

ShanghaiTech University
School of Information Science and Technology

EE112 Lab Experiments

Experiment 0: Multisim, Elvis II, and Labview

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1. Introduction

In the laboratory session, three tools including Multisim, Elvis, and Labview will be used. Multisim is an advanced, industry-standard, best-in-class SPICE simulation environment used by educators, researchers, and engineers worldwide. NI Educational Laboratory Virtual Instrumentation Suite (NI ELVIS) is a modular engineering educational laboratory platform developed specifically for academia. While Laboratory Virtual Instrument Engineering Workbench (Labview) is a system-design platform and development environment for a visual programming language from National Instruments like myDAQ and Elvis.

2. Pre-Lab

Learn about those tools mentioned in the introduction. Each team will be assigned to a work station. The work station includes: one PC with pre-installed LabView and Multisim, one NI ELVIS board, one myDAQ board, and auxiliary cables and materials. You may also bring your own laptop to the lab session. In this case, make sure that Labview and Multisim are installed in your laptop. The student versions of LabView and Multisim are available to download in the course website.

3. Lab

In the experimental course, TAs will give basic introduction to use these tools. Listen carefully in the class. After class, read the “Guide to the Curve Tracer in LabVIEW” and learn to implement the curve tracer in myDAQ which will be

distributed to you. In the following lab courses, Labview programming is important and will be used frequently. Hence, make sure to finish it before Lab1.