User's Manual

SDB View

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SDB VIEW

Welcome to SDB VIEW!

SDB VIEW is one of the essential components of the SDB suite. It enables navigation within a Measurement database SDB created by the SOFO Measurement system. It provides the flexibility of simultaneously displaying, within the same window, several different views of fields chosen from the open database over a defined monitoring period. The display can be of a tabular or graph plot format with associated options.

The data output could either be generated as a screen display or saved to a file (format txt, wmf, bmp, jpg, Excel, …), with the option of manual or automatic display, hence allowing the generation of automatic reports that exploit the update of links.

SDB VIEW allows not only the management of Warning states in the form of Pre-warning and Warning condition indicators but in addition, triggers a corresponding and user-defined display in consequence and sends e-mails.

This document contains detailed information on the use of the SDB VIEW module of SDB suite and guides you through the specific menus and functions.

Window 98/NT/2000/XP/Vista Installation

To activate the SDB VIEW software you have to own a valid license number and enter it in the **Options / License Manager** menu. With it you will have the possibility use all the function of this module.

SDB VIEW Overview

Database principals

The initials DB indicate the use of standard database concepts within the SDB VIEW software.

All data recorded by the SOFO Measurement system are stored in a file having the extension SDB. This is a Microsoft Access data base file type.

SDB VIEW is based on the Microsoft™ Jet Engine. The SDB VIEW files can also be accessed by the Access, Excel or Visual Basic software.

Organization of the Data Base

A SDB VIEW is simply a SDB with additional tables. One table « View » defines the display and output modes for the selected data base fields (this output is henceforth call the **View**). The table may comprise one or multiple views. The other table « Field » comprises the field values for display in accordance with the definitions of the **View** table.

VIEW Table

The fields requiring definition in the compilation of this table are essentially described by:

- The name of the **View**
- The access path to the database file *.SDB from which one wishes to select a display.
- The number of monitoring Sessions for which the data base fields, *.SDB, must be displayed.
- An option defining whether or not to display the « forget » monitoring Sessions and/or Measurements
- An option allowing execution of this View upon launching the software.
- The desired display type.
- The Warning state sensitivity before triggering the corresponding display.

FIELD Table

The fields requiring definition in the compilation of this table are essentially described by:

- For the given database *.SDB, the Sensor data fields to be displayed in accordance with the **View** table
- The Warning values

Output

The SDB VIEW output is based on the definition table « **View** ». For each **View** table the user can define several different views. Each view allows display of the output from one or several Sensors from a given database *.SDB, from a defined number of monitoring Sessions and in comparison with a chosen reference Session. The output type is chosen from; table, text file from table, graph plot, graph plot sent to file type WMF, BMP, JPG, table or graph plot sent to the Clipboard, or table showing the Warning status.

A particular view can be automatically generated as the SDB VIEW software loads.

SDB View Configuration

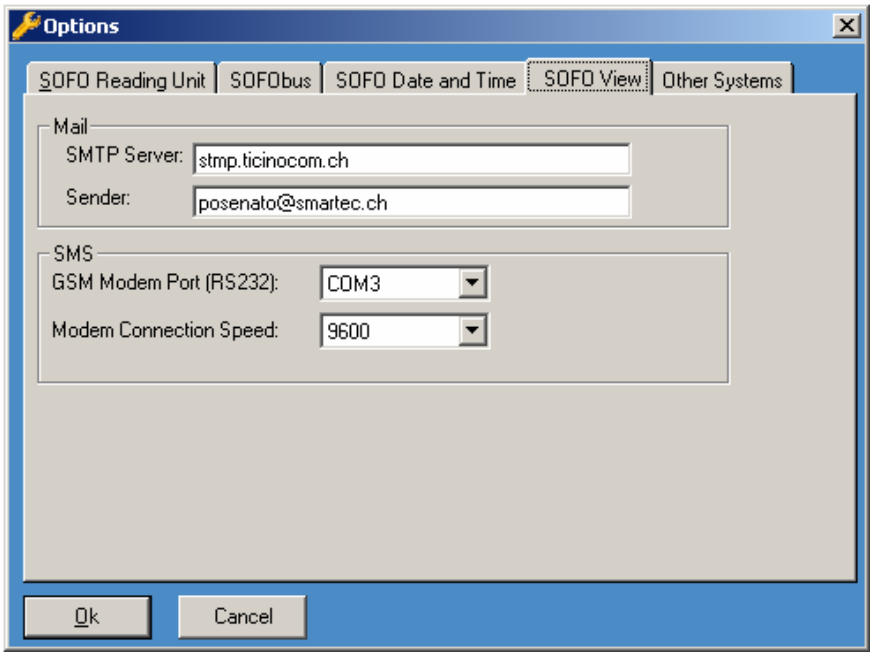
Options Menu

A few basic steps are required to configure the SDB software. All settings required to configure your system are found in the **Tools / Options** menu, panel **SOFO View**.

The SDB View is a powerful tool that offers the possibility to view the measurements in a more consistent way; at the same time offers the possibility to perform predefined action when a critical situation is discovered, such as: one or more values out of the thresholds. In particularly the SDB View, in case of critical situations, offers the possibility to:

1. Send email to a list of email addresses
2. Send an SMS to a list of cell phone numbers
3. Call an external program

For the action 1) and 2) is necessary to specify some parameters under tool-> options-> SOFO View. In this panel can be specified all the parameters that are common to all the views. The panel to configure these parameters is the following:



In this panel the Mail Server and the SMS options can be defined. In particularly the parameters that can be set in this panel are described hereafter:

In the field **SMTP Server** the mail server has to be specified.

In the field **Sender** the email address of the sender has to be specified, this will be the email address of the sender for the email sent on critical situation.

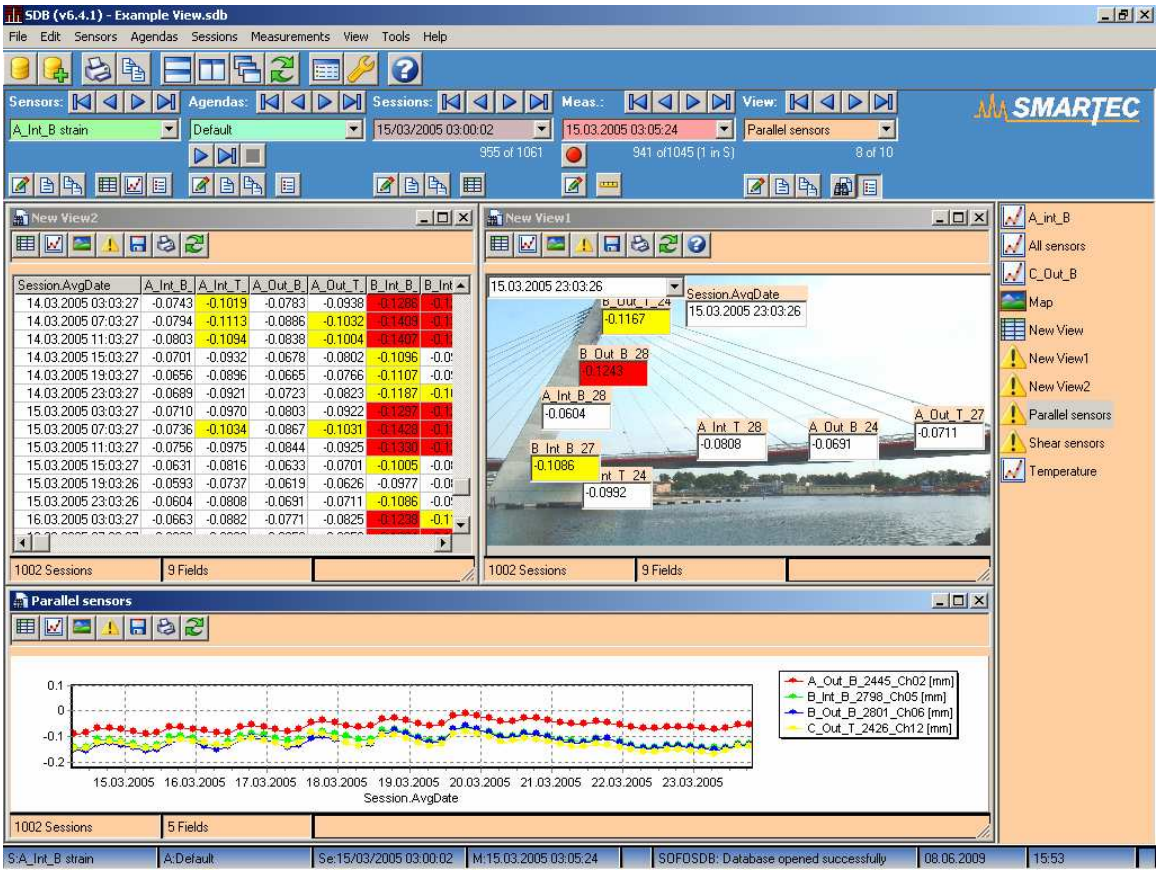
In the field **GSM modem Port (RS232)** the rs232 port to of the GSM modem has to be specified.

In the field **Modem Connection Speed** the communication speed of the GSM modem can be selected, for the most part of the GSM modem the default value should be 9600.

View User Interface

SDB VIEW Interface

The SDB VIEW user interface is integrated in the SDB software. The software SDB VIEW can simultaneously display multiple Views from a single *.SDB file. In addition it is possible to run several Sessions of SDB VIEW on the same PC.



In This example we see:

The View navigation window enabling View editing (at the right hand side).

Three SDB VIEW windows showing displays of different Views with, in the above example (clockwise from top left):

A view displaying a table of data from 6 Sensors.

A view displaying a map of data from 8 Sensor.

A view displaying a graph of data from 4 Sensors

Each view carries a title bar with the name of the view as well as a status bar identifying the monitoring Session and the number of displayed data fields.

The principal status bar allows the display of certain user messages.

The Menu bar

The SDB View menu bar is part of the SDB menu bar, a detailed explanation of the functions available from these menu options is given elsewhere in context.

The Tool bar

The tool bar comprises shortcuts in the form of buttons giving access to commonly used commands defined by the menu options. If the mouse pointer is held over a button for longer than 1 second a brief description of its associated command is displayed.

The icon  gives the possibility to edit the selected view.

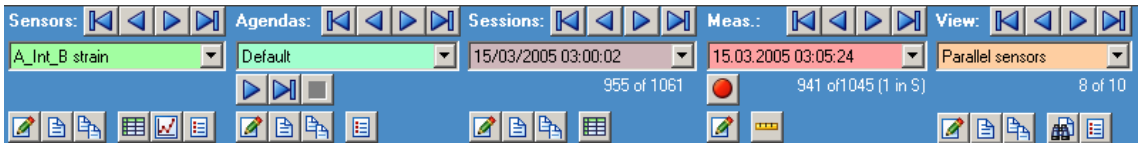
The icon  gives the possibility to create a new view.

The icon  gives the possibility to clone the selected view.

The icon  gives the possibility to show the view selected in combo box of the navigation bar.

The icon  gives the possibility to enable or disable the view navigation window.

