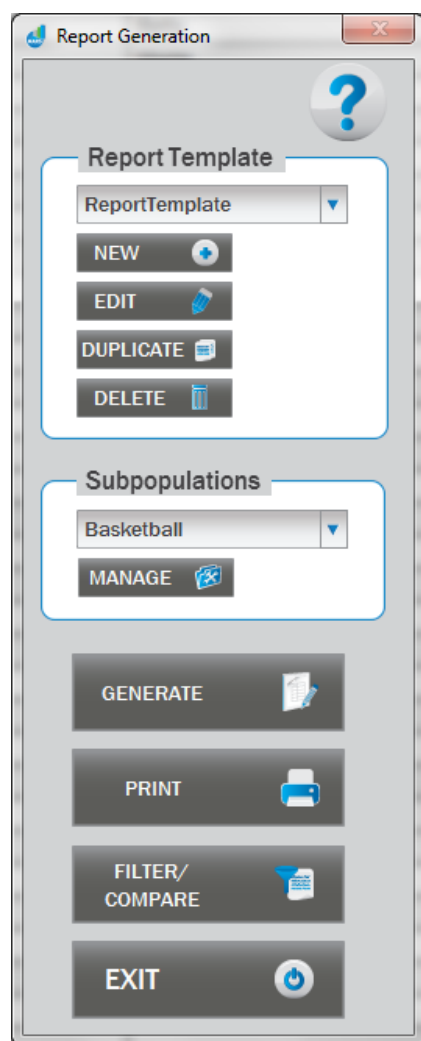# REPORTING

BRIEF DESCRIPTION

The reporting unit generates reports of the measurements for each subject automatically. The reports are based on the report templates that have been prepared in the report template creator. The reports are created in PDF file format.

REPORT GENERATION WINDOW

Report Templates

Contains predefined report templates (i.e. specification of the content of the report) for instant use. To manage the report templates use the New, Edit, Duplicate and Delete buttons (detailed description on how to create report template can be found under the Manage Report Template section).

Subpopulation Templates

Contains predefined subpopulation templates (i.e. group of subjects) for instant use. To manage the subpopulation templates click "Manage" button (detailed description can be found under Subpopulation Templates Management section).

Generate

Starts the report generation process for the selected subpopulation and report template (detailed description of the generation process under Report Generation Process).

Print

Starts the print dialog where the PDF files for printing are selected. Two options for printing are available:

- **All files with default printer**
  Prints all selected files with system default printer and default settings.

- *Use print dialog*
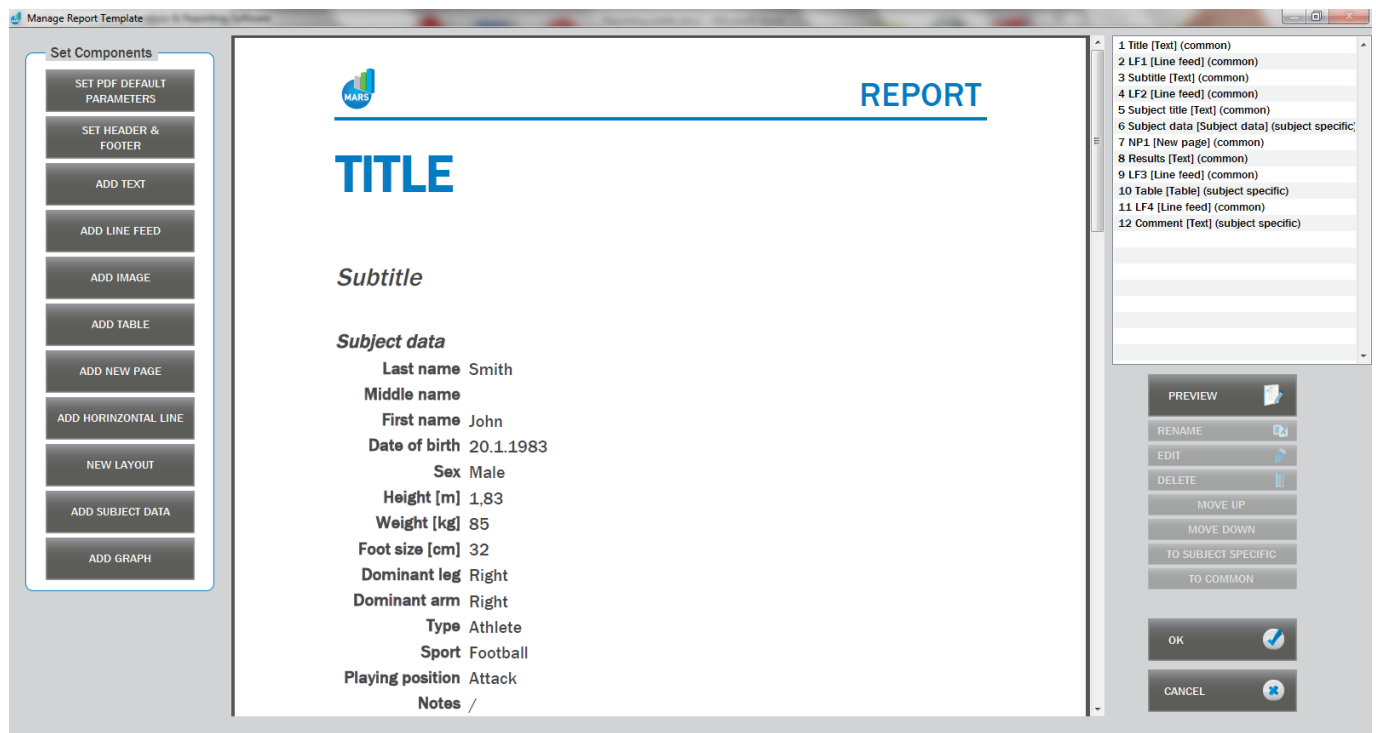 Print dialog for each file is used.

Filter / Compare

Opens Filter / Compare Unit (detailed description under Filter / Compare Unit help).

