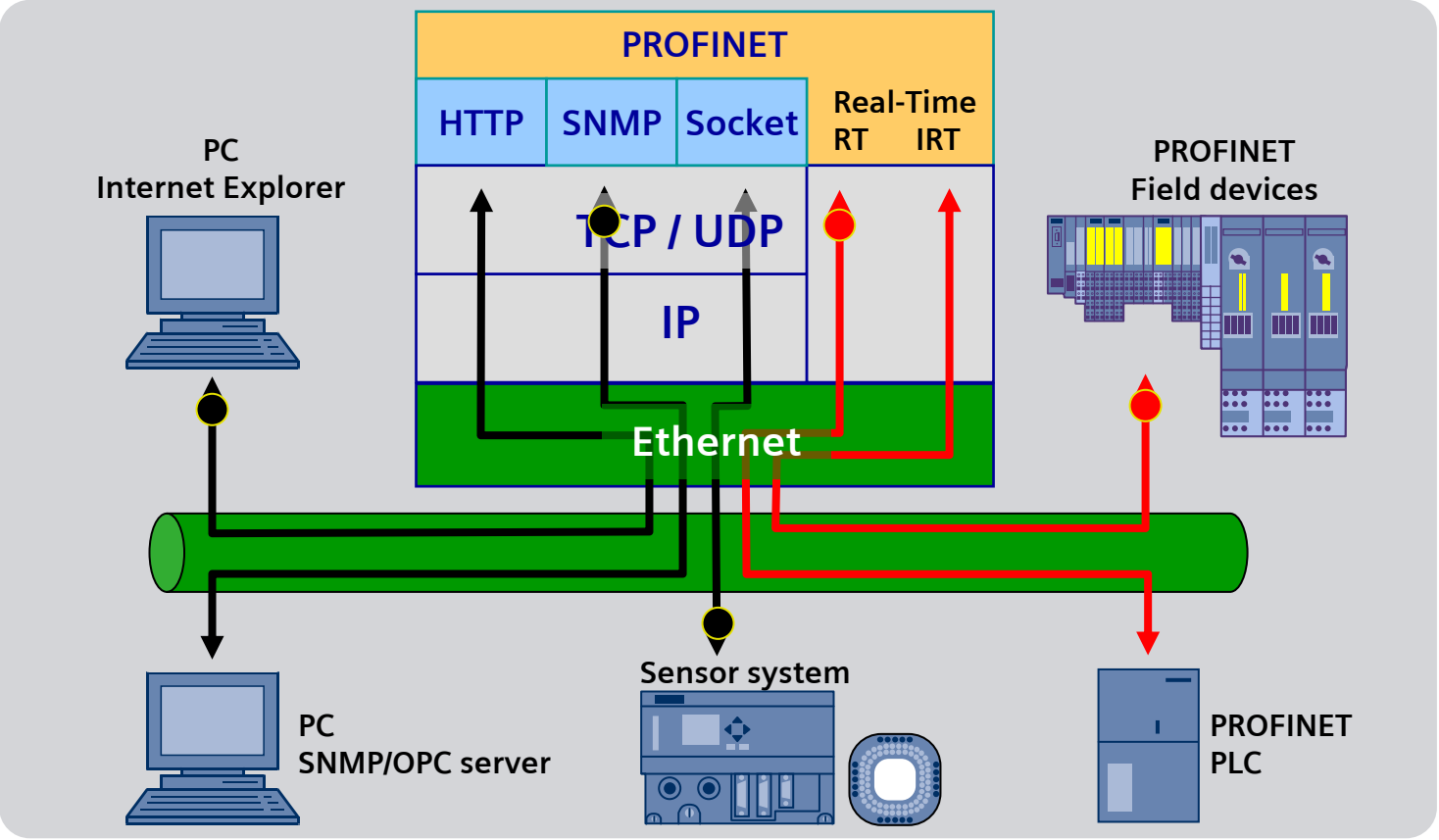
PROFIBUS • PROFINET

PROFINET

The leading Industrial Ethernet Standard

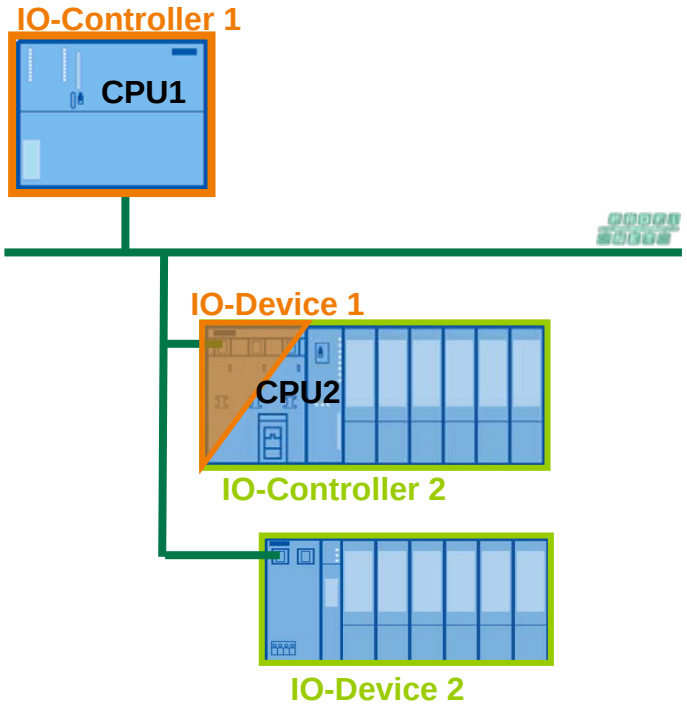
The Benefits of PROFINET Diagnostics

PROFINET communications



PROFINET features standard TCP/IP communications in compliance with IEEE 802.3 and real-time communications

