

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*.