CliniSys MIPS

Release notes - Version 9.6.0

GLIMS

Content

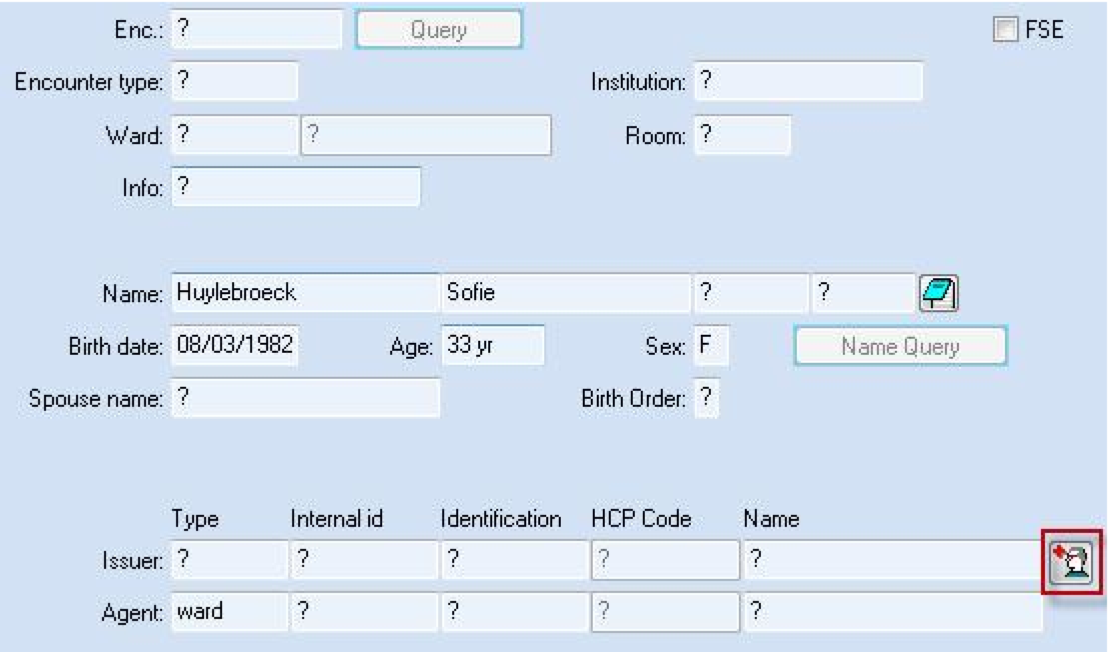
Version 9.6.0

Order entry

Issuer info not displayed in order entry (GLIMS-07134)

When the **Issuer info** of a **Correspondent** is filled in, it will be displayed when entering an order where this correspondent is the issuer.

However, an issue was reported were the **Issuer info** was not immediately displayed when selecting the issuer via the **Family doctor** button (displayed in **Order Entry** when a **Person** has a **Family doctor**). This has been corrected.



About sampling times, object times and references times (GLIMS-07473)

Background information

An issue was reported with the synchronization of sampling times, object times and reference times. This modification solves the reported issue and clarifies the definition and usage of the different times.

Definitions

Requested code - Reference time

The time at which a request was entered.

By default, this is the current time. However, this can be manually changed in the order entry screen.

Note

When requesting a paired specimen, the reference time of its requested code will be the time at which it was requested in this order (and not in the initial order in which it was requested for the first time).

Order - Lowest object time

The lowest of all references times of all requested codes in the order.

Specimen - Sampling time

Time at which the specimen was sampled from the patient.

- As long as the specimen is not sampled (not yet in status Available), this is the target sampling time.
- If the specimen option **Sampled** is enabled, it means the effective sampling time.

Specimen - Sampled

If set, the specimen is effectively sampled from the patient.

Specimen - Availability time

Time at which the specimen was registered in the lab.

Result - Reference time

Identical to the reference time of the requested code linked to the result.

Result - Object time

Is the result's reference time + discriminator.

Examples

A result reference time of 25/03/2016 15:00 with relative discriminator +01:00 will have a result object time of 25/03/2016 16:00.

A result reference time of 25/3/2016 15:00 with absolute time discriminator 18:00 will have a result object time of 25/03/2016 18:00.

Action - Object time

Matches the

- object time of the results that are output of the action.

  or

- sampling time of the specimens that are output of the action.

Changing the object time

Order - Change object time

For all specimens that are directly linked to the order but that are not yet effectively sampled (**Sampled** option is not enabled), the sampling time will be updated.

The time change will be equal to the difference between the old lowest object time and the new lowest object time.

> **Note**
>
> - The object time of the related actions, results, microbiology actions, pathology exams and blood selections will be updated accordingly.
> - The reference time of the requested codes will be updated accordingly.

Sample - Change sampling time

This function will change the sampling time of the selected specimen(s). If the specimen was responsible for setting the order's lowest object time, GLIMS will behave as if the order function **Change object time** is executed.

> **Note**
>
> - The **Cascade** option has been removed. The object time of the related results will always be updated accordingly.

Synchronization

The following GLIMS programs allow to synchronize the sampling time of a specimen:

- Specimen scan with option **Synchronize future object times** or **Synchronize past object time** enabled.
- Synchronization after query by a station.
- Process specimens by number.
- Specimen confirmation (when it is the first specimen in the order)

Reporting

On reports, results are accompanied by the order's lowest object time. If the object time of the result does not match with the order's lowest object time, the time is displayed between parentheses.

> **Examples**
>
> - <Property> (+01:00)
> - <Property> (09:15)

Object time of results of paired specimens (GLIMS-07573)

The object time of a result which is obtained on a paired specimen will no longer be equal to the sampling time of that paired specimen, as this sampling time will lay in the past.

Instead, the object time of a result which is obtained on a paired specimen will now be equal to the reference time of that result. The reference time of the result is set to the reference time of the linked requested code (taking into account the discriminator).

Example:

1. A specimen is sampled on 11/03/2016 - 08:00
2. The specimen is reused (paired specimen) in an order created on 25/03/2016 - 16:00
3. The object time of the results in the new order will now be 25/03/2016 - 16:00 (and no longer 11/03/2016 - 08:00)

Reference time when changing object time of orders with absolute time discriminators (GLIMS-07575)

When changing the object time of an order containing requests with absolute discriminators, it could happen that the reference time was not updated correctly. This has been corrected.

Reschedule actions when specimen becomes available (GLIMS-07582)

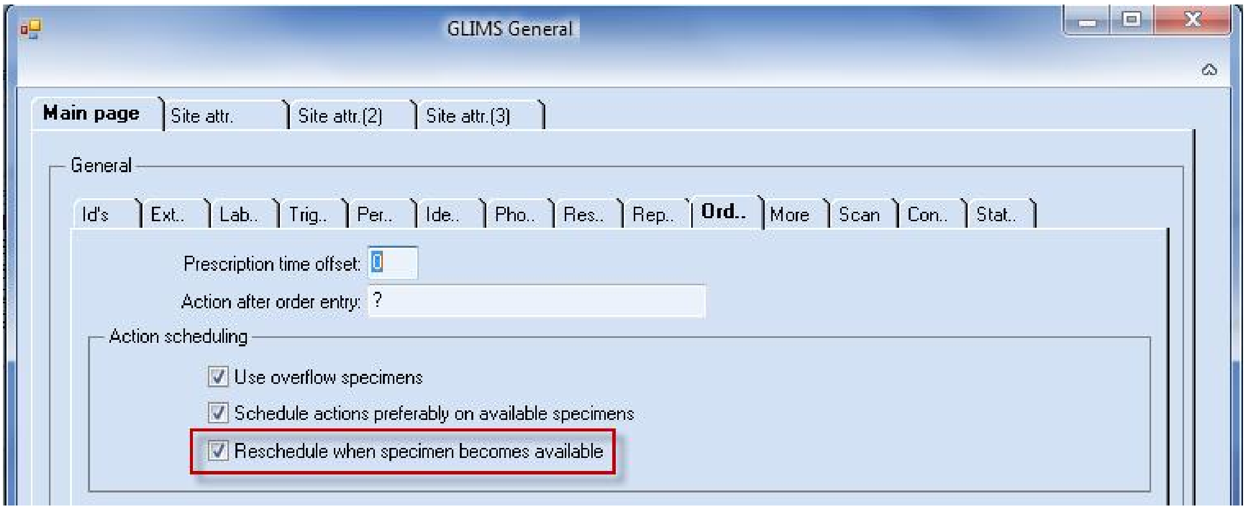
Introduction

During action scheduling, properties which can be measured on different materials are scheduled on their preferred material. However, it can be desirable to have the actions rescheduled as soon as a specimen in the order becomes available (e.g. via the reception scan).

New functionality

Configuration

A new general option **Reschedule when specimen becomes available** can now be found in **Start > System management > Customize > GLIMS General**. By default, the option is disabled.



> **Note**
>
> It is recommended to also enable the general option **Schedule actions preferably on available specimens** as the purpose of rescheduling is to take into account the available specimens.

How does it work

When **Reschedule when specimen becomes available** is enabled and a specimen becomes available in an order with multiple specimens, GLIMS will verify if any rescheduling can be done. If rescheduling makes sense, the existing actions will be "cleaned up" (i.e. actions that have not yet been started or downloaded will be deleted). Subsequently, the action scheduling is again performed.

Conditions for rescheduling

Action rescheduling takes place when there is at least one output result or specimen which can be rescheduled.

A result which is the output of an action can be rescheduled if

- the result status is **Initial** or **Expected**
- the result can be derived from another specimen in the order (if the result can only be derived from the current specimen, then rescheduling does not make sense)
- the result is neither reused nor a duplicate of another result
- the result is not part of a microbiology action (e.g. microscopy result) or pathology exam (the result specimen is the specimen of a pathology exam)
- the property datatype is not **Antibiogram** or **Culture**

A specimen which is the output of an action can be rescheduled if

- the specimen status is **Initial** or **Expected**
- the specimen is not sampled (**Sampled** = NO)
- no label has been generated for the specimen (**Label printed** = NO)
- the specimen is not reused

Rescheduling does NOT take place

- for microbiology and pathology actions.
- when a specimen is set to **Available** by the automatic sample login function.

Conditions for action deletion

Actions will not be deleted if :

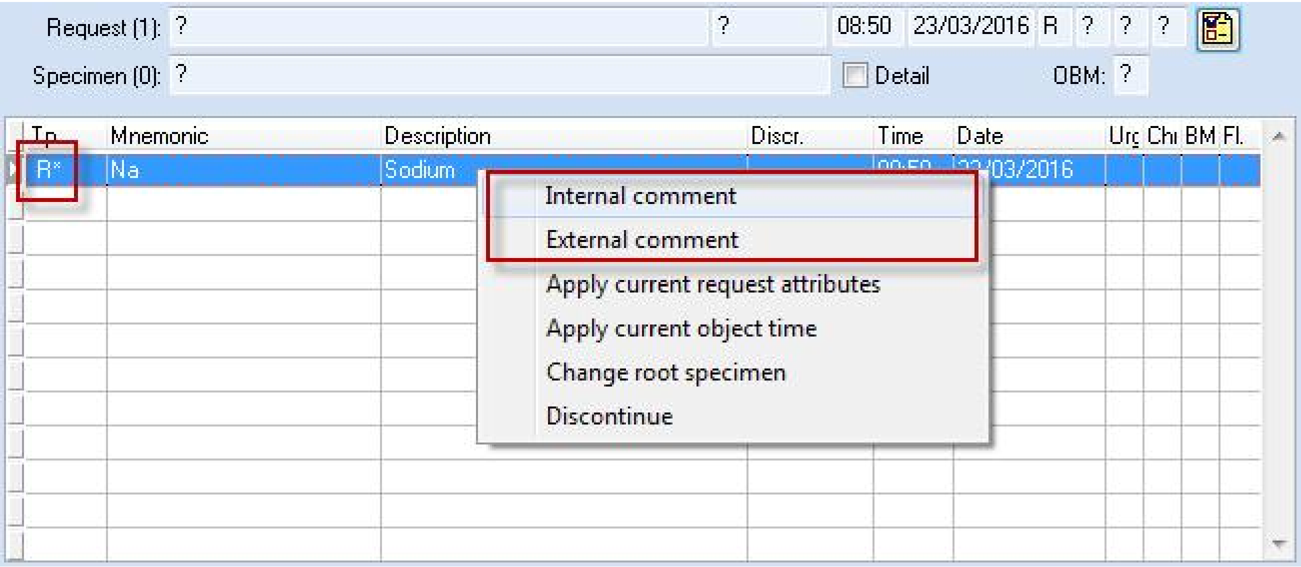
- their **Download status** is set
- their **Status** >= **Partial**
- they occur on a work list

> **Note**

When GLIMS deletes actions, this can result in implicitly requested specimens which are obsolete. These will be deleted after rescheduling if they are not referenced, if no label has been printed yet for the specimen and if the specimen has not yet been sampled. This could result in gaps between the internal IDs of the remaining specimens.

Order entry does not indicate if request has comment (GLIMS-07587)

When an internal or external comment was entered for a request during order entry, the presence of the comment was no longer indicated by means of an '*' in the request browser of the order entry screen. This has been corrected.



Note

Problem occurred since GLIMS 9.3.

Billing mark for request definitions (GLIMS-07684)

During order entry, a billing mark can be specified for the requests.

If no billing mark is specified during order entry, GLIMS will now use the Billing mark specified in the Request definition configuration. This is a new field.

Note: in case of panels, the billing mark specified for the panel request definition takes priority over the billing mark specified for the panel members.

Consistent use of object time in Order entry (GLIMS-07693)

Background information

Prior to GLIMS 9.5.12, when requesting a property with a discriminator, the **Requested on** time was shown in the **Time** column of the request browser in **Order entry**. However, when a panel was requested with a discriminator, the **Requested on** time was shown for the panel, whereas the calculated object time (**Requested on** time + discriminator) was shown for the panel members.

Current behaviour

As of now:

- When a property is requested,
    - without discriminator: the **Time** column in the request browser will indicate the **Requested on** time
    - with discriminator: the **Time** column in the request browser will indicate the calculated object time (**Requested on** time + discriminator)
- When a panel is requested with discriminator, the **Time** column in the request browser will be empty. For the panel members, the **Time** column will indicate the calculated object time (**Requested on** time + discriminator)

> **Note**
>
> For pending orders, the **Date** and **Time** columns in **Order entry** will be empty.

Example

Tp	Mnemonic	Description	Discr.	Time	Date
Pan	TDUpan1	TDUpan1	+00:30	?	
R	- TDUprop1	TDUprop1	+00:30	15:17	29/04/20
R	- TDUprop2	TDUprop2	+00:30	15:17	29/04/20
M	- TDU_MicProc	TDU_MicProc	+00:30	15:17	29/04/20
R	Na	Sodium	+00:30	15:17	29/04/20
R	Na	Sodium		14:47	29/04/20

Issue with isolation tests during electronic order entry (GLIMS_RI-00149)

In case of electronic order entry, isolation test information was not always correctly processed.

This has been corrected.

EOS

Panel expansion for pending orders only on order activation (GLIMS_EOS-00181)

Past functionality

Since the introduction of Requested codes, panel expansion in case of pending orders is delayed until order activation. However, the option **Immediately expand panels on order creation** was available in order to immediately expand panels on pending order creation.

Present functionality

As this option was rarely used, it has been removed. Panel expansion will now only occur when the pending order is activated.

Conversion procedure

The conversion procedure will run through all pending orders. For each pending order, the existence will be checked of requests without an "instance":

- Requests of type **Result** not linked to a result.
- Requests of type **Specimen** not linked to a specimen.
- Requests of type **Blood** not linked to a blood selection.
- Requests of type **Microbiology** not linked to a microbiology action.
- Requests of type **Pathology** not linked to a pathology exam.

If such a request is found, the request itself and the following related records will be deleted:

- **Budget charge** records linked to this request.
- **Request charge** records linked to this request.
- If this request is used as an imposed material request in another request, the latter will also be deleted.
- A reference from a **Requested code** to this request will be nullified.

Orders

Recalculate order lowest object time when changing specimen sampling time (GLIMS-07386)

Problem description

The order's lowest object time was not always recalculated when changing a specimen's sampling time.

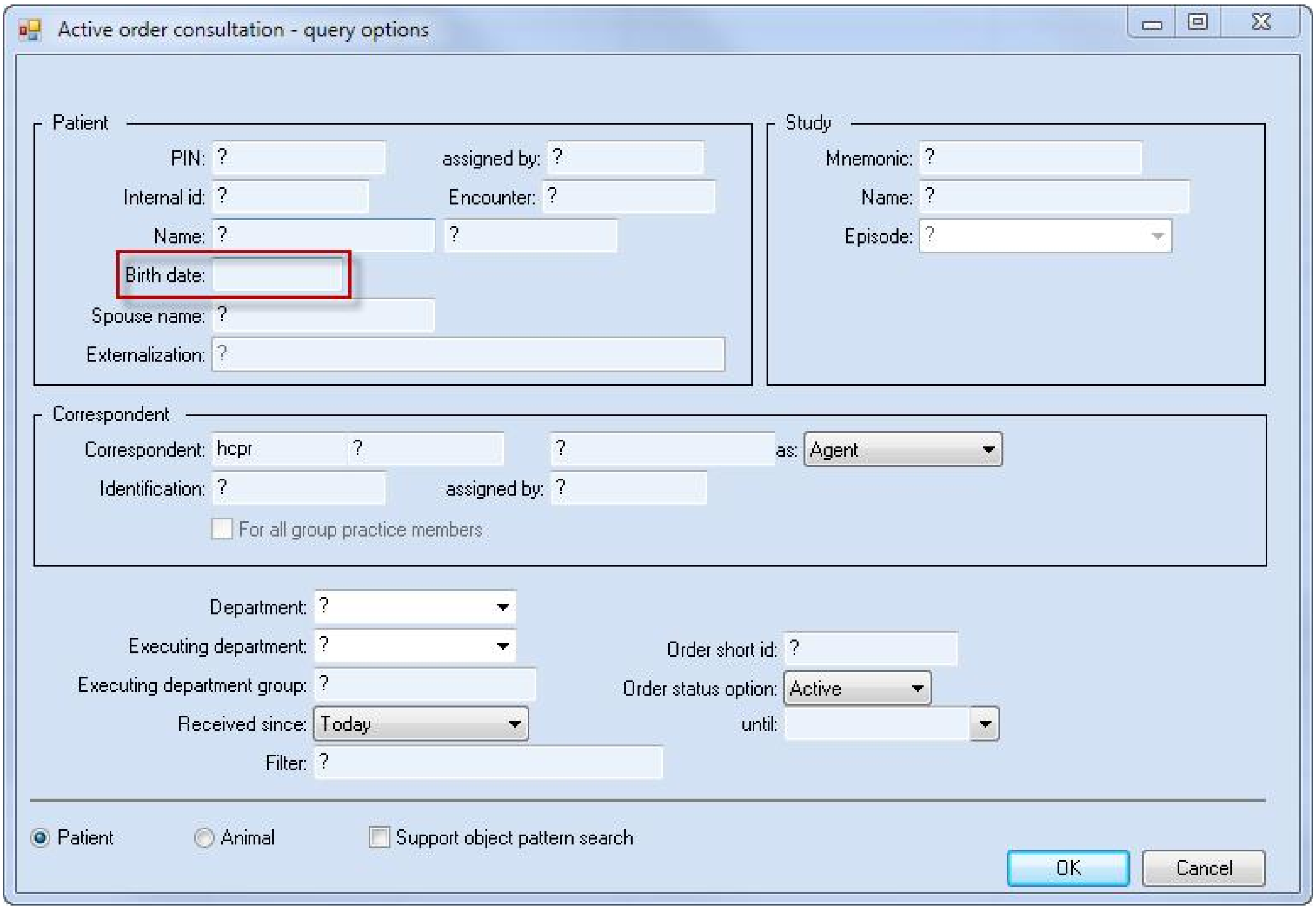
Solution

The order's lowest object time (which should be the lowest sampling time of the order's specimens) is recalculated when changing a specimen's sampling time. However, this does not take place when the specimen is reused in another order. This means that there will be no order lowest object time recalculation when changing the sampling time of a specimen which is used in two or more orders.

The **Cascade** option of the **Change Sampling time** function has been removed. The object time of all related results will now be updated by default. The object time of the actions of the specimen whose sampling time is changed will be modified according to the new sampling time.

Patient selection based on Birth date in Order consultation (GLIMS-07669)

In Order consultation a patient can now also be selected based on its **Birth date**.



Pre-fill patient data in case of order entry from Order consultation browser (MATE-04071)

When using Order consultation to query the orders of a patient (or the orders linked to a study) and using **Insert** in the resulting list of orders to enter a new order for that patient, the patient (or study) is pre-filled in the **Order** editor. This functionality has been restored.

Order review

Conclusion property in Order review (GLIMS-07447)

When validating orders and specifying a conclusion (property) in the **Order review** screen (via the context menu **Requests > Results** or via the main menu **Start > Routine > Orders > Review**), and afterwards sending the report to an external system (e.g. via Lab-Lab communication), the LOINC code for the conclusion property's request was not available. This has been corrected.

> **Note**
>
> Problem occurred since GLIMS 9.3.

Validation

Validation by property domain (GLIMS-07584)

Introduction

GLIMS now allows to validate by property domain. A property domain (or property class) allows grouping properties that belong to a specific domain such as Hematology.

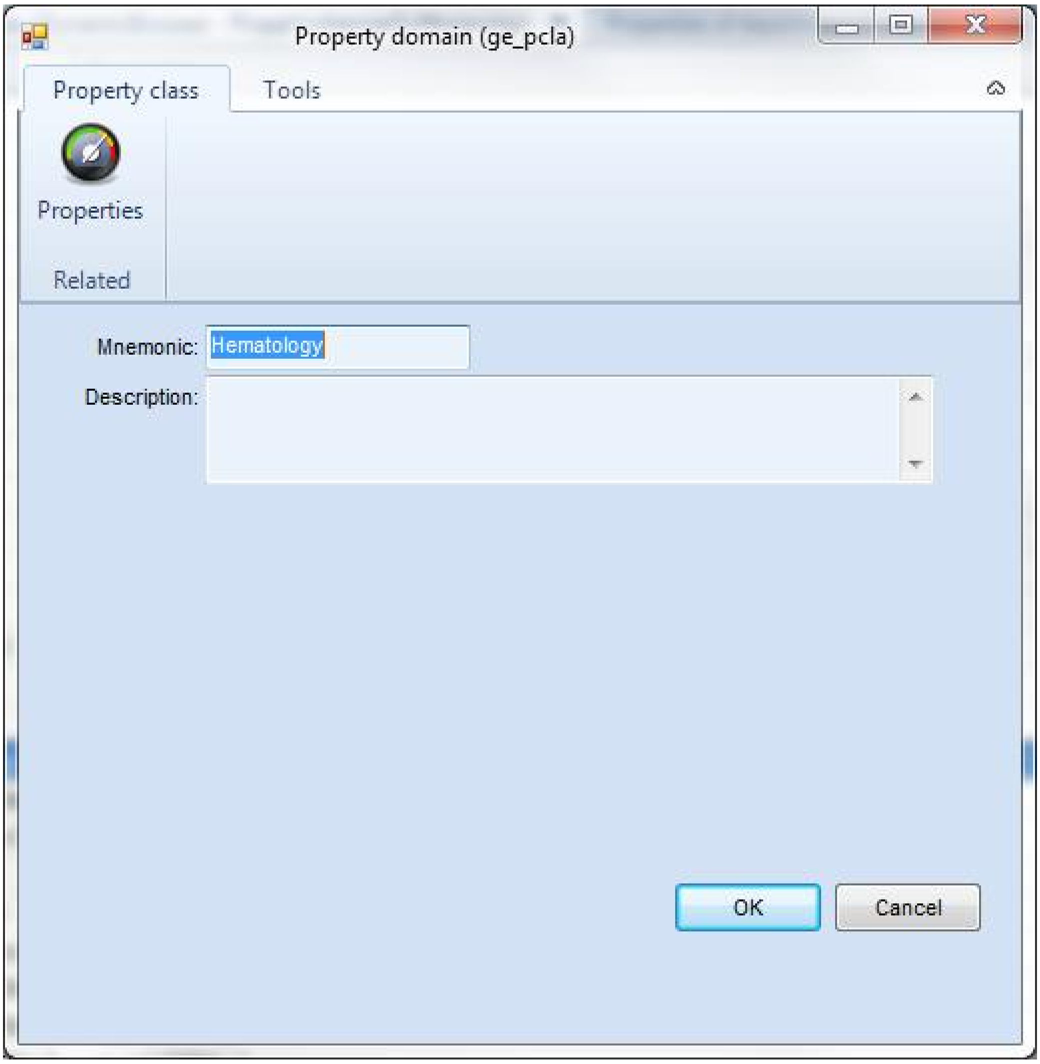
The idea is that a user can only validate results for properties that belong to one or more domains in which he / she is an expert.

Configuration

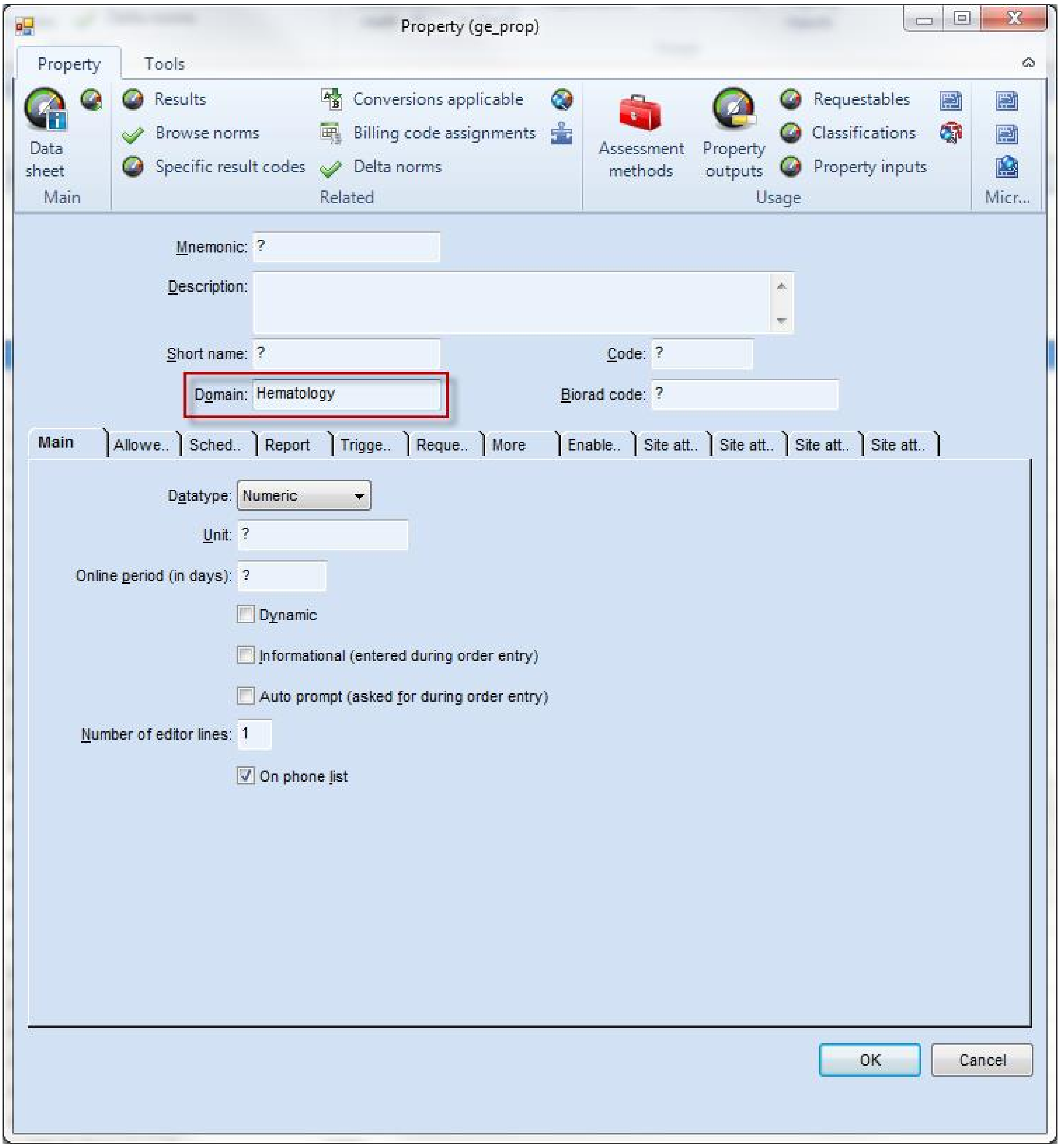
Property domains (or property classes)

First you need to group the properties in **Property domains** (also known as **Property classes** in GLIMS).

1. From the main menu, choose **Start** -> **Configuration** -> **Properties** -> **Property domains**.
2. Use the **Insert** key to define a new **Property domain** and specify a **Mnemonic**.



3. For each **Property**, you can specify the **Domain** to which it belongs.

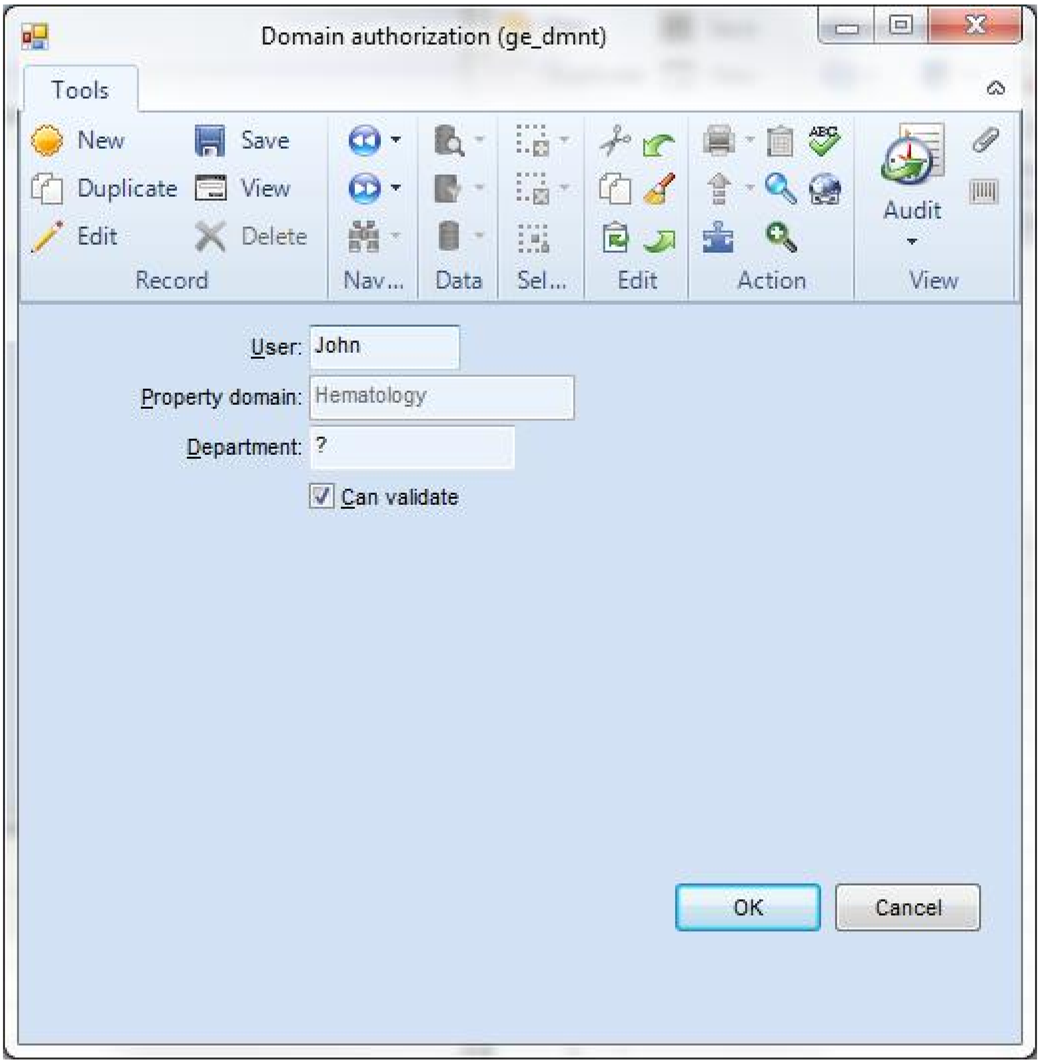


Assign property domains to a user

By assigning a user to a property domain, you can define who has expertise in a specific domain.

There are several ways to assign a user to a property domain:

1. Select a **Property domain** and choose the contextual menu / ribbon item **Domain authorizations**.
2. Select a **User** and choose the contextual menu / ribbon item **Domain authorizations**.
3. From the main menu, choose **Start** -> **System management** -> **Security** -> **Domain authorizations**.



User

User that has expertise in the property domain.

Property domain

Property domain in which the user has expertise.

Department

The department to which the domain authorization applies.

> **Example**
>
> Assume there are 2 departments that execute hematology tests. This option allows to indicate that the user only has domain authorization for hematology tests in a specific department.
>
> GLIMS will check if the **Executing department** of a result matches the department of the **Domain authorization**.

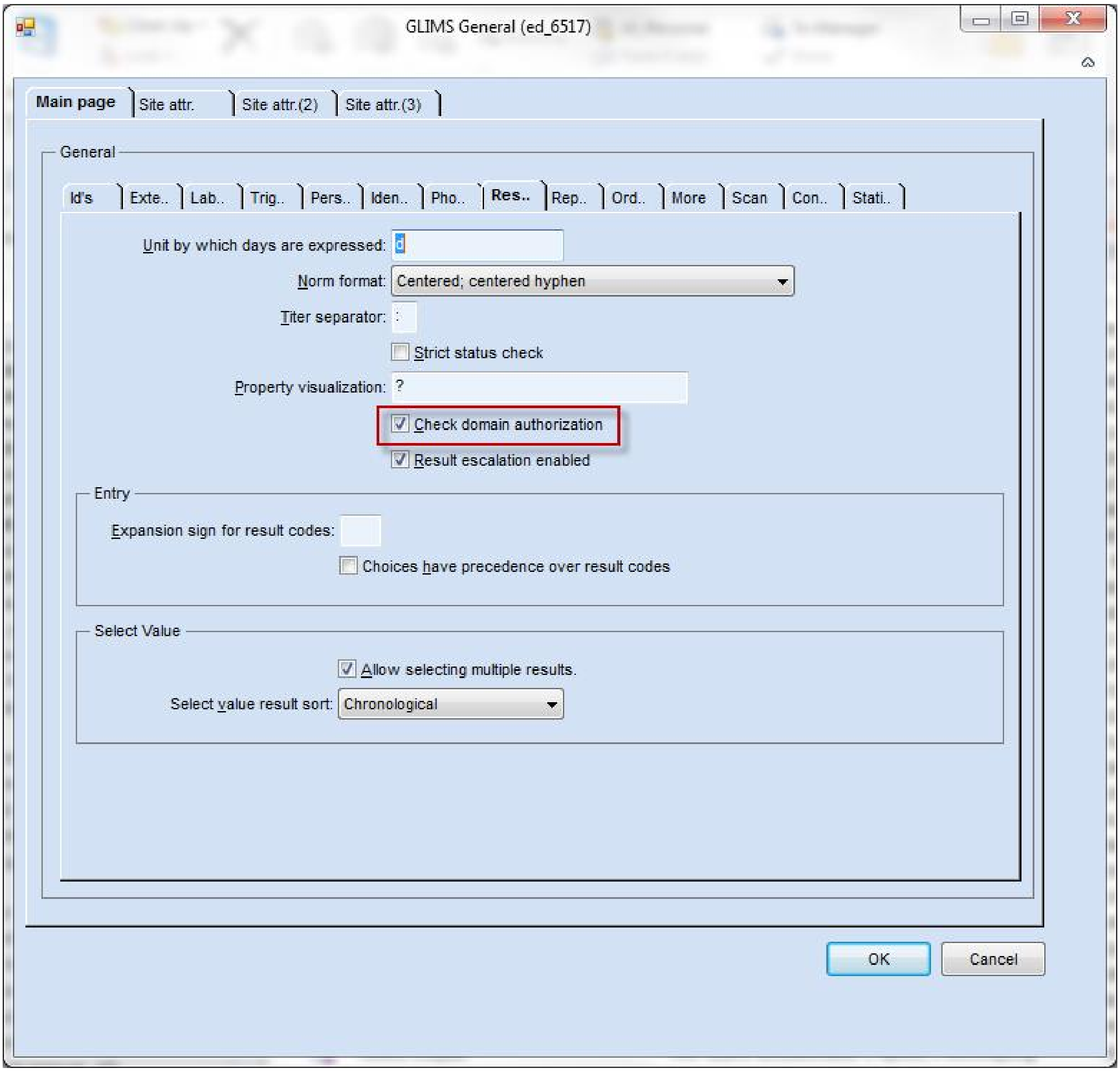
Can validate

If enabled, the user will be authorized to validate results for properties that belong to the specified property domain.

Activate the domain authorization

To actually use property domains as a filter during validation, you must enable the option **Check domain authorization** in the general settings.

