service provision (e.g. ATC vs. AFIS, Apron management, gap filler or contingency solutions) and different operational use cases. As a solution the group agreed on a paragraph stating that the video update rate shall be determined by a safety assessment taking into account the specific operational context in order to ensure adequate presentation of moving objects to the operator. Future remote tower installation and validation results will bring more insight into that parameter and will be considered by WG-100 in a future revision of ED-240.

The **'technology' SG2** (led by Frequentis), assessing the technology state of the art, proposed that, although there exist sensor implementations solely basing on visual light spectrum sensor solutions, the MASPS shall also consider thermal sensors. Therefore the EUROCAE TAC proposed name "RVT for visual surveillance" was progressed to "remote tower optical systems".



WG-105

UAS Standardisation Reorganised

In the past EUROCAE had two active working groups developing standards and guidance material for UAS. Working Group 73 Unmanned Aircraft Systems (UAS) focused on the integration of RPAS into the civil airspace. Working Group 93 (Lightweight Remotely Piloted Aircraft Systems Operations) dealt with guidance material for Visual Line of Sight Operations in the airspace below 500 feet AGL.

With the migration towards a risk based, operation centric regulatory approach as developed in the Riga Declaration by the European Commission and now detailed in the ongoing EASA UAS rule-making process, this structure was seen as no longer adequate. The size of an unmanned aircraft is not anymore the most determining factor in the establishment of the applicable rules, regulations and standards, but the intended operation based scenarios and associated risk. This required EUROCAE to review the arrangements for the development of UAS related standards.

The Council had tasked the Secretariat to initiate this review and to put in place the proper steps to ensure that the future working arrangements are in line with the changing environment. These activities were executed in close cooperation with the leadership of WG-73 and WG-93.

In a Workshop on 04 March 2016 at EUROCONTROL in Brussels more than 70 stakeholders followed an open invitation and had the opportunity to discuss their perspective on the need of a UAS standardisation work programme and the proper EUROCAE work structure to support this work programme. The main message from this workshop was the request by stakeholders to ensure proper coordination amongst all standard developing organisations to prevent overlaps and gaps. Another result taken from the workshop was the need to merge the two existing Working Groups WG-73 and WG-93 into a single WG and to structure the EUROCAE Work Programme along the deliverables to be developed.



Together with the current leadership of WG-73 and WG-93, the EUROCAE Secretariat picked up those messages and started the development of updated Terms of Reference (ToR) along the lines that resulted from the Workshop. Also in response to a request during the workshop, the ToR were coordinated already in the drafting phase with EASA, the SESAR Joint Undertaking and JARUS to ensure that EUROCAE's work programme is in line with the other activities.

These ToR were submitted to the EUROCAE Council for its 291st meeting in September 2016 together with a strategy paper. Having received Council support, the ToR were submitted to the Technical Advisory Committee (TAC) for its 65th meeting. As a result of these meetings the creation of a new Working Group 105 was approved and tasked with the development of standards for UAS of all types, for all types of operations in all types of airspace at all times.

The EUROCAE Secretary General has appointed Mr. Michael Allouche and Mr. Alain Vallée as Co-Chairmen for WG-105.

In the new WG-105 the EUROCAE UAS activities will be clustered in various Focus Teams that will work on a specific subject, irrespective of the class of aircraft affected (large or small). The work will be coordinated

by "Focus Team Leaders". Together with the WG-105 Chairpersons, the Focus Team Leaders will build a Steering Committee to ensure that the activities are coordinated across all Focus Teams and in line with the ToR.

According to the ToR, WG-105 will perform work in the following focus areas:

- ▶ UAS Traffic Management (UTM), including Geo-Fencing and Identification
- ▶ Command, Control and Communication (C3)
- ▶ Detect and Avoid (DAA)
- ▶ Automation, including Enhanced RPAS Automation
- ▶ Design & Air Worthiness Standards
- ▶ Specific Operation Risk Assessment (SORA)

Following the approval of the ToR EUROCAE has published Calls for Participation (CfP) for each of the activities contained in the ToR. As an organisation developing documents based on the commitment of volunteers, this step is absolutely required to ensure that the standards development will be possible in the timeframes envisaged. All those who have received this CfP are thus kindly encouraged to reply to it as soon as possible. Only activities receiving sufficient support during the CfP will actually be launched.

The EUROCAE Governing Bodies, the Council and the Technical Advisory Committee (TAC) of course follow closely the developments in the area of UAS and ensure that the EUROCAE deliverables are in line with those developments.

