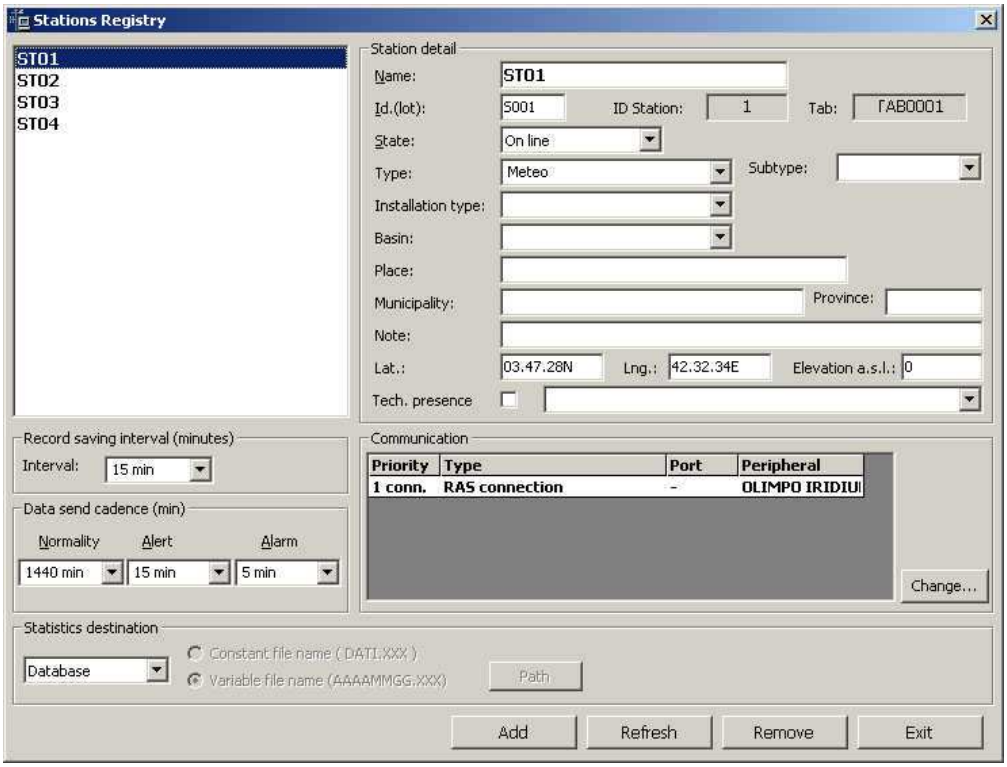
s032-02 GestConf

Configuration management software

User manual (vers. 5.12)



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Linked Documentation

s011-i *DYNAMIC RECORDs - Dynamic records layout description*
s032-01-di *SUPERVIS- Monitoring/remote controlling supervision networks software*
s032-03-di *IMPORTA - Relational database data import management program manual*
s032-04-di *VALIDA - Data validation management program manual*
s032-05-di *DATAVIEW - Report and graph generating software program manual*
s032-06-di *SUPERA - Pollution above level of attention and alarm management program manual*

1 Document purpose

The purpose of this document is to provide a description of the functions and characteristics of GestConf software. **GestConf** allows you to manage the configuration of a complex network of stations for *environmental* and *industrial* monitoring such as Agro-meteorological, Water Quality analysis, Air Quality Analysis, Remote Control, ecc…..

2 'Meteonet' software installation

Gestconf software is included in the installation of Meteonet LT / SCADANET.

Before proceeding with the package software installation, verify that the calculator whereby the installation will occur, has the following *Hardware* requirements available:

- **Pentium** Microprocessor or higher.
- **16 Mbyte** of memory **RAM** or higher.
- **Hard Disk** with capacity of at least **1 Gbyte** or higher (in terms of the amount of data to manage)
- CD reader.
- Graphic board **VGA** o **SVGA**
- Microsoft Windows™ 95, 98, NT, 2000, XP, 2003 operating system.

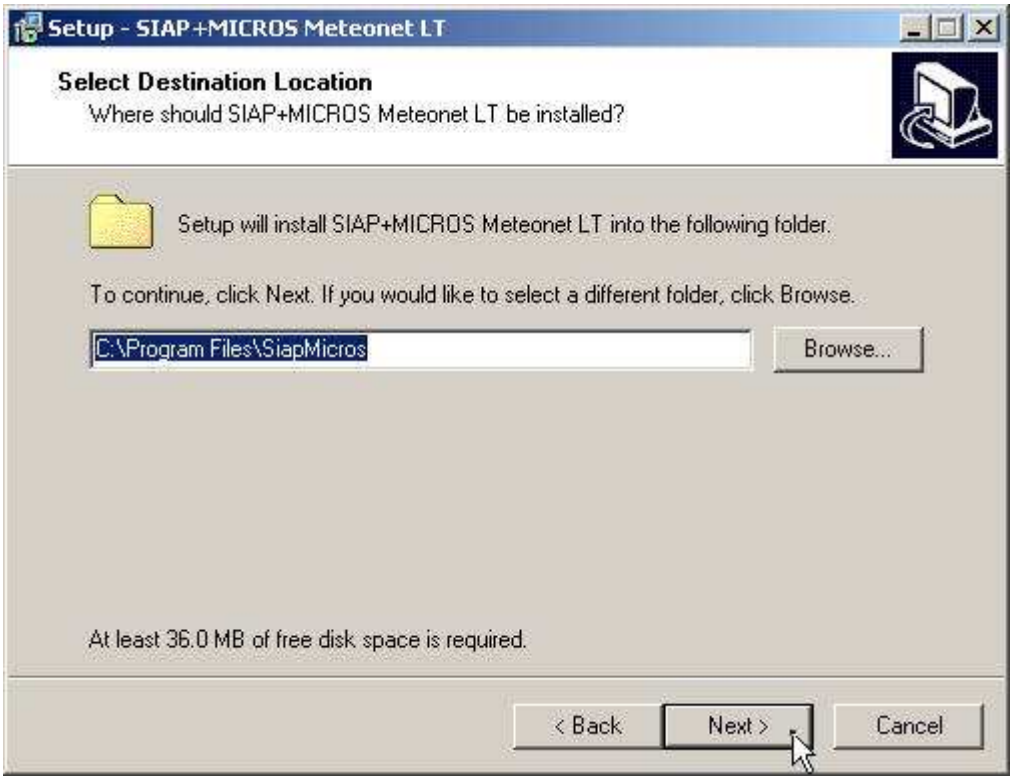
The package software has been tested with a calculator that has the previous characteristics available, therefore a calculator with inferior characteristics will not guarantee the correct working operation.

To proceed with the installation follow the indications below:

- Insert disc in the CD reader;
- From the tool bar choose Starting / Run;
- Type:**MeteoNET LT.exe** in the command line of the window that appears;

- click '**OK**';
- Follow the instructions appearing on the video.

The installation program will request confirmation of the *Directory* and disc unit where to install the software by displaying the following window:



By default it will propose the installation of the "C:\Programmi\SiapMicros\" directory, but it is possible to install the software in another position rewriting the name of the directory or the disc unit in the space provided. To proceed click **"Next"** or **"Cancel"** to quit the installation.

All of the package modules are preconfigured to access the Microsoft Access database, created during the installation phase and situated in the C:\programmi\siapmicros\database folder.

If the user chooses a destination folder different from the one indicated he will have to modify the configuration files of the single modules.

