Requirements for Standard Compliant Electrical Test Authoring in Manufacturing Applications

Dipl. Ing. Alfons Schulte

ASAM Association for Standardisation of Automation and Measuring Systems

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Topics

- Authoring Requirements for Manufacturing E/E-Test
- Applicable Standards
- DSA‘s Approach: PRODIS.*Automation*
- Customer Benefits

Authoring Requirements for Manufacturing E/E-Test

Basic Authoring Requirements

- Graphical Editor for Scripts
- User / Roll Management
- Effective Integration into the OEM‘s Diagnostic Process
- Multi-User / Multi-Site Operation
- Multi-Language Operation
- Import & Export Functions
- Versioning & Release Management
- Simulation & Debugging

Detailed View ..

- Graphical Editor for Scripts
- User / Roll Management
- Effective Integration into the OEM‘s Diagnostic Process
- **Multi-User / Multi-Site Operation**
- Multi-Language Operation
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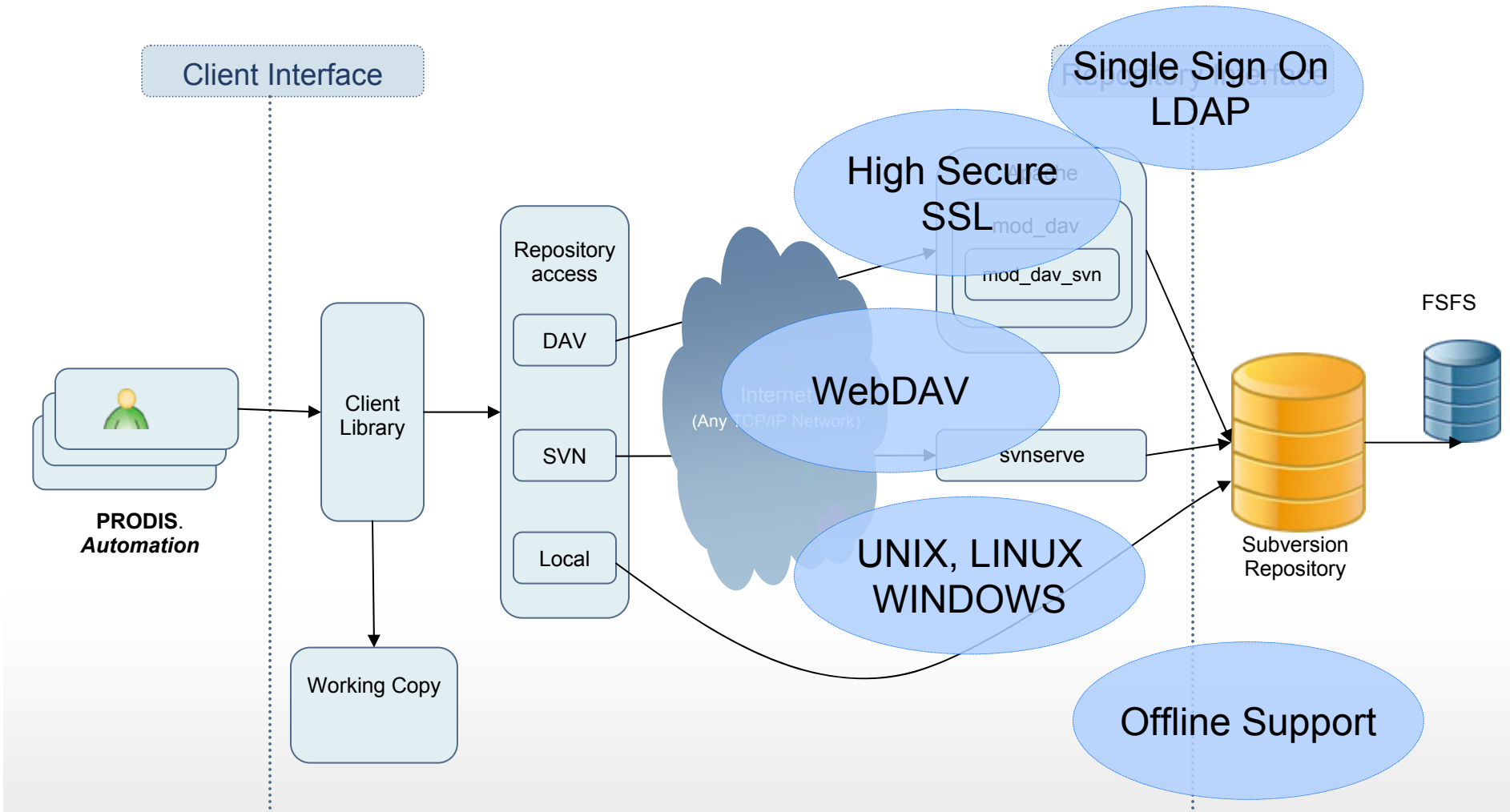
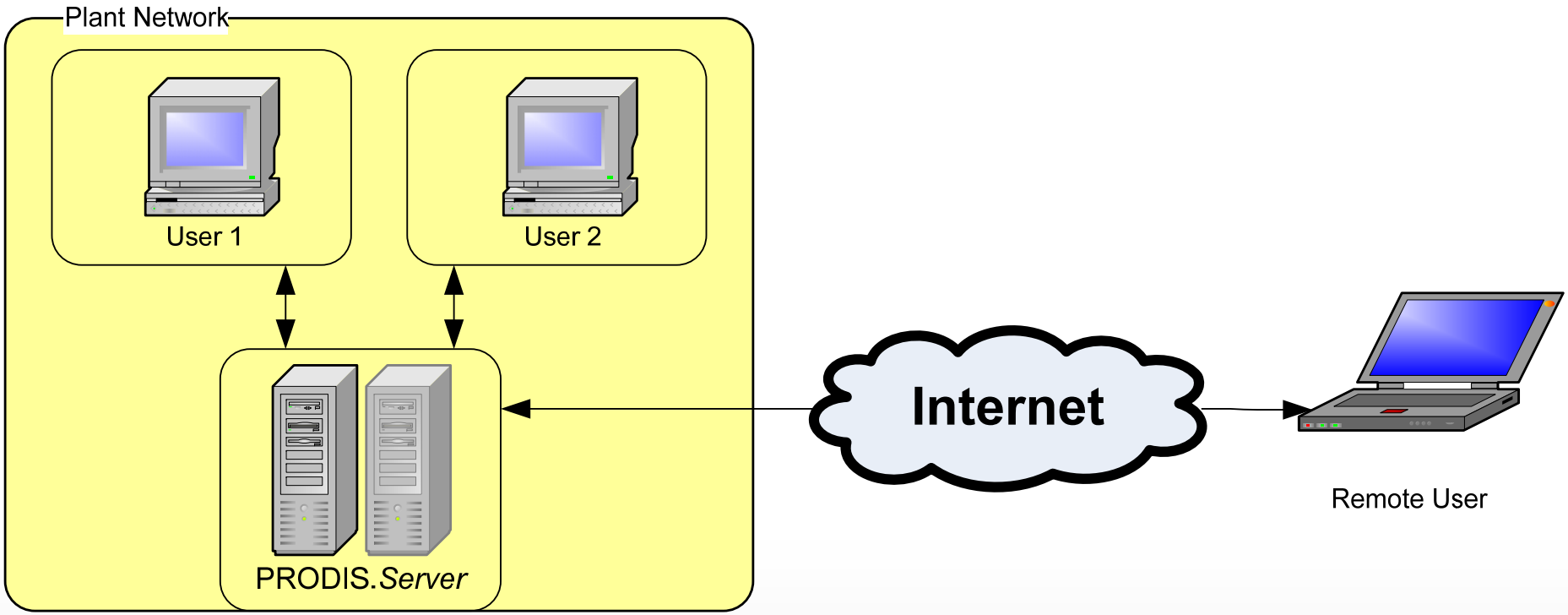
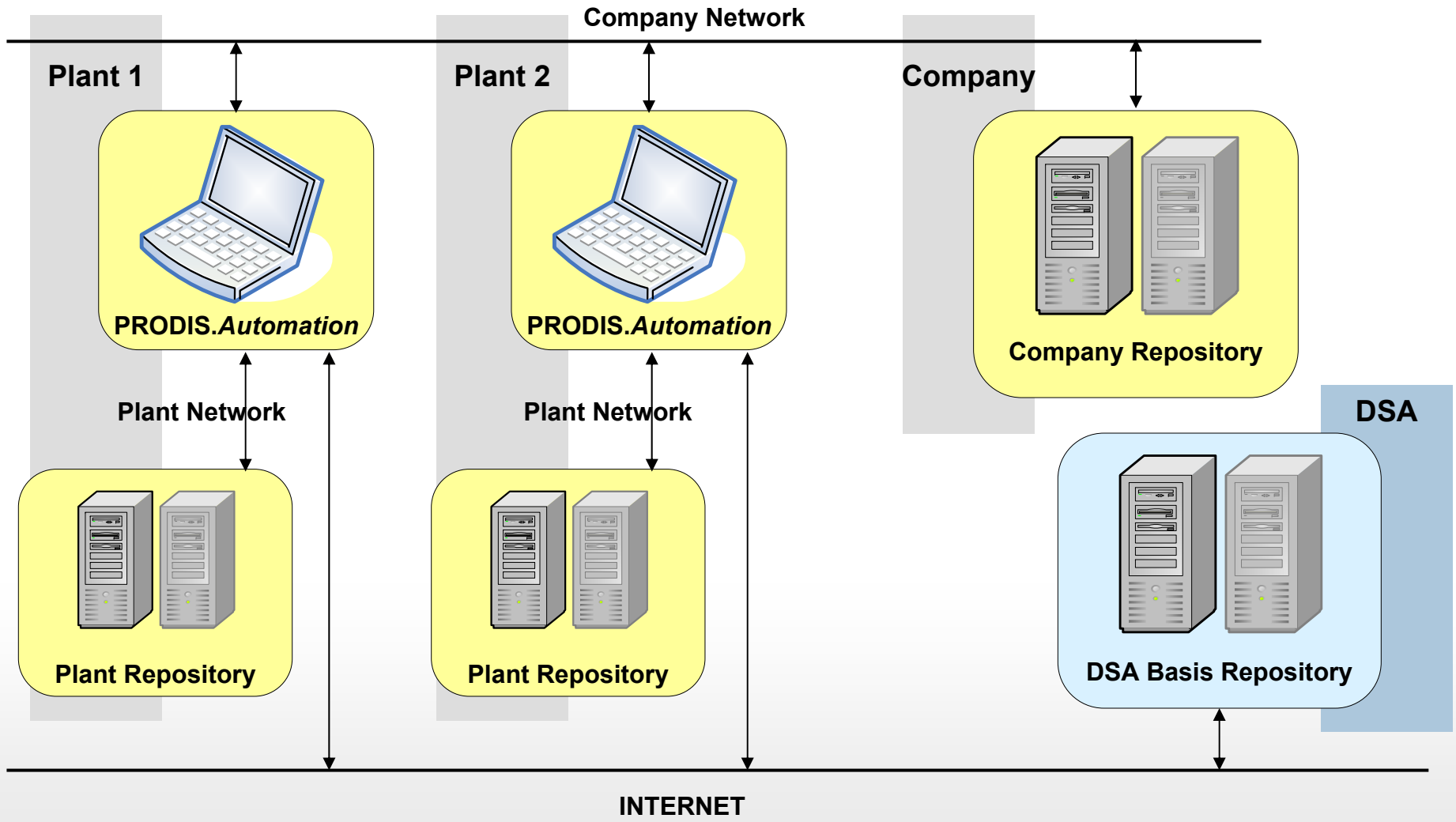
Subversion – Architecture Overview



Multi-User Access



Multi-Site Access



Detailed View ..