I-Device

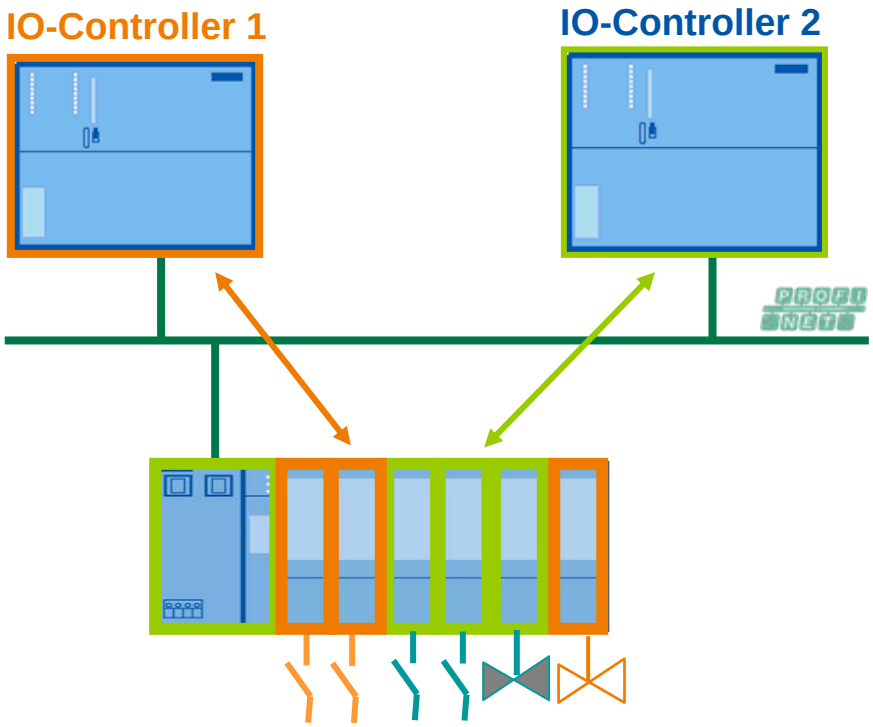


I-Device

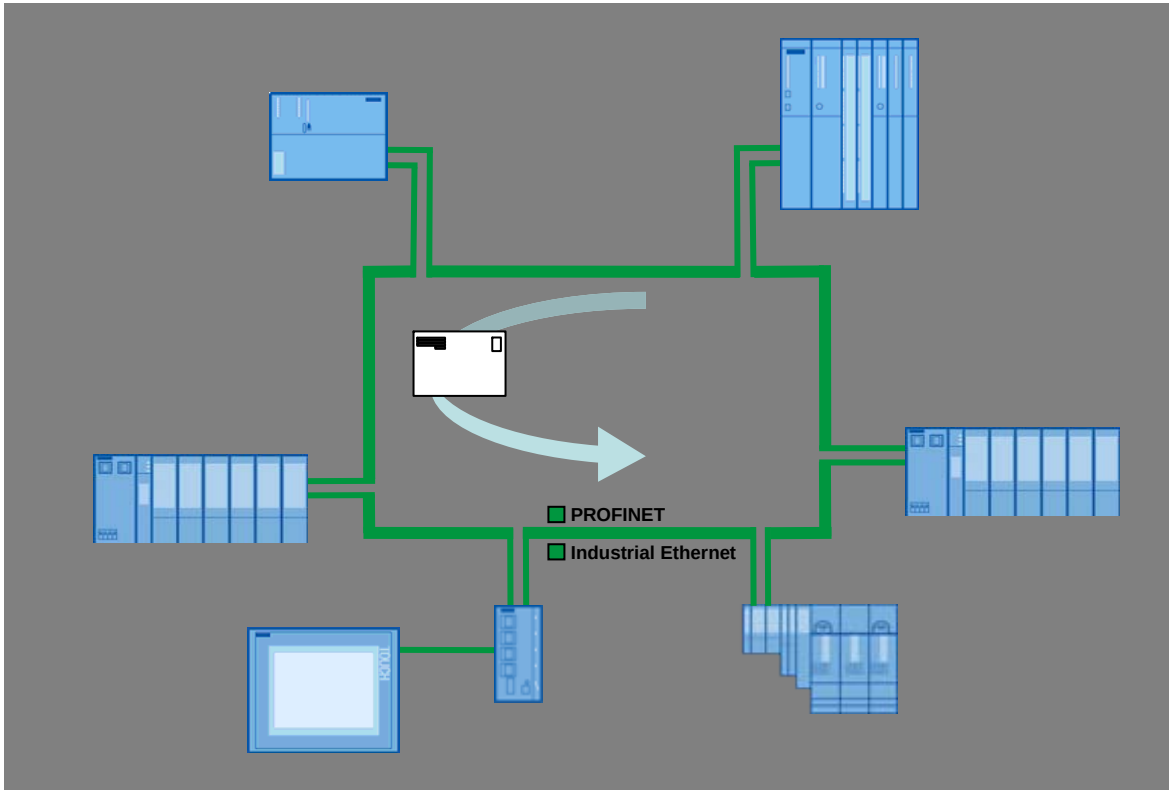
- Simple and familiar IO-coupling of CPU's
- Coupling of CPU's in different projects
- Integration in the foreign controller
- Reduction of PN-PN couplers

Shared Device