2.1 Installed files list

The installation program copies all of the METEONET software package files from the discs inserting them in the specified directory of the following list:

Files copied in the "<INSTALLDIR>\Supervis" directory

SMSServer95.exe
VisLog95.exe
TranscodificaHIst.txt
TranscodificaH2.txt
TranscodificaH6.txt
TranscodificaH1.txt
CConfPico.dll
USafe32.DLL
Sx32w.dll
TranscodificaStzCEMI.txt
TranscodificaDigCEMI3.txt
TranscodificaAnaCEMI2.txt
TranscodificaAnaCEMI3.txt
TranscodificaDigCEMI1.txt
TranscodificaDigCEMI2.txt
TranscodificaAnaCEMI1.txt
ConvertitoreCemi.exe
msscript.ocx

scrrun.dll
Script.bas
GestImage.exe
converter.dll
cRas.dll
GestAllarmi95.exe
SNS3820Per3840.txt
IdMis.txt
SNS3820.txt
CM5800FE.Ini
Supervis.ini
IdMis3820.txt
Supervis.exe
Cm5800FE.dll

Files copied in the "<WINSYSDIR>" directory

MSVBVM60.DLL
STDOLE2.TLB
OLEAUT32.DLL
OLEPRO32.DLL
ASYCFILT.DLL
VB6IT.DLL
MSJET35.DLL
MSJTER35.DLL
MSJINT35.DLL
VBAJET32.DLL
VBAR332.DLL
MSRD2X35.DLL
MSREPL35.DLL
MSVCRT40.DLL
VB5DB.DLL
EXPSRV.DLL
MSEXCL35.DLL
MSTEXT35.DLL
MSXBSE35.DLL
TABCTL32.OCX
COMCAT.DLL
TabCtlIT.dll
MSCOMM32.OCX
MSComIT.dll
MSFLXGRD.OCX
FlxGdIT.dll
MSCOMCTL.OCX
MSCmCIT.dll
MSADODC.OCX
MSStdFmt.dll
adodcIT.dll
MSDATGRD.OCX
DatGdIT.dll
msbind.dll
Ntsvc.ocx
Msinet.ocx
scrrun.dll
TAPIExCt.dll
VsVIEW3.ocx
Sscala32.ocx
MSADODC.OCX
MSStdFmt.dll
adodcIT.dll
MSDATGRD.OCX
DatGdIT.dll
COMDLG32.OCX
MSWINSCK.OCX
MSCOMCT2.OCX
teechart.ocx
wodSFTP.ocx
RICHTX32.OCX

Files copied in the "<CommonFilesDir>\Microsoft Shared\DAO" directory

DAO350.DLL
DAO2535.TLB

Files copied in the "<INSTALLDIR>\Configurazione" directory

USafe32.DLL
Sx32w.dll
GestConf.exe
CConfSvr.dll
CSMS_Gate.dll
GestConf.ini
SQLUpgrade2.0To5.11.0.sql
ScriptCreazioneDBAllarmi.sql
ScriptCreazioneDBCNF.sql
ScriptCreazioneDBImmagini.sql
ACCUpgrade2.0To5.11.0.sql
ModemInit.txt

Files copied in the "<INSTALLDIR>\Importa" directory

USafe32.DLL
Sx32w.dll
CRecentDataSvr.dll
Importa.exe
codcm4000.ini
codmma.ini
CImportaDati.dll
CM4000.exe
CM4000.dll
Importa.ini

Files copied in the "<INSTALLDIR>\DataView" directory

USafe32.DLL
Sx32w.dll
RosaVenti.INI
RosaVenti.exe
TEEUSERX.HLP
CDataView95.dll
DataView.exe
DataView.ini

Files copied in the "<INSTALLDIR>\Database" directory

Immagini.mdb
Cnf.mdb
Dati.mdb
Allarmi.mdb

2.2 'GestConf.ini' configuration file

The 'GestConf.ini' configuration file present in the installation directory, is created while starting GestConf.

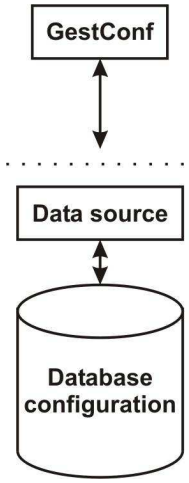
The configuration file is used to store a series of information which are:

- database path
- user personalization

The configuration file is divided into sections; section name is contained between square brackets.

Every section contains a series of lines whereby the left side of '=' symbol represents the label, while the right side makes up the value.

2.3 System architecture



GestConf uses a database to memorize the configuration, which is accessed through 'data supplying objects'.

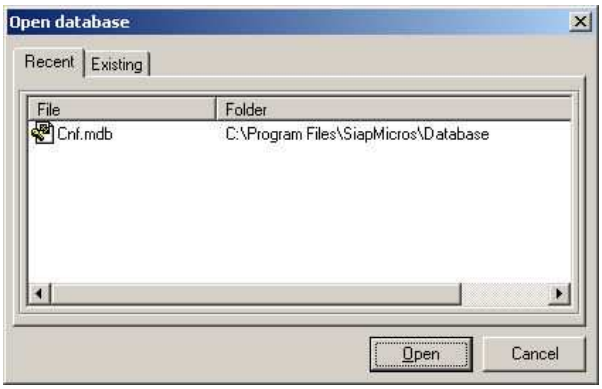
The configuration database contains information relative to the registry monitoring station, measure parameters, download data time planning, users and their availability.

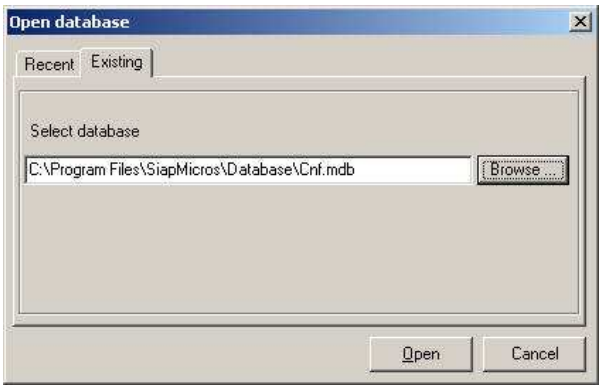
The use of 'data supplying objects' essentially offers two advantages

- makes GestConf independent from any type of database used,
- improves network application performance.

3 Starting GestConf

Starting **GestConf** (double clicking on the icon) opens the main window type *MDI* (Multiple Document Interface), GestConf will then bring up a window that allows the user to choose a configuration database.





To open a configuration database follow the steps below:

1. choose the '**Recent**' card to open a database contained in the list of recent files or choose the **'Existing'** card and press **'Browse'** to search for a new one to add to the list;
2. click on **'Open'** to confirm, or **'Cancel'** to cancel.
3. clicking **'Open'** brings up a dialog window requesting password.

Note. The system is initially set up for a 'Micros' user and has no password. A list of users and their respective passwords is described in the paragraph 'Index Management'.

4 System configuration

The configuration database contains information relative to the registry monitoring station, measure parameters, download data time planning, users and their availability.

By **Registry** is intended a list of requirements that define the characteristics and functioning methods of the station or of one or more acquisition parameters.

The configuration is obtained (by use of a menu) inputting the number of stations to be managed and setting up each with the various properties that make up the registry.

4.1 Addition and configuration of a station

To add a new station or to alter the registry data proceed as follows:

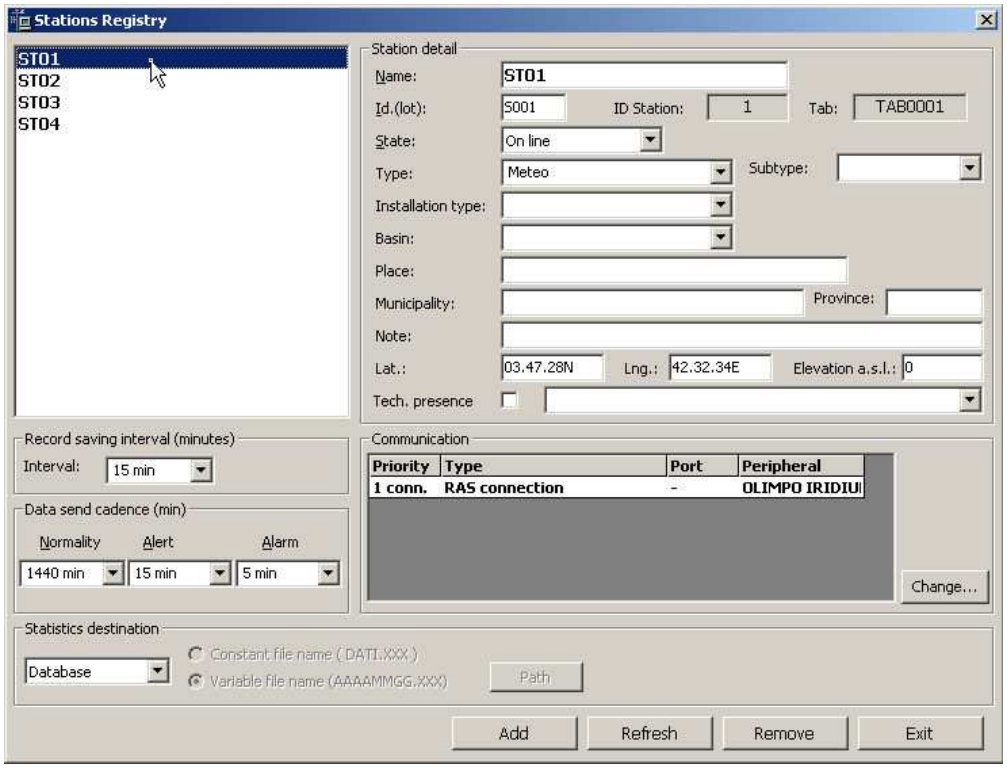
1. Choose from the menu: **Archive** | **Stations** or press the key