Exit

Exits the report generation window.
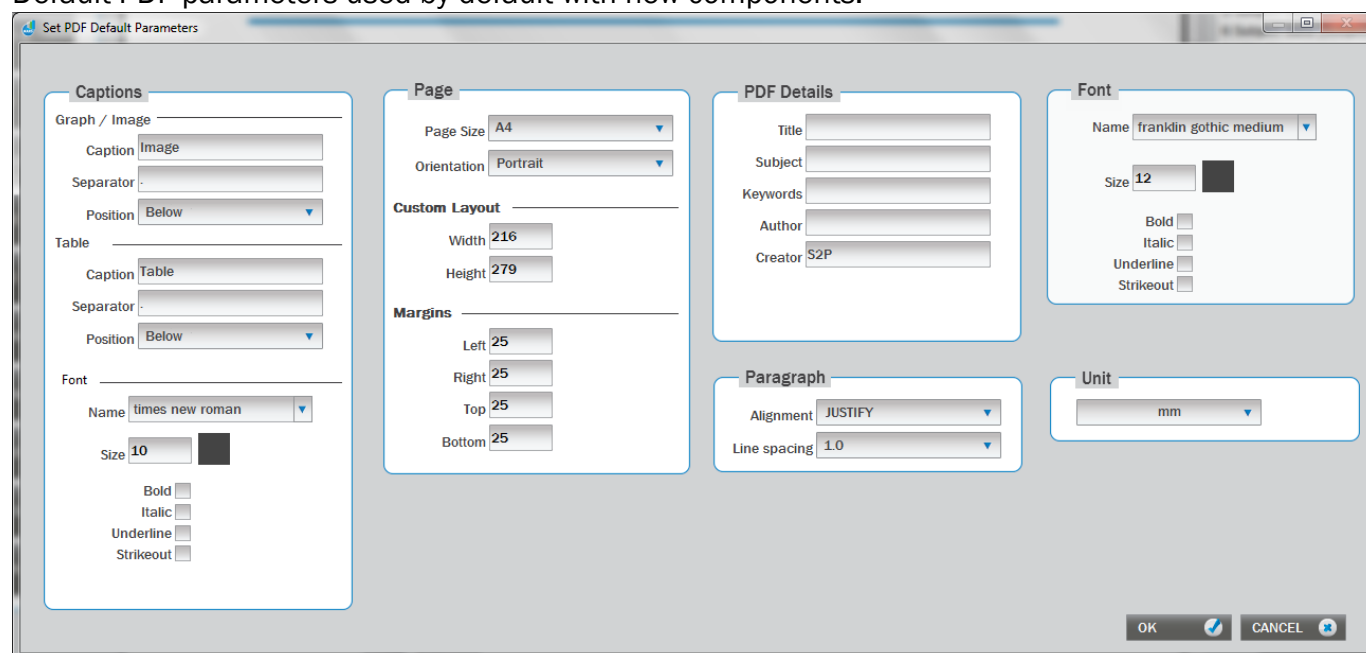

MANAGE REPORT TEMPLATE

Manage report Template consist of three areas: (1) on the left side you find components that can be added to the report, (2) the central part is the report template viewer where the content of the

template is displayed. use "Preview" button to refresh the viewer – it is not automatically refreshed when a component is manipulated) and (3) on the right side you can find all listed components of the template (each row consists of sequence number, name of the component, component type and component specificity type) with functional buttons (same functionalities as offered by buttons are also available in the shortcut menu). When a new component is added to the report, the name of the component has to be specified (name is used only for the naming).

Set PDF default parameters

Default PDF parameters used by default with new components.

- **Captions**
  Caption format for image and table component:
  - o *Caption* – caption name
  - o *Separator* – separator between caption (sequence number included) and caption text.
  - o *Position* – above or under.
  - o *Name* – font name.
  - o *Size* – font size.
  - o *Color* – font color.
  - o *Bold* – bold option.
  - o *Italic* – italic option.
  - o *Underline* – underline option.
  - o *Strikeout* – strikeout option.

- **Page**
  Page format of the report:
  - o *Page size* – size of the page.
  - o *Orientation* – page orientation.
  - o *Width* – width of the page if custom page size used.
  - o *Height* – height of the page if custom page size used.
  - o *Left* – left margin.
  - o *Right* – right margin.
  - o *Top* – top margin.
  - o *Bottom* – bottom margin.

- **PDF Details**
  Details of the report document:
  - *Title* – title of the document.
  - *Subject* – subject of the document.
  - *Keywords* – keywords of the document.
  - *Author* – author of the document.
  - *Creator* – creator of the document.

- **Paragraph**
  Default paragraph of the report.
  - *Alignment* – alignment of the paragraph.
  - *Line spacing* – line spacing between lines in paragraph.

- **Font**
  Default font of the report:
  - *Name* – font name.
  - *Size* – font size.
  - *Color* – font color.
  - *Bold* – bold option.
  - *Italic* – italic option.
  - *Underline* – underline option.
  - *Strikeout* – strikeout option.
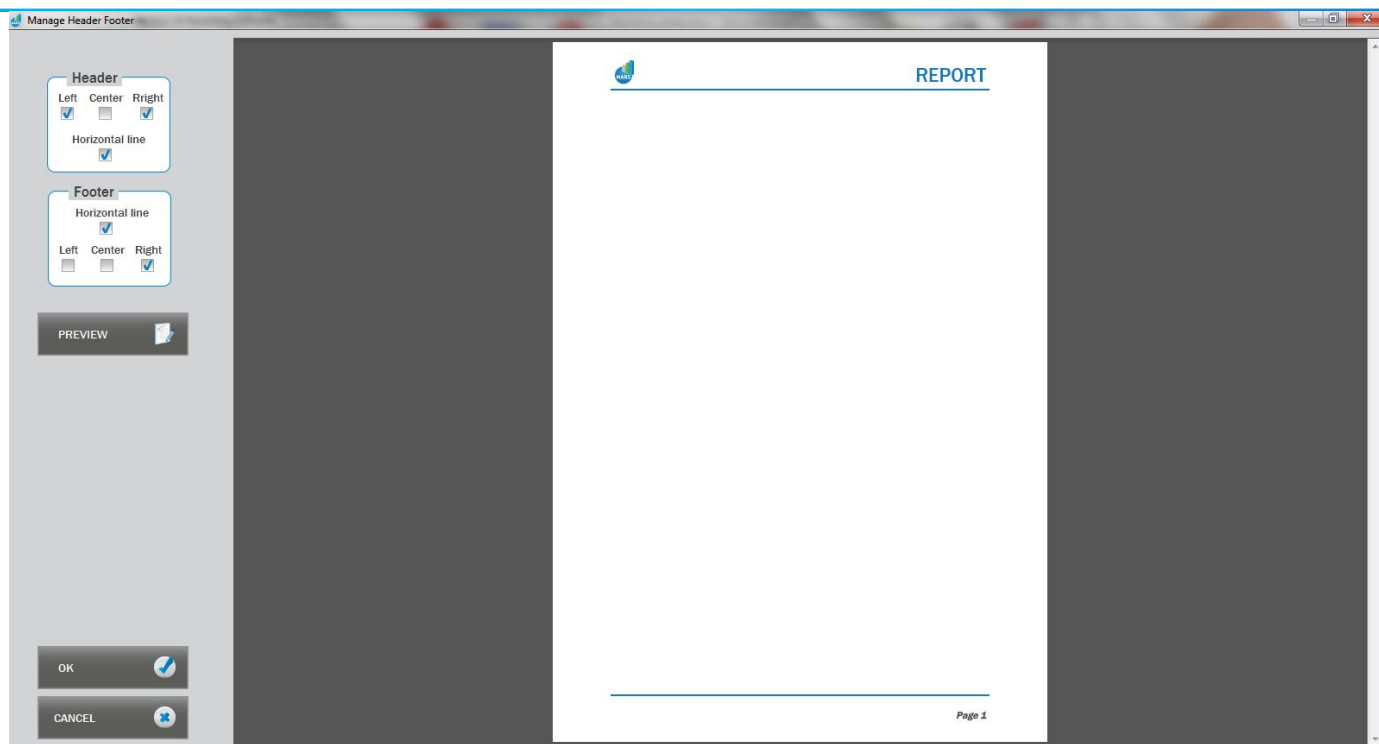
- **Unit**
  Default unit.

- **Ok**
  Accept changes.

- **Cancel**
  Reject changes.

Set Header & Footer

Set header and footer of the report.

- **Header**
  Components in the header of the report:
    o *Left* – left side component (specified in new window).
    o *Center* – central component (specified in new window).
    o *Right* – right side component (specified in new window).
    o *Horizontal line* – horizontal line below other header components (specified in new window).

- **Footer**
  Components in the footer of the report:
    o *Left* – left side component (specified in new window).
    o *Center* – central component (specified in new window).
    o *Right* – right side component (specified in new window).
    o *Horizontal line* – horizontal line above other footer components (specified in new window).

