

The background of the slide is a photograph showing two people, a man and a woman, in profile, looking at a computer monitor. The monitor displays a line graph with multiple data series. The overall background of the slide is dark blue.

WEB Based Remote Monitoring

Wherever you are – check on your test beds

Gerald Sammer, Oct. 2006

Old Test Bed



No electronically data, no remote access

No test fields



Courtesy by Opel

Test Bed → Test Field



Test Field



Test Beds

Test Bed → Test Field → Global-Operation **AVL**



Test Information Management Current Situation



- **Increased utilization of test beds require fast response times in case of test run interrupts**
- **As test fields are growing in size an overview of all test beds is essential**
- **Available standard remote control software does not provide test field specific information**
- **Rollout of software is getting harder due to increased enterprise wide IT regulations**



- Remote users should be notified in the case of alarm events (engine stopped suddenly, etc.)
- Remote users may access the test field remotely (WEB)
- Remote users can do diagnosis and may provide remote support

Requirements for Remote Monitoring



- Engineers frequently need to check for the status of test runs
- Monitoring of actual test status for utilization optimization

AVL Test Factory Portal™ Benefits



- Remote access from any place with network access (WEB browser)
- Increased efficiency due to:
 - Quick remote diagnosis
 - Quick and easy “one-page” status information of all test beds
- Easy software roll-out due to WEB technology (no client installation)
- Suitable for monitoring distributed locations
- Easily extendible for third party test systems (plugin technology)

AVL Test Factory Portal™ Features



- Graphical overview of the test field topology including aggregated status of test beds
- Display test bed specific data like:
 - Status of test beds
 - Online data from test beds
 - Online test bed messages
 - ODS database data
 - Administrative data
- Customizable user interface
- Multi-User / Multi-Language
- Remote Control Option

Technical Concept



Office Area

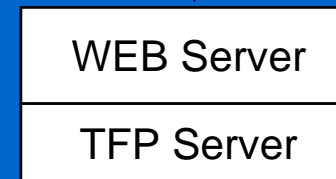
Standard PUMA Office Applications



Test Factory Portal Client (WEB Browser)



Server Area



Test Bed Area



Technical Concept



Office Area

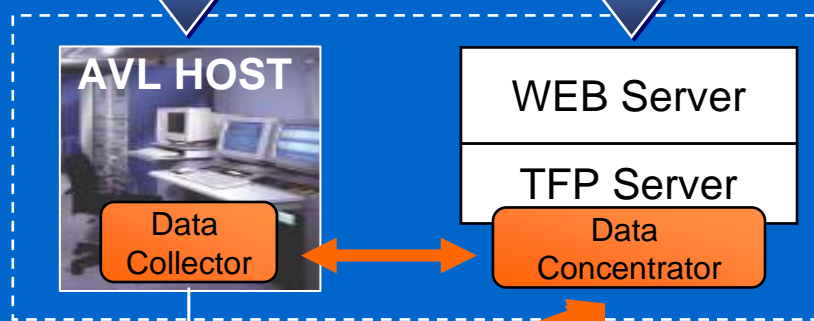
Standard PUMA Office Applications



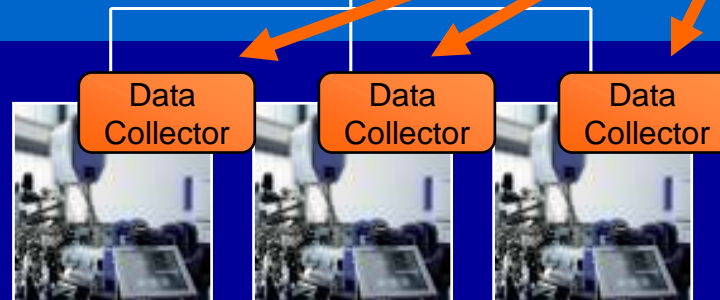
Test Factory Portal Client (WEB Browser)



