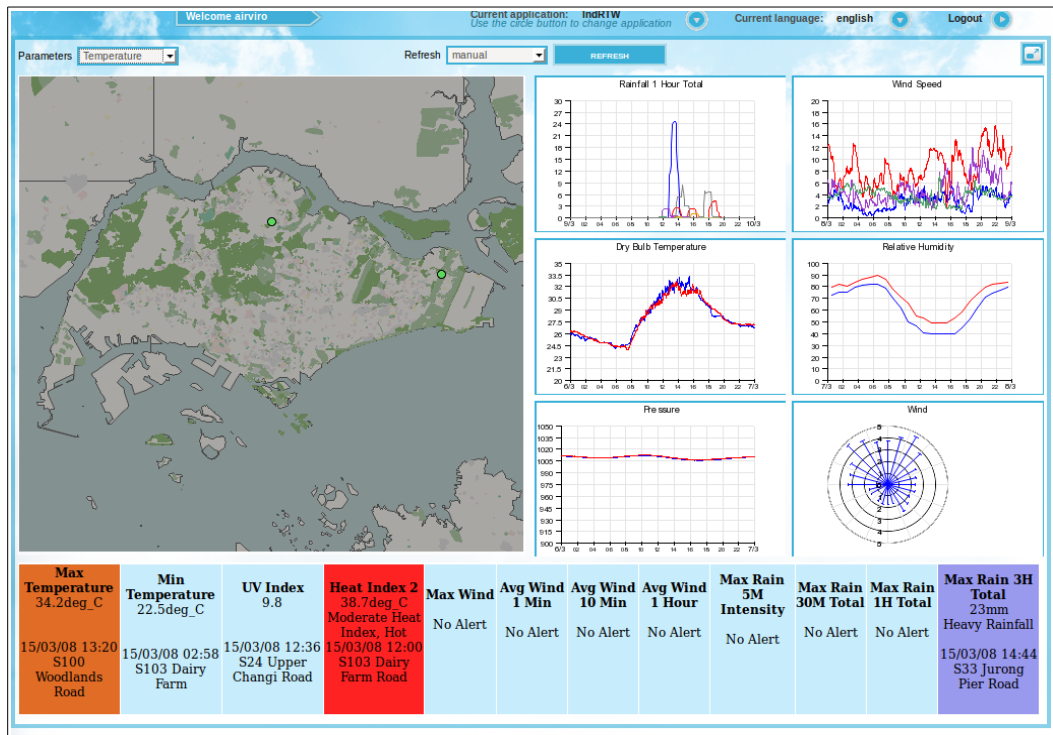


Apertum

Volume 13

Airviro User's Reference



Working with Indico Real Time Weather

Visualizing weather monitoring in real time

CONTENT

13.1 INTRODUCTION.....	4
13.1.1 GENERAL CONCEPTS.....	4
13.1.2 FUNCTIONALITY.....	4
13.2 GETTING STARTED.....	5
13.3 MAIN WINDOWS.....	5
13.4 MAP DISPLAY.....	7
13.5 GRAPHS DISPLAY.....	7
13.6 TABLE DISPLAY.....	10
APPENDIX 13A. CONFIGURATION.....	11

13.1 Introduction

The Indico RTW Module is an Airviro user interface, used to display maps, graphs and alarms. The displayed information depends on the selected parameter.

On the map it is possible to visualize stations and tables with the monitoring information.

Using the Indico Presentation Macros tools one can define which graphs that should be shown. This module is used to show real time data. You can only change the refresh interval from manual to different time intervals.

Alarms are presented as tables at the lower part of the main window. These alarms are defined in Indico Alarms. There is also some important variables shown in the table in the lower part of the interface.

13.1.1 General Concepts

The data collected from several stations and parameters are stored in the TSDB. Using the Indico Presentation, the Airviro user can create and save macros using this data.