  Header and Footer component specification

  For each Header or footer component (except horizontal line) three types of components are available:
    - **Text**
   Text field:
        o *Text* – content of the field.
        o *Link* – hyperlink added on the field.
        o *Start at page* – start page.
        o *Name* – font name.
        o *Size* – font size.
        o *Color* – font color.
        o *Bold* – bold option.
        o *Italic* – italic option.

   o *Underline* – underline option.
   o *Strikeout* – strikeout option.

- **Image**
 Image field:
   o *Path* – absolute path to the image file.
   o *Link* - hyperlink added on the field.
   o *Image (%)* – image scaling.
   o *Start at page* – start page.

- **Page number**
 Page number field:
   o *Page number format* – format of the page number (e.g. Page 3 of 29 pages).
   o *Start at page* – start page.
   o *Name* – font name.
   o *Size* – font size.
   o *Color* – font color.
   o *Bold* – bold option.
   o *Italic* – italic option.
   o *Underline* – underline option.
   o *Strikeout* – strikeout option.

- **Horizontal line**
 Horizontal line below the header or above the footer:
   o Thickness – line thickness.
   o Color – line color.

- **Preview**
 Refresh report viewer content.

- **Ok**
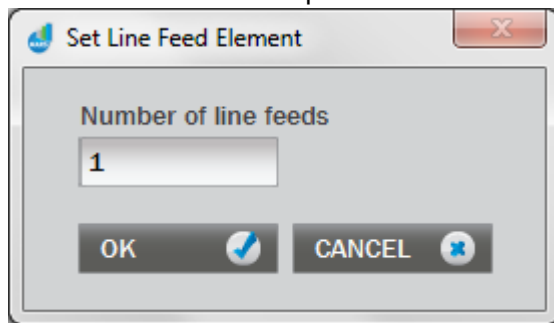 Accept changes.

- **Cancel**
 Reject changes.

Add Text

Add text paragraph in the report.
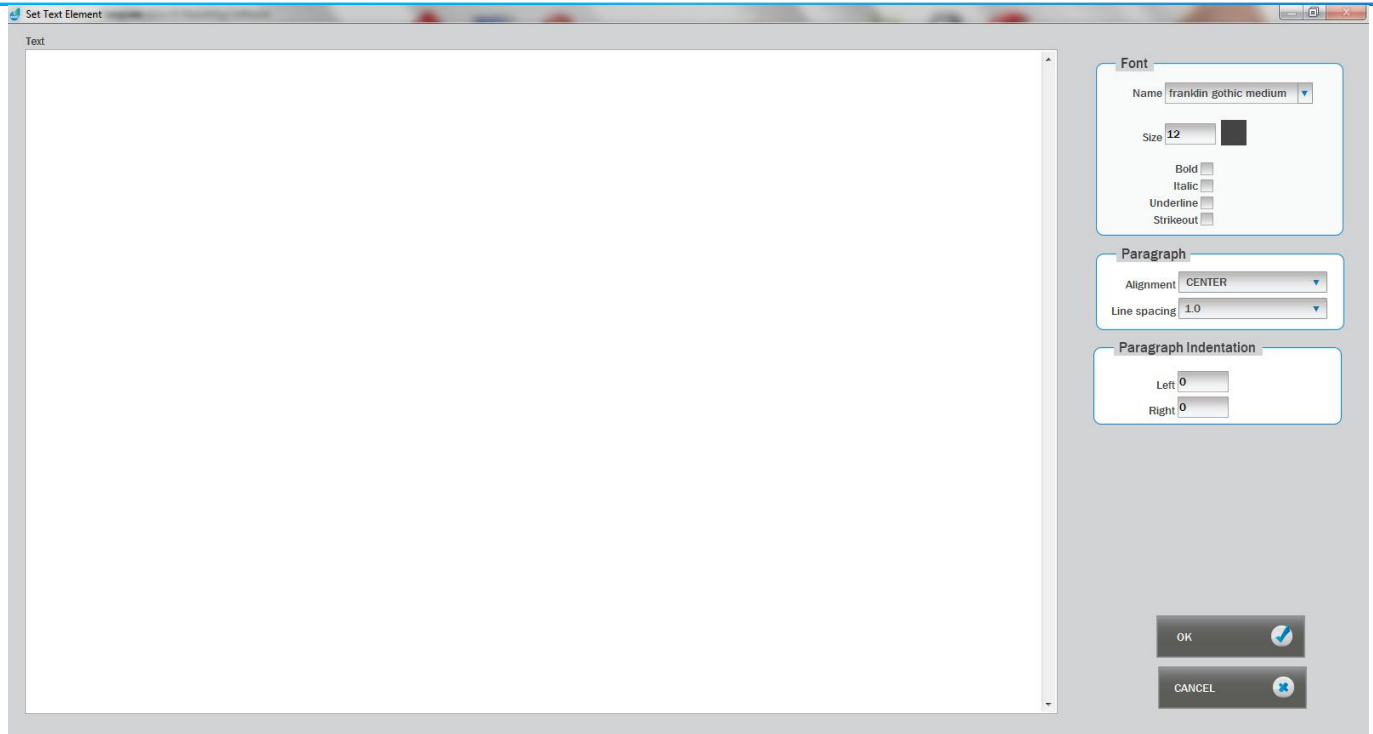
- **Text**
  Content.

- **Font**
  Font options:
  - o *Name* – font name.
  - o *Size* – font size.
  - o *Color* – font color.
  - o *Bold* – bold option.
  - o *Italic* – italic option.
  - o *Underline* – underline option.
  - o *Strikeout* – strikeout option.

- **Paragraph**
  Paragraph options:
  - o *Alignment* – alignment of the paragraph.
  - o *Line spacing* – line spacing between lines in paragraph.

- ***Paragraph* Indentation**
  Default paragraph of the report.
  - o *Left* – left indentation.
  - o *Right* – right indentation.

- **Ok**
  Accept changes.

- **Cancel**
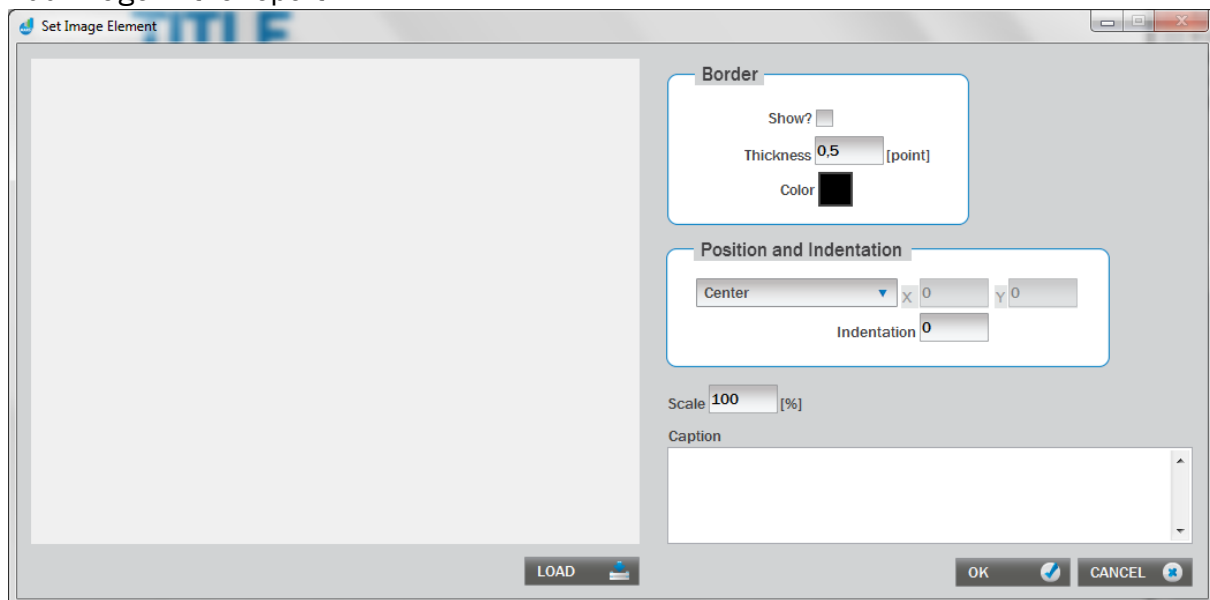 Reject changes.

