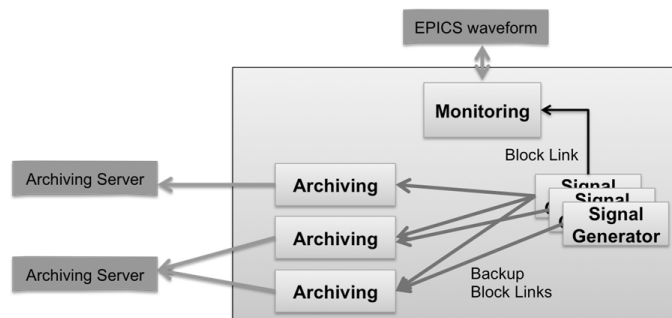


08SW159 Analysis of NetCDF-4 and HDF-5 scientific file formats for the data archiving of ITER fast plant system controller prototype

R. Castro⁶⁸, J. Vega⁶⁸, M. Ruiz⁶⁹, D. Sanz⁶⁹, E. Barrera⁶⁸

New fast plant system controllers are being designed and developed for ITER (International Thermonuclear Experimental Reactor). They require to manage and to process massive data that is being acquired at high sampling rates. This data has to be archived for being posteriorly analysed in order to rebuild several aspects of the experiment. Our group is currently involved in different works related with ITER, and more concretely related with their fast control technologies. ITER fast plant system controllers will require data archiving, and based on ITER requirements our group developed a data archiving solution based on NetCDF-4 [1] [2] [3] technology. At this time, ITER is supporting HDF-5 [4] scientific file format, as data archiving solution for its control systems. In this sense, we have created a set of tests scenarios in order to analyse and compare both scientific data archiving solutions from ITER fast plant system controller requirements point of view.

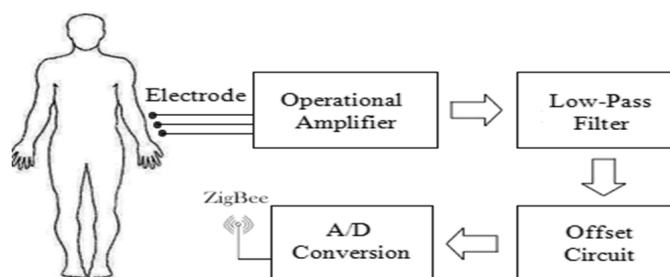


09BM026 A Portable, Wireless and Low Cost Solution for acquisition signal studies: a case for EMG signal

Silva, D. K. N.⁷⁰; Sato, R.M.V.⁷⁰; Castro, A.L.S.⁷¹

This paper presents a prototype of an acquisition board of electromyographic signals (EMG), an embedded portable solution, wireless and low cost. The system is composed of an EMG acquisition board, Zigbee and a device named GPRSx. After acquiring the EMG signal, it is sent through ZigBee wireless technology to GPRSx device. The GPRSx device sends the EMG signal to a server on the Internet using GPRS wireless technology. The EMG signal is displayed in a graph on a computer simultaneously. The results are very promising and may serve as reference in studies for the biomedical area.

Keywords— EMG;portable;wireless;low cost;ZigBee;GPRS.



Block diagram of the EMG acquisition board.