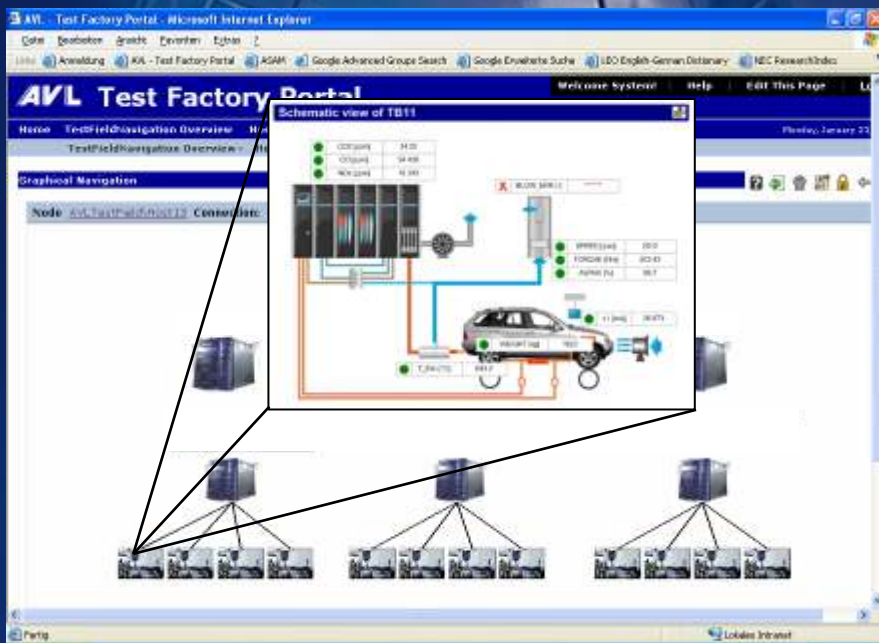
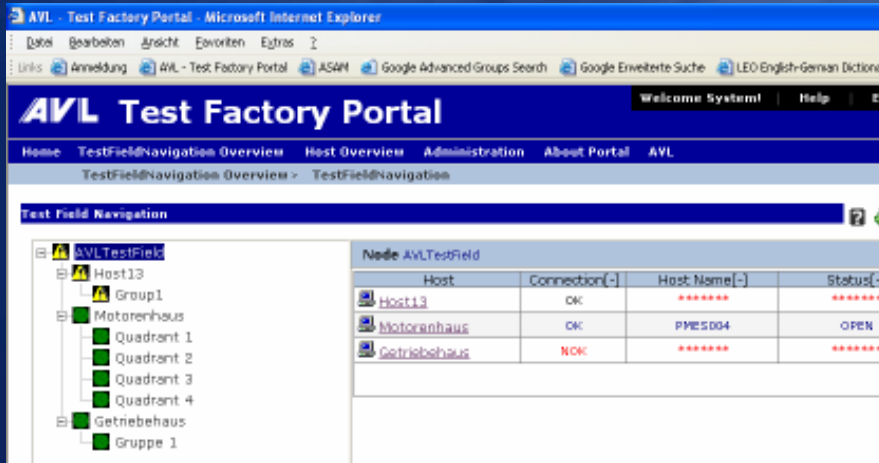
Server Area