- Graphical Editor for Scripts
- User / Roll Management
- **Effective Integration into the OEM‘s Diagnostic Process**
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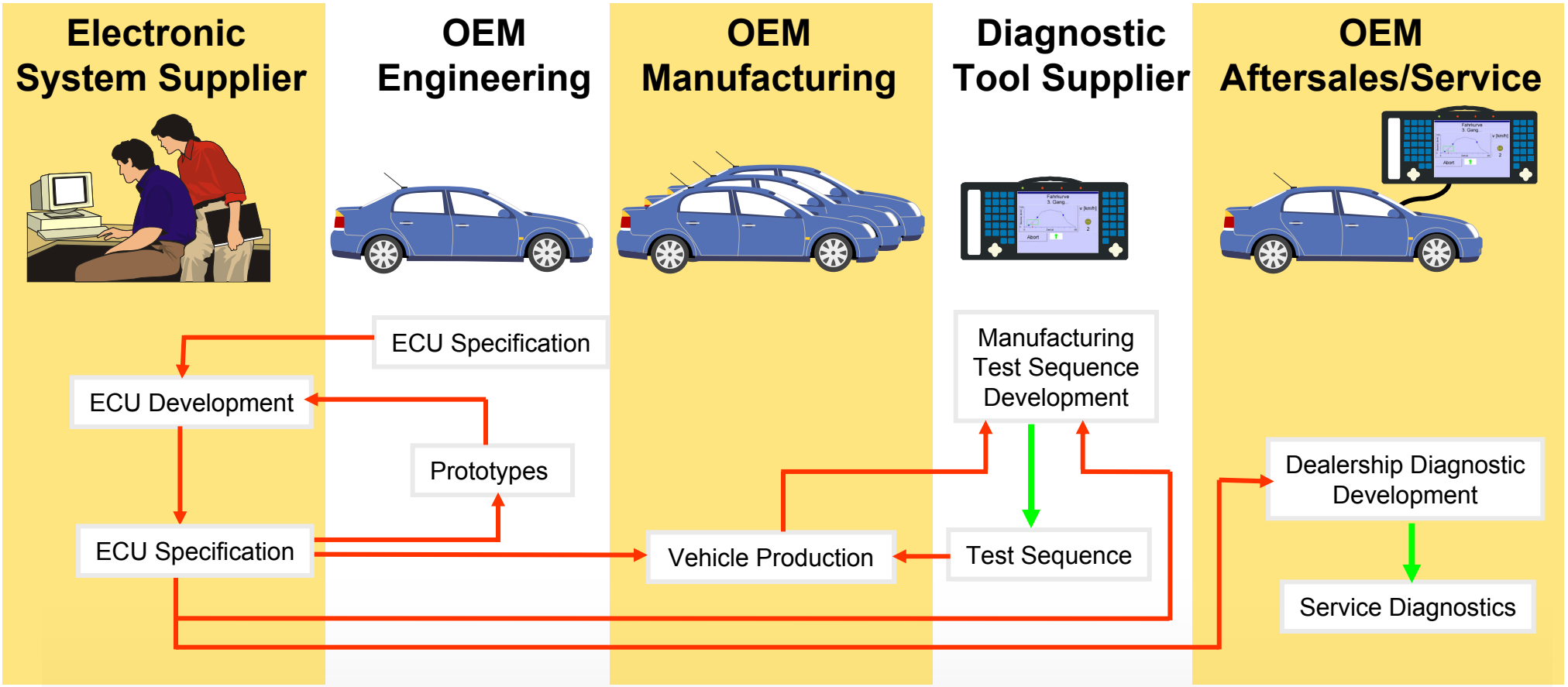
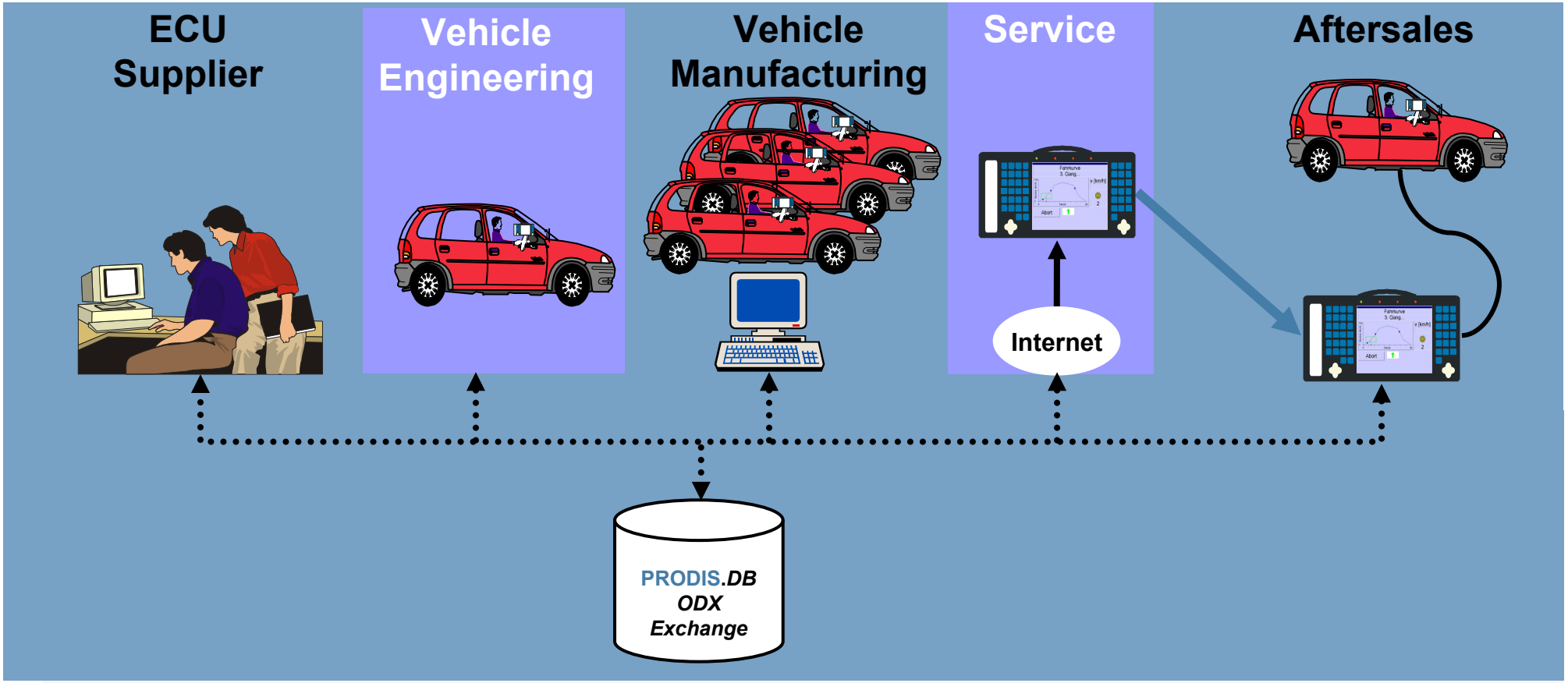
Diagnostic-Process (yesterday)



