Design of Labview Based DAQ System

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Abstract : The Information Computing System of Monitoring (ICSM) for the Research Reactor of Tajoura Nuclear Research Centre (TNRC) stopped working since early 1991. According to the regulations, the computer is necessary to operate the reactor up to its maximum power (10 MW). The fund is secured via IAEA to develop a modern computer based data acquisition system to replace the old computer. This paper presents the development of the Labview based data acquisition system to allow automated measurements using National Instruments Hardware and its labview software. The developed system consists of SCXI 1001 chassis, the chassis house four SCXI 1100 modules each can maintain 32 variables. The chassis is interfaced with the PC using NI PCI-6023 DAQ Card. Labview, developed by National Instruments, is used to run and operate the DAQ System. Labview is graphical programming environment suited for high level design. It allows integrating different signal processing components or subsystems within a graphical framework. The results showed system capabilities in monitoring variables, acquiring and saving data. Plus the capability of the labview to control the DAQ.

Keywords : data acquisition, labview, signal conditioning, national instruments

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