Test Bed Area

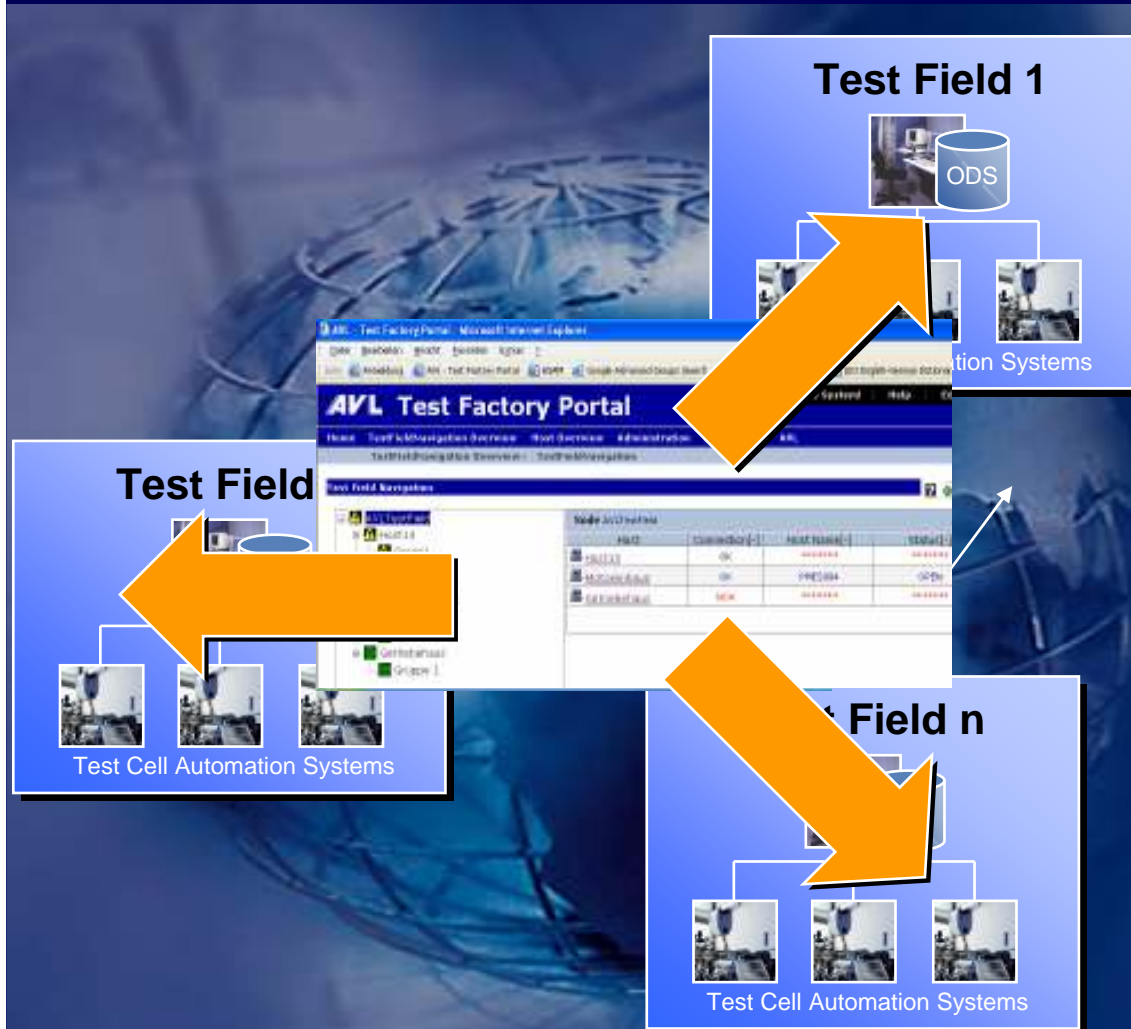


Display test field structure



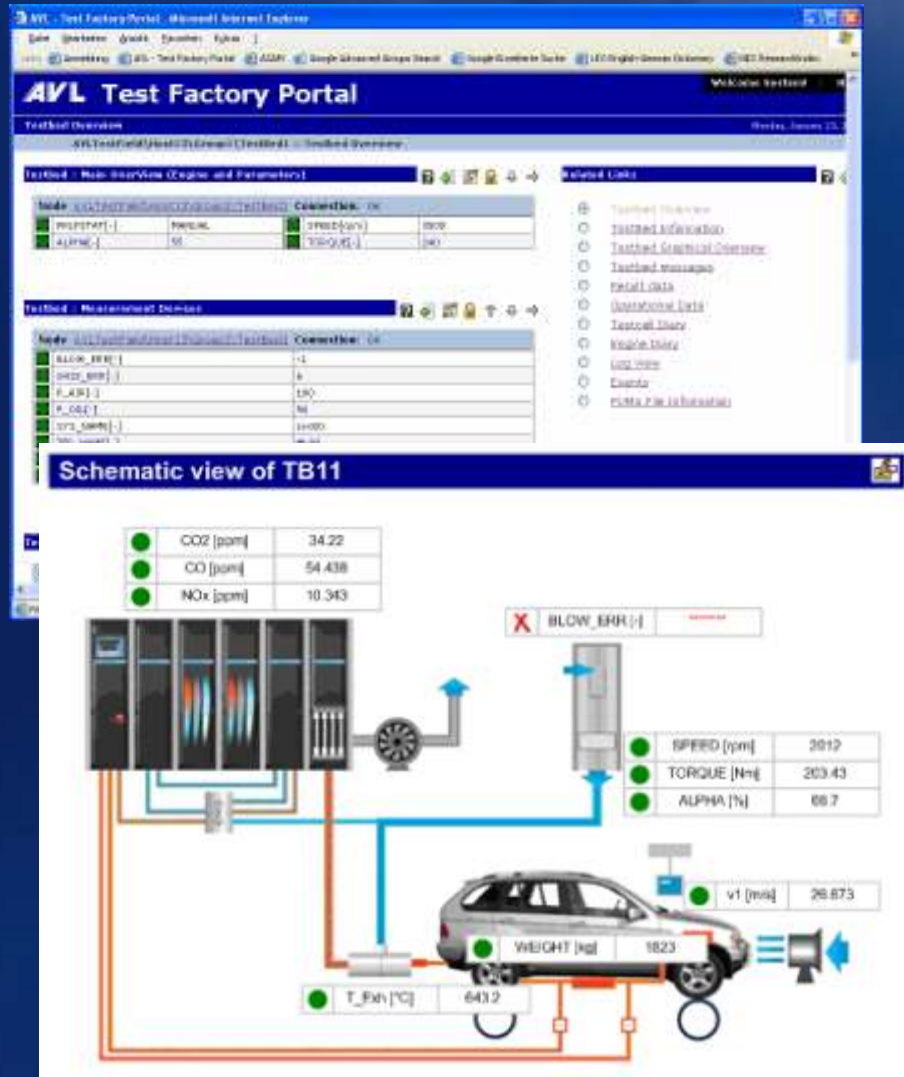
- In tree view
- In overlay mode using background image
- Visualize configurable test bed status in overview

