



Smart Interfaces

INITIAL POINT

With the emergence of new devices that users want to use both for visualization and for controlling, new operating concepts and, consequently, new visualizations have become necessary. In the private sphere users experience completely new interactive concepts through tablets and smart phones and expect them also in the professional environment. For example, users want to go through their production processes with the tablet PC and check or can directly intervene in the control of the production environment. So far, this trend in the automation industry has still to be acted upon.

SOLUTIONS

End customers already require the implementation of new operating concepts and the presentation or control on alternative devices. Not only different kinds of representation, but also the different types of communication should be implemented with this project, so to speak a new man/machine interactive concept. The zenon generation 7.10 from COPA-DATA, offers the only HMI/SCADA system worldwide that already uses a DirectX graphics engine in the system. Besides zenon 7.10 also exists as a 64 bit application certified for Windows 8. Thus, new technological options are available such as a generic Multi-Touch functionality. The new approaches are characterized as superior through four major innovations:

1) New user-/interaction concepts: From Touch to Multi-Touch concepts to scenarios with multiple operating systems simultaneously on the same servers. Combination of different additional input interaction methods such as gesture recognition, speech recognition, etc. a control concept. Plus, intelligent switching between operating modes in a

single project. The same HMI/SCADA application should be optimally operated without additional engineering effort with Touch/Multi-Touch/mouse + keyboard. The interface automatically adapts to the terminal.

2) Intelligent control elements (user interface): New controls and control elements support the optimal operation of the system. They should be able to track and analyze the control actions of the user. Likewise, an intelligent interface per se is desired.

3) Mobile devices: requirements for the HMI/SCADA field are different than in the consumer world. Plants have to be operated, processes have to be controlled. The new operating concepts/interaction elements also need to apply to mobile devices.

4) Assistance in planning and application design and distribution of know-how (Through training/education, services for remuneration, helper tools or surfaces). Already in a preliminary study named PERSEUD this topic was researched resulting in the following points:

- ▶ zenon defaults and standards need to be improved, as is often resorted to it.
- ▶ Support of cross-company exchange of design and user elements.
- ▶ Reduction of the visual complexity of the zenon Editor.
- ▶ Support for a transfer of knowledge to less experienced users.
- ▶ Establishment of a mental (project) model or support a mental project structure.

PROJECT OVERVIEW

INSTITUTION

University of Applied Sciences Salzburg
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FFG



TYPE OF PROJECT

Internal Research project supported by the Austrian Research Promotion Agency (Österreichische Forschungsförderungsgesellschaft mbH)
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WANT TO KNOW MORE

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