Add Line Feed

Add line feed in the report.

- **Number of line feeds**
  Number of line feeds placed in the report.

- **Ok**
  Accept changes.

- **Cancel**
  Reject changes.

Add Image

Add image in the report.

- **Load**
  Loads an image file (absolute path) in the report.

- **Border**
  Border of the image:
    o *Show?* – show border.
    o *Thickness* – thickness of the border.
    o *Color* – color of the border.

- **Position and Indentation**
  Position and Indentation of the image:
  - o *Alignment* – alignment of the image (if Absolute (X,Y) option is used X and Y are offset of the image).
  - o *Indentation* – indentation of the image.

- **Scale**
  Image scaling.
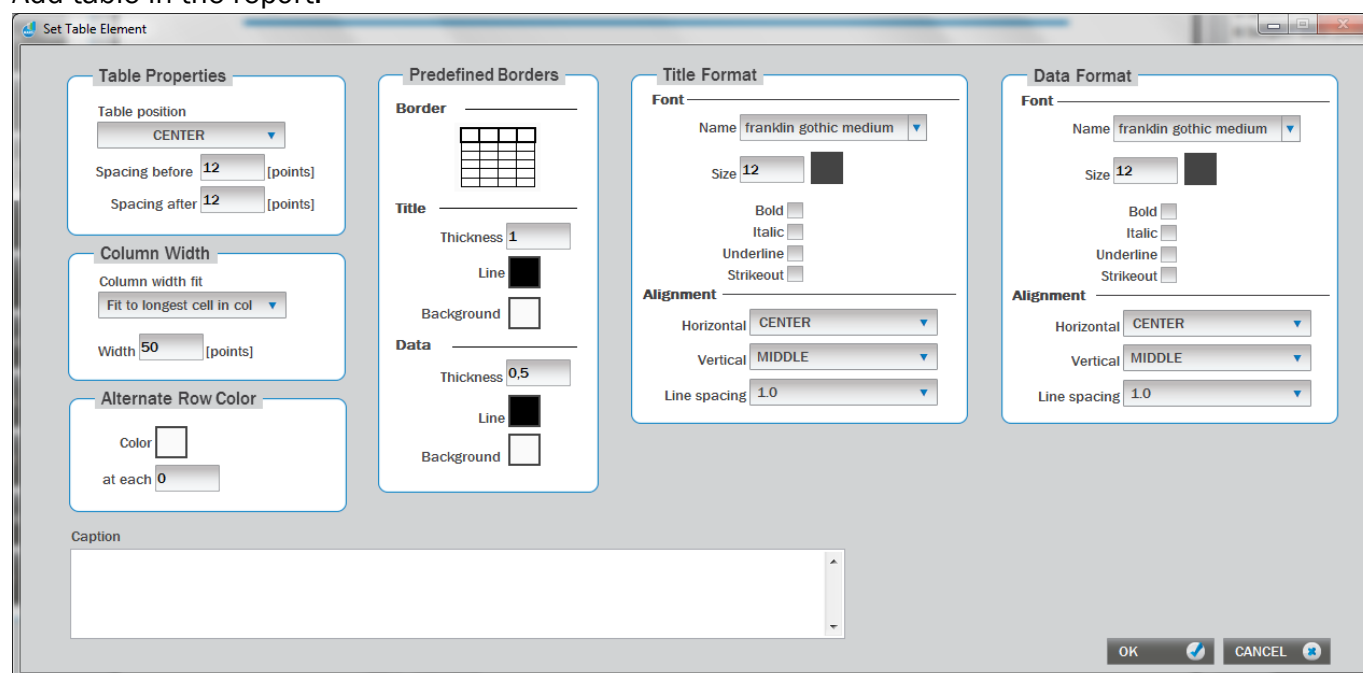
- **Caption**
  Image caption.

- **Ok**
  Accept changes.

- **Cancel**
  Reject changes.

Add Table

Add table in the report.

- **Table properties**
  General properties of the table:
  - o *Table position* – alignment of the table.
  - o *Spacing before* – spacing before the table.
  - o *Spacing after* – spacing after the table.

- **Column width**
  Width of the columns:
  - o *Column width fit* – column width fitting options (Fit to longest cell in column, Fit to title value, Fit to value, Equal).

- o *Width* – maximum width if Equal option is used.

- **Alternate row color**
  Color of alternate rows:
  - o *Color* – color of the alternate rows.
  - o *at each* – alternate row color at each n row.

- **Predefined borders**
  Border setting of the table:
  - o *Border* – border type of the table.
  - o *Thickness (Title)* – thickness of title border.
  - o *Line (Title)* – line color of title border.
  - o *Background (Title)* – background color of title cell.
  - o *Thickness (Data)* – thickness of data border.
  - o *Line (Data)* – line color of data border.
  - o *Background (Data)* – background color of data cell.

- **Title format**
  Format of the title:
  - o *Name* – font name.
  - o *Size* – font size.
  - o *Color* – font color.
  - o *Bold* – bold option.
  - o *Italic* – italic option.
  - o *Underline* – underline option.
  - o *Strikeout* – strikeout option.
  - o *Horizontal* – horizontal alignment.
  - o *Vertical* – vertical alignment.
  - o *Line spacing* – line spacing between lines in a cell.

- **Data format**
  Format of the data:
  - o *Name* – font name.
  - o *Size* – font size.
  - o *Color* – font color.
  - o *Bold* – bold option.
  - o *Italic* – italic option.
  - o *Underline* – underline option.
  - o *Strikeout* – strikeout option.
  - o *Horizontal* – horizontal alignment.
  - o *Vertical* – vertical alignment.
  - o *Line spacing* – line spacing between lines in a cell.

- **Caption**
  Table caption.

- **Ok**
  Accept changes.

- **Cancel**
  Reject changes.

Add New Page

Add new page in the report. No additional options required.

