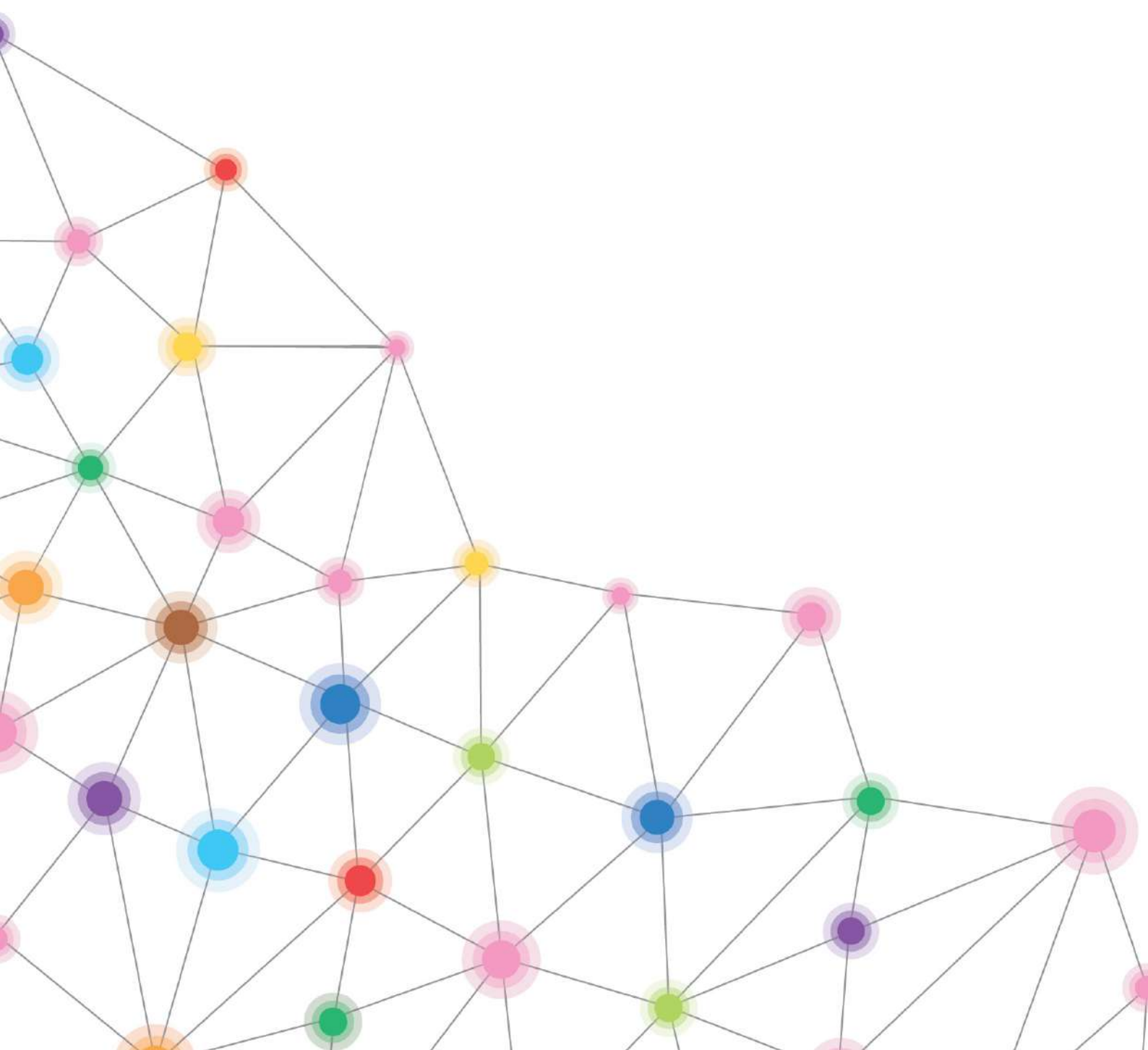# Delphic V10

Our continued focus at Sysmex is to provide expert solutions for patient data and diagnostic workflow, shaping the advancement of healthcare.

Delphic V10

Delphic is an innovative system used by leading laboratories, backed by a highly experienced team of LIS developers and application specialists at Sysmex. Delphic aims to improve the quality and cost-efficiency of patient care by optimising the operation of clinical laboratories and maximising productivity.

The development goals for Delphic are to progressively modernise and redevelop components of the product while maintaining the speed, robustness, flexibility and the breadth and depth of both core and custom functionality that the Delphic system has provided laboratories for over three decades.

Delphic V10 introduces modern technologies into the LIS that enable new functionality, a contemporary intuitive user experience, and provide the right platform and foundation to develop additional modules for your laboratory in the future.

Modernised
technology stack

Simplified
implementation,
configuration and
support

Enhanced
lab business
management

Delivering
new functionality
and modules

Intuitive
user experience

Streamlined
lab workflow

Key Business Benefits of Delphic Version 10 Functionality	Modernised technology stack	Simplified implementation, configuration and support	Enhanced lab business management	Streamlined lab workflow	Intuitive user experience	Delivering new functionality and modules
Worksheet Designer	●	●		●	●	●
Worklists Dashboard	●		●	●	●	●
Enhanced Result Entry	●			●	●	●
Decryptic Monitor	●	●	●		●	●
Custom Reports Dashboards	●		●		●	●
Software Quality Initiatives	●	●	●	●	●	●
User Help		●			●	
Delphic Explorer UI	●	●			●	
Delphic Explorer Dictionaries	●	●			●	
Delphic Micro Enhancements	●	●			●	
Multilab Capabilities		●			●	●