Navigation bar



To select a View you can use one of the following methods:

Select the View from the first combo box under Sessions in the Navigation bar.

Use the buttons in the Navigation bar:

 first View

 previous view

 next View

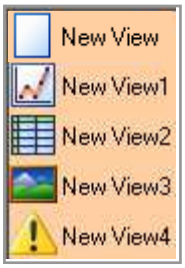
 last View

The commands in the **View / Last SOFO Views** shows the last 10 views used.

The View navigation window

The View navigation window is located to the left of the principal SDB VIEW window.

The View navigation window



The **View** navigation window shows the different views defined in the open database. Each View is identified by name and by an icon indicating the output format for the View.

The icon  identifies a view for which the graphical output is in the form of a table (of type; screen display, txt file or direct copy to the Clipboard)

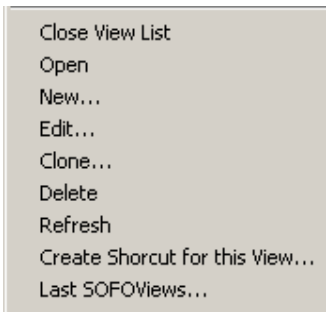
The icon  identifies a view for which the output is in the form of a graph (of type: screen display, file (bmp, wmf, jpg) or direct copy to the clipboard)

The icon  identifies a view for which the graphical output is in the form of a drawing (picture, map).

The icon  identifies a view for which the output is in the form of a table or graph of data for which Warning and Pre-warning thresholds are have been defined. If the output will be in the table form all the cell that have value outside the threshold value will be of a different color. Instead, if the form will in the graph form then in the graph will be draw even the threshold lines.

The icon  identifies a view for which there is no display window. This may mean that not all the parameters of the view have been set or that the output is simply stored in a file and not show as a view.

Having selected one of the views, the contextual menu (identical to the **View menu**) provides access to the following functions:

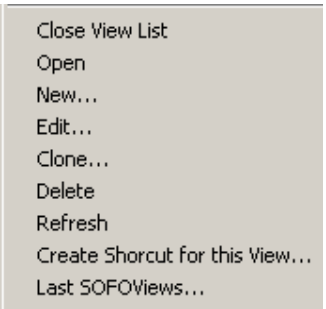


Close View List allows close the View navigation windows. This function can also be activated by clicking on the  if the View navigation list is active.

Open allows display of a selected view. This function can also be activated by double click on the wanted View.

New…allows creation of a new View. This function can also be activated by clicking on the icon 

Edit…allows editing of the selected View. This function can also be activated by clicking on the icon 



Clone…creates a new View having the same characteristics as the selected one. This function can also be activated by clicking on the icon 

Delete…deletes (after user confirmation) the selected view.

Refresh updates the selected View.

External execution of a View

You can execute a View from the Windows Explorer if you create a shortcut to the View with **View / Create Shortcut file for this View**. This will prompt you to enter a file name for the Shortcut file (with .SSV extension). This file contains the name and path of the database and the name of the View to be executed. If you associate the *.SSV extension with the SDB.exe program you will be able to open the Database and execute the View by double-clicking on the Shortcut file from the Windows Explorer. The SDB program will terminate after the view execution. This option may be useful when SDB is used in a batch file, for example when generating view automatically at predefined times.

Arranging Windows

The SDB window can be moved, resized, maximized, minimized and closed as any standard Windows window. If multiple windows are shown, you can:

Tile the windows horizontally using **View / Tile Horizontally** or the  button in the toolbar.

Tile the windows vertically using **View / Tile Vertically** or the  button in the toolbar.

Cascade the windows using the command **View / Cascade** or the  button in the toolbar.

Arrange the icons using **View / Arrange Icons**.

Defining a View

Create a new View

A new View is created by selecting the menu **Views / New View…**

This function can also be attained using the icon  . The software immediately attributes the view name « New ViewXX » (XX represents the first available number).

Edit a new or existing View

Editing a view is achieved by clicking on the menu **Views / Edit View…** after having selected the desired view. This function can equally be attained using the icon  . The SDB VIEW program then opens an assistant (wizard) allowing definition of the desired properties.

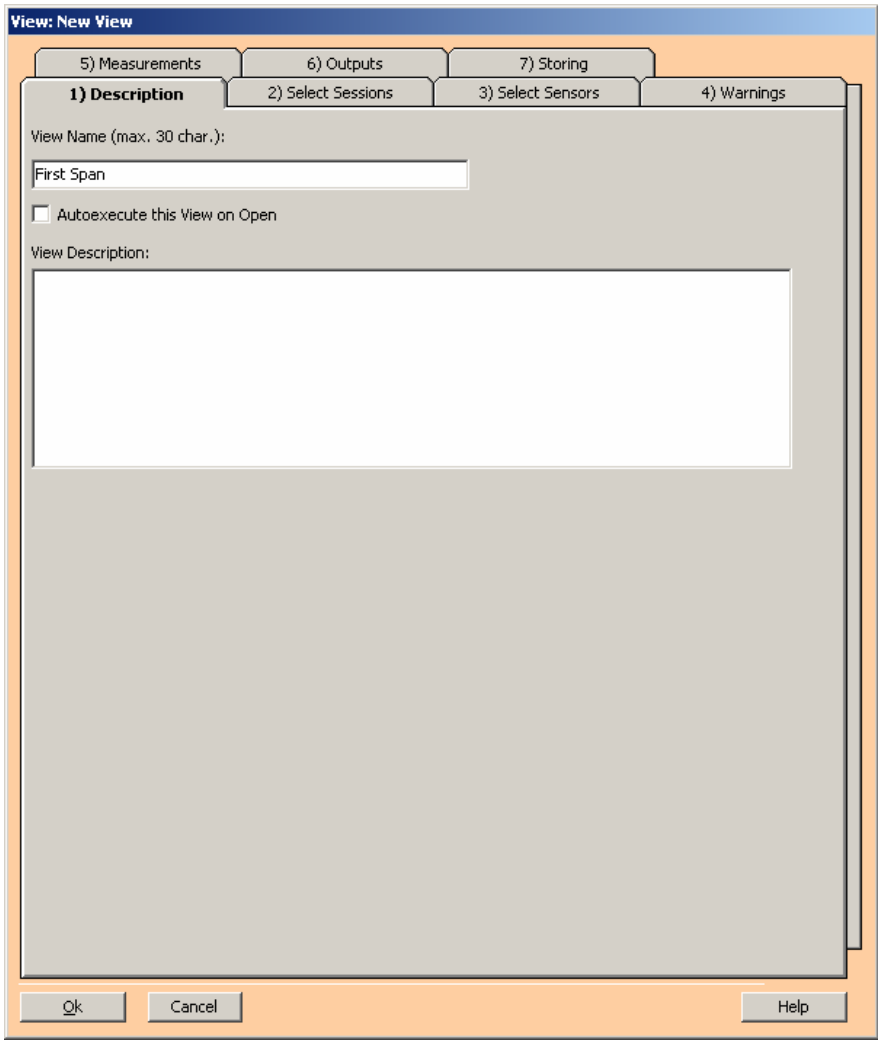
The View edit form

The View edit form provides guidance with the following 7 steps:

1. Describing the SDB view to show.
2. Selecting the Measurement Session interval.
3. Selecting the Sensors to display.
4. Defining the Warnings thresholds.
5. Establishing the type of calculation to be undertaken during the Session duration.
6. Defining the output form.
7. Defining the storing options.

Navigation within this form is self evident and consistent with similar form (assistants) used by Microsoft Corporation software. Clicking on the option menu there is the possibility to specify all the view parameters. The buttons **Cancel** and **Finish** allow the user to cancel or apply all modifications made during operation of the form.

1. Describing the View to Show (“Description”)



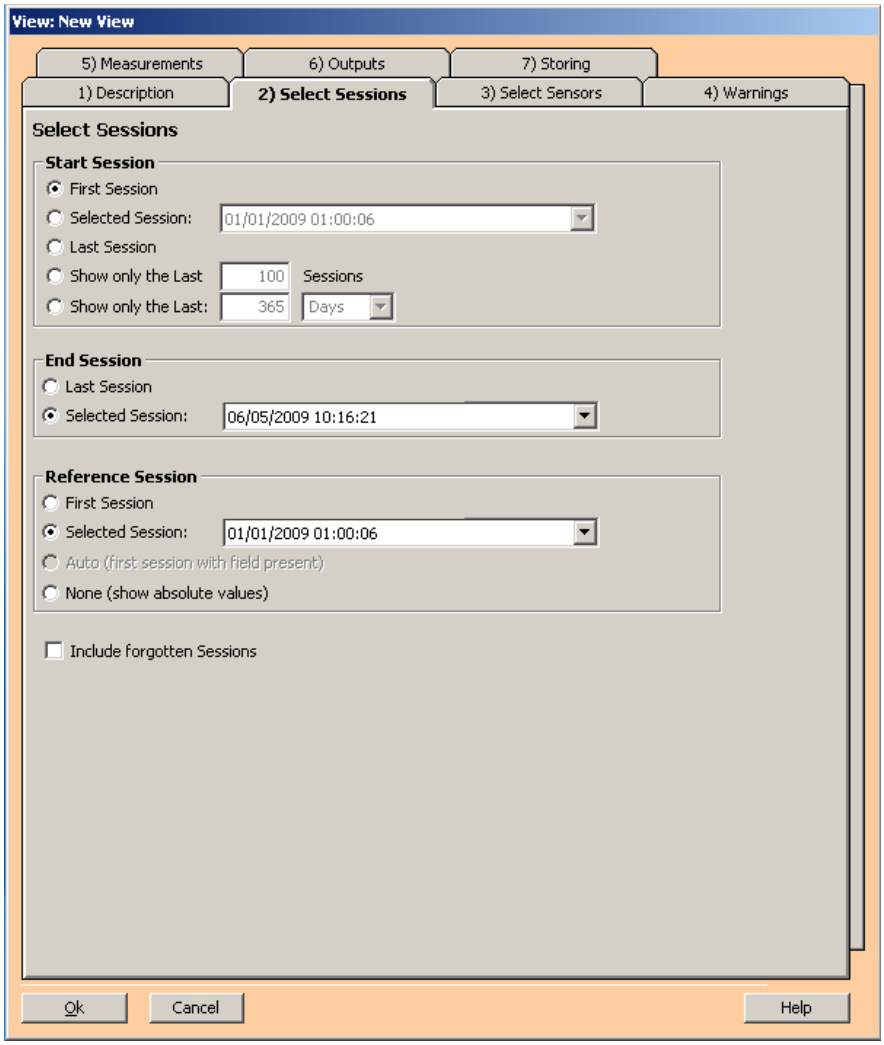
This first page allows:

- Definition of the View name.
- Description of the type of View.

The option **Autoexecute this View on Open** allows one to choose whether or not the SDB VIEW software will automatically execute the defined View upon opened file. Note that this option is normally used to automatically create text files comprising spreadsheet or graph plot data.

2. Selection of the monitoring Session (“Select Sessions”)

This second page allows selection of the Session interval over which the Sensor data will be selected.



