

A prototype of Web-Based, Modular dan Wireless Monitoring Robot

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Abstrak

A concept of a modular networked robot is introduced. A simple prototype of this kind of robot is developed to be accessible over web through wireless internet. The modularity is realized by dividing the robot into three modules: main, data acquisition and data processing modules. The main module consists of robot's body and main processor not only to handle the data processing, but also to store the whole software-based solutions. The data acquisition module is attached with the remaining hardware like sensors, microcontrollers and signal conditioner circuits. The data processing module represents the software-based system to filter, store, analyze and display the data or its final results. Finally, all modules are integrated through a web-based interface to realize a mobile control and monitoring system. In this thesis, the detail discussion is given only for the microcontroller-based solutions required in the system.