



“A MODEL OF DISTRIBUTED CONTROL SYSTEM FOR REMOTE AND SECURED COMMUNICATION”

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Abstract.

Due to lack of university-industry linkages in our country, the students, especially at undergraduate level, when exposed to industries after their graduation, face practical difficulties. To bridge this gap, a model of DCS (Distributed Control System) has been proposed which can be effectively used as hands on training tool in universities labs. The model presented, meets all the fundamental requirements, such as (1) it is user-friendly (2) It can be customized (3) It contains a built-in mechanism for remote and secured communication. During the literature review, it was found that the earlier systems developed, were lacking in one or the other fundamental requirements. The research work presents a solution to the problem by designing a simple, customizable DCSM model for secured communication via TLServer, FServer and KEPServer. TLServer 3.1 combined with Trilogi 6.31 is working as an administrator as well as engineering station in local loop communication, while the FServer works as a user. The DCSM controller can be programmed remotely and can also be controlled through online monitoring simulator. Architecture of proposed model is consist of four layers (1) Hexatec Saturn 3.0 acts as a HMI (Human Machine Interface) (2) KEPServerEx 4.0 acts as a OPC (OLE for Process Control) (3) Trilogi FMD88-10 PLC (Programmable Logic Controller) acts as a controller (4) Sensors. Currently, the developed model is a part of BUKC Intranet, having a MAC address (00-1F-2E-02-04-DE), an IP address (192.168.9.6), Subnet Mask (255.255.240.0) and port address (9080).

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