

ABSTRACT

With current technological developments, the industry has grown to reach industry 4.0, industry 4.0 has five pillars in it, the following are the five pillars of the revolution of industry 4.0, namely digitization, product optimization and customization, automation and adaptation of HMI interactions, added value to business and services , and integrated data exchange. To grow students' abilities in facing challenges in the Industry 4.0 era, TELKOM University prepares its students by providing learning facilities, one of which is a bottling plant simulator. The bottling plant simulator consists of 5 workstations starting from Filling, Separating, Processing, Distribution Box, and Pick and Place stations. One of the important components in industry 4.0 is SCADA and HMI, so applying SCADA and HMI will help operators in controlling and monitoring the bottling plant simulator. The focus of the SCADA system is applied to filling stations, separating stations, and processing stations. In running HMI on a SCADA system, the operator must know the basics in operating the HMI, due to the lack of knowledge about HMI, a system design approach is needed so that the operator can easily understand the SCADA system. Process Centered Design is a method for designing interfaces that can be used to measure whether the interface design is accepted or rejected. Measurement for the success of interface design using Quality in Use Integrated Measurement (QUIM) is used to evaluate the 10 factors contained in the HMI. The application of the SCADA system on the bottling plant simulator can be used for controlling and monitoring what occurs in the bottling plant simulator, and with the PCD method, user satisfaction with the system design is obtained by 81.83% and the results of records from the database obtained the number of production of 238 bottles and the number of bottles. reject product as much as 1 bottle with a time of 65.39 minutes.

Keywords: Industry 4.0, SCADA, Human Machine Interface (HMI), Process Centered Design