FP:(SATAVIA)

8 results **Offices** all **Languages** en **Stemming** true **Single Family Member** false

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1. **WO/2020/053785** SYSTEM AND METHOD FOR AIRCRAFT FLIGHT CONTROL WO - 19.03.2020

Int.Class G06Q 10/00 **Appl.No** PCT/IB2019/057657 **Applicant** SATAVIA LTD **Inventor** DURANT, Adam

There is provided an aircraft flight control system comprising: a computing arrangement including an input interface and an output interface; wherein in operation the computing arrangement executes instructions to provide indications related to an estimated atmospheric contamination risk to at least one aircraft at selected locations and altitudes or pressures, by (i) receiving at least one aircraft flight plan data from the input interface; wherein at least one aircraft flight plan data includes at least one of time, a pressure or an altitude, a trajectory and a location representing at least one aircraft flight; (ii) determining the estimated atmospheric contamination risk using a measure of the at least one atmospheric contaminant for the at least one aircraft flight based upon a location, an altitude or pressure, a trajectory and a time information extracted from the at least one aircraft flight plan data; and (iii) providing, via the output interface, a resultant indication related to the estimated atmospheric contamination risk to the at least one aircraft.

2. **2577064** SYSTEM AND METHOD FOR AIRCRAFT FLIGHT PLANNING GB - 18.03.2020

Int.Class G08G 5/00 **Appl.No** 201814781 **Applicant** SATAVIA LTD **Inventor** ADAM DURANT

An aircraft flight planning system has a measure of an atmospheric contaminant. It receives an aircraft flight plan and calculates a corresponding estimate of atmospheric contaminant risk using the measure based on a location, pressure or altitude, trajectory and time extracted from the flight plan. It outputs an indication of the estimate, e.g. an index of risk of atmospheric contamination on the flight, a recommendation to modify the flight plan to mitigate contaminant exposure or an indication of portions of the flight where exposure exceeds a threshold. A second atmospheric contaminant risk estimate may be calculated for an altered flight plan and compared to the first estimate. The calculation may use further variables related to engine or aircraft control, loading or operation, engine or aircraft model or type, weather, temperatures, speeds, altitudes, mass or fuel flow rates, vibration, inspection results or wear estimates. It may involve spatial or temporal uncertainty calculation or a statistical, regression, machine learning or Monte Carlo model. The contaminant may be ice crystals, dust, organic particles, volcanic ash, salt, sulphur dioxide or sulphate ions and the risk may be a probability of ice crystal presence or an exposure index indicating an amount of contaminant passed through aircraft engines.

3. **WO/2020/053778** AIRCRAFT ENGINE MAINTENANCE SYSTEM AND METHOD WO - 19.03.2020

Int.Class G06Q 10/00 **Appl.No** PCT/IB2019/057644 **Applicant** SATAVIA LTD **Inventor** DURANT, Adam

There is provided an aircraft engine maintenance system comprising at least one input interface that receives, when in operation, data related to a given aircraft engine from a sensor arrangement that is connected to the given aircraft engine and supplementary data from a database arrangement; the supplementary data describes operational and maintenance information that characterizes the given aircraft engine. The aircraft engine maintenance system includes a data processing arrangement that receives, when in operation, the data related to the given aircraft engine as an input data and the supplementary data and uses the input data and the supplementary data to generate normalized data by ingesting the input data and the supplementary data. Ingesting the input data and the supplementary data includes normalizing relative weightings of the input data and the supplementary data to generate the normalized data. The data processing arrangement uses the normalized data to determine an operating status of the given aircraft engine by applying the normalized data to a statistical model of the given aircraft engine. There is thereby generated a data output representative of the operating status of the given aircraft engine, wherein the data output includes at least one of: (i) a maintenance schedule required for the given aircraft engine; and (ii) a measure of wear or an adjustment optimization of the given aircraft engine.

4. **20200079532** SYSTEM AND METHOD FOR AIRCRAFT CONTAMINANT MONITORING AND OPERATION SCHEDULING US - 12.03.2020

Int.Class B64F 5/60 **Appl.No** 16567579 **Applicant** Satavia Ltd. **Inventor** Antony Rix

There is disclosed an aircraft operation scheduling system, wherein:

- (a) the aircraft operation scheduling system includes a computing arrangement that computes a measure of contaminant exposure for estimating aircraft contamination, wherein the computing arrangement, when in operation, accesses a database of contamination data over location and time;
- (b) the computing arrangement receives when in operation schedule information related to a plurality of aircraft flights;
- (c) the computing arrangement receives aircraft data relating to an aircraft fleet being scheduled, and interrogates a database of contamination data to derive:
  - (i) an estimated historical contamination for the aircraft or each aircraft engine of the aircraft to at least one contaminant; and
  - (ii) an estimated expected contaminant exposure for the aircraft or each aircraft engine; and
- (d) the computing arrangement, when in operation:
  - (i) identifies at least one aircraft engine with a higher estimated historical contaminant exposure or with a lower estimated historical contaminant exposure;
  - (ii) identifies at least one route with a lower expected exposure or a higher expected exposure to the at least one contaminant; and
  - (iii) provides recommendations on route allocation by assigning an aircraft with the higher estimated historical contaminant exposure being scheduled to at least one route with lower expected exposure to the at least one contaminant.