The map used to display the information, is the default map for the domain. The user can configure the macros used in the Indico RTW. The Alarms are defined in the Indico Alarms.

The administrator must create a configuration file with the following definitions: Parameter categories, list of keys for each parameter and which alarms that should be shown. See an example in *Appendix 13A*.

13.1.2 Functionality

Unlike other Airviro modules, the RTW Module does not need Java Runtime Environment (run time plug-in) to be installed and enabled in the web browser.

This Airviro module can be executed and accessed using a PC or other device running Internet Explorer 8, Firefox or other internet browsers based on Mozilla.

After entering the user name and password, a working domain must be selected and finally you must select Indico RTW module.

13.2 Getting started

Once Airviro has been properly installed on the *server*, you can begin using it by typing the correct URL in your web browser over Intranet/Internet. The web interface controls all web modules, including **Indico RTW**.

After logging in with user-ID and password, the user select an available domain and choose a web module.

In **Current application** you can see the actually selected Module. Using the arrow button You can choose another module. (*Figure 13.1*)

Click in the arrow button **Current language** to select the language to work with. In version 4.00 this function is not available yet.

With **Logout** you can close the Airviro windows and return to the login window.

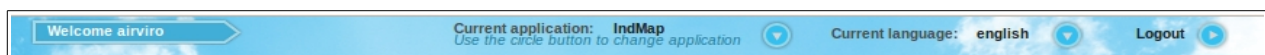



Figure 13.1 Main menu.

13.3 Main windows

When the RTW Module has been selected, the user gets the following options available in the Main RTW Module window:

- Parameters: allows you to select a set of available parameters. The sets are previously defined by the system administrator. The latest values for the parameter set chosen are shown when hovering over the station. The user can select a specific parameter set to be displayed. Example: pressure, temperature and wind.
- Refresh: allows you to manually refresh the display or to specify a refresh interval, for example, manual (in this case you must press the **REFRESH** button) 1 minute, 5 minute or 1 hour.
-  This button is used to maximize the user interface to use the whole browser window.

Hovering the mouse pointer over a station on the map displays a new window with a table. The table contains the following information: Station name and the measured parameters for the station including data/time and values.

When a graph is clicked, it is shown in a maximized pop up window.