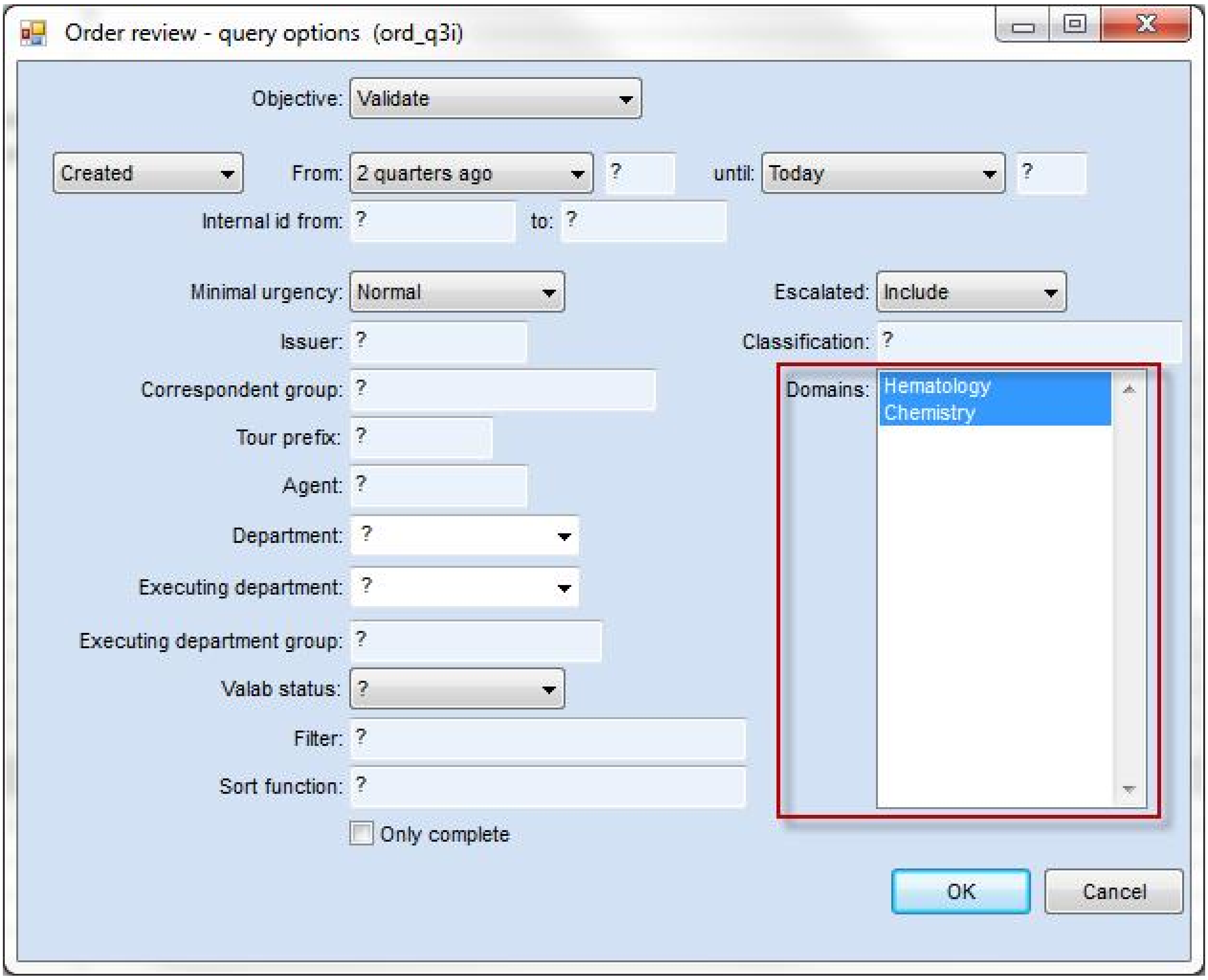
1. From the main menu, choose **Start** -> **System management** -> **Customize** -> **GLIMS General**.
2. In the Results tab page, enable the option **Check domain authorization.**



Order review

Order review - query screen

If the above configuration is in place, you can select one more domains in the query options of the order review screen.



Domains that are available for selection

"Objective" is set to "Validate" or "Confirm + Validate"

The list will contain all property domains that are assigned to the user and for which the option **Can validate** is enabled.

> **Note**
>
> The **Department** specified in the **Domain authorization** is not a criterion in the selection of which property domains should be available for selection.

"Objective" is set to "Confirm"

The list will contain all available property domains.

Order review - result screen

Which results are shown

The result screen will only show results for properties that

- belong to one of the selected property domains.
- do not belong to any property domain.

Which results are preselected

- When "Objective" is set to "Confirm", only results that can be confirmed will be preselected.
- When "Objective" is set to "Validate" or "Confirm + Validate", only results that can be validated will be preselected.

Show all results

The following extra icons are available on the right hand side of the result screen:

 Click this icon to show all results, without checking the selected property domains.

 Click this icon to restore the filtering, taking the selected property domains into account again.

> **Note**
>
> Using these icons has no effect on the preselection of results.

Pre-configuration of the order review function

When setting up a tool that used the **Order review** function, all **Property domains** can be selected even if the **Objective** is set to **Validate** or **Confirm + Validate**.

However, when this tool is actually used in the application, the pre-selected property domains (in the order review query) will be restricted to those that are assigned to the current user and for which the option **Can validate** is enabled.

> **Note**
>
> If the **Tool** option **Skip setup** is enabled, and a property domain was selected in the pre-configuration which is not assigned to the user (or the **Can validate** option is disabled), an error message will be displayed and the order review screen will not be opened.

Result.Validate function

If the option **Check domain authorization** in the general settings is enabled, the Result.Validate function will also check the **Property domain** configuration.

> **Note**
>
> If a property does not belong to any property domain, no checks are performed.

Production statistics

The **property domain** can be selected as column or row value in the layout screen of the result statistics.

Validation in phases: result escalation (GLIMS-07712)

Introduction

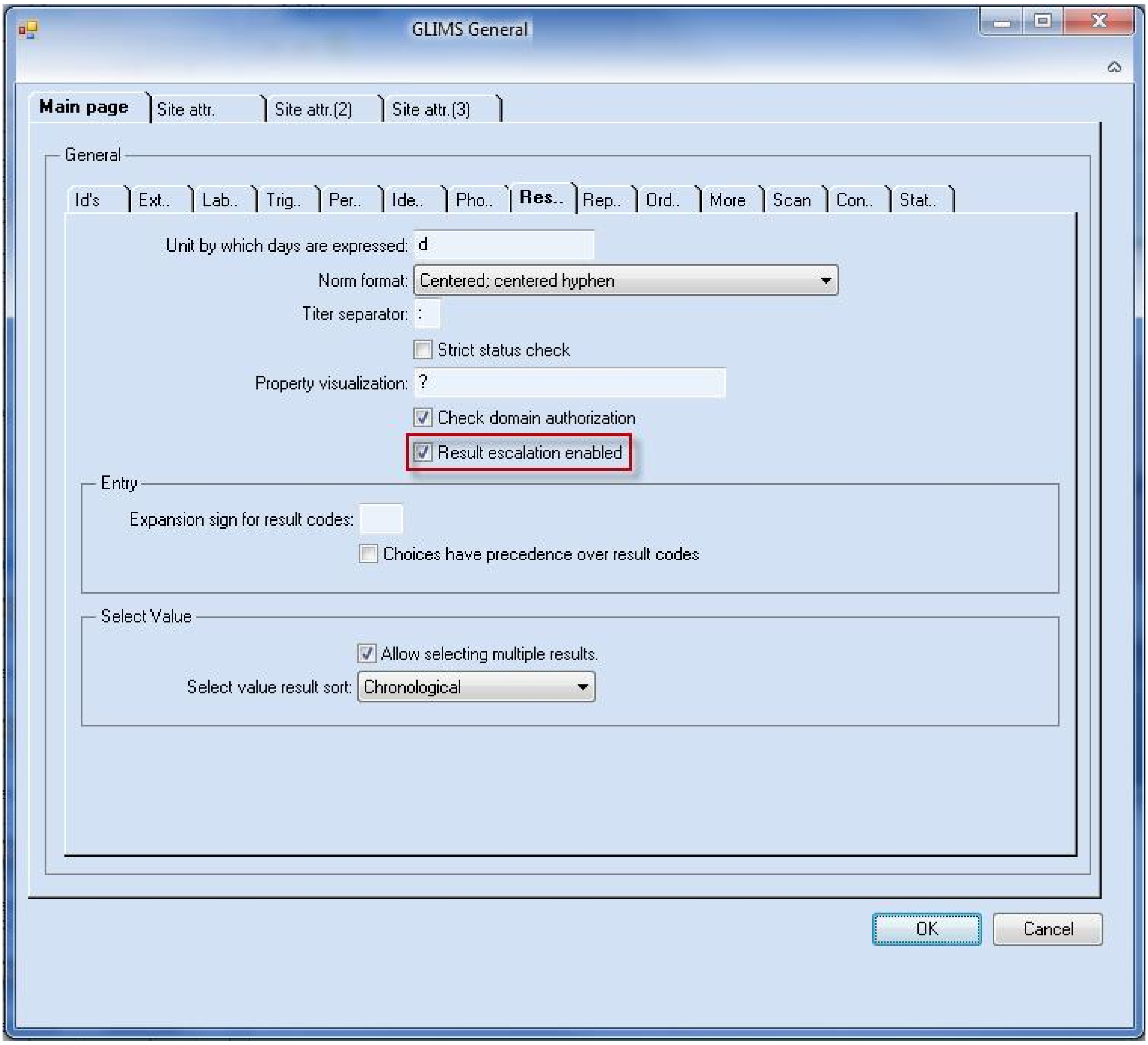
GLIMS now allows to 'escalate' a result in order to have it validated by someone else. It is also possible to 'strictly escalate' a result, meaning that the result can only be validated by someone - typically a HC provider - who is authorized to validate strictly escalated results.

This allows to setup a phased validation process which includes peer review of specific results.

Activation

In order to activate result escalation in GLIMS, you must enable the option **Result escalation enabled** in the general settings.

1. From the main menu, choose **Start > System management > Customize > GLIMS General**.
2. In the **Results** tab page, enable the option **Result escalation enabled**.



How to (strictly) escalate a result

Escalate a result

Who can escalate results

As soon as the result escalation concept is activated (see above), any user can escalate a result.

How to escalate a result

Manually

In the **Results of order** browser and the **Order review** screen, a button **Escalate** is available.

- Select the results you want to escalate and click the **Escalate** button.
- A window will open where the user must fill in a comment. This comment is saved in the internal comment of the result.

> **Note**
>
> If the general setting Use property domains is enabled, the configured domain authorizations will be taken into account. A user can only escalate a result for properties that belong to one or more domains for which he / she has domain authorization.

Automatically via MISPL

A result can be escalated via MISPL by using the MISPL function Result.Escalate.

> **Example**
>
> This can be used to escalate a result with certain values by using the property's availability trigger.

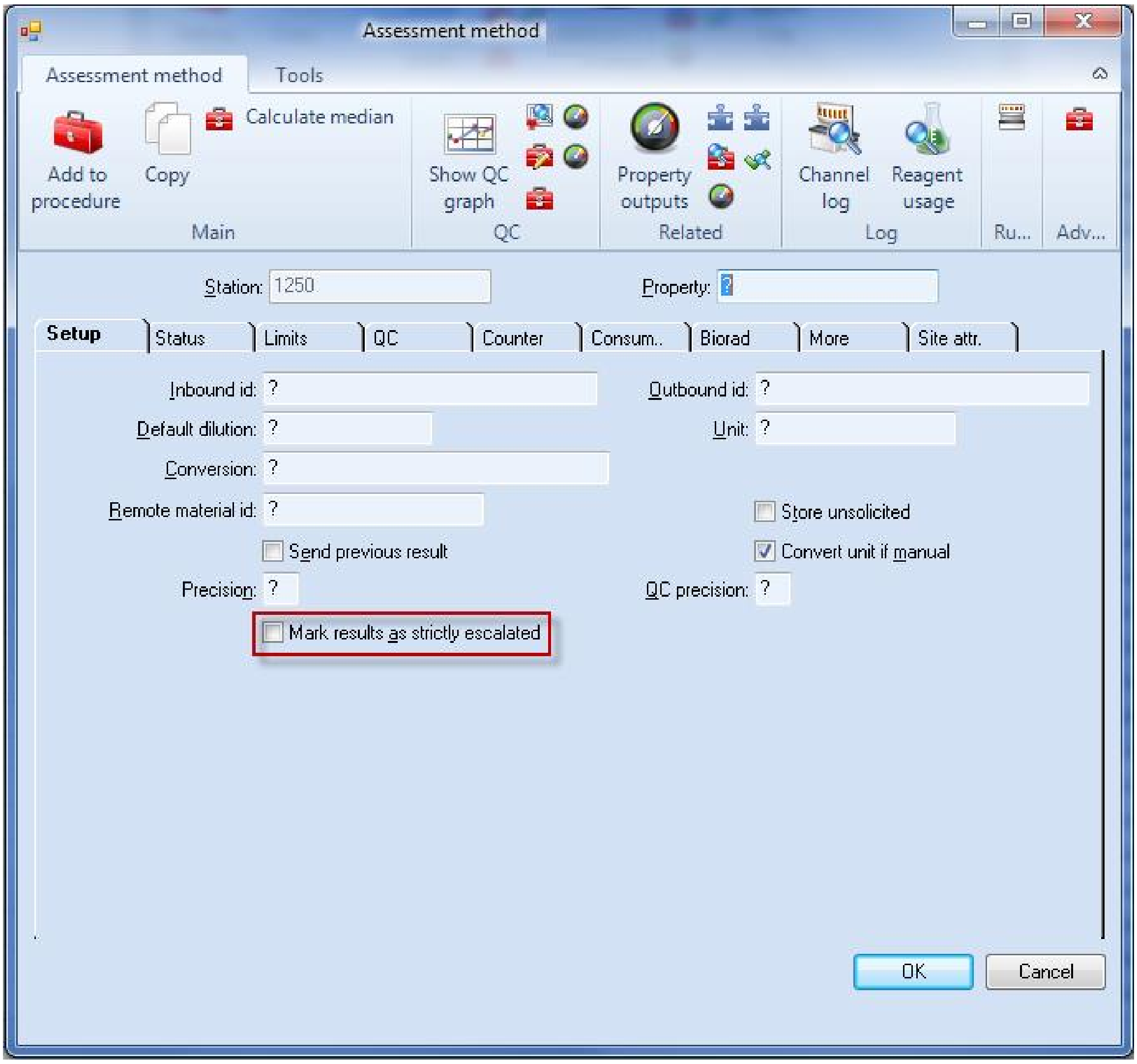
Strictly escalate a result

How to strictly escalate a result

Automatically via assessment method configuration

Strict escalation can be activated in the configuration editor of an Assessment method by enabling the option **Mark results as strictly escalated**.

Results for this assessment method will then automatically be strictly escalated.



Automatically via MISPL

A result can be escalated via MISPL by using the MISPL function Result.Escalate.

> **Example**
>
> This can be used to escalate a result with certain values by using the property's availability trigger.

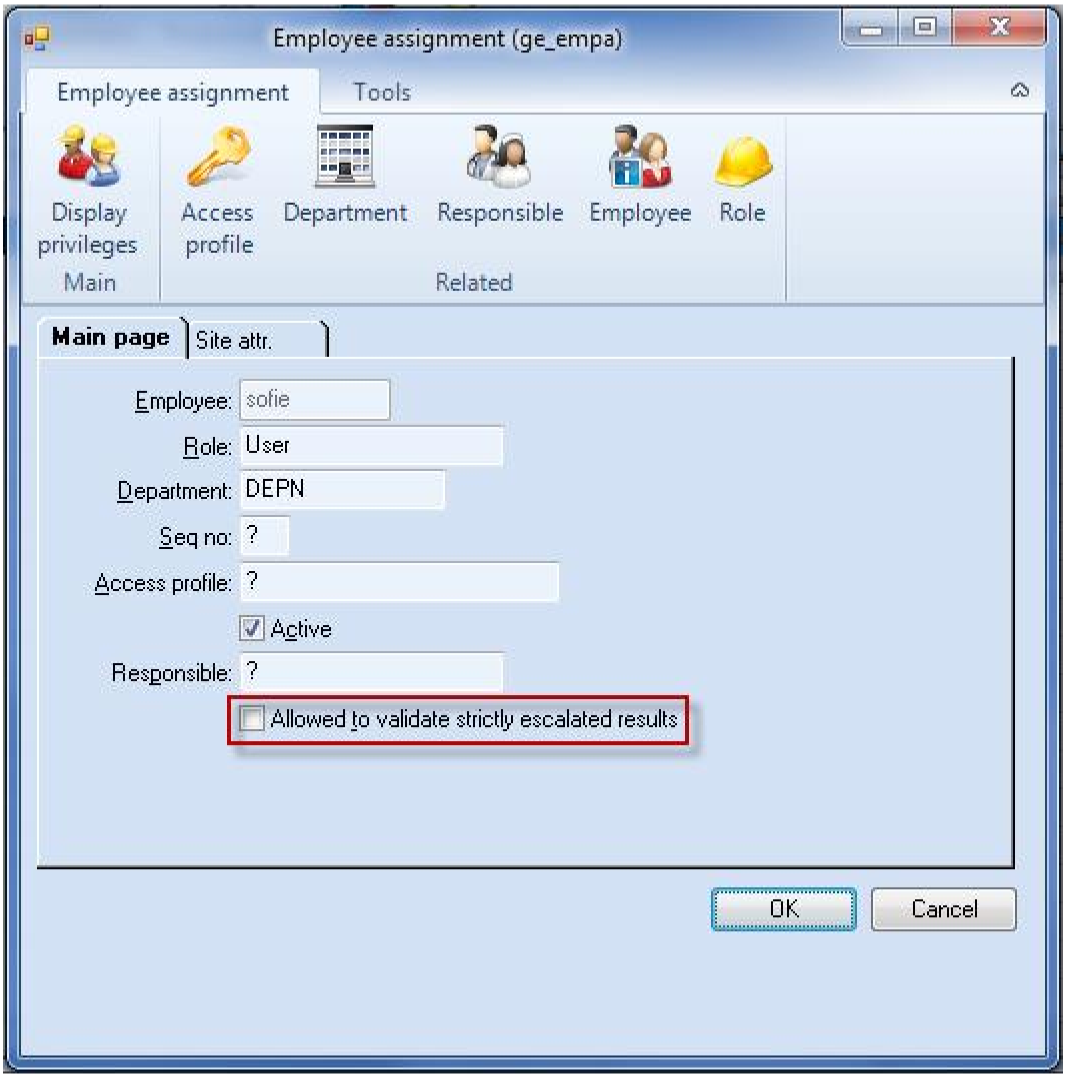
How to validate a (strictly) escalated result

Who can validate escalated results

All the users who have validation privileges, can validate escalated results.

Who can validate strictly escalated results

A strictly escalated result can only be manually validated by a user whose **Employee assignment** has the option **Allowed to validate strictly escalated results** enabled. Naturally, this user must also have validation privileges.

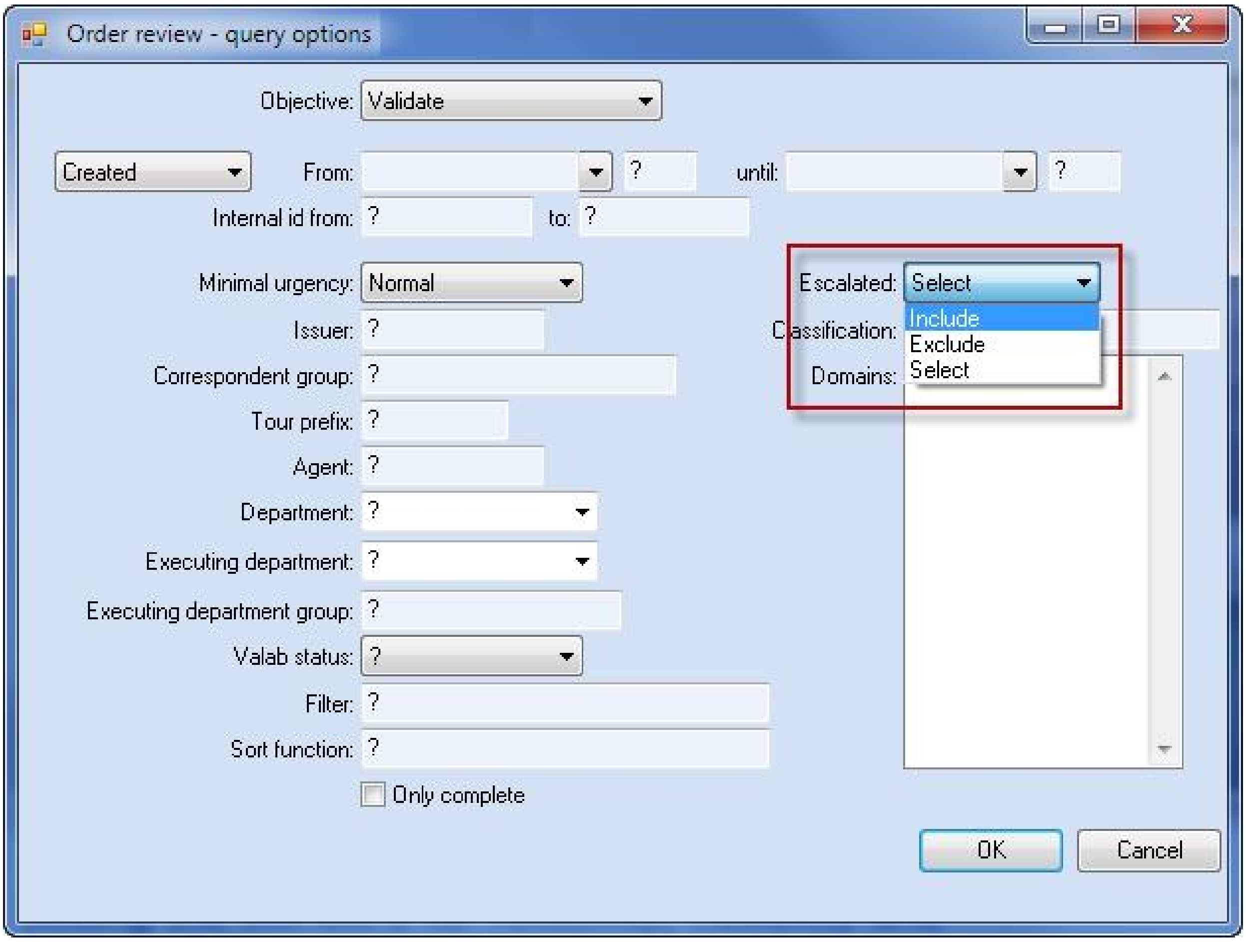


How to validate (strictly) escalated result

When the general option **Result escalation enabled** is set (see above), the Order review screen will offer the following functionality.

Order review - query screen

A query option **Escalated** is available in the query options of the **Order review** screen.



Include

Show orders with and without (strictly) escalated results.

> **Note**
>
> Strictly escalated results will only be included if they can be validated by the current user (the user's **Employee assignment** has the option **Allowed to validate strictly escalated results** enabled).

Exclude

Show only orders without escalated results.

Select

Show only orders with (strictly) escalated results.

> **Note**
>
> Strictly escalated results will only be included if they can be validated by the current user (the user's **Employee assignment** has the option **Allowed to validate strictly escalated results** enabled).

About auto-validation

Escalated and strictly escalated results can be auto-validated. So the auto-validation mechanism also applies for escalated and strictly escalated results .

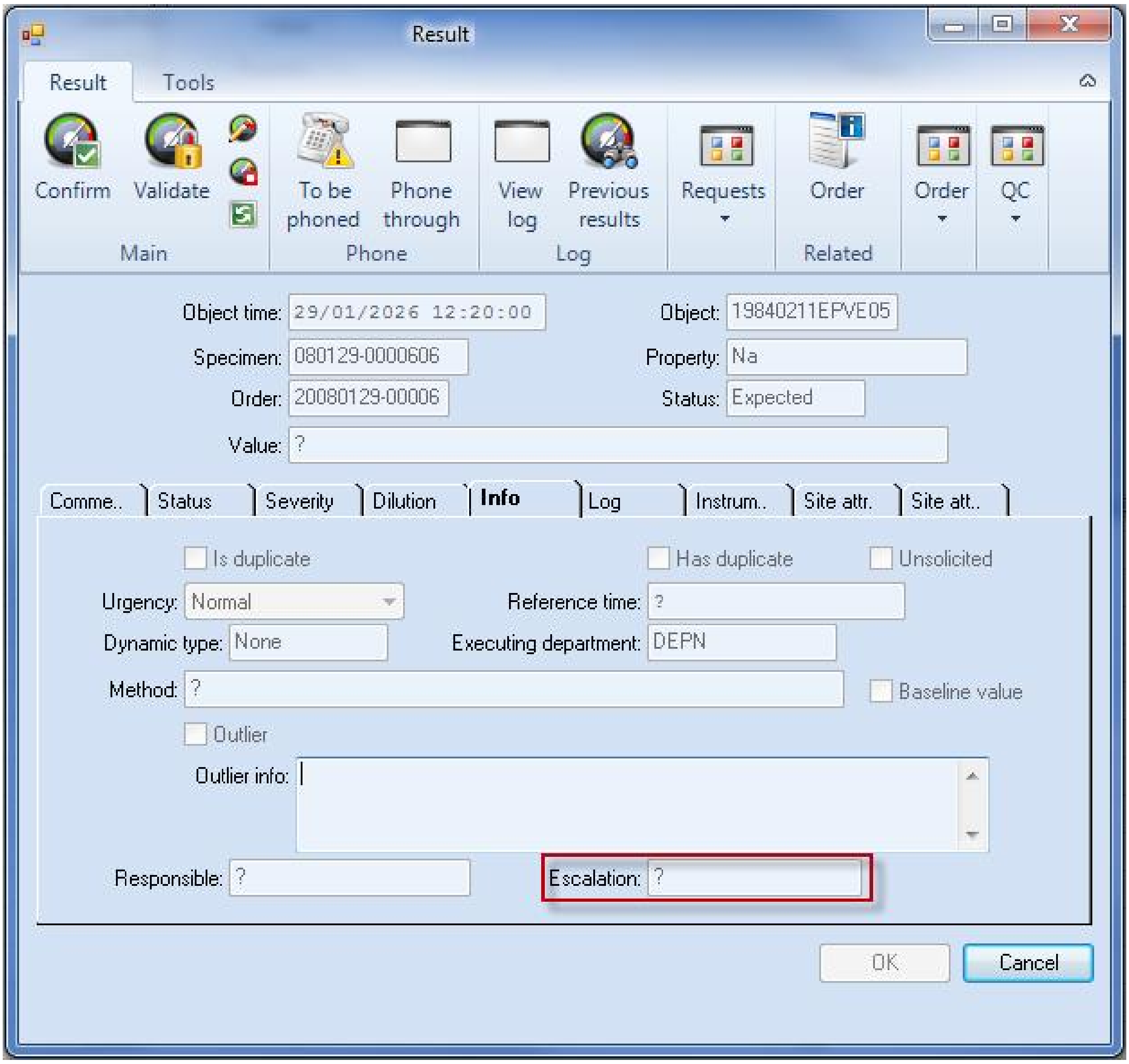
Consultation

Order review - result screen

The result browser of the **Order review** screen can show a column **Esc** with as possible values ' ' (Not escalated), **E** (Escalated) or **S** (Strictly escalated).

Result editor

A field **Escalation** is available in the **Result** editor which indicates if a result has been (strictly) escalated or not ('?').



> **Note**
>
> The escalation date and time and escalation user will be logged in the **Result.Log** field.

Production statistics

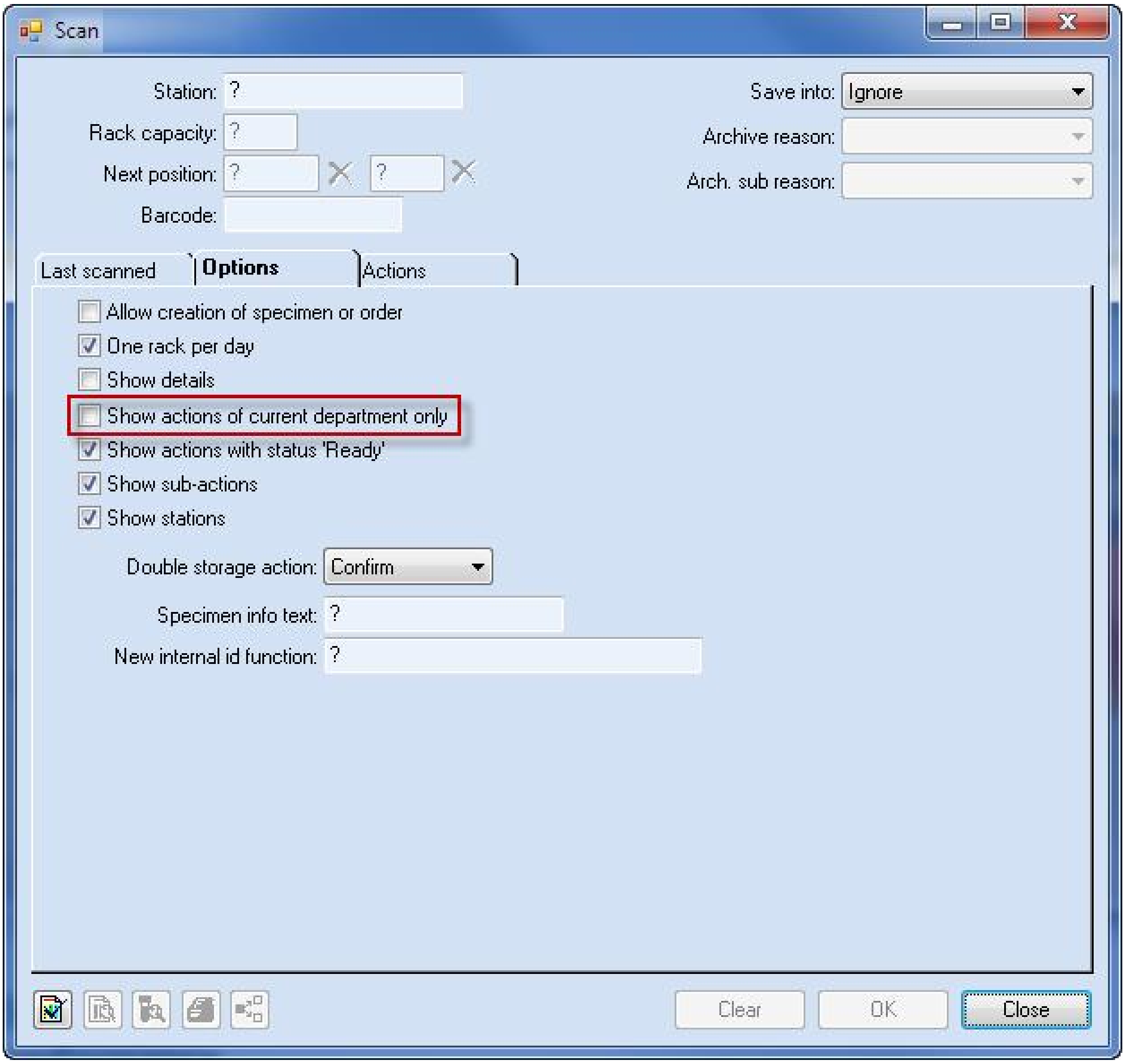
The **Escalation levels** can be chosen as column or row value in the layout screen of the result statistics.

When the general option **Result escalation enabled** is set (see above), the query option **Escalated** will be available in the selection screen of the result statistics. It allows to **Include**, **Exclude** or only select escalated or strictly escalated results (**Select**).

Specimens

Only show actions of current department in specimen scan (GLIMS-07662)

A new option **Show actions of current department only** is available in the Specimen scan program. When enabled, the actions that still need to be performed for the scanned specimen will be listed, but only those of the current user's department.



Note

When the specimen scan option **Check if specimen is ready** is also enabled and the actions related to the current user's department are **Ready**, a message will inform the user that the specimen is ready (even though other actions for other departments might not be).

Results

_NoPrvlCheckForRepeats site attribute no longer supported (GLIMS-07452)

The usage of the SpecificSite-based site attribute named **_NoPrvlCheckForRepeats** is no longer supported.

This implies that users without the required result confirmation or validation privileges can now only repeat automatically confirmed/validated results.

> **Note**
>
> If defined, the site attribute should be removed manually.

Introduction of result responsible (GLIMS-07583)

A new concept of result responsibles has been introduced. For each individual result, GLIMS now stores a responsible. This can be used for:

- Printing the result responsibles on result reports.
- Determining the report responsible.
- Determining the billing item's executor during tariffication (see GLIMS_BILL-03251)

For a full description, please check the chapter Result: Responsible.

> **Warning**
>
> The new concept of result responsibles has an effect on:
>
> - Printing responsibles (previously known as "validators") on result reports.
> - The determination of the report responsible, which is also used in the context of report approval.
>
> Please thoroughly test this new functionality !

Incomplete results browser should display the property short name (GLIMS-07602)

The Incomplete results browser (**Start > Routine > Results > Incomplete results**) displayed the **Mnemonic** of the **Property** even when its **Short name** was available. This was not consistent with previous versions and has been corrected.

The property short name will now be shown if available. Otherwise, the mnemonic is used.

> **Note**
>
> Problem occurred since GLIMS 9.5.0

Reports

No automatic report scheduling for auto-added / unsolicited results (GLIMS-06981)

Introduction

GLIMS now prevents that new reports are scheduled when an extra test is requested via MISPL or when a station sends an unsolicited result.

Warning

This behaviour is not compatible with previous versions!

GLIMS 8

A site attribute allows to determine whether or not automatic report scheduling is required in the cases listed below. For more information, see GLIMS-06942 in the GLIMS 8 manual.

GLIMS 9

As of GLIMS 9.3.13, 9.4.3, 9.5.2, 9.6.0, GLIMS behaves as mentioned below.

How it works

GLIMS will not automatically schedule new reports when:

1. A property is automatically added to an order via the MISPL function Order.AddRequest.
2. A property is automatically added to an order via the MISPL function ResultOutput.CascadeRequest.
3. A station uploads an unsolicited result.

Note

Should automatic report scheduling still be required, you can use the **Order.ScheduleReports()** function in a MISPL expression.

Correction for report triggered when changing Specimen.SamplingTime (GLIMS_RX-00528)

An issue was detected where changing the **Sampling time** of a **Specimen** would trigger a **Report** with **Trigger status** set to **Expected**, even if the results were not yet **Expected**. This has been corrected.

Medidoc reporting: support non-numerical result values for "numeric" properties (GLIMS_RX-00554)

Medidoc reporting now supports textual values for "numeric" properties.

Report Builder

Improve performance of result reports with Report builder (GLIMS_ARep-00198)

A performance improvement has been implemented for generating result reports with Report builder by

- using AppServer to convert the database records to XML.
- limiting the XML output to the fields actually used on the report layout (in case of output format other than XML file).

In case of compatibility issues, you can return to the old export mechanism by enabling the option **Remove PCL codes** in the **Report template** configuration.

Improved performance of Complaint reporting (GLIMS_CPLT-00049)

The **Complaint** reporting module was revised to improve performance by:

- using AppServer to serialize the database records to XML
- limiting the XML output to the fields actually used on the report layout (in case of output format PDF)

Do not export internal fields when using Report Builder in generic Report tool (MATE-03844)

With the extension of the generic **Report** tool in modification MATE_RB-00026, end-users can now generate reports for each table. However some purely internal data could also be exported.

These internal fields have been removed from the export.

Detect recursion issue in Jasper templates (MATE_RB-00069)

Incorrectly configured Jasper report templates may lead to recursion issues where the same page is printed over and over gain (e.g. a report header which is too small to print all the data).

GLIMS will now show an error when such a problem is detected.

Moreover, it is now possible to set maximum number of pages and the maximum generation time for a single report. The following options can be defined for the Report builder service:

-Dmips.reportbuilder.maxpages=1000

-Dmips.reportbuilder.maxtime=1

The settings above define that a single report can have a maximum of 1000 pages and should be generated within 1 minute.

Note

Customers that do not yet use a Report builder service can define the following parameters in the progress.ini file:

MA_JVM_MAXREPORTPAGES=1000

MA_JVM_MAXREPORTTIME=1

Update to JasperReports 5.6.1 (MATE_RB-00076)

JasperReports is the underlying technology of the MIPS Report builder implementation. In order to stay current with its latest features and improvements, MIPS has updated to a more recent version: JasperReports 5.6.1.

Notes

- GLIMS will automatically check whether the Jasper templates have been compiled for the appropriate JasperReports version. If not, the templates will be recompiled automatically.
- If you want to edit the Jasper templates, you need to download and install Jaspersoft Studio 5.6.1.

Report Builder: report headers not translated in multilingual environment (MATE_RB-00080)

An issue was detected in a multilingual environment where report headers were not translated when manually generated via Report Builder on a client PC. This has been corrected.

Function to validate external templates (MATE_RB-00085)

A function **Validate template** has been added to validate External templates. It allows to check for potential problems in the **Jasper template**.

Warning

The **Validate template** function performs some basic checks, but this does not guarantee a 100% flawless Jasper template.

Always thoroughly test the Jasper templates before using them in a production environment !

Validate a template

1. Select an **External template**.
2. Choose the contextual menu / ribbon item **Validate template**.
3. A summary will be shown with potential problems in the **Jasper template**.

   Example

The validation function could warn about the fact that the option **Stretch with overflow** is not set for some of the text field elements in the Jasper template. As a consequence, texts could be truncated due to a lack of space.

Notes

1. The validation summary will be empty when:
   - A Report builder service is defined but it is not running.
   - No Jasper template file is specified in the **External template** configuration.
   - The Jasper template file specified in the **External template** configuration cannot be found.
2. The same validation checks are performed during report generation, but this time with the actual report data (e.g. the application will not log a warning when the **Stretch with overflow** is not set if the actual report data does not exceed the text field limit). Warnings will be shown on screen or added to the log file.
3. The **Validate template** function checks both main and sub reports.

Report builder service: support for raw print commands (MATE_RB-00088)

Introduction

Labels and Text/PCL reports are traditionally printed by streaming raw printer codes to a file and 'copying' that file to the printer. When GLIMS order handling code was moved from the client session to AppServer, one of the side effects at customer site was that specimen labels weren't always printed as expected (the AppServer couldn't send the label to the local printer).

One way to tackle this issue, is to prepare the file on the AppServer, and send it off to the Report builder service for further processing. After all, the Report builder service will most likely be installed on the print server, and thus have access to the printers.

However, after consultation with customer services, it became clear that there a number of scenarios where this would not work (e.g. if the **Print command** uses a batch file which contains logic to determine the printer 'closest' to the workstation)

Hence we have decided to cautiously introduce this feature in a way that requires system managers to explicitly 'opt into' the described behaviour.

Evolution

General setting

There is a general setting **Process print commands on Report Builder services** which you must enable via **Start** > **System management** > **Customize** > **MATE** > **Report builder**.

Printer setting

There is a printer-specific setting **Process print command locally** which you must disable before print command execution is delegated to a Report builder service.