Test Factory Portal Supporting Distributed Locations



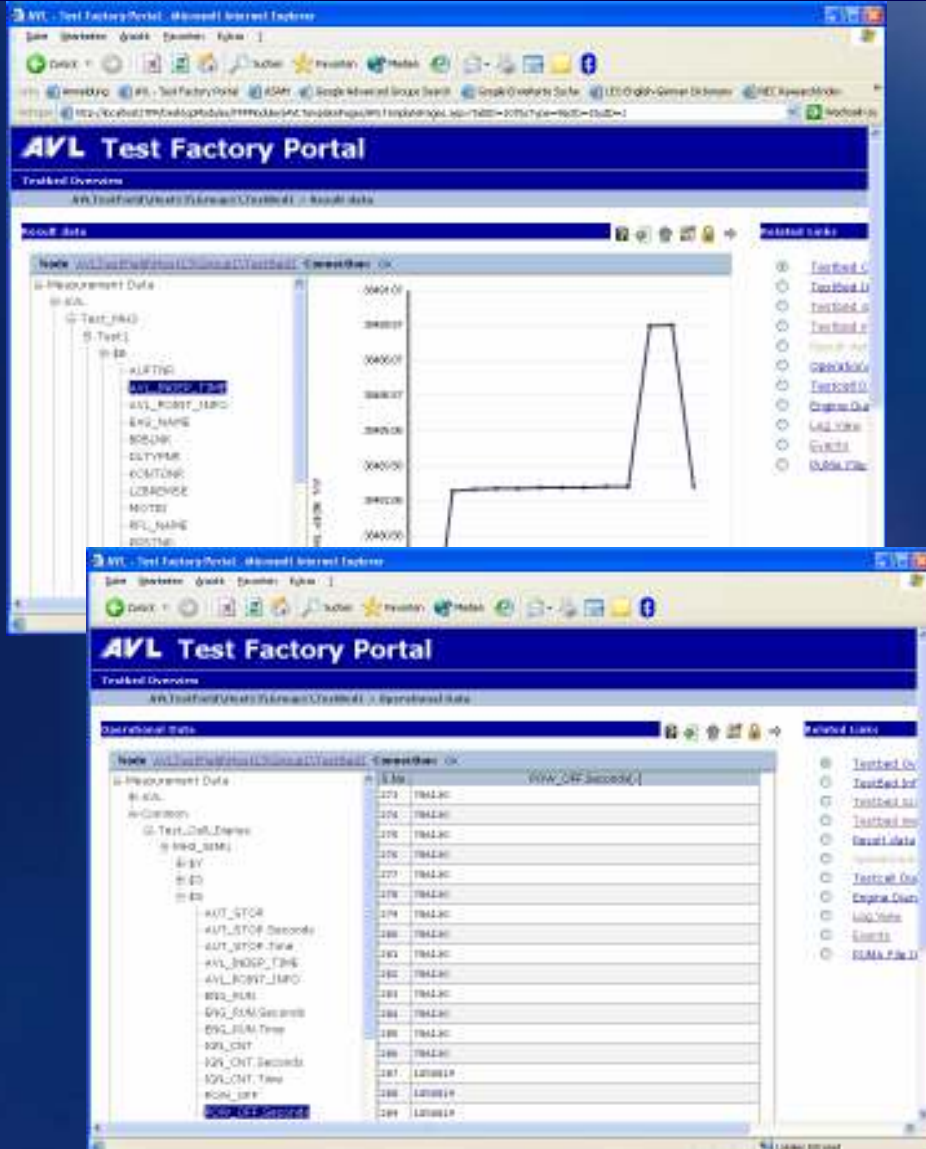
- Comprehensive view of scattered locations
- Reflect the test field topology using graphics or tree view
- Easy navigation to all test beds
- Enterprise wide utilization monitoring

