PROCEEDINGS

Fifth International Conference on Human-Machine Interaction and Artificial Intelligence in Aerospace

From Operations to Design: Closing the Loop.

ENSAE

TOULOUSE (France)

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Organized by

European Institute of Cognitive Sciences and Engineering (EURISCO)

Cooperating Organizations:

Academie Nationale de l'Air et de l'Espace
AFCET
Aerospatiale
Airbus Industrie
CERT-ONERA
CNES
Dassault Aviation
ENSAE
Matra Marconi Space
Société des Amis de l'ENSAE et ENSTA

CONTENTS

concepts in particular towards an increased level of operations and future ground segment infrastructures.

Participants: A. de Saint Vincent , J-M Darroy, P. Gremillon, (MMS), P. Gilbertas Aerospatiale, P. Pacholzyck (CNES) , P. Kauffeler (ESOC)

SPECIAL INTEREST GROUP 2: DATA LINK

This SIG will discuss current trends and novel perspectives on data link systems and related human factors issues. Participants will discuss pros and cons of autonomy sharing between airplanes and ATCs. Several issues will be discussed such as free flight, party line evolution, ATM automation, etc.

Participants: André Benoit (Eurocontrol), Marc Pélegrin (ANAE), Jean Pinet (EURISCO), Eddy Racca (Airbus Training), J-P Daniel (Aerospatiale), R. John Hansman (MIT)

SESSION 4: AUTOMATION AND MANAGEMENT

Algorithms for an Efficient Adaptation of a Diagnostic Result to Changing Attribute Values. Harmut Helmke (DLR)

A cognitive Approach to Analysing Complex Medical Decision Making: Implications for Decision Support; Andre W. Kushniruk (McGill University)

SESSION 5: AUTOMATION AND MANAGEMENT (Cont.)

Reengineering Spacecraft Development and Operations Formalising Plans and Procedures. François Lecouat and Arnaud de Saint Vincent (Matra Marconi Space)

Distributed Intelligence for Ground/Space Systems. Mads Aarup and Klaus Heje Munch (CRI)

SESSION 6: AGENTS AND INFORMATION INFRASTRUCTURES

KAoA: An Industrial Strength Open Agent Architecture for Aerospace Applications. J.M. Bradshaw (Boeing), S. Dutfield, B. Carpenter, R. Jeffers, T. Robinson

A knowledge Acquisition Approach for the Ergonomical Design of Cooperative Systems: the SCOOP Project Experiment. L. Haudot (Dassault Aviation, LAAS, EURISCO), M. Sicard (Dassault Aviation), P. Esquirol (LAAS-INSA), P. Lopez (LAAS), J. Bradshaw (Boeing, work performed while a visiting Fulbright Scholar at EURISCO)

SESSION 7: CORPORATE MEMORY

Experience-Based Reasoning in Aircraft Design. M. Durstewitz (EURISCO)

CADETS Cognitive Analysis, Design and Evaluation Tool Set. P. Hougaard (CRI), J. Mckenzie, I. MacLeod (Aerosystems Int. Ltd.), T. Paulsen (SINTEF)

INVITED SPEAKER'S ADDRESS

Human Engineering R&D in the US Air Force. Kenneth Boff (Armstrong Laboratory)

SESSION 8: AVIATION HUMAN FACTORS IN PRACTICE

Human Interaction in Computer-Based Training. S. Francis (Thomson T&S Crawley) To be distributed during the conference

Towards the Integration of Pilot ;Guard Systems for Monitoring Attentiveness in Flight. J-J Speyer (Airbus Industrie)

SESSION 9: HUMAN FACTORS MEASUREMENTS

Multi-Modal Recording Analysis of Operator Data. Henning B. Andersen and John P. Hansen (RISO)

Formalising Human Error Resistance and Human Error Tolerance. Andrew Dearden and Michael Harrison (University of York)

POSTER

The Role of Anticipating Biases in Air Traffic Control. N. Boudes (CENA, Lab. Travail et Cognition), J-M Cellier (Lab. Travail et Cognition), P. Amaldi (CENA, Lab. Travail et Cognition)

Non-Presented Paper: Linguistic Geometry for Aerospace Combat Simulation: Serial and Concurrent Agents. B. Stilman (University of Colorado at Denver), D. Dyer (Philips Laboratory)