

Cologne, 21-22 June 2017

Speakers' biographies (in order of presentations)

1) **OPENING REMARKS**

Massimo BAROCCO, EASA Flight Test Pilot – Flight Test & Human Factors Chief Expert



Massimo BAROCCO - after having graduated in Aeronautics from the Air Force Academy 1984, Massimo Barocco attended the "Euro NATO Joined Jet Pilot Training" at Sheppard AFB where, in 1985, he graduated as fighter pilot.

Then, after 4 years of operational experience as a fighter bomber pilot on Tornados, he was sent to the Empire Test Pilot School at Boscombe Down (UK) where, in December 1991, after having successfully completed the course, he was nominated "test pilot".

Afterwards, he was assigned to the Air Force Flight Test Centre of Pratica di Mare where he spent all his military test pilot career and in 1996, he was also appointed Commanding Officer of the Italian Official Test Squadron. After having completed his commanding post, he resigned from the Air Force and joined Alitalia where he was nominated technical pilot of the MD 80 fleet and he was tasked to form a test team in charge of all maintenance test flights and STC for the Airline.

In 2009, he left Alitalia to become Chief Test Pilot of OMAS SUD Sky Technology where he was responsible to conduct all the necessary development and certification flights of a new General Aviation twin engine aircraft and a new all composite single engine trainer. In December 2012, Cpt. Barocco joined the Agency as a fixed wing test pilot and he is responsible to conduct certification activities on many aircraft, including Airbus, Boeing and Leonardo products.

In addition, in mid-2015 he was nominated Chief Expert Flight and Human Factor, the position he currently holds in the Agency. Up to now Cpt. Barocco has logged over 10000 flight hours, including over 3000 hours of flight test activity, on over 50 aircraft types, including military jets, general aviation aircraft, business aircraft and transport aircraft.

Marco LOCATELLI, EASA Flight Test Pilot – Flight & Human Factors Expert

Marco LOCATELLI – is a former Italian Air Force Test Pilot where he started as fighter pilot in 1986 and, after graduation at EPNER in 1996, he joined the Italian Test Centre in Rome.

There he followed several test programs both on fighter a/c avionic, sensors and weaponry updates and heavy transport aircraft (A319, C130, ATR42 and B707).

After serving 17 years as military pilot and Test Centre Squadron commander he joined Alitalia Airlines where he flew Embraer E jets on international network for 5 years.

Later he was employed as research test pilot in Turin Polytechnic and Development on electric propelled a/c and certification test pilot in Tecnam srl, bringing new small airplane types and modifications to EASA certification.

He joined EASA in 2014 with a total of 19 years of flight test experience and about 6700 flight hours. In the Agency he's assigned as test pilot to General Aviation Dept. and he follows both CS-23 small a/c and CS-25 /Business jets segment a/c.



2) FLIGHT TEST CLASSIFICATION IN THE FRAMEWORK OF COMMISSION REGULATION (EU) 2015/1039

Massimo BAROCCO, EASA Flight Test Pilot – Flight Test & Human Factors Chief Expert

3) BEFORE FLIGHT TESTING CHECK LIST

Marco LOCATELLI, EASA Flight Test Pilot – Flight & Human Factors Expert



4) HUMAN FACTORS IN ACTION: FROM DESIGN TO END USERS

Georges REBENDER, EASA Head of Air Crew & Medical Department



Georges REBENDER – 1 Career to date

- · Head of Department Aircrew and Medical EASA (September 2014 present)
- · Section Manager Air Operations Standardisation EASA (2007-September 2014)
- · Operations Director Joint Aviation Authorities Netherlands (1999-2006)
- · Certification Manager Flight and Human Factors Airbus Industrie France (1988-1999)
- · Flight acceptance Engineer Airbus Industrie France (1980-1988)
- · Assistant to the Director: Secmafer Aviation France (1978-1980)
- 2 Education
- · Flight examiner DAC Toulouse France 1990
- · Flight instructor SEFA Grenoble France 1989
- · Administration d Entreprises degree : University Robert Schuman Strasbourg France 1978
- · French Air force Officer (Air Traffic Control) 1976 France
- · Bachelor Sciences et techniques Aérospatiales Paris University 1975 France

5) COMPLIANCE FINDING FOR RNP-AR

Gerard TEMME, NLR Flight Test Pilot – Flight Test & Human Factors Expert

Gerard TEMME - graduated from the Delft University of Technology and the International Test Pilot School. He has accrued 35 years of aviation and certification experience with the Civil Aviation Authority (CAA-NL) of the Netherlands, the European Aviation Safety Agency (EASA) and other authorities around the world.

