ABSTRACTION

Supervisory Control and Data Acquisition (SCADA) is one result of the integration of automation components that are used to monitor and control the processes that occur in the field. SCADA can provide information and controls in realtime, thus providing convenience to the user.

This time, *SCADA* have been implemented in many companies as a tool to control and monitor the process. One is used *SCADA* Wonderware Intouch. In the implementation, *SCADA* is still implemented in a standalone in the sense of a *SCADA* one personal computer (PC).

Based on interviews with software vendor Wonderware *SCADA*, *SCADA* implemented as a *standalone* appropriate if the process is simple. If the process has become complex and covers a large area (between branches), there will be inefficient on the use of Tagname (identity variables used in programming) which resulted in *SCADA* reliability.

This research will provide an alternative solution to the problem. The design of the system *Supervisory Control and Data Acquisition (SCADA)* based *Client Server* by using *Industrial Application Server (IAS)* is the solution offered on the issue. In designing the system, starting with knowing the existing process *MPS Pick and Place and testing* as a case study, and continued with the design and configuration of *IAS* scenarios. By doing the design based *SCADA* system using *IAS client server* solutions can be done on a *standalone* system.

The results of this research is based *SCADA* system *Client Server* by using a successful *IAS* designed. In the simulation, the user can perform control and monitoring stations each mill of Personal Computer as a *client*. Users also can conduct surveillance and control as a whole and do maintenance and improve the performance of *SCADA*. *SCADA* systems based *Client Server* is also able to report what happened in the process at the *MPS Pick and Place and Testing* both regional and centralized.

Keywords: Supervisory Control and Data Acquisition (SCADA), Industrial Application Server (IAS), Pick and Place MPS, MPS Testing, Standalone, Client Server.