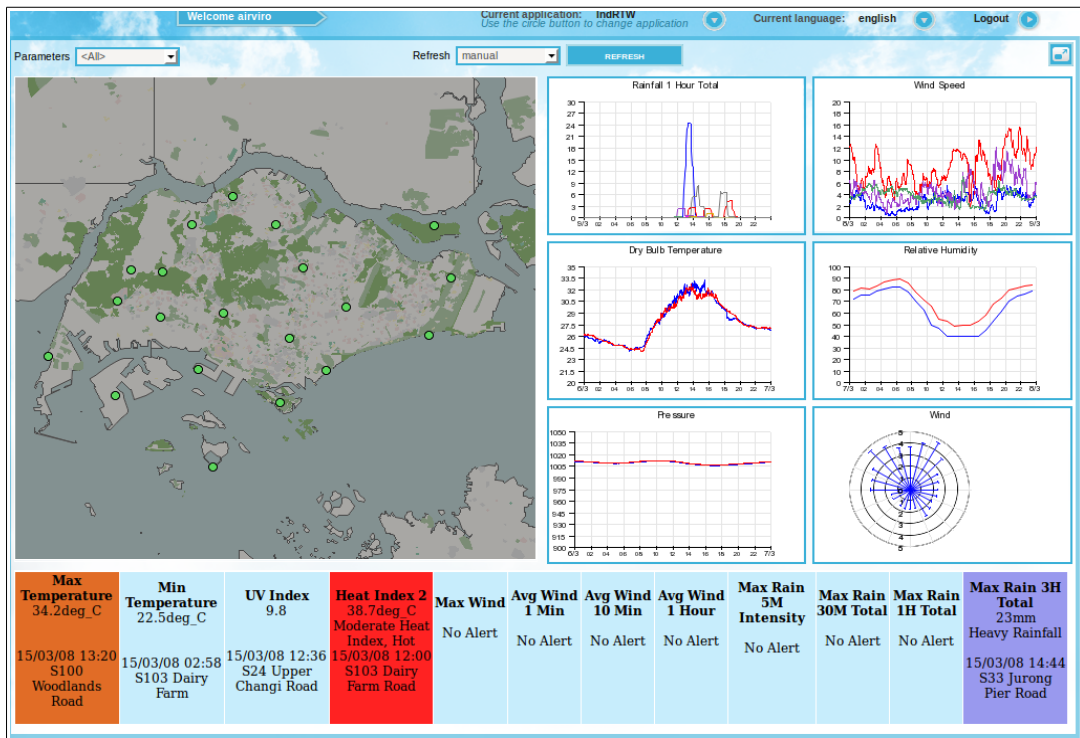


Figure 13.2 RTW Windows.

13.4 Map Display

When selecting a parameter all the stations measuring this parameter are shown on the map with the color of the station being green if the station has no active conditional alarms and otherwise the color of the conditional alarm with the highest value is shown.

Placing the mouse over a station, the user can see a table. This table contains the following data: station name, parameters, data time and the measured value . See *Figure 13.3*, example: station S122.

S122 Sembawang Road		
Parameter	Date time	Result
1 hr, QFE, AVG	not available	- HPa
1 hr, QFE, MAX	not available	- HPa
1 hr, QFE, MIN	not available	- HPa
1 hr, QNH, AVG	not available	- HPa
1 hr, QNH, MAX	not available	- HPa
1 hr, QNH, MIN	not available	- HPa
1 hr, Relative Humidity, AVG	not available	- %
1 hr, Dry Bulb Temp, AVG	not available	- deg_C
1 hr, Dew Point Temp, AVG	not available	- deg_C
1 hr, Wet Bulb Temp, AVG	not available	- deg_C
1 min, QFE, AVG	not available	- HPa
1 min, QNH, AVG	not available	- HPa
1 min, Rainfall Total, TOT	15/03/08 16:03	0 mm
1 min, Relative Humidity, AVG	not available	- %
1 min, Dry Bulb Temp, AVG	not available	- deg_C

Figure 13.3 Station information

13.5 Graphs Display

In the Indico Presentation you must define which graphs to show in the RTW graph display. (*Figure 13.4 Graphics*).The definition of the graphs are saved as Indico Presentation Macros.

