

Test Data and Information Management through Development, Test Bed and Engineering

Long-term Preservation, Retrieval and Sharing of
Development Know-how and Test Data with

Hyper

From Measurement
to Knowledge

Test

Content

The challenge

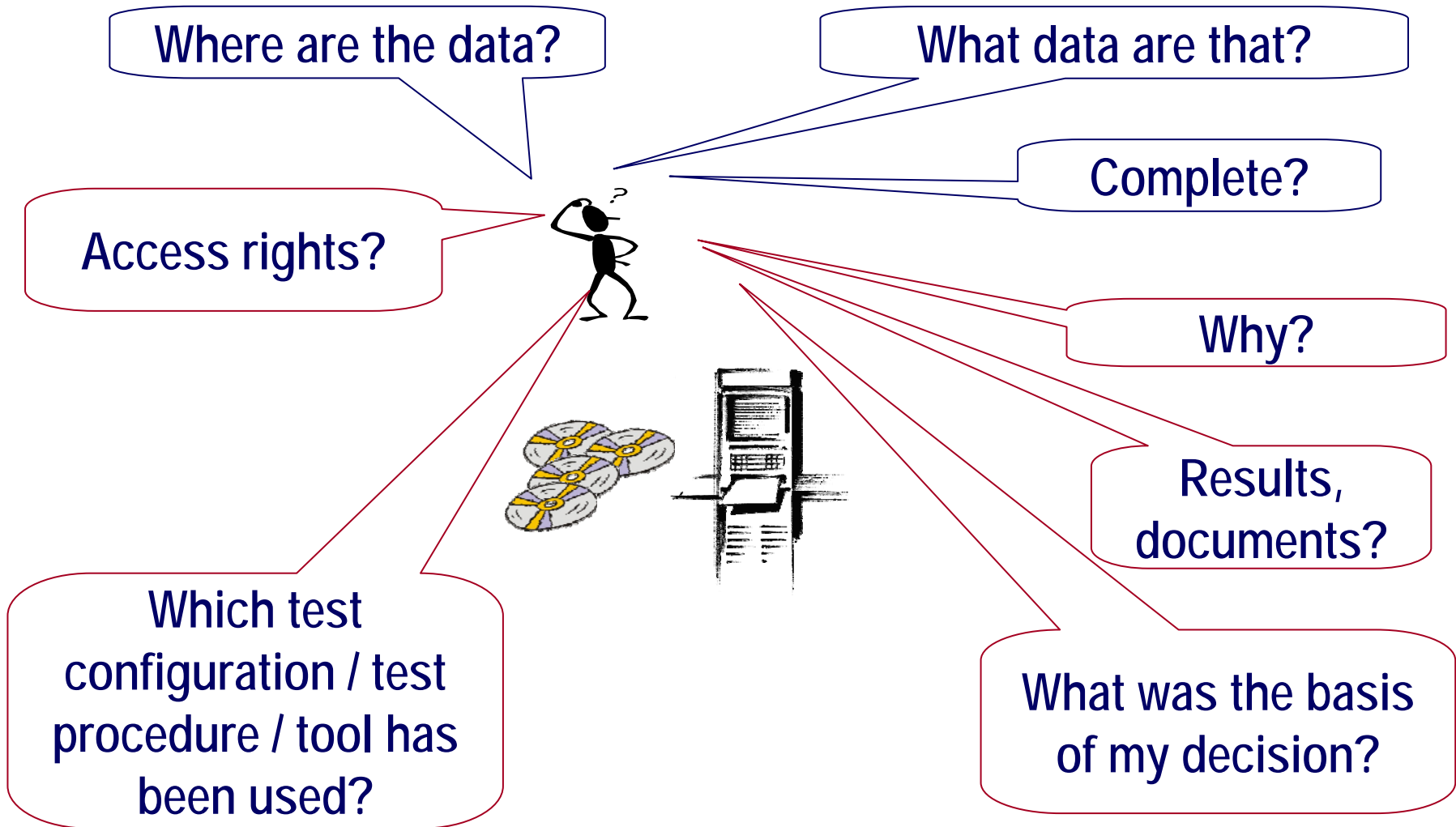
Use of HyperTest

The architecture of HyperTest

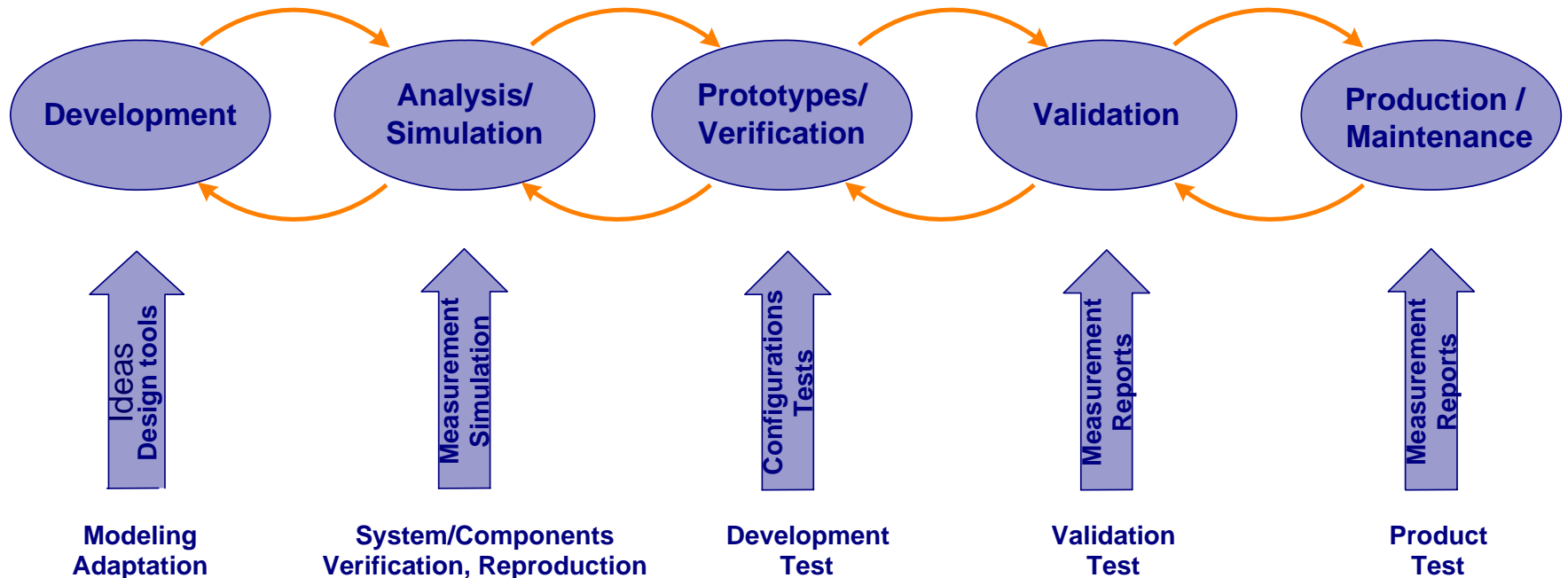
The Challenge intensive Testing

- **Data management with clear traceability of**
 - Development steps and associated tests
 - UUT parameter and test conditions
 - Decisions and their basis
- **Data from inhomogeneous test equipment must be retrievable and usable independent of its origin**
- **Inter-relationships between data must be made transparent, related documents must be retrievable**
- **Long term usability and understanding must be supported (data asset management)**
- **Links should simply lead from documents to their associated data and test circumstances and vice versa**
- **Avoid multiple testing**