   This will bring up a dialog window. A number of cell boxes will appear inside the window. These permit to alter the properties which form a station registry. Many properties are already set up with a value by default, others instead need to be modified based on specific need.

2. Press the key **Add** to add the station, press **Update** to save the changes in the relative registry, press **Remove** to remove the Station or press the key **Cancel** to cancel the operation (in this last case any changes made to the station's registry will be lost)

4.1.1 Station registry property description

This window contains the main properties which necessarily must be set to ensure the proper functioning of all system applications.



Station Name: Is the name itself which identifies the station. Can be made up of any alpha-numeric character to a maximum of 25 characters.

The property is set to Station…N by default.

(Lot) Id.: Is the production lot code. Can be made up of any alpha-numeric character to a maximum of 4. The property is set to 'S' + station ID by default. Identical lot codes are accepted.

The lot property can be utilized to create station groups. It is possible to create multiple 'Supervis' each of which manages it's own group (speeds up the process of unloading data).

Station on-line: This property must be activated to specify that the station is physically and logically connected to the Centre and therefore ***Supervis*** can interrogate it. If this property is not switched on, the configuration commands and operations of the station are not active. In this case the station is represented by a yellow icon. This property is active by default.

Station type: Type of station of the station.

Sub-type: This property is an optional entry which describes the type of station. It is possible to choose from:

- Pluviometer (rain gauge)
- Water gauge
- P.T. Pluviometer + Thermometer
- P.I. Pluviometer + water gauge
- P.T.I. Pluviometer + Thermometer + water gauge
- P.T.I.R.E.A. Pluviometer + Thermometer + water gauge + Radiometer + Evaporimeter + Wind speed & direction
- P.T.R.U. Pluviometer + Thermometer + Radiometer + Humidity
- Water level sensor

Queste costanti sono memorizzate in una tabella all'interno del database.

These constants are memorized in a table within the database.

Installation type: This property is an optional entry which describes the type of installation of the station. It is possible to choose from:

- Country
- Terrace
- Bridge
- Dam

A list of installation types is memorized in a table within the database.

Basin: An optional entry which describes the basin belonging to the station. A list of these is memorized in a table within the database.

Location, Municipality, Province: An optional entry that indicates location, municipality and province of the station.

Notes: An optional entry relative to the station.

Lat/Lng/Altitude a.s.l.: Geographic characteristics of the station representing Latitude, Longitude and Altitude above sea level respectively.

Observer presence: A property that indicates if an observer is associated to the station. If the property is active the selector allows to choose from a list of users configured in the system.

Interval: Indicates the time interval (in minutes) in which data coming from peripheral stations is memorized by the centre database. A selector allows to choose from:

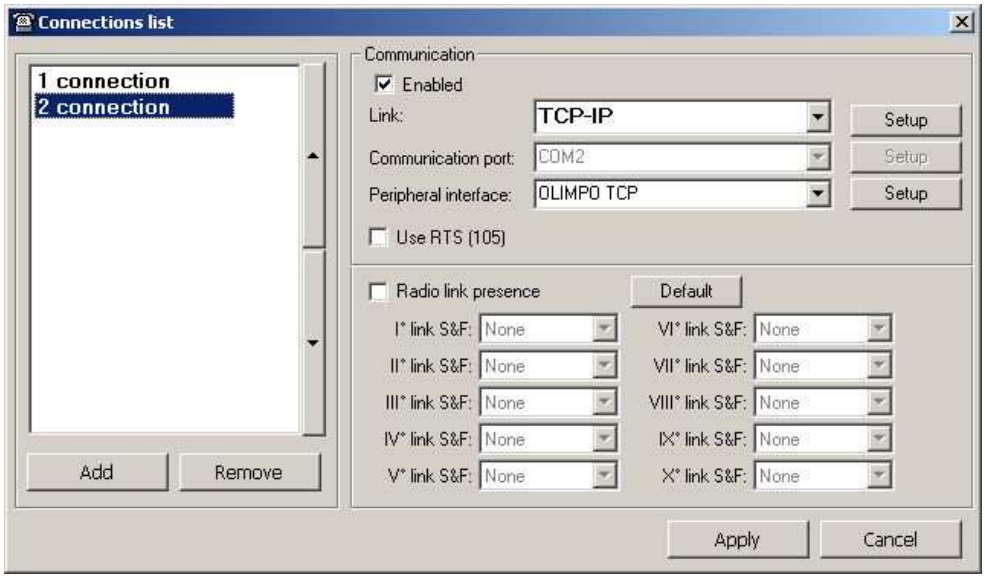
- Free
- 5 min
- 10 min
- 15 min
- 20 min
- 30 min
- 60 min

Data send cadence: This property relates to remote control and monitoring installations whereby there is no centre supervising system requesting data from each station. In such case it's the peripheral stations themselves that send their data to the centre. It is possible to set 3 cadence rates

- Cadence under Normal conditions
- Cadence under Alert conditions
- Cadence under Alarm conditions

The peripheral station automatically sets its cadence based on whether or not it exceeds the alert or alarm thresholds of one or more analog measures.

Communication: This square contains information relative to communication with the peripheral. It is possible to set one or more connections, also of a different type. A button allows to set each individual command. It is possible to prioritize the connections using the arrow keys beside the list. When the peripheral is questioned the first connection on the list is activated; if the call is unsuccessful the next connection is activated.



Enabled: This property indicates if the connection is active.

Connection: The connection device (electronic apparatus) which interfaces the PC with the station communication module.

The selector allows to choose from:

1. *Dedicated Line modem*
2. *Switched Line modem*
3. *Radio apparatus*

The selector is positioned on number 1 by default.

Choosing the *second* device enables a button that brings up a dialog window where to set the Switched Line modem parameters (registry modem); choosing the *third* device instead enables a button that brings up a dialog window to set the radio transmission parameters (v. Store & Forward / Radio Link).

Communication Port: Is the Central PC serial port module whereby the connection device is connected. A button permits to modify the serial port transmission properties (Serial port set-up). The property is set to **Porta COM1**[1] by default.

Peripherals Interface: Is the communication module (electronic board) that interfaces the remote station data acquirer with the Centre PC through the connection device. The module contains a memory zone in which it memorizes data acquired and elaborated by the station. Is subdivided into different memory areas each with various capacity based on specific filing needs. The selector allows to choose from module **CIC**, **CRM, OLIMPO, OLIMPO with Memory-Card, Stations with H layout, Pico-ST, Cabina CEMI, Satellite (via database Env.), SimpraWIn, 3820, 3840, 3840NG, OLIMPO TCP, OLIMPO TCP with Memory-Card, MTX1400, MTX7000**. Choosing CRM activates the **Utilizza criterio RTS** cell box because with this module communication must always occur “piloting” the **RTS** criteria.

[1] ***Supervis*** supports multiple connection devices towards the stations: can connect to a few with a dedicated line modem, to others with a radio apparatus, etc.... Obviously every connection device must be connected to the PC through a different serial port.

