

Final Development and Verification of a Ground Proximity Warning System

Tobias Andersson

Saab AB, Br Ugglas Gata, S-581 88 Linköping, Sweden

e-mail: tobias.andersson@saab.se

Abstract: In the modern multi role aircraft a reliable and accurate warning system for ground collision is a needed relief function as the information flow increases and the system functionalities gets more advanced.

Saab has recently installed a new Ground Proximity Warning System, GPW, in the Gripen system. This function is sprung from an experimental Auto Ground Collision Avoidance System.

The testing and development of the GPW system shows the strength in close cooperation between Experimental Test Pilots, Flight Test Engineers and Development Engineers as well as the important and close coupling between flight test and simulator test.

The GPW system uses an advanced flight trajectory calculation as well as a ground data base to foresee if there is a risk for ground collision. This paper covers final tuning and verification of the system. Questions like how much pre-warning time is adequate for different kinds of maneuvering and when shall the visual and audio warning appear are also covered.