Information Management Problems

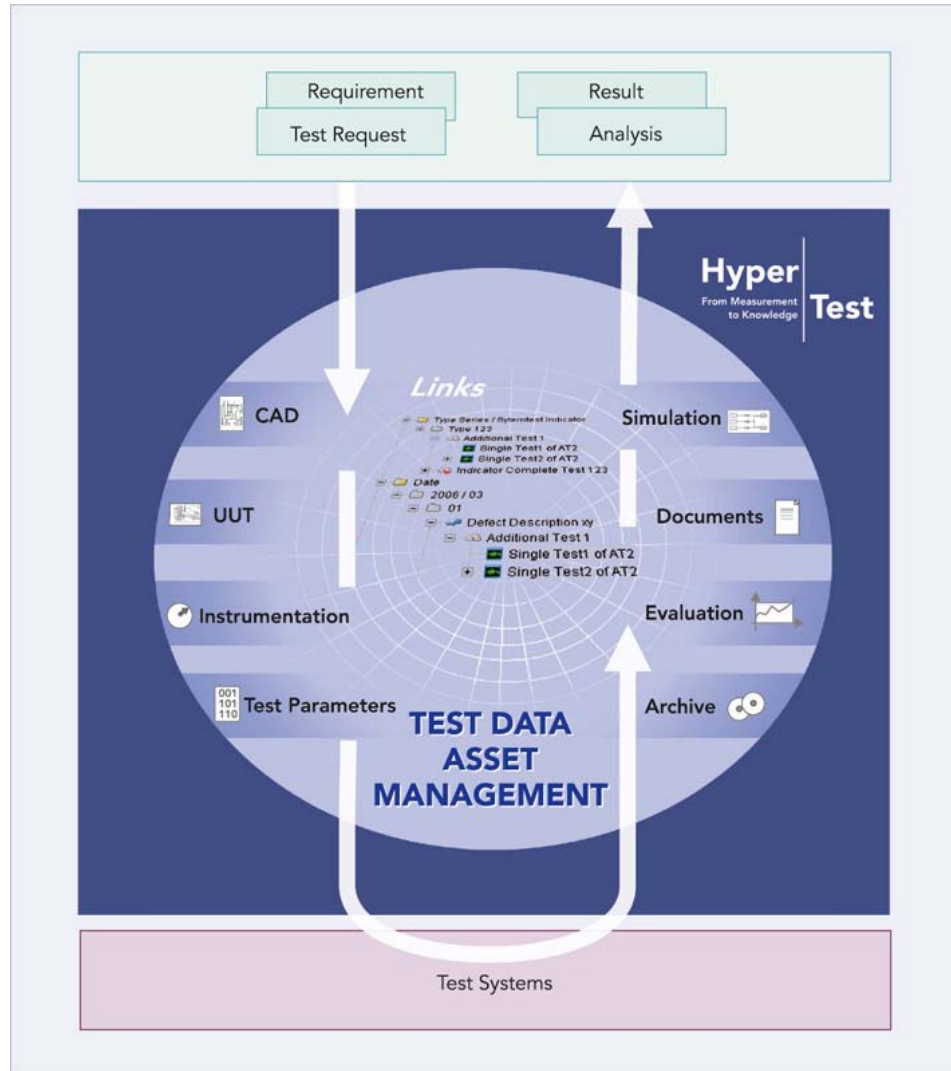


Data and Information through all Phases



- Integrate distributed systems
- Store Data securely
- Identify relationships
- Keep data and information long term understandable
- Provide quick access

From Measurement to Knowledge



Data and information are necessary to understand long-term why what has been done in which way

HyperTest

- Supports your workflow
- Links related Data and information
- Binds know how to data

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Use of HyperTest

Customers

- DaimlerChrysler
- Mercedes AMG
- smart
- Volkswagen
- DLR



Application areas

- R&D (component development, motor test, wind tunnel)
- Vehicle endurance testing
- Quality control (returns of electronic components)
- Fundamental research (virtual laboratory)

Description of a Test

Descriptive metadata keep know-how about

- Order
- UUT configurations
- Test procedure
- Remarks
- ...

The screenshot shows a software window titled 'Test order' with a light gray background and a blue title bar. The window is divided into three main sections: 'Auftrag', 'Messkonfiguration', and 'Messung'. Each section contains several input fields and text boxes. The 'Auftrag' section includes fields for 'Auftragnr', 'Auftragnr I', 'Auftraggeber', 'AG Abteilung', 'Datum Auftrag' (with the value '24.10.2006'), 'Vermessung', and 'Bemerkungen'. The 'Messkonfiguration' section includes fields for 'BKW-Typ', 'Zeichnungsnr', 'Unterdruck', 'THZ Ø [mm]', 'Hersteller', 'Fahrzeugnr', 'Gelaufene Km', and 'Bremsen'. The 'Messung' section includes fields for 'Messungnr', 'Prüfer', 'Bemerkungen', 'Versuch', and 'Datum Messung' (with the value '24.10.2006').