Worksheet Designer

The Delphic Worksheet Designer module provides a much improved way to design, build and maintain worksheets for result entry in Delphic.
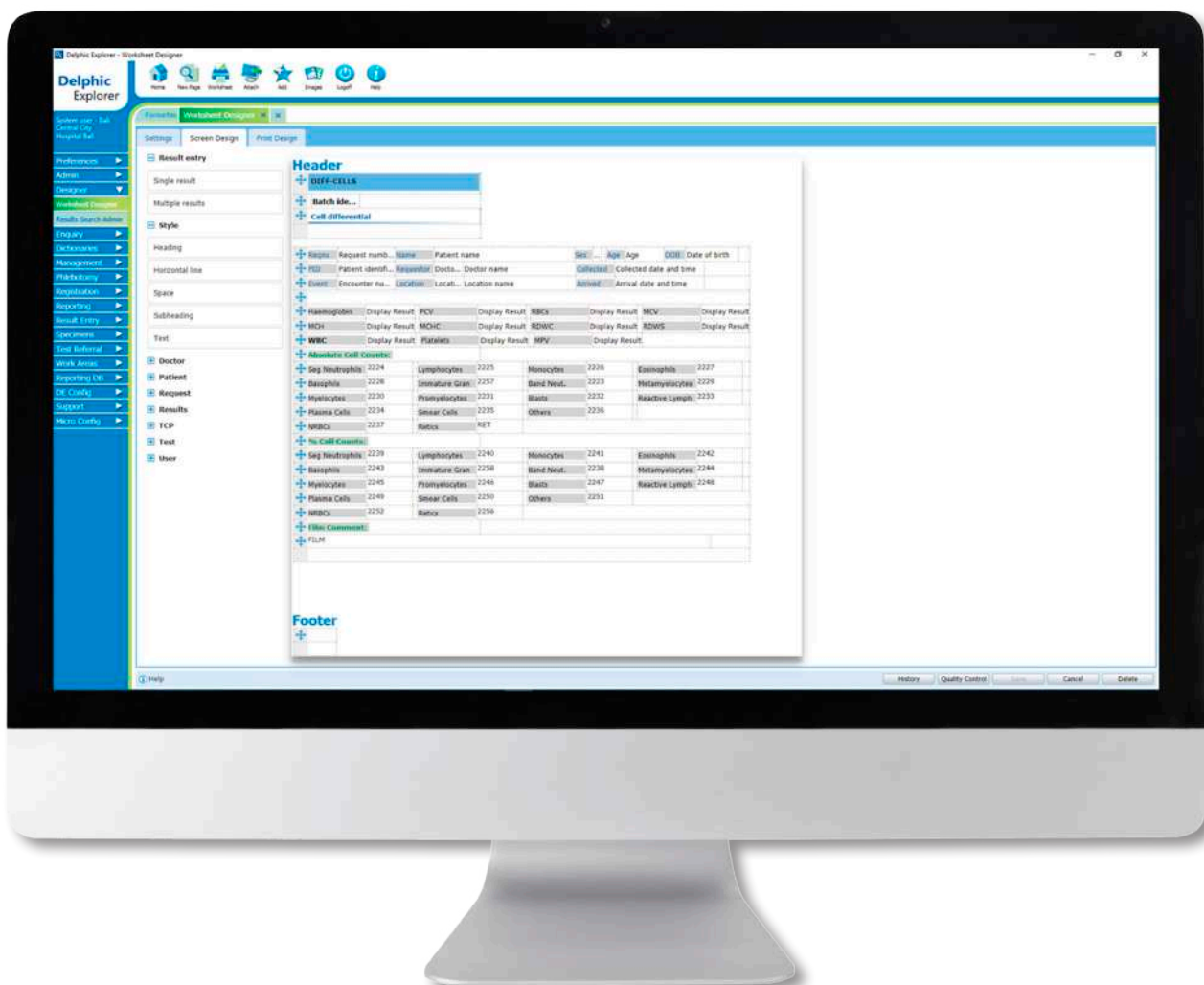
Prior to V10, all worksheets were created using the Format Maintenance Program (FMP). This new technology is a replacement for FMP/ Formgen and the development has been carefully managed to ensure that both FMP developed worksheets and new Designer worksheets are fully supported in Delphic while sites transition from the old method to the new module.

Key features

- Intuitive drag and drop user interface with full use of the screen to build screen and print worksheets
- Guides the user to complete the worksheet design correctly
- Multiple design controls so users can configure the desired settings for each worksheet including: result authorisation workflow; display of alerts; printing options; dictionaries to use when entering results
- Ability to import and export worksheets between systems
- Full audit trail of all changes made to worksheets

