...connecting IT

ascolab

automation systems communication laboratory

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Learning from the past ...

Ancient history reports that a huge project, the Tower of Babylon, failed due to communication problems between the various architects working on it. Apparently there were many different languages spoken by these architects. In modern times, engineering practice has shown that we are faced with similar problems due to the wide variety of "languages" spoken by automation components used in most plants. Systems, particularly those produced by different manufacturers, are frequently not able to communicate with one another. Often times communication can only be established at great expense and effort. Specialists at ascolab GmbH have a solution to these „communication problems". They ensure that automated plant components are able to exchange information perfectly.

The task at hand in industrial practice

There are a number of causes for the communication difficulties which occur in industrial applications. Technologies and standards vary greatly between industries of application. Also, various transfer media, bus systems, and numerous protocols have established themselves over time. Therefore communication between automation components is not merely limited to a classical exchange of information; particularly in complex systems it combines data acquisition and archiving of production data with dependent enterprise information. In these situations, software systems need to communicate with each other even though their interfaces and data formats are frequently incompatible.

ascolab GmbH develops solutions which function as real-time „translators" between various software components and maintain the flow of information using standardized interfaces. With this focus on standardized interfaces, solutions by ascolab meet current requirements of the entire system while maintaining system expandability for future needs.

Working with an independent consultant (one not affiliated with a specific manufacturer or industry) who is experienced at thorough analysis of data-related requirements (like the speed & volume of data communications), will lead to results which are optimally suited to customer needs.

Where do experience and customer needs meet?

ascolab GmbH offers the complete range of consulting and software services required for optimal industrial communications.

1. Feasibility studies and on-site consulting

We work in close cooperation with customers to evaluate their system requirements. After extensive research and analysis, we develop a comprehensive communications specification for the entire system and its sub components. We incorporate proven technologies into our specifications and we also implement our own testing methodologies to ensure that we recommend the best possible technical solution.

We assist our customers when it comes to planning and implementing these solutions. Please contact an ascolab systems specialist, we are eager to help you with your feasibility and consulting needs. The sooner you contact us the sooner we'll be able to help you with your project.

2. Project planning services

Designing and implementing industrial communication systems is our core competency. We specialize in modernizing plants, redesigning and connecting to legacy systems, and developing performance specifications. We are experts at integrating automation hardware and software components to provide seamless communications between systems. Our commissioning procedures include extensive testing and trouble-shooting, as well as long-term care and maintenance of the communication systems.
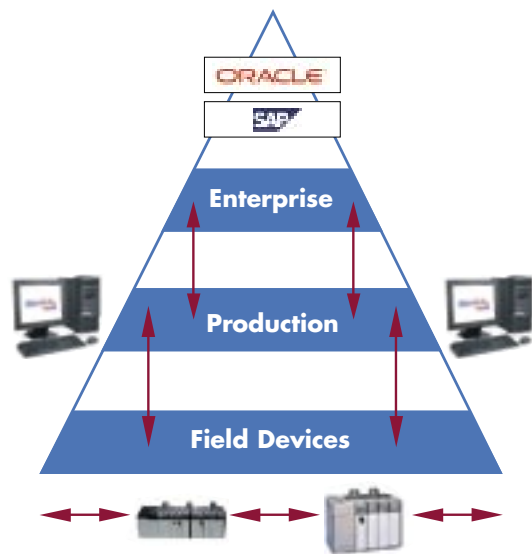
High quality maintenance and technical support provided by one company will ensure that the system will continue to meet or exceed performance specifications and thus extend the useful life span of the automation system.

3. Training courses and seminars

We share our knowledge and experience with our customers by developing training courses which we can adapt to meet customer needs and requirements. The courses are typically offered at the customer site. For planners and system engineers we offer preparation courses in communication technologies to help them acquire expert skills in advance of the project.

Near the close of the project practical applications provide project managers and senior engineers with information related to technologies and trends. Software developers and system administrators receive hands-on exposure to software interfaces with real world examples. Finally, for service and maintenance staff we provide practical information on finding, analyzing, and correcting faults.

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Components based on OPC standards can be found in all levels of the automation pyramid - from the shop floor to the enterprise domain.

The most well known OPC interfaces and their areas of use are as follows:

1. **Data Access, for accessing process data**

2. **Alarms & Events, for alarm management and processing**

3. **Historical Data Access, for archiving and trend analysis**

4. **XML DA, for web based data access**

5. **Data eXchange, for direct device communication**

6. **Unified Architecture, the service oriented OPC**

Resources

The ascolab team consists of specialists with many years of practical experience in industrial communications. This technical experience covers the range from shop floor data exchange up to preparation of complex data for enterprise applications. Ascolab's "vendor neutral" approach ensures that tailor-made solutions where products of various manufacturers are integrated together, will reach optimal application performance. During contracted development ascolab can handle the entire project or assist the customer's development team as needed. As a part of a project or as a service in itself, ascolab provides its customers with training courses and seminars to transfer relevant knowledge.

Active Membership...

...in the OPC Foundation (cooperation of over 300 well known vendors) and extensive contributions in various working groups ensure ascolab an insight into future standards in industrial data communication.

ascolab implements software interfaces, database connections and communication applications for the entire flow of data right up to the enterprise or management level in an organization. Compatibility and reliability is ensured by using standards-based technologies such as OPC.

OPC ®
FOUNDATION
MEMBER
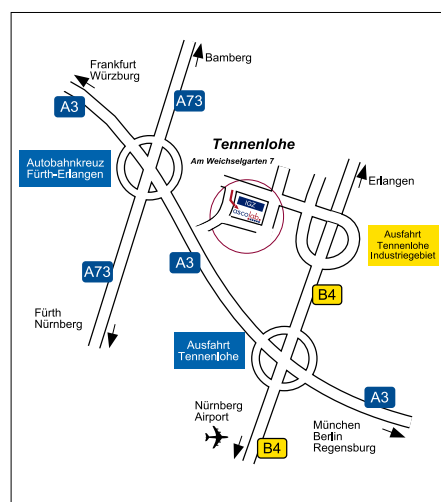
ascolab solutions...

An overview of our services

- Consulting services - from analysis to performance specifications, which are independent of manufacturer or industry.

- Realization of specific software solutions from problem description to system test

- Designing and planning of communications concepts for new plants, custom integration services for plant modernization and restructuring

- Supervision of communications systems throughout the entire useful life span of a system, including maintenance and support

- Training courses and seminars: improving skills through on-site training

Relevant technologies and products

- Bus systems   Ethernet, Profibus, Modbus, Interbus, CAN, …

- Protocols   TCP/IP, SOAP, HTTP, …

- Interfaces   DCOM, OPC, XML, SQL, ODBC, ADO, …

- Programming languages C#, C++, Ansi C, Visual Basic, Delphi, PHP, …

We look forward to hearing from you so please contact us if you have any questions.

ascolab GmbH

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