Abstract of the Diploma Thesis

Elimination of non-determinism in an Engine Controller Software

realized by
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An Engine Controller Software (ECS) is a complex software construct with time-triggered and event triggered tasks. Because of communication between the tasks by global variables and possible preemption of the tasks, the time-triggered part of the ECS is not value- neither time-deterministic. The introduction of the logical execution time (LET) is the key abstraction of the Timing Definition Language (TDL). This concept is applied to the ECS of a real-world Automotive Manufacturer and hence the non-determinism of the time-triggered part of this ECS is eliminated.