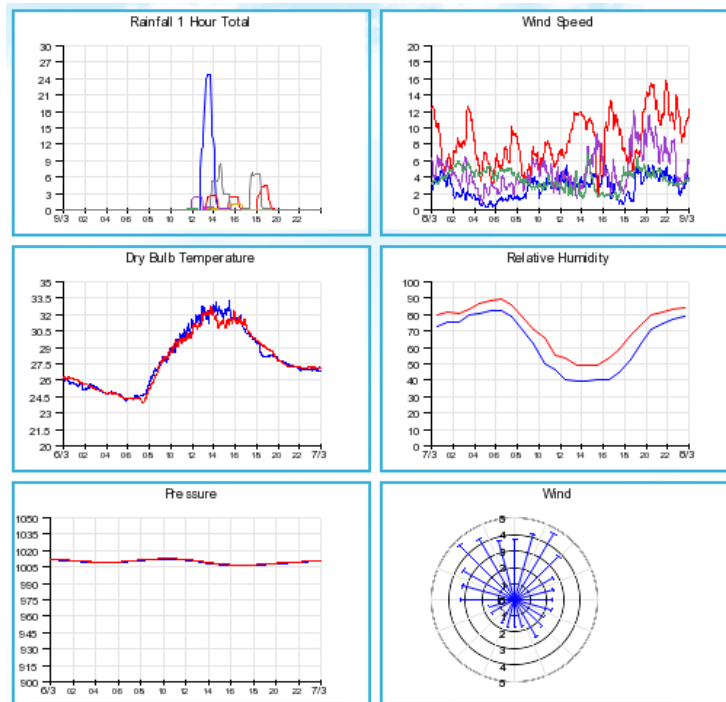


Figure 13.4 Graphics

If no station is clicked, the Indico Macros to be used for the graphs will be the ones called graph1 to graph6 that is located under the logged in users subdirectory for Indico Macros and the sub directory there called **rtw**. If these macros does not exist the module will show the macros called graph1 to graph6 that are located under the *COMMON* directory and the subdirectory **rtw**.

If a station is clicked on, it will become the active station. In that case the station in the used macros might be replaced with the station clicked on. That happens when macros called stngraph1 to stngraph6, is found under the logged in user directory and the **rtw** directory or under the the *COMMON directory* and **rtw** directory.

Example 1: When a station is clicked by the user Tom, the module will look for macros for the third graph (lower left corner) in the following order:

1. COMMON/Tom/rtw/stngraph3
2. COMMON/Tom/rtw/graph3
3. COMMON/rtw/stngraph3

4. COMMON/rtw/graph3

The station in the macro is only replaced with the selected one if the macro found has the name stngraph3.

Example 2: When no station has been selected by the user Tom, the module will look for macros for the third graph (lower left corner) in the following order:

1. COMMON/Tom/rtw/graph3
2. COMMON/rtw/graph3

The user can deselect a station by clicking on the map far away from any station shown.

When hovering over the upper left corner of a graph icons appear, These are used for exporting the graph in some formats: EXCEL, CSV, PNG and PDF.

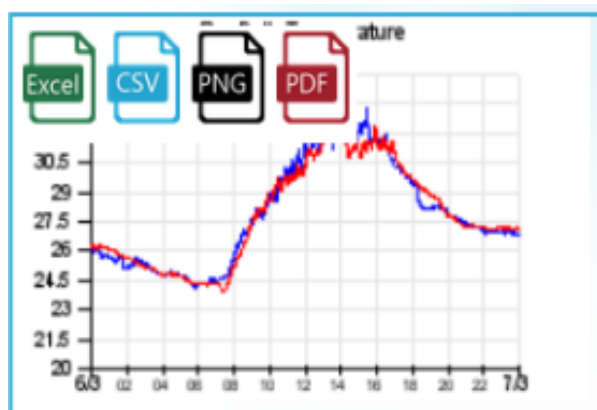


Figure 13.5 Export formats

When clicking on a graph, a new windows is shown with the selected graph enlarged.



Figure 13.6 Enlarged graph

13.6 Table Display

There are 12 fields under the map and graphs. (Figure 13.7 Table).

The leftmost 4 are showing extreme weather conditions during the current day (from midnight up to now). The parameters, colors, and texts are fixed by the system administrator.

The rightmost 8 are showing conditional alarms chosen by the system administrator. For each field the highest alarm is shown.

The colors for the alarm levels (alert, warning, alarm) can be set in the alarm definition, (using Indico Alarm Module).

The alarms can be configure using Indico Alarm.

Max Temperature 34.2deg_C	Min Temperature 22.5deg_C	UV Index 9.8	Heat Index 2 38.7deg_C Moderate Heat Index, Hot	Max Wind No Alert	Avg Wind 1 Min No Alert	Avg Wind 10 Min No Alert	Avg Wind 1 Hour No Alert	Max Rain 5M Intensity No Alert	Max Rain 30M Total No Alert	Max Rain 1H Total No Alert	Max Rain 3H Total 23mm Heavy Rainfall
15/03/08 13:20 S100 Woodlands Road	15/03/08 02:58 S103 Dairy Farm	15/03/08 12:36 S24 Upper Changi Road	15/03/08 12:00 S103 Dairy Farm Road								15/03/08 14:44 S33 Jurong Pier Road

Figure 13.7 Table.