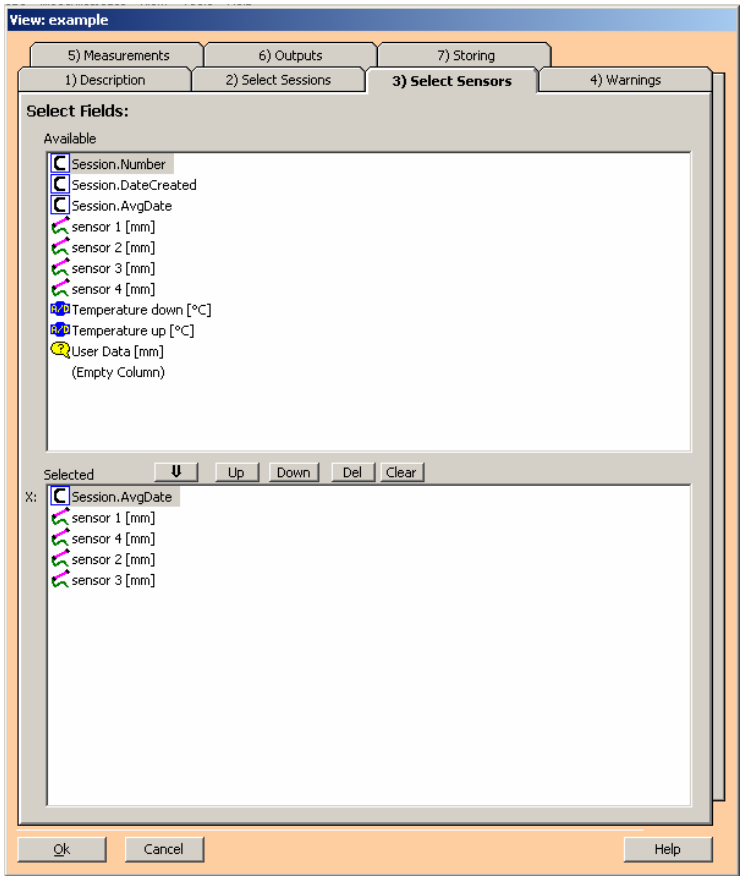
The first recorded monitoring Session from the SDB Measurement database may be selected as the start Session by choosing the option **First Session** from the **"Start Session"** box. If the user wishes that the interval starts with the last monitoring Session undertaken, the option **Last Session** is chosen. If the user wishes to start the interval with a monitoring Session of choice, the option **Selected Session** is first chosen before selecting the desired Session with the aid of the adjacent scrolling menu that displays the list of Sessions stored within the SDB file. If the user wished to visualize only the last N sessions created, the option **Show only the last N Sessions** is chosen. Instead, if the user wishes to display only the sessions created recently there is the possibility to specify the frame of time to be used in the options **Show only the last** "N" "DateUnit", where DateUnit is the adjacent scrolling menu that displays the unit of time that can be selected (Hours, Days, Months, Years), while "N" specifies respectively how many hours, days, months and years should be considered. The last two options are really important if the user wishes to view the data with a moving window.

The last recorded monitoring Session from the SDB Measurement database may be selected as the end Session by choosing the option **Last Session** from the **"End Session"** box. If the user wishes that the interval ends with a monitoring Session of choice, the option **Selected Session** is first chosen before selecting the desired Session with the aid of the adjacent scrolling menu that displays the list of Sessions stored within the SDB file.

For each Sensor, the Measurement is displayed with respect to the value recorded during a reference Session. If the option **First Session** is selected from the **"Reference Session"** zone this, the first hierarchical recorded monitoring Session from the SDB Measurement database is used as the reference Session. If the user wishes to refer the Sensor Measurements to a monitoring Session of choice, the option **Selected Session** is first chosen from the **"Reference Session"** box before selecting the desired Session with the aid of the adjacent scrolling menu which displays the list of Sessions stored within the SDB file.

If the user wishes to include Measurement Sessions tagged with the option **Forget** in the SDB Measurement file, then the option **Include Forgotten Sessions** should be selected.

3. Selection of Sensors or data fields to display ("Select Fields")



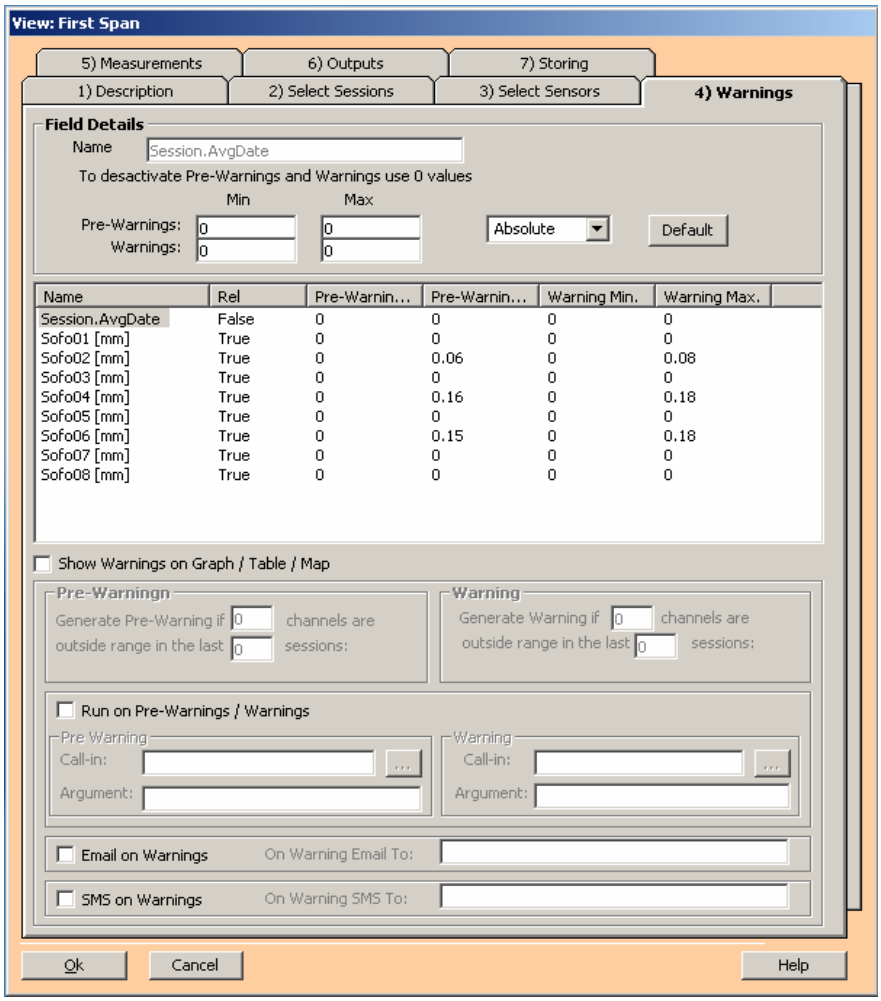
This third page allows the selection of data fields, as defined in the SDB Measurement file, which are to be displayed in tabular or graph format. The field designated by the first line of the **Selected** box will be considered as the abscissa (horizontal axis) in the case where a graphical output is desired. Field selection is accomplished either by double clicking over one of the fields listed in the upper box titled **Available**, or by selecting the field and clicking on the arrow ⇓. The printing order of the selected fields in either tabular or graph format may be modified by highlighting the field in the lower **Selected** box, and then clicking on the button Up or Down (to displace the field by one increment). To remove a selected field from the list, simply highlight it and click

on the **Del** button. To remove all selected fields in one operation simply click on the **Clear** button.

Note that where a graph plot is required, all fields (apart from the first which is plotted along the horizontal axis) should be of the same type.

The suggested default X-axis field should be the **Session.AvgDate**, which corresponds to the overall monitoring period for all Sensors selected and recorded during any single Session.

4. Selection of Warning values ("Warnings")



This page allows the definition of Warning and Pre-warning conditions. The lower list comprises the fields selected for displaying during the previous stage.

In the box "Field Details" the warnings and pre-warnings parameters can be defined for the active Field. To enable a Field to be modified you have to click the name of the field on the **Name** column. All the parameters of the Fields will appear in the "Field Details" section.

The **Pre-warning** fields give the possibility to define respectively the Minimum and Maximum threshold for the selected Field.

The **Warning** fields give the possibility to define respectively the Minimum and Maximum threshold for the selected Field.

In the Combo Box it is possible to choose how to consider the value: **Relative** value indicates whether the Warning value should be considered relatively to the reference Session, **Absolute** value indicates that the Warning value should be considered in terms of its absolute value.

The **Name** column gives the name of the Sensor (field), clicking on the cell gives the possibility to modify all the warnings parameters.

The second column ("**Rel.**") indicates whether the Warning value should be considered relative to the reference Session (True) or in terms of its absolute value (False) the direct output value given by the Sensor which can be either positive or negative.

The third column ("**Pre-warning Min**") indicates the minimum Pre-warning threshold value .

The fourth column ("**Pre-warning Max**") indicates and enables the maximum Pre-warning threshold value. Values outside the max / min threshold will be displayed in yellow when the user requests the screen display giving the Warning status.

The fifth column ("**Warning Min**") indicates the minimum Warning threshold value.

The sixth column ("**Warning Max**") indicates the maximum Warning value. Values outside the max / min threshold will be displayed in red when the user requests the screen display giving the Warning status.

The option "**Show Warning Status on Graph / Table / Map**" allows display the Pre-warning and Warning defined on the table of graph. If the active output format is a Table then a table with the Measurements from each Sensor ordered by Session is created. The values falling outside of the maximum / minimum value ranges defined by stage 4 "**Field Detail**" are colored in yellow for values exceeding the Pre-warning thresholds and in red for those exceeding the Warning threshold. If the active output is Graph then the graphs will be drawn with the threshold lines.

The option "**Email on Warning**" allows emails to be sent when values exceed the maximum / minimum value ranges defined by stage. If this option is selected, the field **On Warning Email To** becomes active and it is possible to specify in the text box the list of valid Email addresses. If more than one email address is specified, they must be separated by a “,” or “;”.

The option "**SMS on Warning**" allows SMS to be sent when values exceed the maximum / minimum value ranges defined by stage. If this option is selected the field **On Warning SMS To** becomes active and it is possible to specify in the text box the list of valid phone numbers, separated by a “,” or “;”.

The option "**Run on Warning / Pre-warning**" allows programs to run when a defined number of values exceed the maximum / minimum Warning or Pre-warning ranges defined by stage.

In the case of one of the following options: "Run on Warning", "Email on Warning" or "SMS on Warning" is active it is possible to configure the **Pre-Warning** and **Warning** conditions. In these two frames it is possible to define all the parameters that identify a critic situation appearing. The sentence “Generate Warning if *n* channels are outside the range in the last *m* Sessions” gives the possibility to define two parameters. The parameter *m* defines how many consecutive measurements must be out of range since the last Session to generate the Warning. The number *n* defines the minimum number of channels that have to exceed their threshold to generate the critical situation.

