

Vereniging van Nederlandse Verkeersvliegers

Dutch Air Line Pilots Association



Position Paper 09 / 1

Bird Detection Radar

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This position paper represents the opinion of the Dutch Air Line Pilots Association based on IFALPA / ECA policy, legislation, scientific research and manufacturer guidelines and recommendations.

Issue

Bird strikes are a major problem to commercial aviation and VNV welcomes the development of bird detection radar in order to contribute to the reduction of bird strike risk.

Before any implementation, assessment of the capabilities and limitations of bird detection radar should be clear. It should meet the demands for strategic and potentially tactical use for bird strike prevention and impact hazard reduction.

VNV supports the strategic use of bird detection radar to reduce the risk of bird strikes.

Bird detection radar may prove to be beneficial for tactical use but only after thorough assessment of the operational and procedural issues and safety consequences.

Strategic use of dedicated airfield bird detection radar

Airport vicinity

VNV supports the use of bird detection radar to improve knowledge of local/regional bird movements in the airport vicinity. This knowledge will assist in an effective local bird hazard prevention programme and will give insight in effects of land use measures or change of operational procedures.

Bird controllers

VNV supports the use of bird detection radar for bird controllers. Timely and accurate information on bird flocks on an airfield will increase bird controllers' efficiency. Either by being in the right spot at the right time or by being able to deploy their countermeasures more efficiently and possibly enabling automatic deployment of such countermeasures.

Strategic use

Strategic use of bird detection radar could be effective in identifying where the potential high risk areas are. Adapted runway assignment or changes in departure or arrival procedures may reduce the risk of bird strikes. At the same time proper land use management (town and country planning) and consideration in airport layout could also contribute to a significant reduction of the bird strike risk.

Tactical use of dedicated airfield bird detection radar

Tactical use of bird detection radar is very complex and its potential capability to use the data in a real-life environment is still questionable. Additional assessment is needed to address the system's operational impact, the practical possibilities in a real-life environment and the safety implications.

A few considerations:

Validity requirements

Bird detection radar should be reliable. The detection of birds by radar should be trustworthy and extensively tested with parallel observations by human eye or otherwise to assure its validity. False

warnings will make bird detection radar useless and can have serious cost implications or may negatively affect flight safety.

Postponing takeoff

After the system has been validated, quick wins in the tactical phase could be realized by postponing takeoff for 1 or 2 minutes, based on accurate predictions of birds in the takeoff path or on the runway. Preventing bird strikes by limited and warranted departure delays of individual flights may increase runway availability as runway inspections following bird strikes may consume more time.

Approach and landing phase

Operational applications of bird detection radar in the approach and landing phase are very complex and this discussion should be postponed until further testing of bird detection radar has been accomplished and insight into the actual capabilities of the system is available.

Feasibility of operational measures in the arrival phase should be evaluated thoroughly. A few concerns are that delays in approach initiation could have serious consequences for traffic flow and fuel use and initiation of a missed approach could lead to more structural damage upon an actual bird strike and has safety, traffic flow and fuel consequences itself.

In any case, should operational use for approach/landing procedures be feasible, VNV is of the opinion that any proposed measures or warnings should be advisory only, with the final authority to accept the measures resting with the pilot-in-command.

Alerts for Air Traffic Control and/or flight crew

Bird alerts for ATC and/or flight crew is a very complex subject as well. Factors that play an important role are: flight safety, responsibility/legal matters and commercial aspects. This discussion should equally be postponed until further testing of bird detection radar has been accomplished and insight into the actual capabilities of the system is available.