

# PILOT ASSISTANCE FOR HELICOPTER OPERATIONS IN DVE

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## Abstract

Helicopter operations at low altitude are to this day only performed under VFR conditions in which safe piloting of the aircraft relies on pilot's visual perception of the outside environment. However, there are situations in which a deterioration of visibility conditions such as brown-out, night or fog may cause the pilot to lose important visual cues thereby increasing workload and compromising flight safety and mission effectiveness. This presentation elaborates the operational challenges of helicopter operations in Degraded Visual Environment (DVE) and describes how today's technologies can improve the helicopter pilots' safety and help to solve their problem of DVE. A system solution will be presented comprising a digital terrain and obstacle database, tactical information, flight plan management combined with an active 3D laser sensor. To support pilots during operations in DVE, the system solution provides an intuitive 3D/2D cueing through both head-up and head-down means to retain situational awareness.