- In the following table there is an example in which *m*=4 and *n*=3. The character “X”) means that the Measurement exceeds the threshold

	Channel1	Channel2	Channel3	Channel4
Session1			X	X
Session2	X	X	X	
Session3	X		X	X
Session4		X	X	X
Session5	X	X	X	

In this example is the critical situation has been reached in the fifth session, there are at least n=3 channels outside the ranges, in all the last *m*=4 Sessions.

- In the following table there is an example in which *m*=4 and *n*=3 but the warning is not generated.

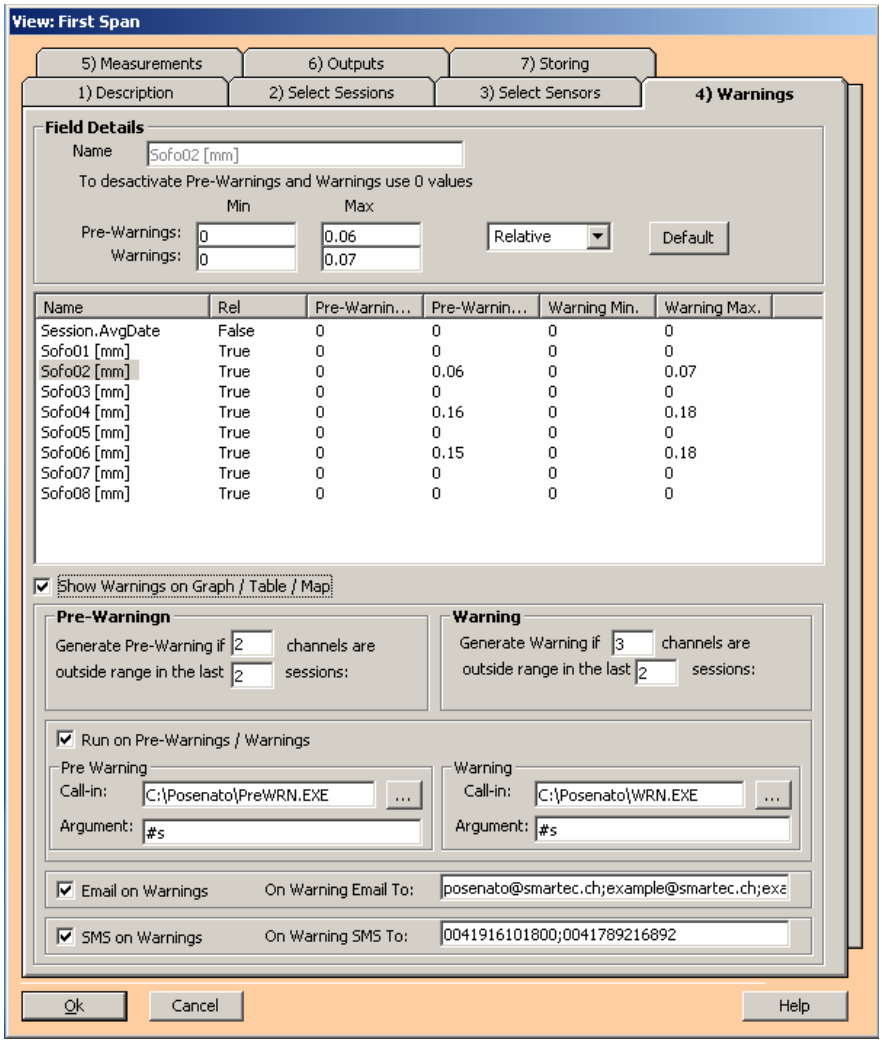
	Channel1	Channel2	Channel3	Channel4
Session1				
Session2	X	X	X	
Session3				X
Session4		X	X	X
Session5	X	X	X	

In this example the critical situation hasn't been reached yet, there are at least n=3 channels outside the ranges, but not in all the last *m*=4 Sessions. So the Warning is not yet generated.

On the left side is possible to define all the parameters necessary to run a program when a Pre-Warning situation appears. To select the program to run in this situation you can use the  button or write directly in the field "**Call-in**". If the program selected needs some parameters to run they should be put in the field "Argument". If the parameter **#s** is typed, the Session names (separated by semicolon) involved in the warning state is passed to the program as argument.

On the right side is possible to define all the parameters necessary to run a program when a Warning situation appears.

In the following picture there is an example of warning setting:



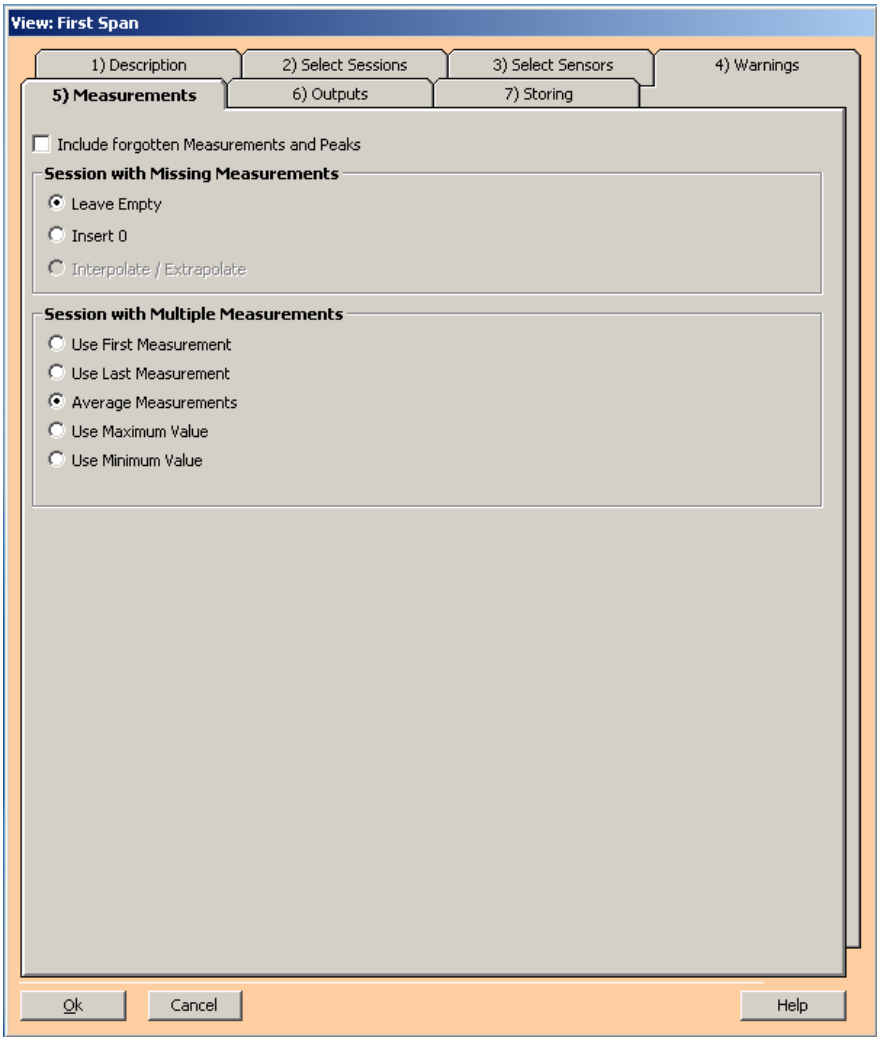
5. Selection of the Measurement method ("Measurements")

This page allows the Sensor calculation mode during a Session to be chosen.

The first option "**Include forgotten Measurements and Peaks**" allows inclusion or exclusion of those Measurements, tagged with the option **Forget** by the SDB software. If the option is not ticked (default value) Measurements tagged with the option **Forget** are not included in the calculations.

The selection box "**Sessions with Missing Measurements**" allows determination of the action to take in the case where a Sensor was not included in a particular monitoring Session. The Measurement entries can either be left empty or given the numerical value zero.

The lower selection box "**Sessions with Multiple Measurements**" allows one to choose how the unique value for reporting is determined if a Sensor has been measured 2 or more times in a single session.



Note that the choice of reported value affects all displayed data within a particular View if:

- "**Use First Measurement**" is ticked; only the first value of the Session will be used as the reported Sensor value.

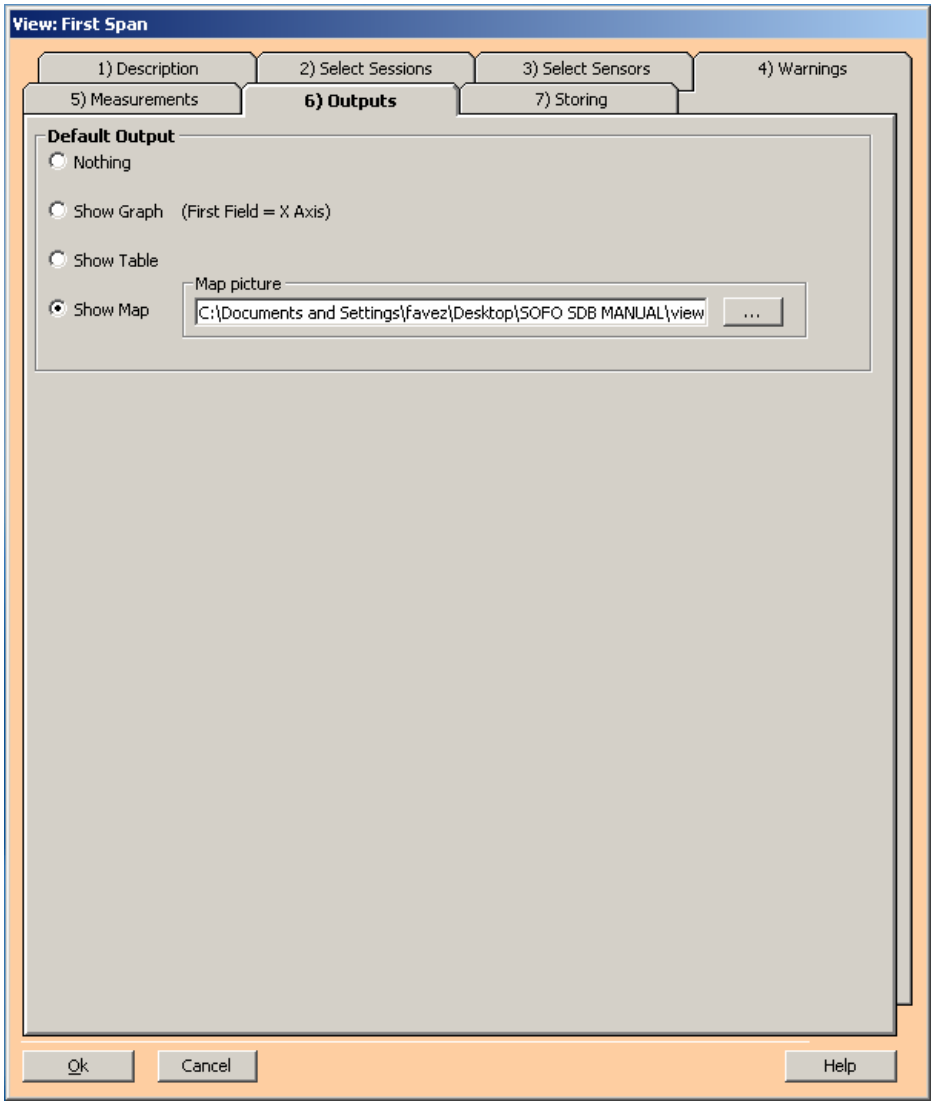
- "**Use Last Measurement**" is ticked; only the last value of the Session will be used as the reported Sensor value.

