

## LIST OF PAPERS

### RTO AVT-144 Workshop on “Enhanced Aircraft Platform Availability Through Advanced Maintenance Concepts and Technologies” Vilnius, Lithuania, 3-5 October 2006

**Welcome Address** – Official Welcome to the Workshop on Behalf of the Applied Vehicle Technology (AVT) Panel.

*Hastings, R.*

*Mr. Robert Hastings – AVT Panel Member (Director Gas Turbine Laboratory, Institute for Aerospace Research, National Research Council, Ottawa, Ontario, Canada)*

**Paper 1** – Evolution of Aircraft Maintenance/Support Concepts with Particular Reference to Aircraft Availability – Polish Air Force Perspective

*Szczepanik, R.; Leski, A.*

*Dr. Ryszard Szczepanik (Director General Air Force Institute of Technology, Warsaw, Poland), and Major (Dr.) Andrzej Leski (Team Leader, Division for Aeronautical Systems Reliability & Safety, Air Force Institute of Technology, Warsaw, Poland)*

**Paper 2** – Evolution of Aircraft Maintenance and Support Concepts – French Armed Forces Perspectives

*Joubert, P.*

*Colonel Patrick Joubert (Structure Intégrée du Maintien en condition opérationnelle des Matériels Aéronautiques du ministère de la Défense – SIMMAD, Ministère de la défense, France)*

**Paper 3** – Evolution of Aircraft Maintenance/Support Concepts with Particular Reference to Aircraft Availability – Czech Air Force Perspective

*Bulanek, J.; Kvetina, L.; Tesar, F.*

*Ing. Jaroslav Bulanek (Logistics Manager, Aero Vochody, Prague, Czech Republic), Lieutenant Colonel Ing. Libor Kvetina (Support Policy Section, Ministerstvo obrany – Ministry of Defence, Prague, Czech Republic), and Mr. Ferdinand Tesar (Logistics Manager, VTULaPVO, Prague, Czech Republic)*

**Paper 4** – Improvements of Aircraft Availability Within the Royal Netherlands Air Force

*Andela, C.*

*Drs. Ing. Carla Andela (Collaborative Engineering and Systems, National Aerospace Laboratory NLR, Amsterdam, Netherlands)*

## LIST OF PAPERS

---

**Paper 5** – The Integration of an Aircraft Availability Performance Program with Life Cycle Management in the Swedish Air Force

*Barbici, S.*

*Mr. Sorin Barbici (Technical Expert Dependability Design, Logistics Division, Defence Material Administration – FMV, Stockholm, Sweden)*

**Paper 6** – The Evolution of Aircraft Support Concepts Within the UK MoD’s Defence Logistics Transformation Programme

*Elford, D.G.*

*Captain David Elford (Defence Logistics Transformation Programme, MOD DPA-DLO, UK)*

**Paper 7** – Metrics, Key Performance Indicators, and Modeling of Long Range Aircraft Availability and Readiness

*Andresen, G.; Williams, Z.*

*Mr. Gerrod Andresen and Mr. Zachary Williams (IVHM Solution Center, Boeing Phantom Works, The Boeing Company, Aledo, USA)*

**Paper 8** – Achieving Organizational Accountability for Aircraft Operational Availability – Systems Engineering and Contracting Strategies in the Canadian Forces

*Béland, P-P.; Hollick, L.J. (both presenters)*

*Lieutenant Colonel Pierre-Paul Béland and Mr. L.J.(Ludy) Hollick (Integrated Logistics Support, Maritime Helicopter Program, Aerospace Equipment Program Management Division, DND, Ottawa, Ontario, Canada)*

**Paper 9** – The Management of Reliability and Maintainability and the Choice of Maintenance Concept to Optimize Aircraft Availability and Life Cycle Cost

*Buderath, M.*

*Dipl. Ing. Matthias Buderath (Chief Engineer Product Support Technologies, EADS Military Air Systems, Munich, Germany)*

**Paper 10** – Availability Improvements in New Transport Aircraft – The Case of the A400M

*Heuinckx, B.*

*Mr. Baudouin Heuinckx (Logistic Support Officer, A400M Program Division, Organisation for Joint Armament Cooperation – OCCAR, Toulouse, France)*

