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DynaWorks ®

PROVEN ENGINEERING
SOLUTIONS FOR :

- DATA MANAGEMENT
- ANALYSIS
- DELIVERY AND SHARING

ARE YOU FACING THESE ISSUES?

- Data transfer between multiple software applications interrupts the test process
- Projects are delayed waiting for test review decisions
- Processes need to be streamlined
- Data is lost during test campaigns
- Test report generation is too time consuming
- Design, test and maintenance departments struggle to collaborate on test data
- Customer access to test data is limited or non-existent
- Cost reduction
- Productivity enhancement

Discover how DynaWorks software packages help your company make test a competitive advantage!

DynaWorks a unique environment for **test-based engineering**

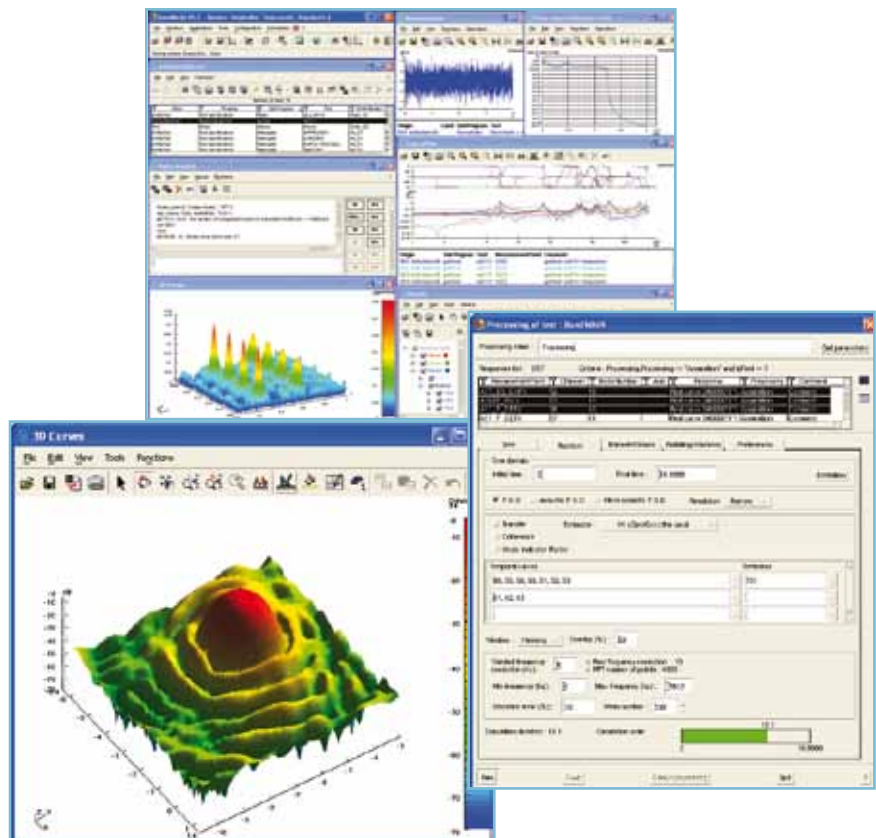
DynaWorks is the only off the shelf software package that can manage your technical data

Based on an extensive experience in Aerospace testing, Intespace developed DynaWorks, the leading solution to manage your test and engineering processes. DynaWorks addresses the unique requirements of the testing business. It combines, in a single software package:

- data management capabilities
- advanced display functions
- fields oriented processing toolboxes
- automated report generation
- secured data sharing with a direct access to co-workers, partners and customers.

Data transfer between applications is no longer an issue using DynaWorks!

DynaWorks adaptive user interface provides process oriented, straight forward applications for the operators and a powerful flexible toolsets for experts. Even a novice can be productive within a couple of hours. Do you need to customize DynaWorks, extend the capabilities or embed external processes? DynaWorks allows you to develop your own automated routines and interfaces or plug the existing applications into the DynaWorks data engine.



