



# Automation

Engineering and implementation of process control systems  
Hardware and software development



**At the press of a button your process plays the right music**

**SYSTAG**  
  
automatically better

## Sophisticated solutions for process automation in the chemical industry!

### Sophisticated automation

Our chemical process concepts always contain technically meaningful and at the same time scientifically optimum solutions. We benefit from our experience in programming control systems, in the development of micro processor systems and in the conception of data banks and networks.

### Our features



The right assembly know-how for sophisticated automation solutions



More than 30 years service in the chemical industry



Integral problem recording for optimum technical and scientific solutions



Input of reliable software and hardware components



High quality awareness, characterised through projects carried out in the pharmaceutical industry



Structured development run



Where applicable, the latest technology



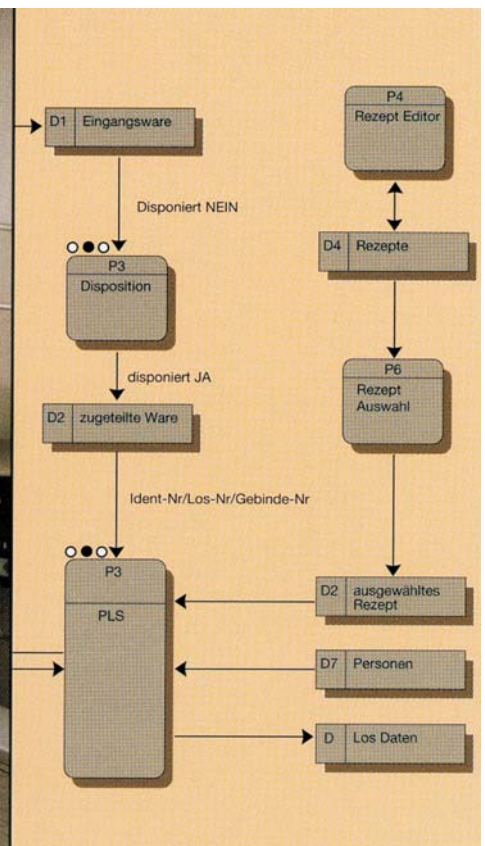
## Even difficult problems are not insurmountable !

### Our achievements

- ➔ Engineering bases and preliminary studies
- ➔ Recipe controls for chemical production
- ➔ Data banks / management of process data and long-term archiving
- ➔ Visualisation of installation conditions
- ➔ Material tracking and personnel identification
- ➔ Networking of control levels, process system levels and product monitoring
- ➔ PLC programming, real time recording
- ➔ Development of electronic hardware, design and testing of prototypes
- ➔ Registration for quality control
- ➔ Support for qualification and validation of systems used (FDA approval)

### Structured sequence of events

Our development works in accordance with a sequence defined in quality management. This defines which documents need to be generated by when. Consequently you can keep yourself continuously informed about the development position and influence the rest of the run during reviews.



## Systems and Languages

### Computer / CPU systems

VAX  
PC  
PLC  
Motorla  $\mu$ P  
Intel  $\mu$ P

### Operation systems

VMS  
Windows (3.11, 95, 98, 2000, NT)  
QNX

### Programme languages

Pascal  
Portal  
Visual Basic  
C/C++  
Modula 2  
SQL  
Assembler  
HTML

### Design tool

System-Architect

### Data Bank

Access  
PISA  
Oracle

### Process control software/tools

FIX/DMACS (Intellution)  
Sattline

### Computer networks

Field bus, Profibus  
Ethernet  
Token Ring  
DecNet  
Novel-Netware  
Internet

## Realized Projects

### Process control systems

Textile dyestuff  
Pharmaceutical bulk production  
In-process analysis laboratory

### Pilot installations

Polymer chemistry  
Dyestuff chemistry  
Photo chemistry  
Energy saving crystallisation procedure

### Automatic laboratory reactors

Active pharmaceutical substance development  
Dyestuff development  
Polymer chemistry  
Reaction calorimetry  
Peptid syntheses  
Bio catalytic converter test installation

### Logistics and information

Material flow and monitoring  
Personnel authorization and registration  
Central data recording with long-term archiving

### Miscellaneous

Dosage system  
Automatic distillation  
Micro processor subsystems  
Remote control and remote monitoring  
Thermal analyses instruments