Web-based wireless data acquisition system using 32bit single board computer

The design and architecture of a web-based wireless data acquisition system are presented. This system provides a web interface for remote monitoring of sensors deployed which connected using wireless technology. The design utilizes the 32bit single board computer as processor board to provide low cost and low power data acquisition system. Two main part of this system are Sensor Node (SN) and Web Server (WS). The SN is function as Data Acquisition Unit which contains processor board and connected to analog inputs while WS function as storage unit. The transmission of collected data between SN and WS is using 802.11b wireless network technology. This system is preferably deploy for large monitoring system such as for agriculture and environmental.