- Accessing one Device from several controllers

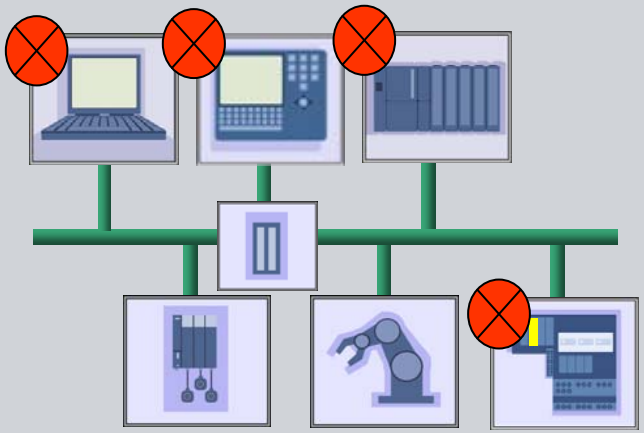


MRP - media redundancy protocol



PROFINET offers …

… more continuity (uniform structures)

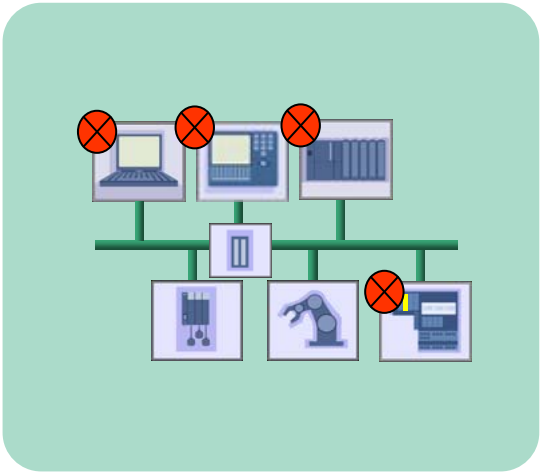


For diagnosis

Requirements for diagnostics

You want...