A quick check of descriptive metadata helps to avoid

- Unnecessary tests
- Unnecessary transfer of data

HyperTest - a Test in its Context

Find the test in different ways:

- Follow links
- Let the system show associations
- Logical structures are built-up automatically

The screenshot displays the HyperTest application window titled "Elektroniktests an Feldrückläufern". The interface is divided into two main sections:

- Left Panel (Tree View):** Shows a hierarchical structure of test items. The selected item is "Indicator Complete Test 123" under the "HyperTest-Demo" folder. Red arrows point from this item to the corresponding fields in the right panel.
- Right Panel (Form View):** Displays the configuration for "Gesamttest Indicator Complete Test 123 anzeigen". It includes various data fields and sections:
 - Schadensdaten:** Fields for Referenz-Nr* (HyperTest-Demo), NR* (A 123 12 123 123), FIN* (123456 XX-123456), EZL* (01.02.2006), Rep. Datum* (01.03.2006), Beanstandung* (keine Beanstandung), Delfi Nr., Auftr-Nr 12xy, Delfi Beanst. (geht nicht), Anlieferung* (01.03.2006), Delfi Maßn. (flashen).
 - Q-Stand:** Fields for HW-Vers.* (08/15), SW-Vers.* (18/15sw), SNR Lief. (12345678900012), Ser-Nr Lief. (abc12345).
 - Gesamttest:** Fields for Q-Stand, HW-Vers.* (08/15), SW-Vers.* (18/15sw), SNR Lief. (12345678900012), Nr Lief. (L098765), Ser-Nr Lief. (abc12345).
 - Funktion IO:** Fields for Anz. Fehler (2), Name* (Gesamttest 123), Start Dat. / Zeit* (02.03.2006, 12:00), Prüzeit [s]* (100), Prüfer* (Fritz), Version* (V0.2), Beschreibung (Testvorschrift 123), Rack ID* (Pst 1), Pfad.
 - Elementartest:** Fields for Name*, Version*, Pfad.

Find a Test using a Generic Search Function

- Additional to navigation
- Use meta data
- Combine full text search and meta data use
- Find data that are related to a document
- Discover the unexpected

Advanced Search

Find Object of Type: PHILAE File

Meta Data

Author	=	Torres	OR ()
Author	=	Mathieu	
Date	>=	2005-10-01	
Model	=	STM	

File Type
Identifier DLR
Identifier Extern
Issue
Location
Model
Released
Revision

Mathieu') AND NOT (Date >= '2005-10-01') OR (Model = 'STM')

Conjunction: AND

Full Text

Search Restore Cancel

Easy-to-use search functions can be implemented user role specific

Content

The challenge

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The architecture of HyperTest

Introduction to HyperTest Architecture

- **Developed for archiving of test and measuring data for the automotive industry**
- **Results, data and documentation of different test system with different formats at different test sites are connected and administrated**
- **No redundant storage of data (computer at different locations can be integrated in the database)**
- **Meta data are generated automatically or manually depending on workflow processes**

HyperTest Architecture & Capabilities

- Data can be accessed via navigation structure or search via meta data of full text search engine
- Access is protected by user authentication
- Navigation structure automatically build up via meta data – independent from physical storage
- Client or server based integration of specific tools
- Integrates in your system environment
- Archive(s) can be integrated
- Secured access to the system and data is given