**Paper 11** – Non-Destructive Evaluation (NDE) and Aircraft Availability

*Bruce, D.A.; Buynak, C.F.; Lindgren, E.*

*Dr. David Bruce (Defence Sciences and Technology Laboratory, MOD, Salisbury, UK), and Mr. Charles Buynak and Dr. Eric Lindgren (NDE Branch, USAF Air Force Research Laboratory, Wright Patterson AFB, USA)*

**Paper 12** – The Use of Advanced NDI to Reduce the Duration and/or Frequency of Preventative Maintenance  
– German Air Force Experience

*Manzke, H.; Grauvogl, E.*

*Dipl. Ing. Holger Manzke and Dipl. Ing. Ernst Grauvogl (Material Testing, EADS Military Air Systems, Manching, Germany)*

**Paper 13** – Corrosion Sensors to Reduce Aircraft Maintenance

*Harris, S.J.; Mishon, M.; Hebbbron, M.*

*Dr. Steve Harris (Group Leader Materials Engineering, Advanced Technology Centre, BAE Systems, Bristol, UK), Dr. Matt Mishon (Corrosion Control Leader, Materials Integrity Group, Technical Enabling Services, MOD DPA-DLO, Gosport, UK), and Mr. M. Hebbbron, (Advanced Technology Centre, BAE Systems, Bristol, UK)*

**Paper 14** – Advances in Avionics Testing to Improve Aircraft Readiness and Mission Reliability

*Ross, W.A.*

*Mr. William Ross (Deputy Program Manager for Automatic Test Systems and Member of DoD Automatic Test Systems Executive Directorate, Naval Air Systems Command, Patuxent River, USA)*

**Paper 15** – Advanced Diagnostics in the SNECMA M-88 Engine of the Rafale Fighter

*Banet, E.; Brousse, C.; Massé, J.-R.. (presenter)*

*M. Erick Banet (M88 ILS Manager, Snecma, SAFRAN Group, Courcouronnes, France); Mme. Carole Brousse (M88 Electronic Control System Technical and Project Manager, Hispano-Suiza, SAFRAN Group, Systems Division, Moissy Cramayel, France); Dr. Jean-Rémi Massé (Dependability Engineering Senior Expert, also Strand 7400 Leader for TATEM European Project, Hispano-Suiza, SAFRAN Group, Systems Division, Moissy Cramayel, France)*

**Paper 16** – The Insertion of Advanced Diagnostic Technologies in an Ageing Fleet of Engines, to Improve Engine/Aircraft Availability and Mission Reliability

*Wicks, B.; Eustace, R.*

*Dr. Bryon Wicks and Mr. Richard Eustace (Propulsion Systems Life Management Group, Air Vehicles Division, Platform Sciences Laboratory, Defence Science and Technology Organisation (DSTO), Fisherman's Bend, Australia)*

**Paper 17** – Improving the Diagnosis of Mechanical Systems, and Structure to Reduce Aircraft Downtime at 1<sup>st</sup> Line and Improve Mission Reliability

*Schmidt, R.K.*

*Mr. Kyle Schmidt (Senior Research Engineer, Messier-Dowty, SAFRAN Group, Ajax, Canada)*

## LIST OF PAPERS

---

**Paper 18** – The Fusion of Data from Existing On-Board Monitoring and Instrumentation Systems to Achieve More Accurate Usage Monitoring

*Cook, H.G.*

*Mr. H.G. (Greg) Cook (Prognostic Health Management Division, Materials Integrity Group, Technical Enabling Services, MOD DPA-DLO, Gosport, UK)*

**Paper 19** – Integrating Experience with Built-In Test (BIT) to Improve First-Time-Fix Performance

*D'Eon, P.; Hastings, R. (presenter)*

*Mr. Phil D'Eon (President and Chief Technology Officer, CaseBank Technologies Inc., Toronto, Ontario, Canada) and Mr. Robert Hastings (Director Gas Turbine Laboratory, Institute for Aerospace Research, National Research Council, Ottawa, Ontario, Canada)*

**Paper 20** – The Use of Integrated Reasoning with Flight and Historical Maintenance Data to Diagnose Faults and Improve Prognosis

*Létourneau, S.; Halasz, M.*

*Dr. Sylvain Létourneau and Mr. Michael Halasz (Institute for Information Technology, National Research Council, Ottawa, Ontario, Canada)*

