

Brno University of Technology
Faculty of Information Technology

Report No.: AWWAS 01.2017

Report type: **Final research report for project**

Weather Advisory System

Weather Advisory System for Flight Crews

Annotation:

The summary report introduces the research on the Weather Advisory System. The availability of up-to-date weather data assists the flight crew in making strategic in-flight decisions along the route or within respective areas of interest. The complex situational overview originating from recent weather information serves as an input for the onboard route planning.

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Appendices: 0

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The availability of up-to-date weather data assists the flight crew in making strategic in-flight decisions along the route or within respective areas of interest. The complex situational overview originating from recent weather information serves as an input for the onboard route planning.

The weather advisory assists the flight crew in decision-making related to route safety and trajectory optimization. The system uses real-time weather and trend information from the cockpit, as well as enhanced Uplink communication containing current weather, historical weather patterns, and weather forecast to give the flight crew a clear view of weather. The main benefits of the Weather Advisory System integration include a reduction of pilot workload, increased situational awareness and enhanced operational safety. Beyond the already mentioned safety aspects, the Weather Advisory System helps to improve route planning and leads to reduction of emissions, fuel and maintenance cost.

Following tasks have been performed within the Weather Advisory System:

- #1 Source code for Honeywell Uplink Weather Data API, including hand-over meeting.
- #2 Document defining data fusion based on Honeywell Uplink Weather observation and forecast weather data.
- #3 Document on analysis and definition of intuitive representation of outcomes in Honeywell EPIC INAV graphical environment.

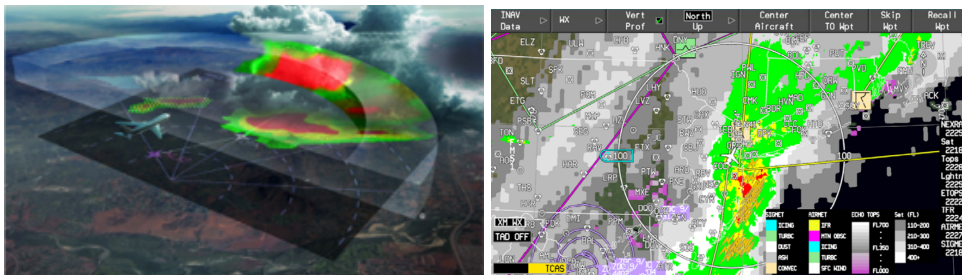


Figure 1 Detection and representation of weather phenomena

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Hereby it is confirmed that on the 25th August 2017 the Supplier provided to the Buyer and the Buyer received and fully accepted following items:

Item	Description	Delivery Date
#1	Source code for Honeywell Uplink Weather Data API, including hand-over meeting	25/AUG/2017

Provided by:

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Hereby it is confirmed that on the 20th October 2017 the Supplier provided to the Buyer and the Buyer received and fully accepted following items:

Item	Description	Delivery Date
#2	Document defining data fusion based on Honeywell Uplink Weather observation and forecast weather data.	20/OCT/2017

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Hereby it is confirmed that on the 24th November 2017 the Supplier provided to the Buyer and the Buyer received and fully accepted following items:

Item	Description	Delivery Date
#3	Document on analysis and definition of intuitive representation of outcomes in Honeywell EPIC INAV graphical environment.	24/NOV/2017

Provided by:

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