EUROCAE is looking forward to the cooperation with all stakeholders in the implementation of this new Work Programme in the years to come.

WG-106

Electronic Flight Bag (EFB)

On 20 October 2016 the EUROCAE Council has approved the creation of a new Working Group with the goal to unambiguously define the perimeter of Electronic Flight Bag (EFB) applications, without preventing future innovation in that domain.

The standard would not contradict existing guidance such as the one contained in AMC 20-25 or in the ICAO EFB Manual Doc 10020, but may implement objectives to achieve completeness.

The quick development of the Electronic Flight Bags (EFBs) use over the last years was such that they became a very common and important tool for flight operations and have replaced paper in most cockpits.

Increasingly present, EFBs also feature more - and more advanced - functions that depart from the simple replacement of paper, while offering new possibilities to enhance operations and information available to the crew. They consequently become more complex to evaluate.

To facilitate the operational approval path in Europe and an EASA ETSO authorisation, an industry standard became necessary.

Based on the existing material, the WG would identify the minimum requirements that any EFB application must meet, develop corresponding test criteria, and monitor and consider the progress of the current EFB rulemaking activity at EASA.

EASCG

celebrates 2 years of standardisation coordination

Building an efficient, sustainable and safe Single European Sky, requires the modernisation of the European ATM infrastructure. To ensure a coordinated and harmonised implementation of the required ATM-related functionalities, it is essential to ensure that the necessary standards are available, in a timely fashion. There is an increased need for new standards arising from the deployment of SESAR and the transition to performance-based regulation.

The European ATM Standards Coordination Group (EASCG) was created in late 2014/early 2015 to support this objective and to ensure coordination of standardisation and regulatory processes for ATM in Europe.

It was established as a joint coordination and advisory group established to coordinate the ATM-related standardisation activities, essentially stemming from the European ATM Master Plan, in support of Single European Sky implementation.

The EASCG is composed of EUROCAE, EUROCONTROL, European Commission (DG MOVE), EASA, the SJU, and the ESOs. In addition, the SESAR Deployment Manager, EDA, ASD as well - as since October 2016 - CANSO Europe, participate as observers. Other organisations may be invited to participate for relevant items on a case-by-case basis.

Since its creation, the EASCG has proven to be a very valuable and effective coordination platform. The first mission was to update the PCP "Indicative roadmap with respect to standardisation and regulation", which the group completed in summer 2015 with the submission of the updated roadmap to the European Commission.

Since then, the EASCG has concentrated on its main deliverable, to develop, monitor and maintain an overarching European ATM standardisation rolling development plan, based on the standardisation roadmap from the SESAR framework, and inputs from the EASCG members (including the military), and where needed other key actors in the aviation domain.

In March 2016, EASCG organised a dedicated workshop during the World ATM Congress (WAC) in Madrid, reported in the previous issue of this publication.

In July 2016, the EASCG launched a website dedicated to inform the aviation community on its activities and to disseminate the European ATM Standardisation Rolling Development Plan (RDP). It is available at www.eascg.eu. The website is an excellent tool for all actors to be informed about the group's activities, and to obtain the latest version of the RDP. Stakeholders are encouraged to make best use of the RDP and to register on the EASCG website to receive information on any future updates.



«Register on the EASCG website to receive information on any future updates.»

In October 2016, the EASCG chair Christian Schleifer presented the model to the ICAO Standards Round Table, which recognised it as a very good example of coordination amongst the key actors and will indeed follow a very similar path to support ICAO's move towards more performance-based regulation, making reference to industry standards, such as from EUROCAE.

After two years of existence, the EASCG can look

back at a successful track record of providing the much needed coordination of standardisation and regulatory activities for ATM, and can look forward to a wealth of future activities thanks to the engagement of its members.

EUROCAE Awards 2017

EUROCAE's work is based on contributions from voluntary workforce nominated by our members. These experts are the heart of the organisation and are driving the standard development process. The EUROCAE Awards are intended to recognise excellence, leadership and hard work in EUROCAE WGs by the WG Chairperson, Secretary, or other key members of the group.