Benefits

- Significant time savings creating and managing worksheets
- Reduces training time and the level of application expertise to build worksheets
- Expands scope to capture result entry needs without limitations of old technology
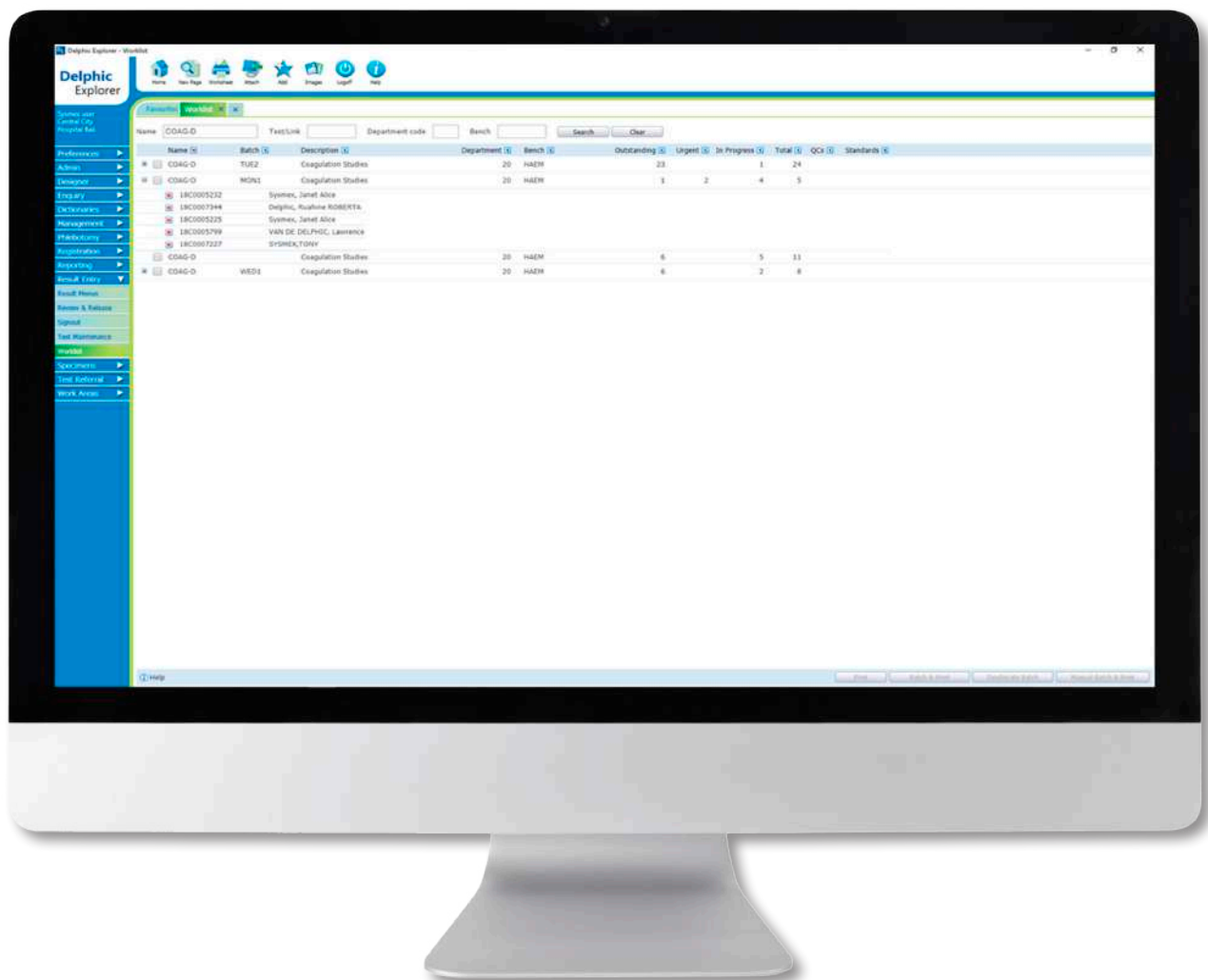- Ensures complete traceability of all changes made

Worklist Dashboard

The Delphic Worklist Dashboard provides each laboratory with a comprehensive snapshot of all work awaiting processing and work assigned to worksheet batches. It combines functionality from the Test View and Results Menu in previous releases and, like Test View, it displays a summary of all requests awaiting specific tests.

Key features

- Dashboard list of all work assigned to worksheets, displaying the status of all requests awaiting specific tests including urgents and work assigned to batches
- Functions to create and manage batching
- Ability to click through to open selected worksheet
- Intuitive user interface with searching and sorting features

Benefits

- Displays status of all work processing and waiting
- Eliminates the need to print or view worksheets to assess numbers
- Aids staff and/or bench workload allocation
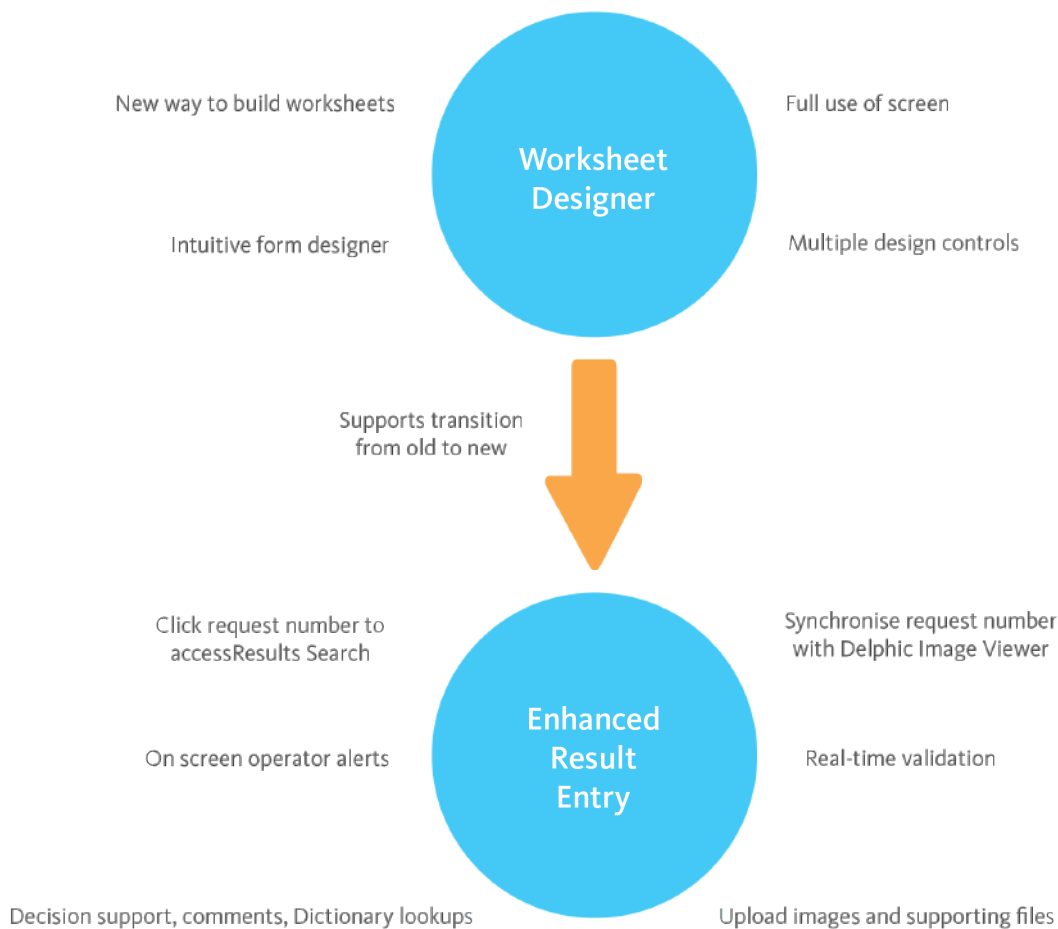
Enhanced Result Entry

