| Theme | **Logical control of model motor units (SP1)** |
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| Key Words | Logical control, truth table, distributed mechatronic systems |
| Specification | Industrial production is more and more realized with increasing number of productive components generally mechanical, electromechanical, electrical or electronic ones. The components form usually one technological set. It can be manipulation, machining, quality checking, packing, etc. operations, in which the components represent individual or cooperative distributed system. For mentioned components above, the system is called mechatronic system.<br>Such system can be controlled on different levels form simple manual and fixed control, via logical feedback control up to high-level continual feedback control. The issue is usually managing of several motor units (drives) to be worked in common time rate.<br>The aim of the theme is a design and technical documentation of simple logical control, which provides simple user control of several partially independent model motor units. |
| Tasks | 1. Study and describe available signals and individual motor units' responses of distributed mechatronic system.<br>2. Realize simple logical control as Simulink model in programmable environment MATLAB-Simulink. |
| Literature | 1. Saleem, A.: Mechatronics System Design, Controller and control algorithm Selection, Philadelphia University, 2010.<br>2. Online Manuals: Using MATLAB, Simulink; The MathWorks, Inc. http://www.mathworks.com/.<br>3. Other full-text sources: http://as.utia.cas.cz/asc - Link to GPC pages. |
| Note | Theme for semester project or bachelor project. |