

ONBOARD WAKE VORTEX FLIGHT SAFETY SYSTEM

One of the possible means to increase airspace capacity at all flight stages is revision of currently existed aircraft separation minimums and procedures concerning wake turbulence, introduced by ICAO. Enhancement of processes, procedures and standards on mitigation of influence of wake vortex between aircraft is foreseen in the ICAO Aviation System Block Upgrade (ASBU) in the following Blocks: B0, B1, B2, and B3.

The development of Wake Vortex Flight Safety System (WVSS) is a focal point in such large-scale national projects as NextGen (USA) and SESAR (European Union). The development of the Russian WFSS is being carried out as part of the Government civil flight safety program.

Russian WVFSS represents a distributed (on-board and ground based segments) information-computer system built on the basic and specific technical systems and instruments of air navigation system as well as on the on-board aircraft flight control and navigation equipment.

Russian WVFSS is implemented as hardware and software or a software complex that is included as a subsystem or special software as follows:

- automation equipment for planning of exploitation of air space and air traffic flow management (ground based segment)
- automation equipment for air traffic control (ground based segment)
- instruments for meteorological support (on-board and ground based segments)
- flight control navigation equipment (on-board segment)
- radio engineering equipment for navigation, landing and air traffic control (on-board and ground based segments)
- on-board information system (information display system and alarm system).