PLENARY SESSION

- N° 1 – A350 Flight test campaign – Patrick DU CHE - AIRBUS – France
- N° 2 – nEUROn Flight test campaign – Sylvain COURTOIS - DASSAULT AVIATION - France
- N° 3 – SNCF Railway Rolling Stock Test Centre and Test in railway domain – Franck BOURGEOIS – Daniel CHAVANCE - SNCF – France
- N° 4 – Last news from Rosetta – Philippe GAUDON – CNES – France
- N° 5 – NASA’s Optical Communications Program for 2015 and Beyond – Donald CORNWELL – NASA – USA

TECHNICAL PROGRAMME
ORAL PRESENTATIONS

SESSION N° 1 – Transducers, measurement devices – AIM2 research European Programme.
Session chairman: Fritz Boden – DLR - Germany

- N° 2 - Recalibration of a Stereoscopic Camera System for in-flight Wing Deformation Measurements - Tania Kirmse - DLR Göttingen – Germany.
- N° 3 - In-flight wing deformation measurements by image correlation technique on A350 - Benjamin Mouchet and Vincent Colman - AIRBUS Operation SAS – France
- N° 4 - Rotating Camera System for Propeller and Rotor Blade Deformation Measurements - Fritz Boden, Boleslaw Stasicki and Marek Szypula – DLR – Germany
- N° 5 - Development of Fibre Optic Strain and Pressure Instruments for Flight Test on an Aerobatic Light Aircraft - Nicholas Lawson, Ricardo Goncalves Correia, Ralph Tatam, Stephen James and Jim Gautrey - Cranfield University – United Kingdom
- N° 6 - Recent achievements in Doppler lidars for aircraft certification - Claudine Besson, Beatrice Augere, Aïnès Dolfi-Bouteyre, William Renard and Guillaume Canat – ONERA – France

SESSION N°2 – Test data acquisition and recording
Chairman Part 1: Christian Herbepin – AIRBUS HELICOPTERS - France

- N° 1 - FALCON 5X1 Flight Test Instrumentation – Jean-Pierre Rouby – DASSAULT AVIATION – France
- N° 2 - High speed development of a temperature remote acquisition system to reduce instrumentation heat sink in an aircraft engine - Jean-Christophe Combier - AIRBUS Operation SAS – France
- N° 3 – Combined position, attitude measurement with precise time distribution for observation payload - Emmanuel Sicsik-Pare, Gilles Boime and John Fischer – Spectracom – France – USA
- N° 4 - Optimizing Bandwidth in an Ethernet Telemetry Stream using a UHF Uplink - Moises Gonzalez-Martín and Pedro Rubio-Alvarez - AIRBUS DEFENCE AND SPACE – Spain
- N° 5 - Flexible Switching for Flight Test Networks – Diamuird Collins - Curtiss-Wright Defense Solutions, Avionics & Electronics – Ireland
- N° 6 - Evolving embedded electronics testing in HIL simulation and largescale test cells through sub-ns synchronization systems via Time Sensitive Networks in Ethernet - Kurt Veggeberg and Olivier Daurelles -National Instruments - United States, France
Chairman Part 2: Diarmuid CORRY – Curtiss-Wright Controls Avionic & Electronic - Ireland

- N° 7 - PTPv1 vs PTPv2: Characteristics, differences and time synchronization performances - Guillermo Martinez - Airbus Military – Spain
- N° 8 - User Programmable FPGA I/O for Real-Time Systems – Combining User Friendliness, Performance, and Flexibility – Yannick Hildenbrand, Andreas Himmler and Jürgen Klahold - dSPACE GmbH – Germany
- N° 9 – Guaranteed end-to-end latency through Ethernet - Øyvind Holmeide and Markus Schmitz - OnTime Networks - Norway, United States
- N° 11 - Cabin Comfort Flight Test Installation - Joel Galibert, Aymeric Plo and Stephane Garay - AIRBUS Operation SAS – France
- N° 12 - The research on wireless sensor network for the aerocraft measurement system - Juan Lu, Ying Wang and Bingtai Liu - Beijing Institute of Aerospace Systems Engineering,- China

SESSION N° 3: Big data and test data processing and analysis
Chairman: Guy Destarac – 3AF- France