5. **2577065** SYSTEM AND METHOD FOR AIRCRAFT HEALTH AND SCHEDULE MAINTENANCE GB - 18.03.2020

Int.Class G06Q 10/00 **Appl.No** 201814784 **Applicant** SATAVIA LTD **Inventor** ADAM DURANT

An aircraft atmospheric contamination determination system has a computing arrangement operable to access a database of atmospheric contamination data as a function of location and time, and to receive flight data relating to a target aircraft from an input interface. The computing arrangement executes a predictive aircraft health model to (i) determine a contaminant exposure measure for the target aircraft by retrieving atmospheric contaminant data at a location and a time in proximity to at least one flight of the target aircraft and (ii) derive at least one predicted aircraft health parameter for the target aircraft based upon at least the target aircraft flight history and contaminant data as a function of location and time. Preferably, the computing arrangement provides an alert or schedules a maintenance intervention based on the health parameter. The health parameter may be indicative of engine health or remaining useful life. The model may be trained by machine learning and may also provide estimates of future contamination exposure of the target aircraft.

6. **2577063** SYSTEM AND METHOD FOR AIRCRAFT CONTAMINANT MONITORING GB - 18.03.2020

Int.Class G06Q 10/06 **Appl.No** 201814777 **Applicant** SATAVIA LTD **Inventor** ANTONY RIX

An aircraft operation scheduling system includes a computing arrangement operable to compute a measure of contaminant exposure for estimating aircraft contamination. The computing arrangement receives schedule information for a plurality of flights and interrogates a database of contamination data as a function of location and time to derive an estimated historic contamination for the aircraft or each aircraft engine to at least one contaminant and an estimated expected contaminant exposure for the aircraft or engines. The computing arrangement is further operable to (i) identify at least one aircraft or engine with higher or lower estimated historical contamination, (ii) identify at least one route with higher or lower expected exposure to the at least one contaminant, and (iii) provide recommendations on route allocation by assigning an aircraft with the higher estimated historical contamination to a route with lower expected exposure to the contaminant. Preferably, route allocation recommendations ensure that an aircraft or engine's total exposure to contamination is maintained within a required range and/or aims to minimise variation in exposure across a fleet. The system may assign aircraft with lower estimated historical contamination to routes with higher expected exposure.

7. **2529271** METEOROLOGICAL HAZARD IDENTIFICATION APPARATUS AND METHOD GB - 17.02.2016

Int.Class G01W 1/10 **Appl.No** 201503014 **Applicant** SATAVIA LTD **Inventor** EYAL TRACHTMAN

A meteorological hazard identification apparatus which performs a method comprising receiving a plurality of measurement sample tracks, each of the measurement sample tracks having been generated by a moving craft, such as an aircraft, using a measurement device mounted on the craft. Each of the measurement sample tracks comprises a plurality of captured samples of one or more meteorological parameters, such as particle concentration, measured with respect to geographical co-ordinates providing a location of the captured sample. The method includes storing the plurality of sample tracks into a data store, retrieving each of the measurement tracks from the data store, combining the plurality of measurement tracks, to form, with respect to mapping information, a representation at geographical locations within a region, of a variation in the one of more meteorological parameters with respect to displacement within the region, and generating a representation of the variation of the one or more meteorological parameters with respect to displacement within the region with respect to a map of the Earth for access by one or more devices for display to users. Also disclosed is a method of protecting an aero engine in accordance with the hazard identified.

8. **2561996** METEOROLOGICAL HAZARD IDENTIFICATION APPARATUS, MOVING CRAFT AND METHODS GB - 31.10.2018

Int.Class G01W 1/08 **Appl.No** 201811171 **Applicant** SATAVIA LTD **Inventor** EYAL TRACHTMAN

A meteorological hazard identification apparatus performs a method comprising receiving a plurality of measurement sample tracks generated by a moving craft using a measurement device mounted on the craft and each of the measurement sample tracks comprising a plurality of captured samples of one or more meteorological parameters measured with respect to geographical co-ordinates providing a location of the captured sample. The craft may be an airborne craft such as an aircraft. The method includes storing the plurality of sample tracks into a data store, retrieving each of the measurement tracks from the data store, combining the plurality of measurement tracks, to form, with respect to mapping information, a representation at geographical locations within a region, of a variation in the one of more meteorological parameters with respect to displacement within the region, for access by one or more devices for display to users. The samples may represent cloud particle characteristics, atmospheric composition, airframe or aero-engine icing, or hazardous gases, for example.