

Internship Work at Design Department Convertec Ltd Wexford, Ireland

The following gives an overview of the typical areas of work in the Design Department available to students seeking internship at Convertec Ltd. Students may also be required to work in other areas of interest as the projects develop, and also in other operational departments.

Many of our projects in the Design Department utilise the control and measurement programming application *Labview*, from *National Instruments*. The basic set of tasks when using Labview is listed here:

- Basics: Setup; Drivers; User Interface
- Labview Programming
- Labview Simulation
- Connection to Instruments
- Resolving problems with communications to instruments etc.
- Optimising speed, efficiency of program operation
- Database connectivity (MySQL, OpenOffice)
- Data manipulation and analysis and reporting

Automated power supply test system

One particular area of interest to Convertec Ltd., is the further development of our automated power supply test systems. This is an area which has benefited from the contribution of students in the past. Labview is used extensively for this task. This system of automated testing allows us to quickly verify design changes through consistent and repeated testing, and allows us to make decisions based on the test results.

Automated component test system

Another running project is the characterisation of passive component parameters and behaviour, using phase/gain analyser and other measurement equipment, controlled by Labview. Some components sourced globally fail to meet the published specifications or fall short of the values listed in the datasheet. This automated component test system allows us to quickly characterise component parameters for any samples we receive for approval. Based on the results we can specify particular manufacturers and focus our component purchasing resources more effectively.

Other Tasks

The nature of the work carried out by students during internships often allows scope for work on a diversity of projects. Both the student and Convertec Ltd. benefit from the willingness and flexibility shown by the student to take on a variety of tasks.