This approach allows our service and support engineers, as well as the system managers at customer site, to migrate gradually after thorough testing.

Print command parameters

For a **Print command**, the following parameters are available:

- &1 = source file path (e.g. c:\tmp\mpr0001.prn)
- &2 = copy count (e.g. 1)
- &3 = windows printer path (e.g. \\printserver\printer)
- &4 = base file name (e.g. mpr0001.prn)
- &5 = device name (e.g. lab-workstation-1). This last parameter was added to support the 'closest printer' scenario mentioned above.

Limitations

Take note of the following non-exhaustive list of inherent limitations:

- UNC file paths do not work so you have to use DOS-style paths (with shared drive letters such as 'S:\')
- If you use a **Print command** such as 'notepad.exe &1' then the Notepad instance will be opened on the server

String utilities for Report builder (MATE_RB-00089)

The application is shipped with a number of string utilities (helper methods) that can be used when customizing the default Jasper templates for Report builder.

For more information, please check the chapter Report builder - Utilities.

Time utility for Report builder (MATE_RB-00091)

The application is shipped with a time utility (helper method) that can be used when customizing the default Jasper templates for Report builder.

For more information, please check the chapter Report builder - Utilities.

Levey Jennings graph in PDF reports (MATE_RB-00119)

An issue was reported where Levey Jennings graphs in PDF files generated with Report builder would cause an error when opening the PDF files with Adobe Reader.

This has been corrected.

Report builder service: extend logging of printer lookup (MATE_RB-00122)

MIPS regularly gets an incident where the **Report builder service** complains that it could not find a specific printer. Usually this means that the printer was not properly installed for the user under which the service was registered at the Windows operating system level; but sometimes it is not clear why the printer is not found.

Hence this modification extends the logging of the mechanism that tries to match the printer name against the Java Print Service API lookup mechanism.

> **Note**
>
> Note that this information is only logged when the Report builder Service **Verbosity** has been set to **High**.

Caching mechanism throws NullPointerException (MATE_RB-00123)

An issue was reported where the caching mechanism would throw a NullPointerException if a Field with an XPath expression in its Description was used on the layout.

This has been corrected, and such fields are now ignored.

Date utility for Report builder (MATE_RB-00125)

The application is shipped with a date utility (helper method) that can be used when customizing the default Jasper templates for Report builder.

For more information, please check the chapter Report builder - Utilities.

Persons

Person.BirthOrder not imported via import with validation screen (GLIMS-06643)

A person's **Birth order** was not imported when using **Start > System management > Database > Specific import > Persons (with validation screen)**. This has been corrected.

Encounters

Recalculate end date / time of encounter (GLIMS_PI-00332)

Past functionality

In previous versions, the end date / time of an **Encounter** is calculated:

1. when creating an encounter.
2. when changing the encounter's type while the encounter's end date / time is not yet specified.

Present functionality

Currently, the end date / time of an Encounter will also be recalculated:

- when changing the start date / time of the encounter while the end date / time has been calculated before.
- when changing the encounter's type while the end date / time has been calculated before.

> **Note**
>
> Once the end date / time is explicitly specified, it will never be recalculated.

User interface

Redesigned browsers (GLIMS-06883)

The following browsers have been redesigned:

- Action browser
- Encounter browser
- Financial shipment browser

> **Note**
>
> - It is no longer possible to sort on **Total amount** in the redesigned browser.
> - The "Generated" financial shipment query is no longer used. The "Standard" financial shipment query offers the same functionality and can be used instead.

- Correspondent browsers
- Norm browsers
- Property browsers

> **Note**
>
> It is no longer possible to use fast positioning in the Properties of department / lab browsers.

- Animal browsers
- Object browsers
- Service browser
- Translator browser
- Queue processor browser

> **Note**
>
> So-called *Cycle columns* (columns with a cycle icon in the header, to switch between different data) are no longer supported. You can now use the Field chooser to define which data should be shown.

Current stays of ward browser redesigned (GLIMS-07481)

The **Current stays of ward** browser has been redesigned. Thus solving a reported issue where only the focused record was reported by the generic **Report** tool instead of all of the selected records in the current stays of ward browser.

Note

So-called *Cycle columns* (columns with a cycle icon in the header, to switch between different data) are no longer supported. You can now use the Field chooser to define which data should be shown.

Improved visibility of desktop alerts (MATE-03751)

Desktop alerts will now be shown in the center of the GLIMS screen instead of in the lower right corner.

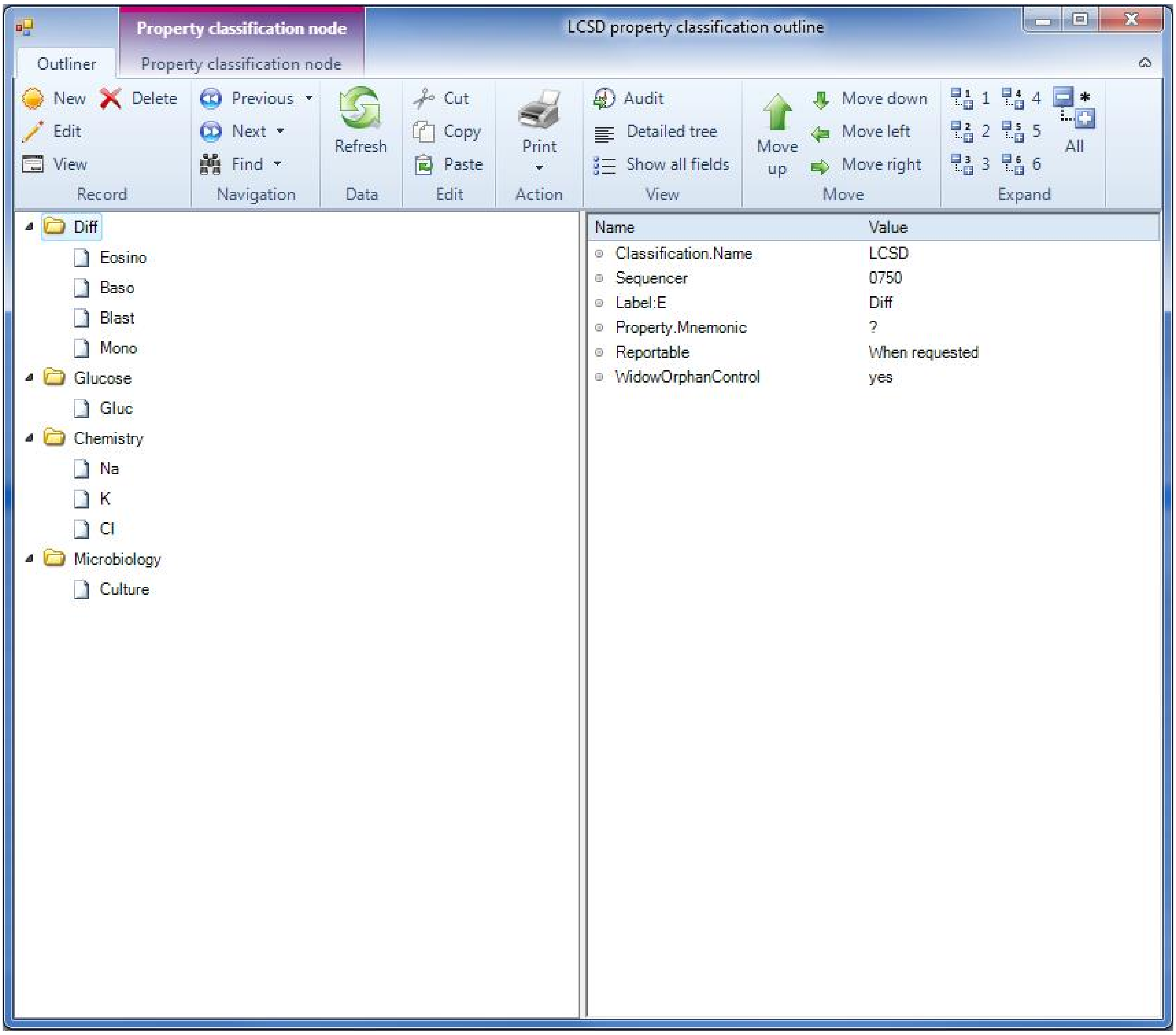
Example

When you have reached the end of the list of microbiology actions, a desktop alert appears for a few seconds stating that you have reached the last microbiology action in the list.

Redesigned tree views (MATE-03908)

All tree views in GLIMS have been redesigned. New features are:

- a Tools ribbon
- a contextual ribbon tab depending on the selected node.
- improved drag and drop functionality with indicators to drop above, inside or below.
- asynchronous data retrieval using AppServer



Support for dynamic text columns and site attribute columns in browsers (MATE-04032)

Some browsers (e.g. Order consultation, Urgency monitor, ...) did not support adding dynamic text columns or site attribute columns via the Field chooser. This has been corrected.

Login screen title cut off (MATE-04065)

A cosmetic issue was identified where the login screen title was cut off in the Dutch version of GLIMS (e.g. the user would see "Selecteer een dep..." instead of "Selecteer een department").

This has been corrected.

Focus issue when logging in after timeout (MATE-04085)

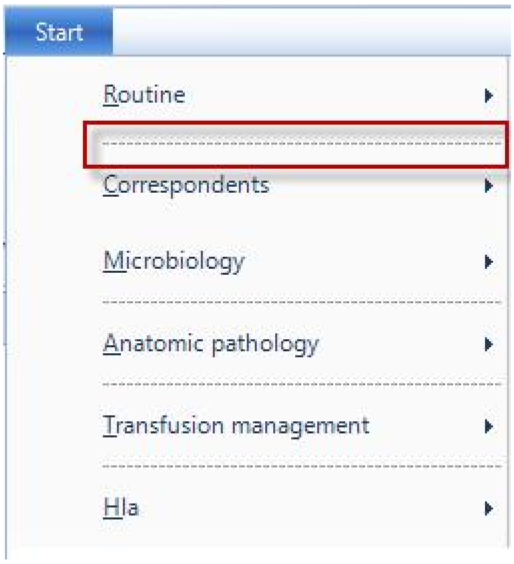
When logging in after an authorization timeout had occurred, it could happen that the focus was not on the right window. This has been corrected.

Site attributes of data type Date in browsers (MATE-04189)

Site attributes with data type Date are now correctly displayed in browsers.

Separator lines in menus (MATE-04202)

Separator lines (if configured) were no longer shown in the main menu and context menus. This has been corrected.



Warning when using active MISPL function as browser filter (MATE_MISPL-00085)

GLIMS allows selecting a MISPL filter for selective display of records in a browser. The usage of active MISPL functions (functions that change data) is not allowed in these MISPL filters.

GLIMS will now show a warning when the use of such active MISPL functions in a browser filter is detected.

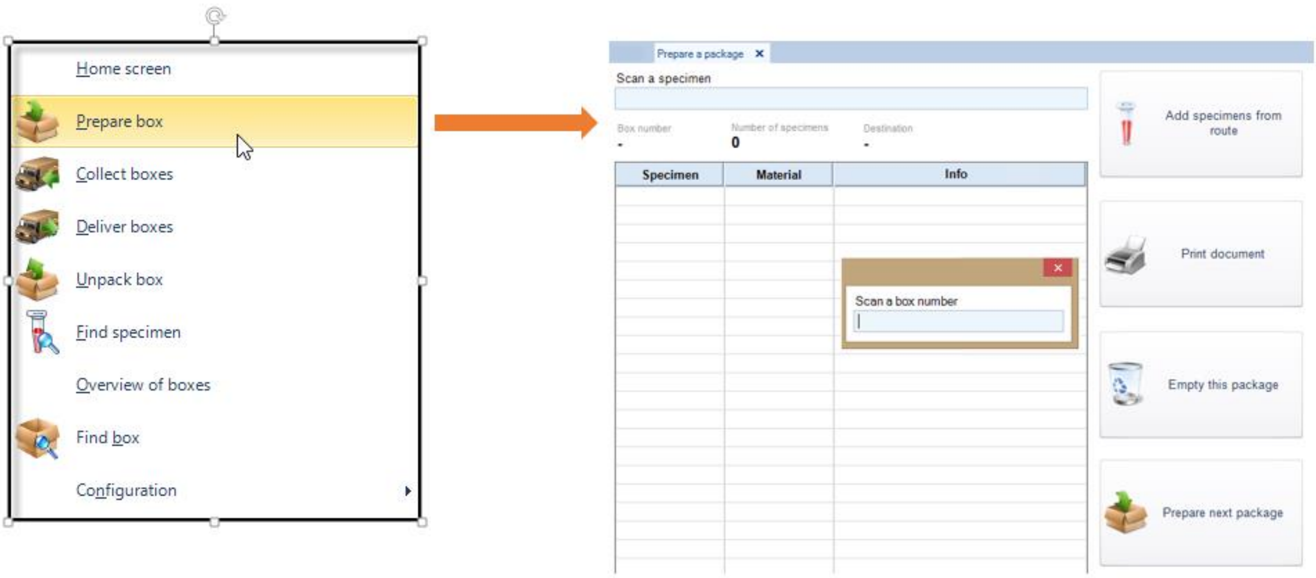
Logistics manager

Introduction of a Logistics manager (GLIMS_LM-00001)

Specimens often need to be transported, from the department where they are packed to the department where they will be analyzed. GLIMS now offers a Logistics manager module which makes organising and monitoring this transport easier:

- It guides users through the logistics workflow of specimen packages, from their preparation to their unpacking.
- It makes it possible to pack and unpack several specimens at once instead of scanning them individually.
- It saves and enables the query of all the specimen and transport data, ensuring traceability.

The following picture shows the functions available in the module as well as one of the logistics workflow screens.



The use of the Logistics manager is subject to a licence: GLIMS_LM.

Business Activity Monitor

Introduction of a Business Activity Monitor (GLIMS_BAM-00002)

GLIMS now offers a monitor which provides an overview of the laboratory's current performance and activities. This **Business Activity Monitor** ("BAM") shows information on the progress of recent orders, results and actions. It also indicates if orders and results are overdue.

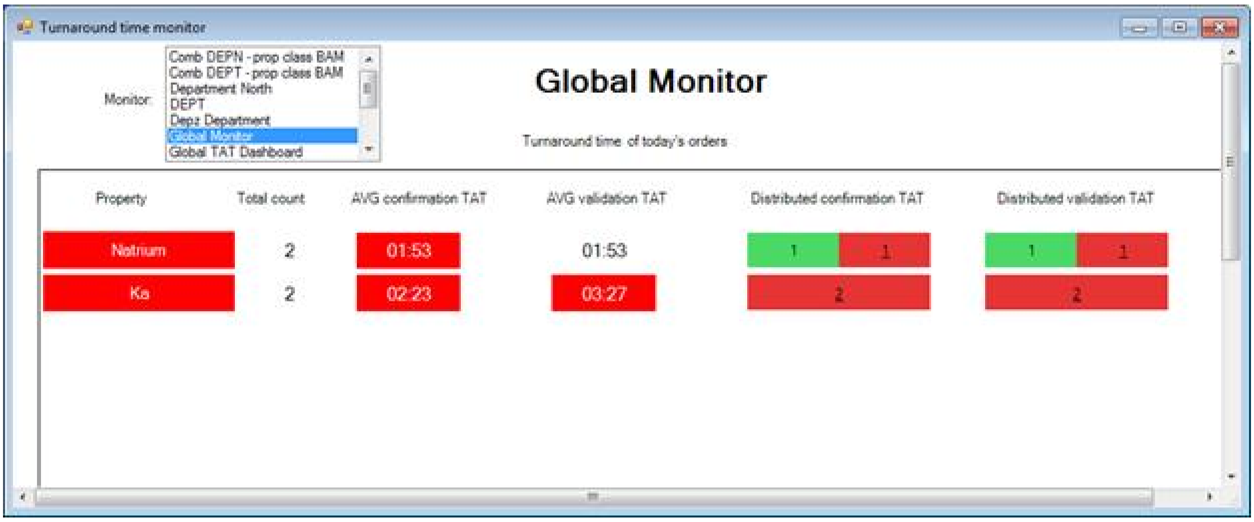
The Business Activity Monitor consists of two monitors:

- the General monitor provides data about current orders, results and actions for the whole laboratory, a specific department or property classification.

  Certain features of this monitor can be customized in the BAM General settings.

- the Turnaround time ("TAT") monitor provides an overview of the overal punctuality with which today's results have been confirmed and validated.



For this monitor to display any data, confirmation and validation time frames must be specified in the configuration editors of properties.

It is possible to limit the displayed BAM data to that of a specific department or property classification by creating Monitor configurations.

Blood transfusion

Focus remains on barcode field while scanning blood bags (GLIMS_BTM-00826)

When scanning blood bags and an error occurs, the focus will now remain on the barcode field whereas in previous versions it was set to the field where the error occurred.

Blood bag file can be imported twice (GLIMS_BTM-00827)

It is now possible to import a blood bag file for the second time when the blood bags from the first import had been discontinued.

Importing blood bags in "ETS Mont-Godinne" format (GLIMS_BTM-00850)

GLIMS can now import blood bags in the customer-specific **ETS Mont-Godinne** format.

Importing blood bags in Red Cross Luxembourg format (GLIMS_BTM-00852)

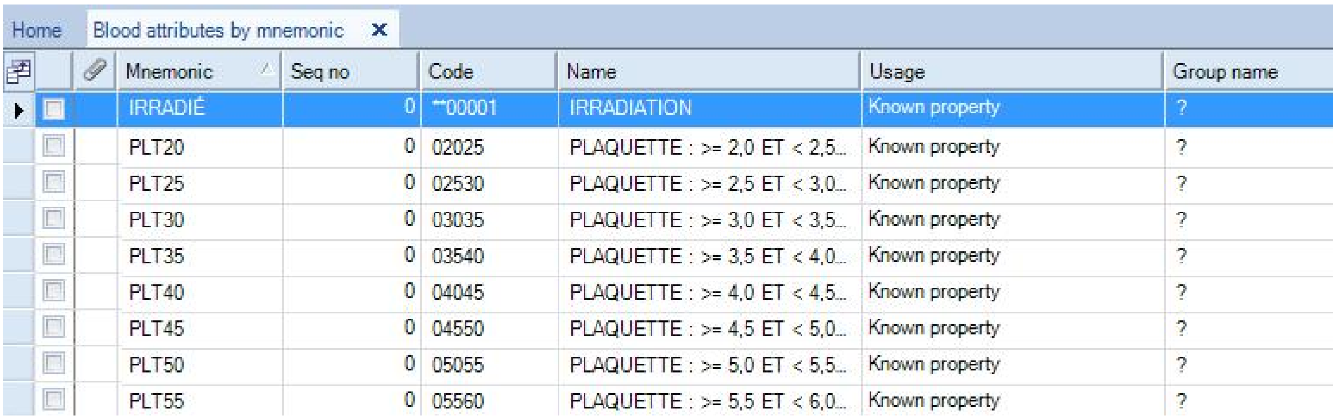
GLIMS can now import blood bags in the **Red Cross Luxembourg** format.

Antigens

- Only phenotypes "+" or "-" are supported as antigen values.
- Antigens "CH/RG", "Ag Public" and "Ag Privé" are not supported.
- Antigen values "indéterminé", "double population", "non testé", "u", "p" and "faible" are not supported.

Blood attributes

When unknown blood attributes are encountered during the import, GLIMS will automatically create new blood attributes using the code in the import file. The **Mnemonic** and **Name** fields of the blood attribute will by default be filled with the **Code** and should be updated manually.



		Mnemonic	Seq no	Code	Name	Usage	Group name
		IRRADIÉ	0	**00001	IRRADIATION	Known property	?
		PLT20	0	02025	PLAQUETTE : >= 2,0 ET < 2,5...	Known property	?
		PLT25	0	02530	PLAQUETTE : >= 2,5 ET < 3,0...	Known property	?
		PLT30	0	03035	PLAQUETTE : >= 3,0 ET < 3,5...	Known property	?
		PLT35	0	03540	PLAQUETTE : >= 3,5 ET < 4,0...	Known property	?
		PLT40	0	04045	PLAQUETTE : >= 4,0 ET < 4,5...	Known property	?
		PLT45	0	04550	PLAQUETTE : >= 4,5 ET < 5,0...	Known property	?
		PLT50	0	05055	PLAQUETTE : >= 5,0 ET < 5,5...	Known property	?
		PLT55	0	05560	PLAQUETTE : >= 5,5 ET < 6,0...	Known property	?

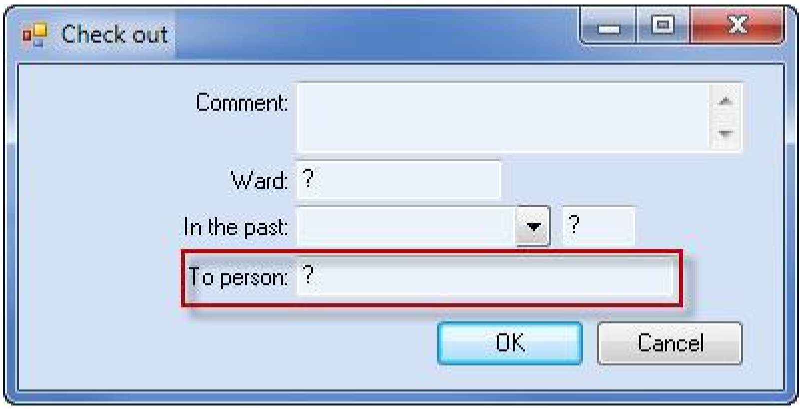
Specify hospital employee during check out of blood bag (GLIMS_BTM-00856)

Introduction

When a blood bag is checked out in GLIMS because it is needed for a patient, it is picked up by a hospital employee. This hospital employee can now be specified during check out.

New field "To person" during Check out

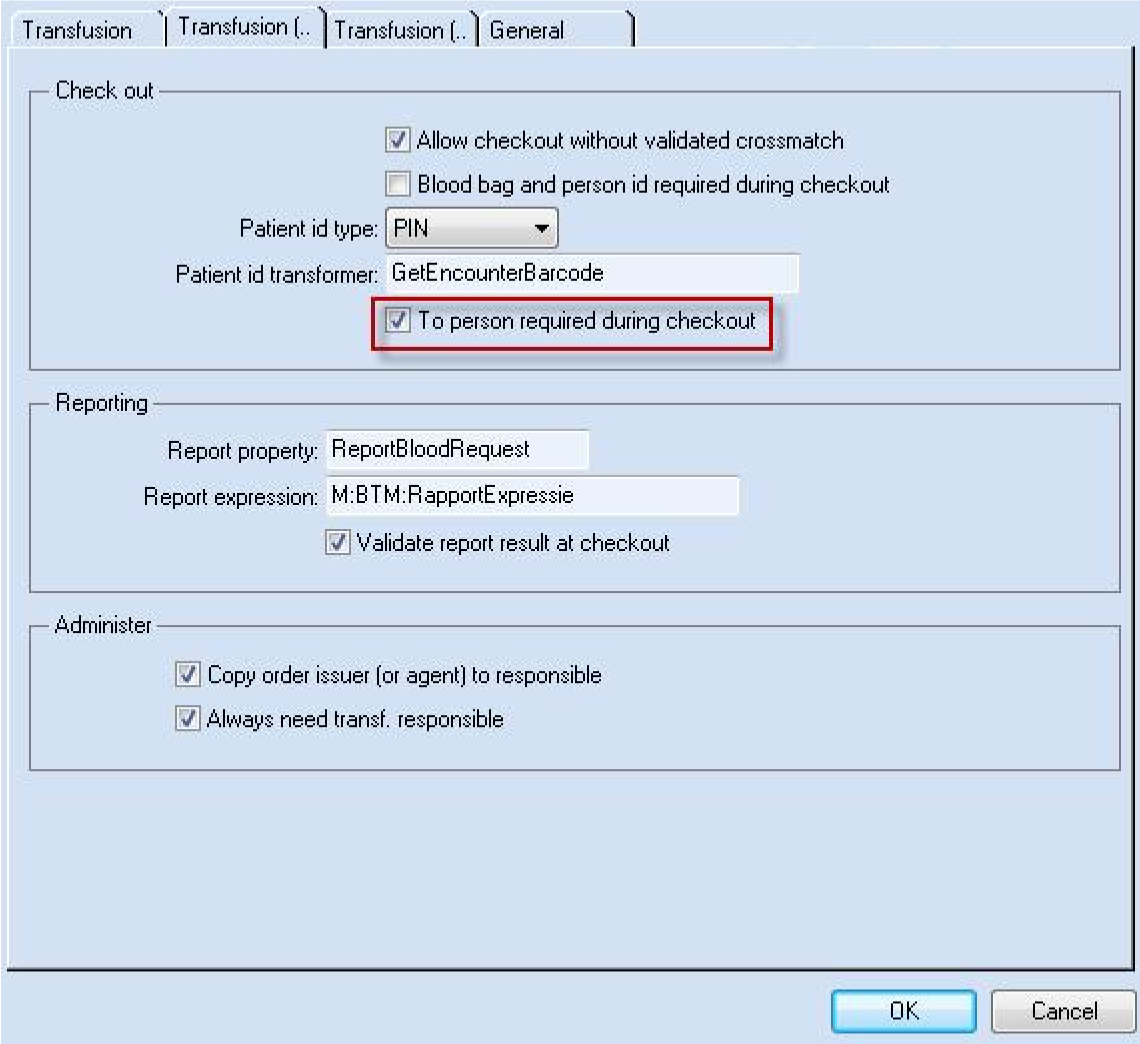
When checking out a blood bag, a new field **To person** is available. Double clicking in it allows you to select a **Hospital employee** from the list of hospital employees configured in GLIMS.



New field in General settings

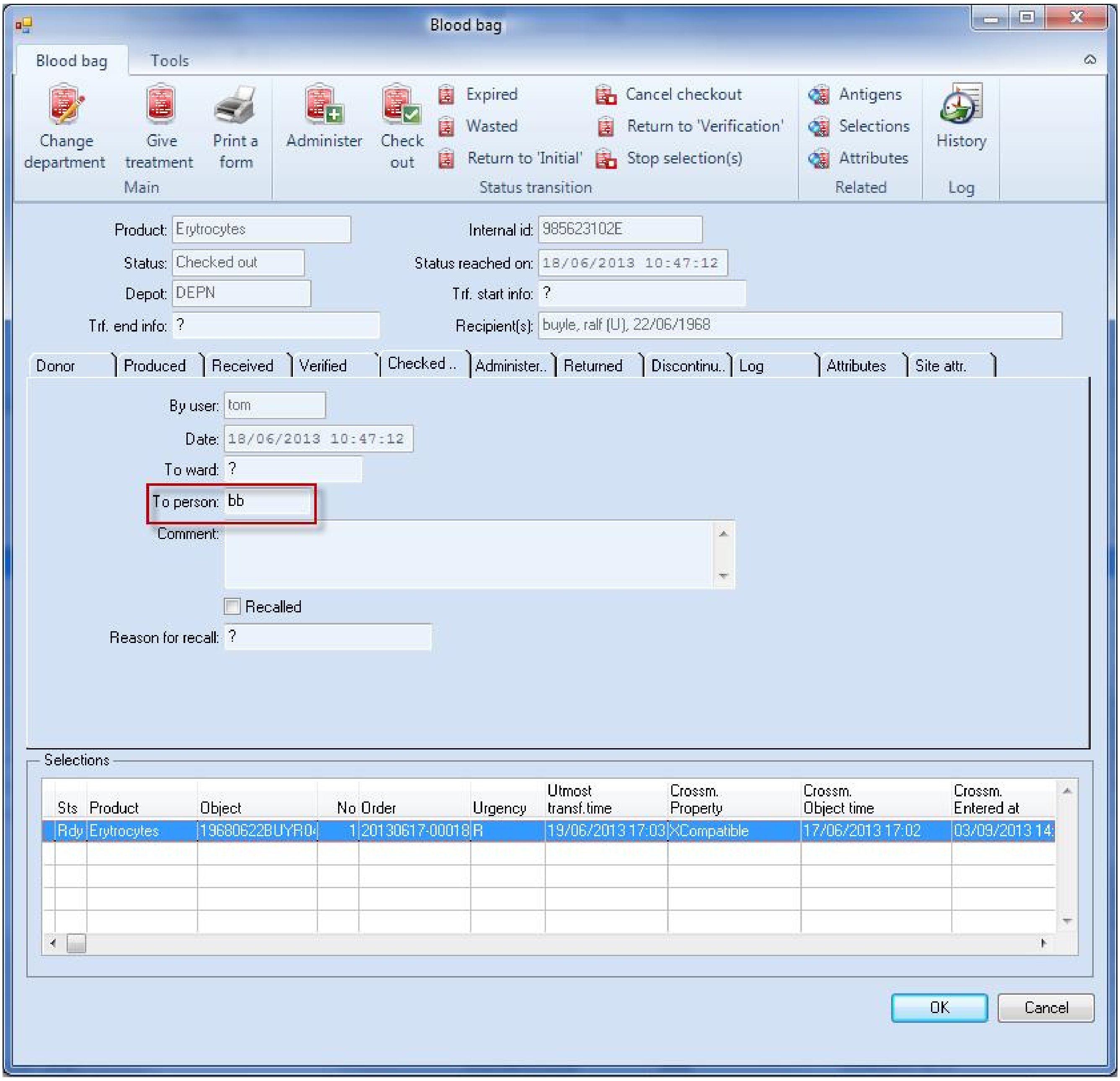
Filling in the **To person** field during check out can be made mandatory by enabling the **To person required during checkout** field in the General settings (**Start > Transfusion management > Configuration > Settings**).

In that case, a warning will be displayed when the **To person** field is not filled in during check out.



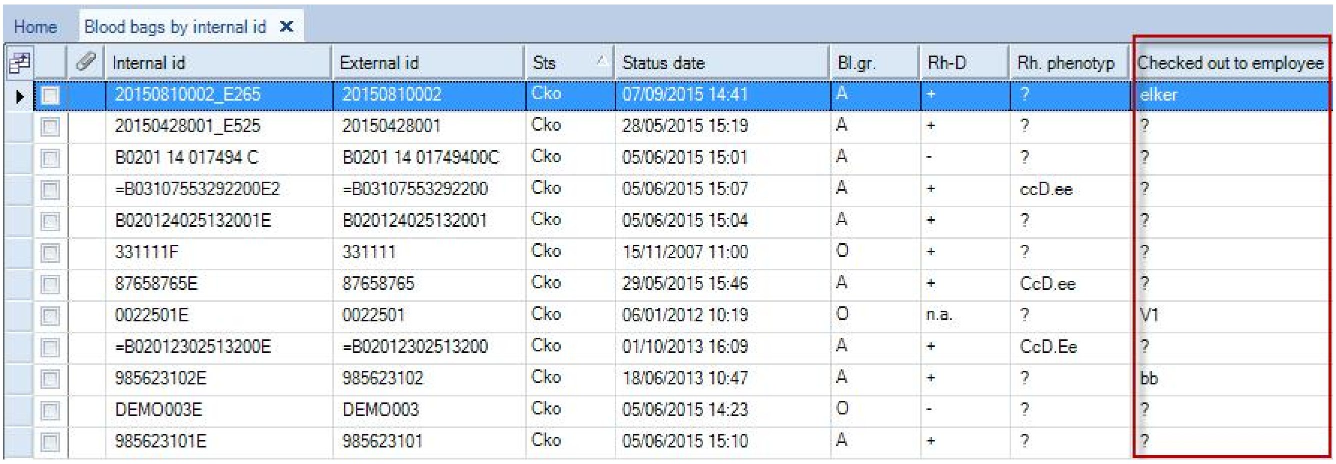
New field "To person" in Blood bag editor

In the **Blood bag** editor, the hospital employee specified during check out is filled in in the **To person** field.



New column "Checked out to employee" in Blood bag browser

In the blood bag browser, a new column **Checked out to employee** is available.



Internal id	External id	Sts	Status date	Bl.gr.	Rh-D	Rh. phenotyp	Checked out to employee
20150810002_E265	20150810002	Cko	07/09/2015 14:41	A	+	?	elker
20150428001_E525	20150428001	Cko	28/05/2015 15:19	A	+	?	?
B0201 14 017494 C	B0201 14 01749400C	Cko	05/06/2015 15:01	A	-	?	?
=B03107553292200E2	=B03107553292200	Cko	05/06/2015 15:07	A	+	ccD.ee	?
B020124025132001E	B020124025132001	Cko	05/06/2015 15:04	A	+	?	?
331111F	331111	Cko	15/11/2007 11:00	O	+	?	?
87658765E	87658765	Cko	29/05/2015 15:46	A	+	CcD.ee	?
0022501E	0022501	Cko	06/01/2012 10:19	O	n.a.	?	V1
=B02012302513200E	=B02012302513200	Cko	01/10/2013 16:09	A	+	CcD.Ee	?
985623102E	985623102	Cko	18/06/2013 10:47	A	+	?	bb
DEMO003E	DEMO003	Cko	05/06/2015 14:23	O	-	?	?
985623101E	985623101	Cko	05/06/2015 15:10	A	+	?	?

Donation type when scanning blood bags (GLIMS_BTM-00869)

Context

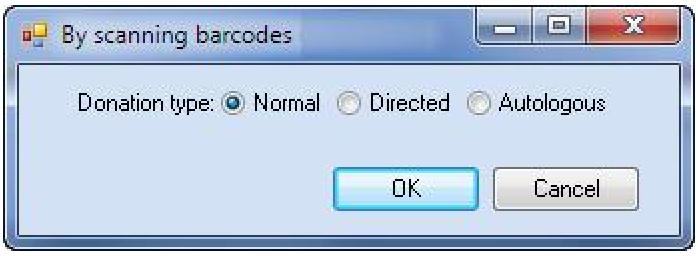
The barcode scan program for blood bags (**Start > Transfusion management > Entry > By scanning barcodes**) allows to scan normal, directed or autologous blood bags. However, according to the default behaviour of the scan program, the donation type has to be indicated for every single blood bag that is about to be scanned as the **Donation type** is always reset to its initial value.

New functionality

It is now possible to indicate the **Donation type** for multiple blood bags :

With setup window

In this case, a window appears allowing to select the donation type that will be used when scanning barcodes. Subsequently, the scan program is opened for the chosen donation type. For every scanned blood bag, the chosen donation type will be used.



> **Note**
>
> The Tool option **Skip setup** should be disabled.

Without setup window but pre-configured

It is possible to create a new, pre-configured menu option with a predefined donation type (function parameter set).

> **Note**

The Tool option **Skip setup** should be enabled.

"Red Cross Luxembourg": support for barcodes with additional identifier "@" or "A" (GLIMS_BTM-00880)

Background information

When a blood bag import file is delivered in a non-ISBT format like **Red Cross Luxembourg**, the blood bags are listed in the blood bag import browser. For the blood bags to be saved in the database, each blood bag external id needs to be scanned.

Problem description

When scanning the blood bag, the blood bag external id has an extra identifier "@" (upper left barcode on the blood bag) or "A" (upper right barcode on the blood bag), whereas the blood bag external id in the import file does not have the additional identifier. As a result, no match is found and the blood bag is not imported.

Solution

We recommend using the following MISPL in the **Bloodbag external id** field of the general settings.

```
String ExternalId;

IF LOOKUP(SUBSTR(.ExternalIdAsBarcode,1,1), "@,A", ",") > 0
THEN ExternalId := SUBSTR(.ExternalIdAsBarcode,2,-1) ;
ELSE ExternalId := .ExternalIdAsBarcode;
ENDIF;

RETURN ExternalId;
```

DGTI Germany: support for barcodes with additional identifier "!" (GLIMS_BTM-00880)

Background information

When a blood bag import file is delivered in a non-ISBT format like **DGTI (Germany)**, the blood bags are listed in the blood bag import browser. For the blood bags to be saved in the database, each blood bag external id needs to be scanned.

Problem description

When scanning the blood bag, the blood bag external id has an extra identifier "!", whereas the blood bag external id in the import file does not have the additional identifier. As a result, no match is found and the blood bag is not imported.

Solution

We recommend using the following MISPL in the **Bloodbag external id** field of the general settings.

```
String Hersteller, Result;


/* Strip off the leading ! when using ExternalIdAsBarcode */
IF LEN(.ExternalIdAsBarcode) > 1
THEN
        IF SUBSTR(.ExternalIdAsBarcode,1,1) = "!"
        THEN Result := SUBSTR(.ExternalIdAsBarcode,2,-1) ;
        ELSE Result := .ExternalIdAsBarcode;
        ENDIF;
ELSE Result := .ExternalId;
ENDIF;


RETURN Result;
```

Support Chaga attribute when importing blood bags in EFS format (GLIMS_BTM-00884)

When importing blood bags in EFS format, the blood attribute "Chaga" will now also be registered in GLIMS.

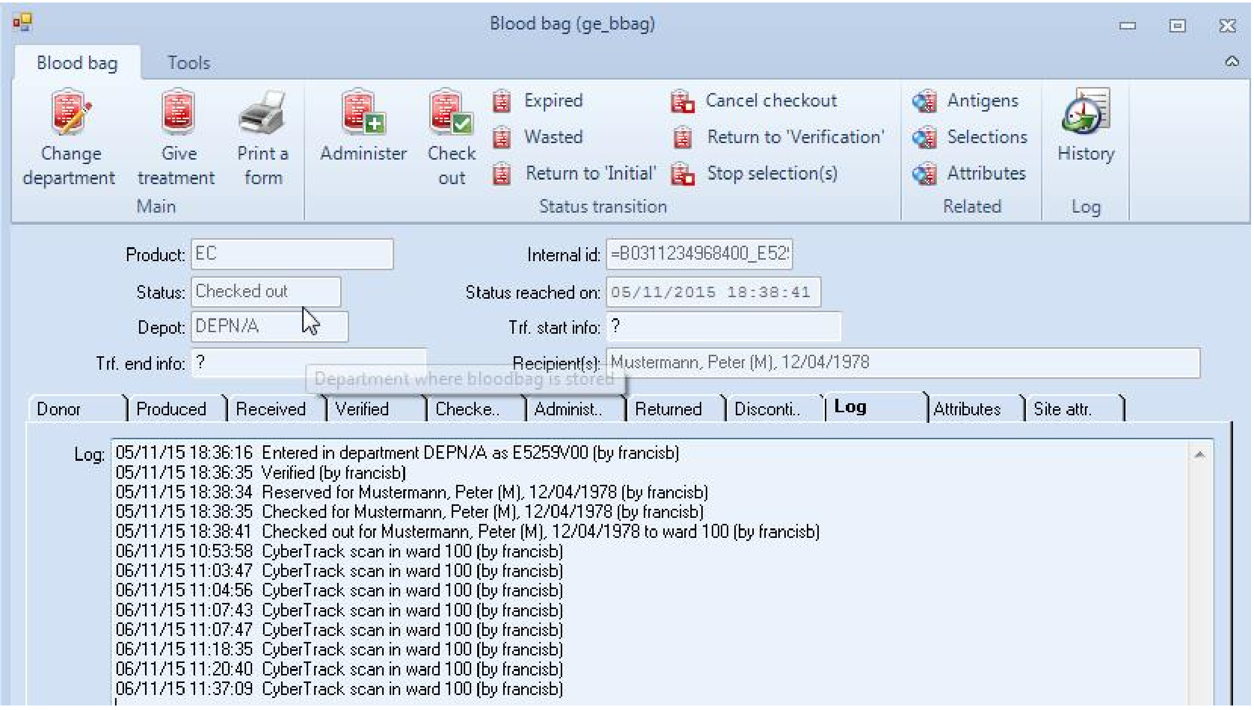
Additionally, to improve the support for changing import formats, unknown blood attributes or unknown antigens will no longer prevent the blood bag from being imported. Instead, these unknown attributes / antigens will be saved in the **Comment** field of the blood bag (tab page **Received**).

