

# Conceptual Validation of Advanced Pilot Guidance-Systems - A field test report -

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**Abstract:** This paper describes the procedure and results of field tests conducted to conceptually validate new taxiing guidance-systems for pilots within the German Competitive-Airport Initiative (WFF – Wettbewerbsfähiger Flughafen). The systems tested comprised an onboard navigation unit as well as taxiway lighting. A field test with twelve pilots was conducted at Frankfurt Airport. Eight airline pilots were performing eleven scenarios in two fully equipped test buses; four Airbus test pilots were taxiing seven scenarios with the A320 ATRA test aircraft of DLR German Aerospace Center. The pilot groups differed regarding system ratings. The system concept as such has been evaluated as supportive by the users.

*Keywords:* onboard navigation, taxiway lighting, mental workload, usability, acceptance

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