

JiveX NDT Product Description

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JiveX NDT

The modern image and test report system in non-destructive testing (NDT)

JiveX NDT digitizes and improves the NDT workflow and helps to overcome the problems encountered in archiving and analyzing test data from numerous NDT modalities, each with proprietary data acquisition systems. JiveX NDT relies entirely on the international DICONDE standard ASTM E2339 as the foundation of the non-proprietary JiveX NDT Archive, thereby consolidating the existing stand-alone solutions of various suppliers. JiveX NDT stores all images, reports, measurement and signal data in the DICONDE archive and distributes them for viewing within the company, as well as by customers, through secure access protocols.

You reap the following definite benefits:

- ▶ Work flow optimization thanks to the integration of JiveX NDT into the ERP and test management system, e.g. SAP. This way, test orders can be accessed digitally right at the point of testing and by the test engineer. Your customers can also retrieve the test images and test reports in the network right after testing via dedicated secure access, even on mobile devices.
- ▶ Protection of investment is another essential reason for JiveX NDT, since all data are archived in the international DICONDE format, and JiveX NDT is compliant with data privacy requirements. In addition, existing stand-alone solutions and systems can be concentrated into a single company-wide system.
- ▶ JiveX NDT optimizes quality, since all information is accessible at any time with just one mouse-click. This is a major argument in favor of test data traceability whenever needed and provides additional protection in case of damage claims.
- ▶ By consolidating all test data, an information pool is created which can help improve product quality within the company. It also provides those in charge with the data base for additional analyses, e.g. using business intelligence systems.

Note:

Both the JiveX NDT product and its description have a modular structure. The user can expand the JiveX Server NDT by activating various extension modules.

JiveX NDT Server

Customized communication and networking

The JiveX NDT Server is the communication hub. It provides all connections and ensures end-to-end work processes, as well as safe retrieval and archiving of images and test reports.

Thus, the JiveX NDT Server can be easily connected to any image source. The DICONDE interface links JiveX NDT with, e.g. X-ray film scanners and digital fluoroscopy systems, while endoscopes and analog ultrasound units are connected via the video interface. Other import interfaces permit the integration of documents, digital images, and other test information, such as signal data.

With the integrated database, the data objects from various test units can be managed online at any time and adapted to the customized workflow via JiveX NDT extension modules. The JiveX Archive Manager with Data Replication is already integrated and handles online storage (SAN, NAS), as well as archiving in a lower-level HSM system, for example, a tape library. For this purpose, multiple storage units can be managed and grouped according to function. The integrated image database provides a good overview of the complete data inventory, storage location, and archival status at any time. In addition, once set up, the optional data replication of highly sensitive data runs completely independently of the underlying storage technology. As an example, in online archiving, various storage locations in distributed NAS systems can be accessed.

While its flexible interfaces allow easy integration of the JiveX NDT System into the existing system infrastructure, a flexible DICONDE communication platform can be set up simply by interconnecting multiple JiveX NDT Servers. Thus, for example, company and customer sites can be linked up.



Device Interfaces

JiveX NDT – independent and flexible

JiveX NDT Modality Gateways provide the link between the JiveX NDT Server and the imaging test devices (modalities). The JiveX NDT System offers interfaces for a wide range of image and video formats, and links almost any analog or digital image source. No matter whether you work with digital radiography, ultrasound, thermography, video endoscopy, or photography – with JiveX NDT you can archive any type of NDT imaging data.

Since its design is based on national and international standards, JiveX NDT can team up with systems from other leading manufacturers.

Modality Gateways for the JiveX NDT Server

JiveX DICONDE Modality Gateway

All test devices compliant with the DICONDE standard are tied into the network via the JiveX DICONDE Modality Gateway. This is how the test device and the DICONDE archive usually communicate with each other. This gateway allows direct transmission of image data from the test device to the JiveX NDT Communication Server via the DICONDE storage service.

JiveX File Import Gateway

The JiveX File Import Gateway provides functionalities that allow data export of PDF and JPEG documents, as well as files with test reports, from the file system; these data can then be integrated into the workflow of NDT departments and service providers via established DICONDE-based infrastructures. The transferred files are converted to the DICONDE format, sent to the JiveX NDT Communication Server via DICONDE Storage Service, or assigned to an order as test data. Thus, these data are deeply integrated into the test processes and can be uniquely retrieved at any time.

JiveX Analog Modality Gateway AV

With the JiveX Analog Modality Gateway, images, videos or PDF documents of any type and from any source can be acquired via a graphical user interface, labeled with testing information, and sent to any desired DICONDE archive. Paper printouts, creation of CDs/DVDs or file export are also possible.



