

Futuristic Black Box Design Considerations and Global Networking for Real Time Monitoring of Flight Performance Parameters

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Abstract : The aim of this research paper is to conceptualize, discuss, analyze and propose alternate design methodologies for futuristic Black Box for flight safety. The proposal also includes global networking concepts for real time surveillance and monitoring of flight performance parameters including GPS parameters. It is expected that this proposal will serve as a failsafe real time diagnostic tool for accident investigation and location of debris in real time. In this paper, an attempt is made to improve the existing methods of flight data recording techniques and improve upon design considerations for futuristic FDR to overcome the trauma of not able to locate the block box. Since modern day communications and information technologies with large bandwidth are available coupled with faster computer processing techniques, the attempt made in this paper to develop a failsafe recording technique is feasible. Further data fusion/data warehousing technologies are available for exploitation.

Keywords : flight data recorder (FDR), black box, diagnostic tool, global networking, cockpit voice and data recorder (CVDR), air traffic control (ATC), air traffic, telemetry, tracking and control centers ATTTCC)

Conference Title : ICA 2016 : International Conference on Aeroengineering

Conference Location : Kuala Lumpur, Malaysia

Conference Dates : February 11-12, 2016