The new Worksheet Designer module enables Delphic laboratory users to build worksheets with a range of enhanced result entry features. The development completed in Delphic V10 also provides the ideal platform for further advancements to result entry in future releases.

Key features

- Display of real-time validation of fields and rules to the user
- Presentation of on-screen operator alerts
- Ability to upload images and supporting files
- Decision support through dynamic access to relevant dictionaries, including Comments, Test, Specimen, User, SNOMED and Bethesda
- Guided workflow for results release with new action buttons: save as draft; send for review; review and release
- Easy access to Results Search from request
- Synchronised display of request form images

Benefits

- Modern, intuitive user experience for capturing and managing results
- Provides guided, templated result entry with decision support
- Offers the potential to extend capabilities for further lab result entry needs

New way to build worksheets

Full use of screen

Worksheet Designer

Intuitive form designer

Multiple design controls

Supports transition from old to new

Click request number to accessResults Search

Synchronise request number with Delphic Image Viewer

Enhanced Result Entry

On screen operator alerts

Real-time validation

Decision support, comments, Dictionary lookups

Upload images and supporting files

Decryptic Monitor

Laboratories have multiple instrument interfaces that are essential to the management of communications and transfer of test requests between analysers and Delphic.
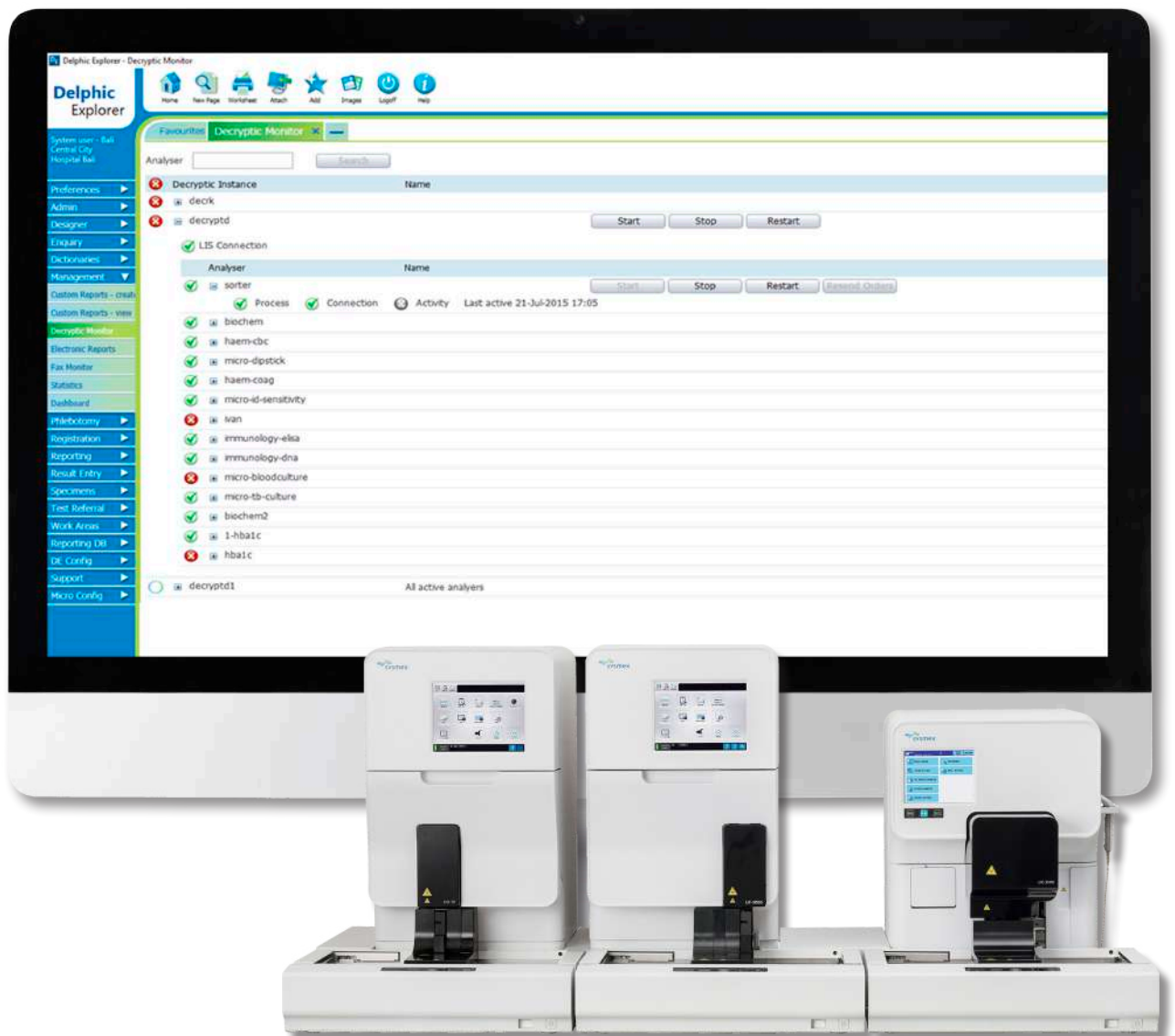
Delphic V10 includes the new Decryptic Monitor module which has been developed to improve the way interfaces are monitored and managed from within Delphic Explorer. This means users no longer require specialised training and detailed technical knowledge to monitor and restart interfaces.

