Internet based learning with Remote Control realized Applications

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Aspects to implement Remote Control laboratory

The reasons to implement remote control labs for technology education are to:

- support E-learning to handle distance experiments with electronic labs,
- develop of complex learning arrangement under the aspects of the constructivism
- analyze complex processes for trouble shooting and to maintain complex plant with the remote control
- impart skills of programming technical processes with and to understand different networks
- implement a new way of communication and learning between groups at different location
Configuration of a control system for water level
Different Levels of imparting automatization

- **AS Interface**
- **Profibus DP**
- **GSM-Handy**
- **Ethernet**
- **Lokales Netz (LAN)**
- **Netz**

**Lokaler Zugriff**

Basic, AWL, FUP, e.g.
E- Lab- Experiment with PLC-Controller and Webcam
Station Distribution with Simulation
Model production or one product with modifications
Learning arrangement with different experiments and complex processes
Communication between groups at different places
Dynamic display of the model plant – Status of the process
Processes and troubleshooting

PLC programming languages

FUP -Charts

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Software design Process

Function chart for a stamping device

Statement list for a stamping device

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Possibilities of analyzing the control sequence

PLC Controller with different modules

Comparison

Actual Values of the step of the program

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Actual Values of the step of the program
Collaborative Learning by Internet

No borders of learning and discussing about Technology between

- national and international Universities,
- Industry and universities
- Students of different universities

To exchange Knowledge
Conclusion of the contribution

New technologies between technology and informatics

- fulfill competencies and standards of technology
- opens a varieties of communication
- allows an access of different processes of life reality
- design complex and networked processes
- make understanding of other disciplines
- initiate new social contacts over all borders
Thank you for your hospitality and your patience