DynaWorks

Making Testing **Easier** and more **Productive**

INTESPACE PROVIDES END-TO-END SOLUTIONS.

→ **Managing your data flow**

Beyond monitoring the physical behaviours of units under test, DynaWorks provides an “intuitive understanding” of the measurements including, testing condition and configuration information, such as facility set-up, instrumentation and multimedia files. DynaWorks, the enterprise technical data vault, organizes the information of the entire test process wherever the data is coming from, improving traceability, global efficiency and helping you in building better informed decisions for test-based engineering.

→ **Visualizing and analyzing**

With DynaWorks, it is easy to interpret large amounts of data that are generated during multichannel tests. Compare the current measurement with results from previous campaigns or simulations, or analyze the frequency responses, etc... DynaWorks does the data handling while engineers concentrate on results. Display classical 2D time history or processed data, complex 3D diagram visualization, modelling surfaces and volumes, Campbell diagrams, are just some of the tasks that DynaWorks can perform to support the analysis process. Whatever your applications, DynaWorks gathers these multiple toolsets required to simply provide, operators or experts, with results of complex analyses.

→ **Reporting**

DynaWorks helps creating high quality reports that reflect the true value of your work. Putting together traces, 3D views, texts and images. The report complies with the corporate standard using predefined templates and documentation databases. DynaWorks also supports dynamic reporting design to publish the analysed data so other users may manipulate data. Stored in the database, and linked to the test campaign, the report is available, any time, online by authorized users. It can be delivered to the customer in electronic format like Word or PDF.

→ **Delivering and sharing**

Extend the impact of the collected data by sharing with colleagues, sub-contractors, vendors, customers or partners is one of the key success for engineering and test teams. DynaWorks provides a new class of collaborative applications developed to share engineering data. Using secure internet connections, authorized users can access needed data, interact with onsite engineers without travelling to the test facility. This substantially reduces cost and delay in decisions making.

OUR TEST CENTER EXPERIENCE

INTESPACE is a leading European aero space test center with more than 45 years experience. The DynaWorks product is based on our advance knowledge of the issues faced by our customers. It provides powerful, cost effective and proven solutions. Our leadership is known worldwide.

OFF-THE-SHELF OR CUSTOM SOLUTIONS

INTESPACE provides a large spectrum of solutions to support your requirements, using the COTS product, or a custom application to meet your specifications. Our goal is to make you successful.



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Analysis



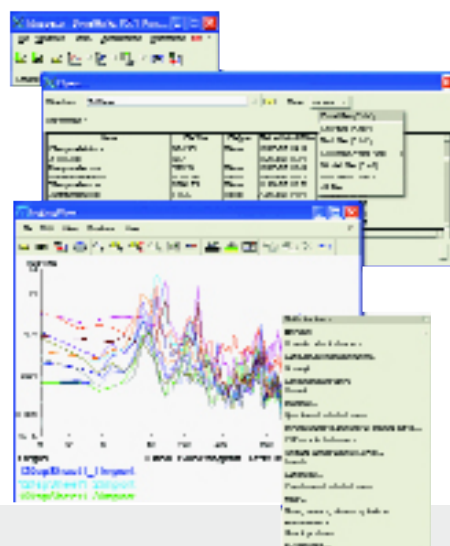
Reports



Test

Turnkey solutions for test benches and acquisition systems

For sine, random, shock, vibroacoustic, acoustic, thermal, engines, and rotating machines tests, DynaWorks Test Solutions offers fast analysis solutions embedded on a test bench. Data access is realized by simple selection of files under Windows or via an interface with the acquisition system. Numerous functions are available for post-processing and report generation. They can be customized to fit with specific customer's needs.