- Access to your data from anywhere
- To localize faults quickly
- Fault messages in plain text and foreign languages
- Comprehensive diagnostics down to the channel, even across gateways
- To use common IT standards
- A graphical overview of the real topology
- Preventative diagnostics and maintenance



Goal: Fast commissioning and increase in plant availability

PROFINET – offers best diagnosis in class

Beside

- Proven channel diagnosis known from field busses
- Guaranteed alarm

... usage of standard Ethernet diagnosis

- Established mechanism like SNMP
- Access anywhere

on top

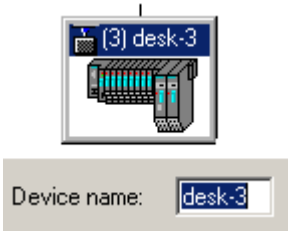
- Easy localization with topology views
- Simple access with web

Simple by integrated naming

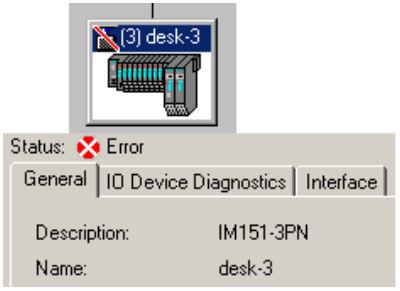
Comprehensible names of devices

- well defined names for the addressing are also used for diagnostic information, e. g. „desk-3“

