PRESS RELEASE Stockholm, June 16th

The MINT project takes a step toward a more environmental air transport system

On 16th of June when Novair flight NVR352 from Zakinthos received clearance to fly the Required Navigation Performance (RNP) decent and approach into Stockholm Arlanda runway 01R a step to more efficient and environmental air transport system was taken.

The flight was part of the Minimum CO_2 in TMA (MINT) project which will demonstrate, with the Airbus A321 aircraft operated by Novair, how minimum CO_2 emissions can be achieved by optimizing the vertical profile and reducing the distance of the lateral track in the TMA through the use of Required Navigation Performance with Authorization Required (RNP AR).

To enable the optimized descent profile, accurate descent wind information tailored for the profile and the Flight Management System (FMS) was uplinked to the aircraft before its top of descent.

The data from the onboard flight data recorders will now be collected and analyzed. Initial results in terms of reduction in CO_2 emissions and noise will be compared to the expected results based on simulations that will be presented on Paris Air Show, June 17th.

The RNP AR procedures are designed by the Swedish LFV Group for minimum track miles, up to 19 NM savings, and to circumnavigate noise sensitive areas. It is the first RNP AR procedure that has been developed for this purpose in Europe. The latest FMS standards on Airbus (in this case the Release 1A from Thales/GE) allow to fly this type of RNP AR 0.3 procedure with basic onboard equipment such as 1st generation Electronic Instrument System. This opens the door for numerous operators to take advantage of Performance Based Navigation procedures, which are about to be implemented in an increasing pace.

"Taking this step from conceptual idea into an operational demonstration is truly a milestone, it has been made possible by a dedicated project team, support by SESAR JU and very importantly a regulatory authority, Transportstyrelsen the Swedish Civil Aviation Authority, who have been engaged", says MINT project leader Christer Forsberg, AVTECH.

The MINT project is executed in the context of the Atlantic Interoperability Initiative to Reduce Emissions (AIRE). AIRE is an agreement between the European Commission and the FAA which aims to reduce CO_2 emissions and accelerate the pace of change by taking advantage of air traffic management best practices and mature technologies. It is expected

to accelerate the implementation of environmental friendly procedures for all phases of flight and to validate the benefits of these improvements. The SESAR Joint Undertaking is responsible for the management of AIRE from a European perspective.

SESAR has as the objective to reduce CO_2 emissions by 10% through more efficient operations but also to reduce noise in neighboring areas to the airport. The procedures at Arlanda will take advantage of the aircraft's RNP AR capability, flying curved segments after the Final Approach Point in order to position the noise away from noise sensitive areas.

Today's partners for Tomorrows Aviation, the MINT consortium includes leading operators and providers of air and ground system:

- LFV Group – ANSP/Airport operator
- Novair - Airline operator
- Egis Avia – Air Traffic Management Ground system
- Airbus - Airframer
- AVTECH (project leader) – Air system

Besides the consortium members listed above, Thales Avionics, Thales Air Systems, Scandinavian Airlines System (SAS) and GE Aviation are participating in the project Expert Advisory Group.

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