NDT Workflow Management

JiveX NDT – open and transparent

Key benefits of the JiveX NDT system are the optimal support for, and simplification of, key work processes of all departments working with the system. The flow of testing data is supported from the onset, through the assessment, to the creation of testing data CDs and image distribution. For this purpose JiveX NDT offers numerous options for automated data processing and data communication. In addition, flexible interfaces and modules help to realize ideal data quality.

Workflow modules for the JiveX NDT Server

JiveX Server Sync Manager

The JiveX Server Sync Manager can help consolidate data bases from different facilities and synchronize changes within the JiveX network. Its main purpose is the central analysis and long-term archiving of test data generated at the various facilities. To this end, the JiveX Server Sync Manager sends the test images from the satellite facilities or customer sites to the central JiveX NDT Server. Since all data are archived at just one, legally compliant location, the central server, this saves time, travel expenses, and hardware expenditure.

JiveX Order Manager

The JiveX Order Manager is a key component in structured quality assurance. It provides the test order worklists for compliant test devices, such as digital fluoroscopy systems. This also includes a data consistency check on the JiveX NDT Server of incoming image and test documents and synchronization with the order information from the ERP system (e.g. SAP) or test management system. For instance, the JiveX Order Manager acquires work order information from the ERP or test management system via the communications interface and transfers it to compliant test devices, such as digital fluoroscopy systems, as a DICONDE worklist. Since each unique order can be accessed right at the point of testing, the test images and documents generated by the test device can be assigned to it. In addition, before the test data are stored in the archive, with its Study Verification Service, the JiveX Order Manager provides the option of reconciling incoming image studies with the order from an administration system (such as SAP). This ensures that only uniquely identified test images and documents are entered into the JiveX Archive. Faulty and incomplete data are marked and can be corrected by hand.



JiveX PDF Print Gateway

The JiveX PDF Print Gateway transmits documents as DICONDE PDF objects from any application, such as your ERP or test report system (e.g. SAP, MS Word, MS Excel), into a DICONDE Archive. In the process, the documents are converted into PDF format via an integrated printer driver. Subsequently, this newly generated PDF document can be linked to test data and then sent as a DICONDE PDF object to a DICONDE archive.

JiveX DICONDE Mail Gateway

The JiveX DICONDE Mail Gateway lets the DICONDE server send and receive, via e-mail, studies with images and test reports in the DICONDE format. This system was developed specifically for smooth and safe e-mail communication of large amounts of data. To this end, the study data are encrypted "end-to-end" as recommended by the German Federal Office for Information Security (BSI). One such typical application example is the communication of studies to customers, external testing engineers, experts, and specialized testing institutions.

JiveX LDAP Gateway

The JiveX LDAP Gateway helps you integrate the JiveX NDT System into your existing user and rights administration. With the aid of the LDAP Gateway you can access the user accounts of an LDAP server and, from there, manage the JiveX groups. During the login to the JiveX NDT system, authentication is checked against the LDAP server. This avoids the need for duplicated maintenance of access IDs and passwords.

JiveX Study Access Manager

The JiveX Study Access Manager checks which testing study has been/had been opened by which user. If another user accesses this study, a note is displayed indicating that a testing study has been opened by multiple users. This module actively helps to avoid unwanted double testing, particularly in the case of multiple sites. On the other hand, the current testing status of your images can be identified in the worklists.



Workplace systems

Individuality and efficiency

The JiveX NDT systems have a modular system architecture and can be extended, in the network, by various platform-independent desktop applications. JiveX NDT supports various operating systems, depending on the area of application. Acting as the switchboard of the JiveX NDT system, the JiveX NDT Server is the central manager of the database and makes the latter available to the desktop applications.

Depending on the network concept, access to images from the workplace can be implemented on-demand directly from the server or rule-based via automatic auto-routing/pre-fetching. In addition, the server also offers a standard interface via the DICONDE Query/Retrieve protocol that allows for seamless integration of common third-party systems into the network at any time.

The desktop applications are used as a JiveX client application. This application accesses the JiveX NDT server directly in order to load (on-demand) image data and documents. A prerequisite for this is sufficient network capacity, which should be matched to the demand. For common application scenarios, standard networks are absolutely sufficient.

JiveX NDT Desktop Applications

The development of JiveX NDT desktop applications relies on various technologies. The desktop applications for image distribution with the JiveX NDT Viewer are based on web technologies (HTML5). The JiveX NDT Viewer Pro is based on Java technology.

JiveX NDT Viewer

With the JiveX NDT Viewer, the user has quick access to all images and test report data via a mobile device. JiveX Mobile can be operated as a stand-alone application or completely integrated into your mobile ERP application (e.g. by SAP). The image data is automatically prepared for this on the basis of standards and can also be edited interactively.

JiveX NDT Viewer Pro

This desktop application allows interactive image and test report viewing at each networked workplace. In the process, high-performance data transfer takes place. The special JiveX transfer protocol transfers the data on-demand, and in various qualities, depending on the use scenario, from the JiveX server to the workplace.









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