A button brings up a dialog window to set the communication module parameters. (registry communication module). The property is set to **Modulo CIC** by default.

Use RTS criteria: This property should be activated only if there's a need for criteria **RTS** (RS232 serial port parameter) during communication with the remote station. Is always enabled if the station communication module is a **CRM** whereas it is optional if the communication module is a **CIC**. Needs to be activated only with certain dedicated line modem models. Is not activated by default.

4.1.2 Modem registry property description

This window allows to set the modem parameters for switched telephone lines or cellular lines.

Telephone number: Is the phone number connected to the modem. Can be made up of any numeric character or special character such as *period, coma*, etc. ....

This property is not set by default.

Model: **(model):** Is the modem model. A button allows to set the start-up string drawing from a list of preconfigured modems.

Init String: A string of Hayes commands that trigger the start-up of the modem every time it has to dial a remote station number to connect with it. The string view is made up of certain commands which determine modem behaviour. The commands are standard and therefore should adapt to any type of modem.

The string must end with ATDT.

By default this property is set with a series of commands that uses a modem with modality V21 a 1200 baud[2].

Connection attempts: The number of attempts by which the modem repeats the connection procedure with the remote station in case the first attempt is unsuccessful. This function occurs only when ***Supervis*** connects *automatically* not by *manual* command (user operated connection attempt). This property is set to **2** attempts by default.

Hang-up attempts: The number of attempts by which the modem repeats the hang-up procedure with the remote station in case the first attempt to disconnect is unsuccessful. This function occurs only when ***Supervis*** connects *automatically* not by *manual* command (user operated hang-up attempt). This property is set to **2** attempts by default.

[2] For more information refer to the modem manual. The suffix **AT** must always precede the commands and must be separated by *semicolon.*

4.1.3 Store & Forward radio link property description

This window allows to set the property relative to communication with S&F protocol but is exclusive to stations that use a radio apparatus connection device.

This *Micros* communication protocol, used to interrogate the stations, allows to exploit every station as radio bridge for the following station which otherwise may not be reached. For example it's possible to interrogate station n.1 using stations n.6 and n.8 as radio bridge[3].

First S&F bridge: Is the communication module address of any station that will function as ***first*** *radio bridge* for the station to be configured. This property is set to **None** by default (which means there is no first radio bridge).

Second S&F bridge: Same as above but relative to the second radio bridge

Third S&F bridge: Same as above but relative to the third radio bridge

Fourth S&F bridge: Same as above but relative to the fourth radio bridge

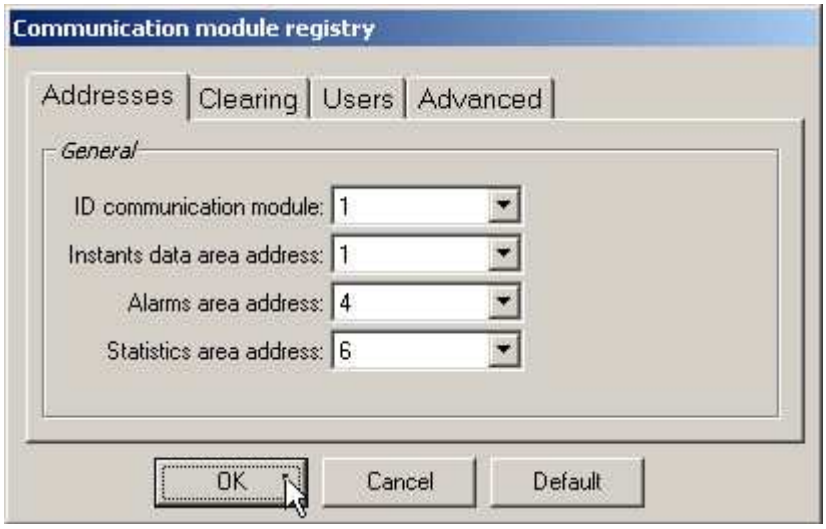
Fifth S&F bridge: Same as above but relative to the fifth radio bridge

For peripherals 3820, 3840, 3840NG it is possible to set the sixth, seventh, eighth, ninth and tenth **S&F bridge** as well.

4.1.4 Communication module property description

This window allows to set the properties relative to the configuration of the station communication module. It is made up of several overlapping pages selectable by clicking on the respective tab.

The communication module is the module (electronic board) that interfaces the station data acquirer with the Centre PC through the communication device. The module contains a memory buffer in which it memorizes data acquired and elaborated by the station. Is subdivided into different memory areas each with various capacity based on specific filing needs[4].



Communication ID module: Is the remote station data acquirer communication module address. Every station is distinguished by a numeric address that unequivocally identifies it

[3] For a complete S&F protocol description please refer to the relative documentation.

[4] The properties essentially depend on the communication module hardware and software set-up. Reason why ***Supervis*** is configured same as the communication module and not vice versa.

within the station network. This property is set to be the same as the station number by default.

Instant data area address: Is the memory area index, of the station data acquirer communication module in which instant data is memorized. This property is set to **1** by default.

Alarm area address: Is the memory area index, of the station data acquirer communication module in which alarms are memorized. This property is set to **4** by default.

Statistical area address: Is the memory area index, of the station data acquirer communication module in which statistical data is memorized. This property is set to **6** by default.

Erase alarm area: This property has to be activated in order to clear/erase alarms following their transmission to the Centre. If the property is not activated the alarms remain present in their area, even after they've been transmitted to the Centre (alarm transfer). In any case the clearing takes place only if the transmission has been successful. This property is activated by default.

Erase statistical area: This property has to be activated in order to clear/erase statistical data following its transmission to the Centre. If the property is not activated the data remains present in its area, even after its been transmitted to the Centre (statistical data transfer). In any case the clearing takes place only if the transmission has been successful. This property is activated by default.

Erase CBM remote/MemoryCard: This property has to be activated in order to clear/erase statistical data contained in the CBM module or Memory-Card (data back-up module) following its transmission to the Centre. If the property is not activated the data remains present in the module, even after its transmission to the Centre. In any case the clearing takes place only if the transmission has been successful. This property is not activated by default.

4.1.5 Statistical data destination property description

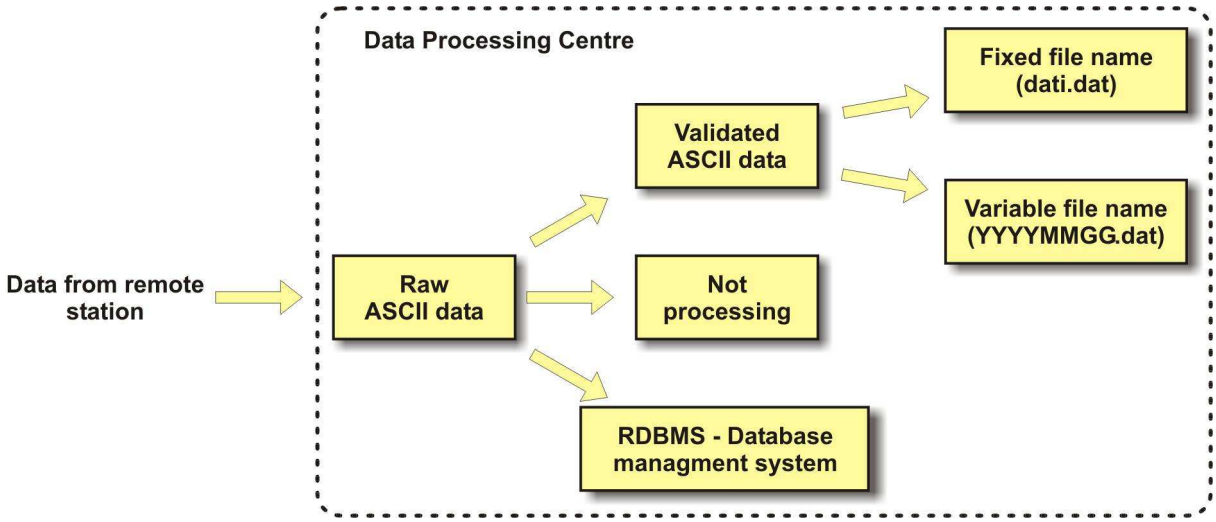
The statistical data that ***Supervis*** transfers to the Centre remote stations, contained in ASCII temporary file, can be assigned three different ways.