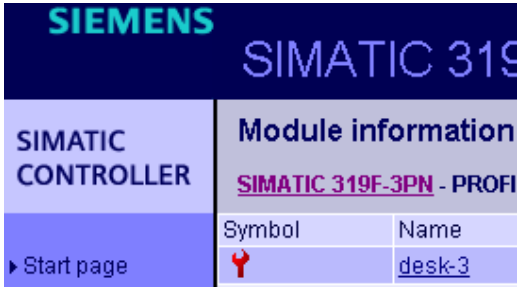
Offline-Engineering



Online-Diagnostics

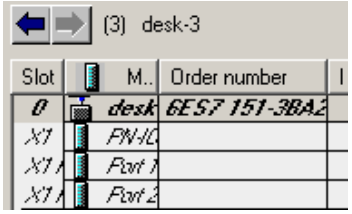


Web-View



Consequent support also of the connectors/wiring naming

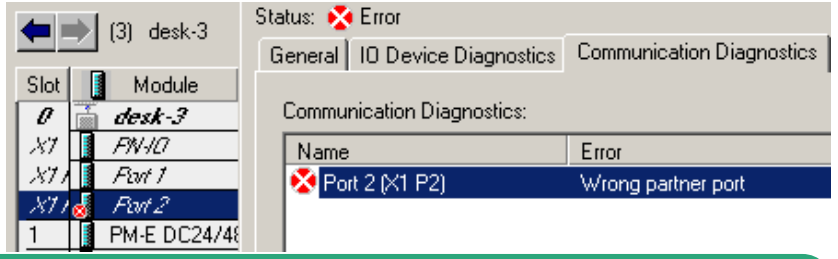
Offline-Engineering



Device-Housing

X1 P2

Online-Diagnostics



Error prevention
Clear identification of the fault location
Fast repair

Device Diagnostics

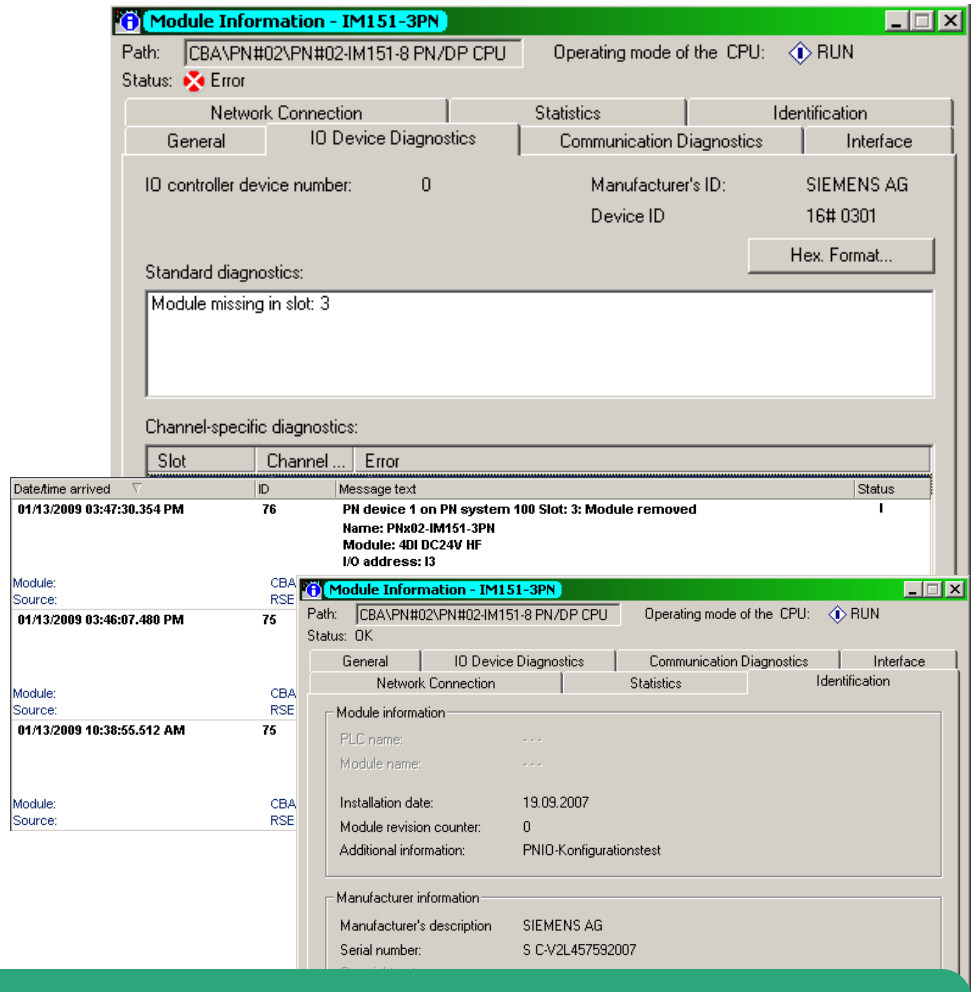
Diagnostic overview

- In levels of detail
  - Device
  - Modul
  - Channel
  - Interrupts

Current fault events

- Acknowledged

I&M (Identification & Maintenance)



High-speed overview
Level of detail according to requirements
Standardized display

