Project Title: Windows Mobile based Atlas agent

Our project is about developing a Java Application that would be deployed on a Windows Mobile based PDA or Pocket PC. The user will be provided an intuitive, easy to operate menu to monitor and control various applications in the smart space.

For instance,
- On entering the house, the user will be able to switch ON/OFF the lights of various rooms
- The user will be able to turn on the TV, switch channels
- The user will be able to control the audio system
- If somebody rings the door bell, the user has the option to see who’s outside on the PDA screen using the webcam on the door.
- If the user is away from the house and if there are cameras inside the rooms, he would be able to monitor the rooms if he has access to wireless internet.
Technical Implementation:

We will be using J2ME for this application. The application running on the PDA/Mobile device is called a MIDlet. MIDlets are developed on regular desktop computers and then deployed on the PDA. The MIDlet itself is designed to run on a small device. The toolkit used for developing this will be Sun's J2ME wireless tool kit.

This toolkit has an emulator which provides a sandbox environment. We developed a sample MIDlet application. In this demo application the user enters his name and the sends a request to the server. The server responds quoting the IP address, it received the request from.

The demo application uses HTTP connection. 2 way communications can be achieved using this. J2ME also provides client server architecture using socket programming. We will be using both of these to establish communication between PDA device an the server running the middleware.