- "**Use Average Measurement**" is ticked; the mean value of the particular Session Measurements will be used as the reported Sensor value. This is the default option

- "**Use Maximum Value**" is ticked; only the maximum value of the Session will be used as the reported Sensor value.

- "**Use Minimum Value**" is ticked; only the minimum value of the Session will be used as the reported Sensor value.

6. Selection of data output type (“Outputs”)



This page allows selection of the desired output type. These options are described in more detail in the following chapter.

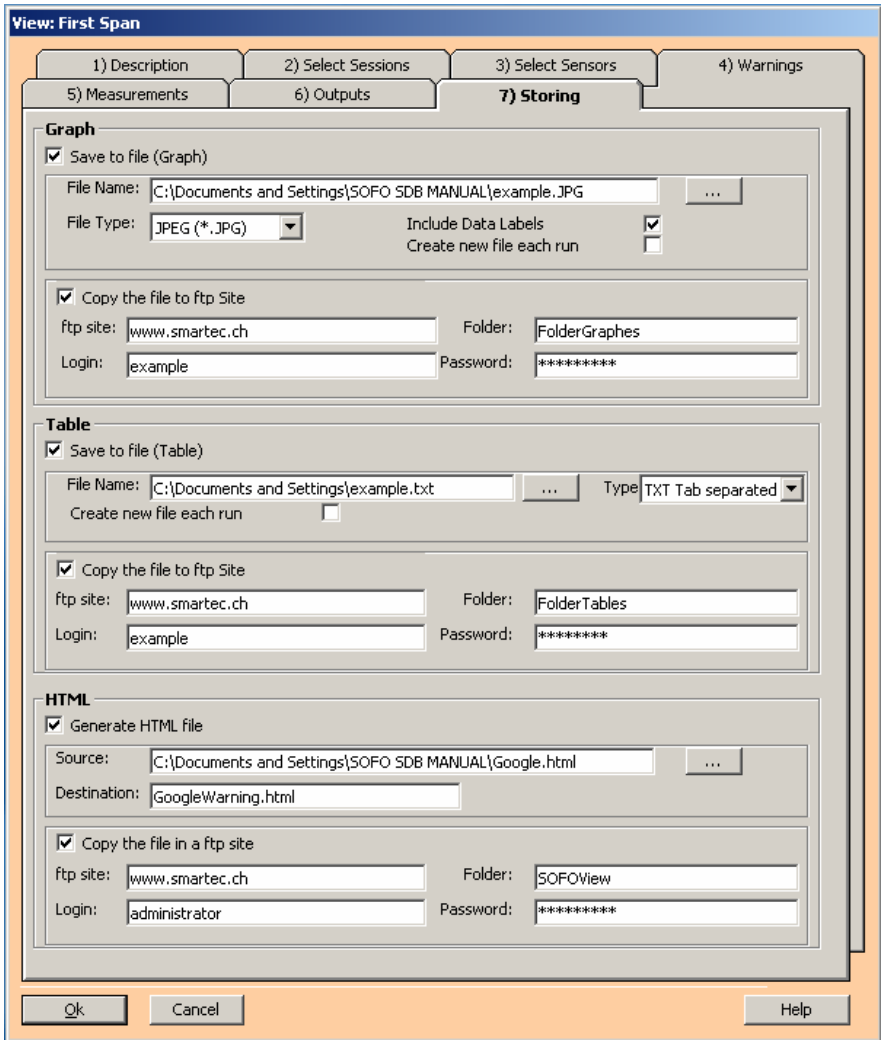
The option "**Show Table**" displays a table of Measurements of each Sensor ordered by Session.

The option "**Show Graph**" displays a graph showing the Measurements of each Sensor ordered by Session as a function of the abscissa values field chosen during stage 3 "**Select Fields**".

The option "**Map**" displays the Measurement of each Sensor on a map. This option is useful to indicate on a map where the Sensors are located. Selecting a Session will display the Sensor values for this session. Picture **File Name** on which the Sensor Measurement will be shown must be selected at this stage. The file has to be a picture format file (JPG, GIF, WMF) and no specific size nor definition are required. The picture will be resized according to the requirement. The picture may be loaded by using the "**...**" button.

The option "**Nothing**" will create a View without any display. This option is useful if the output of the view has to be stored on a file but not necessarily shown on the monitor.

7. Selection of output options (“Storing”)



Options associated with the desired stored output are defined in this page.

- The option "**Save to File (Graph)**" saves the graph to a specific file. If this option is selected the following options can be chosen:
  - The name of the saved file by use of the "**...**" button,
  - The file type by selecting from the scrolling menu "**File Type**". Three types of file can be chosen, Windows Metafile format (Metafile (*.WMF)), Bitmap format (Bitmap (*.BMP)), Jpeg format (JPEG (*.JPG).
  - With the option "**Include Data Labels**" the addition of a graph legend comprising the field names as selected during stage 3 (the default option) will be displayed on the graph.
  - With the option "**Create new file each run**" a new picture will be created for each new View display (whether manually or automatically displayed). The software then creates a new file named "**File Name**" plus an incremental number attached to the end of the file name.

- With the option "**Copy the file to ftp site**" it is posible to upload the created file on a ftp site. If this option is active the following parameters can be chosen:
    - The address of the ftp site can be specified on the field "**ftp site**"
    - The folder where to upload the created file can be specified in the field "**folder**"
    - The login and the password to use for the registration to the ftp site can be specified in the fields "**Login**" and "**Password**"

- With the option "**Save to File (Table)**" the Measurement table will be saved on a file in the form of: text, MS Excel or xml file. If this option is selected the following options can be chosen:
    - The name of the saved file by use of the "**...**" button,
    - The type of separator used in the text file by selecting from the scrolling menu "**File Type**".
      Four different types of file can be selected: tab separated text file, comma separated text file, MS Excel and XML.
    - With the option "**Create new file each run**" a new text file will be created for each new View display (whether manually or automatically displayed).). The software then creates a new file named "**File Name**" plus an incremental number attached to the end of the file name.
    - The option "**Copy the file to ftp site**" allows the possibility to upload the created file on an ftp site. If this option is active the following parameters can be chosen:
        - The address of the ftp site can be specified on the field "**ftp site**"
        - The folder where to upload the created file can be specified in the field "**folder**"
        - The login and the password to use for the registration to the ftp site can be specified in the fields "**Login**" and "**Password**"

- With the option "**Generate HTML File**" an html file will be generated accordingly to a predefined html template (uploaded by the user). The SDB View software parses the source file and then creates the destination file replacing the keywords with the relative information (map, graph and table). If this option is selected the following options can be chosen:
    - The name of the html source file to use as template by use of the  button,
    - The name of the destination file, that contains the file html updated in the "**Destination**" box
    - The option "**Copy the file to ftp site**" allows the possibility to upload the created file on a ftp site. If this option is active the following parameters can be chosen:
        - The address of the ftp site can be specified on the field "**ftp site**"
        - The folder where to upload the created file can be specified in the field "**folder**"

- The login and the password to use for the registration to the ftp site can be specified in the fields "**Login**" and "**Password**"

When the Generate HTML File option is active the view is executed in the html Source file if three different tags are present. The available tags are the followings:

- **graph2html__ ViewName**: where “graph2htm__” is the keyword indicating that a graph picture has to be generated, the ViewName is the name of the view in which the spaces are replaced with the character “_”. If during the parsing of the source file this tag is present a figure of the graph is generated. In the destination file the tag is replaced by a unique picture name. Usually in the source file this tag should be inside a img tag, for example <img src="graph __ ViewName">
- **map2html __ ViewName**: where “map2html __” is the keyword indicating that a map picture has to be generated, the ViewName is the name of the view in which the spaces are replaced with the character “_”. If during the parsing of the source file this tag is present a figure of the map is generated. In the destination file the tag is replaced by a unique picture name. Usually in the source file this tag should be inside a img tag, for example <img src=" map2html __ ViewName">
- **table2html __ ViewName**: where “table2html __” is the keyword indicating that a table has to be generated, the ViewName is the name of the view in which the spaces are replaced with the character “_”. If during the parsing of the source file this tag is present sequence of row in html format are written in the destination file. This tag should always placed between the two tag <table></table>, for example: <TABLE BORDER=1 BORDERCOLOR=#b5b500 CELLSPACING=1 CELLPADDING=7 WIDTH=450> table2html __ ViewName</table>

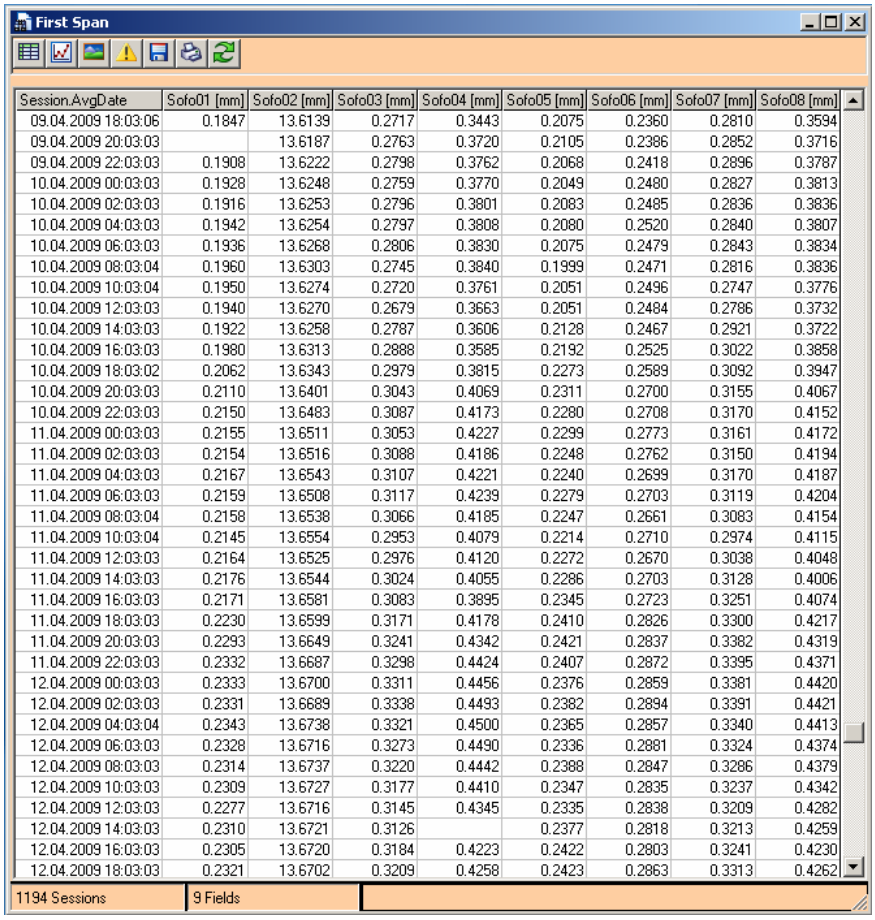
Examples of View output formats

Introduction

The graphical output from each View is obtained by double clicking on the View having highlighted it or by highlighting it and activating the menu item **View / Open View…**

