

# RESEARCH INTO FIRE, SMOKE OR FUMES OCCURRENCES ON TRANSPORT AIRPLANES

# Introduction

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- **The study has been commissioned by the FAA and UK CAA**
- **It involves the collection and analysis of data related to Smoke, Fire and Fume events on US registered airplanes:**
  - **Type certificated to FAR 25 and operating in accord with FAR 121.**
  - **Both cargo and passenger airplanes**
  - **Data period 2002 to 2011 inclusive**

# Objectives

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- 1. Collect data relating to occurrences involving fire, smoke, fumes or odors and false fire/smoke warnings**
- 2. Compile the data into an Occurrence Database**
- 3. Compare Genuine and False occurrences by source of fire, smoke, fumes or odors and consequences (Diversion, Overweight Landings, etc.)**
- 4. Analyze the data to derive any likely trends in the rates of occurrence (per flight/hour) by airplane category (regional, narrow body, wide body)**
- 5. Analyze the data to determine the likely monetary impact of the occurrences and any trends in these impacts**

# Data Sources

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- **The occurrence data to be analysed has been collected from the following sources:**
  - **FAA Aviation Safety Information Analysis And Sharing System (ASIAS)**
  - **The NTSB Aviation Accident Database**
  - **FAA Service Difficulty Reports SDRs**

# Progress

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- **The Occurrence Database has been constructed**
- **Over 800,000 records have been synthesized to approximately 16,000 as being relevant**
- **Data entry for 2002 to 2006 is now complete – 2007 to be completed by December 2014**
- **Initial Analysis has started**

# Deliverables

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**The deliverables of the project are:**

- **A Database containing all Fire, Smoke and fume Events analyzed**
- **A Report containing the data sources, analysis methods, results and conclusions**