Rhythm Archive

Long-Term Storage Solution for NDT Information

The solution to storing very high volumes of inspection
data in an easy accessible format.

GE imagination at work

Rhythm Archive

Rhythm Archive is an extremely efficient data management and storage solution, which allows ready and easy access to large volumes of inspection information. More than 300 million images can be stored at a central location in the industry standard DICONDE format. It accepts images from any number of LAN-connected, remote Rhythm Review workstations and stores these using various compression techniques to save storage space without sacrificing image quality. Input and retrieval of information is quick and easy, as a simple DICONDE tagging system eliminates the need for the complex image file naming conventions often associated with high volume information storage. Furthermore, Rhythm Archive not only stores the raw inspection data but also any enhanced images developed at the Rhythm workstation.

Storing for the Future

Rhythm Archive is a totally DICONDE-based archival solution. DICONDE (Digital Imaging and Communication in NDE) is a development of the DICOM standard which was developed for the medical industry by vendor companies and user groups and is now used by virtually every medical profession that utilizes images.

By using Rhythm Archive, users can enjoy a range of benefits. They can avoid legacy data issues and will not have to maintain old systems or convert old data in the future. They will also be able to use inspection data from various DICONDE-compliant equipment manufacturers, as DICONDE is nonproprietary. And it will be possible to review historical inspection data with future software tools.

Flexibility and scalability are further advantages of Rhythm Archive, as the system can be integrated with a number of long term storage solutions, such as Plasmon, IBM, HP and EMC.

Sharing More Information, Faster

Rhythm Archive offers a significant step-change in information sharing over the existing Rhythm platform. Currently, data is archived at Rhythm Review workstations by storing on the hardware's limited hard disc capacity or on near-line DVD/CD. Consequently, locating particular inspection data in a multiple workstation configuration can be rather complicated and time-consuming. With Rhythm Archive information from all workstations is available at one central repository so that data searching is more efficient.

Rhythm Archive can control image information workflow so that data can be routed to other Review workstations to allow further analysis.

Virtual archiving is yet another feature of Rhythm Archive. This allows information managers to automatically segregate data, on a customer basis, on a department basis or on any storage specific basis, to provide customized, secure archives.

Improving the Bottom Line

By improving data sharing and providing a central, safe, long term information repository, Rhythm Archive can significantly affect profitability, with immediate benefits in time-saving and reliability. However, Rhythm Archive can also bring important productivity improvements of as much as 50%, as pre-inspection plans can now be formulated more efficiently by taking actual inspection history into account. A similar order of productivity improvement can also be achieved in post-inspection, as only relevant inspection data needs to be sent for further analysis.
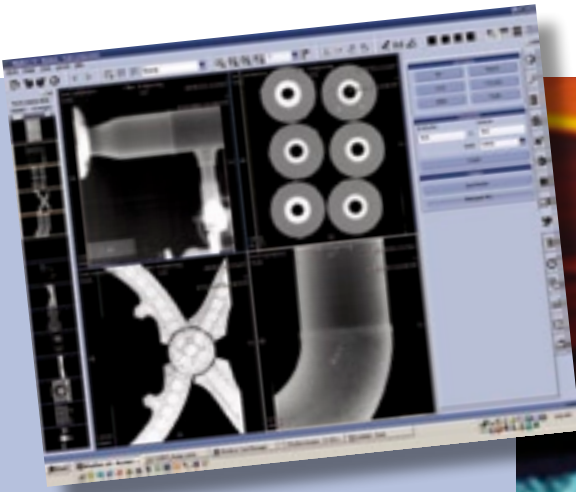
Realizing the Potential

Rhythm Archive completes GE Inspection Technologies' Rhythm software suite. This is a cohesive platform developed to provide an efficient and effective solution to the acquisition, analysis, management and storage of multimodal digital inspection data. Rhythm is made up of three integrated modules, all of which use off-the-shelf hardware.

These modules are:

Rhythm Acquire: interacts with the relevant inspection source to collect the digital inspection information. Current Rhythm Acquire Modules are those for Rhythm Radiography and Rhythm Visual and these offer limited reporting capability, in easy-to-understand formats.

Rhythm Review: accepts data from Rhythm Acquire, other Rhythm Review workstations and removable media, such as CD and DVD. Rhythm Review has the capability to enhance and manipulate the digital data and also features application tools for the analysis, measurement and further enhancement of images. Rhythm Review allows information to be stored on-line using the its hardware disc capacity, or near-line CD and DVD.

Rhythm Archive: expands the operating potential of Rhythm enormously. Now, all information can be made available to every Rhythm user within a network, simplifying the introduction of techniques such as data fusion and data base mining to provide the basis of future condition-based maintenance programs. This will assume increasing importance as the Rhythm platform is extended to other inspection modalities.

Rhythm Archive will find application in various markets.

In **aerospace** all inspection data can be stored for upwards of 50 years and still be quickly retrieved when required.

In **oil & gas** weld inspection data can be transmitted to the Rhythm Archive, where it is accessible to expert resources for review and analysis.

In **power generation** in-service assets can be better managed to help improve their operating life and reliability.

In **transportation** inspection planning can be faster and more meaningful and targeted by referring to inspection period.

Feature Summary

- **A totally DICONDE-based archival solution**. Ensures that multi-modal inspection data will never become obsolete or inaccessible.
- **Easy to use**. Simple tagging of information without elaborate naming conventions allows rapid filing and ease of data retrieval.
- **Simplified information sharing**. Data can now be readily accessed from a single storage source by any number of remote interrogation sites.
- **Interfaces with a wide range cutting edge technology, long term data storage solutions**. Allows operator to select long term storage equipment to meet particular present and future needs.
- **Provides foundation for data mining**. Ready access to large volumes of data at one central storage point allows operators to compare inspections carried out at different times using different inspection modalities.
- **Robust and secure**. Disaster-recovery plans are incorporated and built-in redundancy can be included to ensure constant data availability.

Technical Specifications - Rhythm Software

Hardware	
HP DL 380 G5 Server	With Two Intel Dual-Core CPUs and up to Eight 146GB SAS Hard Discs
MSA50	Giving 1,2,3, or 4 TB Image Cache Options
Optional Monitors	Available
Tape Backup	Available

Long Term Storage Options
Network Attached Storage
Plasmon UDO (Ultra Density Optical) Jukebox
EMC Clarion
EMC Centera

GE Inspection Technologies: productivity through inspection solutions
GE Inspection Technologies provides technology-driven inspection solutions that deliver productivity, quality and safety. We design, manufacture and service ultrasonic, remote visual, radiographic and eddy current equipment and systems. We offer specialized solutions that will help you improve productivity in your applications in the aerospace, power generation, oil & gas, automotive or metals Industries.

www.ge.com/inspectiontechnologies