Display Test Bed Data

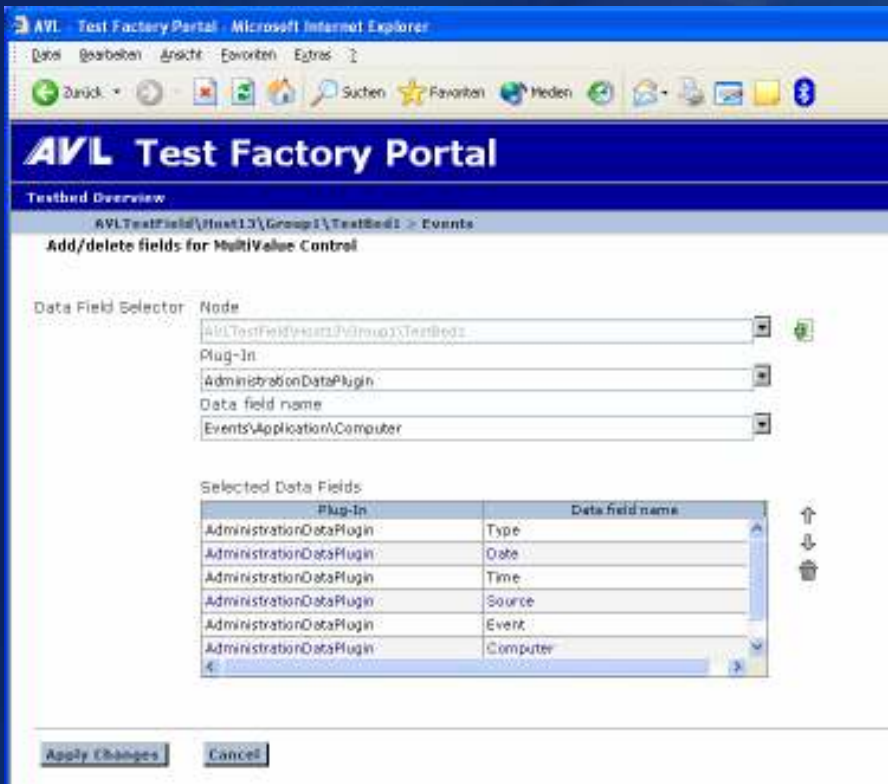


- Graphical Overview (background image)
- Online values
- PUMA Open messages
- Software Version/License Informationen
- ODS Data Browser
 - Result data
 - Unit under test diary
 - Test cell diary
 - Operational data (raw data only)
- Maintenance, Diagnosis
 - Display content of logfiles
 - Resource info (CPU, Memory)
 - Windows event view

Display ODS Database Data



- Result data in the ODS database
- PUMA Open UUT diary
- PUMA Open test cell diary
- Operational data



■ Administration mode

- Modify WEB-Layout, e.g. position of the Portal modules
- Requires Admin privileges
- Settings apply to all users

■ User Mode

- Modify the content of the module (e.g. which Puma normnames should be displayed, etc.)
- Settings are stored user specific



- **Final Release V1.0:**
 - 12-2006
- **Scope of V1.1:**
 - Extended graphical ODS Explorer with Query Engine
 - Video and Audio Support

- **Compatibility**
 - PUMA Open 1.1 and higher
 - PUMA 5.6.1 and higher
 - Third-Party Test Systems using file interface plugin

The background of the slide is a photograph showing a man and a woman in a professional setting, likely a control room or office. They are both looking intently at a computer monitor. The monitor displays a software interface with a line graph showing several data series over time. The man is in the foreground, and the woman is slightly behind him. The scene is brightly lit, suggesting a window in the background.

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