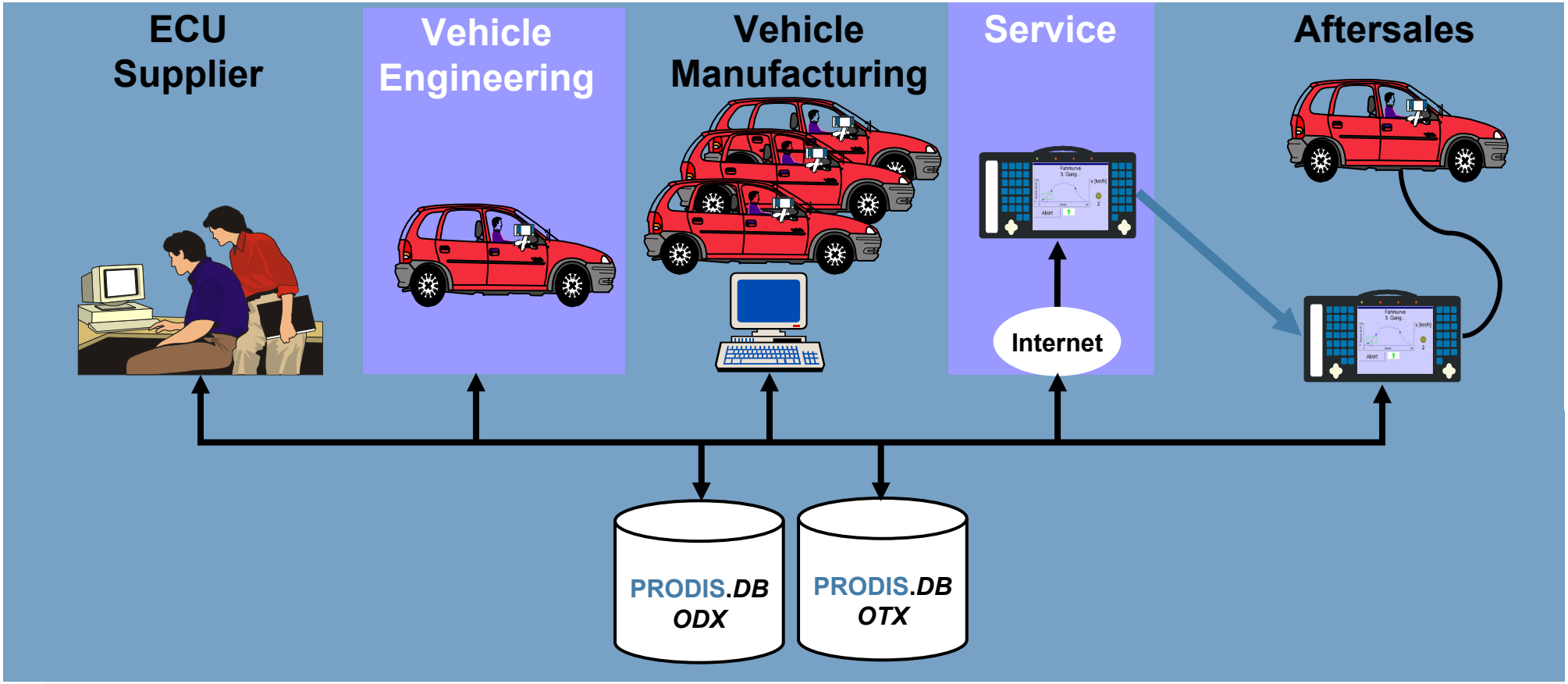
The current situation is characterized by media disruption and a inhomogeneous system components.

Diagnostic-Process (today)



The diagnostic process chain uses common data (ODX) but still a inhomogeneous test sequences due to incompatible scripting products.

Diagnostic-Process (tomorrow)



The diagnostic process uses data and sequence (script) integration without media or system (tool) disruption.