- N° 1 - How to Harness the Value of Iot / Fast Data / Big Data and Data Analytics Technologies for the Tests Community - Frédéric Linder and Stéphane Biguet – Oracle – France
- N° 2 - BigData applications for Telemetry - Greg Adamski and Gilles Kbidy – L-3-Communications Telemetry-West – United States
- N° 3 - Case Study: Proposal of Architecture for Big Data Adoption - Luiz E. G. Vasconcelos, André Y. Kusumoto, Nelson P. O. Leite and Cristina M. A. Lopes - IPEV/ITA, ITA – Brazil
- N° 4 - How Big Data technology brings added-value and agility during a flight campaign? - Laurent Peltiers and Jean-Marc Prangère - AIRBUS operations – France
- N° 5 - Big Analog Data - Extracting Business Value from Test & Telemetry Data - Otmar Foehner, Robert Lee and Olivier Daurelles - National Instruments - United States, United Kingdom, France
- N° 6 - Improving Test Cell Efficiency by Monitoring Measurements - Gouby Aurélie - Snecma – France
- N° 7 – Processing Ethernet Flight Test Data with Open Source Tools – Paul Ferrill – Avionics Test and Analysis Corporation – United States

SESSION n° 4 – ICTS (International Consortium for Telemetry Spectrum)
Chairman: Jean-Claude GHNASSIA – 3AF – France

- N°1 - Welcome and Introduction by ICTS Chair J.-C. Ghnassia
- N°2 - Regional Reports:
  RI : J-C. Ghnassia
  RII: G.Mayer
  RIII: M.Ryan by J-C.Ghnassia
- N°3 - “World Radiocommunication Conference 2015 (WRC-15) – Agenda Items Relative to Telemetry” G. Mayer
- N°4 – “C-band for Airbus telemetry : status and improvement” L. Falga
- N°5 - “Eurocopter’s Conversion to C-band” tbc
- N°6 – Threats to aeronautical telemetry in USA : update #10. S. Hoshar
- N°7 - Conclusion and Closure J.-C. Ghnassia
SESSION n° 5 – Telemetry frequency (spectrum management), modulation, telemetry systems.
Chairman: Gilles FREAUD – Airbus – France

- N° 1 : A new design to ground TM/TC communications for spacecraft launch campaign at Guiana Space Centre - Nicolas Hugues and Michel Thomas - CNES, ZDS – France
- N° 2 : The entry into service of C-band Telemetry at Airbus Test Centre: first result and way of improvement - Luc Falga - AIRBUS Operations – France
- N° 3 – Combining a Reed-Salomon block code with a blind equalizer: synchronization and bit error rate performance - Alexandre Skrzypczak, Gregory Blanc and Tangi Le Bournault - Zodiac Data Systems – France
- N° 4 – Limitation of the 2 antennas problem for aircraft telemetry by using a blind equalizer. - Alexandre Skrzypczak, Gregory Blanc and Tangi Le Bournault - Zodiac Data Systems – France
- N° 5 - A Gaussianization-based performance enhancement approach for coded digital PCM/FM - Guojiang Xia, Xinglai Wang and Kun Lan - Beijing Institute of Astronautical Systems Engineering – China
- N° 6 - Real time C Band Link Budget Model Calculation - Francisco-M-Fernandez – Airbus Space and Defence - Spain

SESSION n° 6 – Space Telemetry
Chairman: Jean-Luc ISSLER - CNES – France

- N° 1 - Rosetta-Philae RF link, from separation to hibernation - Clément Dudal, Céline Loisel, Emmanuel Robert, Miguel Angel Fernandez, Yves Richard and Gwénaël Guilloë - CNES, Syrlinks – France
- N° 2 - JASON3, a story of TT&C interference handling - Céline Loisel and Gérard Zaouche – CNES – France
- N° 3 - Wavelet and source coding on Ariane 5 telemetry data - Didier Schott - Airbus Defence & Space – France
- N° 4 – Cubesat communication CCSDS hardware in S and X band - Issler Jean-Luc and Lafabrie Philippe – CNES – France
- N° 5 - Implementation of a high throughput LDPC decoder in space-based TT&C – Wen Kuang, Nan Xie and Xianglu Li - Inst. Of electronic engineering, china academy engineering physics – China
- N° 6 - The Implement of IP-Based Telemetry System of Launch Vehicle - Feng Tieshan, Lan Kun and Zhao Weijun - Beijing Institute of Astronautical Systems Engineering - China

