

MENTAL MAP SHIFT - AN OPERATIONAL EXAMPLE



By Dan Gurney

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The aircraft was descending approximately 25nm from the airport for an approach to runway 17 - straight in. As the aircraft approached the positioning VOR the controller prepared to clear the aircraft to a lower altitude (FL 70).

At this time a runway change was in progress, to land on runway 35; this distracted the controller. The revised procedure required the aircraft to fly overhead and beyond the runway.

The controller mentally repositioned the aircraft at a point closer to the run-

way by use of the previous track miles to touchdown (mental map shift). Using this perception of the situation the controller cleared the aircraft to 5000ft. The crew did not cross-check the aircraft position, possibly also distracted by the change of runway or suffering from a similar mental slip. As the aircraft approached 5000 ft an EGPWS 'Terrain Terrain Pull Up' warning was given.

This incident illustrates the potential for error due to distraction, habit, or expectation. The safety defences are to



check the mental plan (perception) with the real world, cross-check the aircraft position against the lateral and vertical profiles. Situation awareness is both gained and refreshed by using a systematic scan of real-world parameters; this also redirects mental attention to the required task.

