

ABSTRACT

Industry 4.0 automation technology is currently experiencing rapid development. The production system is currently used by industries to guarantee the products produced and meet market demand. Automation has constituent components consisting of sensors, actuators, and controllers. One of the control systems that is widely used is the Programmable Logic Controller (PLC). Distribution of data information in the human machine interface design automation system can be done using the Intouch Wonderware program. To improve the quality of human-machine interface design at water and beverage packaging workstations, this research uses the Waterfall method, which is a method including the development method for the final project that has been carried out. It can be concluded that the design of an integrated automation system uses a PLC (Programmable Logic Controller) and a Human Machine Interface (HMI). The result of the design is an HMI model that is integrated with the bottled water packaging system. The PLC program that has been designed will be integrated into a mini plant to create an automation system that works in an integrated manner. The PLC is directly connected to the HMI, so that it can directly carry out processes at the bottled water packaging workstation, monitoring the operation of the system to find out the data produced.

Keywords: Industrial Automation Technology, HMI (Human Machine Interface), Packaging Station, Waterfall Method, Bottled Water Packaging System.