Lessons learnt from L1 Functional And Operational Safety For Tier 1 ADAS Suppliers

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Abstract:

ADAS in today's world is a combination of complex electronic systems and human interaction. These complexities in ADAS mandates automotive industry to consider safety from point of view of E/E failures and operational point. Tier 1 supplier in the automotive industry are contributors in the advancements of ADAS. Hence Tier 1 suppliers work closely with OEM’s in piloting new ADAS features which can help create a safe driving experience. In few scenarios, Tier 1 supplier also work independently on developing new ADAS features based on their experience, market conditions and regulations. Hence Tier 1 suppliers are required in variably to perform activities of functional and operational safety and understand the safety aspects of the new ADAS functions. The functional safety measures defined, and the implementation approach can vary based on the experiences or preconditions established by OEM, whereas the measures of Operational safety can vary based on the driver experience that OEM wants to offer.

In this paper we will explore the methods used by Tier 1 suppliers to develop new ADAS features with compliance to functional and operational safety. This paper will also reflect on the lessons learnt of Tier 1 supplier while defining the measures for OEM specific needs as against to the approach considered to develop a standard platform solution.

Key words: Functional safety Management, HARA, ISO/PAS 21448: SOTIF, Safety Validation, ADAS.