The categories, which have been chosen based on key areas of importance to EUROCAE WGs, are:

- ▶ **WG Leader:**
To recognise excellent leadership of a WG or activity
- ▶ **Best contribution:**
To recognise outstanding contributions to a WG
- ▶ **Global harmonization:**
To recognise joint WGs activities and to support worldwide interoperability and global harmonisation
- ▶ **Women in Aviation:**
To recognise the contribution of women to the EUROCAE activities in aviation
- ▶ **International contribution:** To recognise specifically participation from non-European stakeholders.
- ▶ **Lifetime Achievement Award:** To recognise long lasting contributions to EUROCAE Working Groups.



The Awards will be presented during the Award Night as part of the EUROCAE Symposium on the 27th of April 2017 at London.

Technical Advisory Committee (TAC)

By Eric Bouchard and Ralph Rudolph



The Technical Advisory Committee - TAC - is one of EUROCAE's constitutional bodies. Its task is to advise the Council on technical, operational and on request policy matters. What does this mean in reality and why is the TAC important for EUROCAE?

▶ WHAT IS THE TAC?

The role of the TAC is defined in Article 17 of the EUROCAE constitution. In addition to giving advice to the Council, it provides recommendations on the creation and modification of new standardisation activities, namely Working Groups. TAC is composed of 12 members that represent the different stakeholder groups in EUROCAE. The Secretariat is also a TAC member. TAC Members are appointed by the Council for 3 years, any EUROCAE member can apply.

Names of current TAC Members	Company	Role
Eric Bouchard	Dassault	Chairperson Aircraft Manufacturers – Business Aviation
Ralph Rudolph	DFS	Vice Chair Air Navigation Service Providers
Hugues Meunier	Thales Avionics	Equipment Manufacturers - Avionics
Robin Davies	BAE Systems	Equipment Manufacturers – Aircraft non-Avionics
Hervé Kerhoas	Airbus	Aircraft Manufacturers – Commercial Aviation
Jean-Marc Loscos	DSNA	Air Navigation Service Providers
Michael Mowinski	Fraport	Airports
Sasho Neshevski	EUROCONTROL	European ATM Organisation
Michel Procoudine-Gorsky	Thales Air Systems	Equipment Manufacturers – Ground Equipment
Friedhelm Runge	EASA	Regulatory Authority
David Bowen	SJU	European R&D community
Giancarlo Buono	IATA	Airlines or Airspace Users



► WHAT DOES THE TAC DO IN PRACTICE?

The TAC meets four times a year, synchronised with Council meetings so as to allow a fast flow of information. During its meetings, it monitors the progress of the Working Groups and looks into what is actually happening in the standardization world outside at RTCA, EASA, SESAR, ICAO. This work is done in close cooperation with the Secretariat. Most intense debates happen about the start of new WGs or new TORs for existing WGs. It has to make sure to align the work with the activities of other bodies (especially RTCA and SAE), with the needs of European Industry, and sometimes to prioritise in order to make best use of scarce resources of members.

Once a year, the collective experience of TAC members is brought into the EUROCAE Technical Work Programme (TWP). This programme captures the scope of EUROCAE work into 9 Domains (e.g. on-board avionics) and undertakes to preview the development in each Domain to capture possible future work for EUROCAE (roughly five years in advance). The TWP is approved by the Council and then provides the basis for future work, especially guiding which new WGs need to be created.

► WHAT IS THE IMPACT ON EUROCAE?

Why does EUROCAE afford something like a TAC? Standardisation would work as well with able Working Groups alone.

TAC is quite a unique establishment. At EUROCAE, the technical expertise of its various aeronautical industry stakeholders is bundled in TAC, as a delegation from the Council. This has its merits, as TAC ensures from the outset that prospective work is aligned with EUROCAE member interests. An additional benefit is having representatives of key European aeronautical organisations in TAC (e.g. SJU, EASA, EUROCONTROL) to align work with SES-development in Europe. Via the General Secretariat (also a TAC member) and direct contact of TAC chair with RTCA, the transatlantic alignment of work can be assured as well. Close coordination between TAC and EUROCAE Council leads to an efficient and well balanced operation of the organisation.

In a nutshell the impact of TAC on EUROCAE is to focus standardisation work towards the interests and usefulness for its stakeholders, in coordination with external forces and regulatory necessities. Above that a high quality level of output is assured by thorough discussion in TAC and finding resolutions in consensus.

► WHAT ARE THE PLANS FOR THE NEAR FUTURE?

First of all, TAC will continue providing its service to the Council.

Meanwhile, TAC is also focussed on the 36 EUROCAE active Working Groups so as to maintain their efforts in line with the EUROCAE overall work programme. Hence, contact with the Working Groups has been recognised as an important aspect.

