

Healthcare Aide: Towards a Virtual Assistant for Doctors Using Pervasive Middleware

The advancement of available, portable, low cost handheld devices (PDAs, cell phones, etc.), Bluetooth, and WiFi has resulted in the users' mobility at unprecedented levels. As these devices can communicate with one another, the combined capabilities can be leveraged to form a useful new set of tools. Presently, pervasive computing is being extended into the sophisticated healthcare sector with the promise of providing an easier and more efficient mode of communication among healthcare professionals. In this paper, we present the details of our application 'Healthcare Aide', which has been designed to provide not only more convenience for doctor-doctor, resident doctor-doctor, patient-doctor and nurse-doctor interaction but also a smooth pathway for real-time decision making along with survey results from users' point view and performance analysis. Our pervasive middleware MARKS (Middleware Adaptability for Resource Discovery, Knowledge Usability and Self-healing) provides the underlying support for 'Healthcare Aide' in a completely transparent manner.