

GLIMS 9

The perfect match for Total Lab Automation

Flexible GLIMS LIS supports all logistic sample processes
in the automated laboratory



GLIMS 9

To enhance their ability to work more efficiently, laboratories are seeking ways to cooperate more closely, and even merge. This universal movement is opening up new opportunities, including laboratory investments in robotics and automation.

CliniSys | MIPS helps you to ride the wave of this evolution. If your laboratory is opting for Total Lab Automation (TLA), GLIMS version 9 ensures seamless control – for whatever type of TLA system you choose.



Innovating the automated laboratory

Medical laboratories – both clinical chemistry and medical microbiology labs – are increasingly adopting TLA systems. These generally consist of a track connected to equipment such as distributors and analysers, inoculation machines and incubators. Today, there are a range of TLA systems offered by various suppliers, running different operating systems (middleware).

GLIMS 9 and your TLA: a matched set

GLIMS has a long-term reputation amongst our customers for unrivalled flexibility and functionality. An ERP system, it helps ensure that track-and-trace information is always up to date – a powerful advantage. Every physical sample is, and remains, unique and identifiable in GLIMS. Only in this way can the correct handling of samples in a subsystem or on a track be assured.

Depending on the TLA system you select, the requirements for communication with your LIS will vary. But with GLIMS, this creates no difficulties: it seamlessly supports different communication concepts.

Slave-master concept

The TLA's operating system (middleware) controls the track and the connected equipment. Orders from GLIMS are sent to the middleware, without any additional routing information. When results are available, they are transmitted to GLIMS by the middleware.

This concept requires a relatively simple GLIMS configuration, with the parameters for the physical processing of samples defined in the middleware environment.

Master-slave concept

All of the information needed by each distributor is defined in GLIMS, which transmits orders, including the defined routing information, to it. When the results are available, they are sent directly to GLIMS from the analyser that performed the test.

This concept can be used when a distributor, acting as a component of the system, can work without its own operating software. With this concept, the GLIMS configuration will be relatively more complex.

However, this is not a very common concept for a completely new TLA system with its own operating system.

Hybrid master-slave concept

The TLA system aims to combine the best of both worlds: maximum GLIMS functionality and capabilities, supplemented by specific middleware functionality for control of the track.

How it works

GLIMS 9 and your TLA system support all logistic processes for the sample, regardless of the communication concept used. Everything is automated, no matter how complex: from the sample's arrival in the lab to the provision of the test results. No manual interventions at all are involved.

- Samples are directly delivered to the track, without manual pre-processing. Even the hospital's pneumatic tube system can be connected to the track. When they arrive in the lab, the samples are automatically unloaded and deposited on the track.
- Next, the track system carries out a series of controls using cameras: Is the tube cap the right colour? Is the tube type correct? Based on the information provided by GLIMS 9, the connected distributor will perform the correct pre-analytic actions, before the sample is transferred to the analyser.
- Via the middleware, GLIMS 9 provides information regarding the creation of subsamples. Unique IDs are assigned to these subsamples.
- Based on the test results, GLIMS 9 transmits a message to the middleware, so that the system knows whether a sample can be automatically archived or must start along a new route.