When the following graphical outputs are selected, we obtain:

Show Table



Session.AvgDate	Sofo01 [mm]	Sofo02 [mm]	Sofo03 [mm]	Sofo04 [mm]	Sofo05 [mm]	Sofo06 [mm]	Sofo07 [mm]	Sofo08 [mm]
09.04.2009 18:03:06	0.1847	13.6139	0.2717	0.3443	0.2075	0.2360	0.2810	0.3594
09.04.2009 20:03:03		13.6187	0.2763	0.3720	0.2105	0.2386	0.2852	0.3716
09.04.2009 22:03:03	0.1908	13.6222	0.2798	0.3762	0.2068	0.2418	0.2896	0.3787
10.04.2009 00:03:03	0.1928	13.6248	0.2759	0.3770	0.2049	0.2480	0.2827	0.3813
10.04.2009 02:03:03	0.1916	13.6253	0.2796	0.3801	0.2083	0.2485	0.2836	0.3836
10.04.2009 04:03:03	0.1942	13.6254	0.2797	0.3808	0.2080	0.2520	0.2840	0.3807
10.04.2009 06:03:03	0.1936	13.6268	0.2806	0.3830	0.2075	0.2479	0.2843	0.3834
10.04.2009 08:03:04	0.1960	13.6303	0.2745	0.3840	0.1999	0.2471	0.2816	0.3836
10.04.2009 10:03:04	0.1950	13.6274	0.2720	0.3761	0.2051	0.2496	0.2747	0.3776
10.04.2009 12:03:03	0.1940	13.6270	0.2679	0.3663	0.2051	0.2484	0.2786	0.3732
10.04.2009 14:03:03	0.1922	13.6258	0.2787	0.3606	0.2128	0.2467	0.2921	0.3722
10.04.2009 16:03:03	0.1980	13.6313	0.2888	0.3585	0.2192	0.2525	0.3022	0.3858
10.04.2009 18:03:02	0.2062	13.6343	0.2979	0.3815	0.2273	0.2589	0.3092	0.3947
10.04.2009 20:03:03	0.2110	13.6401	0.3043	0.4069	0.2311	0.2700	0.3155	0.4067
10.04.2009 22:03:03	0.2150	13.6483	0.3087	0.4173	0.2280	0.2708	0.3170	0.4152
11.04.2009 00:03:03	0.2155	13.6511	0.3053	0.4227	0.2299	0.2773	0.3161	0.4172
11.04.2009 02:03:03	0.2154	13.6516	0.3088	0.4186	0.2248	0.2762	0.3150	0.4194
11.04.2009 04:03:03	0.2167	13.6543	0.3107	0.4221	0.2240	0.2699	0.3170	0.4187
11.04.2009 06:03:03	0.2159	13.6508	0.3117	0.4239	0.2279	0.2703	0.3119	0.4204
11.04.2009 08:03:04	0.2158	13.6538	0.3066	0.4185	0.2247	0.2661	0.3083	0.4154
11.04.2009 10:03:04	0.2145	13.6554	0.2953	0.4079	0.2214	0.2710	0.2974	0.4115
11.04.2009 12:03:03	0.2164	13.6525	0.2976	0.4120	0.2272	0.2670	0.3038	0.4048
11.04.2009 14:03:03	0.2176	13.6544	0.3024	0.4055	0.2286	0.2703	0.3128	0.4006
11.04.2009 16:03:03	0.2171	13.6581	0.3083	0.3895	0.2345	0.2723	0.3251	0.4074
11.04.2009 18:03:03	0.2230	13.6599	0.3171	0.4178	0.2410	0.2826	0.3300	0.4217
11.04.2009 20:03:03	0.2293	13.6649	0.3241	0.4342	0.2421	0.2837	0.3382	0.4319
11.04.2009 22:03:03	0.2332	13.6687	0.3298	0.4424	0.2407	0.2872	0.3395	0.4371
12.04.2009 00:03:03	0.2333	13.6700	0.3311	0.4456	0.2376	0.2859	0.3381	0.4420
12.04.2009 02:03:03	0.2331	13.6689	0.3338	0.4493	0.2382	0.2894	0.3391	0.4421
12.04.2009 04:03:04	0.2343	13.6738	0.3321	0.4500	0.2365	0.2857	0.3340	0.4413
12.04.2009 06:03:03	0.2328	13.6716	0.3273	0.4490	0.2336	0.2881	0.3324	0.4374
12.04.2009 08:03:03	0.2314	13.6737	0.3220	0.4442	0.2388	0.2847	0.3286	0.4379
12.04.2009 10:03:03	0.2309	13.6727	0.3177	0.4410	0.2347	0.2835	0.3237	0.4342
12.04.2009 12:03:03	0.2277	13.6716	0.3145	0.4345	0.2335	0.2838	0.3209	0.4282
12.04.2009 14:03:03	0.2310	13.6721	0.3126		0.2377	0.2818	0.3213	0.4259
12.04.2009 16:03:03	0.2305	13.6720	0.3184	0.4223	0.2422	0.2803	0.3241	0.4230
12.04.2009 18:03:03	0.2321	13.6702	0.3209	0.4258	0.2423	0.2863	0.3313	0.4262

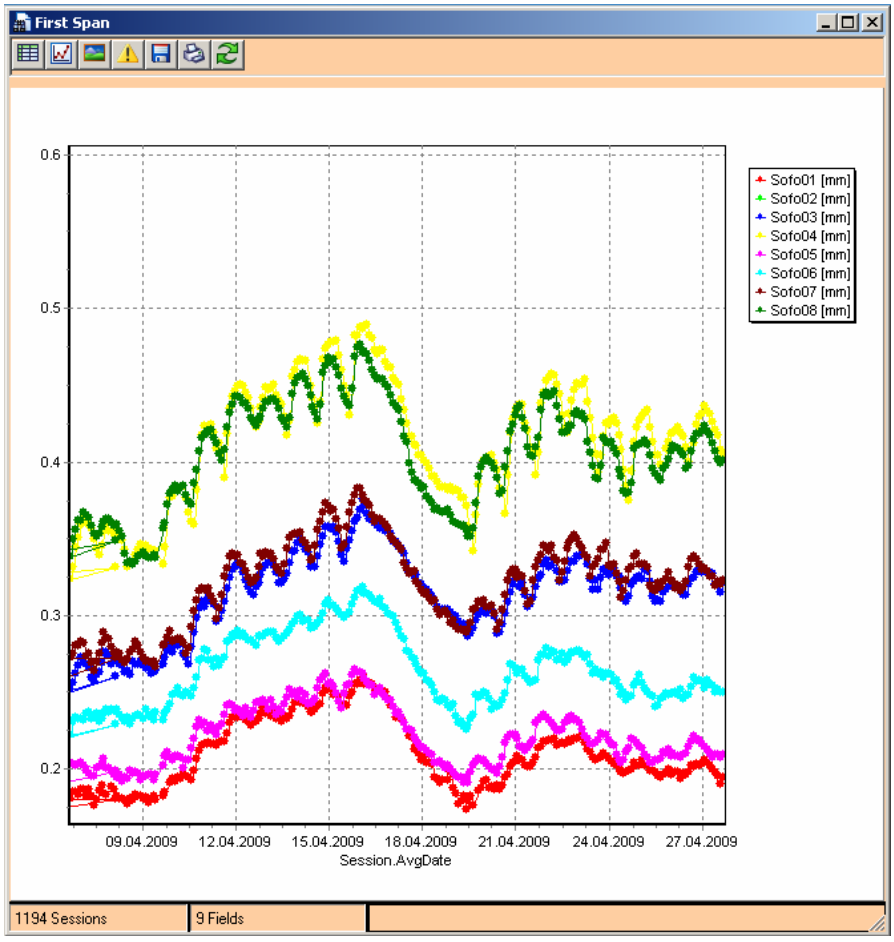
1194 Sessions | 9 Fields

The graphical output a window with the name of the View in the title bar (in this case "Fist Span") with the number of Sessions treated and the number of fields

displayed given on the status bar (1194 Sessions and 9 fields in the above example).

Once the above window has been displayed it is possible to select a group of cells with a mouse pointer and then send them to the Clipboard using the menu function **Edit / Copy**. It is possible to select an entire column by simply clicking on the column header.

Show Graph



The graphical output shows a window containing the desired graph. The window includes the name of the View in the title bar (in this case "First Span") with the number of Sessions treated and the number of fields displayed given on the status bar (1194 Sessions and 9 fields in the above example)..

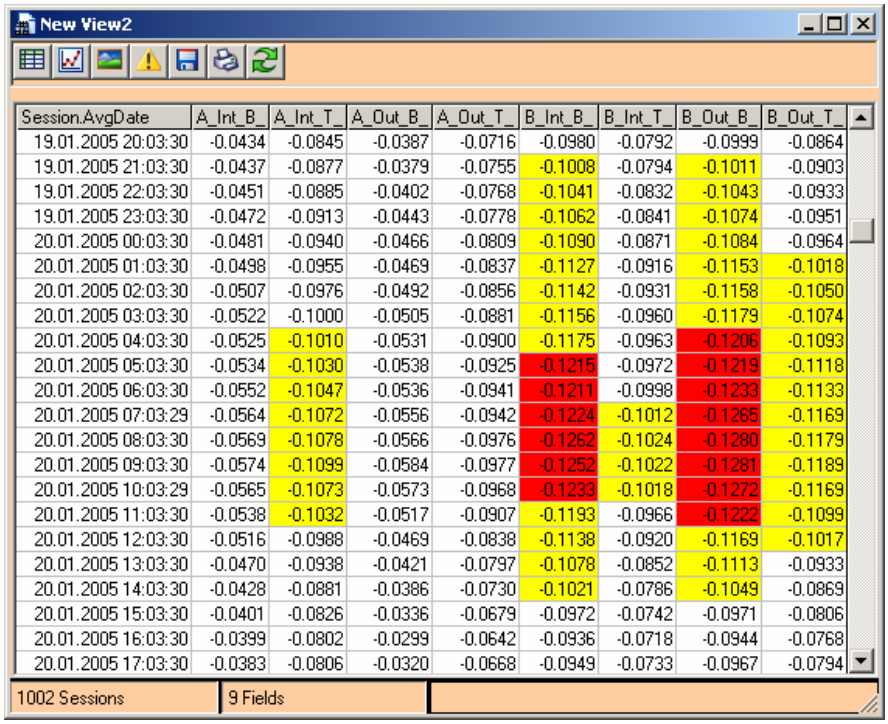
How to Zoom and Scroll the Graph

On a graph view it is possible using the mouse to execute a zoom and a scroll.