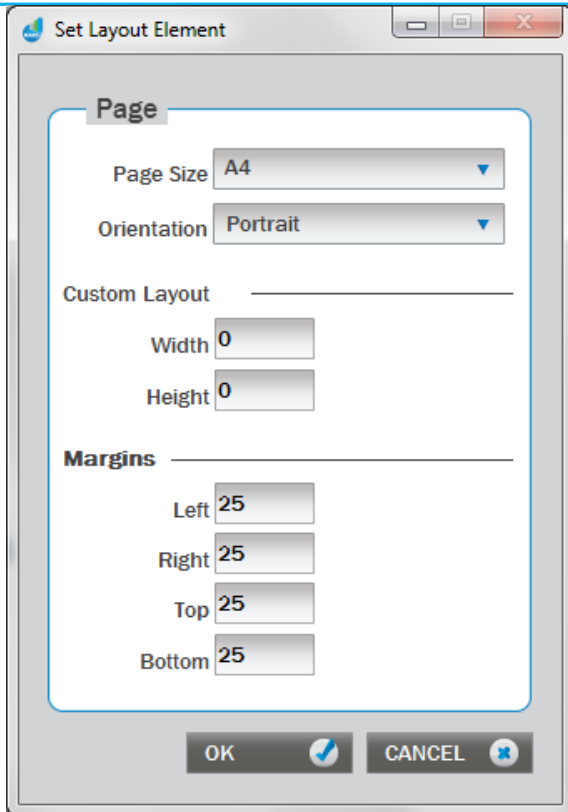## Add Horizontal Line

Add horizontal line in the report.
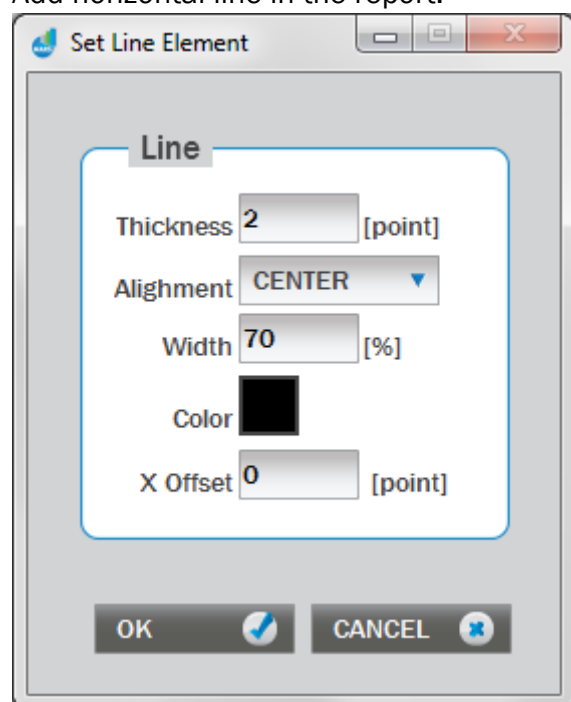
- **Line**
  Line options:
    - *Thickness* – thickness of the line.
    - *Alignment* – horizontal alignment.
    - *Width* – width of the line in percent of the page width.
    - *Color* – color of the line.
    - *X Offset* – horizontal offset.

- **Ok**
  Accept changes.

- **Cancel**
  Reject changes.

New Layout

New page layout.

- **Page**
  Page format:
    o *Page size* – size of the page.
    o *Orientation* – page orientation.
    o *Width* – width of the page if custom page size used.
    o *Height* – height of the page if custom page size used.
    o *Left* – left margin.
    o *Right* – right margin.
    o *Top* – top margin.
    o *Bottom* – bottom margin.

- **Ok**
  Accept changes.

- **Cancel**
  Reject changes.

Add Subject Data

Add subject data in the report.

- **Selected Fields**
  Subject attributes that will be printed in the report.

- **Label format**
  Format of the label:
    o *Name* – font name.
    o *Size* – font size.
    o *Color* – font color.
    o *Bold* – bold option.
    o *Italic* – italic option.
    o *Underline* – underline option.
    o *Strikeout* – strikeout option.
    o *Horizontal* – horizontal alignment.
    o *Vertical* – vertical alignment.
    o *Line spacing* – line spacing between lines in a cell.

- **Data format**
  Format of the data:
    o *Name* – font name.
    o *Size* – font size.
    o *Color* – font color.
    o *Bold* – bold option.
    o *Italic* – italic option.
    o *Underline* – underline option.
    o *Strikeout* – strikeout option.
    o *Horizontal* – horizontal alignment.
    o *Vertical* – vertical alignment.
    o *Line spacing* – line spacing between lines in a cell.

- **Alignment properties**
  Alignment properties of the subject data:
    o *Alignment* – alignment of the table.
    o *Spacing before* – spacing before the table.
    o *Spacing after* – spacing after the table.

- **Max Image Size**
  Maximal bounds of the subject image:

  o *Width* – maximum width.
  o *Height* – maximum height.

- **Ok**
 Accept changes.

- **Cancel**
 Reject changes.

Add Graph

Add graph in the report.
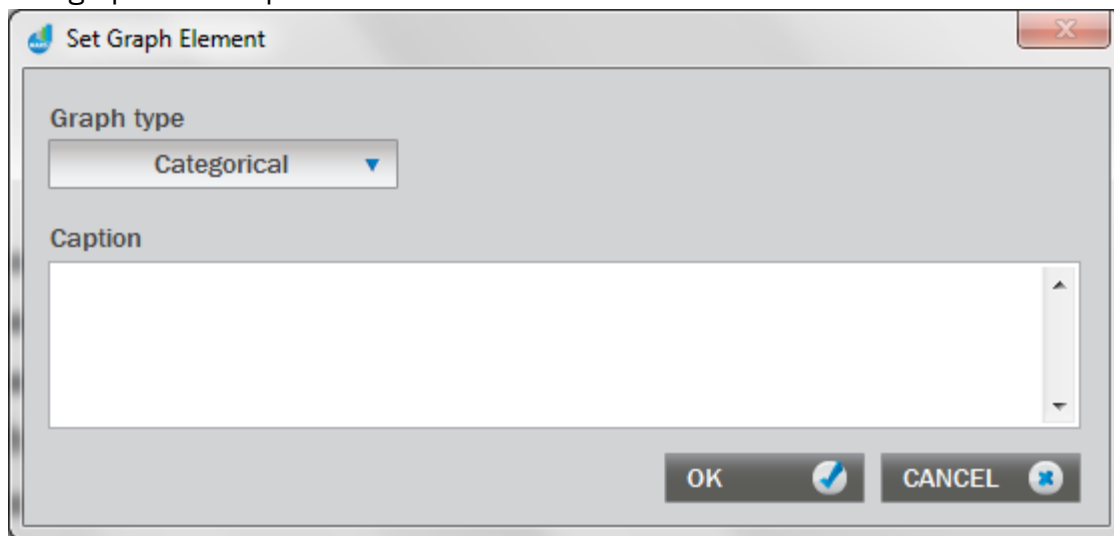
- **Graph**
 Graph type (categorical or line).

- **Ok**
 Accept changes.

- **Cancel**
 Reject changes.

Components Functional Buttons

Component functional buttons are used for the manipulation of components. Same functionalities as offered by buttons are also available in the shortcut menu.

- **Preview**
 Refresh report viewer content.

- **Rename**
 *R*ename selected component.

- **Edit**
 Edit selected component.

- **Delete**
  Delete selected component.

- **Move Up**
  Move up selected component.

- **Move down**
  Move down selected component.

- **To subject specific**
  Selected component content will be specific for each subject separately (e.g. subject data). Some component cannot be subject specific.

- **To common**
  Selected component content will be common to all subjects.

- **Ok**
  Accept changes.

- **Cancel**
  Reject changes.