Avoid errors, save lives

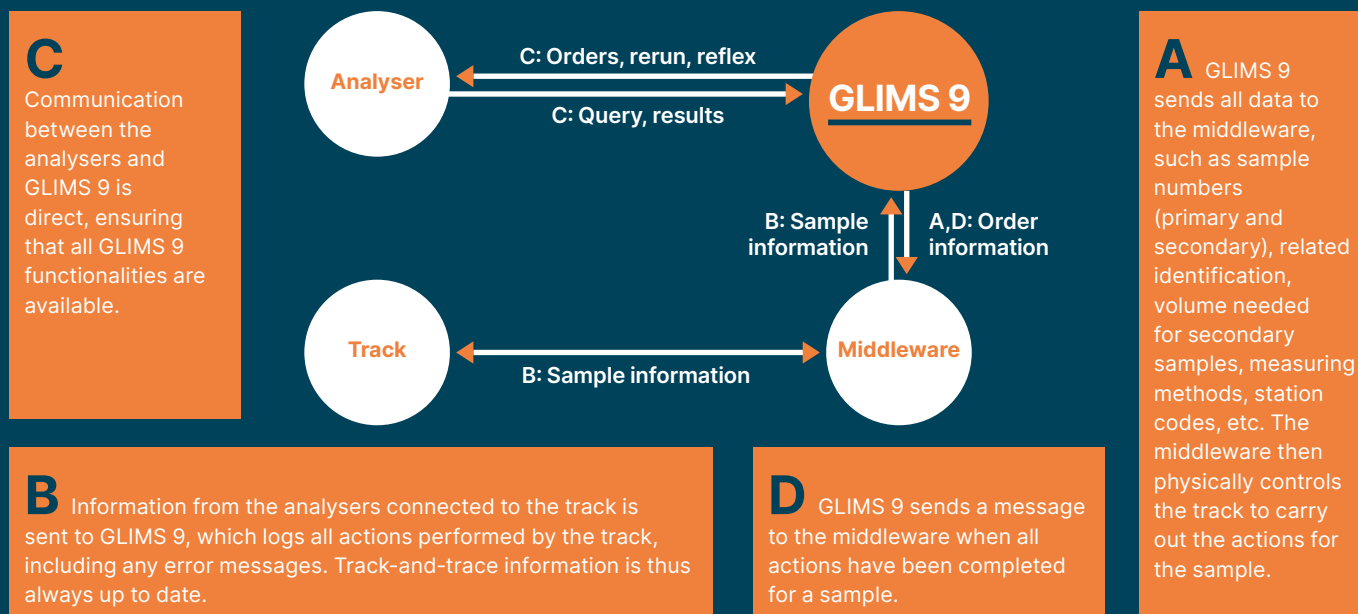
Most errors in the laboratory occur during manual sample preparation, and can also quickly arise during subsequent processes. A TLA system can avoid these types of errors.

- The system detects any samples that have been taken incorrectly, and checks whether there is enough sample material for testing.
- Labels are always attached to the correct tube.
- Samples cannot get lost or mixed up.
- The system senses whether there is residual sample material, avoiding unnecessary additional blood samples from patients.
- You can define the archiving time for each material code. When an add-on test needs to be performed, only the samples with guaranteed quality of the sample material are automatically sent to the analysers.
- If a temperature-dependent add-on test is needed for an archived sample, the sample is automatically transported first to the buffer for warming, before being conveyed to the analyser.
- Should a QC result exceed the predefined limit, the sample will automatically be sent to an alternate destination, or will be held until the 'unreliable' measuring channel has been re-released.

Advantages of a well-integrated TLA with GLIMS 9

- ✓ Your laboratory can work more efficiently.
- ✓ Your results are available more quickly. The FIFO-principle (first-in, first-out) ensures a short and guaranteed turn-around time, while urgent orders are prioritised.
- ✓ You always have access to all the information you need in GLIMS 9.
- ✓ You can avoid errors and enhance the quality of the laboratory exams.
- ✓ You have guaranteed track-and-trace for both primary and secondary samples, whether on-track or off-track.
- ✓ You need no additional middleware.

How the hybrid master-slave concept works:



This hybrid concept lets you get the most from your GLIMS system and your TLA system. Configuration settings are defined where they belong, and set-up redundancy is avoided.

Smooth transition with CliniSys | MIPS

Transitioning to TLA can be a disruptive event for a laboratory. You have to (re)build and organise the laboratory completely from scratch, usually with new equipment. You may also need to re-install or upgrade your LIS.

MIPS is an experienced partner who supports you in all phases of your project:

- CliniSys | MIPS has extensive experience with the various communication concepts – Master-Slave, Slave-Master and Hybrid Master-Slave. Working closely with your lab team, skilful CliniSys | MIPS consultants perform a thorough preliminary analysis and make a design for the GLIMS 9 set-up, tailored to your lab's needs.
- The CliniSys | MIPS project manager and project engineer support your organisation and your GLIMS application managers to configure the system.
- CliniSys | MIPS provides training and onsite support to resolve problems.

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