

M3S

A general-purpose integrated and modular architecture
for the rehabilitation environment.

ir. M.W. Nelisse
TNO Institute of Applied Physics, Delft, The Netherlands

M3S stands for Multiple Master Multiple Slave and is a proposed standard architecture for general-purpose integrated and modular systems. It is based on a digital communication bus and designed to improve access to assistive technical devices by disabled people. It provides a standard interface between input devices and end-effectors, allowing devices from different manufacturers to be linked in the same system. During revalidation phases this facilitates the process of evaluating different input devices and making the decision what input devices are optimal for a specific user. Furthermore the M3S architecture enables the user to operate more end-effectors using a single input-device.

M3S is primarily intended for use on wheelchairs, although the architecture allows wider integration e.g. with homesystems. It is based on an industry-standard bus, the Controller Area Network (CAN) which was developed for use in the automotive industry. Furthermore it includes additional signal lines to increase system safety and integrity.

Correspondence:

TNO Institute of Applied Physics
Attn. M.W. Nelisse
PO Box 155
2600 AD Delft
the Netherlands

phone: +31 15 2692323
telefax: +31 15 2692111
e-mail: nelisse@tpd.tno.nl