Statistical data destination: Is the destination of statistical data relative to only one station.

The selector allows to choose from: **None**, **File** and **Database**.

With **None**, the statistical data after the transfer from station to the Centre in the ASCII temporary file, is not assigned and therefore lost; with **File** the statistical data is joined with an ASCII file, and lastly with **Database** the statistical data is automatically passed over to the ***Import*** software which interprets and files it in the relational database. In this last case a back-up copy on ascii file is created, the name of which is in YYYYMMDD station id format.

Choosing the **File** option enables the **Setup** push button and the file name selectors. The selector is positioned on **Database** by default.



Destination of data coming from remote stations

Set up: This push button brings up a window that allows to choose the path to be assigned to the ASCII file in which the statistical data will be linked together. The path is formed by the letter that distinguishes the unit disc and by a folder name. It is possible to choose network unit disc as well. The path is the same as the ***Supervis*** installation path by default.

Constant file name: This choice assigns a fixed name (that is: **dati.dat)** to the ASCII file in which statistical data will be linked together.

Variable file name: This choice assigns a variable name to the ASCII file in which statistical data will be linked together. Such name is made-up by the year plus month plus current day, in YYYYMMDD format.

4.2 Addition and configuration of measure parameters

The system allows to manage both analog type measure parameters as well as digital type parameters.

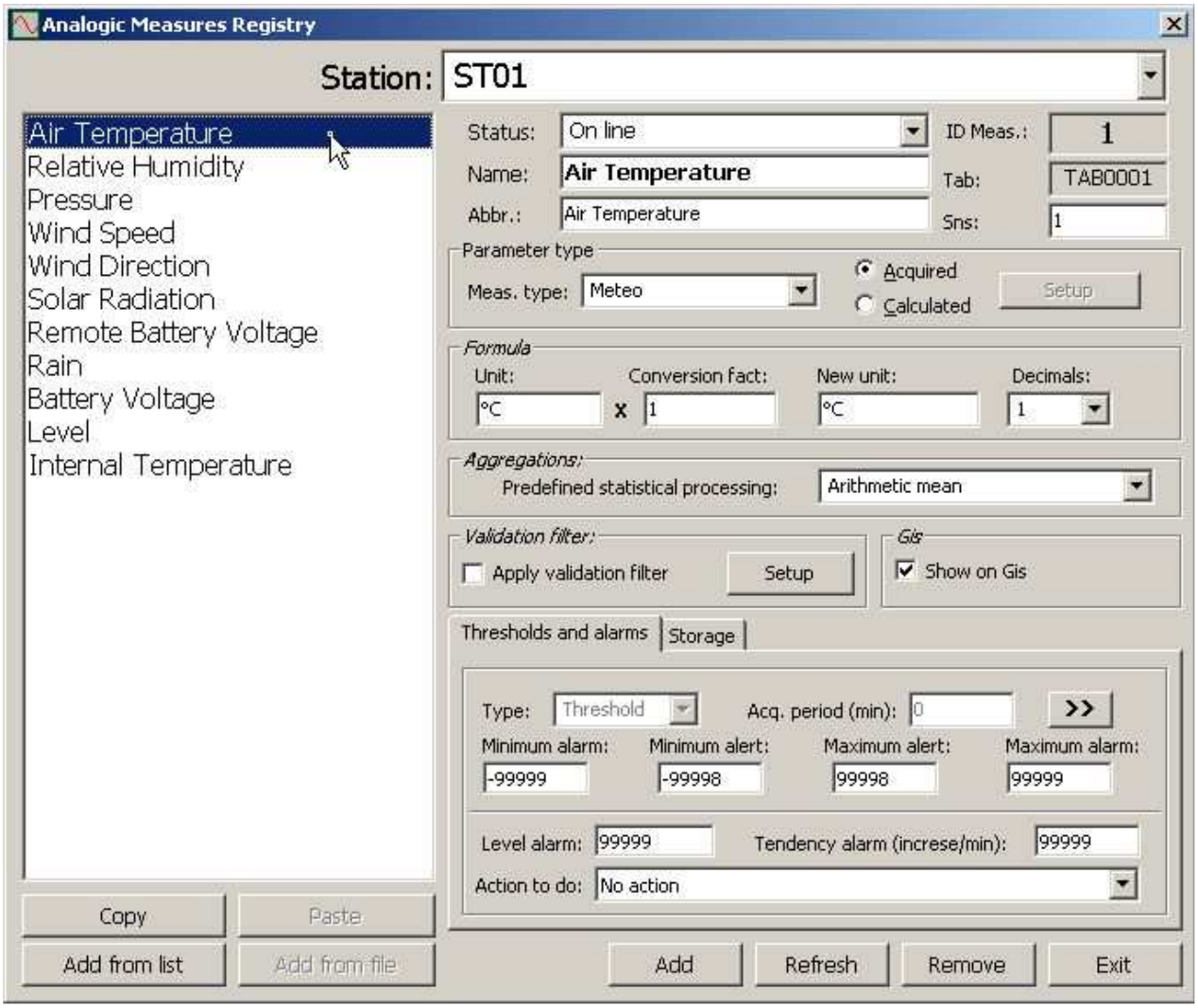
4.2.1 Analog parameters

To set-up and/or modify the registry of analog type measure parameters proceed as follows:

1. Choose from the menu: **Archive** | **Analog measures** or press

.

   This operation will bring up a dialog window where several cell boxes appear. These cell boxes allow for the set-up or the alteration of properties which make up the analog measure parameters registry.
2. Alter accordingly the properties that make up the analog and digital measure parameters' registry referring to their description.
3. Press the **Add** push button to add a new measure. **Add from List** to add a new measure with all items preconfigured, **Update** to save the changes, **Delete** to delete the measure chosen or press **Cancel** to cancel the transaction.
4. It is possible to copy the measures relative to one station to another station that has no measures yet configured by using the keys: **Copy** and **Paste**.



Measure ID: Every measure parameter is identified by a number called **ID** that unequivocally encodes the data inside the instant data record layout (v. **s11** Dynamic record layout description). The selector allows to choose an ID corresponding to the parameter one wishes to set.

For example if the remote station transmits an instant temperature data with ID equal to 5, the selector must be set on 5 so that the properties relative to it may be configured.

Sns ID: A property that represents the sensor Id.

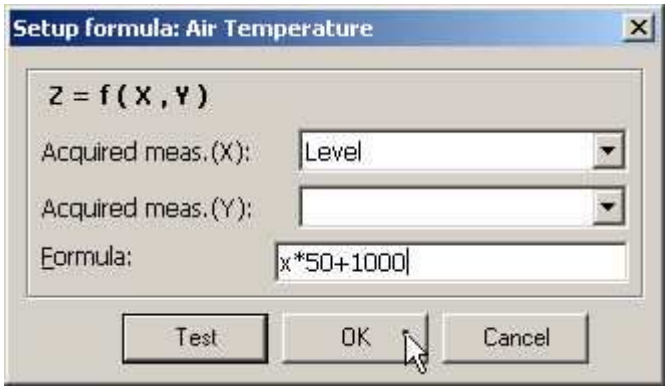
Name: The name of the parameter represented that will be visualized by all system applications.

Abbreviation: Parameter name abbreviated.

Measure type: Type of measure to which it is associated. The measure type can be selected from a descending cell box.

It is also possible to specify if dealing with an acquired or calculated parameter, that is a virtual parameter who's value depends on one or two acquired parameters.

If the *'calculated'* option is active, the key that calls up the dialog window to set the parameters and formula is enabled.



The value of calculated parameter (Z) is a function of one or two (X & Y) parameters. The formula is a string of alpha-numeric characters that **include the X and/or the Y parameter.** The formula will accept parenthesis/brackets and mathematical functions most commonly used.

Unit measure: Is the parameters' engineering unit or unit measure.