TAC is relying on the reports of the Technical Secretariat that follows the WGs closely. In order to establish a more direct and also personal contact with the WGs,

we plan to involve the WG chairs more directly in TAC meetings (by teleconference or direct participation) and TAC chairs to participate in the annual Chairperson Club meeting.

Also, in the framework of the Council Efficiency Initiative, the time to set up new Working Groups shall be shortened. For a WG approved by Council, the TAC will get more autonomy to set the direction of work progress within given limits.

We are looking forward to working closely with our WGs and sharing in the discussions.

New TAC member

Council appoints Giancarlo Buono, IATA, to the TAC

On 6 September, the Council appointed Mr Giancarlo Buono, Director Safety and Flight Operations for Europe at the International Air Transport Association (IATA), to represent the airlines view in the Technical Advisory Committee.



a Captain on the Airbus A-320 family.

The TAC is composed of specialist members, appointed in order to achieve a balanced representation of EUROCAE interests.

The appointment of a representative for the airspace users' community to complement the TAC flows down from EUROCAE technical work programme and is intended to enhance the understanding and consideration of their perspective in EUROCAE activities.

Capt. Giancarlo BUONO is responsible for the delivery of IATA Safety and Flight Operations Strategy in Europe and for the liaison with European Regulators, the EC and EASA on issues relating to air transport Safety and Flight Operations.

His professional expertise consists of extensive flight operations and quality-safety management experiences. With 24 years of experience in the Air Forces and Airline industry, he is currently qualified as

Inside EUROCAE

News



Save the date: 27-28 April 2017
54th EUROCAE General Assembly & Symposium
 at the Radisson Blu Edwardian Bloomsbury Street Hotel, London, UK



EUROCAE moves - our future address:
 Please notice to use our new address early 2017:
 Le Triangle, 9-23 Rue Paul Lafargue, 93200 Saint Denis



New website: Part of the recent initiative to provide enhanced services to our members, we are glad to announce that we have launched a new website. You will find this platform a modern tool, easy to navigate,

with a fresh approach to information management.
 Additional upgrades for the Working Groups and the e-Shop are coming up soon. To explore the new site and all it has to offer, check out www.eurocae.net



Arrival: Raphaël de Courrèges joined the team in September to assist the Secretariat during the absence of Samira Bovigny. Previously, he worked as a professional coach in a Counseling and HR consulting firm.



Bye bye FAX machine: We care about environment. Therefore, we will no longer use the FAX machine. You can always contact us at the usual email and telephone numbers. Visit us: www.eurocae.net