To zoom in on a graph, press the right mouse button at the top left hand corner of the area you wish to zoom in on and, maintaining the mouse button pressed, drag out the rectangle to the bottom right-hand corner of the zoom area. Release the mouse button and the graph will redraw the area selected. To undo the zoom, press the left mouse button anywhere on the graph area and drag up and left with the mouse button depressed. Release the button and the graph will redraw to the originally defined graph area.

To scroll a graph across, press the left mouse button and, maintaining the mouse button pressed, drag the mouse in the direction you wish to scroll the graph. When you release the mouse button the graph will remain at the new location. To undo the scroll, press the left mouse button anywhere on the graph area and drag up and left with the mouse button depressed. Release the button and the graph will redraw to the originally defined graph area.

Show Warning Status on Table



Session.AvgDate	A_Int_B_	A_Int_T_	A_Out_B_	A_Out_T_	B_Int_B_	B_Int_T_	B_Out_B_	B_Out_T_
19.01.2005 20:03:30	-0.0434	-0.0845	-0.0387	-0.0716	-0.0980	-0.0792	-0.0999	-0.0864
19.01.2005 21:03:30	-0.0437	-0.0877	-0.0379	-0.0755	-0.1008	-0.0794	-0.1011	-0.0903
19.01.2005 22:03:30	-0.0451	-0.0885	-0.0402	-0.0768	-0.1041	-0.0832	-0.1043	-0.0933
19.01.2005 23:03:30	-0.0472	-0.0913	-0.0443	-0.0778	-0.1062	-0.0841	-0.1074	-0.0951
20.01.2005 00:03:30	-0.0481	-0.0940	-0.0466	-0.0809	-0.1090	-0.0871	-0.1084	-0.0964
20.01.2005 01:03:30	-0.0498	-0.0955	-0.0469	-0.0837	-0.1127	-0.0916	-0.1153	-0.1018
20.01.2005 02:03:30	-0.0507	-0.0976	-0.0492	-0.0856	-0.1142	-0.0931	-0.1158	-0.1050
20.01.2005 03:03:30	-0.0522	-0.1000	-0.0505	-0.0881	-0.1156	-0.0960	-0.1179	-0.1074
20.01.2005 04:03:30	-0.0525	-0.1010	-0.0531	-0.0900	-0.1175	-0.0963	-0.1206	-0.1093
20.01.2005 05:03:30	-0.0534	-0.1030	-0.0538	-0.0925	-0.1215	-0.0972	-0.1219	-0.1118
20.01.2005 06:03:30	-0.0552	-0.1047	-0.0536	-0.0941	-0.1211	-0.0998	-0.1233	-0.1133
20.01.2005 07:03:29	-0.0564	-0.1072	-0.0556	-0.0942	-0.1224	-0.1012	-0.1265	-0.1169
20.01.2005 08:03:30	-0.0569	-0.1078	-0.0566	-0.0976	-0.1262	-0.1024	-0.1280	-0.1179
20.01.2005 09:03:30	-0.0574	-0.1099	-0.0584	-0.0977	-0.1252	-0.1022	-0.1281	-0.1189
20.01.2005 10:03:29	-0.0565	-0.1073	-0.0573	-0.0968	-0.1233	-0.1018	-0.1272	-0.1169
20.01.2005 11:03:30	-0.0538	-0.1032	-0.0517	-0.0907	-0.1193	-0.0966	-0.1222	-0.1099
20.01.2005 12:03:30	-0.0516	-0.0988	-0.0469	-0.0838	-0.1138	-0.0920	-0.1169	-0.1017
20.01.2005 13:03:30	-0.0470	-0.0938	-0.0421	-0.0797	-0.1078	-0.0852	-0.1113	-0.0933
20.01.2005 14:03:30	-0.0428	-0.0881	-0.0386	-0.0730	-0.1021	-0.0786	-0.1049	-0.0869
20.01.2005 15:03:30	-0.0401	-0.0826	-0.0336	-0.0679	-0.0972	-0.0742	-0.0971	-0.0806
20.01.2005 16:03:30	-0.0399	-0.0802	-0.0299	-0.0642	-0.0936	-0.0718	-0.0944	-0.0768
20.01.2005 17:03:30	-0.0383	-0.0806	-0.0320	-0.0668	-0.0949	-0.0733	-0.0967	-0.0794

1002 Sessions | 9 Fields

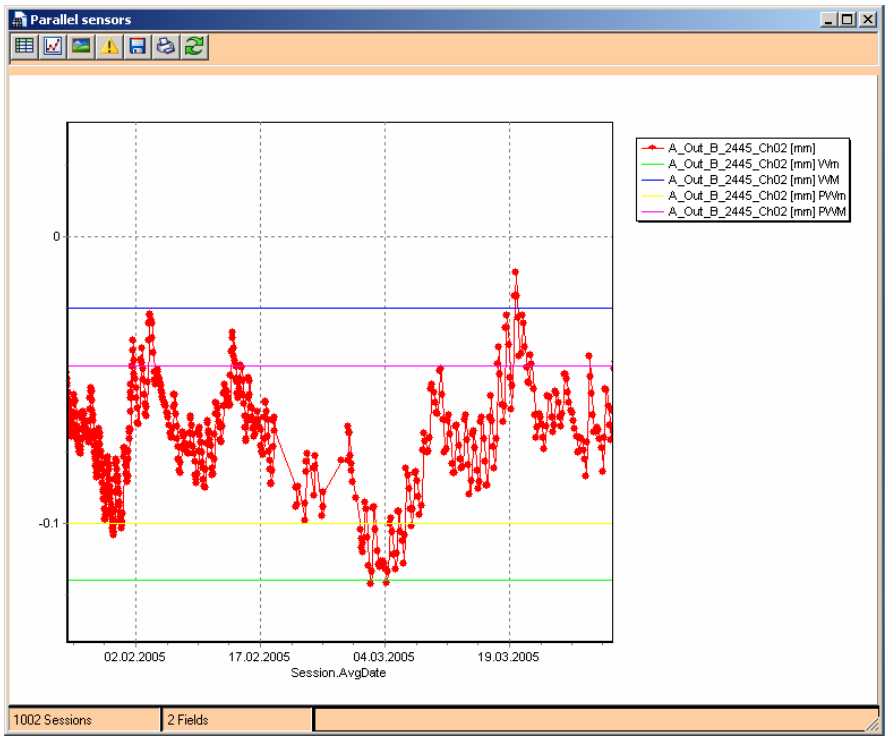
In this example are visible some colored cells. These are the cells that are outside the thresholds. This output is generated because the option “Show Warning on Table” has been selected.

The graphical output is the same window as the "Show Table" one but with exceeding data displayed in the relevant color. Data reaching the pre-warning level is displayed in yellow. Data reaching the warning level is displayed in red.

Note that it is also possible to select and copy groups of cells from the resultant table but the Warning indicators will not be copied to the Clipboard.

A red or yellow colored cell doesn’t mean that a Warning or Pre-Warning is generated. This only means that the Measurement exceeds the defined warning threshold for this Sensor. To generate a Warning the conditions defined on panel 4 “Warnings”, described on chapter Selection of Warning values (“Warnings”) on page 18 must be fulfilled.

Show Warning Status on Graph



To have the graphical output with the Pre-warning and Warning lines the option "**Show Warning on Graph**" has to be selected.

In this example colored lines are visible. The red one corresponds to the Field selected in the View and the others lines represent the Threshold levels. Four possible Thresholds are available:

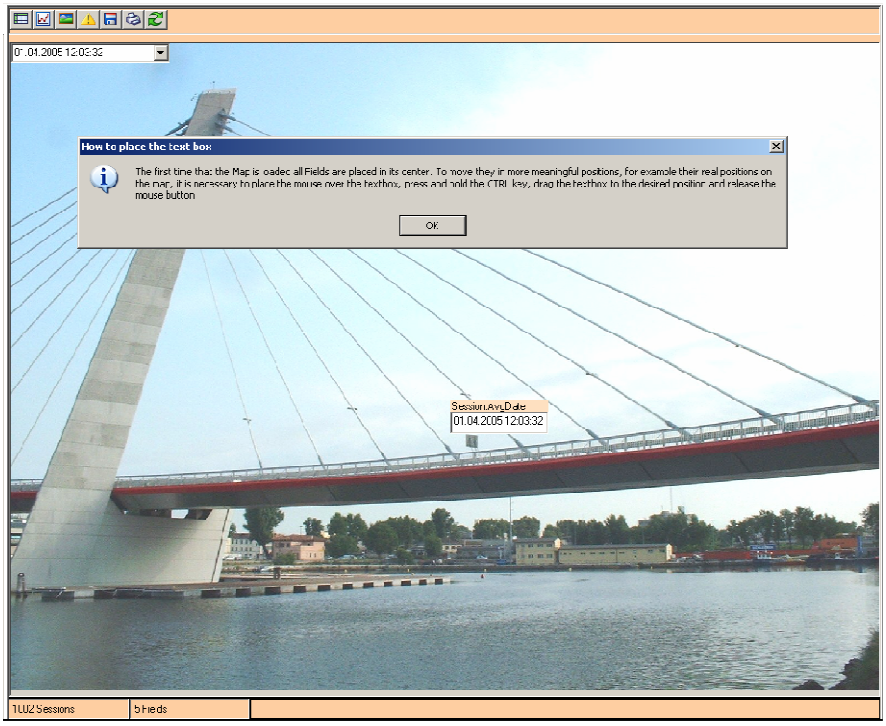
- **WM**: means **W**arning **M**aximum
- **Wm**: means **W**arning **m**inimum
- **PWM**: means **P**re-**W**arning **M**aximum
- **PWm**: means **P**re-**W**arning **m**inimum

Please note that an outgoing curve doesn't mean that a Warning or Pre-Warning is generated. This only means that the Measurement exceeds the defined warning threshold for this Sensor. The condition to generate a Warning is to have *n* channels outside the range in the last *m* Sessions. So if one curve exceeds the thresholds this only means that a critical situation has happened for this Sensor. To generate a Warning the conditions defined on panel 4 "Warnings", described on chapter Selection of Warning values ("Warnings") on page 18 must be fulfilled

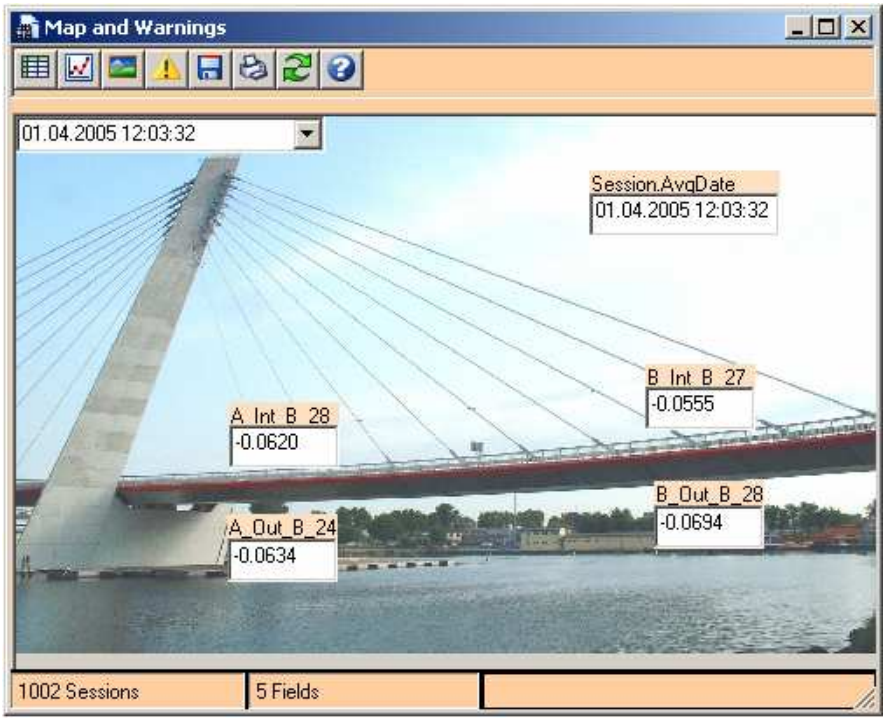
How Map works

The first time the Map is loaded all Fields are placed in its center. To move them in more meaningful positions, for example at their real positions on the map, it is necessary to place the mouse over the textbox, press and hold the CTRL key, drag the textbox to the desired position and release the mouse button. The name of the field is indicated on every box.

