Abstract

Remote Access Webcam Suite

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I have developed Remote Access Webcam Suite as an alternative to Internet Protocol camera's and other different forms of remote access cameras. It consists of two parts, the software control suite and the rotator hardware. I chose to develop the software in Visual Basic, using Visual Studio because of the robustness of the language and the stability and Rapid Application Development (RAD) characteristics of Visual Studio. I wrote it to provide an alternative to expensive and difficult to setup IP cameras. It uses a computer and free software I developed to allow remote access. Instead of using a built in micro-controller like IP camera's do, I replaced the micro controller and network interface with a common household object, a computer. The suite of programs I have developed includes software to broadcast a live video stream from the camera, to remotely pan the camera's view field, and to test the connections of the rotator module. The project also consists of a rotator module, which allows a wide variety of cameras to be mounted onto a motor and stand, and to interface the box, allowing it to be remotely panned. I designed this to be simple to setup, using user intuitive wizards, color coded connections, and robust documentation. The success of my development process shows that Visual Basic can be used to interface with hardware if the proper drivers are provided, and that Visual Basic and the .NET Framework provide the ability to create complex Internet and wide area network applications.