Appendix 13A. Configuration.

indrtw.rf

```

!
! Which parameter categories to show in RTW dropdown menu
!
parlist.rain.name: Rain
parlist.temp.name: Temperature
parlist.wind.name: Wind
parlist.hum.name: Humidity
parlist.pres.name: Pressure
!
!
! List of keys to consider for each parameter category
! (hovering menus on map)
!
active.all.keys: ,MPQFEAVG ,MPQNHAVG +MPQFEAVG ,MRAINTB1 ,MRAINTB2
,MRHUMAVG ,MTEDBAVG ,MTEDBAVG ,MTEDPAVG ,MTEWBAVG ,MwDIRAVG
,MwSPDAVG fMRAINTB1 fMRAINTB2 fMRR01TB1 fMRR01TB2 fMRR03TB1
fMRR06TB1 fMRR12TB1 tMwDIRMAX tMwDRHAVG tMwSPDMAX tMwSRHAVG
+MPQFEAVG +MPQFEMAX +MPQFEMIN +MPQNHAVG +MPQNHMAX +MPQNHMIN
+MTEDBAVG +MTEDPAVG +MTEWBAVG +MRHUMAVG
active.rain.keys: ,MRAINTB1 ,MRAINTB2 fMRAINTB1 fMRAINTB2
fMRDURTB1 fMRDURTB2 fMRR30TB1 fMRR30TB2 fMRR01TB1 fMRR01TB2
fMRR03TB1 fMRR03TB2 fMRR06TB1 fMRR06TB2 fMRR12TB1 fMRR12TB1
fMRR24TB1 fMRR24TB1 +MRAINTB1 +MRAINTB2 +MRDURTB1 +MRDURTB2
active.wind.keys: ,MwDIRAVG ,MwDRTAVG ,MwSPDAVG ,MwSRTAVG
tMwDIRMAX tMwDRHAVG otMwSPDMAX tMwSRHAVG
active.pres.keys: ,MPQFEAVG ,MPQNHAVG +MPQFEAVG +MPQFEMAX
+MPQFEMIN +MPQNHAVG +MPQNHMAX +MPQNHMIN
active.temp.keys: ,MTEDBAVG ,MTEDPAVG ,MTEWBAVG +MTEDBAVG
+MTEDPAVG +MTEWBAVG
active.hum.keys: ,MRHUMAVG +MRHUMAVG
!
!
! Alarms to show in the eight rightmost positions in the Alert
panel
! id: Refers to alarm name (without station)
! name: Name shown on panel
!
rtwalerts.1.id: wSRT_MAX
rtwalerts.1.name: Max Wind 10 Min M1M

```

```
!  
rtwalerts.2.id: WSPD_A1M  
rtwalerts.2.name: Avg Wind 1 Min  
!  
rtwalerts.3.id: WSPD_A10  
rtwalerts.3.name: Avg Wind 10 Min  
!  
rtwalerts.4.id: WSPD_A1H  
rtwalerts.4.name: Avg Wind 1 Hour  
!  
rtwalerts.5.id: RAIN  
rtwalerts.5.name: Max Rain Total  
!rtwalerts.5.id: RAIN_5M  
!rtwalerts.5.name: Max Rain 5M Intensity  
!  
rtwalerts.6.id: RAIN_30M  
rtwalerts.6.name: Max Rain 30M Total  
!  
rtwalerts.7.id: RAIN_1H  
rtwalerts.7.name: Max Rain 1H Total  
!  
rtwalerts.8.id: RAIN_3H  
rtwalerts.8.name: Max Rain 3H Total  
rtwalerts.8.lev.1: Moderate Rainfall  
rtwalerts.8.lev.2: Heavy Rainfall  
rtwalerts.8.lev.3: Deluge  
!  
!
```