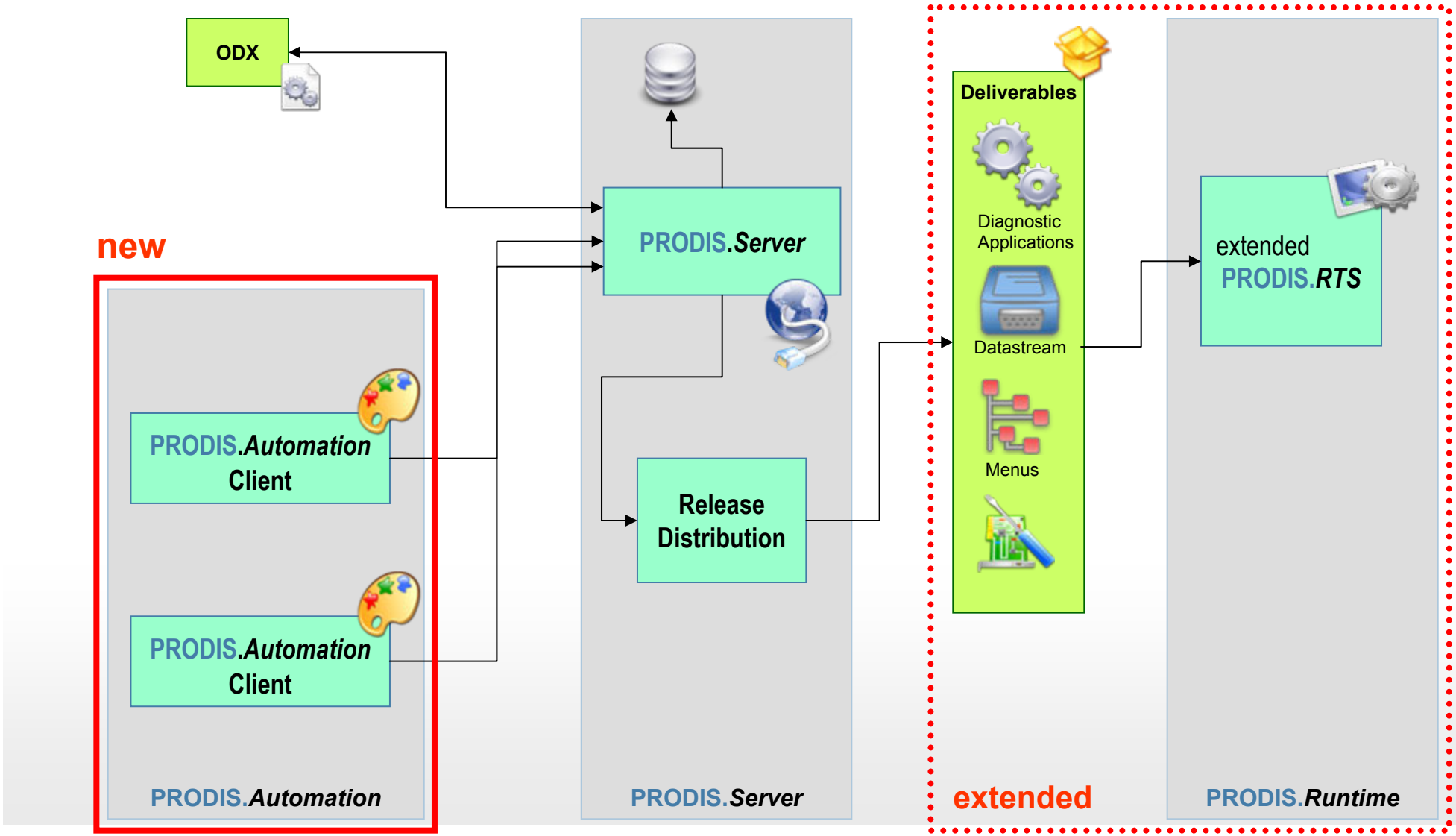
Applicable Standards

Standards Related Authoring Requirements

- **ODX Browsing**
  - supported versions:
    - ODX 2.0.1, 2.1.0
    - ODX 2.2 available 11/2010
  - comfortable assignment of request and response parameters
- **GDI Browsing**
  - Browsing of DCDs version 4.3.2
- **OTX Import & Export Functions**
  - OTX export and import available 03/2011

DSA‘s Approach:
PRODIS.*Automation*

Overall System Architecture



Integration with DSA's PRODIS product family

PRODIS.*Authoring*
Datastream Editor

Screen Editor

Complex Test Sequence

Script Editor

Building Block Editor

PRODIS.*Automation* Core System

CTS, Scripts, Bulding Blocks, Screens

CTS

Main application flow
Mostly deals with handling the
User input and the output to
The screen

Scripts

Common Tasks
Routines that handle common
diagnostic routines such as
reading values

Building Blocks

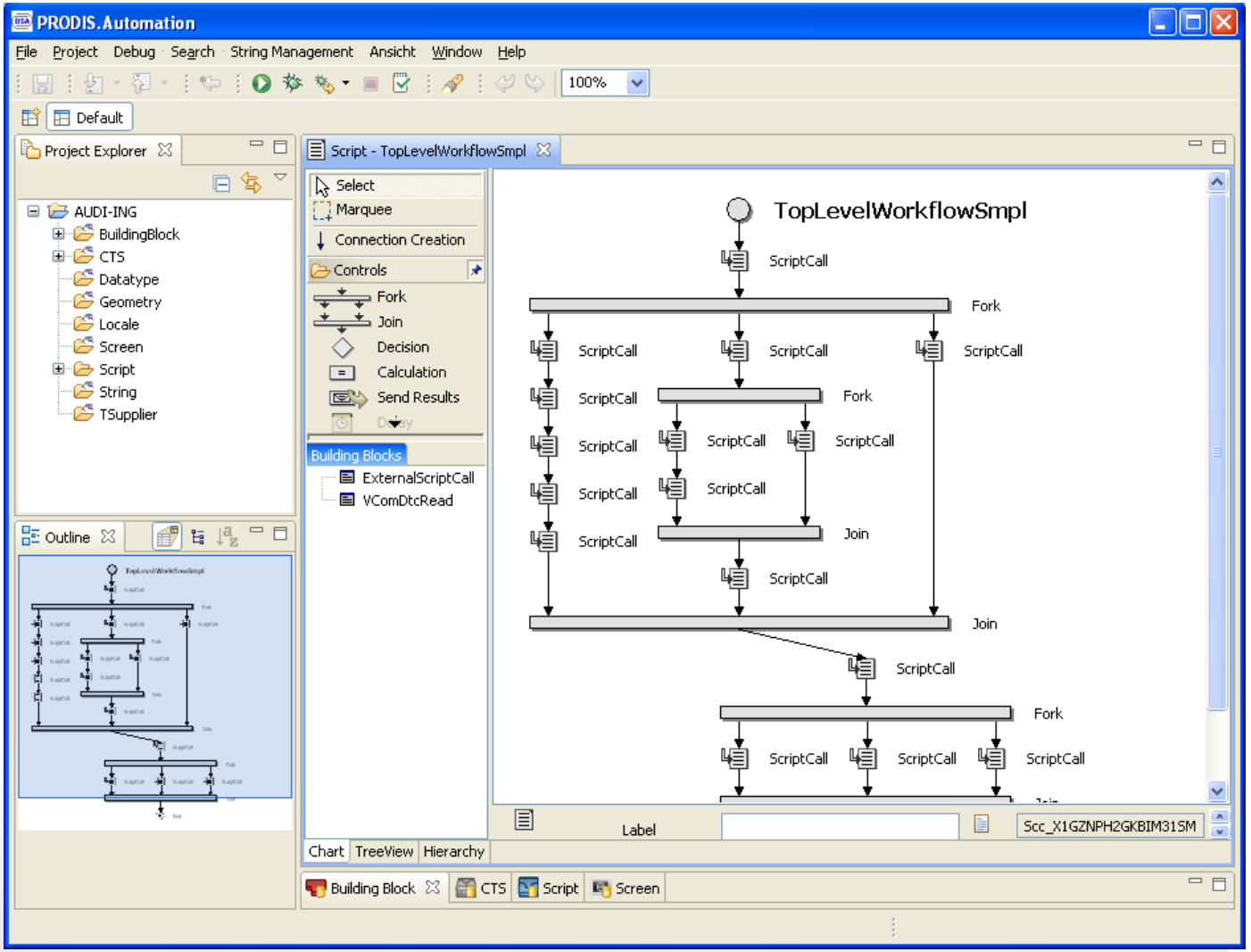
Low-level Access
Calls to the Vehicle Electronics,
And to external interfaces.