SUBPOPULATION TEMPLATES MANAGEMENT

Subpopulation templates management is stated by clicking "Manage" button in Subpopulation Templates panel.
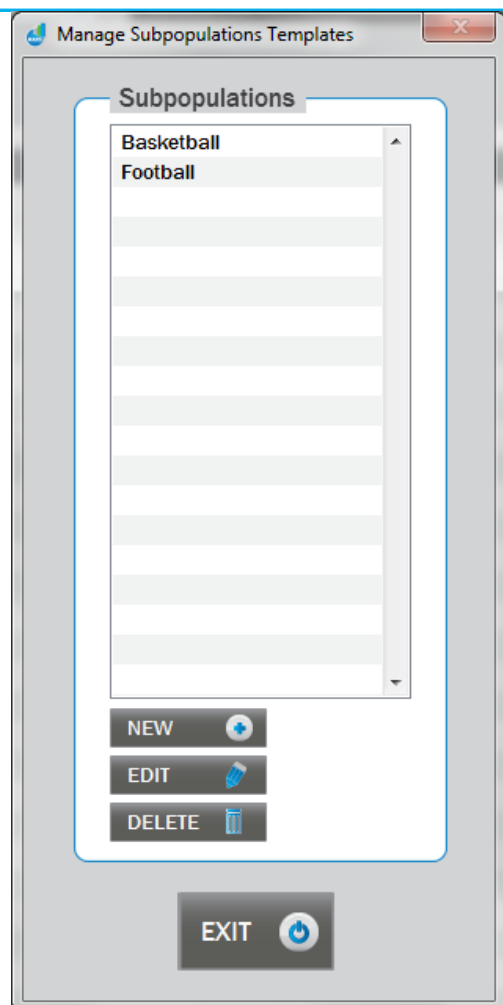
Subpopulation
Is the list of defined subpopulation templates.

New
Create new subpopulation template (new window "Manage subpopulation template" is opened).

Edit
Edit an existing subpopulation template (new window "Manage subpopulation template" is opened).
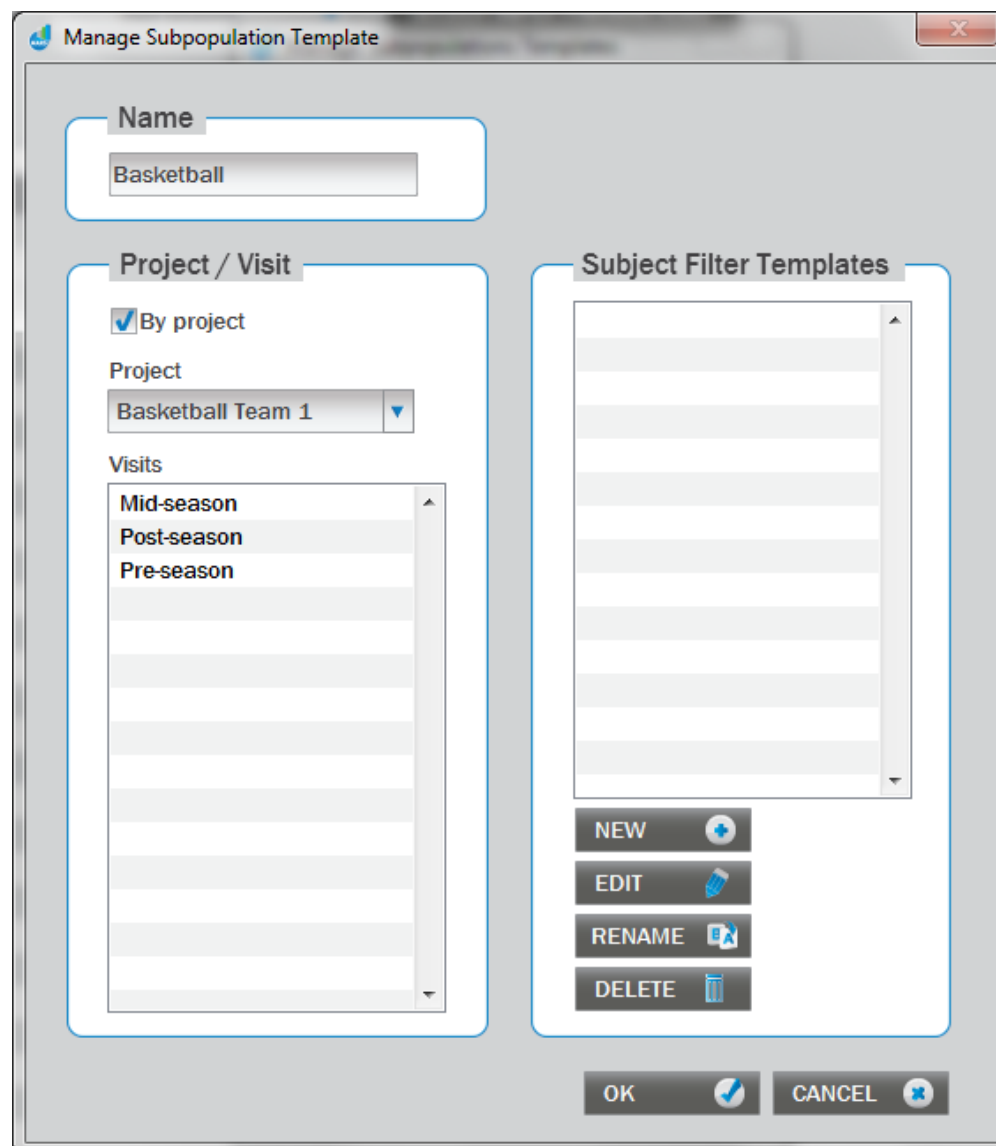
Delete
Delete an existing subpopulation template.

Exit
Exit the subpopulation management.

Manage Subpopulation Template

Name
Name of the subpopulation template.

Project/Visit
Select project and visits.

By project
Select subpopulation that is contained in a project.

Project
Selected project for the subpopulation.

Visit
Selected visits for the subpopulation.

Subject Filter Templates
Subject filters defined by subject attributes (values/ranges).

New
Create new subject filter template (new window "Subject filter" is opened).

Edit
Edit an existing subject filter template (new window "Subject filter" is opened).

Rename
Rename an existing subject filter template.

Delete
Delete an existing subject filter template.

Ok
Confirms changes.

Cancel
Rejects changes.

Subject Filter

Contains all subject attributes for which filter options can be set. Any combinations of attributes can be included in the filter. To include subject attribute into the filter check the checkbox next to the attribute. For categorical parameters more categories can be selected, while for numerical parameters range of values can be defined.

Ok
Confirms changes.

Cancel
Rejects changes.

REPORT GENERATION PROCESS

Report generation is starter with "Generate" button in Report Generation window for the selected report template and subpopulation.

If the report contains subject specific tables or graphs a new window is opened for each of them. In this window, the content of the table or report is specified (detailed description is in section Subject Specific Data Specification).