Unit measure N. : Is the name of the new engineeric unit or unit measure of the represented parameter which will be visualized if the conversion factor is different from/ other than 1.

Conversion Factor: The value of the relation between the represented measure expressed with the new unit and the measure expressed with the original unit.

Aggregations: This square contains information on the measure aggregation type used in statistical processing.

It is possible to choose from:

1. *Accumulated (f.e. precipitation)*
2. *Mean (f.e. temperature, humidity, pressure …)*
3. *Trigonometric mean (f.e. wind direction)*

Visualize on GIS: This property must be activated in order to see visualized the MeteoGIS measure.

Status: Is the measures' current status. The value can be:

1. *On line (parameter in acquisition)*
2. *Off line (parameter not acquired for generic reasons)*
3. *Under maintenance (parameter not acquired being that the relative measuring instrument is under maintenance)*

Alarm thresholds: Are formed by a series of properties that set the thresholds for:

1. *Minimum alarm*
2. *Maximum alarm*
3. *Minimum alert*
4. *Maximum alert*
5. *Level alarm*
6. *Alarm trend*

These thresholds are used by the centre monitoring software applications to generate and memorize potential alarms. With the key it is possible to add more thresholds for the purpose of process automation.

Level alarm: Is the alarm threshold relative to the measure. If the value exceeds such a threshold the centre generates and memorizes an alarm.

Alarm trend: Is the alarm threshold relative to the trend: is expressed as increase per minute. If the increase between the last two acquisitions exceeds such a threshold the centre generates and memorizes an alarm.

Action to be taken: Is the action the centre will have to take in case the level or trend alarm thresholds have been surpassed. The possible values can be personalized for any type of installation, for example sending an SMS message, interrogation frequency increase. This option is currently not active.

Validation filter: This square contains information relative to the validation filter which the **Valida** applicative uses to analyse imported data. A push button allows to set each item.

Climatic area maintenance

Climatic area maintenance arises from the need to be able to verify the 24 hour mean data based on space consistency.

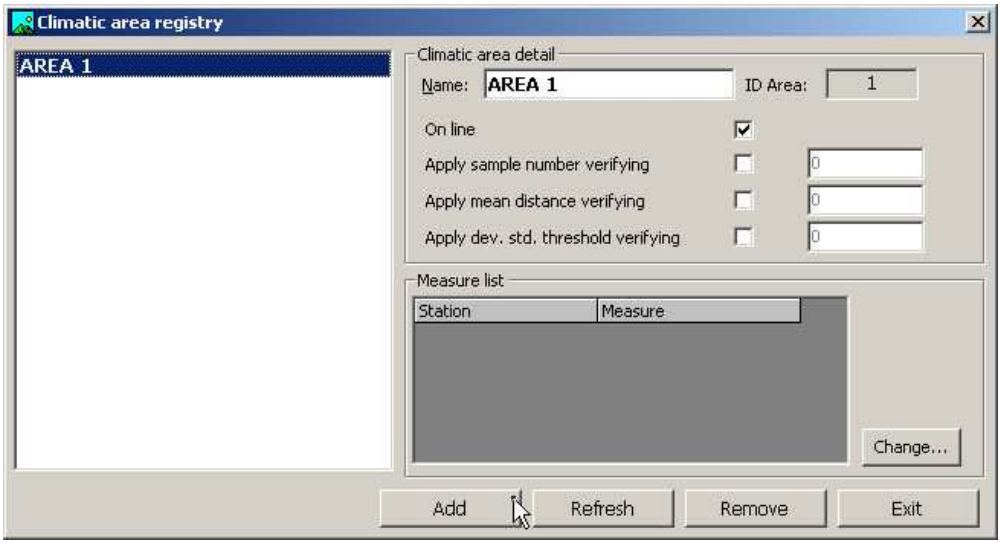
An area includes one ore more measures of one ore more stations that have some common characteristics.

All of the information relative to the area is used by the **Valida** applicative to analyse the imported data.

To set up and/or modify the climatic areas:

1. Choose from the menu: **Archive** | **Validity rules** | **Climatic area rules**.
2. This operation brings up a dialog window where several cell boxes appear. These cell boxes allow for the set-up or the alteration of properties which make up the area registry.
3. Alter accordingly the properties that make up the area registry.

4. Press the **Add** push button to add a new area, press **Change...** to add and/or remove measures relative to the area, **Update** to save the changes, **Delete** to eliminate the area chosen or press **Cancel** to cancel the transaction.



Area ID: Every area is identified by a number called **ID** that unequivocally encodes the data inside the table.

Nome: Area name. Can be made up of any character to a maximum of **25**.

On line: If selected, Indicates that the area is active.

Apply sample number verify: If selected, indicates that the data is valid if the sample number is greater than the value set.

Apply mean distance verifying: If selected, indicates that the data is valid if the data mean within 24 hours compared to the area mean is less than the value set.

Apply dev. std. threshold verity: If chosen, indicates that the data is valid if the data deviation standard is less than the value set.

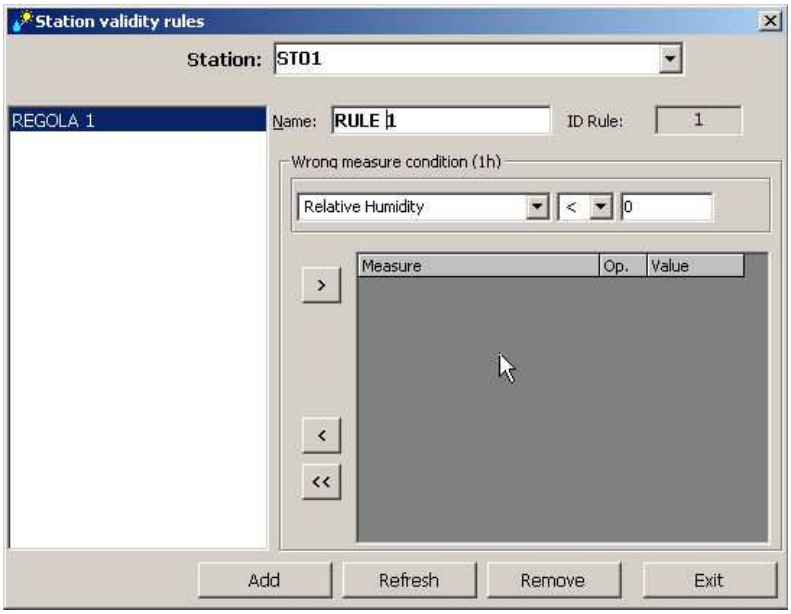
Station validity rules maintenance

The rules all together are a combination of conditions that, if verified, invalidate the data.

All of the information relative to the rule is utilized by the **Valida** applicative to analyse the imported data.

To set up and/or modify the climatic areas:

5. Choose from the menu: **Archive** | **Validity Rules** | **Station Rules**.
6. This operation brings up a dialog window where several cell boxes appear. These cell boxes allow for the set-up and/or the alteration of properties which make up the rule.
7. Alter the properties accordingly.
8. Press the **Add** push button to add a new rule, **Update** to save the changes, **Delete** to eliminate the rule chosen or press **Cancel** to cancel the transaction



Rule ID: Every rule is identified by a number called **ID** that unequivocally encodes the data inside the table.

Nome: Rule name. Can be made up of any character to a maximum of **25**.