CyberTrack

Scanning a blood bag in CyberTrack is logged in GLIMS (GLIMS_BTM-00872)

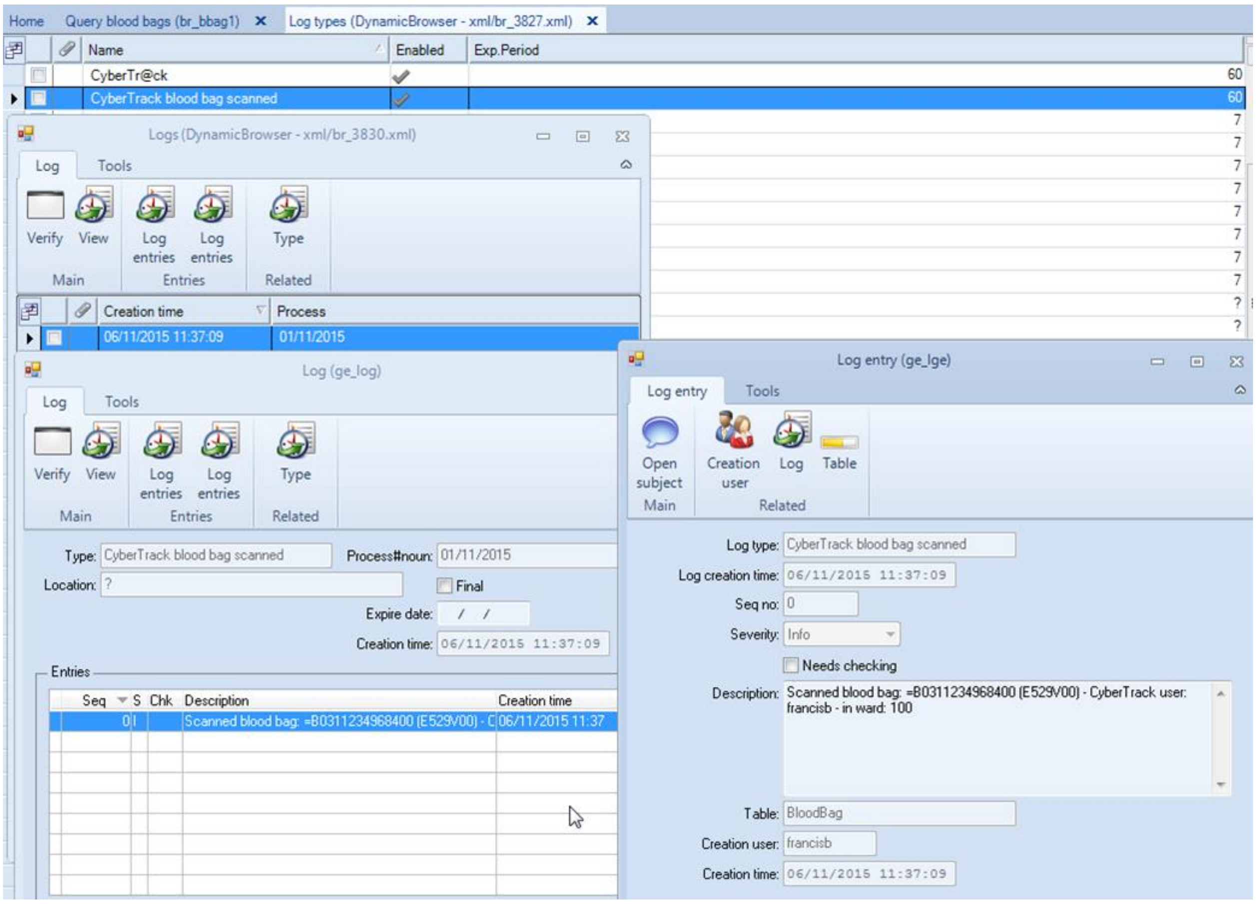
When scanning a blood bag in CyberTrack, logging will now be added in GLIMS:

1. In **Blood bag** editor, tab **Log**



2. For the **Log type** with name **CyberTrack blood bag scanned**

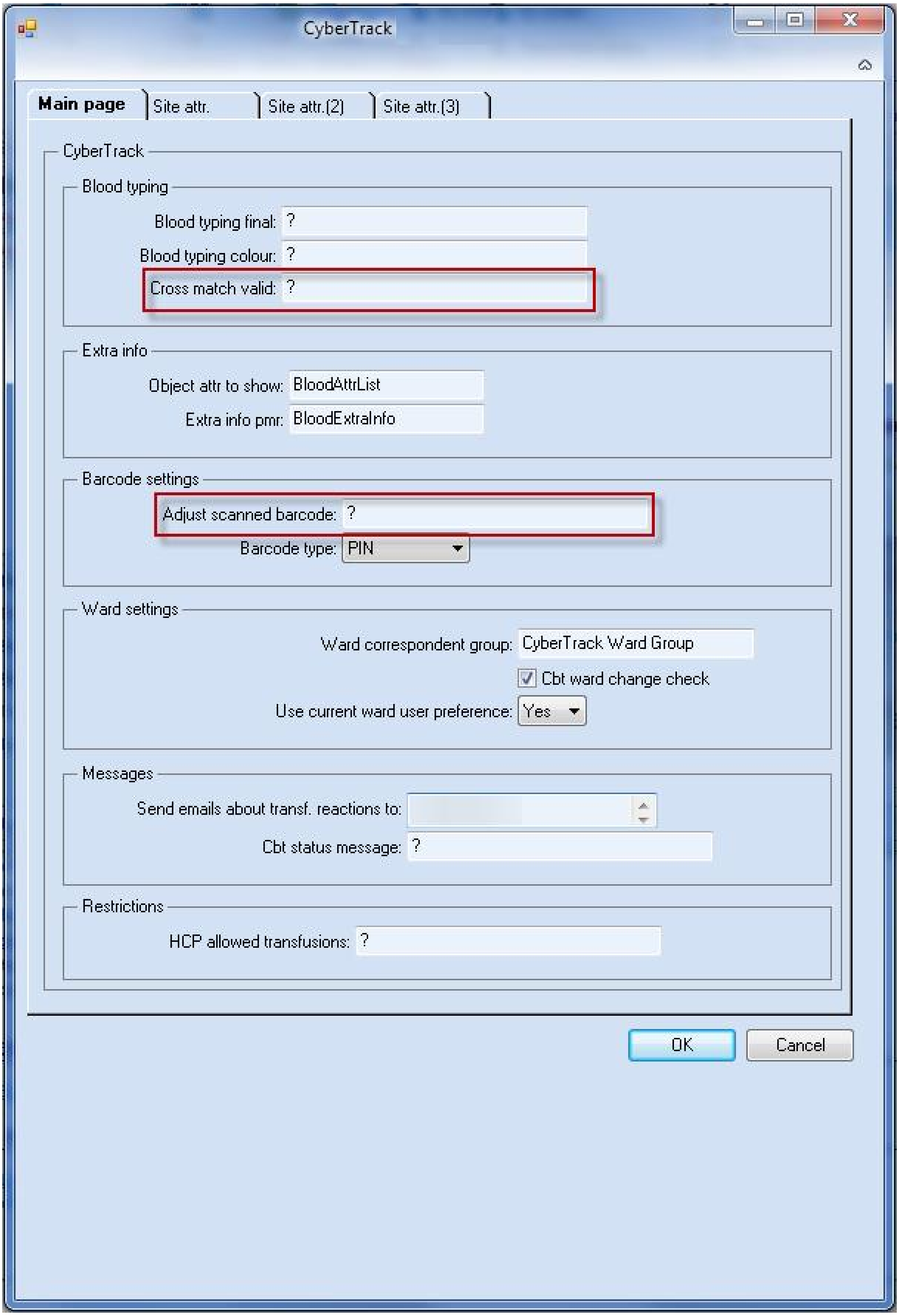
Start > System management > Logging > Log types



Updated field labels for CyberTrack (GLIMS_CBT-00145)

The following 2 field labels in Start > System Management > Customize > CyberTrack have been updated:

Old label	New label
Cross blood valid	Cross match valid
Adjust scanned encounter	Adjust scanned barcode


CyberTrack
Main page
Site attr.
Site attr.(2)
Site attr.(3)
CyberTrack
Blood typing
Blood typing final: ?
Blood typing colour: ?
Cross match valid: ?
Extra info
Object attr to show: BloodAttrList
Extra info pmr: BloodExtraInfo
Barcode settings
Adjust scanned barcode: ?
Barcode type: PIN
Ward settings
Ward correspondent group: CyberTrack Ward Group
Cbt ward change check
Use current ward user preference: Yes
Messages
Send emails about transf. reactions to:
Cbt status message: ?
Restrictions
HCP allowed transfusions: ?
OK
Cancel

Microbiology

Antibiotic result should not be updatable when action is closed (GLIMS-07320)

An issue was reported where the antibiotic result could still be updated via the zoomed antibiogram screen or the antibiotic result editor even when the microbiology action was closed. This has been corrected.

> **Note**
>
> Problem occurred since GLIMS 8.11.7.

Introduce choice lists for numeric antibiotic result values (GLIMS_BAC-00829)

In a nutshell

In the antibiogram, non-RIS antibiotic result values can be entered. It is now possible to limit the values that can be specified to defined sets of values.

Past functionality

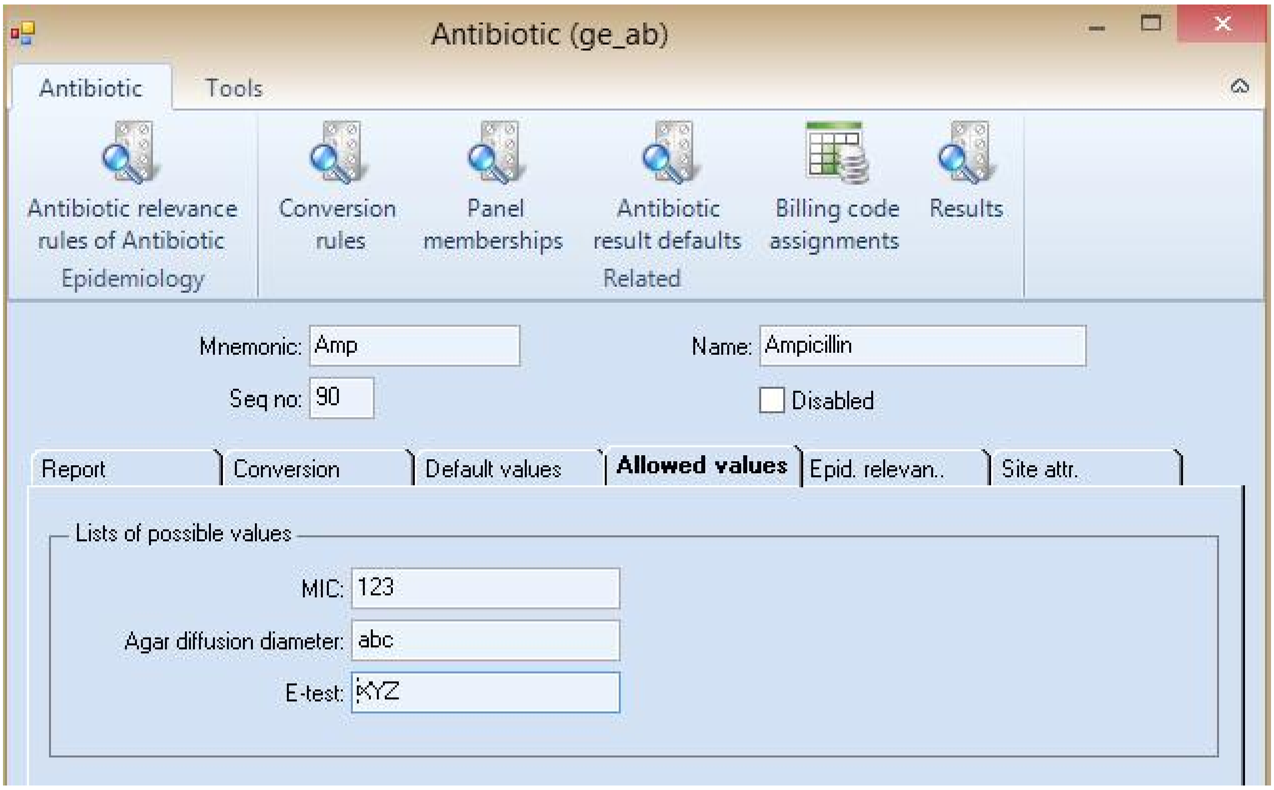
Antibiotic result values can be entered in the antibiogram browser of the microbiology workscreen. These values can be RIS or non-RIS (e.g. numeric) values.

Until now, anything could be entered as a non-RIS value. In practice, however, only specific values are appropriate for antibiotic results. For instance, *12* and *48* are correct E-test result values, *2051* is not.

Present functionality

It is now possible to limit the non-RIS values that can be entered to specific values. To this aim, lists with appropriate result values can be created via the configuration editor of any antibiotic.

Once such lists have been created, they can be selected during the configuration of an antibiotic:



The selected lists will automatically be checked when a user enters a non-RIS value in an antibiogram. If the entered value is not part of the relevant selected list, a warning message will be displayed. However, the value can be saved even if it is not part of the selected list.

Notes

> **Note**
>
> In the previous GLIMS versions, it was already possible to create lists of result values via the configuration editors of antibiotics. However, these lists were never checked upon insertion of a result value and no warning was displayed when the entered value didn't belong to a list.

Correction for position of cursor in microbiology screen (GLIMS_BAC-01099)

When entering a conclusion for a microbiology action with status **ReadValidated**, the microbiology action's status changes, causing the microbiology screen to refresh. However, when the focus returned to the **Conclusion** field, the cursor was positioned at the beginning of the already entered text and not at the end. This has been corrected.

Option to enable/disable column sorting in antibiogram (GLIMS_BAC-01100)

In a nutshell

It is now possible to choose whether or not the antibiotics in the antibiogram window of the microbiology workscreen should be sorted according to the sequence number they have in the currently selected panel.

Past functionality

The antibiogram browser of the microbiology workscreen is composed of columns (1, 2, 3,...). Each column corresponds to the antibiotic panel of a given isolation.

When clicking in a column, the antibiotics were automatically sorted according to the sequence number they have been assigned in the panel represented by that column.

Given that one and the same antibiotic may have a different sequence number in different panels, the order in which the antibiotics were sorted automatically changed when clicking in another column, i.e. in another panel.

Present functionality

It is now possible to deactivate the automatic reordering of the antibiotics thanks to a new option in the Options of the microbiology workscreen:

When inside the antibiogram, sort according to the antibiotic panel of that column

If this option is unticked, the antibiotics remain in the initially displayed order when the user clicks in another column of the antibiogram browser.

Discontinue antibiogram result when removing isolation (GLIMS_BAC-01111)

Description

1. In the microbiology work screen, add an isolation.
2. Remove the isolation.

Current behaviour

The antibiogram result which was created when the isolation was added will now be discontinued when the isolation is removed.

"Record passed" message no longer shown when changing microbiology action status (GLIMS_BAC-01114)

When changing the status of a microbiology action, a **Record passed** info message is displayed. In order for the message to disappear, the user has to click the **OK** button. As this message has no added value and requires one extra click, it will no longer be displayed.

Adding carriers automatically with MISPL functions (GLIMS_BAC-01115)

MISPL functions '.AddCarriers'

Carriers can now be requested automatically using two new MISPL functions:

- MicrobiologyAction.AddCarriers
- Specimen.AddCarriers

Use case of MicrobiologyAction.AddCarriers

When new tests need to be done, additional carriers should be requested for the microbiology action. For this request to occur automatically :

1. Open the configuration editor of the corresponding medium.
2. Enter a MicrobiologyAction.AddCarriers MISPL function in the field **Trigger when comment changed**.

Examples

Examples

Here are examples of MicrobiologyAction.AddCarriers you can use:

Example 1:

```
if substr( .comment,1,1) = "P"
then RETURN .Action.AddCarriers("ut_Medium2",?,YES,NO,?);
else return YES;
endif;
```

Example 2:

```
if substr( .comment,1,1) = "P"
then RETURN .Action.AddCarriers("ut_Medium1,ut_Medium2,ut_Medi-
um3",YES,YES,NO,"testcomment");
else return YES;
endif;
```

Example 3:

```
if substr( .comment,1,1) = "P"
then RETURN .Action.AddCarriers("ut_Medium2",?,?,?,?);
else return YES;
endif;
```

Once automatically requested, the new carriers are displayed in the microbiology work screen.

Extra justification / logging for microbiology changes (GLIMS_BAC-01116)

Introduction

This modification ensures that users must specify a justification for important changes applied to microbiology data.

Changing a validated antibiotic result

Justification

When an antibiotic result in status **Validated** is changed, a justification (reason) will be asked.

> **Warning**
>
> Validated antibiotic results can no longer be modified in the antibiotic result editor. You have to do this in the microbiology screen or in the zoomed antibiogram screen.
>
> This implies that a justification is always required.

Logging

A **log entry** containing this reason will be created. The audit trail of the antibiotic result will display an extra entry with the content of this log:

Validated antibiotic result modified, reason: [reason]

Reopening a closed microbiology action

Justification

When a microbiology action in status **Closed** is reopened, a justification (reason) will be asked.

Logging

A **log entry** containing this reason will be created. The audit trail of the microbiology action will display an extra entry with the content of this log:

Validated microbiology action modified, reason: [reason]

Changing the microorganism of a validated isolation

Logging

When the microorganism of a validated isolation is changed to another one that is unrelated to the previous one (no child, grandchild, etc...), a **log entry** about this specific change will be created. The audit trail of the isolation will display an extra entry with the content of this log:

Validated isolation modified, organisms [old morg] and [new morg] unrelated

Status of MB action remains "Ready" when conclusion is modified (GLIMS_BAC-01124)

When a biologist modified the conclusion of a microbiology action with status **Ready**, the status wrongly changed to **Read-confirmed**. This has been corrected: the status remains **Ready**.

New (MISPL) function to mark isolation as "To be reported officially" (GLIMS_BAC-01125)

Introduction

In some countries, labs are required to send a report to a health office when specific microorganisms are found.

GLIMS allows to mark isolations as "To be reported officially". In previous versions, this could only be accomplished by enabling the **Microorganism** option **Must be reported officially**.

New functions have now be added to mark isolations as "To be reported officially".

Interactive function

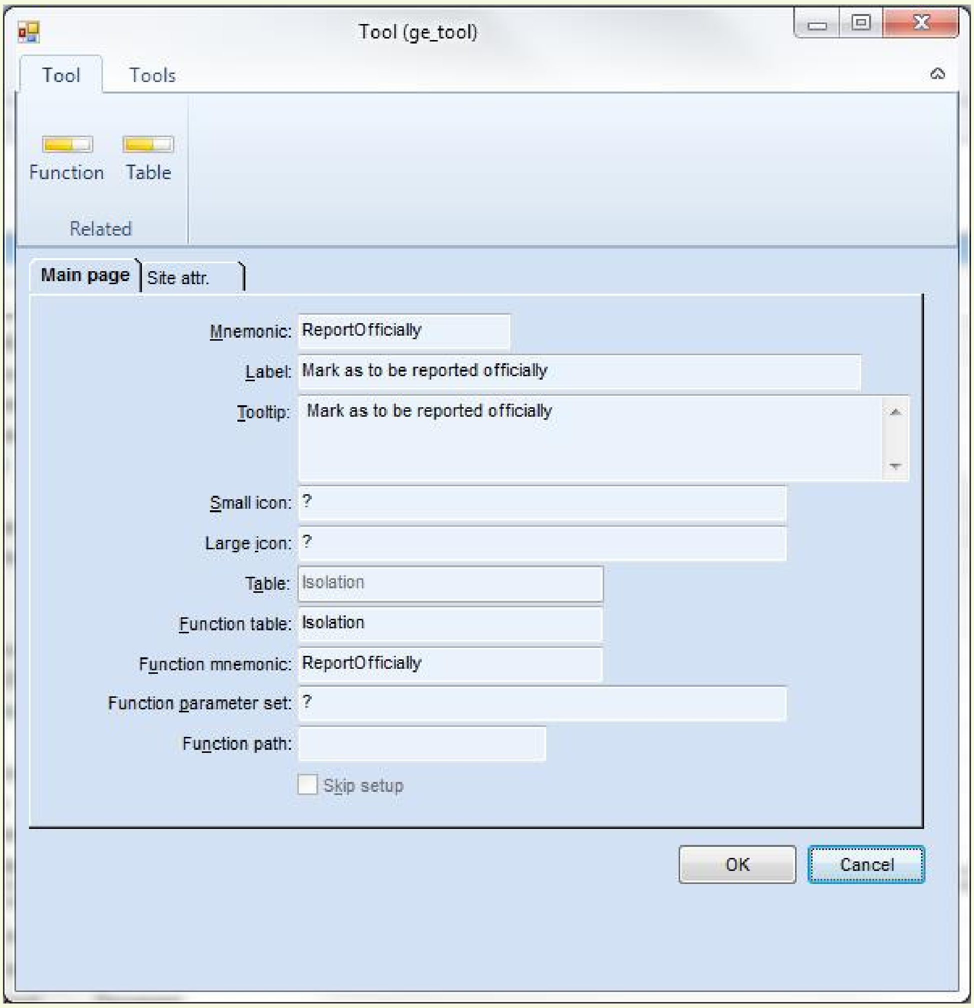
A new Isolation-based function **ReportOfficially** is now available that can be added to the Isolation-based context menu or ribbon.

It allows to mark one or several isolations as "To be reported officially".

Note

By default, the function will not be visible after the upgrade to GLIMS 9.6.

You must manually define a Tool (Base table: Isolation, Function mnemonic: ReportOfficially) and add this tool to the context menu or ribbon.



MISPL function

A new Isolation-based MISPL function SetReportOfficially is available.

This MISPL function can e.g. be used in

- The **Microorganism** field **When isolation confirmed**.
- The **Microorganism** field **When antibiogram confirmed**.

This MISPL function can overrule the **Microorganism** option **Must be reported officially**.

Colors in microbiology work screen in case of a non-reportable isolation (GLIMS_BAC-01133)

When an isolation in the microbiology work screen is marked as **Non-reportable**, the foreground color of the microorganism's mnemonic becomes gray.

The related appraisal, isolation test values and antibiotic results will now also be displayed in gray in the:

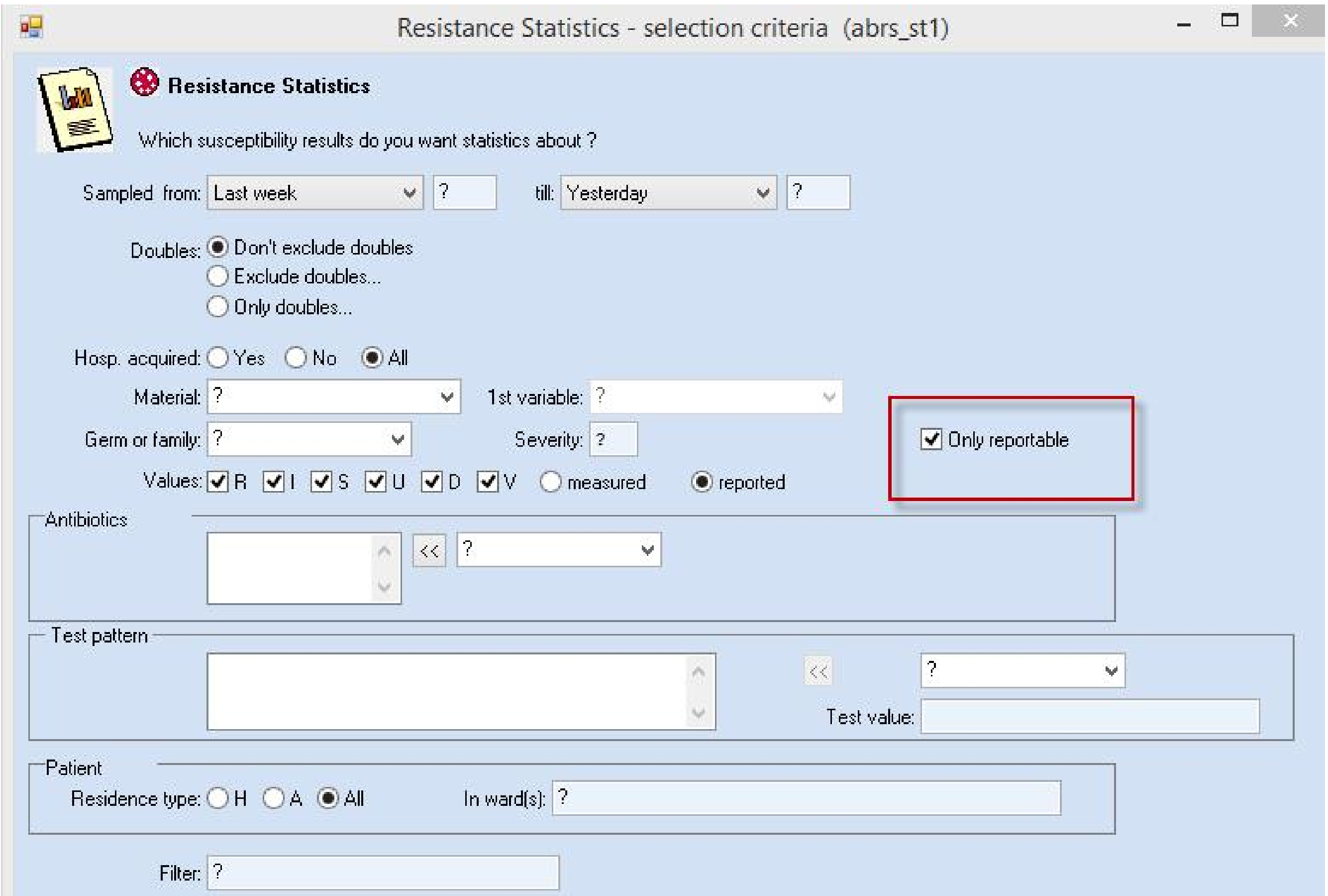
- Microbiology work screen
- Zoomed antibiogram screen
- Isolation browser

Only include reportable isolations in resistance statistics (GLIMS_BACS-00012)

GLIMS can now provide resistance statistics in which only reportable isolations are taken into account.

The selection criterion **Reportable only** has been added to the **Resistance Statistics selection** screen.

If this criterion is activated, GLIMS will only provide resistance statistics data for reportable isolations.



This change is only backward compatible if the option **Only reportable** is set to **No**.

Pathology

Correction for adding disabled slide to pathology order (GLIMS-07322)

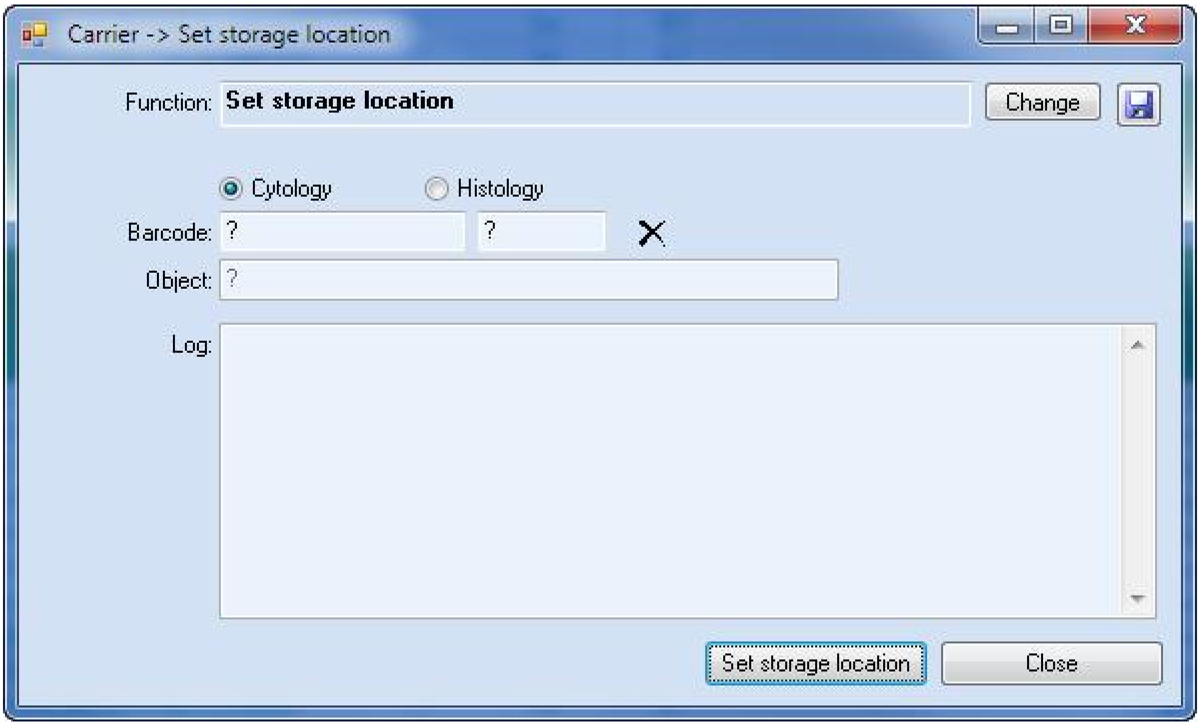
An issue was detected where a disabled slide could still be added to a pathology order via the **Add slides** window in the pathology screen. This has been corrected.

New function "Process blocks and slides by number" (GLIMS_Path-00328)

Introduction

The new function **Process blocks and slides by number** is now available in the GLIMS **Anatomic pathology** module. It is similar to the Specimen.ProcessByNumber function.

It can be accessed from the main menu via **Start > Anatomic pathology > Routine > Process blocks and slides by number**



Functionality

In a nutshell

The user enters a barcode in order to execute the selected function on the identified carrier record (block or slide).

Field description

"Change" button

Allows to choose the function that needs to be executed. The selected function will appear in the **Function** field (and in the title bar of the window). The leftmost button at the bottom will also have this function as label.

Which functions can be chosen

Any function from the **Carrier** context menu can be chosen or Carrier-based, string-valued site functions.

"Save" icon

This icon is available for users with role **System manager**. It allows to save the selected function and pathology examination type in a parameter set, which can then be used to add a pre-configured option to the main menu or ribbon for the **ProcessCarriers** tool.

Cytology / Histology

The type of the pathology examination must be indicated in order for GLIMS to be able to retrieve the correct block or slide for the entered barcode.

> **Note**
>
> A block in histology can have the same barcode as a slide in cytology. Hence the need to indicate the context in which the **Process blocks and slides by number** function is executed.

Barcode

A barcode can be scanned or entered manually. Based on this barcode, GLIMS tries to identify the block or slide. The second part of the **Barcode** field contains the carrier ID without the specimen ID.

> **Note**
>
> The barcode should have the format <specimen internal id> + <carrier internal id>
>
> - For blocks (only used in histology), the carrier internal id is a number.
> - For slides, the carrier internal id depends on the usage:
>   - cytology: carrier internal id is a number
>   - histology: the carrier internal id is <block number> + "-" + <slide number> as slides are derived from a block

Use the Enter key or the button with the label of the selected function to activate the selected function for the entered barcode.

Object

Shows the patient identification when the block or slide has been identified and the selected function is executed.

Log

This field gives the user feedback about the execution of the selected function. For site functions, the output is also shown.

Example

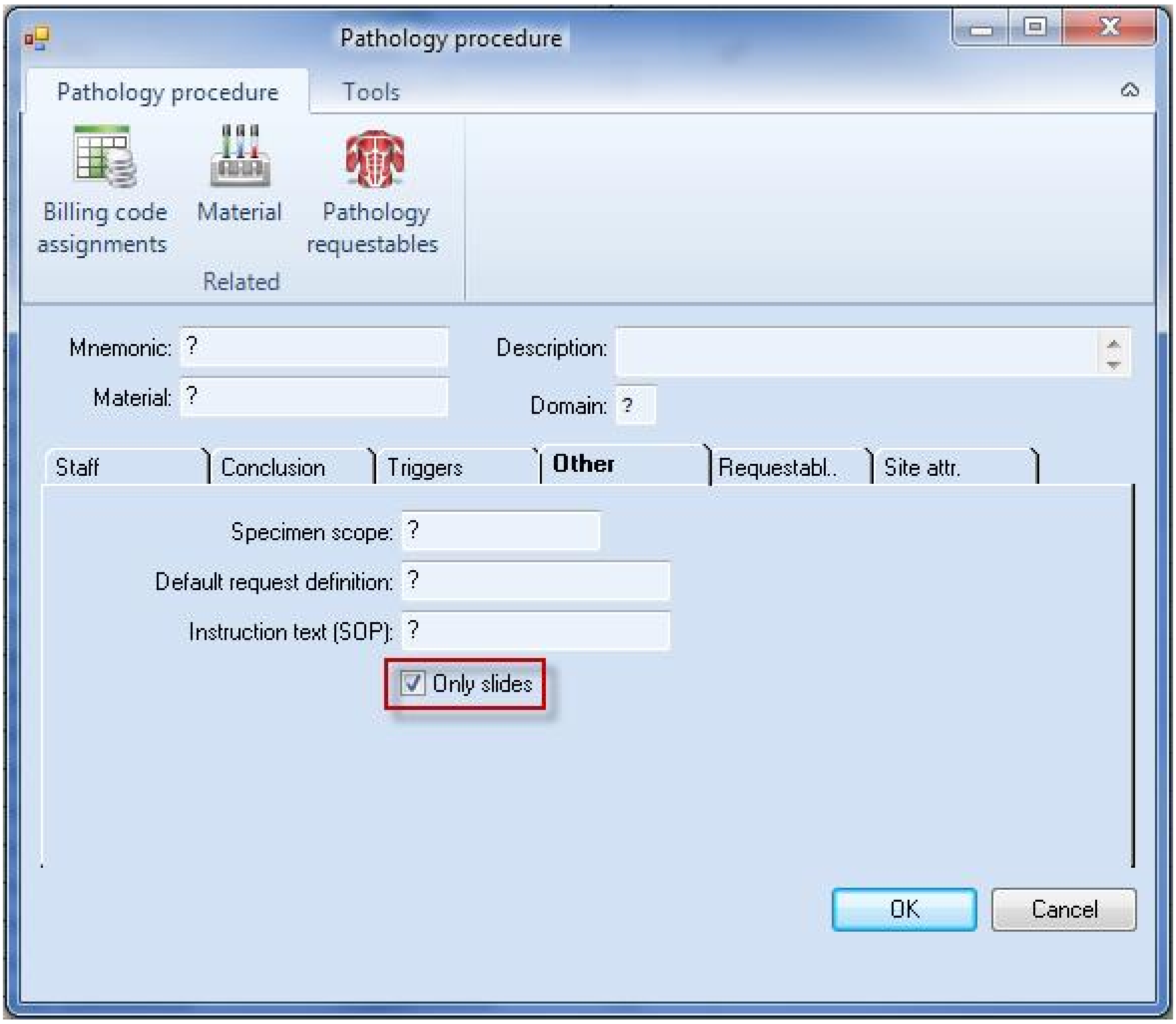
You could for instance use this program to scan a slide and then add it to the archive.

Anatomic pathology module supports use of only slides (GLIMS_Path-00329)

In the configuration editor of a pathology procedure, the option **Only slides** is now available. When set, the pathology module will be adjusted to only use slides and no blocks (e.g. for cytology).

