

177. DELINEATION OF IWSN STACK - RTOS FRAMEWORK WITH MULTIPROCESSOR SUPPORT USING LAXITY TIME ALGORITHM

1N.Umameswari, 2A.Manjunathan

1 PG Scholar, 2Assistant Professor

1,2, Department of ECE, K.Ramakrishnan College of Technology, Samayapuram, Trichy, India

lumameswari.ecom@gmail.com , 2 manjunathankrct@gmail.com

The delineation of industrial wireless sensor network (IWSN) stacks requires the adoption of real time operation system (RTOS). In Industries large numbers of sensor are used to collect several kinds of data. Data collected by the sensors cannot be given priority beforehand. Since all the data are equally important. Hence to ensure data acquisition and processing in a fair manner, a protocol stack is used. RTOS is used to implement this protocol stack in IWSN. The data acquired from the sensor nodes of IWSN is processed by non-preemptive scheduling using the protocol stack the data is transferred parallel to the central controller of the IWSN. RTOS (Real Time Operating System) is a Process which done between hardware and application. Packets have to send at particular time. During the packets transmission some collision may occur. To overcome this collision we are going to do this project. This project is implemented in two sections as prototype. First one runs with RTOS and LPC2148 as master node and another as normal data acquisition node to which sensors are connected. Second section may contain any controller as per need. Communications between two nodes are accomplished through wireless HART.

Index Terms – RTOS, Wireless HART, Laxity time, microcontroller, GSM, GPS.

Journal of Science and Innovative Engineering & Technology