

VIRTUAL INSTRUMENTATION AS AN EFFECTIVE ENHANCEMENT TO AN ELECTRONICS LABORATORY EXPERIMENT

Dr. Yogendra B.GANDOLE
Department of Electronics
Adarsha Science J.B.Arts and Birla Commerce
Mahavidyalaya Dhamangaon Rly-444709, INDIA

ABSTRACT

This paper describes a tool to improve the electronics laboratory process. The tools really constitute a virtual electronic laboratory because it is made up of a set of virtual experiments with a user-friendly graphic interface and interactive simulated electronic instruments relating practical concepts with theoretical ones. The combination of the demonstration and the virtual electronic laboratory constitute a bridge between theoretical lessons and laboratory classes. The professor can use the experiments of the virtual laboratory in the classroom to improve student retention. Using this tool, undergraduate students improve their performance and increase their efficiency in the laboratory. A pilot experience has been implemented for Basic Electronics. This work demonstrates that instrumentation experience is greatly enhanced by integration Virtual Instrumentation into the Laboratory. The incorporation of computer data acquisitions into the undergraduate laboratory provides students with a valuable tool for data collection and analysis.

Keywords: Virtual Instrumentation, Laboratory Experiments, Learning Tool, Computer Technology.