Features

- Advanced 2D, 3D or numerical displaying
- Fast analysis of test data: sine, random, shock, vibro-acoustic, acoustic aero-engines, rotating machines
- Test / test and test / simulation comparison
- Automated analysis process and report generation
- Expandable to support other test processes

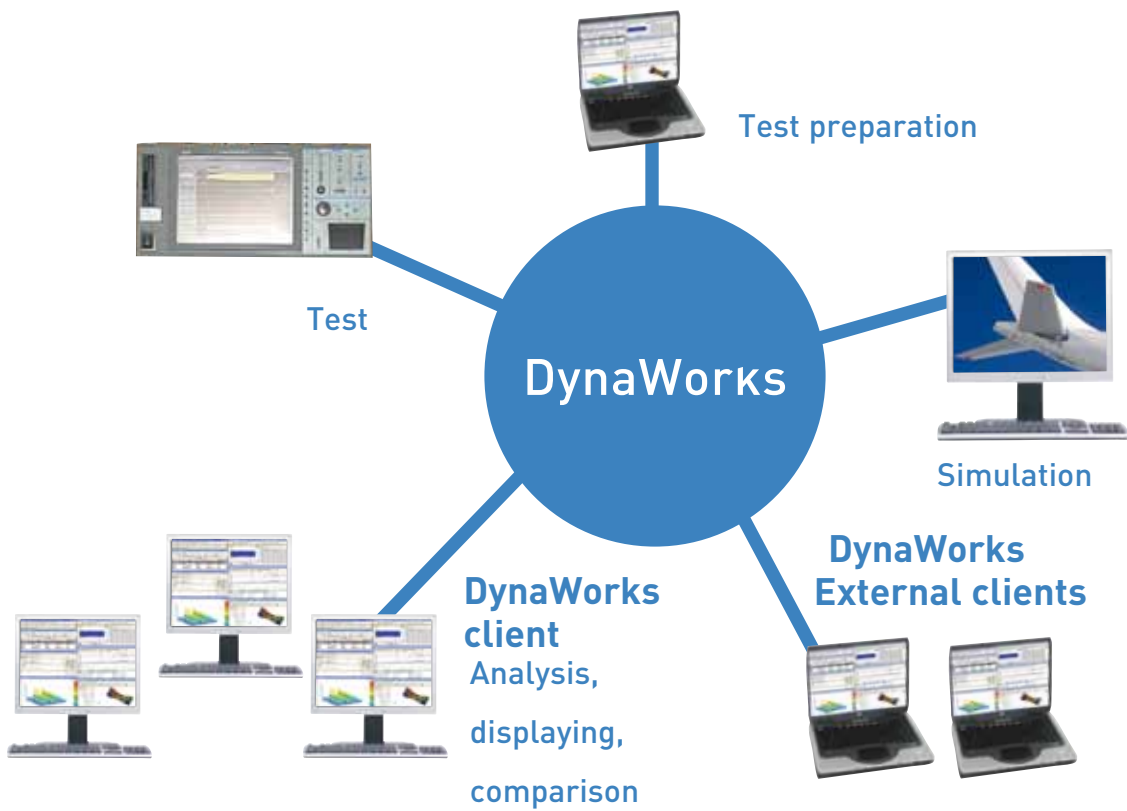
- Direct export of reports and data towards Office (Word, Excel, etc)
- Many interfaces to market acquisition systems

Benefits

- Reduced test phase duration
- Available on Windows and Linux
- Test analysis & comparison, prediction covered
- Increased productivity in test analysis and test report edition

