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Abstract
Because GPRS wireless network has the capacity to connect with Internet, it has been the research topic with increasing interest and attention. Recent development in wireless sensing architectures can be found in literature. Due to the constraints concerning the power supply, the traditional wireless networks can only transmit data over a short distance to a data logging station nearby. A GSM-based system can transmit the sensing results over a long distance. However, the GSM networks are incompatible with Internet protocol and can’t support multiple transmitters with one data receiver. Furthermore, the high costs for GSM connections devalued the widespread use of data transmission.
The Internet capable of world-widely information dissemination and broadcasting has revolutionized our everyday life during the past decades. It will continue to dominate and change the way of information exchange and even daily life in the future. Meanwhile, mobile networks also gain exponential traffic increase and growing importance to users. Wireless Internet-based sensing network is the resulting of the developments of Internet and mobile networks and will dominate the next trends of communication technology development.
The proposed system design is based on 32-bit advanced RISK machine (ARM), it can capture video signals and save the corresponding video files to USB compact disk in JPEG format. Furthermore, the sensing results and JPEG files can be transmitted to the host computer, which can be very far away from the accelerometers and it can be also flexibly assigned with a static IP address. The GPRS concept allows volume-oriented charge, which permits users to have cheap, permanent connections to the Internet. The proposed system has many applications in remote monitoring.
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