Cable Diagnostics

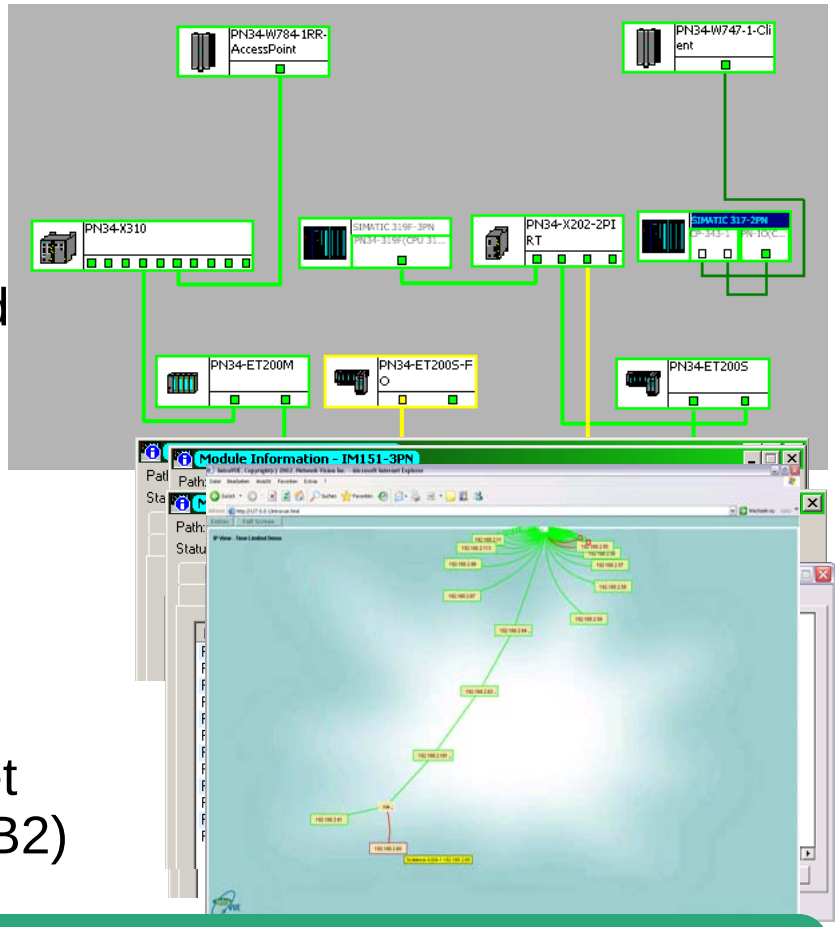
Cable diagnostics as for device diagnostics

- Same modeling of Ports as of I/O channels

Representation in standard and topology view

Additionally with POF: Maintenance (plastic optical fiber)

Additionally: Use of standard Ethernet mechanisms (SNMP/MIB2)



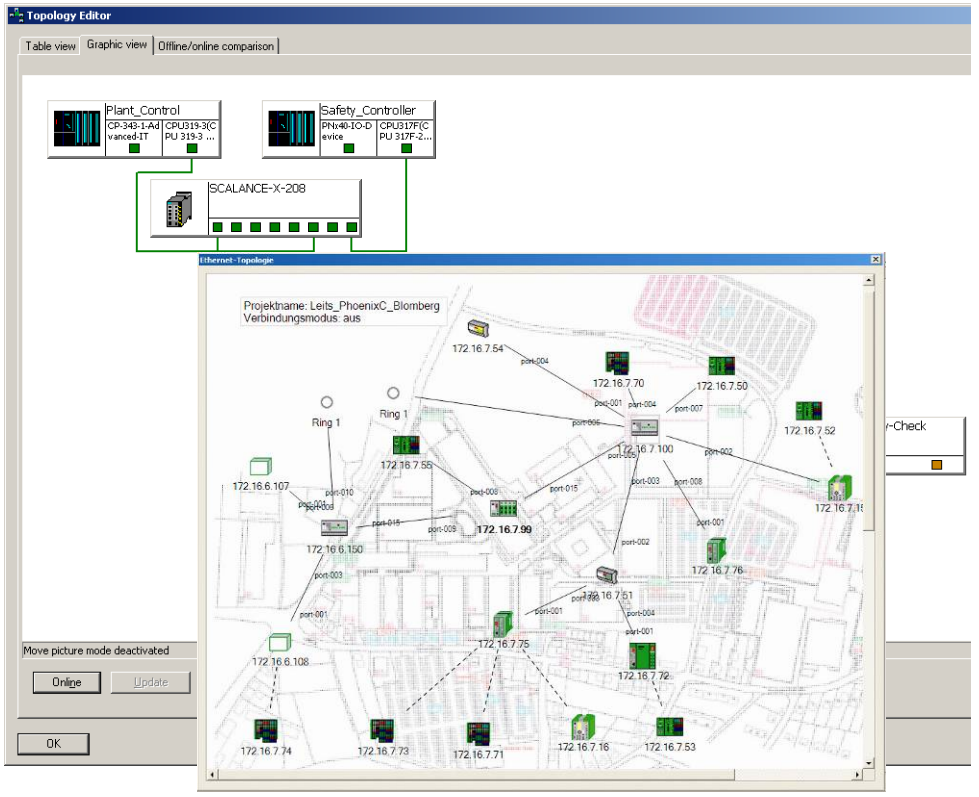
Familiar engineering
Fast and location-related diagnostics
Use also by standard Ethernet diagnostics

