

Abstract

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Web Application for Remote Experimentation

The aim of this paper is to present an operating web application for remote experimentation. The main purpose of the development of such platform is to provide remotely accessible and controllable experiments which constitute a complete web-based laboratory. This has been achieved through two steps 1) use of hardware development platform with a customized hardware experiment, and 2) development of a web application service to access, control, and get back results from the experiment, and finally display these data. The proposed system has been implemented to build real hardware physics experiment for teaching Faraday's law of induction. The success of this platform enables the full development of an "eLAB" for teaching physics in undergraduate engineering education.