

CAN Development Environment

An open approach for a CAN development environment.

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Although CAN is gaining fast access to different kind of application areas, there is still a big need for an **easy to use and open CAN Development Environment** (CDE). This CDE can stimulate the application of CAN in more products by lowering the initial knowledge necessary to start with CAN and therefore reducing time to market and development costs.

Currently there is a lack of open CAN development environments for the different application layer protocols on top of CAN. Several manufacturers provide hardware and software solutions, but most of them are only available in binary (non source code) forms and at commercial prices.

Since 1992 several European projects focused on the development of a CAN based communication protocol in rehabilitation technology, called M3S¹. Rehabilitation industry shows great interest in this protocol, but has been reluctant to use it in their products, because of the initial costs. To overcome this problem, a **portable Application Programming Interface** (API) and a **Software Development Kit** (SDK) have been developed. The API provides a complete implementation of the M3S protocol written in C code, while the SDK forms a complete set of software tools which can be used to develop and test new products. Both parts are available for **free** as **public domain software**. Although this CDE was originally developed for the M3S protocol, we have experienced that the 'open' approach makes it quite easy to use the software in other application fields.

Examples will be given about application fields in which open CDE has been used, the portable layering structure used in the architecture of the API and the possibilities of the SDK tools in developing CAN based devices and testing CAN based systems.

World Wide Web reference:

<http://www.tno.nl/instit/tpd/m3s/m3s.html>

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¹ M3S stands for Multiple Master Multiple Slave. The M3S version 2.0 specification has been submitted to ISO/TC-173/SC-1/WG-7 for formal standardisation.