A folder for the report files has to be specified in "Select Folder" dialog window. Select the folder and click "Current Folder" in right bottom window.
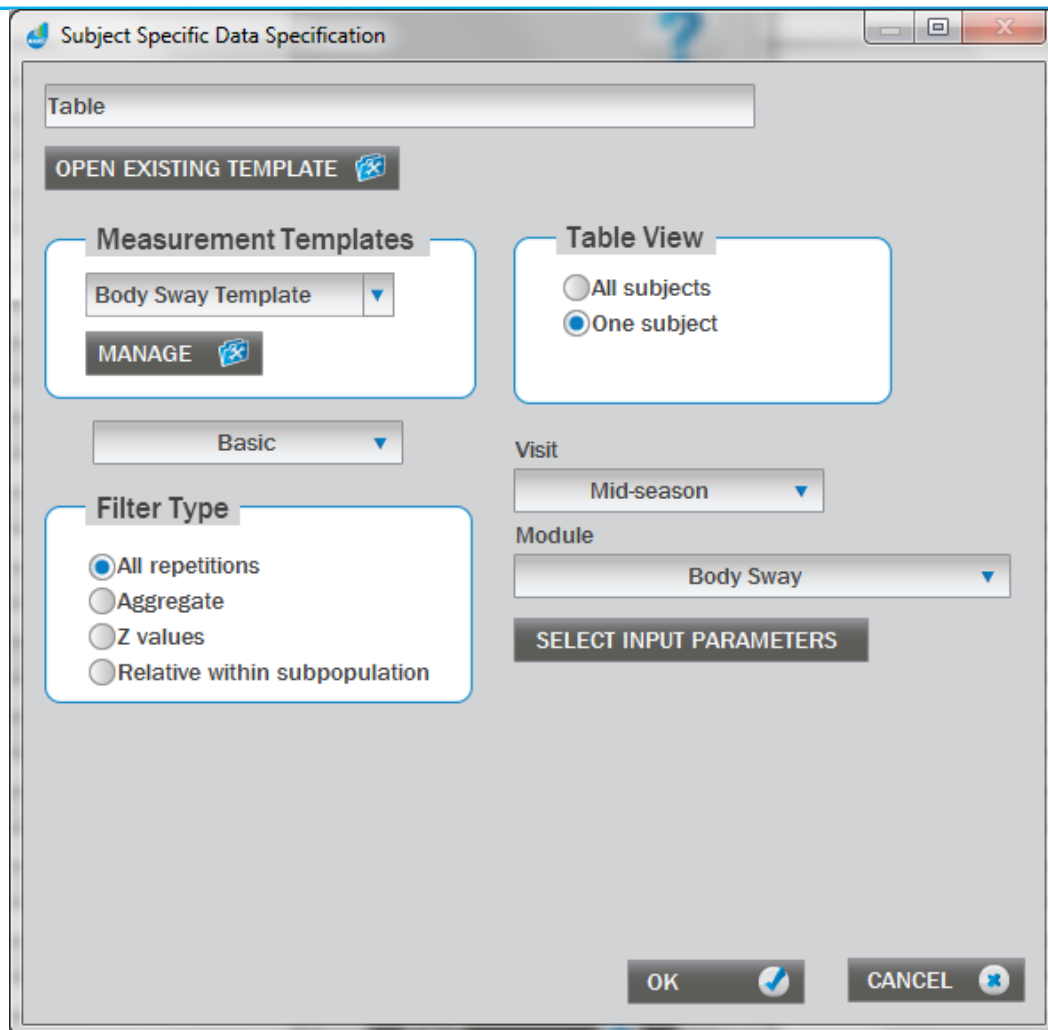
If report contains subject specific text a new window is opened for each of them. In this window, the content of the text field is defined e.g. comments about results (detailed description is in section Subject Specific Text).

Subject Specific Data Specification

Subject specific content of the table or report is specified in a similar way as in the Filter / Comparison Unit.

Open Existing Template
Use an existing filter / comparison template.

Measurement Templates
Contains predefined measurement templates (i.e. group of tests with corresponding sets of selected result parameters and input parameters) for instant use. To manage measurement templates click "Manage" button (detailed description is under Manage Measurement Templates section).

Filter level
Is either basic or advanced. The basic level contains quick and easy to use filters and comparison options. Advanced level contains more complex functionalities with a wider range of options (in addition to basic options).

Filter Type (Basic level)
Four options are available for result parameters manipulation:
- *All repetitions* – all repetitions.
- *Aggregate* – uses aggregate function (on repetitions) that is specified for each result parameter separately in a measurement template.
- *Z values* – calculates Z values (standard score) for results parameters (aggregate function specified in measurement template is used on repetitions).

- *Relative within subpopulation* – calculates relative values (in %) compared to the selected subpopulation under Subpopulation Templates (aggregate function specified in measurement template is used on repetitions).

Filter Type (Advanced level)
Two basic options are available for result parameters manipulation:
- *All repetitions* – all repetitions.
- *Aggregate* – uses aggregate function (on repetitions) that is specified for each result parameter separately in a measurement template. Additional four options are available under Relative Comparison.

Relative comparison
Four options for comparison are available:
- *None* – no comparison is performed.
- *Z values* – calculates Z values (standard score) for results parameters (aggregate function specified in measurement template is used on repetitions).
- *Relative within subpopulation* – calculates relative values (in %) compared to the subpopulation specified with "Set" button (aggregate function specified in measurement template is used on repetitions).
- *With visit* – calculates relative values (in %) compared to the selected visit (dropdown menu under "With visit" option) (aggregate function specified in measurement template is used on repetitions).

Table View
If in Filter Type All repetitions is selected, two options are available: (1) All subjects (result parameters of all subjects are displayed in table/graph) and (2) One subject (result parameters of one subject are displayed in table/graph).
If in Filter Type any other option then All repetitions is selected, three options are available: (1) By subjects (result parameters of all subjects are displayed in table/graph), (2) By input parameters (result parameters of all input parameters are displayed in table/graph) and (3) By visits (result parameters of all visits are displayed in table/graph).

Visit
Visit for which result parameters are displayed in table/graph.

Module
Module for which result parameters are displayed in table/graph.

Select input parameters
Input parameters for which result parameters are displayed in table/graph.

Ok
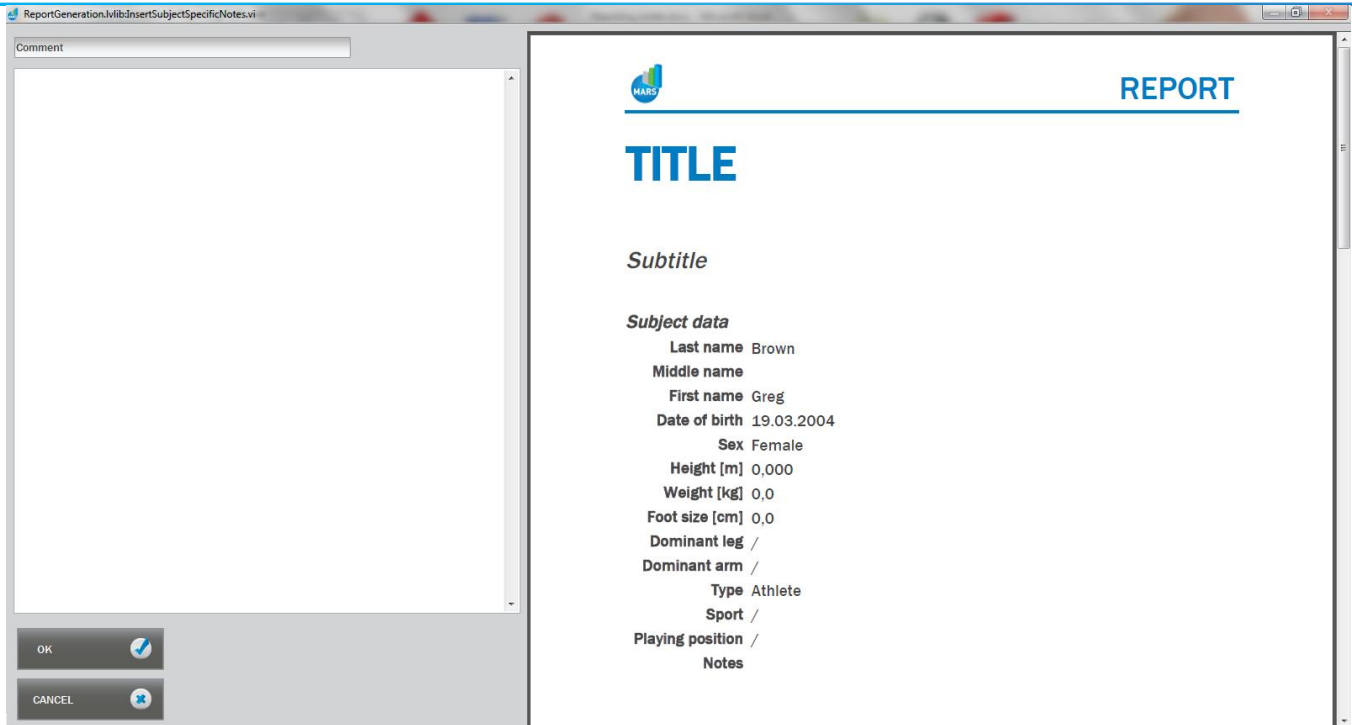Confirms changes.