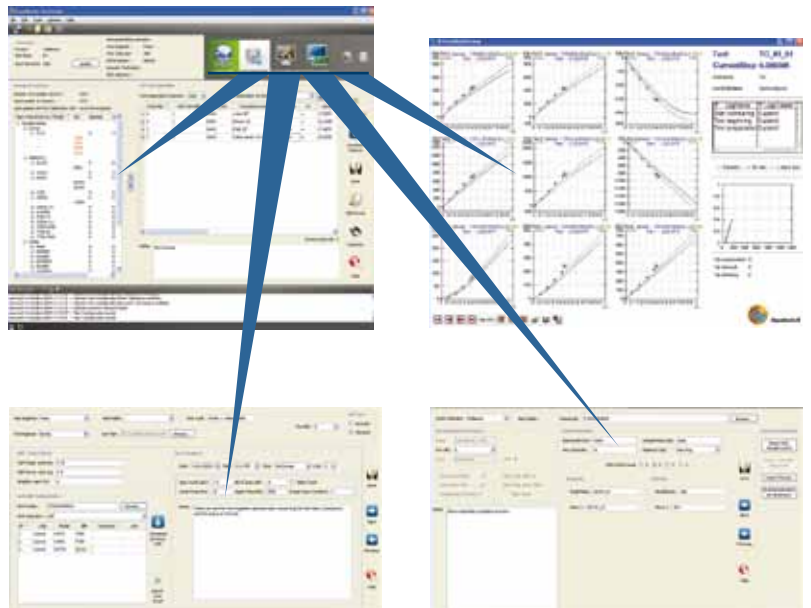
Examples of applications

- Technofan - Safran Group: Fan functional errors analysis during ECM tests
- Aircelle - Safran Group: Rotating machine analysis
- Dassault aviation: Shock tests post processing
- Snecma & EADS Astrium: Vibration tests post processing



Solutions for test center data management

A unique solution fully dedicated to test centers. In a single environment, it manages the entire test process gathering the different test configurations and collecting the raw data. It provides fields dedicated analysis toolboxes to extract the physical behavior of the unit under test and delivers, right away, the test results, analysis and reports to the customer providing a secured direct access to the information or packaging it on a CDROM or DVD.



Features

- Manage sensors life and workflow for the all lab
- Setup the instrumentation of the unit under test
- Setup the hardware regarding the test configuration
- Collect raw test results
- Process the raw data using field dedicated toolbox (vibration, vibro-acoustic, thermal...)
- Generate test reports
- Provide customer web access

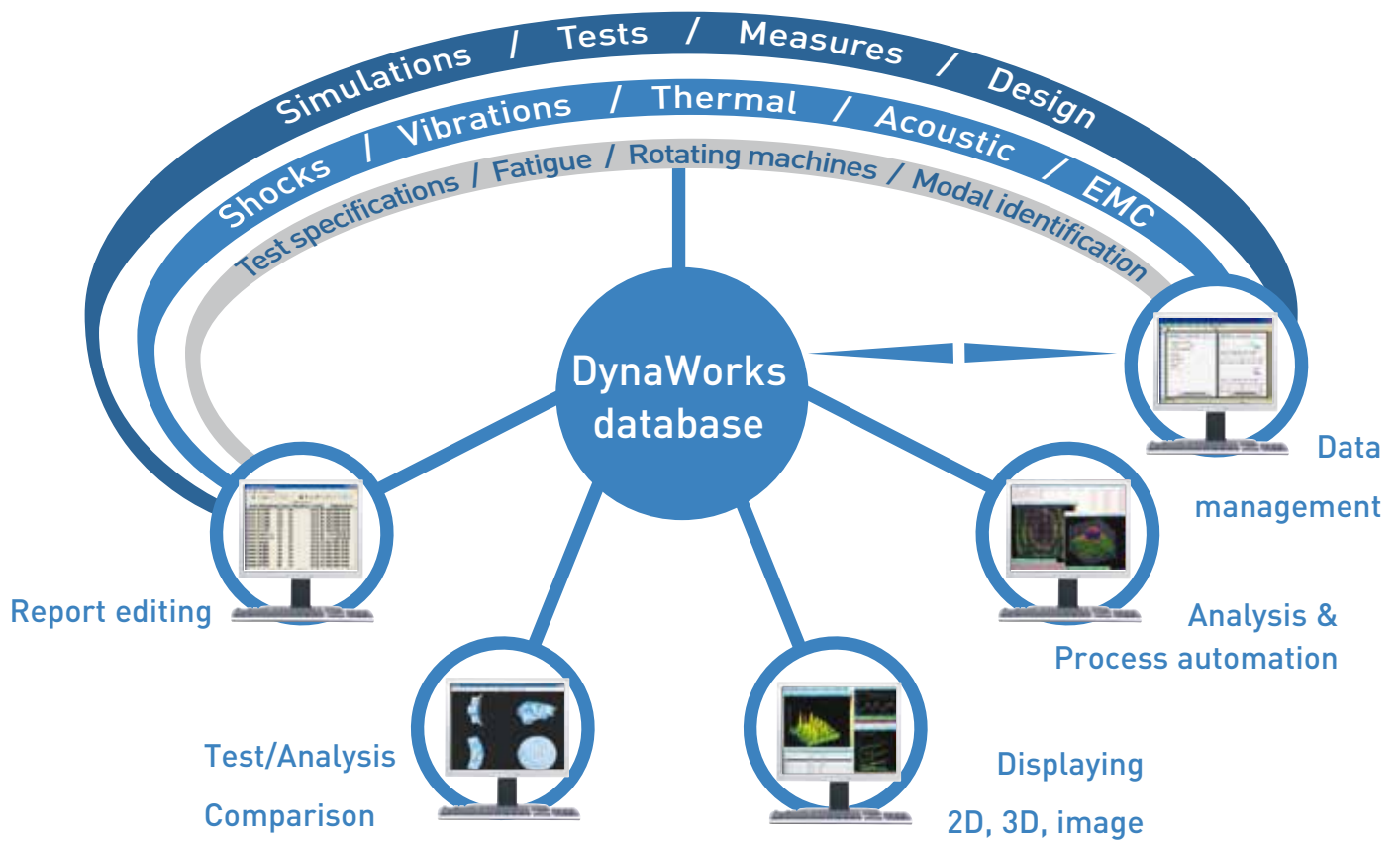
- Standard interfaces with data acquisition and command & control systems
- Test monitoring

