ecICP from ExpertControl for PID controllers and beyond – completely automatic parameterization based on measured data in less than 4 seconds

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Martinsried/Munich, May 04 2009: With ecICP, ExpertControl offers a revolutionary software tool for controller design which is really capable to do what other tools merely promise. When talking about “automatic controller parameterization” techniques, software controller developers’ underlying understanding is manifold. Some for instance associate this term to adjusting the setpoint based on a given controller, others to iteratively optimizing the controller parameters according to non-practical performance criteria and again others just to automatically importing parameters into the controller unit. Other than this, ExpertControl redefines the term “automatic controller parameterization”! ecICP does not only calculate controller parameters for optimal/desired setpoint and disturbance dynamics, but the correct controller type as well – and everything just based on measured data.

Within less than 4 seconds, ecICP calculates the correct controller type and the appropriate controller parameters for each operating point, automatically. Prerequisites for this are appropriate measured data from system stimulation (plant input, plant output and time). After importing the measured data into ecICP, the necessary operating points can be easily defined inside the ecICP graphical user interface within a diagram visualizing the measured data. In case of highly nonlinear systems, several operating points and corresponding individual controller parameter sets are needed to achieve high quality control results. For this, ExpertControl offers ecCST, an extremely flexible controller algorithm as another high-tech tool and an alternative to the conventional procedure. Conventional procedure means linearizing the nonlinear system and deriving one single controller parameter set from the resulting linear model. Experts know very well that this procedure represents merely a compromise between feasibility and quality. With ecICP and ecCST, it is no longer necessary to live with a compromise. Feasibility, quality and economical aspects are the center of attention and are the only criteria! With ecICP you get the correct automatic controller structure and the correct automatic controller parameters within few seconds. ecCST switches the parameter sets for each operating point without any bumps to achieve the desired closed-control loop dynamics in the entire operating range. This level of quality cannot be handled by classic PID controllers.

Further information on the above and topics in areas including closed-loop control engineering, simulation and real time applications may be found at www.expertcontrol.com.

About ExpertControl:
ExpertControl (www.expertcontrol.com) is developing and marketing powerful engineering software tools for standalone use and for various development environments including LabVIEW, The MathWorks, Inc. MATLAB® and Maple. In the control design context, EC is focusing on providing automated software solutions for different application and industry areas, especially where reliable and high quality results are needed in very limited amount of time. EC is based in Martinsried/Munich, Germany, and operates with distribution partners in USA, Japan, Korea, China, Taiwan und Israel to support the products worldwide.

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