Topology view

Engineering view in addition to the actual plant structure

- graphical
- tabular
- offline
- online

- integrated in
  - Engineering
  - Controller



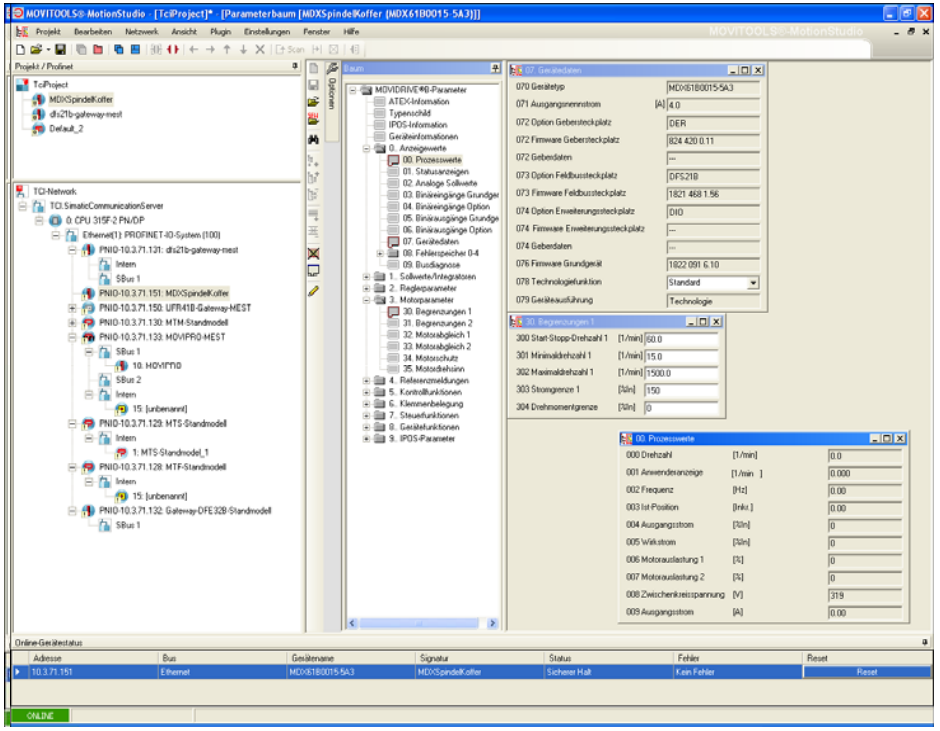
Clear plant overview, documentation
Fast fault location
Fast access to detailed diagnostics

TCI (Tool Calling Interface)

