

# A Feedback Experience on DELTA SR: A Smart Tool to Compare Complex SCADE Models

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**Abstract** The signaling railway system company Ansaldo STS develops, with the formal language SCADE, a Carborne Controller for a SIL 4 CBTC (a management system for communicating urban trains). The Carborne Controller SCADE model is a critical software, embedded in the trains, of the CBTC system: 1026 SCADE operators to implement 1323 system requirements and 17 levels for the depth. To be compliant with the standard CENELEC EN 50128, Critical Code Reviews are mandated for the Carborne Controller SCADE model. Without support solution for Critical Code Reviews on complex SCADE models, we have developed a tool: Delta SR. Developed with TCL language, thanks to a heuristic based on textual, syntactic and semantic analyses, it computes a classification of differences between two SCADE models and exhibits the functional impacts of changes. The paper presents a feedback on DELTA SR and on its added value for the Critical Code Reviews on SCADE models.

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