Key features

- Intuitive administration of interfaces; all Decryptic processes, connectivity, and activity levels are checked
- Display of visual icons to indicate the status of instances and interfaces
- Functions to stop and restart interfaces as needed
- Ability to customise names of the Decryptic instance making it easier to identify connected instruments
- Proactive notifications for administrators when analyser inactivity is outside normal parameters

Benefits

- Provides improved transparency of essential information on interface connectivity, keeping all users better informed
- Reduces the need for specialised training or calls to support
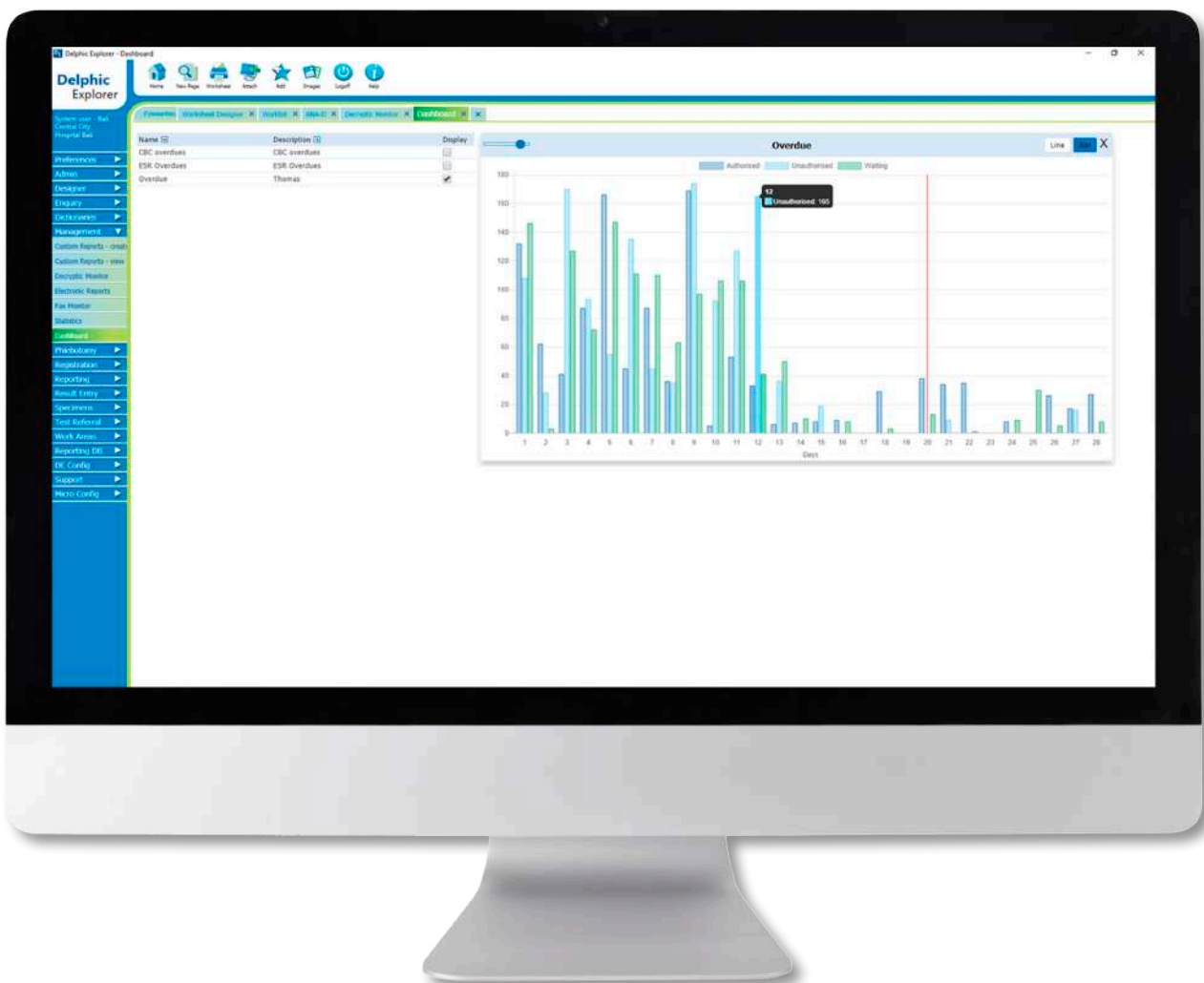- Minimises downtime and helps maintain service level agreements

Custom Reports | Dashboards

The Custom Reports module provides the ability to perform parameterised database queries to extract and review data and statistics relevant to the LIS and laboratory business management.