EUROCAE

New office address

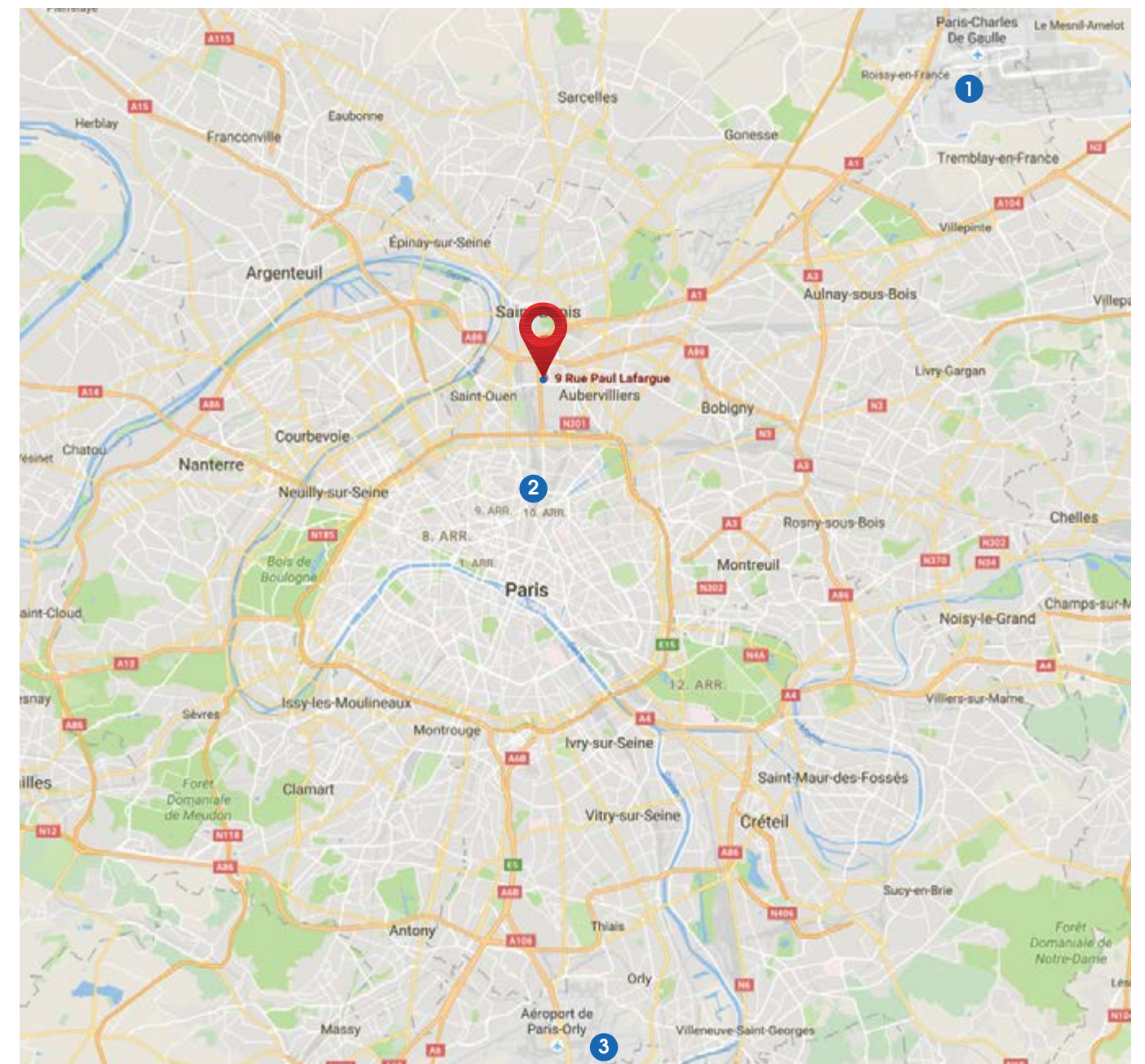
New Office address (early 2017):

Le Triangle, 9-23 Rue Paul Lafargue
 93200 Saint Denis

▶ Located directly at the RER B station La Plaine, Stade de France.

Travel times by public transport:

- 1 Airport Charles De Gaulle: 35 minutes
- 2 Gare du Nord: 15 Minutes
- 3 Airport Paris Orly: 45 minutes



Latest publications

since April 2016

EUROCAE Documents (ED) are developed by Working Groups bringing together renowned experts in their area, and following a well-established process. They are often developed jointly with our international partners and recognised worldwide for their high quality and as state of the art technical specifications.

These EDs can be system or equipment performance specifications, safety and performance requirements, interoperability requirements, technical specifications or guidance material. Some documents are dedicated to the airborne side, others to the ground side (mainly CNS and ATM), while others cover common air and ground requirements.

EDs are widely referenced as a means of compliance to regulatory documents by EASA, EUROCONTROL, the European Commission and ICAO.



Recent publications:

- ▶ **ED-117A**
"MOPS for Mode S Multilateration Systems for Use in Advanced Surface Movement Guidance and Control Systems (A-SMGCS)"
- ▶ **ED-129B**
"Technical Specification for a 1090 MHz Extended Squitter ADS-B Ground System"
- ▶ **ED-227**
"Minimum Aviation System Performance Standards (MASPS) AeroMACS"
- ▶ **ED-228A**
"Safety and Performance Standard for Advanced ATS Data Communication"
- ▶ **ED-229A**
"Interoperability Standard for Data Communication via ATN"

- ▶ **ED-230A**
"Interoperability Standard for Data Communication via a Mix of ATN and FANS-1/A+"
- ▶ **ED-231A**
"Interoperability Standard for Baseline 2 ATS Data Communication, Baseline 1 Accommodation"
- ▶ **ED-240**
"Minimum Aviation System Performance Specification for Remote Tower Optical Systems"
- ▶ **ER-014**
"Light Remotely Piloted Aircraft Systems (LRPAS) Visual Line of Sight (VLOS) Operations Guidance material for Regulators and Operators"

You can find all the EUROCAE publications at:
www.eurocae.net

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Seasons' Greetings &
Happy New Year
from the EUROCAE Team!

EUROCAE
NEW Le Triangle, 9-23 Rue Paul Lafargue
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