Mr Temme has been active in national and international certification teams, has certified more than 25 aircraft types for the European market in the expert fields of Aircraft systems, Handling Qualities, Performance, Human Factors and Avionics and is currently working as Senior Certification Test Pilot in leading European projects. In the last 25 years as flight test pilot and in the years preceding as Noise specialist, Flight test engineer and mechanical systems surveyor.



He has been a member of the D&F JAA study group and the JAA Flight study group, which handled the

development of new airworthiness requirements in the JAA system. In order to maintain currency he has flown part time with different airlines.

Mr Temme has been part of the group that developed Notice of Proposed Amendment (NPA) 14-2004 on Human Factors. In addition he has been working with the NLR research establishment and the FAA over the last five years to develop an analysis technique for pilot error.

Mr Temme has served a two year contract with the Indonesian authorities for assistance with certification activities and on the job training of test pilots.

Mr Temme has extensive experience in certification processes gained in more than 25 certification projects for CAA-NL, JAA and EASA. He is currently involved in many certification projects for EASA. This involves the following applicants: Boeing, Gulfstream, Cessna and Embraer.

Currently Mr Temme is the executive director and owner of the independent consulting company CertiFlyer. CertiFlyer is specialized in: Certification Flight testing, Academic Aviation research projects, Aircraft system certification, Avionics evaluation, Human Factors assessment, and Aircraft Operation.



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6) ICING CERTIFICATION IN ROTORCRAFT

Francesco PAOLUCCI, EASA Senior Expert - Rotary Wing Flight Test



Francesco PAOLUCCI - graduated from the University of Rome in 1990 with a degree in Aeronautical Engineering. After working as a consultant for one year in University of Rome, he joined Registro Aeronuatico Italiano (now ENAC) in 1991.

He joined EASA in September 2014 as a Rotorcraft Flight Test Senior Expert. His professional experience is based on more than 22 years of certification flight testing in a number of projects carried out for ENAC and EASA on general aviation and small and large Rotorcraft. Working for ENAC and EASA, he has been involved in the basic certification and subsequent major changes of one JAR VLA, one CS23 piston engine aircraft, four CS 29 rotorcraft (EH101-510, AW139, AW189, AW169) and four CS27 rotorcraft (A119, A109N, A109LUH, AW109SP) and in the validation of many different types and in the approval of STCs. As FTE, he has accumulated more than 1700 FH in flight test.

7) CS25/PART25 HARMONIZATION

John MATTHEWS, EASA Flight Test Engineer- Flight & Human Factors Expert

John MATTHEWS -

BSc Honours Aeronautical Engineering British Aerospace Flight Test 1979-1984 Tornado ADV CAA Flight Test 1984-2007: CAA, JAA & EASA certification projects EASA Flight Test 2007-2017



8) BDC MODEL 3000 EASA VALIDATION UPDATE

Roger MATHYS, Flight Test Pilot and Bernhard BERSET, Chief Test Pilot, Armasuisse



Roger MATHYS – is fixed wing Test pilot with Armasuisse, the Swiss Defense Procurement Agency in Emmen, Switzerland. He joined the Swiss Air Force in 2000. After completing a Bachelor and Master degree in Physics and Biomedical Engineering in 2011 he joined the Armasuisse Flight Test Center in Emmen, near Lucerne. In 2013 he graduated from the ETPS fixed wing course as a test pilot. He was involved as project pilot in airworthiness certification tests of various Pilatus aircraft (PC-6, PC-12 and PC-21). Since 2015 and on behalf of the Swiss Federal Office of Civil Aviation (FOCA), he is part of EASA panel 1 for the Beechcraft T-6C Model 3000 EASA validation and was nominated early 2017 as EASA flight test expert for CS-23. Roger has flown over 40 aircraft types and is current on a wide range of fixed wing aircraft, including most of the Pilatus Models and holds all the relevant ratings.



9) OPERATIONAL SUITABILITY DATA FOR FLIGHT CREW – THE INTERACTIONS BETWEEN PANEL 1 AND PANEL 2

Herbert MEYER, EASA Flight Crew Training Section Manager & Senior Expert

Capt. Herbert Meyer, M.Sc. – joined EASA more than 10 years ago, initially as rulemaking officer in air operations and as operational evaluation pilot and Section Manager since 2008.

He is an aeronautical engineer, as well as a former military pilot and flight instructor, and airline pilot. His career also includes being a member of the ICAO Air Navigation Commission and several Panels.