In Delphic V10, users with appropriate permissions can now select to view the data in a visual, graphical presentation within Delphic Explorer.

Sysmex has introduced this new feature to gather feedback from laboratories on how best to utilise the Dashboard functionality and where to direct development of the module in future releases of Delphic. Ideas for future development include providing the ability for users to choose the Dashboard view they would like to display on their homepage in Delphic Explorer or on a prominent monitor in the laboratory.

User Documentation

In Delphic V10, user documentation has been divided into a library of module specific User Guides. These can be launched from the relevant area within Delphic Explorer providing content in context. This provides more specific help, making it much faster to find the information you need for the task being worked on. For example, if working in the Doctor Dictionary in Delphic V10, when a user clicks Help, the new Doctor and Locations Dictionary will launch. Previously the entire Dictionaries manual was displayed and the user had to search for the appropriate section within the document. The library of new User Guides is also available via Help in the Delphic Explorer navigator.

Delphic Explorer User Interface

Delphic Explorer, the user interface for Delphic V10 and replacement for DOTW and Latte, has been further developed in this latest release. Delphic Explorer, sometimes known as DE, provides all user functionality for everyday lab workflow including seamless access to other modules of the LIS, such as Delphic AP and Delphic Micro. Delphic Explorer also includes a number of management, administration and configuration functions.

There has been excellent feedback from customer sites using Delphic Explorer. Originally it was designed as a "portal" to bring together many parts of Delphic, and because of this some areas of the product may still appear hybrid, bringing together legacy and new. The ongoing modernisation of the LIS in V10 reduces this significantly, especially with the development introduced through Dictionaries, Worksheet Designer and new Result Entry worksheets. However, until all format type pages and modules are completely replaced in future releases of Delphic, there remains some hybrid areas within Delphic Explorer.

Key features

- New shortcut keys
- Ability to customise favourites
- Ability to recall screen size between sessions
- New Worksheet print icon which replaces old formats
- Support of local Windows printer for Designer worksheets
- Standardised naming conventions for Result Entry action buttons

Benefits

- Improves the user experience making it more intuitive and logical
- Provides a single user interface for multiple applications
- Simplifies deployment and configuration
- Facilitates support and implementation of a multilab system
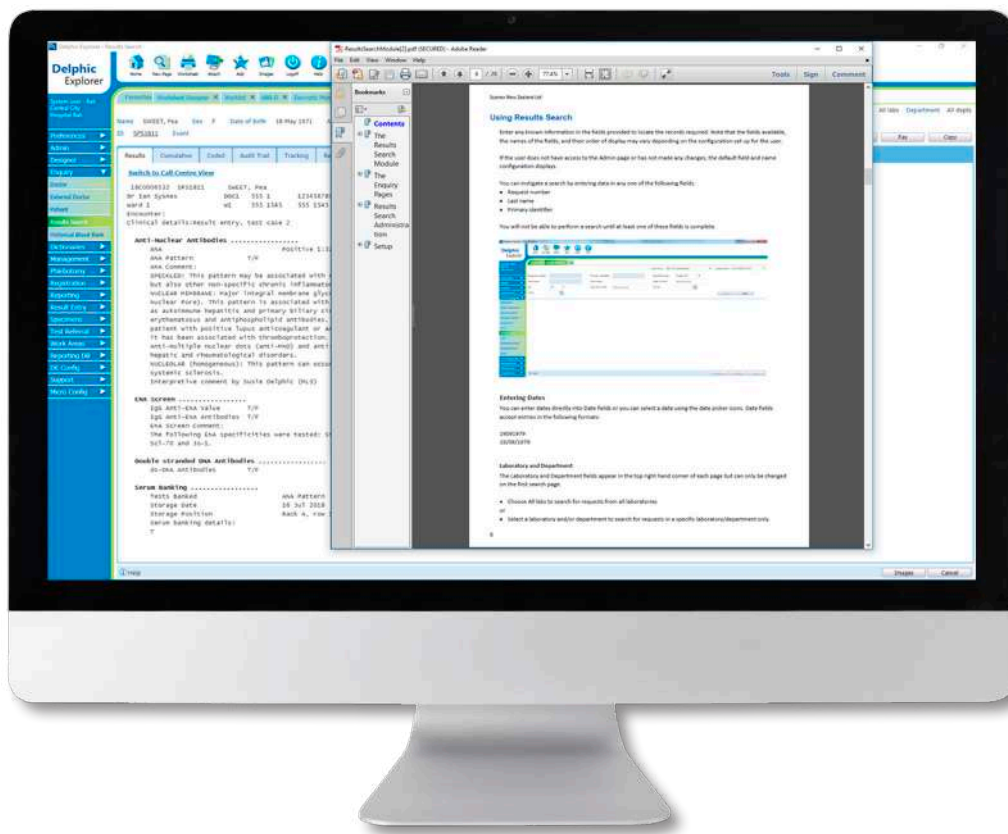
Delphic Dictionaries

Delphic Dictionaries enable flexibility to configure and maintain the LIS application and to store the information that defines and describes your system. In Delphic V10, a number of dictionaries have been redeveloped to provide a more modern and intuitive user experience.

Key features

- Ability to open multiple dictionary tabs in parallel
- Test and Testlist dictionaries now separate, making it easier to configure tests
- Dedicated menu item providing users with appropriate access level easy access to all dictionaries
- Enhanced user interface for a subset of dictionaries

Benefits

- Easier to work on relevant configuration side by side
- Enhances response time and performance
- Improves the user experience

Results Search

The hub of Delphic, Results Search provides a central enquiry module where lab staff can respond to requests for test results, test amendments, faxed reports and reports to be sent to additional doctors. This module has evolved to become a one-stop shop for a number of core functions replacing old format based programs.

