World Academy of Science, Engineering and Technology
International Journal of Electronics and Communication Engineering
Vol:8, No:12, 2014

Optimization of Real Time Measured Data Transmission, Given the Amount of Data Transmitted

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Abstract : The operation of nuclear power plants involves continuous monitoring of the environment in their area. This monitoring is performed using a complex data acquisition system, which collects status information about the system itself and values of many important physical variables e.g. temperature, humidity, dose rate etc. This paper describes a proposal and optimization of communication that takes place in teledosimetric system between the central control server responsible for the data processing and storing and the decentralized measuring stations, which are measuring the physical variables. Analyzes of ongoing communication were performed and consequently the optimization of the system architecture and communication was done.

Keywords : communication protocol, transmission optimization, data acquisition, system architecture
Conference Title : ICCINS 2014 : International Conference on Communications, Information and Network Security
Conference Location : Sydney, Australia
Conference Dates : December 15-16, 2014

Open Science Index, Electronics and Communication Engineering Vol:8, No:12, 2014 publications.waset.org/abstracts/11728.pdf