Cancel
Rejects changes.

Subject Specific Text

Subject specific content of the text field is defined (e.g. comments about results).

Text Field
Content of the text field in the report.

Report Viewer
Displays content of the report without Subject Specific Text components. The report contains tables and graphs which helps the user writing comments and conclusions.

Ok
Confirms changes.

Cancel
Rejects changes.

MEASUREMENT TEMPLATES MANAGEMENT

Measurement templates management is stated by clicking "Manage" button in Measurement Templates panel.
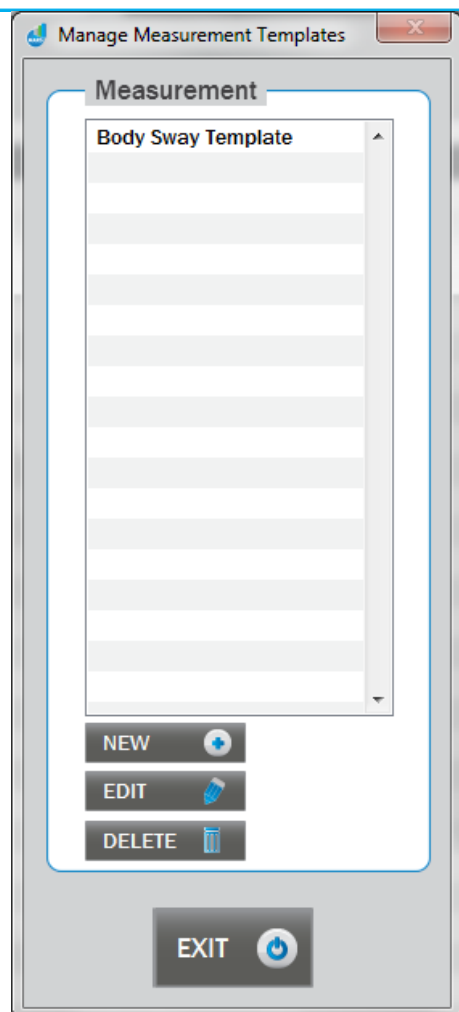
Measurement
Is the list of defined measurement templates.

New
Create new measurement template (new window "Manage measurement template" is opened).

Edit
Edit an existing measurement template (new window "Manage measurement template" is opened).

Delete
Delete an existing measurement template.

Exit
Exit the measurement management.

Manage Measurement template

Name
Name of the measurement template.

Module
List of modules. If at least one result parameter is selected for a module, then check is shown left of the module name.

Result parameters
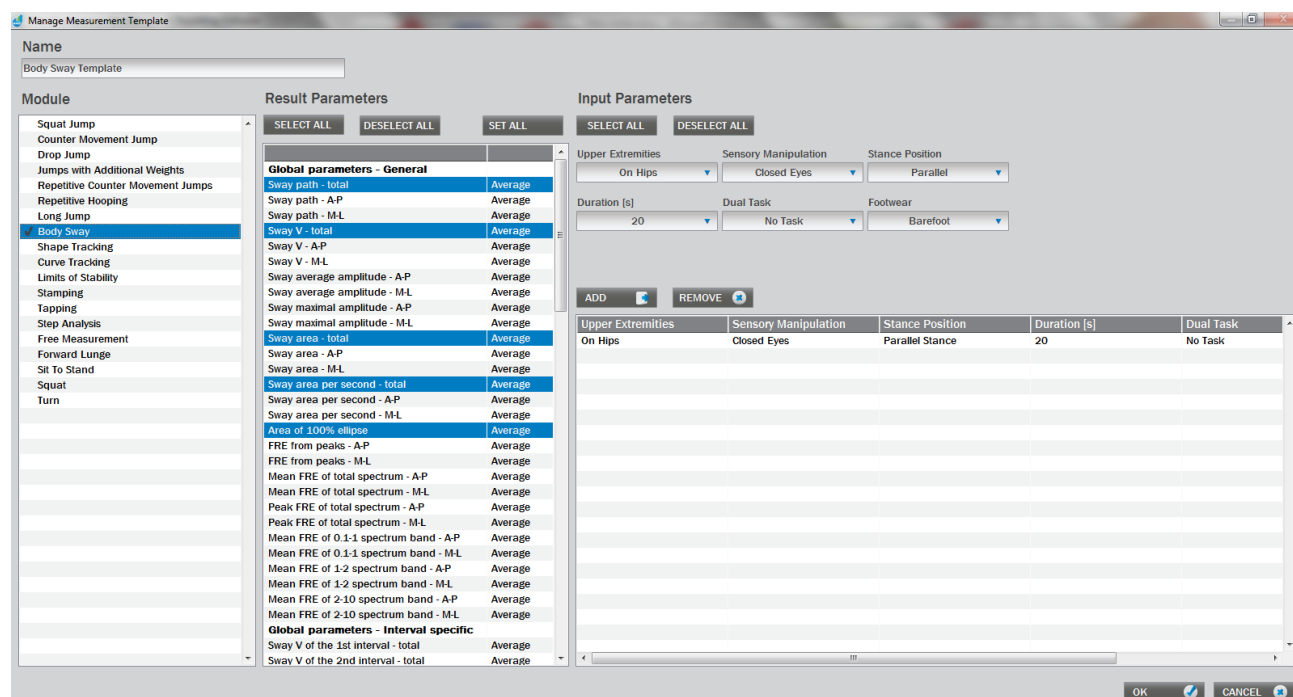List of result parameter of the selected module (test). To select/deselect a result parameter click on its name. To change aggregate function of a result parameter click on right column of the parameter and select one of three options: Average, maximal or minimal. This aggregate function is used if option "Aggregate" in "Filter Type" is used (see Filter / Comparison window for details).

Select All (Results Parameters)
Select all result parameters.

Deselect All (Results Parameters)
Deselect all result parameters.

Set All (Results Parameters)
Set selected aggregate function for all result parameters.

Input parameters
List of results` parameters of the selected module (test).

Add (Input Parameters)
Add the selected input parameters (use dropdown menus to select input parameters) on the list.

Remove (Input Parameters)
Remove the selected input parameters (in the list) on the list.

Select All (Input Parameters)
Select all input parameters. If more than 100 input parameter combinations are possible they will not be added to the list due to their opacity and hard handling in tables and graphs. In this case, you have to add input parameters manually ("Add" button).

Deselect All (Input Parameters)
Deselect all input parameters.

Ok
Confirms changes.

Cancel
Rejects changes.