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ADS-B TRACKING IN UKRAINIAN AIRSPACE

The increasing of airspace capacity over the last years requires new air navigation systems that will use future algorithms for the required safety level providing. ADS-B concept is one of the ways to solve this challenge.

ADS-B is a technology where avionics onboard the aircraft broadcast messages with information relevant to Air Traffic Control and nearby aircraft once every second.

The broadcast information includes: latitude and longitude, aircraft velocity, aircraft altitude, transponder code, the aircraft's call sign as well as other elements.

The ADS-B system also has data link capability where information can be linked from the ground to aircraft while in flight and vice versa. Information available via data link includes weather data as well as airspace status information and other services.

ADS-B is especially important for general aviation. Pilots in an ADS-B equipped aircraft will have the ability to see, on their electronic flight instrument system, other air traffic in the airspace. By VHF Data Link pilots can find information they need to navigate through airspace.

All of this data pilot can obtain through synthetic vision system.

ADS-B depends from the satellite navigation system, ground additions such as EGNOSS or WAAS. It is necessary to implement the ADS-B receivers over the whole territory of Ukraine in the optimal way. Airports are the most convenient places for this purpose. The set of ADS-B ground stations should be centralized with the system server and should possess the data management system for the system appropriate operation.

With the growth of general aviation the necessity of ADS-B technology was grown up too.

ADS-B is intended to increase safety and efficiency. Aircraft equipped with ADS-B will be benefited by air traffic controllers ability to more accurately and reliably monitor their position. ADS-B provides better surveillance in fringe areas of radar coverage. ADS-B does not have the siting limitations of radar. Its accuracy is consistent throughout the range.

Therefore the rapid increasing of ADS-B technology will lead to the radar refusal in the future.