Press the key > to add a new condition

Press the key < to remove a condition chosen

Press the key << to remove all conditions

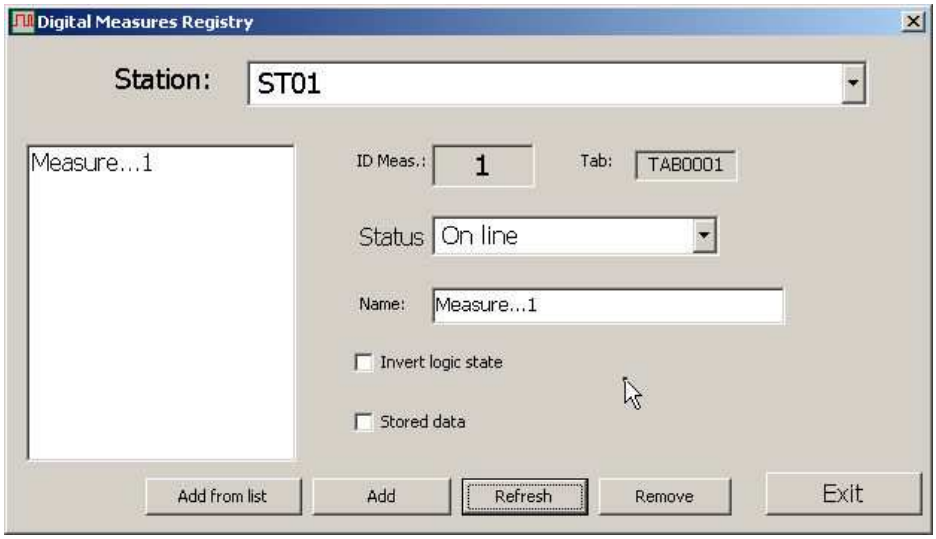
Choose the condition and use the descending cell boxes and text cell boxes to alter the parameters relative to the condition.

4.2.2 Digital (on/off) parameters

To set-up and/or modify the registry of digital type measure parameters proceed as follows:

1. Choose from the menu: **Archive** | **Digital measures** or press Misure dig. .

   This operation will bring up a dialog window where several cell boxes appear. These cell boxes allow for the set-up and/or the alteration of properties which make up the digital measure parameters registry.
2. Alter accordingly the properties that make up the analog and digital measure parameters' registry referring to their description.
3. Press the **Add** push button to add a new measure. **Add from List** to add a new measure with all items preconfigured, **Update** to save the changes, **Delete** to delete the measure chosen or press **Cancel** to cancel the transaction.



Measure ID: Every measure parameter is identified by a number called **ID** that unequivocally encodes the data inside the instant data record layout (v. **s11** Dynamic record layout description). The selector allows to choose an ID corresponding to the parameter one wishes to set.

For example if the remote station transmits an instant temperature data with ID equal to 5, the selector must be set on 5 so that the properties relative to it may be configured.

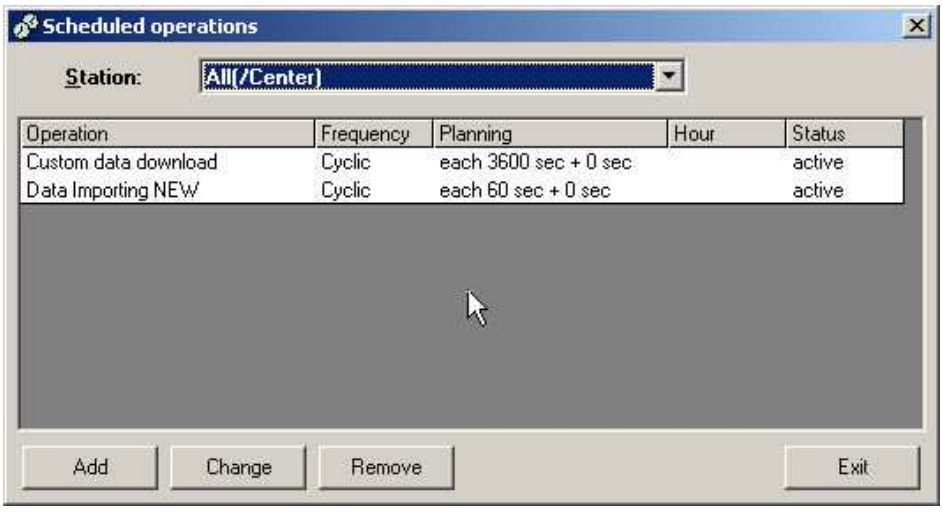
Name: Parameter name. Can be made up of any character to a maximum of **25**.

Invert logic state: If selected, indicates that the data will be memorized with an inverted value.

Memorized data: If selected, indicates that the data will be memorized in the measure database.

4.3 Programmed operations management

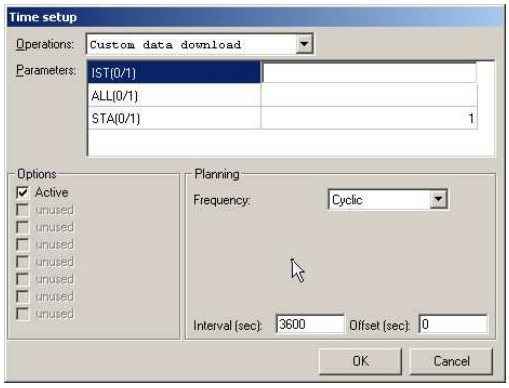
In addition to the information relative to the stations' registry, **GestConf** allows to manage the programming of the monitoring stations' data downloading operations.



To set up and/or alter the programming of the data downloading clock/timer proceed as follows:

1. Choose from the menu: **Archive** | **Time scheduling** or press

2. This transaction brings up a dialog window that shows a list of operations already memorized for each station.
3. Choose the station (choose **All** if the operation applies to all stations simultaneously). *Some operations such as compacting for example is valid only if the **All** option has been selected.*
4. Press **Delete** to eliminate an operation from the list; press **Exit** to exit.
5. Press the **Add** push button to add another operation to the list, **Change** to change the values; a second dialog window appears



6. Choose the type of operation (“Data download” for example) with the Operations’ selector.
7. Set eventual parameters if the operation requests it
8. Set the time and frequency
9. Press **OK** to save the changes or **Cancel** to cancel and return to the previous window.

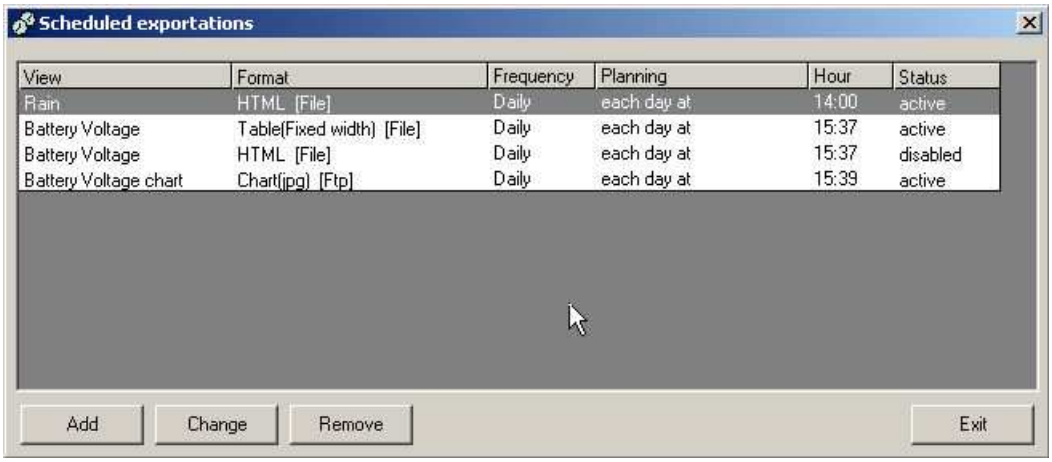
The schedulable operations are:

Description	Description
Data download	Instant data download (current), alarms, statistical (files)
Instant data download	Instant data download (current)
Data download 3820/3840 group	Data download for a group of stations
3820/3840 data recovery	Carries out the verification of the files data downloading operation & activates the recovery of missing data.
Re-index & compact database	Compacts the indicated database
Data Importing	Verifies the presence of files in the specified folder & activates the import by means of DDE.
Daily data Validation	Starts Valida95
Macro implementation	Carries out the script file
NEW data importing	Reading of file in the specified folder*
E-Mail reading	E-Mail reading from the indicated server

* Differently from the others this operation is carried out by Importa rather than by Supervis.