Key features

- Ability for sites to effortlessly configure their own search form preference using a drag and drop form designer
- Configuration setting that determines the maximum number of requests to return and display in a search
- Ability to sort display order via column headings
- Check box functionality so users can select and readily navigate between multiple requests
- Functionality to easily select requests and send multiple faxes and report copies
- New tracking tab that shows details of when a request has been dispatched via the Test Referrals module
- New search field so users can filter by department
- Simplified management of user access (trancodes) making it easier to allocate access to the different tab views in Results Search
- New Uploaded Files tab that displays any documents that have been uploaded via a result entry worksheet or PDF results reported from Delphic AP

Benefits

- Provides fast, accurate searching across all records in the LIS
- Allows users to perform multiple reporting and request update functions in a single module without having to navigate to a separate page
- Replaces old formats and is continually bringing in functionality that was previously managed elsewhere, delivering an intuitive, centralised user experience

Quality Management Initiatives

Delphic V10 encompasses a number of initiatives that improve the quality of the software, management of the system and continued support of your LIS.

System Parameters

Delphic LIS system configuration options have been restructured and the compile time options replaced by run time options. Benefits include:

- Single set of COBOL components is generated per version of the product which can be issued to any customer
- Sysmex can maintain one COBOL environment for all customers
- Quality management issues such as configuration management and change control are reduced as the same version of the product is issued to each customer
- System parameters can be viewed and updated via the Delphic Explorer user interface

Differentiating Test and Production Data

This enhancement enables the operational mode (Test or Production) of the Delphic LIS to be included as a flag in HL7 messages sent from the Delphic LIS to external receiving systems. If configured in Delphic and the receiving system, this ensures that testing and production data are kept separate and that data from one environment is not loaded into the mismatching system.

Portfolio Management

The LIS is now being managed as a complete portfolio rather than as individual modules (such as Delphic Explorer and Delphic Microbiology) with a single release identification. This ensures a tightly integrated release mechanism for improved quality control.

Support and Troubleshooting

Delphic V10 includes the ability to set real-time diagnostics on certain programs. This can be initiated at the user interface by Sysmex staff and reduces the response times when investigating support issues.

A secure enquiry feature allows Sysmex and customers' support staff to access or provide details of a patient request while maintaining patient confidentiality.

Internal Communication

The internal communication between the web and core application servers has been updated with enhanced response times for transferring and processing messages between the Core LIS and Delphic Explorer.

Multilab Capability Enhancements

Delphic is highly regarded for its advanced multilab capabilities enabling multiple laboratories to operate a single instance of the Delphic LIS. Sites that use Delphic as a multilab system will benefit from the following enhancements.

Efficiencies in Data Handling and Risk Mitigation

- Load balancing incoming ADT transactions and registrations
- Change to running overdue reports to remove potential for conflicts
- Simplified generation of fax files

Transfer of Work to Central/Hub Labs

- Minor enhancements made in Test Referrals module for transfers between labs on the same Delphic LIS

Automation Enhancements

- Load balancing workload through automation lines
- Local customisations introduced to support automation lines in core labs

Streamlining Lab Workflows

Delphic V10 brings further enhancements to HL7 messaging and communication between laboratories, specialist systems and clinical systems to continually support and improve electronic workflows for order requests and results.

New HL7 Messaging Features

- Receipt of orders from Eclair, other hospital information systems or patient management systems
- Receipt of eOrder Test Adds from Eclair
- Specimen acknowledgement and updates in initiating analysis and report delivery
- Direct HL7 results through preferred report mode to CDR
- Generating order and cancellation messages in Delphic to send to specialist LIS systems
- Receipt of HL7 result and cancellation messages

New Development for HL7 Interface Support

- Receipt or output of additional data items, or support a different format for existing options
- Dictionary configuration updates to define parameters for decision support rules so more transparent for setup and support
- Extraction of data from messages for enquiry or reporting

HL7 Order Receipt

With the increase of lab to lab and clinician to lab orders, Delphic V10 development includes new pages to acknowledge the receipt of HL7 orders.
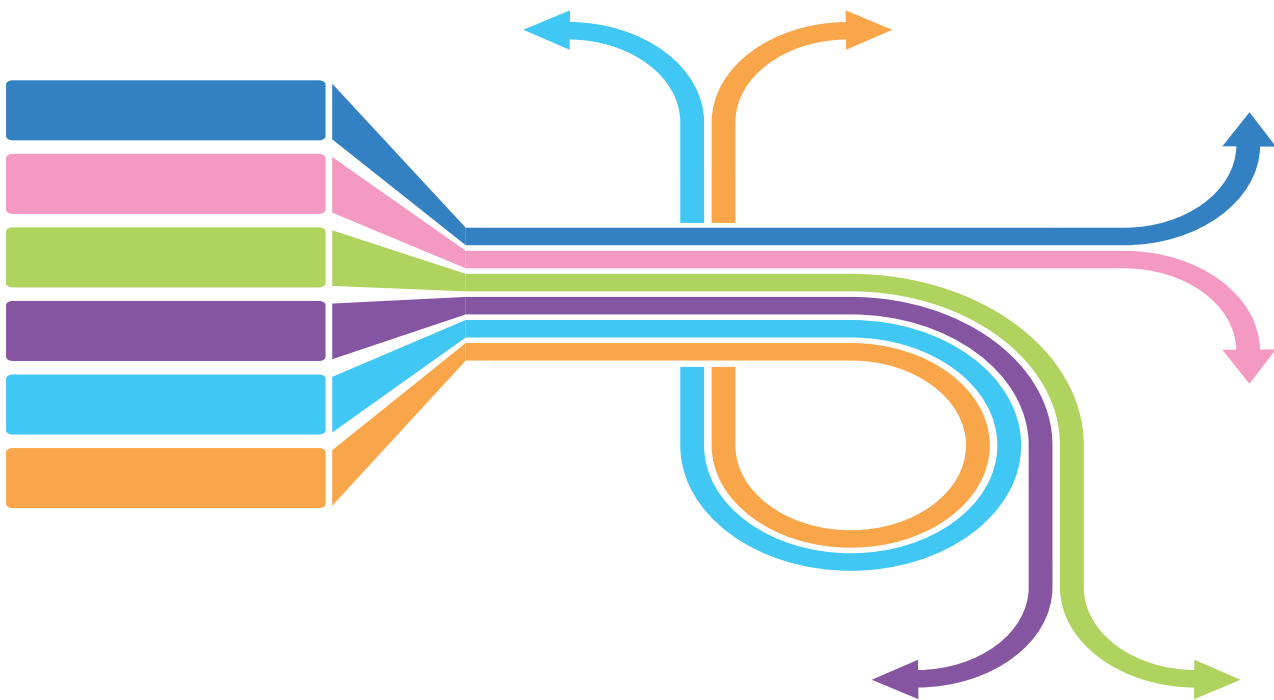
The Acknowledgement module available in Delphic Explorer is specific to individual site requirements.