Benefits

- Centralized management of the entire lab
- Traceability of the test configuration, instrumentation and results
- Single environment to manage and analyze all test types

Applications

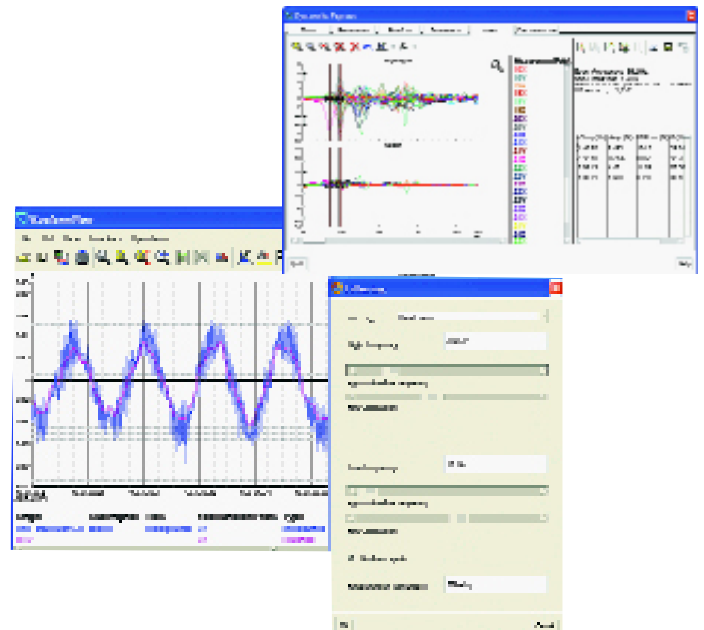
- ESA, Astrium satellites, Thalès Alenia Space, Intespace: For thermal vacuum test facilities, real time monitoring and post-processing
- Nasa Goddard: Structural dynamics test facilities management
- DGA Techniques aéronautiques - Site de Balma: Test data management and report production for several test facilities (EMC, Lightening, Thermal, Vibrations, Landing, Impact shock)



Turnkey solutions for design offices

Powerful solution for design department to manage test data and unify analyses and test / simulation correlation process. A large choice of field dedicated signal processing tools is provided. The engineering teams can automate processing using a macro language. The database engine provides powerful data management capabilities to improve traceability of processing and data archiving.

Interfaces are available to import / export data from / to simulation tools, test benches, MS-Office, ...