10) NEW CS-AWO AND RELATED AMC FOR SVGS, HUD, EFVS AND SA CAT

Carl George Ennis GARVIE – EASA Regulations Officer - Initial Airworthiness and Vincenzo PENNETTA, EASA Flight Test Engineer – Fixed Wings



Carl George Ennis GARVIE - was born in the UK, his education includes an MSc in Airworthiness and he is a Chartered Engineer (CEng) and a member of the Royal Aeronautical Society. Carl started his career in aeronautical engineering in 1992 working for the UK Ministry of Defence in a military MRO environment and held positions including maintenance technician, maintenance team leader and non-destructive testing officer. In 2003, Carl started working within UK Defence Equipment and Support (DE&S) and held posts including UK Apache AH-64D airworthiness officer and UK A400M project team certification manager. With the formation of the UK Military Aviation Authority in 2008, Carl became an airworthiness specialist tasked with the introduction of updated airworthiness regulations. In 2010, Carl started work at the European Defence Agency (EDA) as an airworthiness

and certification officer tasked with the harmonisation of European military airworthiness regulations in-line with the EASA regulatory structure. In 2016, Carl started work in EASA as a regulations officer within the certification directorate and is responsible for CS-VLR, CS-27, CS-29, CS-E and CS-AWO.

Vincenzo PENNETTA – started his career in aviation in 1983 as a Cadet in the Italian Air Force Academy (Pozzuoli, Naples). After graduation from Academy and from the University of Naples in Aeronautical Engineering in 1989 (110/110 Cum Laude), he was appointed 1st Lieutenant and assigned to the Italian Flight Test Center (Reparto Sperimentale Volo) in Pratica di Mare Air Force Base, 15 km south of Rome.

He graduated in 1991 (class 90B) as Flight Test Engineer -Fixed Wing - from the USAF Test Pilot School in Edwards AFB (USA - California). Since then he was involved as Lead Project Flight Test Engineer in several test trials for fighter aircraft (Tornado, Eurofighter, AM-X) and air-to-air refueling trials with B-707 T/T, C-135FR, VC-10. He holds the Italian Air Force Certificate for FTE n.49.



From 2002 he left active duty with the rank of Major to join the Italian Accident Investigation Board (ANSV,

an agency under the control of the Italian government - Presidenza del Consiglio dei Ministri -), where he was involved in many aircraft accident investigations (Linate runway collision accident in 2001, Investigator in Charge of the ATR 72 Tuninter ditching off-shore Palermo, etc.). In 2005 he was appointed as the Head of investigation Department.

In May 2009 he joined the European Aviation Safety Agency in Cologne (Germany) as Safety Investigation Officer within the Safety Analysis and Research Department. He monitored the follow-up of safety investigations conducted by the relevant Accident investigation agencies/boards (AIBs) throughout the world, specifically for those investigations in which aircraft of EASA remits were involved. Acted as a focal point in the Agency for investigation related activities in order to have a centralized coordination function.

In January 2014, following an EASA external selection procedure, he has been appointed as Flight Test Engineer – Fixed Wing in the Certification Directorate. Works as FTE in several EASA projects (DA Falcons, ATR, Cessna 680A/700, Sukhoi Superjet, A320/321, A330 neo and MC-21).



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11) EASA NEW CS23 AND NEW CHALLENGES FOR FLIGHT PANEL

Dominique ROLAND, EASA Head of General Aviation & Remotely Piloted Aircraft Sys. (RPAS), Boudewijn DEUSS, EASA Senior Regulations Officer - Initial Airworthiness and Manfred REICHEL, EASA Section Manager CT.2.2, CS-23 Aeroplanes



Dominique ROLAND – Is Head of the General Aviation Department since September 2016 and Champion for the GA Roadmap project since 2014. Holds a CPL and a GA Test Pilot Rating (EPNER 2010). Head of Design Organization Department from 2014 to 2016. Started at EASA in August 2005 as DOA Team Leader. In charge of Airbus DOA between 2015 and 2014. Started as Flight Instructor, and then test pilot for Avions MUDRY & Cie (France, CAP10B, CAP232...). Head of Design Organization for Robin/Mudry between 1997 and 2003.

Boudewijn DEUSS – started to work for EASA in March 2005 as rulemaking officer dealing with initial airworthiness (Part-21, CS-22, CS-23 etc.) His aviation experience before EASA was in different roles at Fokker Aircraft, primarily involved in typical interface activities. Starting as liaison officer between production and engineering followed by various positions in customer support activities.

Currently, as senior rulemaking officer and GA Roadmap project manager, primarily involved in General Aviation Roadmap activities and related rulemaking projects to create a sustainable and healthy regulatory environment for GA.