Specialist System Interfaces

Three new interfaces enable HL7 integration between Delphic LIS and other specialist LIS systems. The interface communications:

- Create an HL7 order message when tests are registered in the Delphic LIS and receive an acknowledgement
- Receive an accession or processing notification from the specialist system
- Receive HL7 ORU messages for results
- Create an HL7 ADT transaction when key updates to patient demographic data are made in the LIS

The message content for each interface is customisable within the Delphic LIS.

Delphic Micro

New features in Delphic Micro have been implemented in response to the most popular items logged in the product forum as well as essential development to improve signout. One major achievement has been the development and successful implementation of the Kiestra automation interface to Delphic Micro. This highlights the capabilities of the LIS to tightly integrate with specialist systems enabling laboratories to move forward with their automation strategies.

Results Management

Delphic Micro includes a new alert for invalid results. When activated a new icon is highlighted in the navigator notifying users of results that have failed validation and should not be released/reported until verified. These results can now be immediately identified and quickly corrected within Delphic Micro. A new On Hold option provides an adhoc means to hold back some results on the non-culture result entry screen while allowing the others to be reported.

Signout

To improve communication processes and provide better performance for the signout step, Delphic Micro now provides a configuration option to define the workflow for the release and signout of results.

Enquiry

Specimen code details are now included when displaying requests in enquiry lists, providing users with more granular detail about the request.

Delphic Micro users can hover over the user's name to view the attached laboratory, department and label printer. It is also possible to 'click through' to change the printer if needed.

Receipt Attach Lab Only

Delphic Micro now provides the ability to only display work for the attached lab. This eliminates the complicated workflow previously necessary to avoid receipting specimens for another lab, or items which are still in transit between labs. This new feature saves Delphic Micro staff time during specimen receipt.

Improvements to Worklists

Worklists can now be sorted by column heading. The total number of outstanding specimens can be displayed for each category in a worklist. This number refreshes as requests are added/ completed.

A new menu configuration option lets you activate the totals button in worklists. When enabled, the Totals button displays the worklist data with a tally of the requests currently included in each worklist.

Kiestra Automation and Screen Synchronisation Interface

Delphic Micro is now able to support the complex interface to the Kiestra lab automation system including full support for screen synchronisation between Delphic Micro and digital plate images in Kiestra.

Historic Programs and Formats

The Delphic V10 release removes historic programs, interfaces and legacy configuration including interfaces from bespoke hospital information systems and the Blood Bank module (with the exception of the enquiry functions). This has resulted in the de-implementation of 35 – 40 programs, plus access codes and formats, reducing unnecessary overhead on the system. For customers who have legacy Delphic Blood Bank data available, a new Historical Blood Bank navigator option in Delphic Explorer provides access to this.

New TCP Macros

A number of new TCP Macros are available, making it faster to configure common functions.

Delphic Cobol Integration

Delphic LIS architecture comprises a number of components which include COBOL for many of the business logic programs.

Previously the Delphic LIS relied solely on the Micro Focus product for integration of COBOL programs in the LIS application. With Delphic LIS V10 we are using the new NetCOBOL product.

This new tool has been developed to provide downstream benefits for your LIS system management, improving the the standardisation for shipping and distribution of Delphic software code.

Telemetry

Delphic V10 includes Telemetry functionality which can be turned on at a system or workstation level by LIS administrators with the appropriate access rights. Telemetry is automated remote measurement and data collection and is used to monitor the health of the system and user activity in Delphic Explorer.

Benefits

- Enhances the LIS audit trail
- Provides analytics on LIS usage
- Supports easier troubleshooting for multi-screen workflow issues
- Captures response time data
- Captures information on LIS modules and formats that are not being used

Auditing

Enhancements to Delphic include the ability to store more information and present better detail via the system logs.

Benefits

- Monitors incoming transactions for orders and ADT messages
- Provides more details of errors on receipt of orders to assist in troubleshooting
- Maintains an audit of users viewing images through the Delphic Image Viewer

Delphic is an innovative system used by leading laboratories, backed by a highly experienced team of LIS developers and application specialists at Sysmex. Delphic aims to improve the quality and cost-efficiency of patient care by optimising the operation of clinical laboratories and maximising productivity.

Delphic is not a medical device as it does not have a therapeutic purpose.