Screen

Graphic Display
Output to the user in easy
to configure widgets

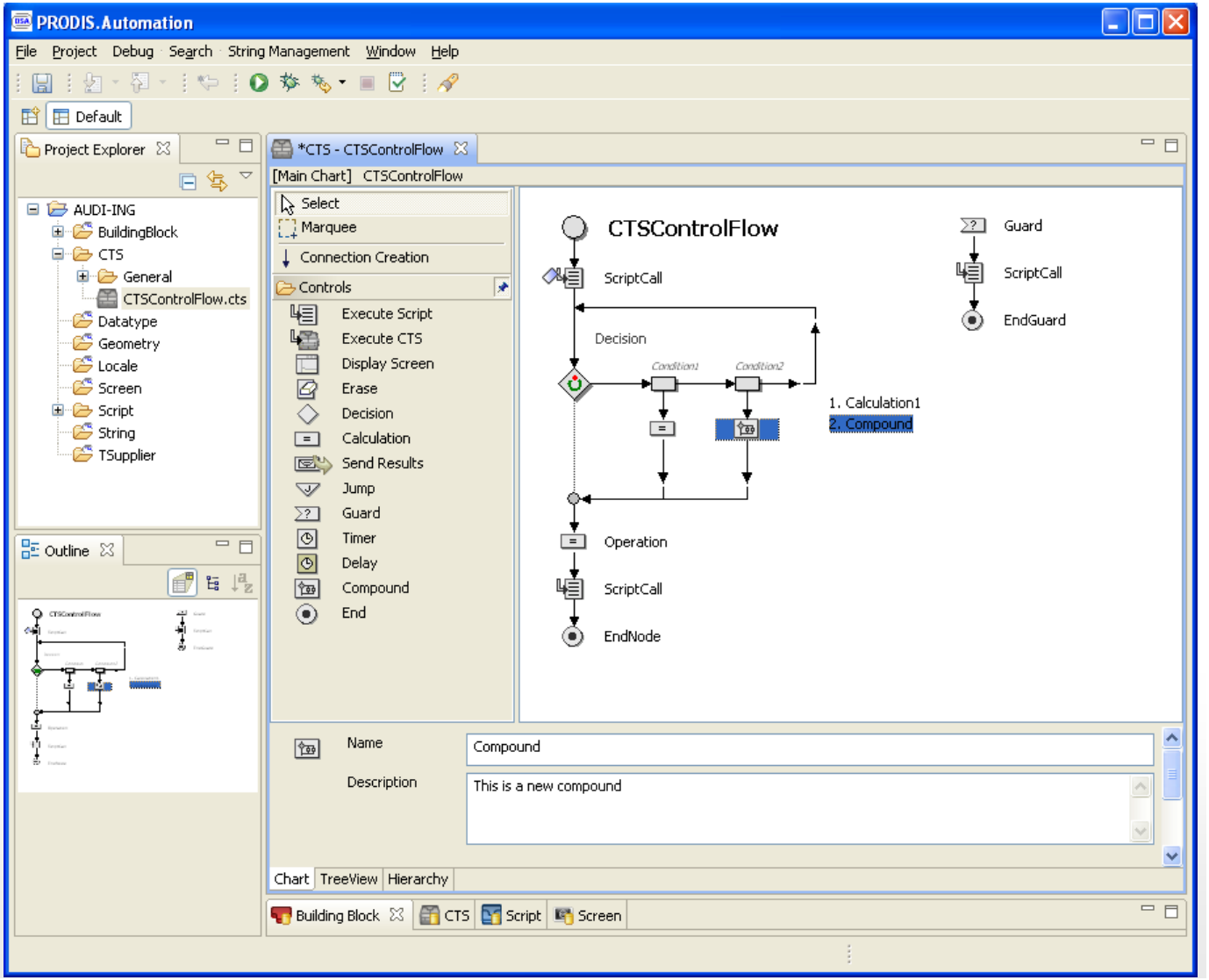
Level 1: Top Level Workflow Sequence

- **Graphical representation of sequence and parallel tasks**



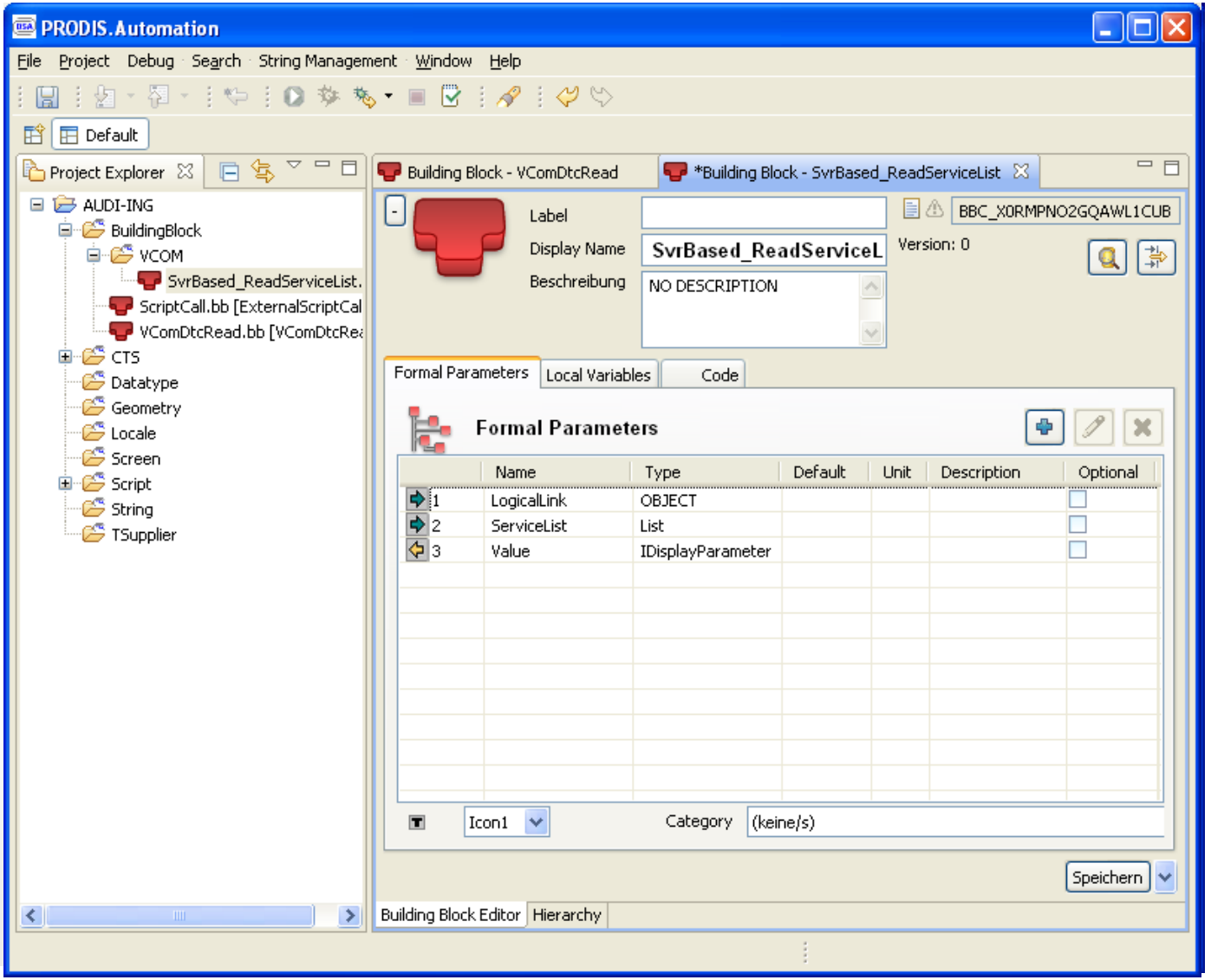
Level 2: Diagnostic Sequence

- Graphical representation of diagnostic progression
- Representation of parallel processing
- Guard: Control flow depending on specific event



