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Abstract
Most of the operator interface and PC-based software are inconvenient for data processing and query. VB(Visual Basic) can be used to connect to Excel or Access to improve the inconvenience; further, by using Access form on web sites for people to browse can save considerable time of web-form development. The purpose of this research is to apply VB to combine the advantages of Excel, Access, WCDMA(Wide-band Code Division Multiple Access)、CDMA(Code Division Multiple Access)、GPRS(General Packet Radio Service)、PHS(Personal Handy-phone System) and Web Cam to integrate the wireless remote graphic control and monitoring of PLC(Programmable Logic Controller) and its applications.

This research has performed a great success of applying WCDMA、CDMA、GPRS and PHS to execute the wireless mobile remote graphic control and monitoring of PLC on Excel, Access and Web Cam under VB development environment. The integration of data meets the expected result as well. Not only the drawback of operator interface and PC-based software has been improved, have wireless monitoring and video image transmission technology also been applied on this study.

Multiple-Layer Form should be used to display charts and monitor screens due to the restriction of PDA's (Personal Digital Assistant) small screen. This will increase the size of the program. It is recommended that Tablet PC(Personnel Computer) can be the alternative. Tablet PC is just the medium alternative between NB(Notebook Computer) and PDA. Though wireless image transmission use image compression technology, since it is limited by the bandwidth of GPRS, the quality of the image is still slightly worse than wired transmission. Nowadays, 3G(3rd Generation) wireless networks are like rising winds and surging clouds.

They offer great advantages on integrate the development of PDA and web pages. In the future, if the bandwidth of 3G can be applied on the development, the effect of the wireless mobile remote graphic control and monitoring will be better.

The solutions and the display of real-time image proposed in this article, PLC control unit can also be replaced by micro-controller or other modules to make a diver application scheme. Program developers and management decision makers will acquire an economic and powerful alternative plan.

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