

SCIENCE AND TECHNOLOGY CENTER EC1



As part of the project for EC1 Center of Science and Technology, we have created a part of the "Development of Knowledge and Civilization" exposition with stands that required a completely multi-disciplinary approach. The scope of the work involved the integration of electronic and mechatronic components and the development of dedicated multimedia solutions.

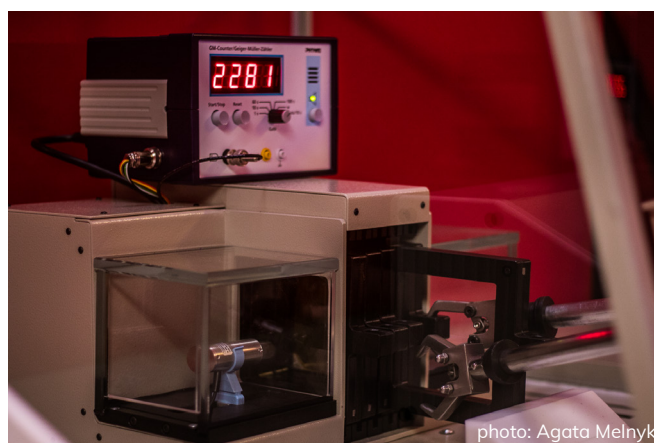
Year of completion: 2017
www.centrumnaukiec1.pl



FACILITY DESCRIPTION

EC1 Center for Science and Technology is the largest center of that kind in Poland, and includes an onsite spherical 3D-cinema. The facility is part of the EC1 complex – the City of Culture. At the same time, it is one of its key attractions.

The Center offers 3 complex education paths: "Energy Conversion", "Development of Knowledge and Civilization" and "Microworld – Macroworld". All the exhibitions are presented in an exceptionally interactive and modern way.



PROJECT SCOPE

As part of "The Development of Knowledge and Civilization" education path, we have comprehensively prepared the key stands for the entire exposition. The scope of the work included enhanced integration of electronic, mechatronic and multimedia systems.



Science centers are very complex projects because the stands frequently consist not only of software and visualization, but also of measurement systems and electronics. Our task was to combine several technologies and solutions into one effective interactive stand.

As part of this project, we have built low-level electronics management software. We have also integrated the systems already existing in the Center and created an attractive visual setting for the whole structure. Thanks to this, the constructed stands present scientific issues and research results in a beautiful and attractive form.

The most comprehensive part of the project is a simulator of a nuclear power plant. The stand has numerous physical switches and diodes, with which you can control the energy production process. The process itself, as well as its changing dependencies, is presented to the visitor on a large screen – in a form that is visually impressive. The user's task is to manage the process correctly in order to avoid failure. If the task is performed in the wrong way, the alarm goes off and an explosion occurs.

Our other installations were connected with such topics as thermography, measurement of the speed of light, the Doppler effect, sound analysis and sound synthesis.

TECHNOLOGIES USED

- Interactive Unity 3D applications,
- C++,
- Mechatronics,
- Electronics.