Manfred REICHEL - Manfred is Section Manager within the European Aviation Safety Agency (EASA), responsible for the CS-23 aeroplanes with piston engine and electric propulsion. He joined EASA more than 10 years ago as a Project Certification Manager in General Aviation, taking care of aircraft types under CS-LSA, CS-VLA and CS-23, and also airships. In 2015 he became Section Manager for CT.2.2. He is engaged in the reorganisation of CS-23 and is also heavily engaged in electric propulsion for more than two years now.

Before EASA he spent 15 years in the small aeroplane industry in Austria and Germany, dealing with flight test, non-electric systems, DOA, serial production support, final inspection and, throughout that time, type certification of modern type design worldwide.

12) UAV CERTIFICATION FLIGHT PANEL CONSIDERATIONS

Riccardo FROLLO, EASA Flight Test & Human Factor Expert

Riccardo FROLLO– was born in 1968, Naples (Italy). He graduated the Italian Air Force Academy in 1992, Aeronautical engineer. 1994 EPNER French Flight Test Engineer (FTE) Diploma. 1992-2001 Italian Flight Test Center in Pratica di Mare, for domestic rotorcraft projects and the NH90 helicopter. 2001-2002 flight test engineer in Piaggio Aero Industries in Genova (Italy). 2002-2005 Flight Analyst in ASW170 FAA Rotorcraft certification office in Fort Worth (Texas) worked on various STCs, on AW609, Bell 210 TC and the Sino Swearingen SJ30 business jet TC. 2005 to present EASA Project Certification Manager for rotorcraft, currently flight test engineer on general aviation, Airships and rotorcraft. Specialized on Night Vision Image System certification and helicopter external loads certification. He holds a PPL on piston engine airplanes and flew as FTE around 700 experimental flight hours on various aircraft. He is married and has two children Flight Test Engineer – Flight Test & Human Factors Expert





13) GETTING TO GRIPS WITH ATTCS

Matthias SCHMIDT, EASA Flight Test Engineer– Flight & Human Factors Expert



Matthias SCHMIDT - is a Flight Test Engineer for Fixed Wing Aeroplanes. After graduating from the Technical University of Braunschweig with a Master Degree in Mechanical Engineering, Aeronautical Engineering in 1988 he started his professional career as a Scientific Employee of the German Aerospace Research Establishment (DLR) in Braunschweig, Germany. In an industry co-operation he designed, analysed and tested air foils for a European tiltrotor aircraft project.

In 1992 he joined the German National Aviation Authority (Luftfahrt-Bundesamt) in Braunschweig, Germany. He was assigned responsibility in aeroplane type certification as an expert for Performance and Flight Manuals. The scope of work was expanded to flight test after his Flight Test Engineer education at International Test Pilot's School, Coventry, UK, in 2000. Following reorganization in light of European Aviation Law he took also

responsibility as Project Certification Manager for Small Aeroplanes.

In 2013, he joined EASA's Certification Department, Cologne as Flight Test Engineer for Fixed Wing Aeroplanes. As a flight test engineer, his main projects were Airbus A310 MRTT (Multi-Role Transport Tanker), Dornier 328, Dassault Falcon 7X, Airbus A400M and A350 projects. His current TC projects are Dassault Falcon 5X, Gulfstream GVII, Embraer E2 Jets.

14) **PROPULSION FLIGHT TEST**

Laurent BUSSIÈRE, EASA Flight Test Engineer

Laurent BUSSIÈRE – is a former French Air Force C160 Navigator. After graduation at EPNER in 2006, Laurent joined the CEAM (Centre d'expertise aérien militaire/ French military Air warfare Centre). His main task was to lead the Joint Evaluation Team, in order to coordinate additional flight test necessary for entry into service and to prepare the operational evaluation of the A400M. He was also involved in many project to upgrade French military transport aircraft capabilities (CN235, C160, C130).

After 20 years in the French Air Force, he joined EASA in 2013 as an "in house" lead flight test engineer. Since this time, he is involved in all Airbus projects (A350-900 and -1000, A320 Neo...) and flight panel coordinator for long range (A330/A340, A330 Neo and A330 Beluga). He is the focal point for engine flight test. Recently, he was nominated as flight panel coordinator for COMAC C919 validation.



15) CLOSING REMARKS

Massimo BAROCCO, EASA Flight Test Pilot – Flight Test & Human Factors Chief Expert and Marco LOCATELLI, EASA Flight Test Pilot – Flight & Human Factors Expert