

Holistic model-driven development for embedded systems, taking into account different hardware architectures (German abbreviation: HoLMES)

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**Summary:** Conventional development methods for embedded systems are palpably reaching their limits – faced with increasing legal and competitive pressure – to comply with common standards (e.g. safety standards), to be flexible in terms of the portability of embedded software applications (e.g. due to increasing volatility in the controller market) and on the other hand, to exploit new hardware options (e.g. multi-core architectures).

With the help of model-driven development, the project aims to create an integrated tool environment which would remove the previously existing paradigm break between object-oriented graphical modelling and the procedural hardware-embedded level. To achieve this, a new generalised hardware abstraction layer is being developed over the course of the project, for mapping and porting to different hardware types. Executable code can be generated from models, whereby such code contains security mechanisms and can use current hardware options.

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