

Mending the Gap, An effort to aid the transfer of formal methods technology

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Abstract

Formal methods can be applied to many of the development and verification activities required for civil avionics software. RTCA/DO-178B, Software Considerations in Airborne Systems and Equipment Certification, gives a brief description of using formal methods as an alternate method of compliance with the objectives of that standard. Despite this, the avionics industry at large has been hesitant to adopt formal methods, with few developers have actually used formal methods for certification credit. Why is this so, given the volume of evidence of the benefits of formal methods? This presentation will explore some of the challenges to using formal methods in a certification context and describe the effort by the Formal Methods Subgroup of RTCA SC-205/EUROCAE WG-71 to develop guidance to make the use of formal methods a recognized approach.