Since all fields are initially superposed in the center of the screen, the second textbox will be visible only when the first is moved, and so on.



Please note that after a textbox has been moved, its new position is stored in the DB. This means that in the future, when the Map will be activated, the position of the box remains the same of its previous position before closing the View. When Map is resized, the position of all the Sensors will be scaled accordingly to the new dimensions.

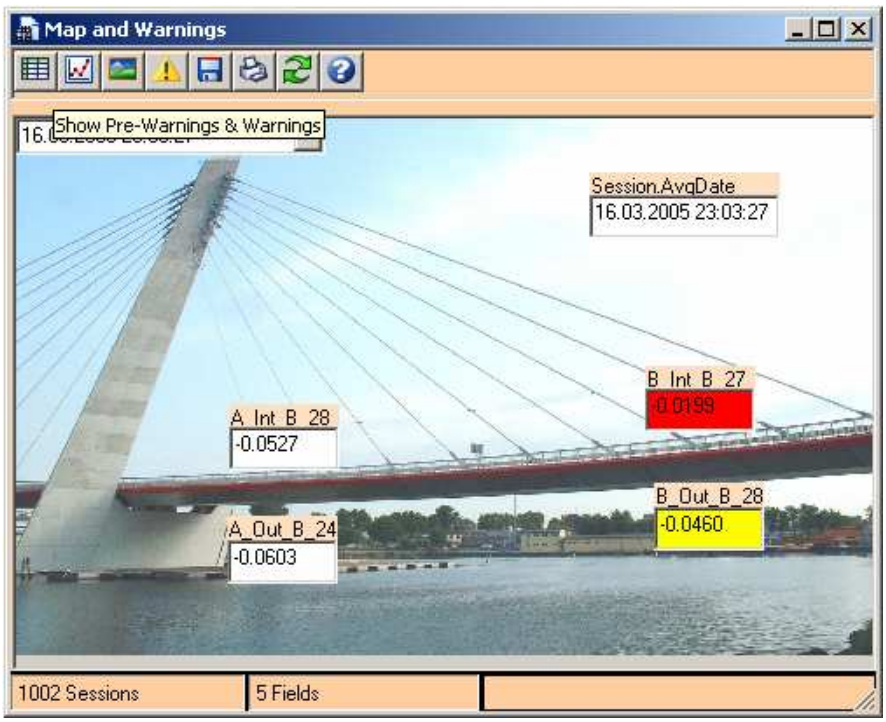


In the above example it is possible to observe the values for all the selected fields, session by session with a combo box indicating the currently displayed

Session. Each time the map is loaded the plotted values are displayed for the last Session. It is possible to select another Session using the combo box at the top left corner.

To view whether a Sensor has exceeded the Warning or Pre-Warning thresholds or not two methods are available:

- Select to view the results on the map and activate the option “show warning / pre-warning on map” on the definition view form.
- Click on the icon  . If the Warning and Pre-Warning thresholds have been defined then the results will be exposed in white, yellow or red color accordingly to the level of Warning reached.



In this example is possible to observe which Sensors have exceeded the thresholds values.

Save To HTML

When the view has to be saved in HTML format the software parses the source file and then creates the destination file replacing the keywords with the relative information. If a keyword is missing in the source file the relative information is not placed in the correct destination. An example of HTML source of a view with name “ViewName” may be the following:

…
<img src=" **graph2html__ ViewName**">
<TABLE BORDER=1 BORDERCOLOR=#b5b500 CELLSPACING=1
CELLPADDING=7 WIDTH=450>
Table2html__ ViewName
</TABLE>
<img src=" **map2html__ ViewName** ">
…

the destination HTML file generated from the source will be the following:

…
<img src="graph12.jpg">

```
<TABLE BORDER=1 BORDERCOLOR=#b5b500 CELLSPACING=1
        CELLPADDING=7 WIDTH=450>
    <tr>
        <td>Session.DateCreated</td>
        <td>2438 ch2 [mm]</td>
        <td>Temp aria CH11/1 [°C]</td>
        <td>Temp ROR CH11/0 [°C]</td>
    </tr>
    <tr>
        <td>4/11/2003 11:14:54 AM</td>
        <td>-0.0493</td>
        <td>21.5 </td>
        <td>12</td>
    </tr>
    <tr>
        <td>4/14/2003 9:42:55 AM</td>
        <td>-0.0654</td>
        <td>21.7</td>
        <td>12.1</td>
    </tr>
    <tr>
        <td>4/14/2003 11:30:28 AM</td>
        <td>-0.0223</td>
        <td>21.8</td>
        <td>12</td>
    </tr>
</TABLE>
<img src="map12.bmp">
…
```

Warning check after every scan

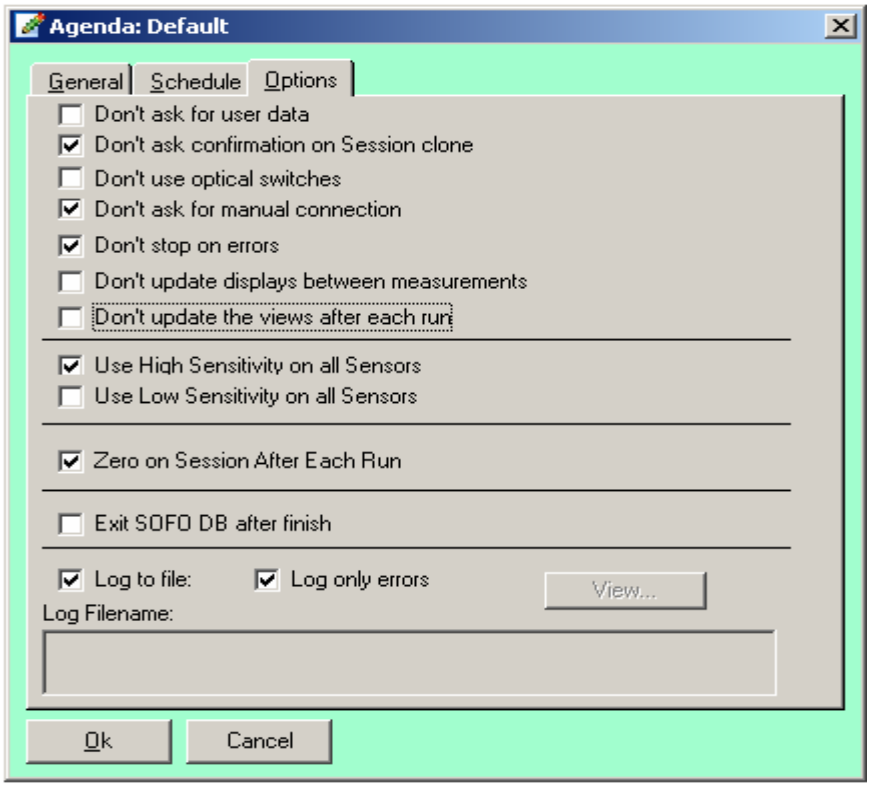
In SDB View, It is possible to update all the views after every cycle of an Agenda. This is real useful for many reasons:

- Store the result after every cycle (in a text file or a picture)
- View in real-time what is happening
- Check if there are new critical situations and run programs or send emails

To perform all this operation it is necessary to set a flag of the Agenda properties form, on the pane Options as shown in the figure next page.

Leaving unchecked the option “Don’t update the views after each run” the Agenda will execute an update of all the views after each agenda run. This means that every operation related to each view will be performed (save to file, alarm,…).

Please note that the update will be done only for the views that are opened. The other views present on the right list but closed won’t be updated.



Switching between Output formats

In every View there is a small navigation tool bar:

Using these icons, it is possible to switch between different types of views without modifying the View information stored in the SDB.

The icon  gives the possibility to generate a graphical output in table form. When this Icon is selected, the table will not show the Warnings and Pre-warnings but only the values.

The icon  gives the possibility to generate a graphical output in graph form if the fields to show are of the same type.

The icon  gives the possibility to view the result on the Map.

The icon  saves the content of the window in a file. If in the window contains a graph, then a window appears and allows the selection of the filename and of the format (jpeg, gif, bmp, wmf…). If the window contains a table, then you will be asked the filename and the format for the output numeric file (excel, txt,…).

The icon  redraws the active graph or table showing the Warning and Pre-warning thresholds. This means colored cells for tables and colored lines graphs.

The icon  gives the possibility to print the active window.

The icon  refreshes the information of the current view. This means that if new Measurements have been performed, these will appear in the view after the refresh.

Getting help

Help

An online help can be accessed pressing F1 in any part of SDB or from the **Help** menu.

Support

Getting the latest version

The registered users will automatically receive new major releases of SDB. Minor releases can be sent by e-mail to users with specific problems. Consult SMARTEC's website at www.smartec.ch to find out about software updates.

Getting support

Support for the SDB software is provided directly by SMARTEC SA. Only registered users are entitled to receive support for this software.

To get support contact SMARTEC SA by one of the following means:

E-mail: support@smartec.ch.

Fax: +41 91 610 18 01

Tel: +41 91 610 18 00 (workdays 9 AM to 12 PM and 2 PM to 5 PM GMT + 1)

Mail: SMARTEC SA, via Pobiette 11, CP, CH-6928 Manno, Switzerland

To facilitate the user support, please be ready to indicate which version of SDB you are running. In case of bugs please write down the error message and the situation in which it has occurred.

Suggestions and bug reports

To suggest addition and modifications to SDB or to report bugs please use the form on the next page and send it or e-mail it to the above address.

Your feedback is sincerely appreciated!

Suggestions and Bug Report
SDB Software

Date:

SDB version:

Operator:

• Bugs

☐ Crash (the software stops and/or gives an error message)

☐ Error (the software behaves incorrectly)

☐ Messages (unclear message or spelling error)

Menu command generating the bug:

Previous operations:

Problem description:

Suggested solution?:

Is the problem reproducible? ☐ Yes, ☐ No

• Suggestions

☐ Modification of an existing functionality

☐ New functionality