SESSION n° 7 – MDL (Meta data language group)
Chairman: Lee H. ECCLES – Boeing - USA

Programme tbc.
- Target of the group.
- Detail of the actual situation
- Discussion
SESSION n°8 – ETSC (European Telemetry Standardization Committee)
Chairman: Gerhard MAYER – GMV Consulting – Germany

Welcome & Introduction (G. Mayer)

1. Committee Reports
   - ETSC Subcommitees
     SC-1: Spectrum & Frequency Management (J.-C. Ghnassia, S. de Penna)
     SC-2: Data Acquisition & Processing (W. Lange, Ch. Herpepin)
     SC-3: Data Recording & Storage (B. Bagó, P. Morel, S.W. Lyons)
     SC-4: Networked Telemetry (E. Schulze, Ch. Eder)
   - Telemetering Standards Coordination Committee (TSCC) (D. Corry)
   - Consultative Committee for Space Data Systems (CCSDS) (R. Ritter)

2. Short Presentation & Discussion
   Briefing on the “Working Draft IRIG 106, Chapter 7” (B. Bagó)

3. New Business
   Membership standings, coming elections, preparation for the ETC 2016

Conclusions & Adjourn

POSTER PRESENTATIONS
SESSION n° P1 – TEST METHODS

- N° 1 - Computational results for flight test points distribution in the flight envelope and dynamic relocation - Lina Mallozzi, Alessandro D’argenio, Pierluigi De Paolis and Giuseppe Schiano - Dipartimento di Ingegneria Aerospaziale - Università degli Studi di Napoli “Federico II” – Italy
- N° 2 - High-resolution electro-acoustic transducer for dielectric characterization of outer space materials - Lucie Galloy-Gimenez, Laurent Berquez, Fulbert Baudoin and Denis Payan - LAPLACE, CNES – France
- N° 3 - Non-contacting Methods with Lidar for Spacecraft Separation Ranging - Shengzhe Chen, Hui Feng and Yuzhi Feng - Beijing Institute of Aerospace Systems Engineering – China
- N° 4 - How do you go about achieving your video recorder? (Chapter 2) - Pierrick Lamour and Loic Mauhourat – TDM – France
- N° 5 - SpaceWireless: Time-synchronized & reliable wireless sensor networks for Spacecraft - Damon Parsy – Beanair – Germany

SESSION n° P2 – TEST TOOLS AND SIMULATION

- N° 1 - LTM scalable to the tests - Sylvain Derlieu - AIRBUS OPERATIONS SAS – France
- N° 2 - Optimized Automatic Calibration Tool. Application for Flight Test Programs – Enrique Torello, Jose Manuel Baena, Lorenzo Miranda and Pilar Vicaria - AIRBUS DEFENCE AND SPACE – Spain
- N° 3 - Means driven by tests - Jerome Sartolou and Bruno Chaduteau – Nexeya – France
- N° 4 - Design and implementation of LAN-based real-time simulation system of high frequency communication - Rui Song, Daquan Li, Guangming Zhou and Guojiang Xia - Beijing Institute of Astronautical Systems Engineering - China
SESSION nº P3 – PROPAGATION, JAMMING AND ASSOCIATED MITIGATION

- Nº 1 - Characterization of the unavailability due to rain of an X band radar used for range safety at Kourou Space Center - Frédéric Lacoste, Jérémy Trilles and Clément Baron – CNES – France
- Nº 2 - Channel capacity estimation of stacked circularly polarized antennas suitable for drone applications - Ioannis Petropoulos, Jacques Sombrin, Nicolas Delhote and Cyrille Menudier - SigmaLim Labex, University of Limoges – France
- Nº 3 - Pattern-reconfigurable antenna design for telemetry and wireless communication systems - Gaojian Kang, Daquan Li and Xinglai Wang - Beijing institute of astronautical systems engineering - China