REENGINEERING AN EMBEDDED LABORATORY ALLOWING REMOTE EXPERIMENTS THROUGH INTERNET.

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Publicado em: *Livro de Resumos do 6th IFAC Symposium on Advances in Control Education, Oulu, Finlândia, Junho de 2003.*

The paper presents a methodology for reengineering existing control systems labs allowing remote experiments through the Internet. Such a methodology is based on standard software tools applied to develop and implement a computer gateway. All the devices used in the control system lab considered in the current approach, such as sensors, actuators and controllers, as well as the computer gateway, are connected to a PROFIBUS network. The system implemented allows real-time experiments being performed remotely and could be a powerful way of studying new identification, control or fault detection and isolation algorithms independently the place where the methods are implemented.