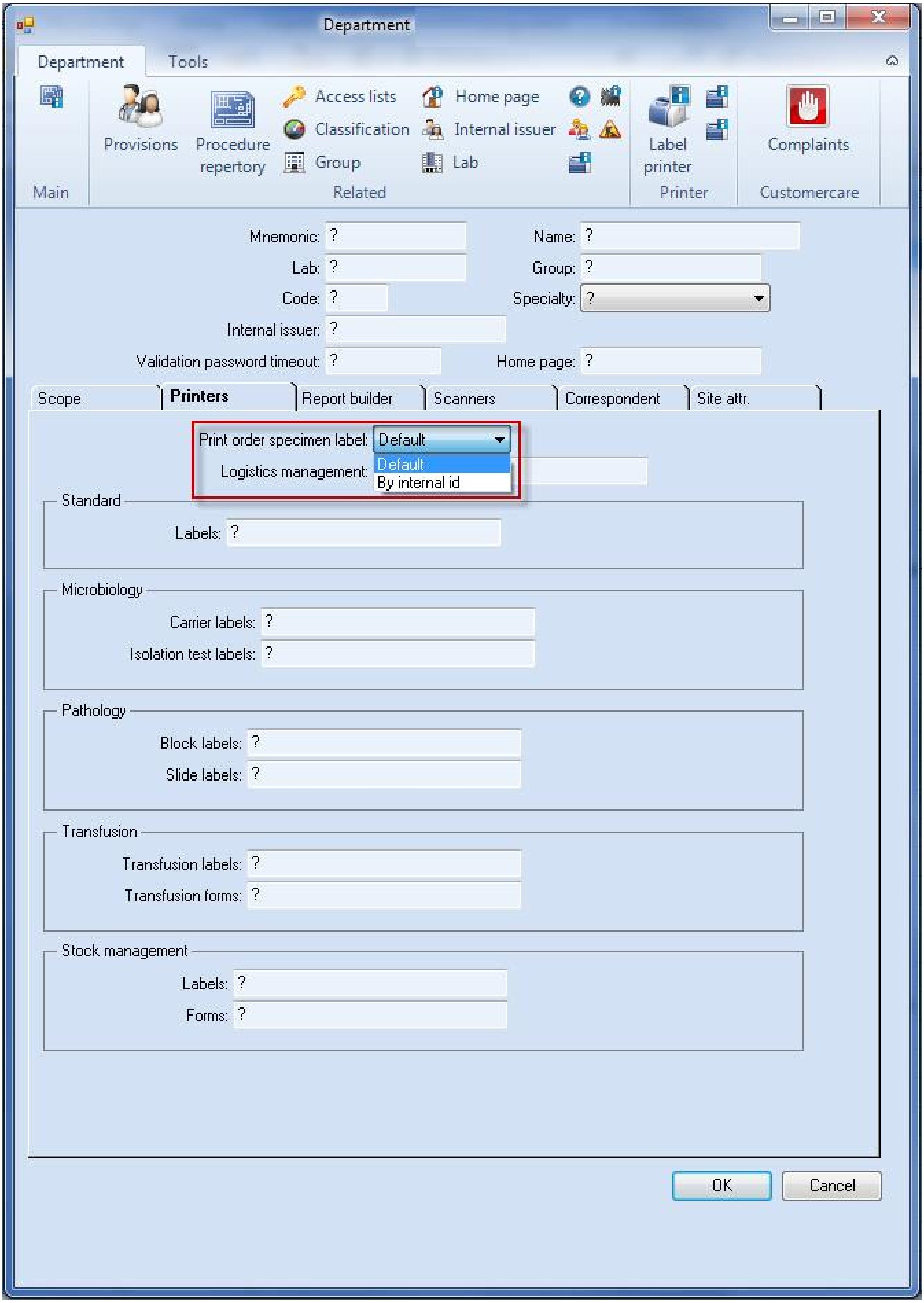
For pathology procedures with **Only slides** enabled:

1. The initial work status of a newly created pathology examination is **Staining**
2. The pathology examination's work status can only be set to **Reading** or **Staining** via the dedicated context functions.
3. The **Blocks > Generate** context function cannot be executed for the pathology examination.
4. In the pathology work screen,
    1. Only work status **Reading** and **Staining** can be selected.
    2. The **Add blocks** icon is hidden and the ALT-F1 key combination cannot be used.



Print order based on Specimen.InternalId for specimen labels (GLIMS_Path-00330)

In the configuration editor of a Department, the new option **Print order specimen label** is now available in the **Printers** tab. It allows to indicate per department the order in which specimen labels should be printed.


Department
Department
Tools
Provisions
Procedure repertory
Access lists
Classification
Group
Home page
Internal issuer
Lab
Label printer
Complaints
Main
Related
Printer
Customercare
Mnemonic: ?
Name: ?
Lab: ?
Group: ?
Code: ?
Specialty: ?
Internal issuer: ?
Validation password timeout: ?
Home page: ?
Scope
Printers
Report builder
Scanners
Correspondent
Site attr.
Print order specimen label: Default
Logistics management:
Default
By internal id
Standard
Labels: ?
Microbiology
Carrier labels: ?
Isolation test labels: ?
Pathology
Block labels: ?
Slide labels: ?
Transfusion
Transfusion labels: ?
Transfusion forms: ?
Stock management
Labels: ?
Forms: ?
OK
Cancel

The following values are available for the new option:

Default

The default print order as was already applied by GLIMS: Material.LabelSeqNo + Material.Mnemonic + Specimen.SamplingTime + Specimen.InternalId + Procedure.SeqNo (for the material input labels).

By internal ID

Allows a print order based on the Specimen.InternalId (e.g. for pathology).

Improvements for PathologyExam.ChangeResponsible function (GLIMS_Path-00331)

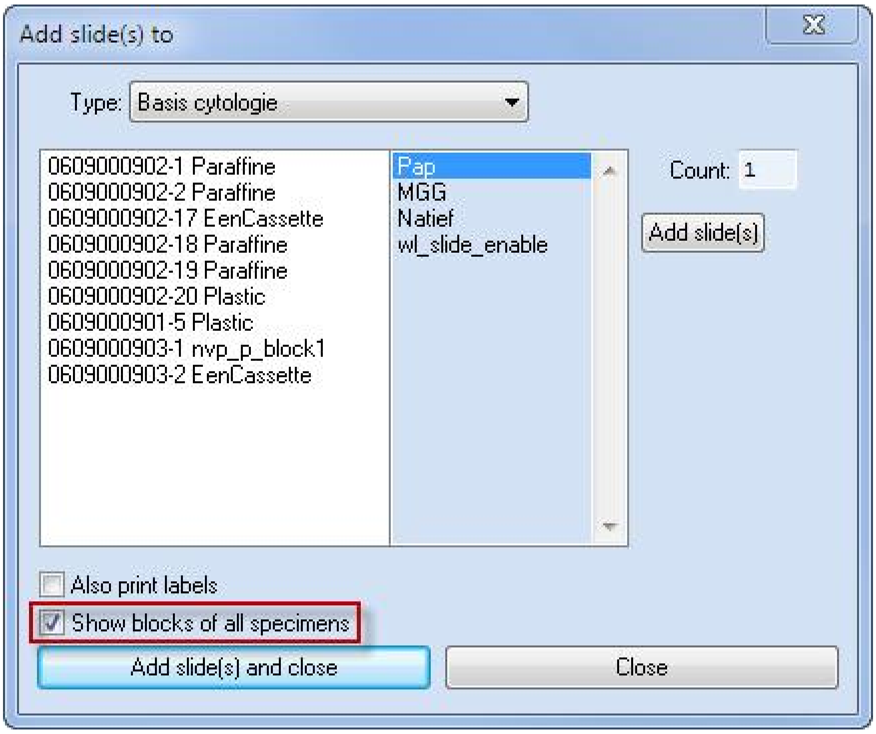
The context function Change responsible can be used for one or more pathology examinations and allows to change the responsible HC provider for the selected examinations. This function has been improved:

1. It can now be added as a pre-configured menu option.
2. It can now be used in MISPL via the new MISPL function PathologyExam.ChangeResponsible
3. It is now also possible to type in the **Responsible** field in order to select the new responsible HC provider from the list.

Show blocks of all specimens when adding slides (GLIMS_Path-00332)

The **Add slides** function that can be activated from the pathology work screen contains a new option **Show blocks of all specimens**.

When set, not only the blocks of the currently selected specimen but also those of the other specimens of the same order will be shown. This way, slides can be added to blocks of multiple specimens.



Notes

Show blocks of all specimens

1. When the option is enabled, the displayed block name will be prefixed with a reference to the specimen.
2. This setting is not remembered. When opening the **Add slides** window, the option will always be disabled.

Add blocks

The ordering of the specimens in the **Add blocks** window might be different than in previous versions. The specimen of the current pathology examination is now displayed first.

Expand carrier nodes by default in pathology work screen (GLIMS_Path-00333)

Past functionality

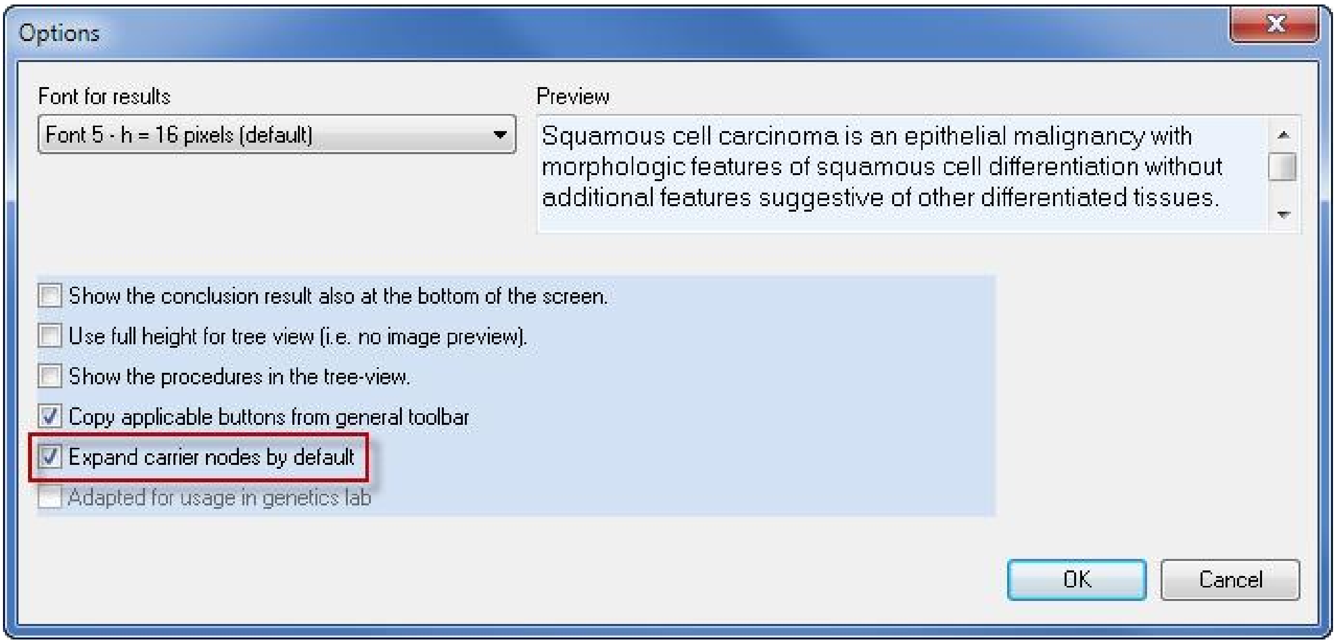
In previous versions, the carrier nodes displayed in the tree view of the pathology work screen always had to be expanded manually in order to see the slides.

Present functionality

The option **Expand carrier nodes by default** is now available in the options window of the pathology work screen. When set, carrier nodes will be expanded by default when opening the work screen. As a result, the slides for the blocks in the tree view will be immediately visible.

User preferences

This setting is saved in the user preferences.


Options
Font for results
Font 5 - h = 16 pixels (default)
Preview
Squamous cell carcinoma is an epithelial malignancy with morphologic features of squamous cell differentiation without additional features suggestive of other differentiated tissues.
Show the conclusion result also at the bottom of the screen.
Use full height for tree view (i.e. no image preview).
Show the procedures in the tree-view.
Copy applicable buttons from general toolbar
Expand carrier nodes by default
Adapted for usage in genetics lab
OK
Cancel

Quality control

Error when opening QC population (GLIMS-07297)

An issue has been reported where the error **Value cannot be displayed using >>>>9. (74)** occurred when opening a **QC population** because a number of more than 5 digits could not be displayed. As a result, the **Total count** and **Numeric count** fields of the QC population and the **#** column of the QC population browser displayed ?????. This has been corrected.

Stock management

Correction for product check in when using bar code parser (GLIMS_STCK-00543)

GLIMS offers a mechanism to interpret scanned bar codes during product check-in and check-out and automatically set product data. Bar code interpretation logic is to be defined in the field **Product bar code parser** of the general options (**Start > System management > Customize > GLIMS Stock Management**).

However, when manually filling in product data (e.g. External ID, Lot no, Production Date, Expiration date, Quantity) in the product check-in screen, the values that were not set by the barcode parser were not taken into account. This has been corrected.

Billing

Export of prices for import in CyberLab (GLIMS_CBL-00001)

Introduction

A new gp_Site-based function **Export price list** is now available. It can be used to export price information in CSV format. This CSV file can then be imported in CyberLab to offer a price indication during order entry.

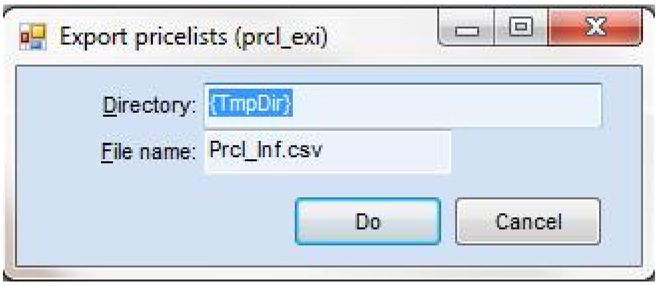
This export function requires a separate license (GLIMS CYBERLAB SYNCHRONISATION).

Functionality

Starting the export

Manually

From the main menu, click **Start** -> **Billing** -> **Export price lists**.



Directory

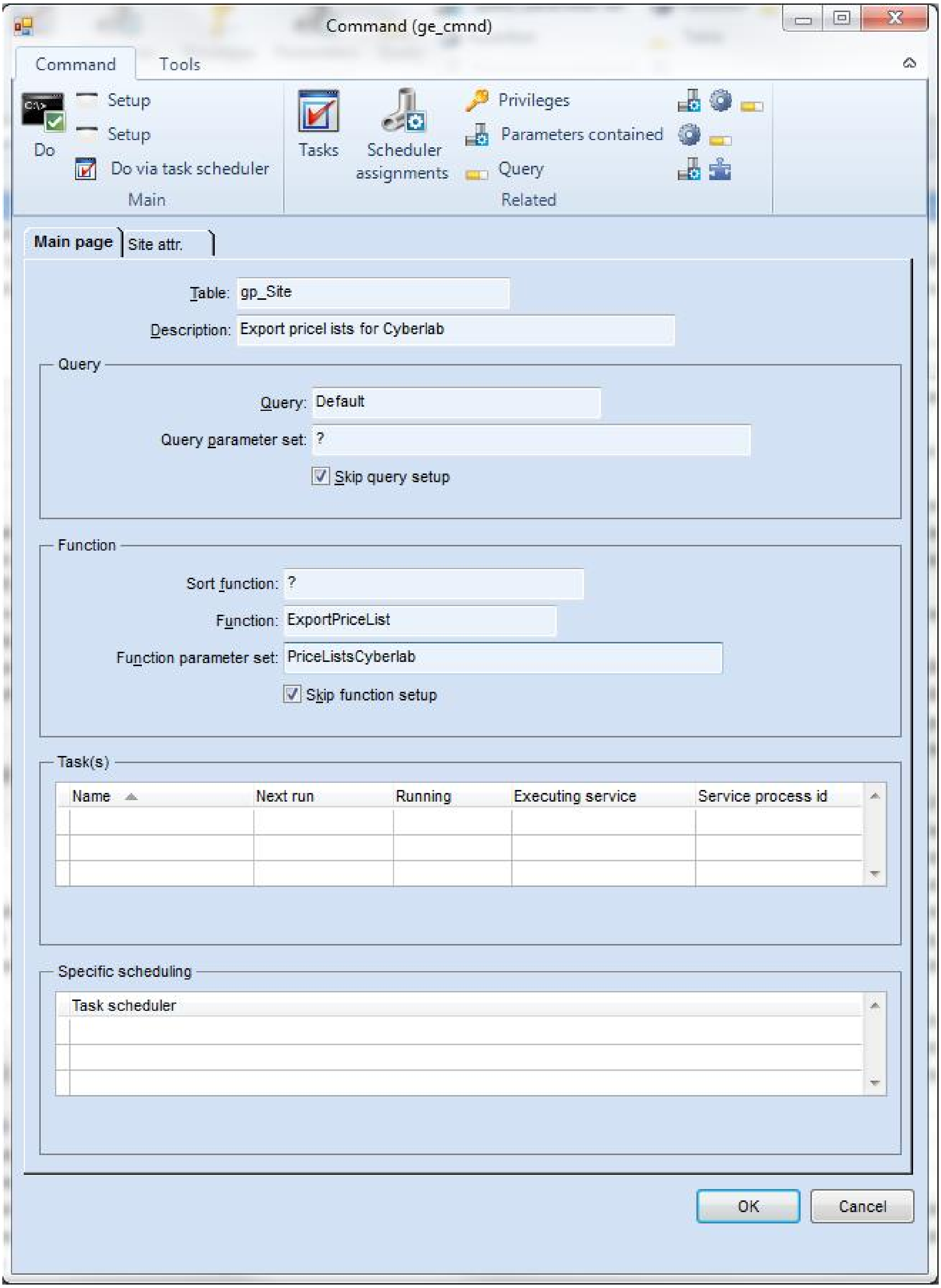
Directory where the exported file will be saved.

File name

Name of the exported file.

Automated

In most cases, the export will be run at a regular basis through a command.



File format

The CSV file contains the following fields:

1. Requestable mnemonic
2. Nomenclature code
3. Billing code
4. Description billing code
5. Price list code
6. Price code
7. Base Value code
8. Base Value
9. Multiplier (only if extension price list is used)
10. Fixed Amount
11. List Price
12. Discount (will always be 0)
13. Charged Price (multiplied with extension factor)
14. Indication to charge (yes/no) : combining info coming from tariff and from requestable (if one of both is no, then we will export ‘no’
15. Start date tariff
16. End date tariff

About panels

If members of a panel have billing codes and tariffs in a price list, they will be exported as such. If the panel itself has a billing code and tariff, this will be exported as well.

Limitations

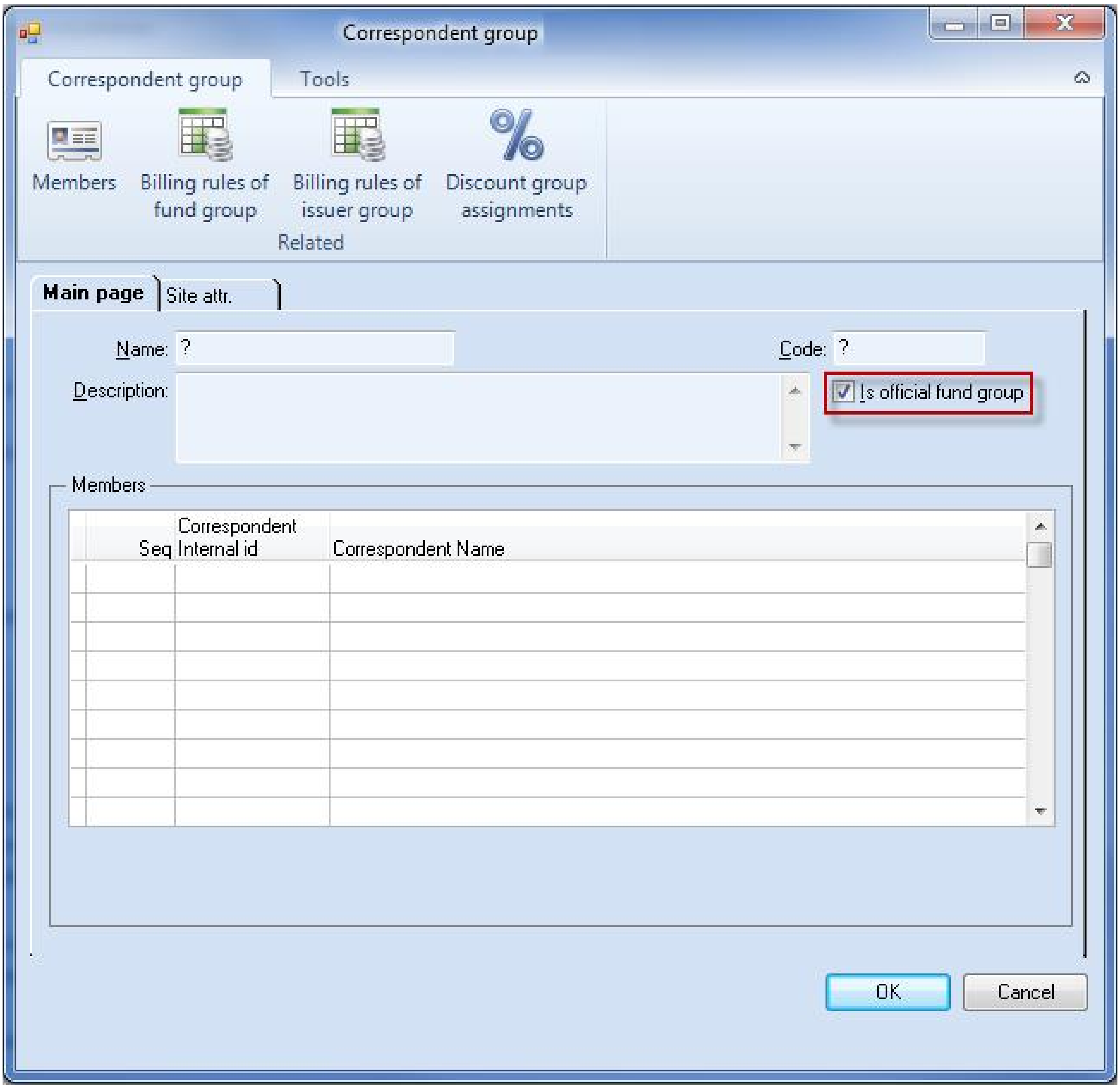
- Discount data is not exported.
- Issuer-specific price lists are not exported.
- MISPL logic is not exported.
- Billing code assignment, Tariffs and Price formula's are only exported when they are valid at the time of export.

New field "Is official fund group" on "Correspondent group" (BILX_CARE-00009)

New field "Is official fund group"

The field **Is official fund group** has been introduced on **Correspondent group** level. It allows to mark a **Correspondent group** as an official fund correspondent group.

Multiple official fund correspondent groups can be defined.



New MISPL "Fund.IsAnOfficialFundMember()"

A new (Logical) MISPL function is available to check if a fund is a member of an official fund correspondent group: **Fund.IsAnOfficialFundMember()**.

Backward compatibility

Currently defined MISPL functions based on a configuration where correspondent groups have a **Code** = OFF-MUT or the site attribute **_GroupOfficialFunds** enabled will continue working.

Financial export in "C Page MCA" format (BILX_CPAGEMCA-00002)

When exporting financial data in the **C Page MCA** format, the NABM code (**Tariff.NomenclatureCode**) will now be exported in the field "Liste des codes NABM" at position 1401 when "Lettre Clé" = B (Billing item >Tariff >PriceCode.BaseValueCode =B), in order to comply with version 2.107 of the protocol.

Financial export in "CPOWISH" format (BILX_CPOWISH-00020)

The following improvements have been made to the export of financial data in the CPOWISH format (ItPlat, Ihprest, IhPharm and ExtPharm):

- For each successfully exported financial shipment, a summary of the export will now be stored in a new file. The file will have the extension .log and its file name and directory will be identical to those of the original export file.
- The summary will also be logged in GLIMS and in the FinancialShipment.Comment field.
- An issue was solved where an empty .rptE file (ItPlat) was generated due to a mandatory field not being filled. The first field will now be filled with the first three letters of the file name.

Financial export in CPOWISH format (BILX_CPOWISH-00023)

GLIMS has been updated in order to reduce the need for MISPL when exporting financial data in CPOWISH format.

> **Note**
>
> When you choose not to update your MISPL expressions, the export of financial data should work as before.

Itplat

- Fields 6, 7, 8, 11, 13, 14, 15 can be removed from the MISPL Send_Cpow_itplat_det_values
- Field 10: if the Lowest object time is older than the Prescription time, the Lowest object time is used.

> **Note**
>
> - The command for the export of financial data should use the Internal id of the Order.
> - The field Execution time has been removed from the user interface.

IhPrest

- Fields 1 (default value in GLIMS = '0000000000'), 2, 4, 9, 13 (default value in GLIMS = '000'), 27, 37 can be removed from MISPL.
- Field 3 can be removed from MISPL. Make sure that the Execution time is set correctly in GLIMS.
- Field 12: GLIMS uses by default the Accounting class code defined on the Billing code.
- Field 14 can be removed from MISPL. The identification order (Short id or Internal id) can be set in GLIMS.
- Field 15: GLIMS uses by default the Prescription time.

- Field 16: can be removed from MISPL if the identification of the issuer is defined in GLIMS.
- Field 18: if patient is hospitalized externally, then code 18. If subcontracting, then code 23. Externally hospitalized means **Institution** = **Internal** and **Residence type** of encounter is **Hospitalized**.
- Field 42: can be removed from MISPL. GLIMS uses by default the **Lowest object time**.

> **Note**
>
> The default value for **Execution time** in GLIMS is the **Lowest object time** (and not the **Result availability time**).

IhPharm (version 1403 of Ihprest)

- Fields 3, 4, 6, 8, 9, 10, 11, 14, 16, 23, 28, 33, 36 can be removed from MISPL.
- Field 13 can be removed from MISPL if the identification of the issuer is defined in GLIMS.
- Field 34 can be removed from MISPL if the identification of the blood bag's transfusion HC provider is defined in GLIMS.

ExtPharm (version 1303 of IhPrest)

Same remarks apply as for IhPharm. Note that ExtPharm has an extra field in the beginning. As a result, field 5 in ExtPharm is field 4 in IhPharm.

Financial export in "German KVDT" format (BILX_GKVDT-00060)

The export of financial data in the "German KVDT" format (using the FinancialShipment.Send function) has been updated to support the changes (quarter 1, 2015) in KBV regulation.

Financial export in "German KVDT" format (BILX_GKVDT-00061)

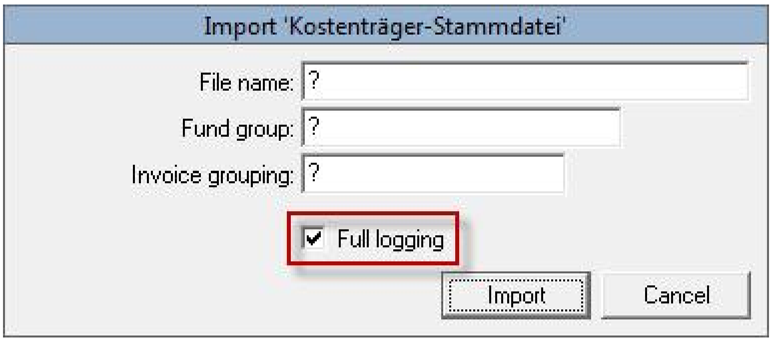
When exporting financial data in the **German KVDT format** using the FinancialShipment.Send function, GLIMS offers a more flexible method to look up the billing item executor for export. See BILX_GKVDT-00031 for more information.

However, if the validated dummy **Executor property** was discontinued, its validator was still used during the export. This has been corrected.

Extended logging for KostenTräger-Stammdatei import (BILX_GKVDT-00066)

When importing KostenTräger-Stammdatei via **Start > Billing > Configuration > Funds > Import 'KostenTräger-Stammdatei'**, the number of payment agreements that had been closed per fund was no longer available in the logging. This has been corrected.

Moreover, a new option **Full logging** will now be available, allowing a more extended logging:



Financial export in KVDT format: support 'X' for *Geschlecht* (BILX_GKVDT-00067)

The export of financial data in the German KVDT format (using the FinancialShipment.Send function) has been updated to support the changes (quarter 1, 2016) in KBV regulation.

The new value X ('Unbestimmt') is now supported for *Geschlecht*:

Sex in GLIMS	*Geschlecht* in ADT export
Male	M
Female	W
Unknown	U ('Unbekannt')
Other, Ambiguous	X ('Unbestimmt')
Not applicable	' ' (the empty value will cause an error for the field FK 3110 in the KVDT export)
?	U ('Unbekannt')

In addition:

- The following *Regels* have been implemented: 762, 786, 787, 817, 818
- *Version der Satzbeschreibung* has been updated to ADT0116.01

Financial export in "German KVDT" format (BILX_GKVDT-00075)

The export of financial data in the German KVDT format (using the FinancialShipment.Send function) has been updated to support changes (quarter 4, 2015) in KBV regulation.

- The *OMIM P Kode* (site attribute value specified for Property) will now also be exported for billing code 11233 (in field 5071).

  When no *OMIM P Kode* is available (or value is set to 999999), field 5073 (Request.ExternalComment or value of Order site attribute XDT_5009) will be required.

  Fields 5070 and 5072 are not exported for billing code 11233.

- The *OMIM P Kode* will now also be exported for billing codes 11320<G-Alpha>, 11321<G-Alpha>, 11322<G-Alpha> and 11233<G-Alpha> where <G-Alpha> is A-Z.

- The GNR format check has been improved. In the past, billing codes like 11233a were allowed while the letter at the end should be in uppercase (A-Z).

- The EGK format check has been improved. In the past, payment agreement matriculation numbers starting with lowercase were allowed. Numbers should now start with uppercase A. Verification is done during KVDT check – not in the payment agreement editor.

- If the Order.Issuer has as identification code an *ASV nummer*, then it will now be sent in 4217/4218. In the past, the *ASV nummer* was not seen as a valid/recognized number and was therefore sent via 4219.

Financial export in "German KVDT" format (BILX_GKVDT-00079)

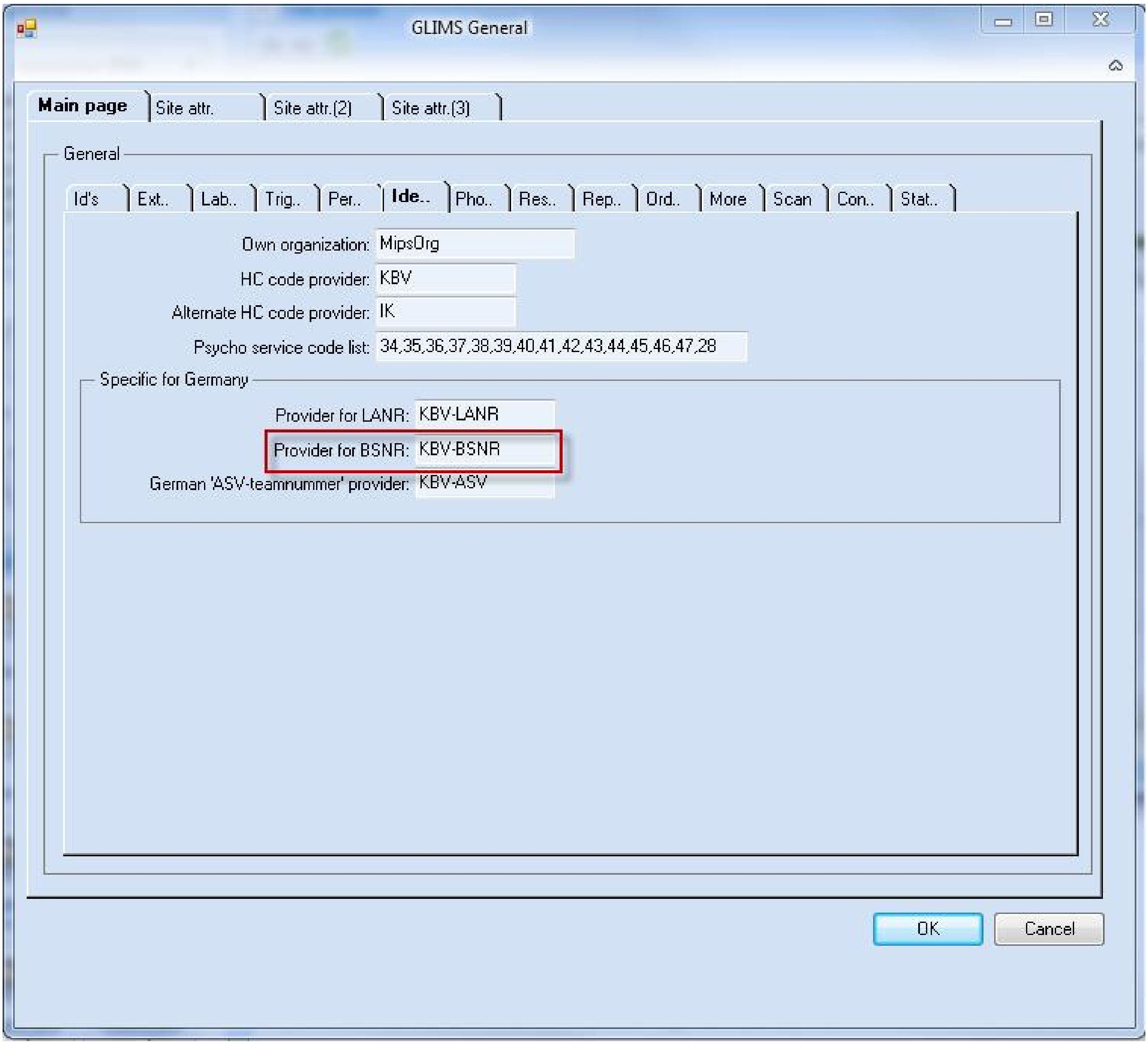
The export of financial data in the **German KVDT format** (using the FinancialShipment.Send function) has been updated to support the latest changes (quarter 2, 2016) in KBV regulation.

> **Note**
>
> These changes will apply for financial shipments with an **External date** >= 1 April 2016.

Financial export in KVDT format: BSNR (BILX_GKVDT-00082)

The export of financial data in the **German KVDT** format (using the FinancialShipment.Send function) has been updated to now export the identification code of the **BillingItem.ExecutingDepartment** (and no longer the identification code of the **BillingItem.Executor**) in field 5098 "BSNR des Orts der Leistungserbringung".

Make sure to specify the **Provider for BSNR** in **GLIMS General** via **Start > System management > Customize > GLIMS General** (**Identification** tab).



Financial export in "German KVDT" format (BILX_GKVDT-00087)

An issue was reported where a blocking error occurred during the export of financial data in the **German KVDT format** (using the FinancialShipment.Send function) when the patient's **Correspondent.AddressLine1** contained a house number exceeding 9 characters.

The exported house number will now be truncated at 9 characters and a warning will be logged (log type **Create KV-DT file**).

Financial export in "SEPA" format (BILX_GSEPA-00002)

Introduction

Since GLIMS 9.4 (BILX_GSEPA-00001), financial data can be exported in the **SEPA** format using the FinancialShipment.Send function.

The SEPA export requires some additional configuration. A mandate should be defined between the debtor (the **Correspondent** linked to the **Payer**) and the creditor (the **Correspondent** linked to the **Firm** of the **Lab**), containing **Sequence type** and **Creditor identifier** information.

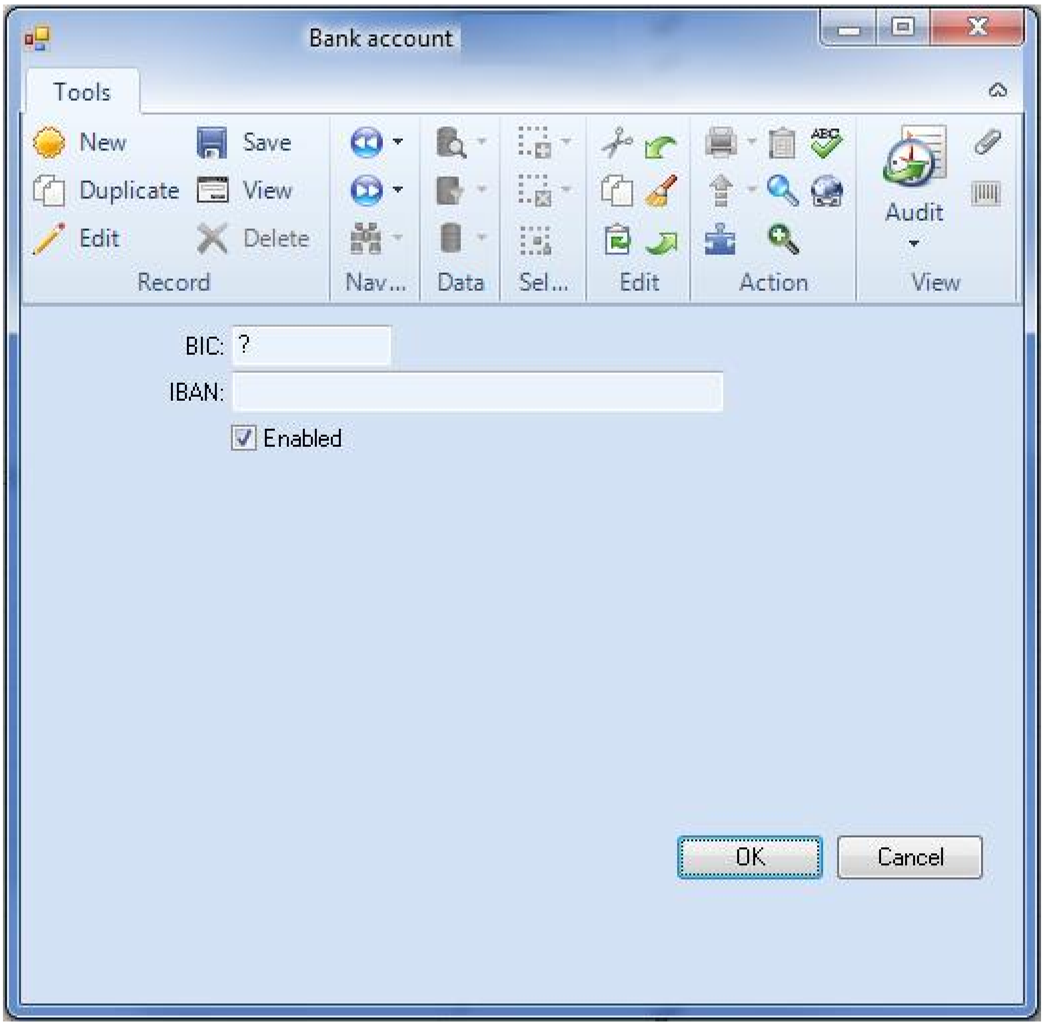
> **Note**
>
> The financial export in the **SEPA** format now requires a license.