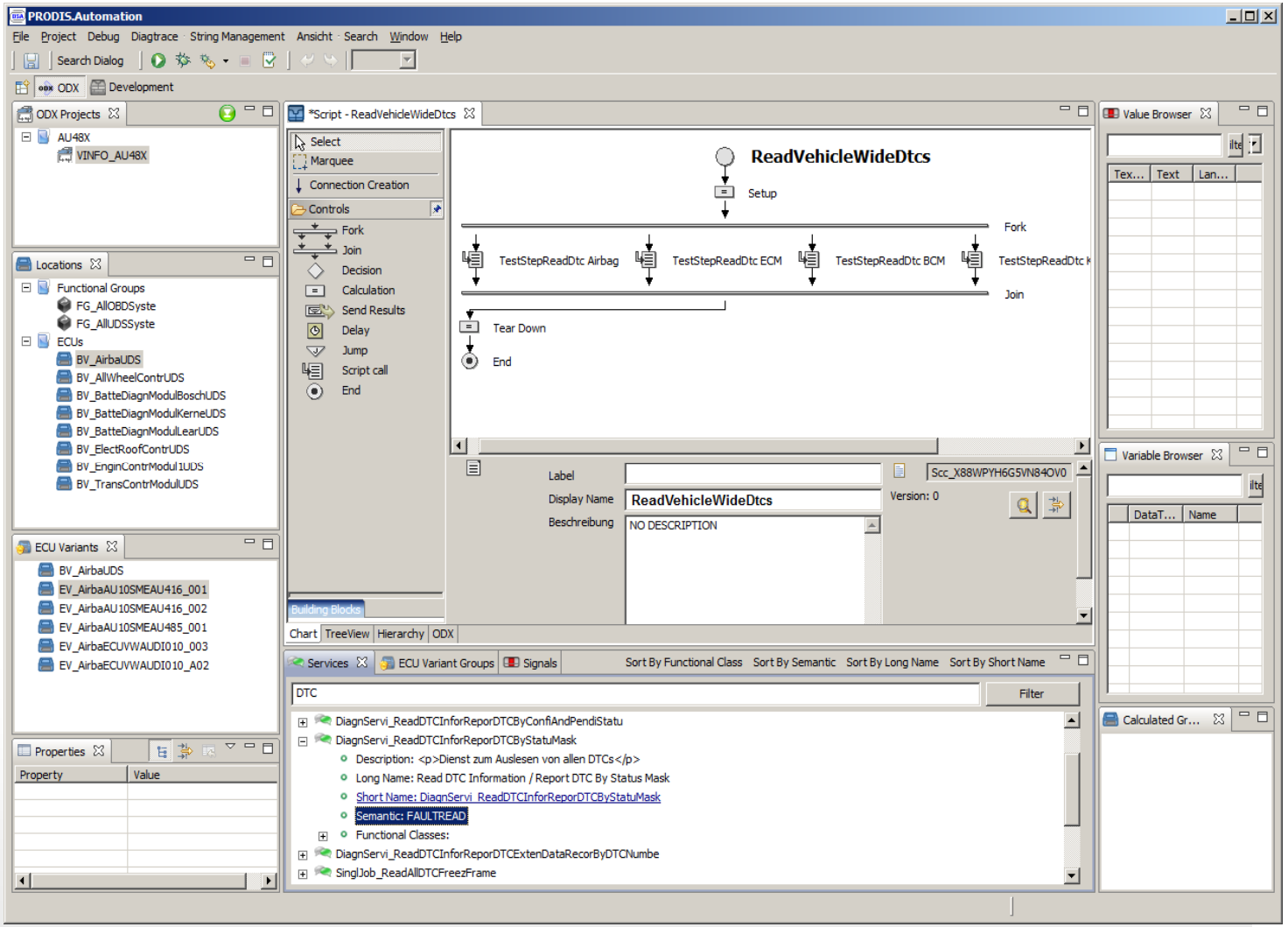
Level 3: Library Elements

- Generation of new library elements
- Usage of JAVA as programming language
- Sequence highlighting
- automatic code completion
- Integrated source code debugger



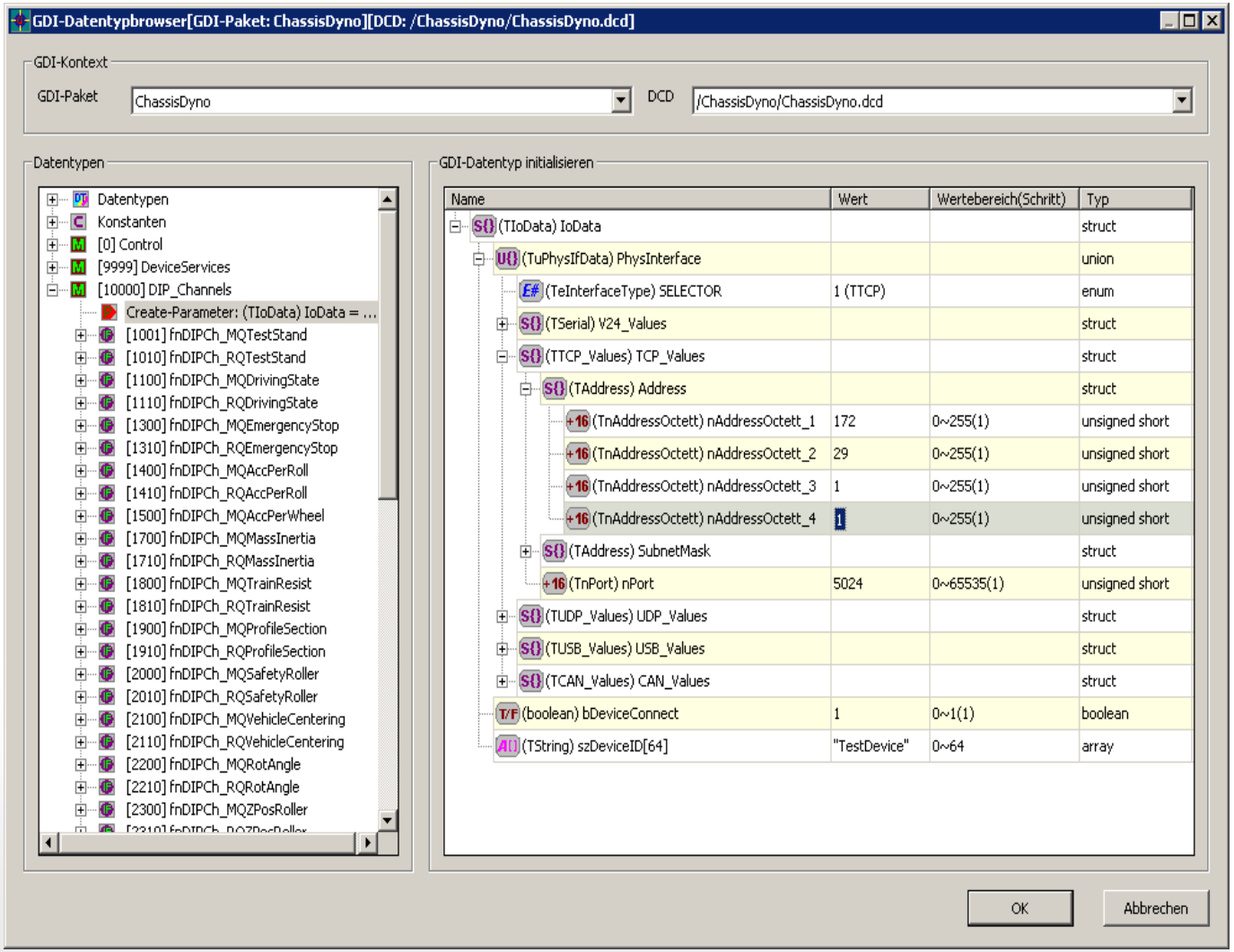
ODX Support: Browser

- Comfortable selection of ODX service
- Assignment of request and response parameters
- Sophisticated ECU Variant handling by defining ECU groups



GDI Support: Browser

- **Reuse of existing PRODIS.*Office* GDI building blocks and sequences**
- **Integrated browsers for the selection and parameterization of GDI data structures**
- **Integrated browsers for the selection and parameterization of GDI communication objects and operations**



Customer Benefits

PRODIS.*Automation* ..

- fully supports all ASAM/ISO ODX standards
- allows comfortable control of ASAM GDI devices
- will be OTX ready by 03/2011
- enables multi-user access
- enables multi-site access

PRODIS.*Automation* ..

- **effectively includes version and change management**
- **allows**
  - Setting Tags and
  - Opening Branches

  thus allowing the user to perform easy rollback or concurrent development
- **enables soft migration from PRODIS.*Office***
  - by reuse of existing library elements and sequences and
  - integrated MSL interpreter in runtime environment
- **smoothly integrates into DSA‘s Manufacturing Test Suite**

Thank You