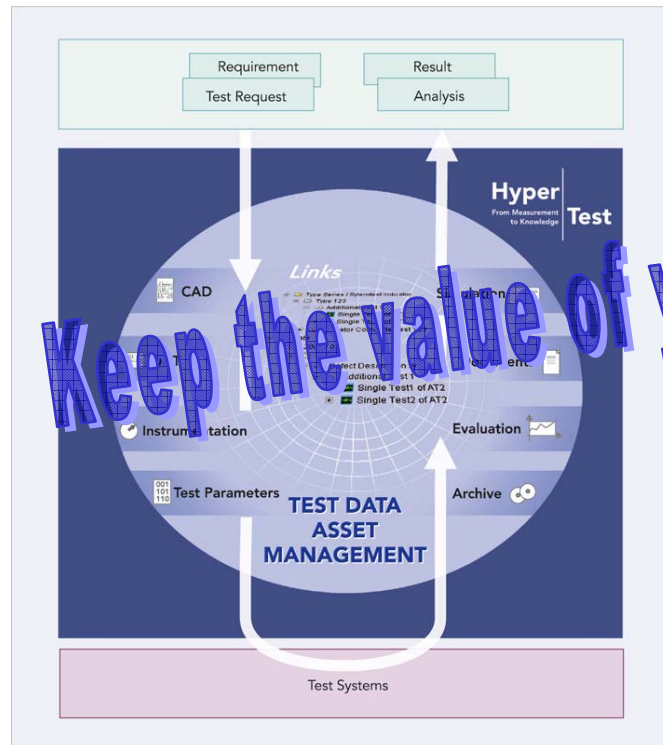
HyperTest at a Glance

Test Data Asset Management

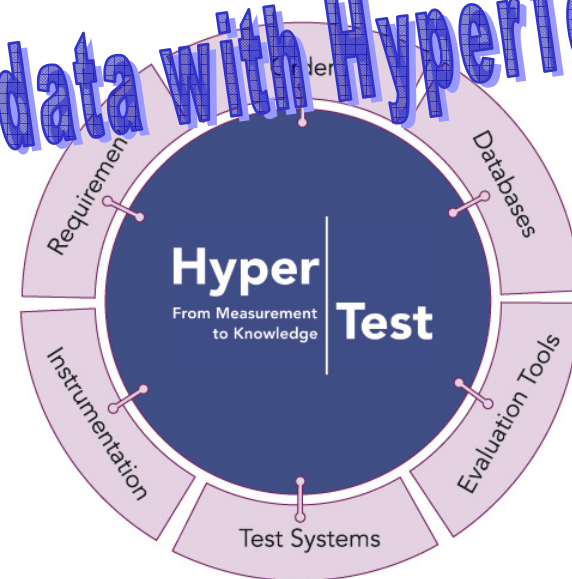
- Linking data and know how to make it long term usable and quickly accessible

Platform for information management solutions

- Handle data and information independent from where they are physically stored



Keep the value of your test data with HyperTest!

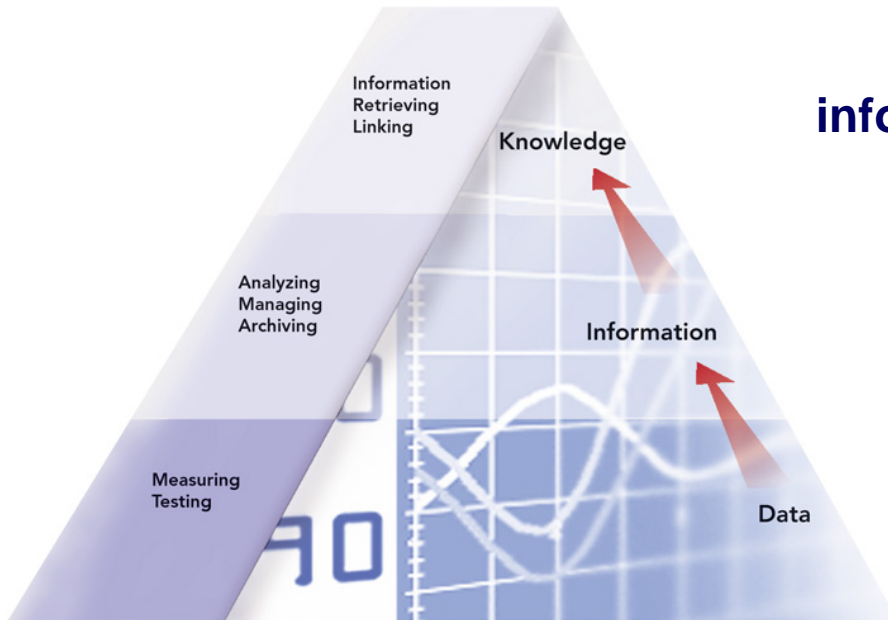


A few Words about the Company ...



- **Established in 1969**
- **275+ employees**
- **Locations**
 - Werum Software & Systems AG
 - Headquarters at Lueneburg
 - Branch Office West (Cologne)
 - Branch Office South-West (Hausach, Black Forrest)
 - Werum America Inc. (New Jersey)
- **ISO 9001 Certificate since 1995**

Information Lifecycle Solutions



**Test data and
information management
systems**

Hyper
From Measurement
to Knowledge **Test**

**Generic test and
control systems**

WTCS
Wind Tunnel
Control System

**Ranging from real-time applications to test management solutions
for the automotive industry**

More information?

Please look at www.hypertest.com

Or contact

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Visit us at booth 1032.

See and discuss:

- HyperTest solutions
- Wind Tunnel Control Systems