New tables BankAccount, BankAccountHolder and BankMandate

The extra data which is needed for SEPA can now be specified by means of the following new tables:

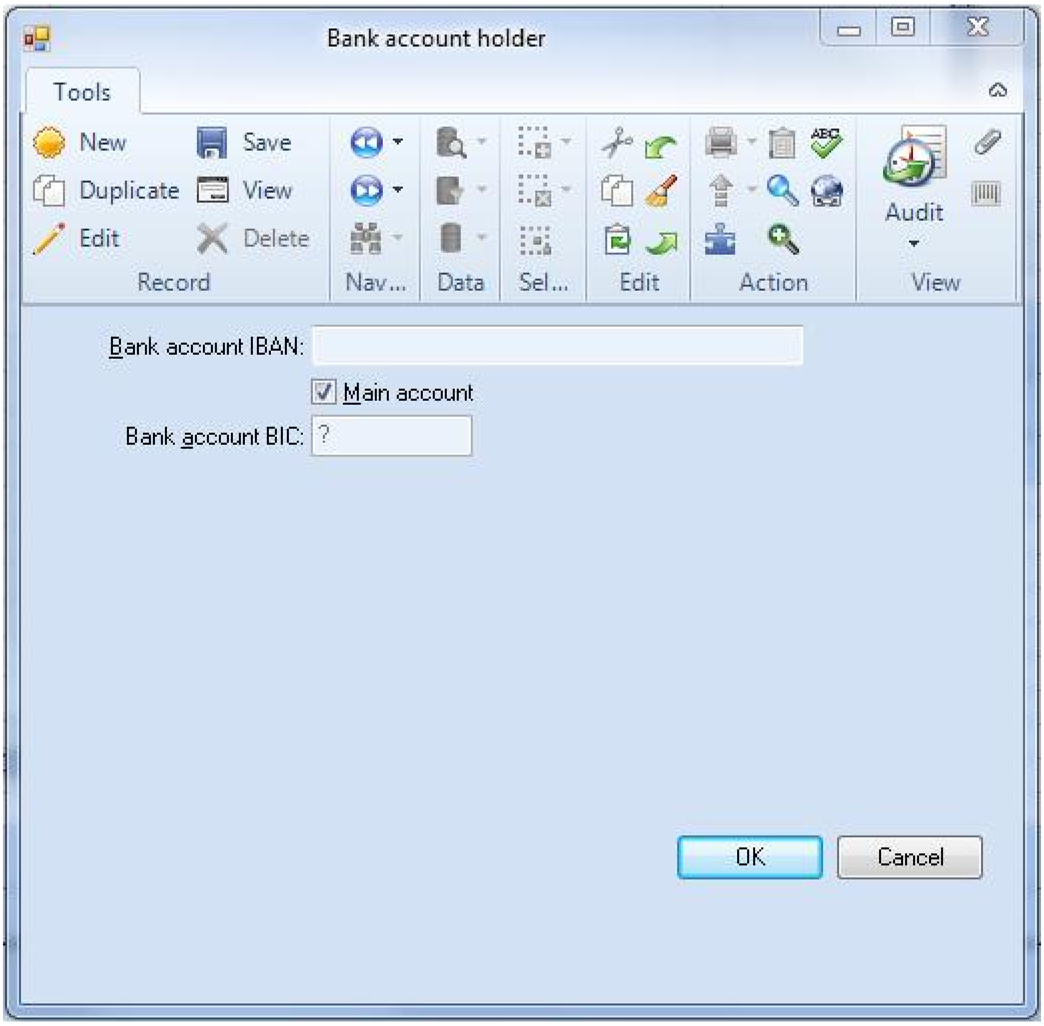
BankAccount

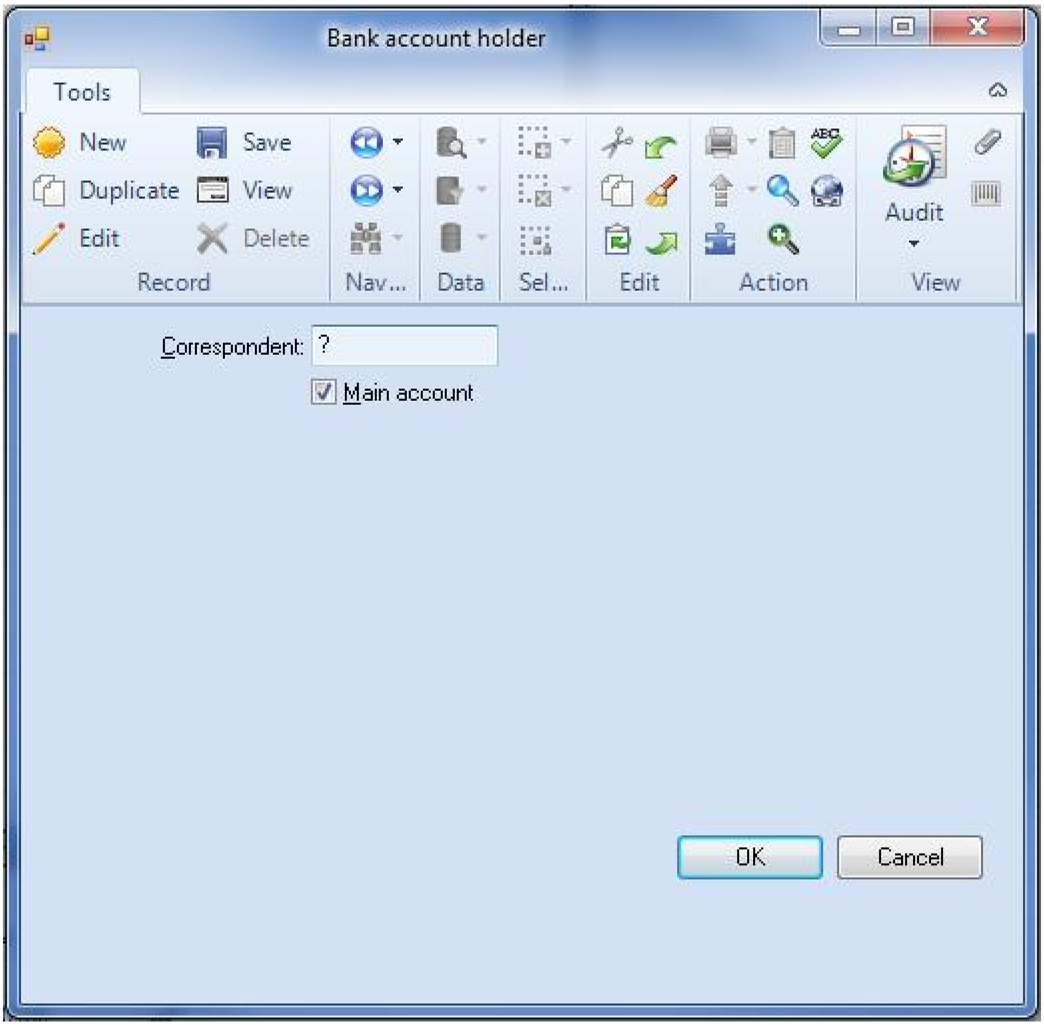
Bank accounts can be accessed via **Start > Billing > Configuration > Bank accounts** or in the **Correspondent** editor (see below).



BankAccountHolder

This table links a **Bank account** to a **Correspondent**. The bank account holder(s) can be accessed from a **Bank account** or a **Correspondent**.


Bank account holder
Tools
New
Save
Duplicate
View
Edit
Delete
Record
Nav...
Data
Sel...
Edit
Action
Audit
View
Bank account IBAN:
Main account
Bank account BIC: ?
OK
Cancel


Bank account holder
Tools
New
Save
Duplicate
View
Edit
Delete
Record
Nav...
Data
Sel...
Edit
Action
Audit
View
Correspondent: ?
Main account
OK
Cancel

Note

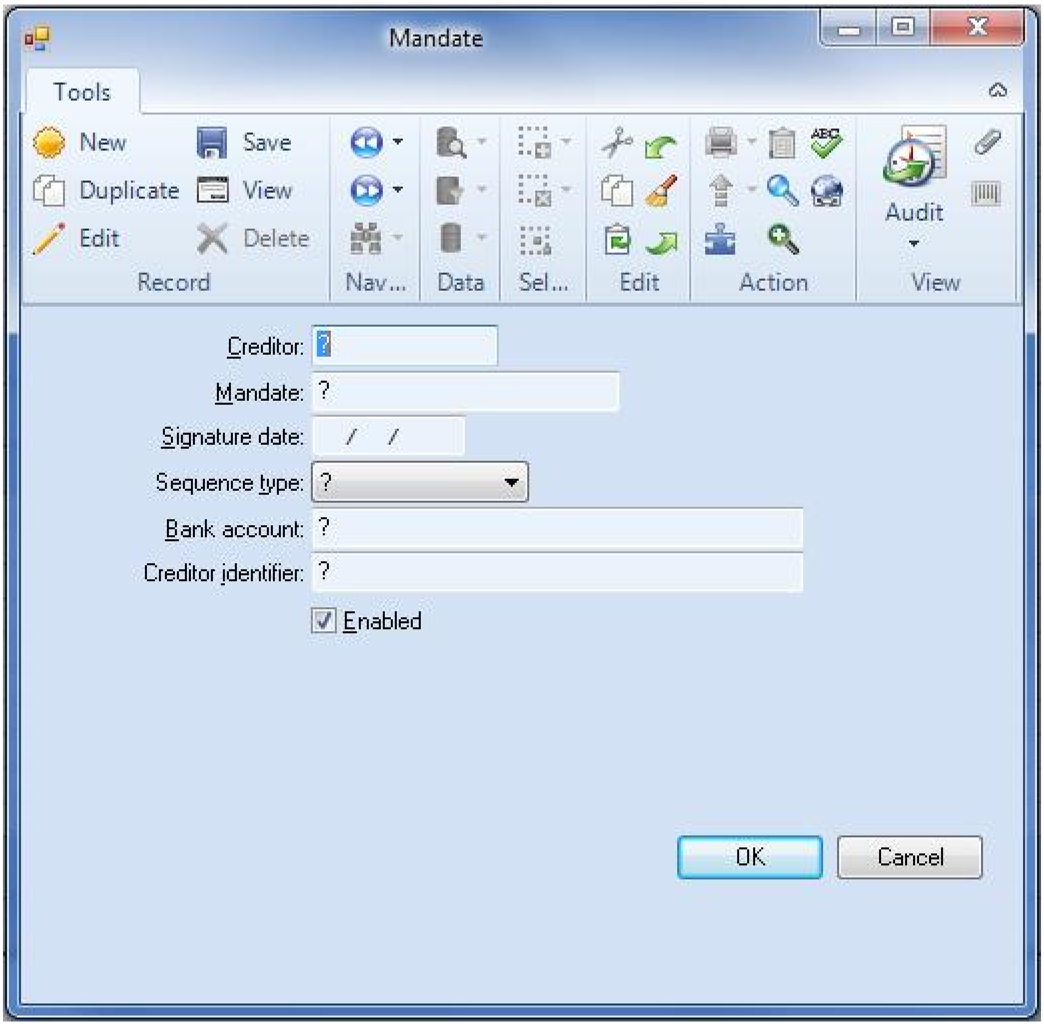
- There can only be 1 **Main account** for a **Correspondent**.
- A **Bank account** can be linked to multiple correspondents.
- A **Correspondent** can have multiple bank accounts.

BankMandate

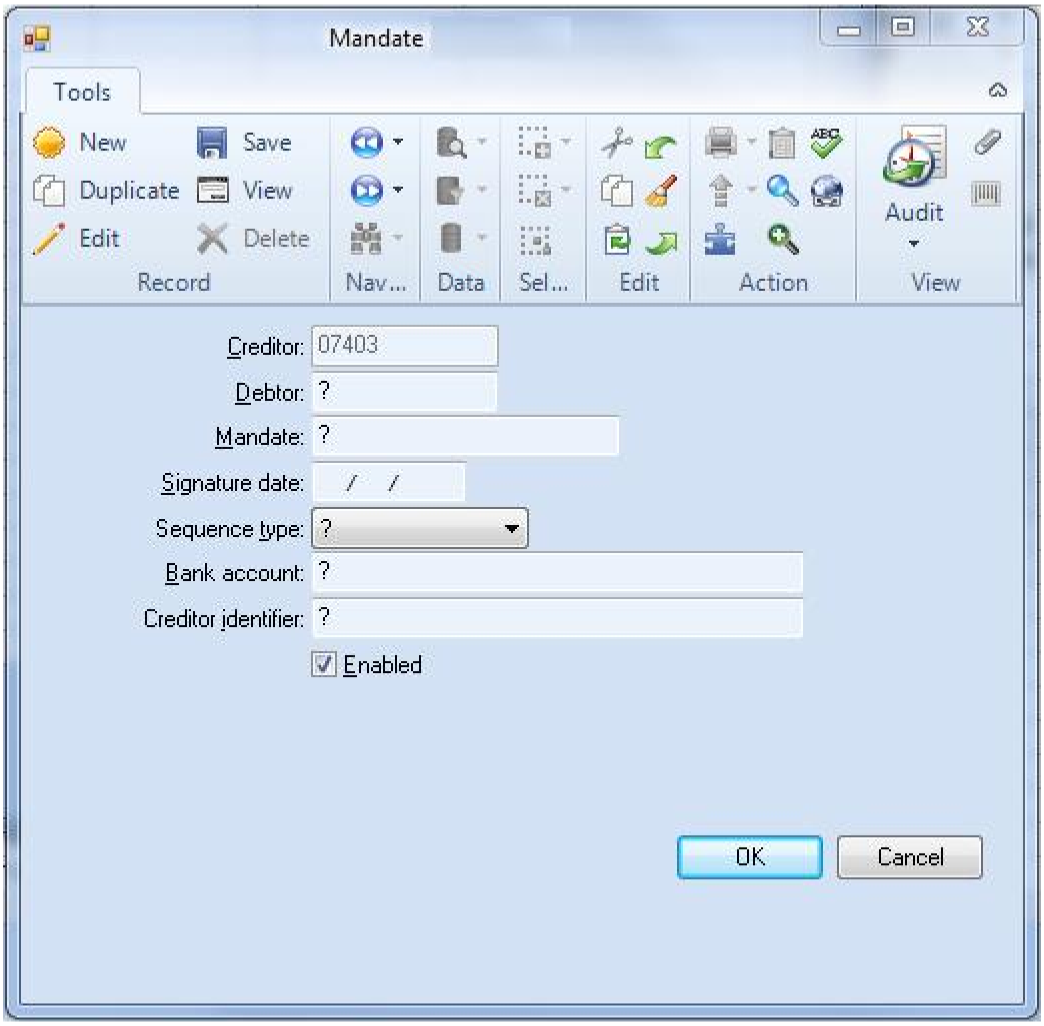
A bank mandate is given to a creditor for a specific bank account. A creditor can receive mandates for more than one account (or the debtor can give multiple mandates).

A mandate can be defined:

1. from a debtor correspondent by choosing **Show all > Given bank mandates** in the context menu or by using the incorporated **Given bank mandates** browser in the **Correspondent** editor (see below).

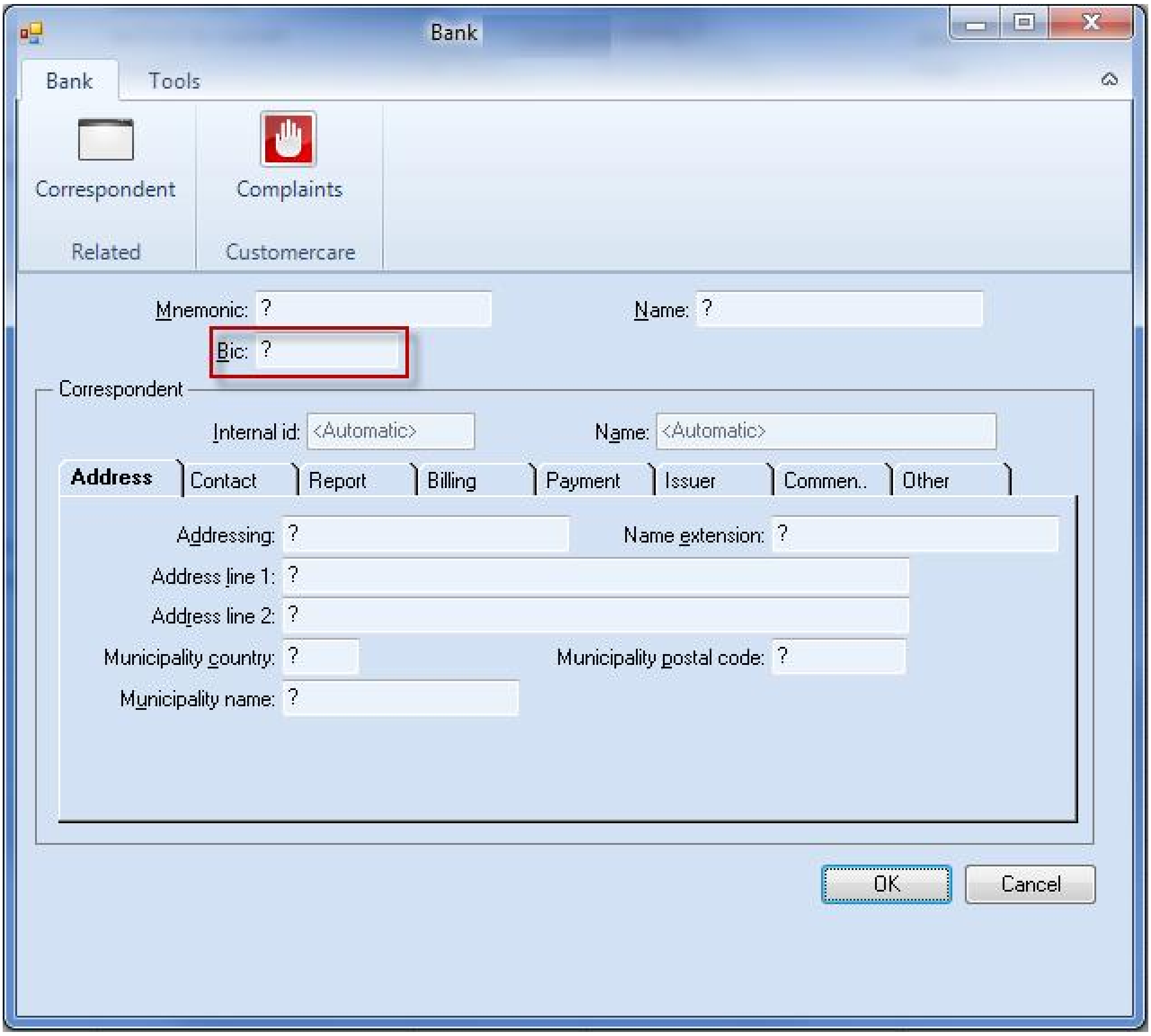


2. from a creditor correspondent by choosing **Show all > Mandates** in the context menu



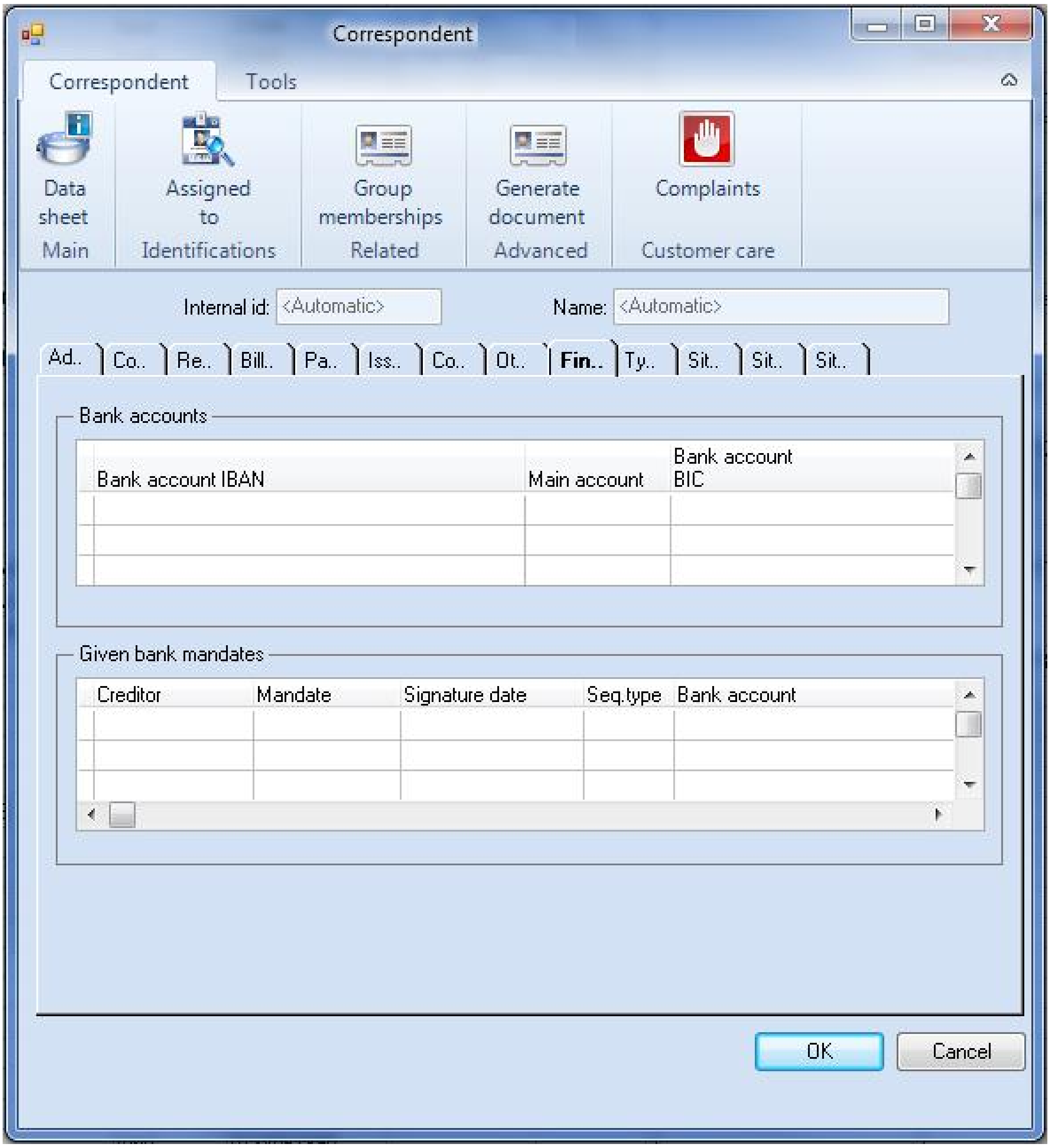
> **Note**
>
> There can only be one mandate enabled for each combination of debtor and creditor.

New field "BIC" on Bank level



New tab "Financial" on Correspondent level

The new tab **Financial** in the **Correspondent** editor displays the bank account(s) of the correspondent and the bank mandate(s) the correspondent has given. It is possible to create, update and delete bank accounts / mandates in the incorporated browsers.



> **Note**
>
> The Correspondent tab **Payment** does no longer contain the fields **Bank account** and **Bank identifier code**.

Conversion

A conversion is provided to fill the new tables with the data currently stored on **Correspondent** and **FirmAccount** level.

> **Note**
>
> The bank account currently stored on **Correspondent** level will be used as the main bank account.

Incorrect summary data when using FinancialShipment.Send (BILX_HOST-00001)

The summary displayed when having exported financial data via the FinancialShipment.Send function could contain an incorrect number of successfully exported invoices when an error occurred during the export. This has been corrected.

> **Note**
>
> Problem occurred since GLIMS 8.

Financial export in "Xtenso" format (BILX_TRIPLEP-00024)

Problem description

When exporting financial data in the **Xtenso** (TripleP) format for orders with blood requests, incorrect encounter information could be sent.

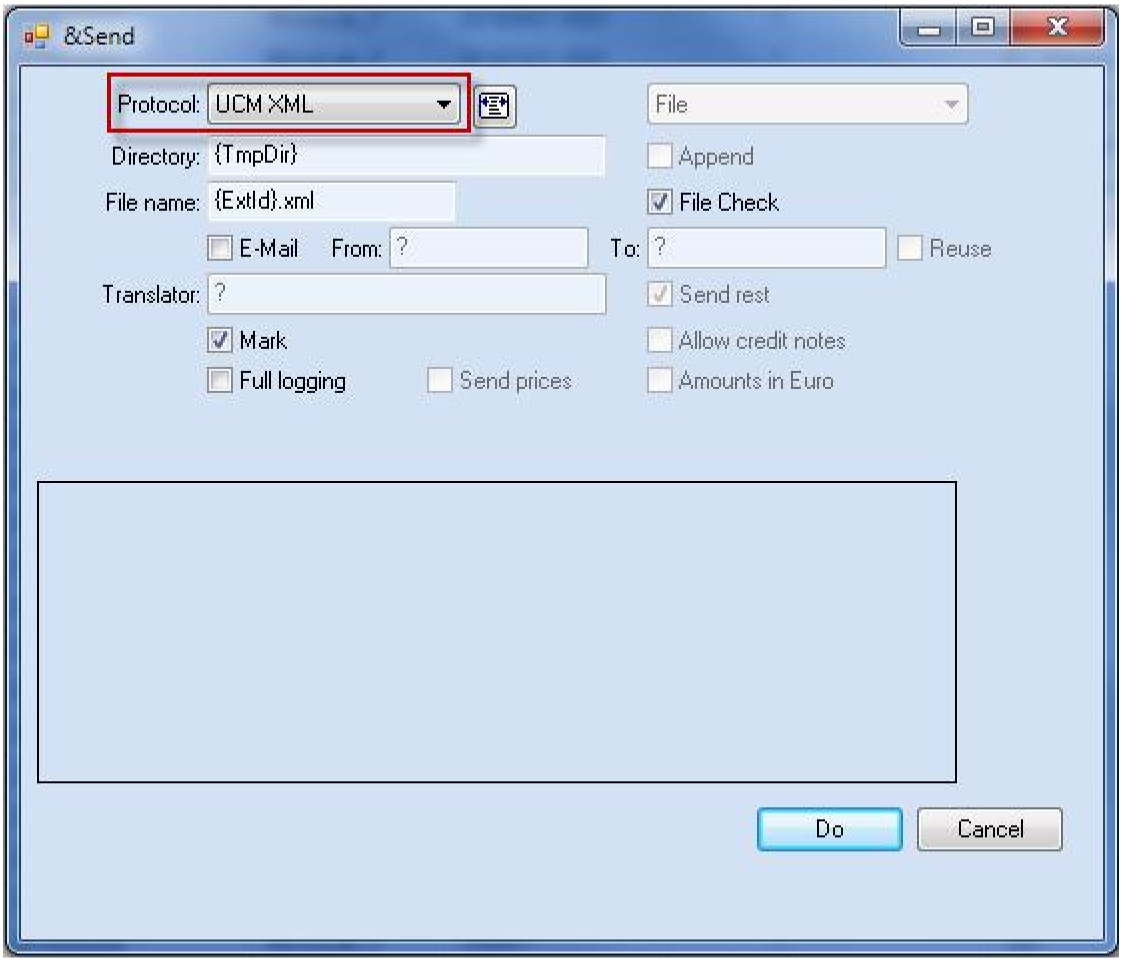
Solution

GLIMS will now search for encounters where the transfusion time lies in between the encounter start and end time. If multiple encounters are found, the encounter with the most recent start time will be selected.

> **Note**
>
> Customers that use a site function to determine the correct encounter may consider removing this custom logic and testing the integrated solution.

Financial export in "UCM XML" format (BILX_UCMXML-00002)

GLIMS now allows exporting financial data in the **UCM XML** format to CNS Luxembourg. For more information, please check the chapter Financial export in "UCM XML" format.



Financial export in "Vektis ZH308" format (BILX_VEKTIS9-00009)

As of GLIMS 9.6.0, only version 9 of the financial export format **Vektis ZH308** is supported. Earlier versions are no longer supported.

In addition, the **VEKTIS7** protocol can no longer be selected when importing rejections.

Sequence numbers of billing rule lines and inputs / outputs (GLIMS_BILL-02792)

Sequence numbers of billing rule lines or inputs / outputs longer than 3 digits were displayed as ??? in the billing rule editor (accessible via the **Billing rule** context function **Edit lines**). This has been corrected.

Note

- For billing rule line sequence numbers, a maximum of 4 digits is allowed.
- For billing rule line input / output sequence numbers, a maximum of 8 digits is allowed.

Creation of .ok file when exporting financial data in HPRIM XML format (GLIMS_BILL-02844)

When exporting financial data by means of the FinancialShipment.Send function, it is now possible to trigger the creation of a .ok file for the following export formats. A .ok file will then be created after the export to indicate that the exported file is available and complete.

HPRIM XML GMSIH / HPRIM XML 1.04

The option **ok** is now also available for **HPRIM XML GMSIH** and **HPRIM XML 1.04** (as was already the case for **HPRIM FAC** and **HPRIM FAC 2.0**).

If this option is enabled and the data file is created successfully, an empty .ok file will be created in the same directory and with the extension .ok (lowercase).

> **Note**
>
> Some other changes applying to HPRIM XML GMSIH and HPRIM XML 1.04 have been implemented:
>
> - NomNaissance (Person.SpouseLastName) will be skipped when not available.
> - The unused fields **File per encounter**, **Property id provider**, **Message per** and **Force executing lab** are now hidden.

Centralized check for matriculation and national numbers (GLIMS_BILL-03121)

Background information

In previous versions of GLIMS, the validity check for matriculation and national numbers was mainly implemented using MISPL expressions.

To centralize these checks and to reduce the amount of MISPL code, new functionality has been added to execute these validity checks.

> **Warning**
>
> Labs that want to use the new built-in checks and that have implemented validity checks for matriculation and national numbers using MISPL expressions must update their MISPL code to avoid double checks.
>
> Please contact our support department for assistance.

> **Note**
>
> The new functionality is currently only supported for Belgium and Germany.

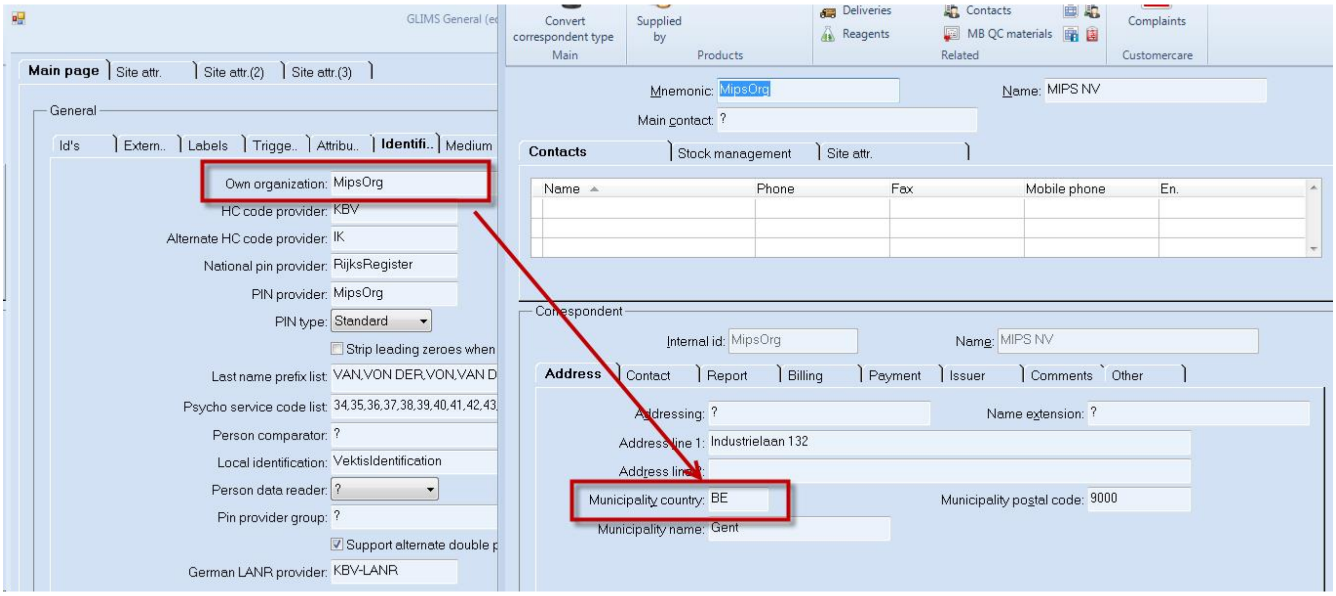
New functionality

Country of the own organization

In the general settings, the **Own organization** can be specified.

In the **Correspondent** configuration of the own organization, make sure that the **Municipality country** is specified.

- For Belgium, this should be **BE**.
- For Germany, this should be **DE**.



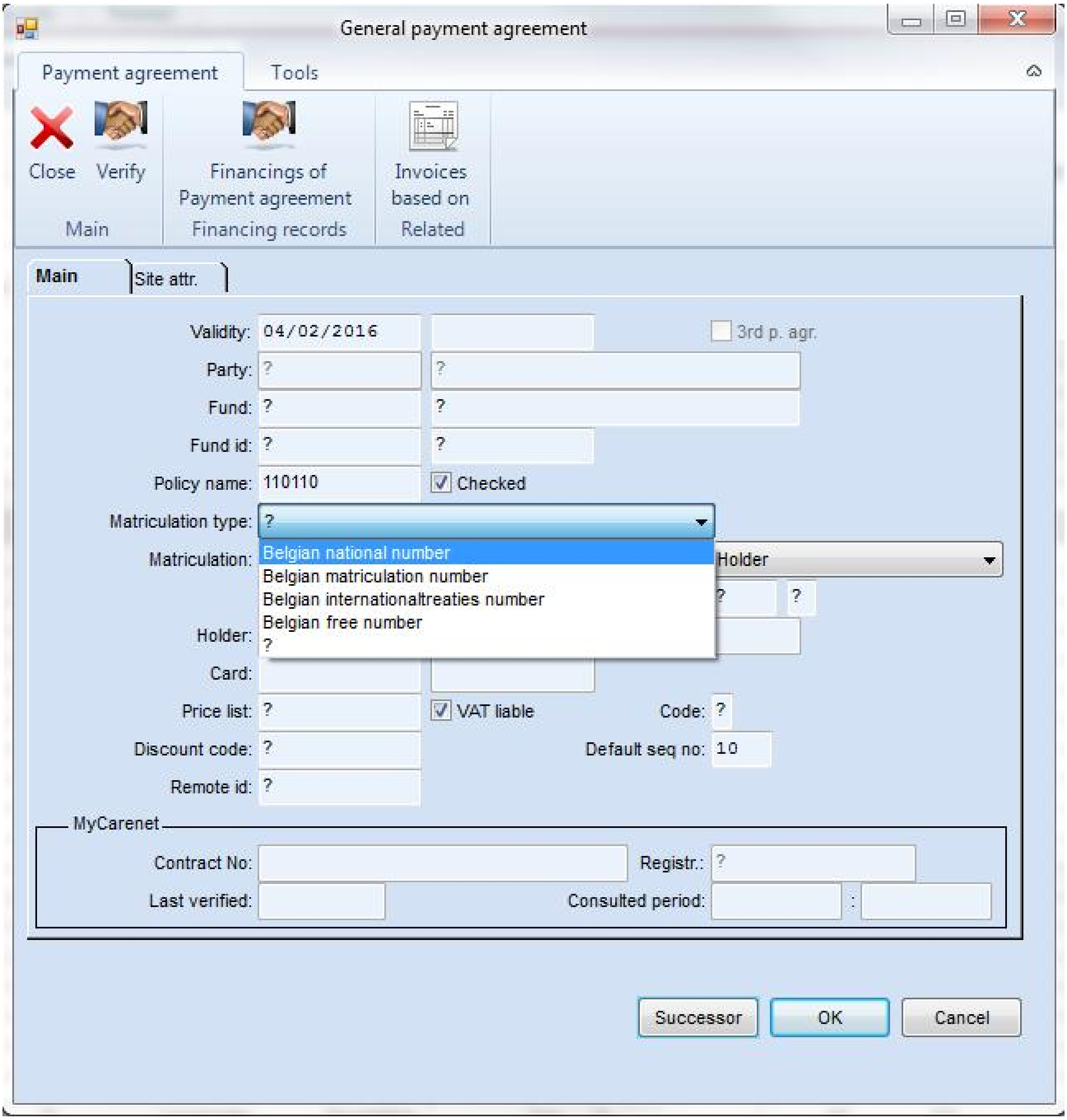
Matriculation type of payment agreement

In the **Payment agreement** configuration screen, a new field **Matriculation type** is available.

Depending on the country of the own organization, different matriculation types will be available. The type of check that will be executed depends on the selected matriculation type.

The matriculation type **Free number** has been added for future use.

Belgium



Notes

- By default, the **Matriculation type** will be set to **?**, which ensures backward compatibility.

  There is 1 exception: in Belgium, the **Matriculation type** will be set to **Belgian National Number**.