**Paper 21** – The Use of Prognostic Systems to Reduce the Duration and Frequency of Helicopter Maintenance

*Cook, J.*

*Dr. Jonathan Cook (Head of the Prognostic Health Management Division, Materials Integrity Group, Technical Enabling Services, MOD DPA-DLO, Gosport, UK)*

**Paper 22** – The Use of On-Board Condition Monitoring, Usage Monitoring, Diagnostics, Prognosis, and Integrated Vehicle Health Management to Improve Aircraft Availability and Mission Reliability

*Dunsdon, J.*

*Dr. Jonathan Dunsdon (Manager of Technologies for New Maintenance Concepts, also Technical Manager of TATEM European project, Smiths Aerospace Electronic Systems, Cheltenham, UK)*

**Paper 23** – Maintenance Free Periods of Operation – The Holy Grail?

*Hockley, C.J.*

*Wing Commander (Rtd.) Chris Hockley (Lecturer, Defence College of Management and Technology, MOD Defence Academy, Shrivenham, UK)*

**Paper 24** – Rapid Salvage and Repair Strategies for Aircraft Disabled or Damaged in Action

*Absi, F.; Lemaigen, L.*

*Mr. Frédéric Absi (Rafale Maintenance Manager, Military Customer Support Division, Dassault Aviation, St. Cloud, France) and Mr. Louis Lemaigen (Head of Future Support Studies, Military Customer Support Division, Dassault Aviation, St. Cloud, France)*

**Paper 25** – Aircraft Corrosion Control and Maintenance

Agarwala, V.S.

*Dr. Vinod Agarwala (Associate Director for Materials Science & Engineering, US Office of Naval Research Global, London, UK)*

**Paper 26** – Use of Dehumidification to Reduce Preventive and Corrective Maintenance of Aircraft Due to Corrosion

Schweitz, H.

*Lieutenant Colonel (Retd.) Hakan Schweitz (Dehumidification and Storage Expert, Competence Centre for Logistics, FMV, Stockholm, Sweden)*

**Paper 27** – Galvanic Sensor for Monitoring Structural Damage

Aiello, L.; Colavita, M.; Agarwala, V.

*Major Lorenzo Aiello (Aeronautica Militare, Centro Sperimentale di Volo (Flight Test Centre), Pomezia, Italy), Major Mario Colavita (Aeronautica Militare, Agenzia Nazionale per la Sicurezza del Volo ANSV, Rome, Italy), and Dr. Vinod Agarwala (Associate Director for Materials Science & Engineering, US Office of Naval Research Global, London, UK)*

**Paper 28** – Defending Our Aging Fleets: Defining the Impacts of Aging Aircraft Sustainment on Warfighting Capability

Hart, K.A.

*Mr. Karl A. Hart (Senior Engineer/Analyst, Alion Science & Technology Inc., Wright Patterson Air Force Base, Ohio, USA)*

**Paper 29** – State of Development of Advanced Sensory Systems for Structural Health Monitoring Applications

Mrad, N.

*Dr. Nezhil Mrad (Research Scientist, Defence R&D Canada, Department of National Defence, Ottawa, Ontario, Canada)*

**Paper 30** – Physics of Failure Modelling at the Microstructural Level for Prognostics of Creep Failure in an Engine Turbine Blade

Koul, A.K.; Tiku, A.; Bhanot, S.; Junkin, B.

*Dr. Ashok K. Koul, Mr. Ajay Tiku, and Mr. Saurabh Bhanot (Life Prediction Technologies Inc., Ottawa, Ontario, Canada), and Mr. Brent Junkin (Standard Aero Limited, Winnipeg, Manitoba, Canada)*

**Paper 31** – Operational Availability Modeling for Risk and Impact Analysis

Hurst, D.J.

*Mr. David J. Hurst (Manager Accreditation and Audits, Aerospace Engineering and Project Management Division, Department of National Defence, Ottawa, Ontario, Canada)*

## LIST OF PAPERS

---

**Closing Remarks** – Observations by Reviewer at Close of Workshop.

*Bird, J.*

*Mr. Jeff Bird (Senior Research Officer, NRC Institute for Aerospace Research, Ottawa, Ontario, Canada)*