Features

- Data analysis toolboxes: mechanical, vibro-acoustic, thermal / thermal vacuum, rotating machines, modal analysis, tests/ simulation comparison, test specifications, ...
- Powerful embedded technical database
- Advanced visualizations: 2D, 3D, 4D, picture, text, array, video, ...
- Scripting capability
- Report generation
- Interfaces with Excel / Word and Matlab
- Connectors with legacy and industry standard tool sets and file formats

Benefits

- Easy tests / calculation results Handling & comparison
- Guarantees traceability & quality of data analysis
- Streamlines and automates complex analysis processes

Applications

- Arianespace, Astrium Satellites, Astrium Space transportation, Snecma Propulsion Solide, Thalès Alenia Space, ELV, AVIO, CNES, Dassault aviation, EADS CASA Espacio, IABG, IAI: Advanced post-processing, report generation after test campaigns or flights for satellites and spacecraft

- Snecma Moteurs, AIRCELLE, TECHSPACE AERO, AVIO, ITP, Rolls-Royce, MTU, NPO Saturn: Aero Engine performance and rotating machines analysis
- Airbus Toulouse, Snecma moteurs: Acoustic Aero Engine tests and simulation data management & powerful acoustic analysis tools
- CEA-CESTA, LRBA, SAGEM, MBDA, Intespace: Test specification for defense applications (GAM EG13)



• Airbus A380: © AIRBUS / O. Dognier • Ariane 5: © CNES-ESA-Arianespace • Satellite entrée caisson: © EADS Astrium
 • Chambre anéchoïde: © CNES/DUMAS Patrick, 2001

DynaWorks

First class solutions for collaborative operations

DynaWorks Data Management is dedicated to organizations which need to deal with the entire product life cycle, from early design to maintenance, repair and operations. DynaWorks Data Management provides ability to share authorized information between various departments of the organization and with partners, subcontractors and customers. The solution is able to manage large amount of data on any IT architecture with optimized use of communication bandwidth. It is designed to support large number of connections, physical users or external application, while maintaining high security requirements and data access time performance.



Features

- High performance DynaWorks engine to manage large data-bases distributed over several systems (local, centralized, on or off line)
- Ability to be tailored to company processes with integration of legacy tools
- Enhanced DynaWorks database administration tools
- Availability of the wide range of DynaWorks data processing and displaying features

Benefits

- Technical memory improving organization global know-how exchange and capitalization
- Higher quality with full traceability of test conditions and data processings
- Increased efficiency by providing immediate access to any data, at any time and anywhere

Applications

- Astrium Space transportation, ESA: Management, processing of telemetry data in a collaborative environment for Ariane & ATV programs

- Astrium Space transportation: Management of flight and test data for Ariane and french missile programs, all data on line for collaborative post-processing
- EPI, Snecma Moteurs, Rolls-Royce, MTU and ITP: Collaborative tool for Airbus A400M engine
- Snecma moteurs: Management of engine test data, more than 20 years of test data available on line
- Airbus: Instrumentation management and real-time monitoring for Airbus 350 static tests

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Some references

- AIRBUS France
- AIRCELLE
- ARIANESPACE
- AVIO SPA
- BEIJING MECHANO ELECTRONIC
- BOSCH
- CEA
- CNES
- CONTINENTAL
- DCN
- DGA Techniques aéronautiques
- DLR
- EADS ASTRIUM SPACE TRANSPORTATION
- EADS ASTRIUM SATELLITES
- EADS CASA ESPACIO
- EDF
- ELV
- EPI (Europrop International)
- ESA
- ETS (European Test Services)
- GAMESA EOLICA
- HISPANO SUIZA
- IABG
- ISRAËL AIRCRAFT INDUSTRIES LTD
- LIEBHERR AEROSPACE
- LRBA
- MBDA
- MICROTURBO
- NASA
- RATP
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- SAFT
- SAGEM
- SALOMON
- SCHNEIDER
- SMARTEC
- SNECMA Moteurs
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