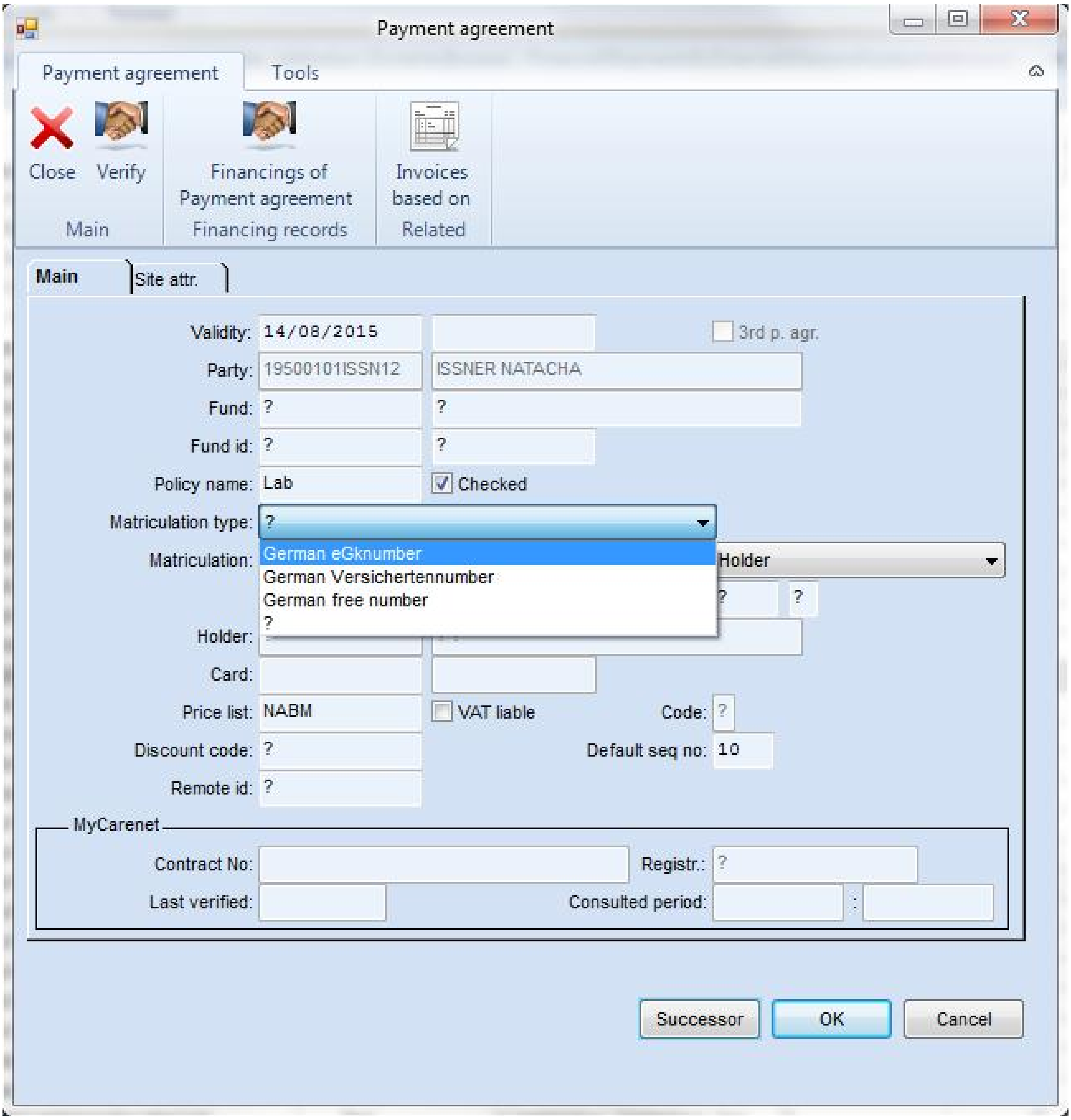
- For Belgian customers, GLIMS only checks the matriculations of official funds. An official fund is a fund that

  - belongs to correspondent group with code "OFF-MUT".

    or

- belongs to a correspondent group of which the option **Is official fund group** is enabled.

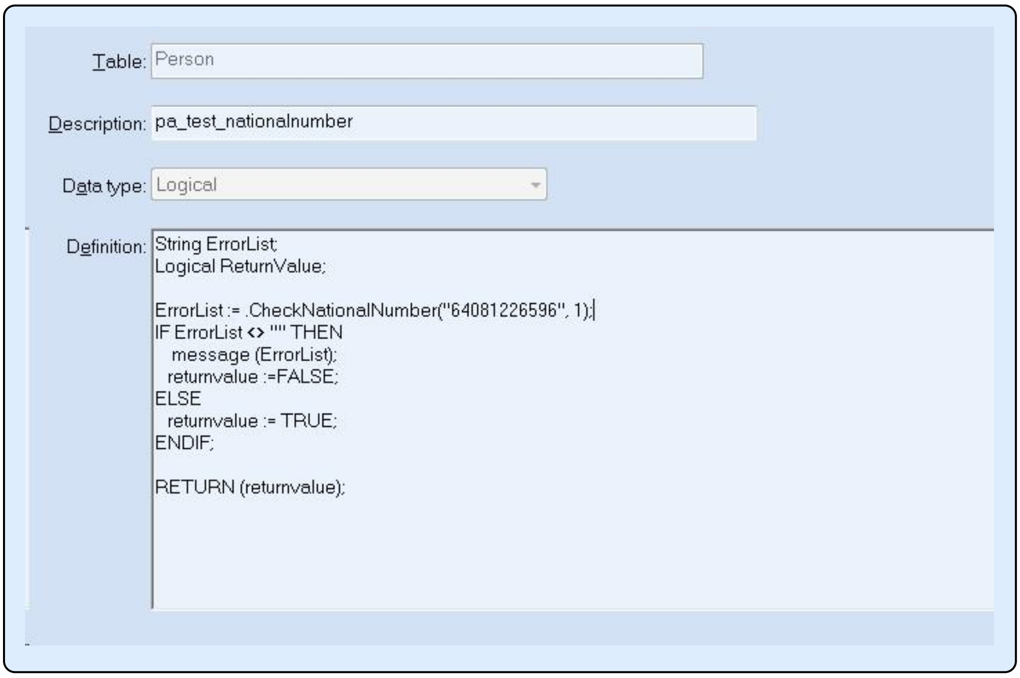
Germany



New MISPL function

A new Person-based MISPL function CheckNationalNumber is available.

Example



Improved error handling during tariffication (GLIMS_BILL-03150)

A proper error log will now be shown during tariffication when an order (set) does not have a payment agreement.

Improvements for importing MyCareNet rejections (GLIMS_BILL-03156)

The following improvements have been implemented for importing MyCareNet rejections via **Start > Billing > Payments > Import payments file**:

1. When only part of an invoice is rejected (error code R in record 50 of message 920900), we will now only credit the rejected invoice items (and no longer the entire invoice).
2. The invoice's **Rejection reason** will now indicate the error code and long description.
3. The "Referentie Verzekeringsinstelling (Rekening A)" will now be logged (Log type **Mycarenet facturation response**). In addition, the accepted amounts for the fund and for the patient will also be logged. They will appear in brackets and only if there is a difference between original amount and accepted amount.
    - Zones 114 & 115 are the accepted amounts for the fund, while zone 19 (position 88) is the amount originally sent by GLIMS.
    - Zone 116 is the accepted amount for the patient, while zone 27 (position 128) is the amount originally sent by GLIMS.
4. Crediting will no longer occur in case of error code E (only logging).
5. Payments will not be created in GLIMS for received / accepted amounts.

> **Note**
>
> The chosen file name including the directory name is restricted to 128 characters.

Cash register correctly displayed in window title when opening payment (GLIMS_BILL-03174)

The cash register mnemonic is now displayed correctly in the window title when opening a payment done via a cash register.

Improved logging when exporting financial data in the RIZIV format (GLIMS_BILL-03177)

When exporting financial data in the RIZIV format, it is possible to enable the field **Full logging**. When doing so, the logging did not always display clearly the invoice number, which could be confusing. This has been corrected.

Improved payment agreement import (Medisupport) (GLIMS_BILL-03185)

The following improvements have been implemented for the payment agreement import as used by Medisupport:

- When importing payment agreements, and a payment agreement already exists for the given party, fund and matriculation, then the record is updated. Else, a new payment agreement is created. In that case, the existing and overlapping agreements of the same party (Person) and policy (but different fund or matriculation) will be closed. This is now also supported for existing agreements with known end date and not only for agreements with an open end date ("?").

> **Note**
>
> Existing agreements with the same start date as the new, imported agreements will not be closed automatically as they are considered to be concurrent agreements.

- Improved logging: e.g. the number of new / changed / closed agreements and other important information will be logged in GLIMS (**Log type** = **Import payment agreements (Medisupport)**).

- The import function was already available via **System management > Database > Specific import > Payment agreements** and is now also available via **Billing > Payment agreements > Specific Import Medisupport**

Financial export in "RIZIV" format (GLIMS_BILL-03189)

When an empty invoice was present in the financial shipment towards RIZIV, the error **No w_ InvoiceDetailsData record is available** occurred.

If an invoice without invoice items is present in a shipment towards RIZIV, a proper error message will now be shown and logged indicating that empty invoices are not allowed.

MyCareNet payment agreement should not be updateable (GLIMS_BILL-03192)

As MyCareNet payment agreements should not be updateable, the MyCareNet specific data in the payment agreement will now be read-only, both in the **Person** editor as in the **Payment agreement** editor. Moreover, it will not be possible to close a MyCareNet payment agreement.

> **Note**
>
> A MyCareNet payment agreement can only be deleted from the payment agreement browser and as long as no invoices are referring to it.

Improvements for export of financial data in Vektis format (GLIMS_BILL-03196)

The following improvements have been implemented for the export of financial data in the **Vektis** format :

1. The default file name extension is now **.vk**
2. The **Full logging** option is now immediately accessible for vektis file type **ZH308** (or **OS301**).

Financial export in "RIZIV" format (GLIMS_BILL-03213)

When exporting financial data in the **RIZIV** format, GLIMS now always exports the value **0** for field **33** (*code facturering persoonlijk aandeel*).

Error in invoice summary query when ReminderLevel site domain is defined (GLIMS_BILL-03234)

An issue was reported where errors occurred when using the (pre-defined) invoice summary query while a **ReminderLevel** site domain (**Start > System management > Scheme > Site domains**) was defined with a value larger than 10 characters. This has been corrected.

> **Note**
>
> After upgrading to GLIMS 9.6.0, it might be necessary to redefine the pre-defined function parameter set in order to prevent the error **Entry 0 is outside the range of list...** from occurring.

Financial export in "Xtenso" format (GLIMS_BILL-03236)

When exporting financial data in the **Xtenso** format, GLIMS now supports the field **MULTI_DEM** (multiple sampling dates for same prescription). Additionally, GLIMS now supports version 1.9 of the Xtenso format.

GLIMS will send the value **Y** for the field **MULTI_DEM** for orders with a lowest object date different than the prescription date and for which other orders are available in GLIMS with the same prescription.

GLIMS considers orders with the same object person, issuer, and prescription date (ignoring the time part) as requested for the same "prescription".

Notes

- Orders requested with the same "prescription" do not necessarily have to belong to the same financial shipment.
- Orders with **MULTI_DEM** set to **Y** will be logged.

Cash register management: correction for payment update (GLIMS_BILL-03238)

An issue was reported where trying to update a payment (e.g. its payment type) could produce the error **Modifying a payment stored in a cash register isn't allowed** even though the cash register used to register the payment was configured to allow updates (the site attribute **NoUpdateRegisterPayment** was disabled). This has been corrected.

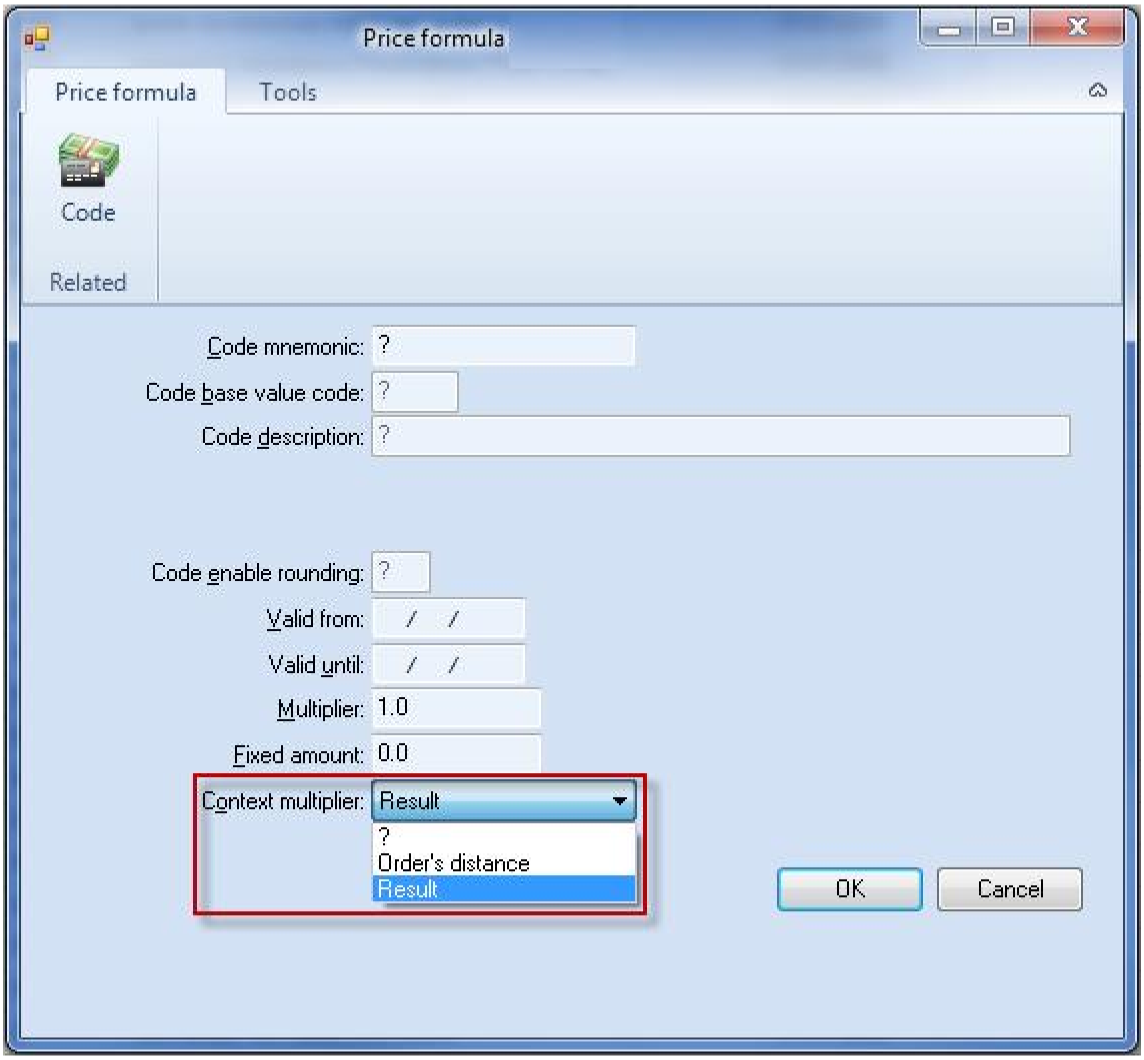
Price calculation based on Result.Value (GLIMS_BILL-03249)

New functionality

In the configuration editor of a price formula, the **Context multiplier** field can now also be set to **Result**. If chosen, the price of the invoice (item) will be calculated as follows:

Tariff.BaseValue x Result.Value + PriceFormula.FixedAmount

This way, price calculation can be based on a variable multiplier.



Notes

1. The property of which the result is used as multiplier should have data type **Numeric**. Moreover, the result should have a numeric value. The value can be a positive (decimal) value.
2. When the result does not have a value, the ('fixed') PriceFormula.Multiplier will be applied.

Warning

1. An error will occur when there is no unique linked request of type Result (e.g. in case of a panel containing 2 properties). Exactly one linked result is needed.

Tip

1. Make sure that the result value used as multiplier can be accessed during tar-ification (e.g. shielding, privileges,...)

Functions taking into account Context multiplier = Result

1. Export of financial data in the **Sibelmed** protocol
2. Export of data in the **MAIS** protocol (via the Order.ExportToMAIS function or by using the FinancialShipment.Send function).
3. **Quarter statistics** context function on a **Firm**

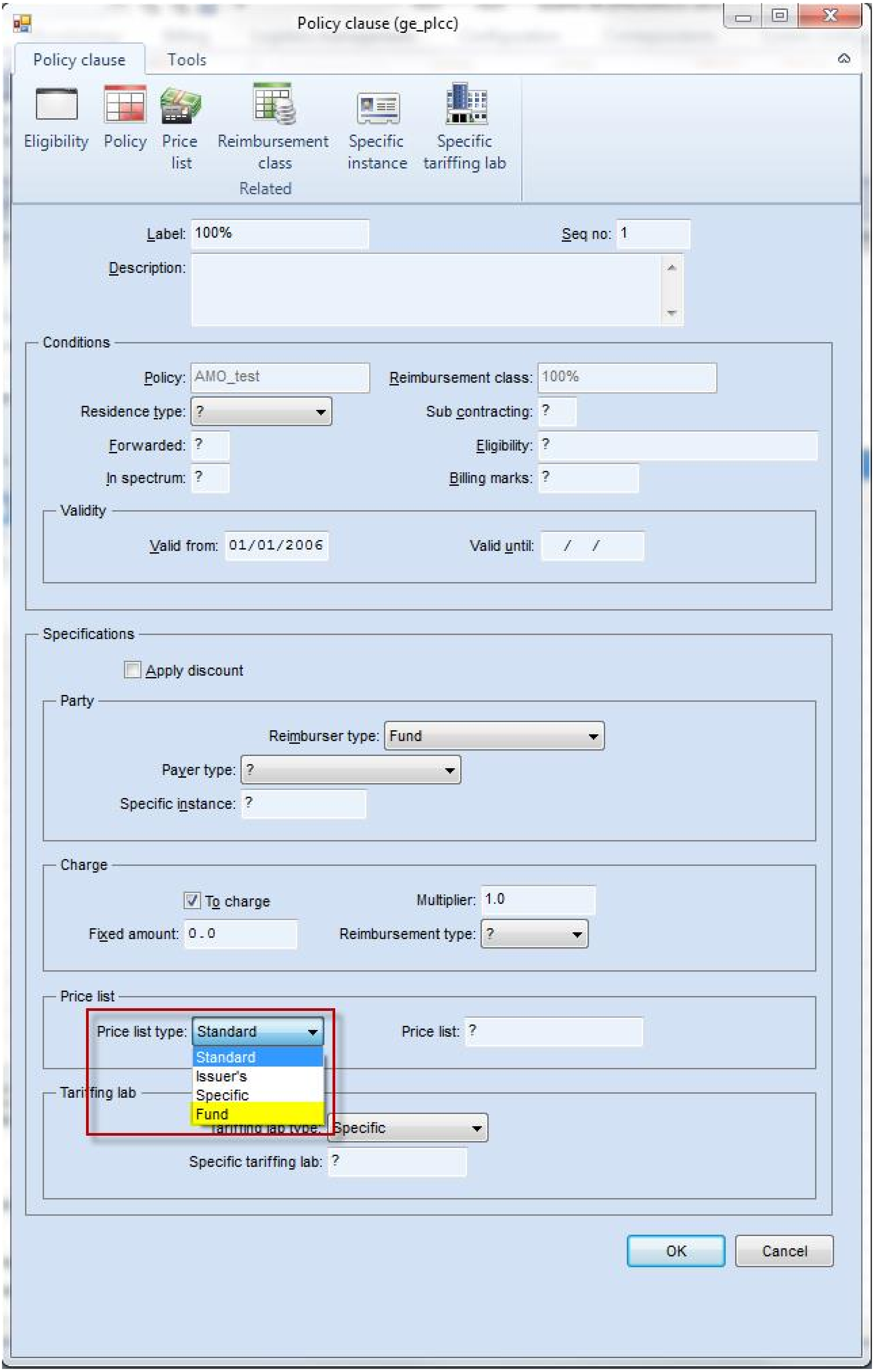
Functions not taking into account Context multiplier = Result

For functions using configuration data, the 'fixed' multiplier is used instead.

- gp_Site based function **Print price list**
- gp_Site based function **Generate external examinations csv file**
- Billing item editor
- Budgeting program

Use fund-specific price list during tariffication (GLIMS_BILL-03250)

In the Policy clause configuration screen, the option **Price list type** now allows to indicate that the fund-specific price list should be used during tariffication.


Policy clause (ge_plcc)
Policy clause
Tools
Eligibility
Policy
Price list
Reimbursement class
Specific instance
Specific tariffing lab
Related
Label: 100%
Seq no: 1
Description:
Conditions
Policy: AMO_test
Reimbursement class: 100%
Residence type: ?
Sub contracting: ?
Forwarded: ?
Eligibility: ?
In spectrum: ?
Billing marks: ?
Validity
Valid from: 01/01/2006
Valid until: / /
Specifications
Apply discount
Party
Reimburser type: Fund
Payer type: ?
Specific instance: ?
Charge
To charge
Multiplier: 1.0
Fixed amount: 0.0
Reimbursement type: ?
Price list
Price list type: Standard
Standard
Issuer's
Specific
Fund
Price list: ?
Tariffing lab
Tariffing lab type: Specific
Specific tariffing lab: ?
OK
Cancel

Price list type

Standard

Price list specified in the payment agreement. If not specified, price list specified in the general billing settings.

Issuer's

Price list specified in the Correspondent configuration of the issuer.

Specific

Price list specified in the policy clause.

Fund (new)

Price list specified in the Correspondent configuration of the fund linked to the policy clause.

If no price list is specified for the fund, an error will be produced during tariffication.

Use result responsible as billing item executor (GLIMS_BILL-03251)

Introduction

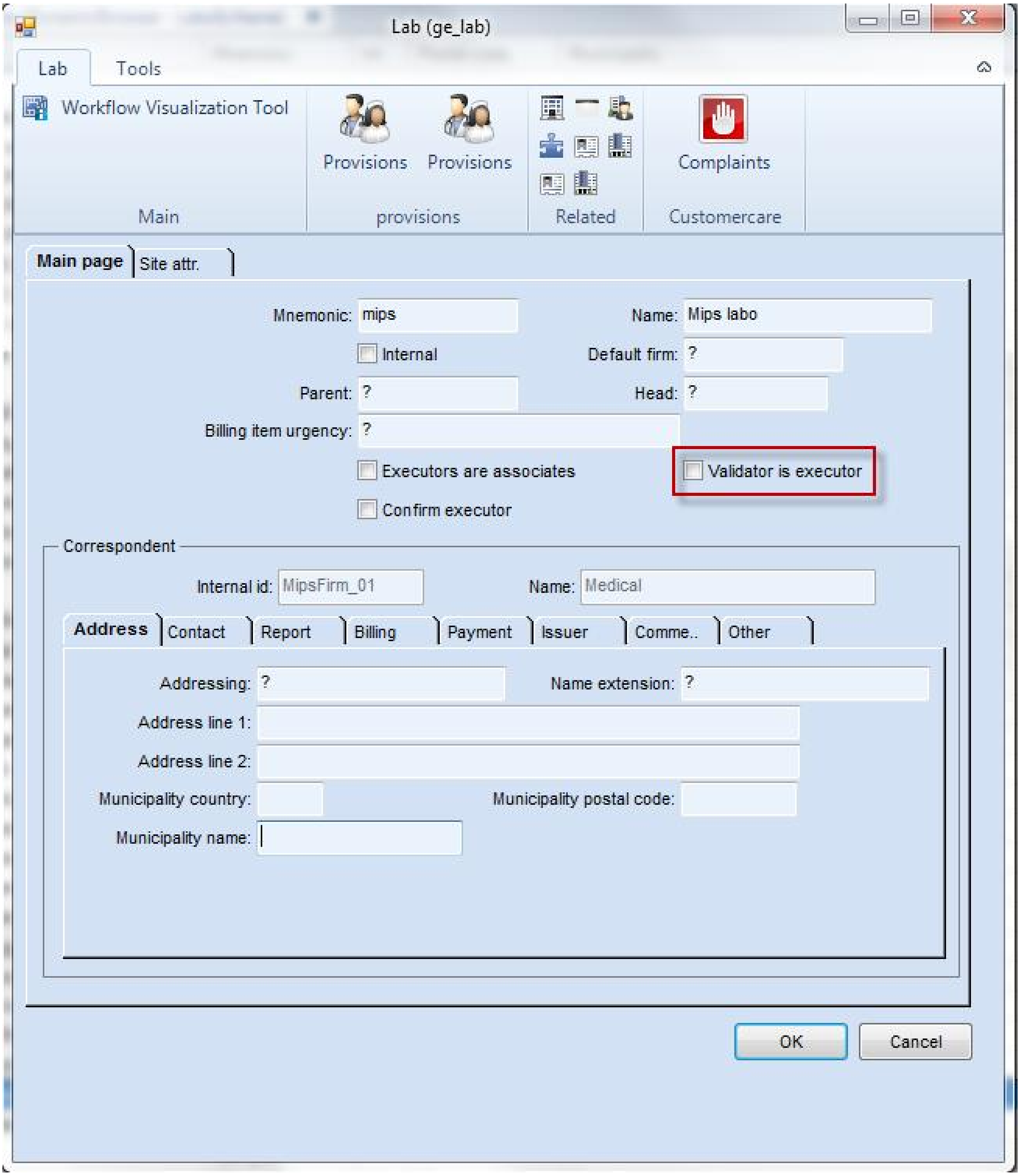
In GLIMS 9.6, a new concept of result responsible was introduced. With this modification, it is now possible to use that result responsible as executor of the billing item (instead of using the provisions).

New functionality

Activation

If you want to use the result responsible as executor of the billing items, you can activate this for each individual (executing) lab.

In the **Lab** configuration, enable the option **Validator is executor**.



Determination of billing item's executor

Billing item is linked to 1 request of type Result

The result's responsible is used to set the billing item's executor.

Note

> The result responsible is only available if the result has been validated. However, it is possible to tariff results that are not yet validated (and that do not yet have a responsible).
>
> For that reason:
>
> - The billing item's executor is optional in case of incomplete tariffication. In case of final tariffication (option **Mark as completely tariffed** is enabled), the billing item's executor must be set.
> - When creating an invoice summary, the billing item's executor must be set.

Billing item is linked to a pathology exam

The responsible of the pathology exam is used to set billing item's executor.

Billing item is linked to a microbiology action

The responsible of the result for the **Report property** (defined in the microbiology procedure) is used to set billing item's executor.

Billing item is linked to a specimen

The most frequently used responsible for results linked to the specimen is used to set billing item's executor. If no results are available for the specimen, the most frequently used responsible for results within the order is used.

Billing item is linked to a request of type 'Blood'

The responsible of the result for the **Report property** (defined in the general settings (specific site)) is used to set billing item's executor.

Billing item is linked to multiple requests (panel)

The most frequently used responsible for results within the panel is used. If no results are available for the panel, the most frequently used responsible for results within the order is used.

Billing item is not linked to a request (supplements)

The most frequently used responsible for results within the order (set) is used. Responsibles for tariffed results have priority.

> **Note**
>
> This executor can be replaced by an executor returned by the supplement MISPL expression defined in the policy configuration.

Disallow manually changing the billing item's executor

- The **Order set** function **Specify executors and billing codes** will not allow updates for lines where the **Lab** option **Validator is executor** is enabled.
- Billing item confirmation: the option **Confirm billing item executor** will be disabled if the **Lab** option **Validator is executor** is enabled.

- The **Executor** cannot be changed in the billing item configuration screen if the **Lab** option **Validator is executor** is enabled.

Correction for error "b_Log in use" when using price consultation (GLIMS_BILL-03252)

An issue was reported where the error **b_Log in use** occurred when using the Price consultation function in GLIMS.

This has been corrected.

Quick invoice: correction for error "cannot open file" (GLIMS_BILL-03261)

An issue was detected where reopening or refreshing a quick invoice for an order without invoice summaries caused the error **cannot open file**.

This happened when the following options were set for the quick invoice:

- **Preview party** = ?
- **Billing document type** = ftr
- **Template** <> ?

This has been corrected.

Communication

Order no longer created as pending in case of unknown data in import message (GLIMS-07272)

An issue was detected where an order was created as **Pending** - even in an environment where no pending orders were used - when the electronic order import message contained an unknown request code. This has been corrected.

When an electronic order import message is received with an unknown request code, an error will now be raised and the order will no longer be created with status **Pending**.

Numeric specimen discriminator in electronic order import (GLIMS-07718)

When electronically importing an order containing a specimen with a discriminator consisting of 2 digits (e.g. "01"), the error **is not a valid discriminator** occurred. This has been corrected.

Improved LAS status communication during (un)linking of station in LAS hierarchy (GLIMS_ANLZ-01100)

Linking a station (in)directly to a LAS, will now have the effect that:

1. the station (and also its substations, if any) receive the same **station status message queue** as the LAS station (i.e. the queue name used for LAS status communication on the message queue).
2. the station and its assessment methods (and also the substations and their assessment methods, if any) receive the **Connect** LAS status. This will trigger a **Connect** LAS status message being sent to the **station status message queue** for:
    a. the station itself
    b. the assessment methods of the station
    c. the substations
    d. the assessment methods of the substations

Unlinking a station from a LAS (in)directly, will now have the effect that:

1. the LAS it was connected to knows that the station and its assessment methods are not available anymore for usage => a **Disconnect** LAS status message is sent when the **LAS status** of the station goes from **Connect** => "?" for:
    a. the station itself
    b. the assessment methods of the station
    c. the substations
    d. the assessment methods of the substations

2. the station (and all its underlying stations) do not have the **station status message queue** name of the LAS station anymore.

Support assessment method codes in messages to LAS (GLIMS_ANLZ-01110)

GLIMS can communicate with GLP-Systems. In messages sent to the LAS, tests will now be identified as follows:

1. **Code out** defined in the assessment method codes browser of the LAS station.

   Warning: As soon as 1 assessment method code is found for the LAS, the **Outbound ID** of the assessment methods linked to the LAS will no longer be taken into account!

2. **Outbound ID** specified in the assessment method linked to the LAS (only if no assessment method codes are used!).

   For all tests that can be executed by the analyzers connected to the GLP system, an **Assessment method** must also be available for the LAS station.

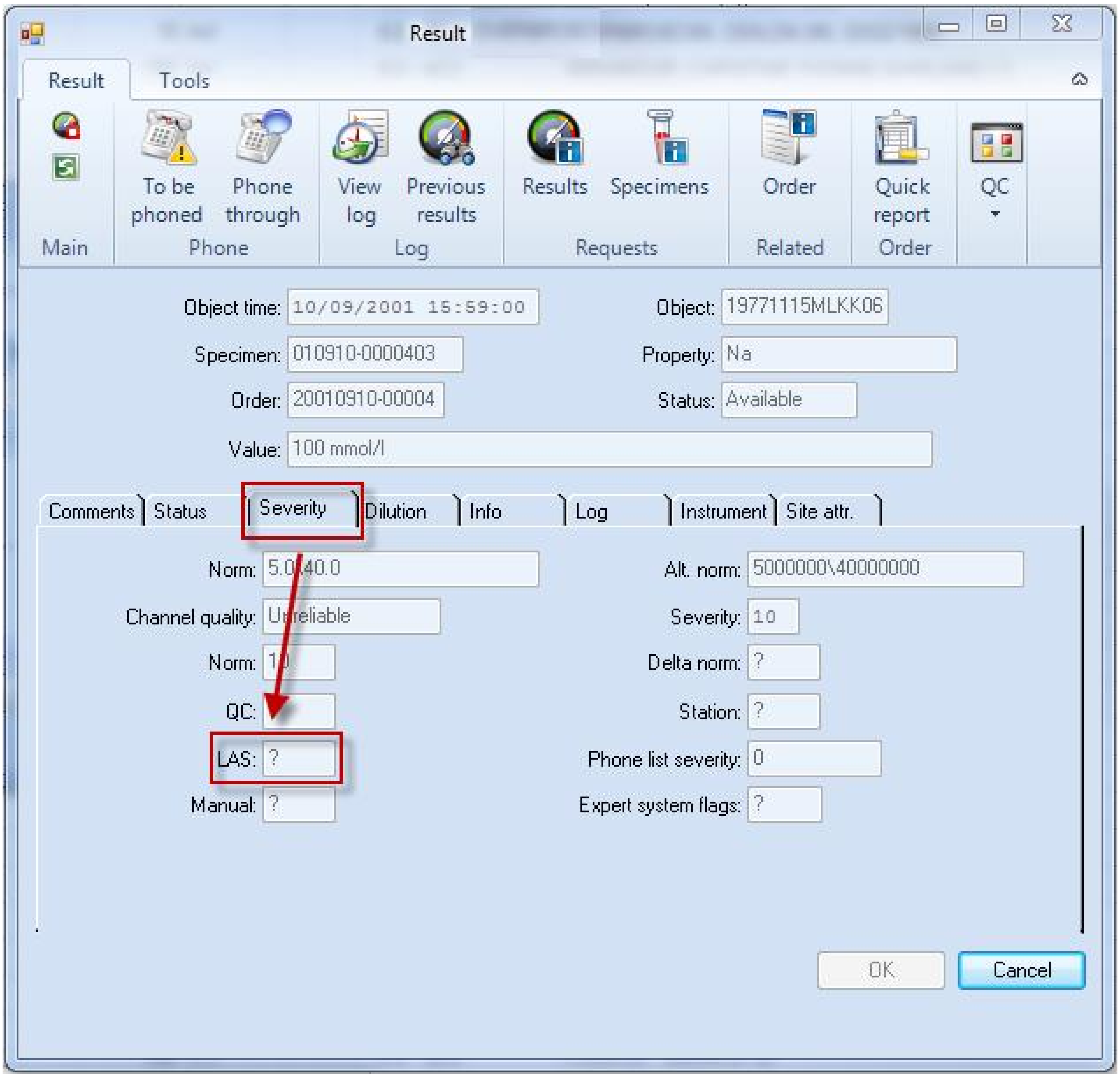
For more information, see Connection with GLP-Systems.

Result.LASSeverity available as database field (GLIMS_ANLZ-01116)

Upon result upload to GLIMS, an analyzer can send station flags. In a LAS context, the **LAS severity** of the **Station flag** is copied to the **Result**.

In GLIMS 9.5, this information was stored in a site attribute "_LASSeverity" on Result. This site attribute is now available as a proper database field: **Result.LASSeverity**.

> **Warning**
>
> MISPL expressions still referring to the site attribute will need to be adapted in order to now refer to the Result.LASSeverity field.



Load balancing for two LAS systems in slave mode (GLIMS_ANLZ-01132)

Introduction

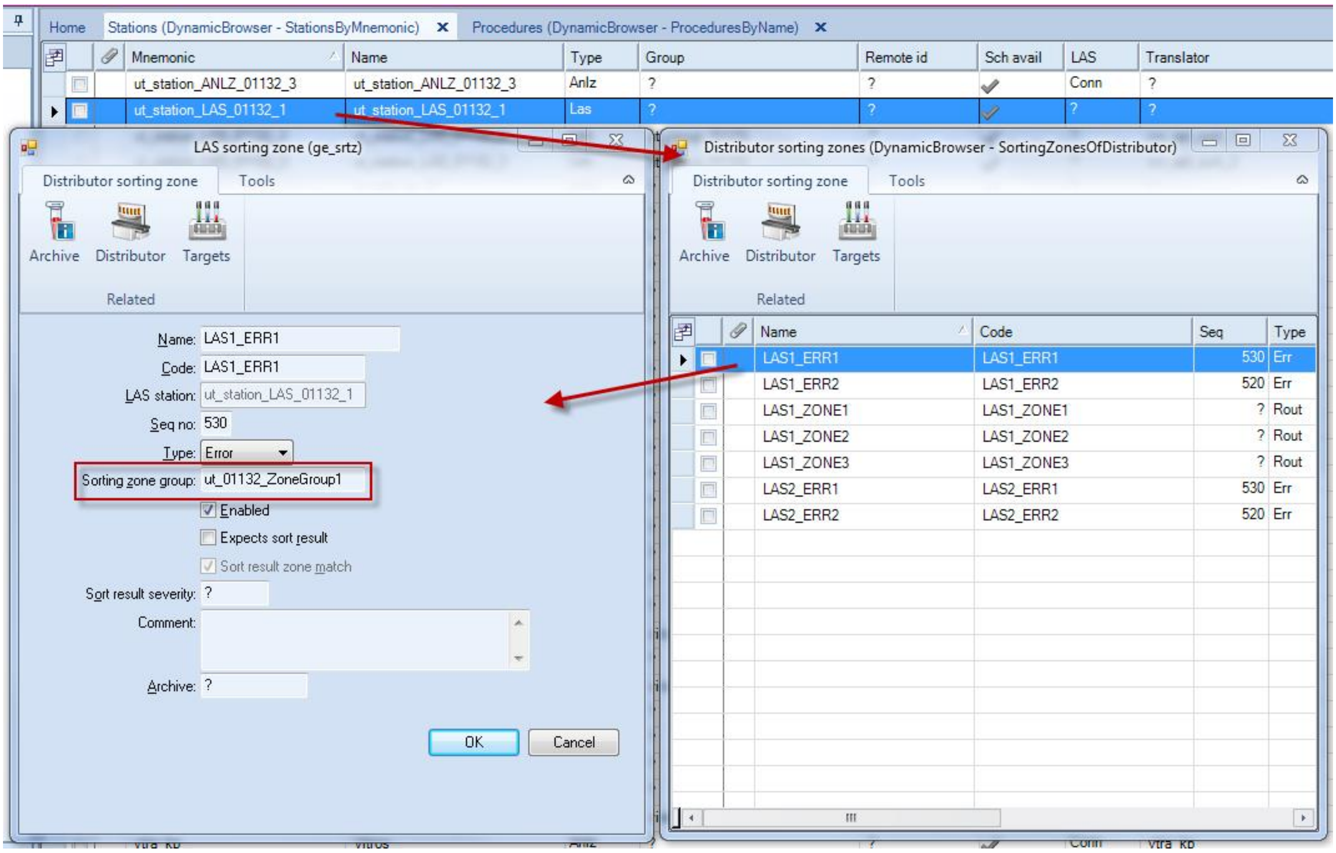
When two LAS systems (e.g. PVT) are configured in GLIMS with the same download group, both LAS systems can continue each other's work flow (e.g. continue with the next sorting zone).

