



DIS Scientific Usecases and Projects

Project: Handwriting motor skills tests

In close cooperation to Revaki Ghent (Hilde van Waelvelde), we are working on automatic registration and analyses of handwriting, for which data is acquired on a digital tablet. A team of 19 students has been formed for the collection of data. First results are expected in spring 2012.

Project: Intelligence Tests

In cooperation to a team of freelance test developers, we are working on the construction and collection of normative data for a new intelligence test battery. We expect to be able to publish the first results in November 2012.

Project: Crossvalidation of the usability of the MAAS norms in case of digital presentation using DIS

Together with Maastricht University (MUMC) and Atrium MC, we are cross validating the usability of the MAAS norms in case these tests are presented and scored using DiagnoseIS. Both patient as well as assessor related issues are being researched and the software has been improved based on the findings during this project.

Usecase by Nathalie Vaes, PhD student, Laboratory for Neuropsychology, Ghent University

“In the context of a doctoral research project I used DiagnoseIS to develop a visuospatial test battery to measure the effects of prism treatment in stroke patients. Data are collected by means of a pen tablet and generated automatically in DiagnoseIS, which facilitates statistical analyses.”

Usecase by Mark van den Bunt, Master student, Neuroscience and Cognition, Utrecht University

“Due to the limited possibility of testing epileptic patients with intracranial direct cortical stimulation, it was required to develop a visuospatial task that allows for direct statistical analyses. With DiagnoseIS, I have developed a line bisection task that gives me online feedback of the patient's performance. This enabled me to gain more statistical power in a more efficient way.”

Usecase by Jasper Fabius, Master student, Neuroscience and Cognition, Utrecht University

“In my internship with neuropsychologists in the UMC Utrecht, I have developed a task that requires patients to make a reach-to-point movement, to test for optic ataxia. This task is developed using DiagnoseIS and a Wacom tablet. With this test we can now online see how the patient performs, in terms of accuracy and reaction time. Afterwards we can also check for odd movement patterns in a 2D-plane, thanks to the 'register hovering' feature in DiagnoseIS.”

Usecase by Tinneke Hellinckx, PhD, Experimental, Clinical and Health Psychology, Ghent University

“For my PhD project, I was able to program two experiments with DiagnoseIS to get more insight into the mechanisms of movements in children with Autism Spectrum Disorders. Firstly, an aiming task was developed to gain a better understanding of their motor control strategy. Secondly, a visuomotor adaptation task was programmed to evaluate their abilities to update an internal model. By using DiagnoseIS, combined with a WACOM tablet, data was collected and automatically processed into valuable movement parameters, on which statistical analyses could be conducted.”