Calling of vendor-specific device tools for complex devices

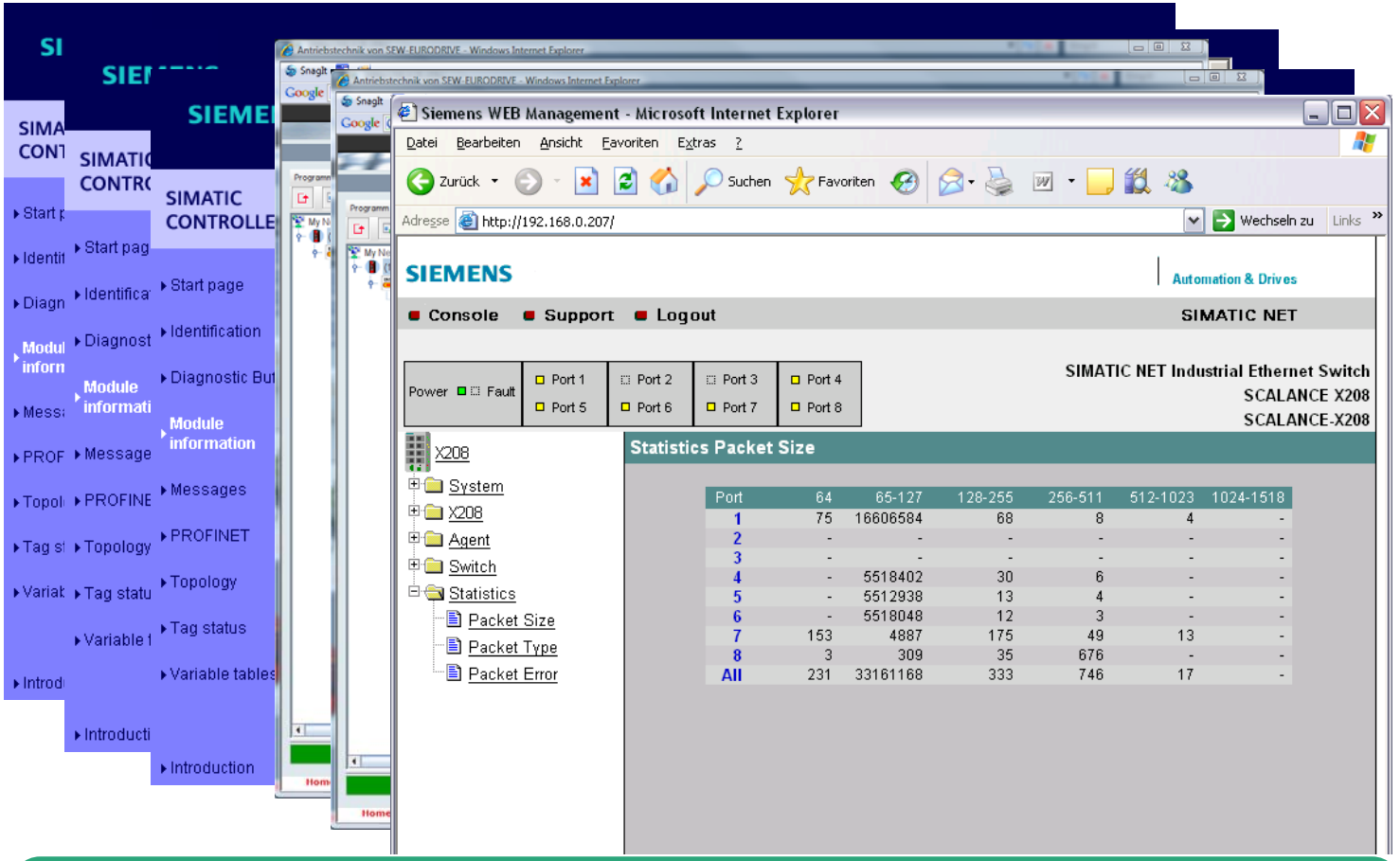
Simple user handling

- Automatic assignment of tool
  → associated device
- Use of the existing interface paths
- Standardized behavior of tools,
  e.g. for storage path
- Simple user handling



Fast, easy access to device tools
Vendor-specific diagnostics and parameter setting
Use of familiar tools

Presentation of diagnostics and parameter settings

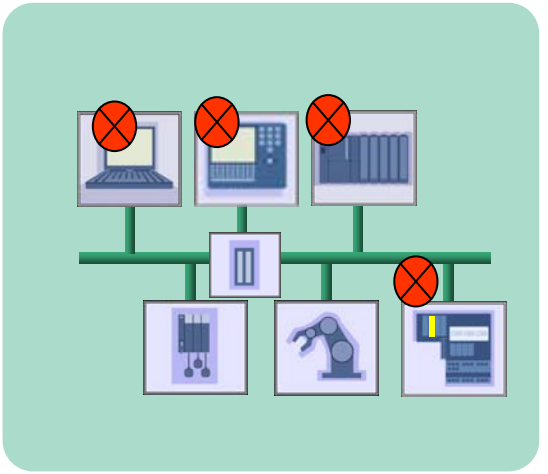


Simple access
Regardless of location, even wireless
No engineering

Fast commissioning and high plant availability…

Added value for our customers

- Fast engineering
- High plant availability
- Cuts costs of configuration and commissioning
- Diagnostic information worldwide
- Fast localization of faults
- Transparency in the network
- Automatic documentation
- Preventative maintenance
- Data available from anywhere



Summary **... Increase of efficiency by fast commissioning and increased plant availability**

Demo