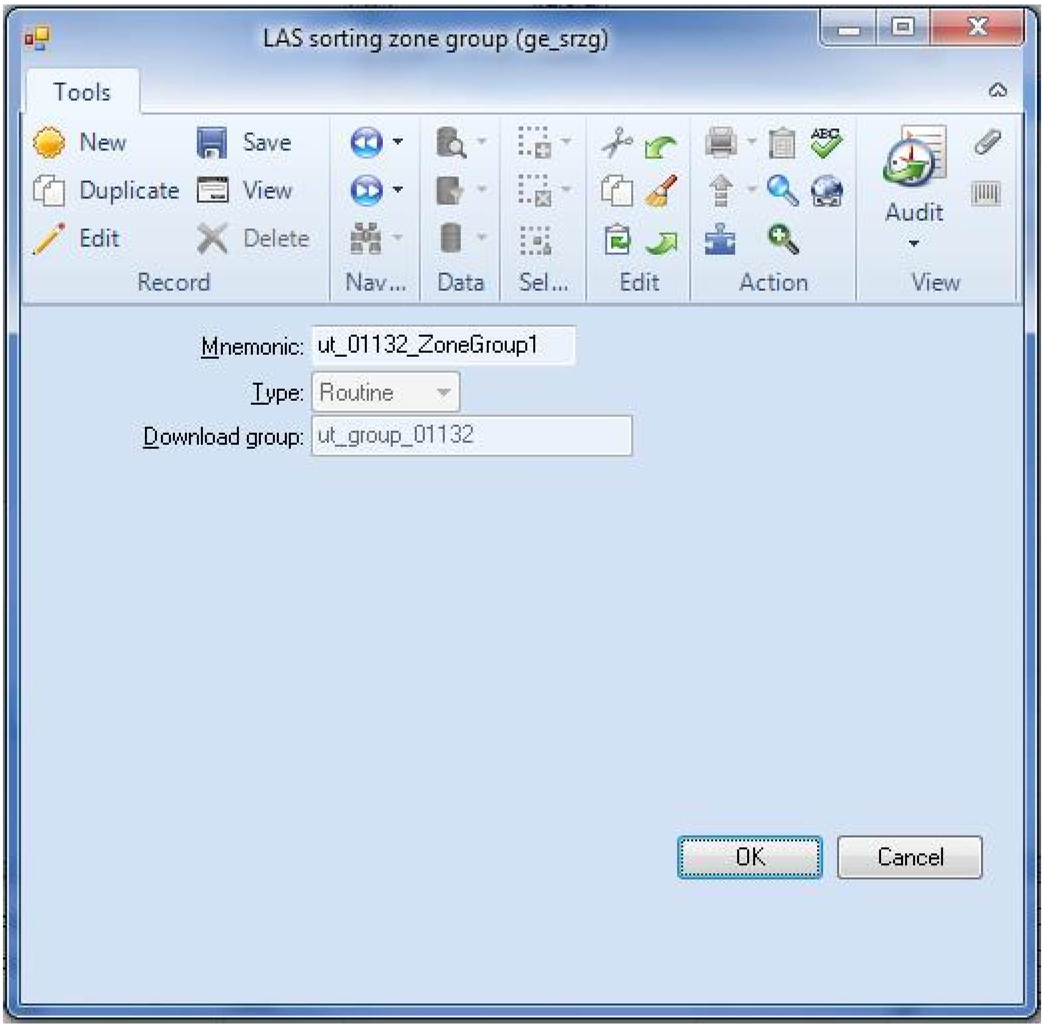
Sorting zone group

Configuration

A new table **Sorting zone group** is now available in GLIMS. It allows to group similar sorting zones of stations belonging to the same download group.

When defining a **Sorting zone** on a **Station** that is part of a download group, a **Sorting zone group** can be specified. When another station from the same download group has a **Sorting zone** that is linked to the same **Sorting zone group**, the sorting zones are considered similar.





Restrictions

1. A **Sorting zone** should be linked to a **Sorting zone group** with the same download group as the station's download group.
2. A **Sorting zone group** can only be linked to one **Sorting zone** of a **Station**.
3. When a **Station** is removed from a download group, the **Sorting zone groups** (referring this download group) linked to the sorting zones are also removed.

Backward compatibility

When upgrading from GLIMS 9.5 to GLIMS 9.6 and using load balancing for LAS systems in slave mode in GLIMS 9.5, sorting zone groups will need to be created manually and linked to the corresponding sorting zones. An automatic conversion procedure is not available.

Send LAS status overview of assessment methods of Connected station to LAS (GLIMS_ANLZ-01145)

Background information

GLIMS can communicate with GLP-Systems. The GLP system is designed to deliver tubes for diagnosis individually to analyzers.

Whenever an analyzer is unavailable or cannot execute particular tests, GLIMS can immediately inform the GLP system to avoid that tubes are still transported to that analyzer.

GLIMS can assign a **LAS status** (**Connected / Disconnected**) to either an entire station or to a specific assessment method. For more information, see Analyzer and test availability messages.

Problem description

When the **LAS status** of

1. an **Assessment method** of a station is set to **Disconnected**,
2. the **Station** itself is set to **Disconnected**,
3. the **Station** is set to **Connected**,

then the GLP system incorrectly assumed that the **LAS status** of the assessment method was **Connected**, whereas it was still **Disconnected** in GLIMS.

Solution

When a station's **LAS status** is set to **Connected**, GLIMS will now :

1. send a message informing the GLP system about the station's availability
2. send a message with the current LAS status for each assessment method of that station

> **Note**
>
> For concentrators, when their **LAS status** is set to **Connected**, GLIMS will inform the GLP system about all the disconnected stations, and about the connected stations with the status of their assessment methods.

Unsolicited results in lab-lab communication (GLIMS_RI-00144)

The support for unsolicited results in lab-lab communication has been improved.

When tests are added by the Order Filler Lab, the Order Placer Lab will no longer store these results as 'unsolicited'. Instead, they will be requested using their Property.DefaultRequestable.RequestCode.

Services: ServiceController should not have SpecificOptions (MATE-03792)

Since modification MATE-03040, **Services** of type **Service controller** were pre-configured with **Specific options** that were superfluous.

This has been corrected, and the database conversion clears the **Specific options** for all **Services** of type **Service controller**.

Service.Synchronize supported for XML services (MATE_COMHL-00278)

The **Synchronize** function of the **Service** table can be used to update logging settings without requiring a restart of the **Service**. However, this function was not supported for **Services** with **Internal lan-**

guage set to XML. With the recent addition of Service Controller and Report Builder types (which only allow XML as InternalLanguage) this lack of support had become more than an inconvenience.

Support for XML services has now been added to this function.

Display message when stopping a translator (MATE_COMHL-00307)

Since modification MATE_COMHL-00239, stopping a Translator no longer displayed a message that the translator had been stopped. This has been restored, and you will now see the message again.

Introduction of 'message queue' concept (MATE_COMHL-00308)

Introduction

To e.g. allow for multi-channel communication with external systems, the concept of a Message queue is integrated in the application.

1. The message queue itself is implemented as a Service with Type set to Message queue.
2. The application can put messages on the message queue.
3. Queue processors will read and process messages from the message queue.

Message queue service

A message queue service basically behaves in the same way as services of an another type.

Type

Must be set to Message queue.

> **Note**
>
> This is actually an embedded implementation of the open-source application ActiveMQ.

Message queue JMS port

Port used by the application to get messages from the queue.

Message queue STOMP port

Port used by the application to place messages on the queue.

> **Tip**
>
> Beside the STOMP and JMS ports, also the traditional Port needs to be specified. This port is used for maintenance of the service and for Watchdog monitoring.

Queue processor

To process the messages put on a message queue, you need to define a **Queue processor** in the application. A **Queue processor** is linked to a **Service** of type **Message queue** like a **Translator** is linked to a **Service** of type **Translator server**.

You can access queue processors

1. by selecting a **Service** and right-clicking **Related -> Queue processors**.
2. from the main menu via **Start** -> **System management** -> **Services** -> **Queue processors**.

Message queue

Reference to a **Service** of type **Message queue**. This is the message queue from which the queue processor will read and process messages.

> **Tip**
>
> When starting a **Service** of type **Message queue**, an actual queue will be created for each connected **Queue processor**.

Watchdog monitoring

Similar to other types of **Services**, message queue services and queue processors are also monitored by Watchdog (as of version 5.7).

For **Queue processors**, Watchdog will also show the number of received, handled, rejected, accepted messages and the number of errors that occurred.

Application root folder for Service groups (MATE_COMHL-00310)

Services have a field **Application root folder** to allow system managers to compensate for different installations on multiple servers.

However, no such field was available for **Translators**, and it made more sense to define this at the Service group level so that it can be applied to all **Services** and **Translators** in the **Service group**.

Hence it was decided to add a **ServiceGroup.ApplicationRootFolder** field to streamline system management.

> **Tip**
>
> The **Application root folder** defined at **Service** level takes precedence over the one define at **Service group** level.

Function to change Service group of Services and Translators (MATE-COMHL-00311)

Service groups serve as centralized configuration of **Host** and **Log directory** information, as well as the ability to set an **Administrator role** for all **Services** and **Translators** within the **Service group**.

One use-case that was not included in the initial implementation, was the ability to easily move **Services** and **Translators** from one Service group to another. Hence it was decided to introduce two new functions:

- Service: Change service group
- Translator: Change service group

These functions let system managers quickly change the **Service group** of a set of **Services** or **Translators** as they balance the workload over multiple servers.

Java Communication Engine and Java translators (MATE_COMHL-00312)

Introduction

MIPS has been shifting the development of drivers away from the classic C/C++ programming language towards the Java programming language. Java offers a wealth of built-in features such as multi-threading and transparent cross-platform development and runtime model, and has a vibrant eco-system of libraries that can be leveraged.

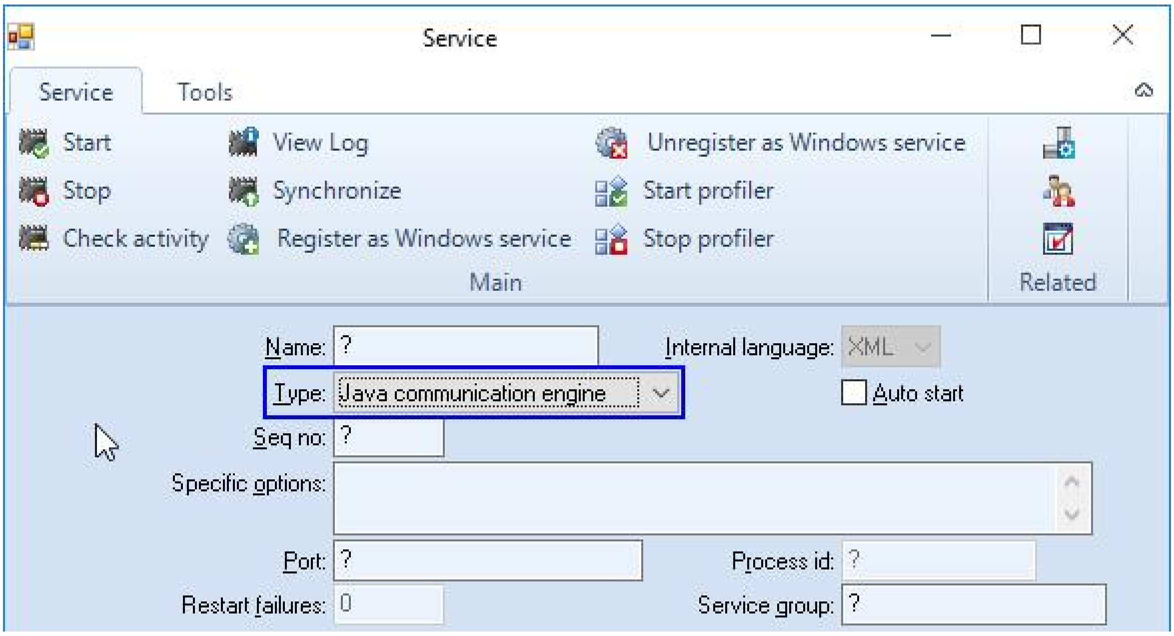
GLIMS has been extended to integrate the Java Communication Engine and the Java Translator drivers:

- The **Service** functionality was extended with a new type of Service **Java communication engine**, which acts as a container for Java translators.
- The **Translator** functionality was extended to distinguish between **Classic** and **Java** drivers.

> **Warning**
>
> Some customers already use Java-based drivers and a manually installed Java Communication Engine.
>
> If you want to switch to the integrated Java Communication Engine, please contact your MIPS project manager.

Java Communication Engine

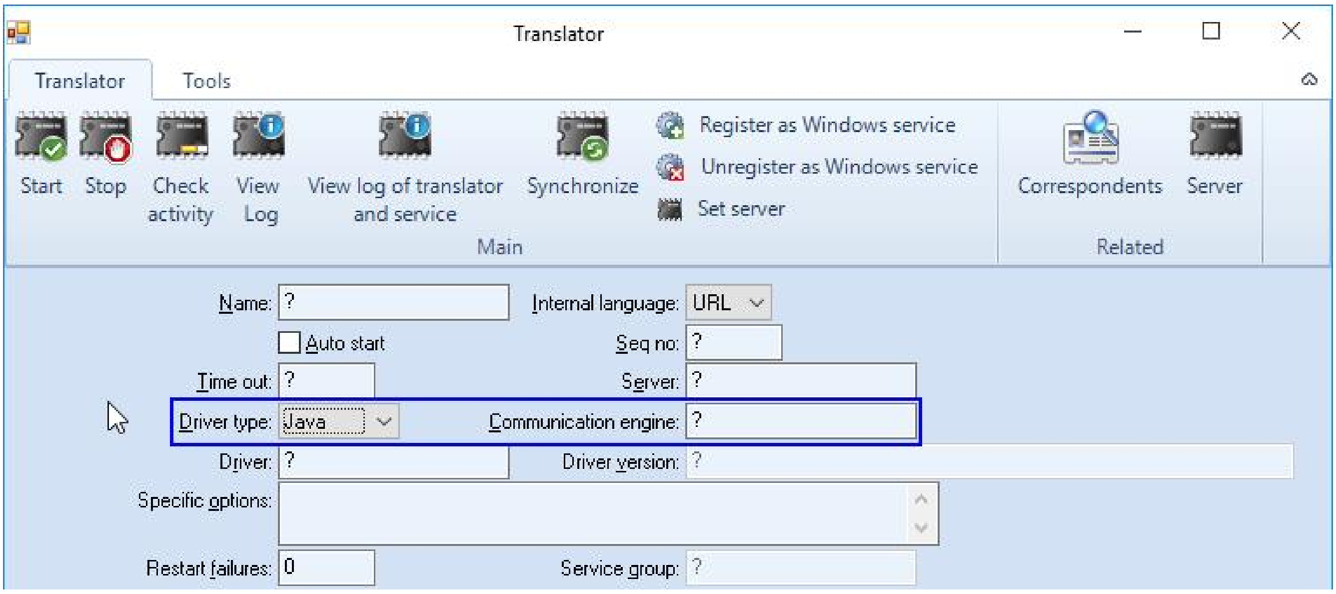
A new Service type **Java communication engine** has been introduced.



> **Note**
>
> About the logging options for a Java communication engine:
>
> - **To database** is not supported.
> - **File refresh on max size** is auto-enabled.

Java translators

A new Translator option **Driver type** has been introduced.



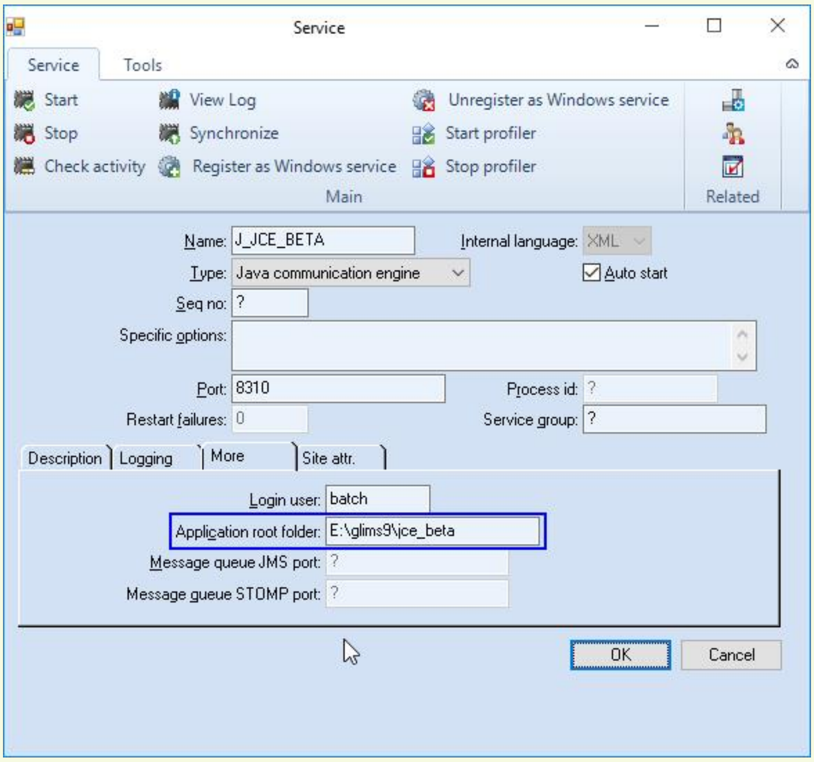
Driver type

Should be set to **Java** for Java-based translators. For Java translators, a **Communication engine** must be specified.

> **Note**
>
> - Contrary to Translators with Classic drivers, Translators with Java drivers cannot be registered as Windows services.
> - A Java translator inherits the **Service group** from its **Communication engine**.

Application root folder

The field **Application root folder** has been moved from Service to Service group. It will be applied to all **Services** and **Translators** in the **Service group**.

> **Note**
>
> Only for **Services** with **Type** set to **Java communication engine**, an **Application root folder** can be defined on **Service** level. The reason is that you cannot have multiple Java communication engines in the same root folder.
>
> Configuration for 2 Java communication engines:
>
> - The first JCE can use the default folder [$APPL\JCE]
> - For the second JCE:
>   - Create a new folder [$APPL\JCE2]
>   - Copy the default JCE folder into the new folder [$APPL\JCE2\JCE]
>   - In the **Service** for the 2nd JCE, specify the **Application root folder** [$APPL\JCE2]
>
> 
>

New function to view translators of JCE (MATE_COMHL-00321)

The **Service** table already offered functions to see related records, depending on the Service type:

- Translator server -> Translators of server
- Task schedulers -> Task now executing + Scheduler assignments
- Message queues -> Queue processors

We added another function:

- Java communication engine -> Translators of communication engine

Watchdog

Control service may log errors (MATE-03815)

An issue was detected where WatchDog database status queries could result in error logs after an uptime as certain statistical values exceeded the provided space.

This has been corrected.

Watchdog uses $DLC/jre instead of $APPL/java (MATE_COMHL-00318)

In previous versions of the application, Watchdog required:

- on Windows, that a separate installation of Java Runtime Edition 1.5 was placed in directory $APPL\java
- on UNIX, that the default java version was at least 1.5

This was a left-over from the days when OpenEdge did not ship with a sufficiently recent version of the Java Runtime Environment. At the time of writing OpenEdge ships with Java Runtime Edition 1.7.0_45 which is far more recent than unsupported Java 1.5.

The recently introduced Report builder, Message queue and Java communication engine services are based on Java and always executed as follows:

- on Windows, using the Java Runtime Edition as shipped with OpenEdge ($DLC\jre\bin\java.exe)
- on UNIX, using the java executable as defined in .applrc environment variable MA_JVM_JAVAPATH

With this modification, we apply the same reasoning for Watchdog Daemon.

> **Warning**
>
> Backward compatibility notes
>
> On Windows, the path to the java executable is stored upon registering Watchdog as a Windows service
>
> - the system manager must Unregister and Register Watchdog again before removing directory $APPL\java
> - from then on, Watchdog will use $DLC\jre to start Watchdog Daemon
>
> On UNIX, the path to the java executable is now no longer the default java version
>
> - the system manager must add environment variable MA_JVM_JAVAPATH and point it to a java version 1.5 or later
> - from then on, Watchdog will use MA_JVM_JAVAPATH to start Watchdog Daemon

System management

Order-based "Dump to file" function (GLIMS-07453)

The Order-based function Dump to file allows to export detailed data about an order in **JSON** format. It is typically used to provide MIPS with detailed logging when an issue was detected.

In order to increase responsiveness in case of an issue, the **Minimal user type** of this function has been lowered to **User**.

Integrity check: save errors to file (MADE-00254)

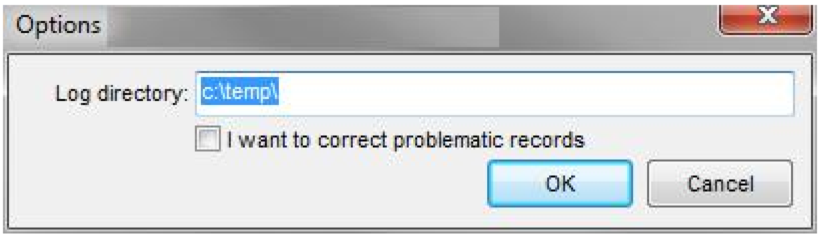
Introduction

The application allows to perform an integrity check on the database tables (e.g. gp_SiteFunction). In previous versions, each individual violation of the integrity check was reported on screen to the user.

It is now possible to save all errors to a log file for later review without having to go through all violations one by one.

Usage

1. From the main menu, choose **Start -> System management -> Scheme -> Tables**.
2. Select the table for which you want to perform an integrity check and choose the contextual function **Check integrity**.



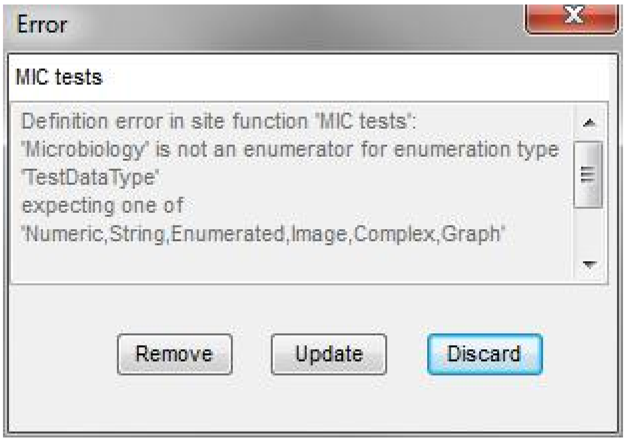
Log directory

Directory where the log file with integrity errors is saved.

The log file name will be **<table name>IntegrityCheck.log**.

I want to correct problematic records

If enabled, each violation of the integrity check will be reported on screen to the user.



Remove

Delete the problematic record.

Update

Edit the problematic record.

Discard

Ignore the error.

Straighten Oracle database schema (MADE_DICT-00170)

In the past, database columns were never dropped nor renamed in the Oracle database schema at customer sites, because early Oracle versions did not allow this.

Since newer Oracle versions do support renaming and dropping columns, the Oracle database scheme of GLIMS 9.6 has been synchronized with the Progress database scheme.

This will make future upgrade procedures more flexible and more reliable.

> **Warning**
>
> Customers with a GLIMS Oracle database that access the database directly using ODBC or sqlplus need to take these changes into account.
>
> Click here for a full list or renamed and deleted fields in the Oracle database scheme.

PID in name of interactive client log file (MATE-03818)

GLIMS allows to produce interactive session error logging. The interactive session errors are logged in 'rolling' log files (keeping e.g. max 4 log files with maximum 1MB size).

The file name of the client log will now contain the PID.

If a client session crashes, a protrace file is generated (protrace.<pid>). Hence, it should now be easier to link the protrace files to left-over client log files (with the same PID in the file name).

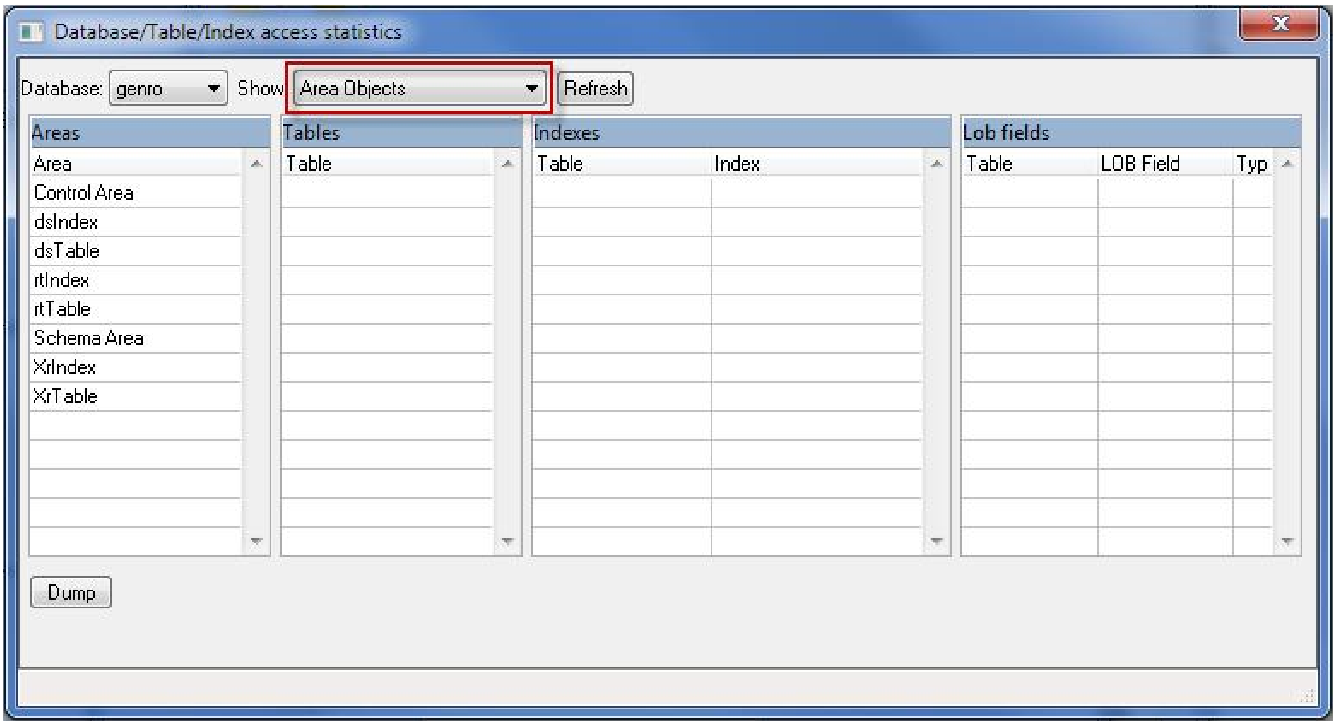
The name of the log file will now have the following format:

<directory>/<device>_<pid>_<seqno>.log

Area Objects in database statistics (MATE-03955)

The Database statistics program has been extended with an extra page to display **Area objects**.

The browser displays the areas and the tables, indexes and lob fields defined in that area. It also has a **Dump** button to export the data to a text file.



Reset password of default database user (MATE-04140)

To increase security, the default password of the default database user has been reset.

Event detail window not synchronized correctly with Events browser (MATE-04167)

Problem description:

- Choose **Start > System management > Events > Event handlers > By name, discriminator**
- Select an **Event handler** and choose the context menu function **Show all > Events**
- Select an **Event** and choose the context menu function **Show record**.
- When selecting another **Event** record in the **Events** browser without closing the detail window, it could happen that the **Event** detail window was not synchronized correctly.

This has been corrected.

GLIMS 9.6 requires Progress 11.6.2 hotfix 006 (MATE-04250)

GLIMS 9.6 requires Progress OpenEdge 11.6, Service pack 2, hotfix 006.

Note

The installation files can be downloaded from the MIPS support website.

Miscellaneous

Tool to introduce new PIN numbers based on import file (GLIMS-07039)

Introduction

A tool is available in GLIMS creating new PIN numbers based on an import file.

Context

For each patient with a PIN from provider A, a PIN for provider B needs to be created.

Path to access tool

This tool can be accessed via **Start > System management > Database > Specific update > Identifications**. Only available for **Roles** with **User type** = **System manager**.

Import file

The import file should contain comma or semi-colon separated values designating the old and new PIN.

OldPIN1,NewPIN1

OldPIN2,NewPIN2

...

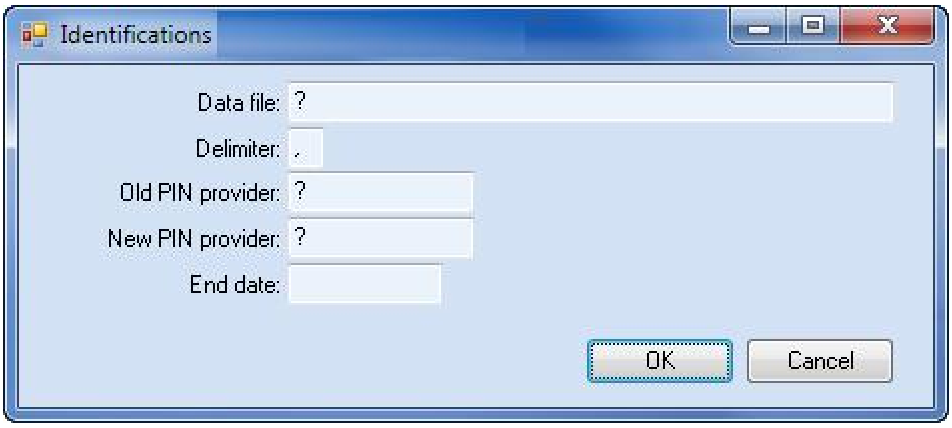
Functionality

For each **Identification** assigned by the "old PIN provider" and with **Code** = "old PIN", the tool will:

- Set the **Valid until** field (if an **End date** is specified, see below)
- Create a new **Identification** assigned by the "new PIN provider" and with **Code** = "new PIN"

> **Note**
>
> A log file in the same folder as the input file will indicate for each row in the import file whether the import was successful or not and the reason why the import failed.

Fields



Data file

Full path to the file containing the data to be imported.

Delimiter

Comma or semi-colon, to be specified according to the delimiter in the import file.

Old PIN provider

Reference to a Correspondent record in GLIMS.

New PIN provider

Reference to a Correspondent record in GLIMS.

End date

When specified, the Valid until field of the old Identification will be set to the specified date - 1. Mandatory if new PIN provider = old PIN provider.

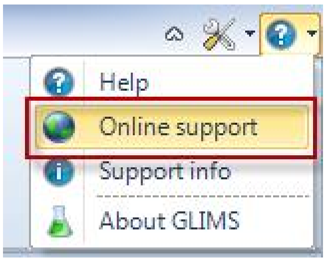
Allow "Skip setup" for certain functions (GLIMS-07459)

The Tool option Skip setup has been restored for the following functions :

- AssessmentMethod based function QCPopulations
- gp_Site based function ActionsOfStation
- gp_Site based function FinancialShipmentQueryBrowser
- gp_Site based function FinancialShipments
- gp_Site based function PropertiesOfStation
- gp_Site based function CorrespondentsQuery
- gp_Site based function IncompleteResults
- gp_Site based function ExtendedResult
- gp_Site based function ExtendedResultQuery
- gp_Site based function Encounters
- gp_Site based function UrgencyMonitor

Access to MIPS support website from within GLIMS (GLIMS-07484)

MIPS's support website was no longer accessible from within GLIMS. This has been corrected.



Remove option PreCommitAtTransactionPostCommit (GLIMS-07634)

As its practical use was unclear, the general option (SpecificSite) **PreCommitAtTransactionPostCommit** has been removed from the application.

Permanent solution for issue when closing certain browsers (GLIMS-07637)

An issue was detected where closing a browser (e.g. Order consultation and Work lists browser) would cause GLIMS to crash.

A workaround was provided in GLIMS 9.5.6. This modification implements a genuine solution to the problem.

Technical improvement for color scheme (MATE-03431)

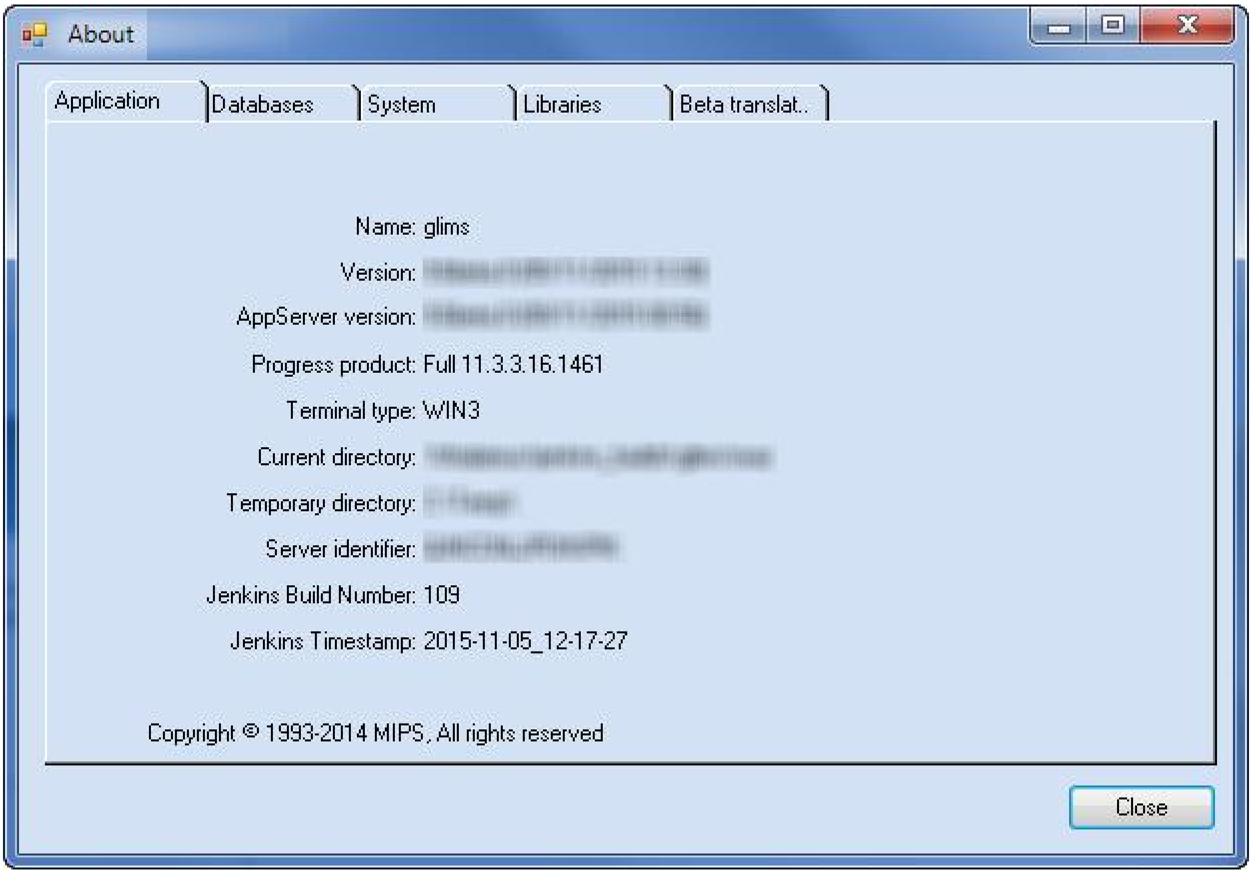
The Color scheme configuration is no longer stored in a single field (gsit_ColorScheme) but now accesses new tables **ux_StyleSheet** and **ux_StyleRule**.

Correction for Print... tool (MATE-03803)

An issue was reported where the generic **Print...** tool for some browsers no longer included the title line. This has been corrected.

Show Build information in about box and splash screen (MATE-03807)

The application's **Build number** and **Build timestamp** are now shown in the About box and the splash screen.



Improved performance when executing a function on multiple records simultaneously (MATE-03854)

It could take long to execute a function for multiple records simultaneously. This has been corrected.

Introduction of internal build number (MATE-03871)

For each application version, an internal build number is now generated which uniquely identifies the application build.

This build number is shown in the **About box**.

Impose closing of report preview window (MATE-03935)

An issue was identified where the application would crash if the log window was closed by the user at the same time that a report preview window was open.

It is now no longer possible to close any of the application windows until the preview window is closed.

Visual warning when entering non existing value (MATE-04036)

When entering a value for which no database record can be found, a visual indication will now also be given that no record can be found (previously, only a bell sound could be heard).

Examples

- Entering an unknown value in the Order consultation query options screen
- Entering an unknown micro-organism in the microbiology screen
- …

Correction for deactivation of filter (MATE-04041)

In classic browsers, a filter was only active when the window had focus. It happened that the filter was disabled because the window seemed to lose focus, causing e.g. the **Select all** functionality to select too much records. This has been corrected.

Known issue

When two browsers are open for the same table, only the filter of the browser that was opened last works correctly.

Sort order of records in a selection when using CTRL-A (MATE-04060)

When using CTRL-A to select all records in a browser and choosing the **Report** function in the **Tools** tab of the context menu, the sort order of the records in the output was different from the sort order of the records in the browser. This has been corrected.

Correction for adding functions to the Quick Acces Toolbar (MATE-04064)

When adding menu functions to the Quick Access Toolbar via the context function **Add to Quick Access Toolbar**, it happened that some of the added functions were not available in the Quick Access Toolbar after closing and reopening GLIMS. This has been corrected.

Restore locale when changed by external component (MATE-04078)

An issue has been detected where an external component (e.g. Adobe Reader when displaying a PDF during a Quick report) could change the locale settings of GLIMS. As a result of a locale change, decimal values in GLIMS could be interpreted incorrectly.

GLIMS will now automatically detect if an embedded 3rd party component has modified the process locale settings and will restore them, if necessary. The **MA_LC_NUMERIC** variable can be removed in Progress.ini.

Show correct default file type in 'Save as' box (MATE-04079)

When generating statistics, on the 3rd screen (**output options**), when output to file is chosen, and the **Save as...** dialog was opened (e.g. via double clicking the text box), the file type displayed in the **Save as type** box was not always correct. E.g. when Excel was chosen as file type, HTML files was shown as **Save as type**.

Batch sessions will ignore print commands with notepad.exe (MATE-04122)

A recurring issue at customer sites was the use of 'notepad' as a print command:

- A user would change the print command to test a specific layout, changing it to 'notepad.exe &1' in order to see the output on-screen, but then forget to change it back.
- While other interactive users would see the change on-screen, batch processes (such as Translator servers, Task schedulers and AppServer) would get 'stuck' waiting for someone to close the notepad application.

Print command execution has been revised to ignore such a print command and log an error if it is a batch session.

Internal application mails (MATE-04166)

An issue was reported with the confidentiality of the internal mail in GLIMS. This has been corrected.

To allow users to review the internal application mails they have sent to other users, a new function (gp_Site.ViewMailMessages) is available via **Start > Tools > Mail > Sent**.

Prevent e-mails from being sent from a test system (MATE-04168)

When a database is marked as a 'test' database, then it should either not send out e-mails or properly identify the e-mails as coming from a test environment - to prevent that correspondents receive e-mail data that they could inadvertently interpret as real-life patient data.

The following changes were applied:

- When marking the database as being a test database, the system manager is warned and given the option to clear the mail server settings
- When an e-mail is sent from a test database, the subject will be prefixed with "*** TEST ***" and the body will be prefixed with "*** EMAIL SENT FROM TEST ENVIRONMENT ***" if possible

Editor allows update while privileges deny it (MATE-04187)

An issue was reported where editors would allow changes to be saved even though the active user privileges denied it. This has been corrected.