Design, Build and Remote Control of a Miniature Automated Robotic Sorting System

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Abstract

Programmable logic controllers (PLCs) are used in industry to monitor and regulate automated processes. While many processes may be automated, color sorting provides a single example and is used to impact the traits of a finished product. With the development of the internet, there is also increased demand and capacity for remote management of such systems. The performance of remote management is dependent on the implementation methods used. While internet control is typically designed for personal computers (PCs), there has been research done on use of mobile devices. In order to better prepare students for work in industry, education regarding current technology and processes is important. However, it is often inconvenient or impossible to visit and observe actual facilities. Given this limitation, an alternative is to create trainer sets that use or emulate key features of real industrial systems. This research describes the design, build, and validation of a trainer set using a custom demonstration module. Furthermore, the research implements internet-based remote control for use with PCs. Future work could evaluate the performance of various sets of server software with respect to remote control. Also, additional features could be incorporated such as remote
programming.

References


Index Terms

Computer Science, Control Systems
Keywords

Programmable logic controllers, remote operation, automated systems