UNIVERSITY OF NORTH DAKOTA

CORPORATE ENGAGEMENT & COMMERCIALIZATION

UND 13-16 Analyzing Flight Data Using Predictive Models

UND Technology 13-16
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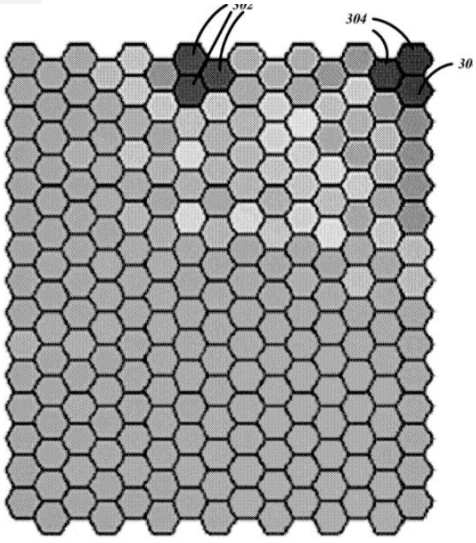
Summary

The University of North Dakota has patented a method of analyzing flight, telemetry, and flight maintenance data using predictive models. In the method, a quadratic least squares model is applied to a matrix of time-series flight parameter data for a flight, thereby deriving a mathematical signature for each flight parameter of each flight in a set of data including a plurality of sensor readings corresponding to time-series flight parameters of a plurality of flights. The derived mathematical signatures are aggregated, and machine-learning is applied.

Advantages

- An alternative strategy to reactive methods
- Increased safety
- Utilizes applied statistics to identify accident precursors to mitigate potential safety hazards



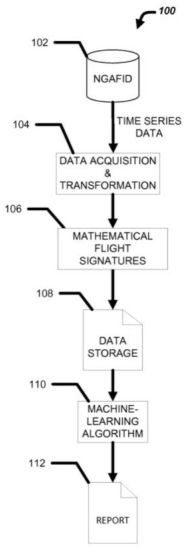


FIG. 1

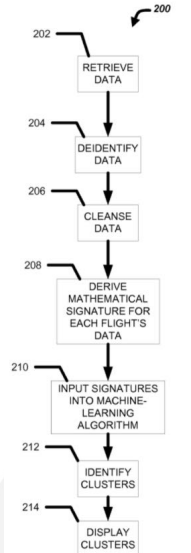


FIG. 2

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