Premier Clinical Pathology Laboratory

eInfotree

APPLICATION NOTE

LEADING DIAGNOSTICS CHAIN IMPLEMENTS CIMCON'S ELECTRONIC DOCUMENT MANAGEMENT SYSTEM AND IMPROVES TEST REQUISITION PROCESSING TIME

The Customer

This customer has immense knowledge and expertise in the field of laboratory / pathology science and is considered to be a center of innovation, a premier clinical pathological laboratory, and a leading and most respected diagnostics chain with many hubs, collection centers, and pathology labs across the country.

Business Drivers

This customer was facing issues related to poorly defined document sharing techniques and unstructured documentation. The process of collecting information from patients, recording in its ERP system and making it available to laboratories, involved manually transferring hard copies of TRFs (Test Requisition Forms) between various centers. This made the customer's goal of achieving same in 45 seconds impossible.

Their quality division was also having tough time fulfilling the needs of quality standards in maintaining their SOPs and other quality documents.

Solution

The customer implemented CIMCON's $elnfotree^{M}$ Electronic Document Management system, a webbased integrated document management solution that allows internal departments, chair people, lab



assistants and registration users to upload and share documents in a highly secure environment.

The solution replaced the organization's manual system with a more efficient one that eliminates the need to manually transfer documents from collection centers to the data center for data entry into Microsoft Dynamics AX and subsequently makes it available to test labs. Users have access to the software based on the rights provided and are able to access documents from across the globe.

CIMCON understood the client's requirements and the integration requirements of the DMS with Microsoft Dynamic AX and built a core team to achieve the objective. The team studied the problem area and gathered all required information to understand the organization's business processes.

CIMCON customized and configured its' elnfotree a web-based solution that would allow the client to establish a centralized repository and a single source of access of documents for collection centers, data entry operators, lab assistants and doctors.

CIMCON also provided the customer with a web version developed on the .NET platform with an 11g Oracle Server as its backend database. A high range IBM Server was installed with the application software and placed at the client's office. Mirroring of the hard disk was done to keep the downtime of the server to a minimum in case of failure. A back-



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up was made on a daily basis on an external tapedrive as a disaster recovery step.

CIMCON's elnfotree provided the client with the following features:

- A pure web-based solution which can be accessed from anywhere using a web browser
- Configuration of hub folders and files in a systematic way with access privileges to all authorized users
- Automatic flow of TRP based on priority and with sync between TRF recording state in ERP and its status in elnfotree
- Digitization of hard files (Test Requisition Forms) by detecting barcodes and storing them to the EDMS
- Standardization of file naming by collecting metadata along with barcode while adding the file
- A facility to access TRFs and documents stored in elnfotree directly from the Microsoft Axapta and STARLIMS screen
- Integrating with their MIS Reporting module for providing high level view to keep track of TRF recording process and to assess data entry operator performance
- Integration with their LIMS solution to provide access to documents stored within eInfotree from within STARLIMS screen
- Data and document archival solution to handle the load wherein in tens of thousands of TRFs are added into the system everyday from different collection centers

- An audit trail of each action performed on the file, including viewing of documents
- Automating their quality procedures with a clean solution of review, approval and publishing of quality documents
- Publishing quality documents with watermarks at each stage for distinction between master and controlled documents
- Extensive search functionality based on different criteria including barcodes of scanned TRFs
- Search within an audit trail to get a clear idea of the dates when each person worked on the file
- An ad hoc workflow application to automate quality documents review and approval process
- Detailed reports to track daily activities

CIMCON deployed onsite engineers for the business process study, installation, configuration and training of the employees to ensure user adaptability and familiarity with the software.

elnfotree's patent-pending ECM architecture allowed the client to mimic their business processes and reduce their registration time for TRFs within the stipulated time for better productivity, leading to a decrease in response time to their customers.

The solution is also planned for implementation in the Quality Assurance department in the near future.



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Business Benefits

The benefits of implementing the new system included:

- Achieving the goal of 45-second turnaround time for whole TRF registration process made possible.
- No change in the way of working of persons collecting TRFs as they need to fill, scan and keep in a folder location as earlier from wherein elnfotree automatically picks up and adds to repository.
- Connectivity between hubs spread across the country is improved.
- Lowered TRF recording time for data entry operators of ERP and LIMS as TRFs are now available within their screen instead of paper form. TRF automatically positioned itself based on the data that is to be entered by operator thus making entry quicker.
- Documents are stored in a central repository with access to all authorized users, thus reducing human dependency to access documents.
- Only authorized users can access, modify and get a copy of the documents.
- All documents such as Word documents, spreadsheets and images are stored at a single location in a hierarchal manner, creating a knowledge base for the organization.
- A history of files including version and editor details is maintained.

- Easy retrieval of documents is possible with the extensive search provided by elnfotree.
- All users have access to the latest version of documents.
- Reviewing time of documents is drastically reduced with the file comparison feature.
- The Collaboration tool helps in sharing and discussing the views regarding documents more effectively among team members.
- Team members are notified in a timely manner about the addition of new files, thereby reducing the time needed for finalizing the documents.
- File nomenclature and barcode detection is achieved to identify the documents easily.
- The review and approval process for documents is automated with easy tracking and notification to concerned team members, thereby cutting down the instances of time overruns.
- The work in progress can be easily tracked, which helps the client achieve a timely response.
- Standardization is achieved throughout the enterprise with minimum effort.
- Turnaround time is reduced.

Value

By selecting CIMCON, the customer received tremendous value:

Time: Application's open architecture and with support of third party application integration helped it deliver the solution in minimal time, thus helping the client's personnel to resolve their current issues and start following a standardized



method of document management immediately. Being a user-centric solution, the users did not have to go for long training sessions thereby allowing them to quickly adopt the system in their business process.

Productivity: CIMCON re-engineered and automated their business process with notifications to concerned individuals about the changes and jobs waiting for them. The review process became faster with the availability of collaboration tools and comparison features. Since ad hoc workflow tracking was possible, the client could easily optimize their business processes for better productivity. Integration with their existing systems provided a better working environment with increased productivity. Custom reports based on their needs gave management a clear picture to track activities and productivity better.



About CIMCON

CIMCON Software, Inc. provides a wide range of software solutions and compliance services that reduce costs and improve operational efficiency while complying with 21 CFR Part 11 and GxPs. CIMCON anticipates, defines, evaluates and solves the technical and regulatory issues that arise in a constantly changing environment to help clients achieve their business goals. The firm brings to bear 25 years of innovation, experience and knowledge in designing, developing and implementing technology solutions from the plant floor to the top floor.

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