

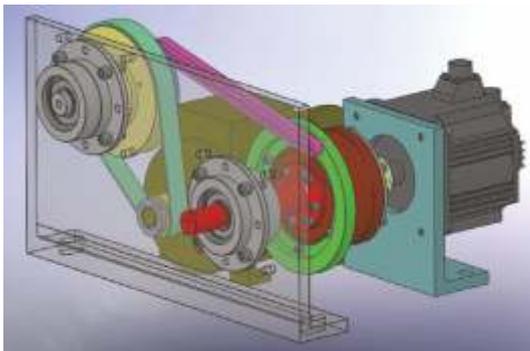
# RESEARCH AND APPLICATION OF MECHATRONIC SYSTEMS

In the fields of drives and movement implementations of the working links of mechanisms and machines, mechatronic systems are applied increasingly. In this area, VÚTS, a.s., is involved mainly in the research and application of electronic cams, which are servo drives controlled by a master controller. The electronic cam system is able to flexibly respond to a change of displacement laws of the working elements of the manufacturing process (flexible automation) and to cooperate within its own or superior control system with any peripherals, including communication with the user. The system of electronic cams is suitable for both the complex solution of the working movements of a machine as a whole and replacing individual conventional mechanisms because the inclusion of an electronic cam (system integration) into the machine or a superior manufacturing system is easy.

VÚTS, a. s., has been involved in the calculations and manufacture of conventional cams for more than 30 years. An extension of research and applications with electronic cams is a logical continuation with the use of all the knowledge and experience in this important area of technical mechanics.

## VÚTS, a.s., APPLIES KNOWLEDGE FROM RESEARCH AND DEVELOPMENT IN THESE AREAS

- Optimizing displacement laws according to various criteria
- Dimensioning servomechanisms in the modes of machine running
- Dynamic modelling and simulating applications
- Flexible automation solutions by designing rotary tables and step mechanisms
- Control systems of single-purpose devices with electronic cams (including the control systems of single-purpose machine tools).
- Electronic cam system integration into any host (superior) system
- Suppressing residual oscillations in rest intervals of electronic cams, where the rest interval is a technological production time period.
- Synergic mechatronic solutions of applications (combination of conventional and electronic cams)
- Consultancy in the applications of conventional and electronic cams (assessing costs, price comparisons, evaluating various alternative solutions with conventional and electronic cams, etc)



Gold medal - MSV Brno 2008

VISION UNLIMITED