Hyper | Test

From Measurement to Knowledge

Test Planning and Data Management Platform

HyperTest is a software platform for integrated, web-based solutions covering test planning and data management up to full test process management. Its modular and configurable architecture facilitates the realization of any workflow to support your company's processes. The modularity enables distributed use at different sites, which may even be spread across the world. Maintaining high performance can be fostered by distribution of functionality to multiple networked computers and easy expansion of capabilities.

The system does not impose any limitation on the number of test engineers, customers, managers, administrators or facility technicians and connected workstations. Neither is there any limitation on the number or type of connected test facilities.

The well-defined interfaces make overall system expansion easy and allow adding functionality or external systems at any time. Moreover, it is ready for integrating the test process with corporate PLM, ERP, long-term archiving or other overlaying systems.

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SOFTWARE & SYSTEMS

Integration platform

The core functionalities of the modular HyperTest platform provide application-independent, general-purpose tasks and can be expanded by customer-specific modules. By configuration and customization they are tailored to the customers' individual process workflows and functionalities. Individual data models, dialogs and workflow definitions are frequently met customizations.

Typical customer-specific modules are:

- Interfaces to corporate, testing-related systems like PLM, ERP or RM
- Interfaces to various test facilities using different means and formats
- Analysis scripts and report templates

The combination of core functionalities with options to customize, add corporate-wide expansions and integrate into business processes is what makes testing departments fit for the future.

HyperTest's main functionalities include:

- Request and order management
- Definition of tests and test plans
- Parameter mapping
- Measurement chain definition
- Asset management
- Master data management
- Calibration management
- Test scheduling
- Test execution
- Result data management
- Meta data query and full-text search
- Automated and interactive analysis
- Reporting and data visualization
- Workflow management
- Rights & roles management

HyperTest capabilities

DEFINE

Requests and requirements management

Test requests and requirements can be imported from upstream corporate tools. Defined standards and regulations can be applied to the tests.

Test definition and order management

Test plans are defined as basis for test projects. All departments involved - be they in charge of the device under test (DUT), the test facilities or the measurement equipment - work with the same, consistently managed information in an integrated system.

The test order workflow supports review, approval, assignment and tracing of the test orders for all tests executed on a DUT.

Parameter mapping and measurement chain

Requested measurement quantities must be accommodated to the test facility capabilities. HyperTest maps the resulting parameters to the DUT in tabular and graphical displays, which visualize the sensor locations as well. It also supports visual definition of measurement chains from the sensor through to the data acquisition system.

PLAN

Test scheduling

After definition, the tests are scheduled. The defined resource and asset types are replaced by particular items. Assigning items presupposes certain conditions, e.g. they are available at the right time and meet the specifications. There are calendar views and equipment catalogs to support test scheduling efficiently while ensuring optimum facility utilization.

Resources and calibration management

HyperTest provides information about any known measurement equipment, devices and sensors. This includes descriptions, current and previous deployments, calibration data and history. Availability of this information supports design and scheduling of tests as well as setting up test facilities and DUTs.

EXECUTE

HyperTest interfaces with test facilities using different order file formats or web service communications. Such an automated process eliminates error-prone manual data transfer. Data received from the test facilities are integrated into the context of the test project by extracting meta data from the result files. Various file formats are inherently supported, but new formats are easily added with plugins.

MANAGE

Data and information management

Knowing the relations between the data is crucial for any data analysis. HyperTest combines the measured data with meta data from the measurements and additional information from the different test stages and interlinks them appropriately. Relevant information is extracted from all sources, such as orders, requirements, design documents, analysis procedures, simulations etc. Users can also add documents and define further data relations.

Data retrieval

Data can be searched by such meta data, relevant results can quickly be retrieved and the basis on which the results were obtained is comprehensible at any time - which ensures reproducibility and traceability of the processes throughout. Efficient filtering and comprehensive project navigation furthermore offer handy strategies for finding information and objects. Full-text search in documents and selected meta data provides further data exploration capabilities while the integrated rights & roles management ensures targeted channeling and confidentiality of information.

ANALYZE

Automation

Received data can immediately undergo automated preprocessing. Names, quantities and units can be standardized and data can be calibrated, verified or validated. In parallel, raw data are kept untouched. Ad-hoc or automated analyses can be done on single data sets or data collections. They are triggered by events governed by data content or business rules allowing server-based analyses of new data sets, summarizing analyses of test series or aggregated key performance indicators.

Reporting

HyperTest automatically generates standardized or individual status and test reports, distributes them to defined entities and manages them in the associated context. It also supports users in preparing different reports from meta data.

ORGANIZE WORKFLOWS

HyperTest supports the structuring and organizing of individual test processes - from definition through to automated analysis. By streamlining the management of requests, facilitating coordination between departments and managing the filing of data the system provides an apt foundation for sharing the data. With making scope, schedule and status of tests transparent it eventually succeeds in raising cost awareness and adherence to schedules.
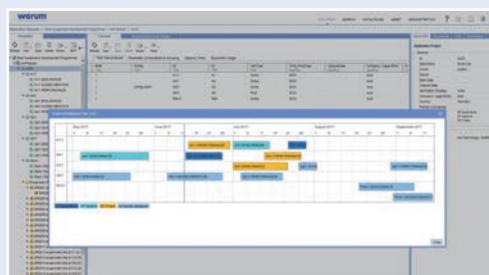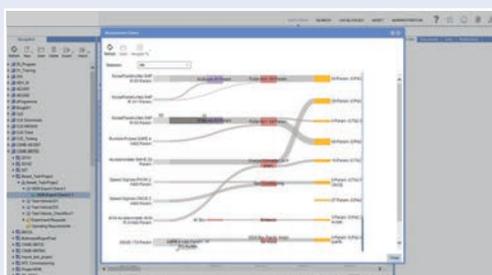
DEFINE   PLAN   EXECUTE   MANAGE   ANALYZE

Application areas

HyperTest is a well-established platform for test planning and information management solutions in various industries. Main industries of our customers are not limited to, but include:

- Automotive
- Aerospace
- Home appliances

Applications cover solutions in various areas:

- Durability tests
- Material science
- Aerodynamics and acoustics
- Jet, rocket, and automotive engine tests
- Dynamics and performance tests

and many more ...

HyperTest at a glance

- Test order management
- Test definition and planning
- Data management and query
- Equipment and resource management
- Automated and ad-hoc data analysis
- Custom process workflows ensuring reproducibility and traceability
- Web-based client/server solution
- Strict access control
- Integration platform for test facilities and relevant enterprise IT systems
- Centralized source of information on test data and KPIs
- Standard interfaces / API
- High level of system availability and data throughput

About Werum Software & Systems

With a workforce of over 100, Werum Software & Systems AG is one of the largest independent employers for IT professionals in Germany. For 50 years we have been implementing sophisticated software and systems for a worldwide base of customers, among them many renowned companies from the automotive and aerospace industry as well as scientific institutions and public authorities.

Our activities focus on the support of customer-specific processes in the core areas of test data and information management, earth observation, eGovernment and enterprise information management. The software solutions are based on platforms specially developed for these areas.

Diversity, reliability, flexibility and fairness are part of our philosophy and create the basis for sustainable customer relations. We offer our international customers well-founded application know-how and the knowledge and experience gained in many years of implementing most diverse projects and IT solutions. Already in the run-up to project implementation we assist them in advisory capacity with regard to any IT-related aspects of the specific task setting. Long-term maintenance and care services for the solutions supplied are a matter of course for us.

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