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Abstract
This paper is concerned with a home automation system which is combining with an OPC server and LonWorks devices. A interactive technology of 3D virtual reality is used as the human machine interface. In generally, the LonWorks devices are operated by the platform of the LNS. The LNS DDE Server is the kernel of the LNS which is used for the dynamic data exchanger. However the structure dispenses a lot of memory size. It will slow down the system performance and will make the system unstable. The OPC server is proposed to control the LonWorks devices in this paper. The OPC structure is developed on the technique of Microsoft OLE/COM. The structure is used to unify the communication functions between the applied program and the hardware equipment. The OPC specification is public and free, so it can cost down the developed system. In addition, a 3D interactive program, the Virtools program, is used as the interface between the computer and the operator to do the home automation. A program was written by the Visual Basic is used to communicate between the Virtools program and the OPC server. The proposed system will show a new field of vision.
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