
基于 MFC 的人防警报发送软件的开发

摘 要

人防是国防的重要组成部分,关系到国家安全和人民生命财产安全。它也负责防震,防洪,防灾等自然灾害系列的民防通知的任务。人防警报系统是有平时和战斗双重职能的。根据社会发展及其国内外形势的不同,防空警报的控制,信息采集,警报发送等一系列的功能建设就成为了新的目标,主要是由人工来操作。因为无法同步警报器报警时的音响信号,会导致警报的延迟发送现象。在通信技术高速发展的情况下,发送警报信号的人防警报发送系统的终端软件的开发对于城市人防建设越来越重要,进行区域化的警报器管理,在终端上需要操作简单,方便快捷,安全可靠的警报发送软件。

本文提出了一种基于 MFC 的人防警报发送软件的技术方案,在 vs2012 的编译环境下,通过 C++做 MFC 主窗口设计和功能按钮显示,JavaScript 制作 html 文件,导入百度地图 api 接口函数做电子地图,并通过 Webbrowser 控件显示。这样利用在电子地图上进行可循迹的警报点选择,MFC 控件上做警报类型选择,报警呼叫方式选择,在完成 CRC 校验后,通过串口控件 MSComm 进行串口通信,将警报信号用二进制数据的形式发送给终端报警装置。和硬件设备组成完整的人防警报系统。经测试结果表明本软件作为人防警报系统上位机可完成警报发送任务的基本需求。此方案可行。

关键词 人防警报 MFC C++ JS 电子地图 CRC 校验 串口通信

Development of alarm sending software for civil air defense based on MFC

Abstract

The important part of national defense is Civil air defense, it related to the people's lives and the country's safety. It is also responsible for the civil defense notice tasks of earthquake prevention, flood control, disaster prevention and other natural disaster series. The air defense system of alarm has double functions ,The combat and peacetime. As long as the social development and other situations at home and abroad. The air defense alarm control of the construction. The collection of information, sending alarm and some different columns already become a new target, manually operated. Because it is unable to synchronize the sound signal when the alarm is alarming, it will lead to the delay of alarm sending. Under the condition of rapid development of communication technology, people who have alarm signal sending will The development of the terminal software of the anti alarm sending system is more and more important for the construction of civil air defense in the city. For the regional alarm management, the terminal needs a simple, convenient, safe and reliable alarm sending software.

This paper proposes a technical scheme of civil air defense alarm sending software based on MFC. In the compiling environment of vs2012, MFC main window design and function button display are done by C + +, HTML file is made by JavaScript, baidu map API interface function is imported to make electronic map, and WebBrowser control is used to display. In this way, the following alarm points can be selected on the electronic map, alarm types and alarm call modes can be selected on the MFC control. After CRC verification, the alarm signal can be sent to the terminal alarm device in the form of binary data through serial port control MSComm for serial port communication. And hardware equipment to form a complete civil air defense alarm system. The test results show that the software, as the upper computer of civil air defense alarm system, can fulfill the basic needs of alarm sending task. This scheme is feasible.

Keywords Civil air defense alarm MFC + + JS electronic map CRC verification serial communication

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