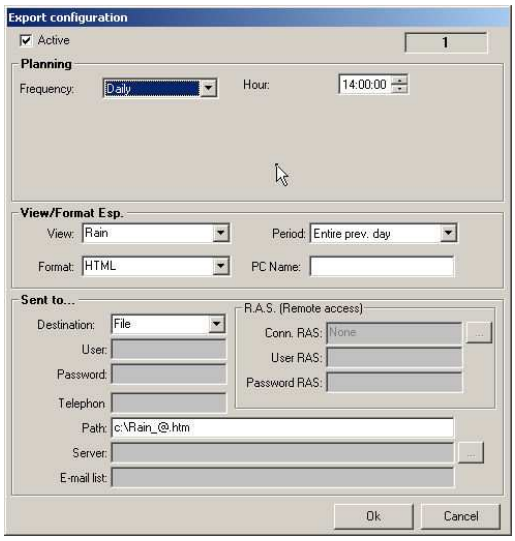
4.4 Programmed exports management

In addition to the information relative to the stations' registry, **GestConf** allows to manage the programming of the export views.



To set up and/or alter the programming of the data downloading clock/timer proceed as follows:

1. Choose from the menu: **Archive** | **Time scheduling** | **Programmed exports**
2. This transaction brings up a dialog window that shows a list of operations already memorized for each station.
3. Press **Delete** to eliminate an operation from the list; press **Exit** to exit.
4. Press the **Add** push button to add another operation to the list, **Change** to change the values; a second dialog window appears



5 Choose the export implementation status (able/disable).

6. Set the time and frequency

7. Choose the view (The view must be created with DataView).
8. Choose the view observation period.
9. Choose the export format (table in text format or HTML, graphic in bmp format or jpg …).
10. Choose the destination (file, ftp printer, fax, e-mail).
11. Set the parameters relative to the export type.
12. For export via ftp or e-mail its possible to create/utilize a (RAS) remote access system connection. In this case it is necessary to have the RAS service installed in the machine.
13. Press **OK** to save the changes or **Cancel** to cancel and return to the previous window.

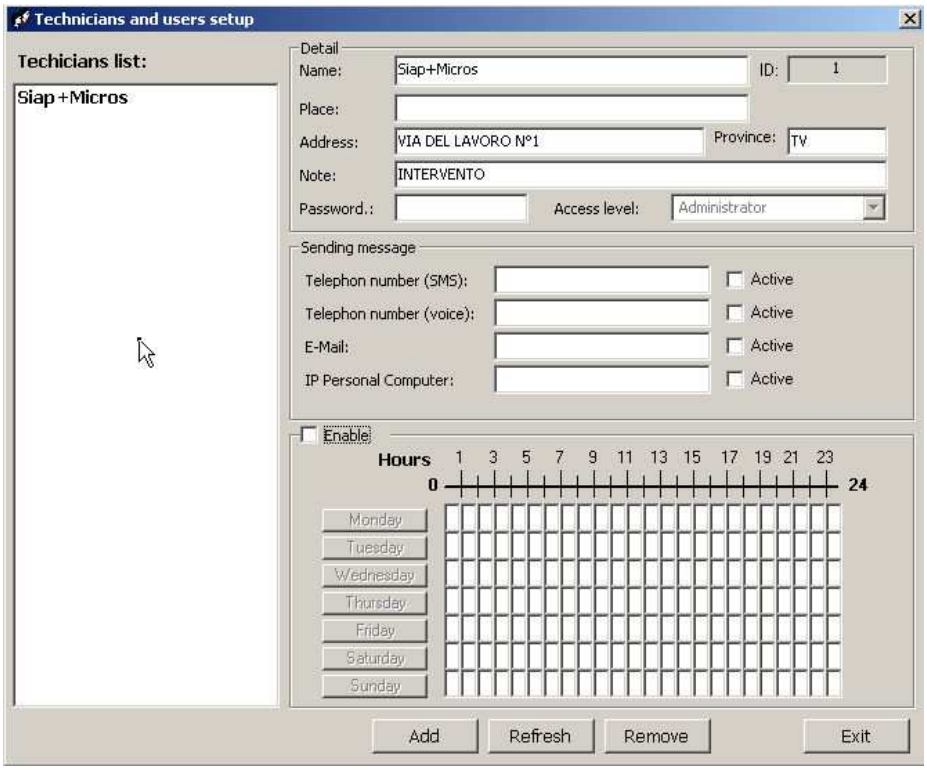
4.5 Index management

In addition to the information relative to the stations' registry, **GestConf** allows to manage an index of users interested in receiving notice of alarms sent by Supervis under message format.

To set up and/or alter the programming of the data downloading clock/timer proceed as follows:

1. Choose from menu: **Archive** | **Setup locatability** | **Telephone book** or press

   This operation will bring up a dialog window where several cell boxes appear. These cell boxes allow for the set-up and/or the alteration of properties which make up users' registry.
2. Press the **Add** push button to add another user, **Update** to save the changes, **Delete** to eliminate the user chosen or press **Exit** to cancel the operation.



ID: The users' unequivocal identification.

Nominative: User name.

Location, Address, Municipality: An optional entry that indicates location, municipality and province of the user.

Notes: An optional entry relative to the user.

Password: User password.

Access Level: A property that indicates the user access level. A selector allows to choose from:

- User
- Worker
- Administrator

Only the administrator has the power to modify data and manage the tele-programming.

Telephone number: Phone number to which the message is sent.

Enable: If selected, indicates that the user is able to receive messages; in this case the highlighted grid cells indicate the user time availability.

To highlight a cell double click on it.

To highlight an entire day press the key beside the grid.

5 Remote programming

By remote programming is intended the possibility to carry out programming operations on the peripheral stations' data-logger using the Centre PC.

With this function it's possible to intervene on the software implemented in the stations' data-logger by changing its behaviour. In detail it's possible to visualize and change the parameters that regulate the acquisition and elaboration of data and/or control eventual particularly elaborate cycles.

GestConf memorizes, in the configuration database, all of the changes made to the remote station acquisition parameters, operated through remote programming. In the case of substitution of a remote stations' data-logger, this allows to recover the acquisition with the last configuration set.

Teleprogramming gives the user a number of management possibilities which are nevertheless conditioned by the remote stations' software.

1.1. Clock adjustment

This programming function allows to modify the remote stations' data-logger clock/timer and synchronize it with the current or legal time.

It is possible to synchronize the remote stations' clock with the calculator clock or any desired setting.

To change a remote stations' clock/timer, proceed as follows:

1. Select from the menu: **Programming** | **Clock synchronize**

   This transaction brings up a dialog window whereby it is possible to set the clock (time and date) and program it in the remote station.
2. Select the desired station with the relative selector.
3. Press **Enter** to send the clock time set to the remote station, or press **Cancel** to abort the operation.

NOTE. FOR SYSTEMS WHERE THE STATIONS SEND DATA TO THE CENTRE VIA SMS IT'S POSSIBLE TO PROGRAM ALL STATIONS SIMULTANEOUSLY WITH THE NEW SETTING

The dialog window contains two overlapping pages selectable with a click of the mouse on each respective tab. The two pages contain respectively the properties relative to the clock setting and setting of the date.

Synchronize with system clock:	This property must be activated in order to program the remote stations' clock same as the PC clock (teleprogramming), or do not activate if setting the clock manually is preferred. Once the property is activated it is no longer possible to set the clock manually. This property is active by default.
Hours:	Current hour of the PC clock. The scroll bar allows to change it from 0 to 23.
Minutes:	Current minutes of the PC clock. The scroll bar allows to change them from 1 to 59.
Seconds:	Current seconds of the PC clock. The scroll bar allows to change them from 1 to 59.
Day:	Current day of the PC clock. The scroll bar allows to change it from 1 to 31.
Month:	Current month of the PC clock. The scroll bar allows to change it from 1 to 12.
Year:	Current year of the PC clock. The scroll bar allows to change it from 00 to 99.

The changes made to the clock, can be seen in this display window.

1.2. Modifying one or more parameters

This programming function allows to change the parameters that regulate the acquisition and elaboration of data and/or control eventual particularly elaborate cycles.

To change one or more parameters of a remote station, proceed as follows:

1. Select from the menu: **Program** | **Parameters**

   This operation will bring up a dialog window whereby it is possible to read and/or set the value of one or more properties of the parameter selected.
2. Select the desired station with the relative selector.
3. Select the type of measure: the measures' list is filled with all possible programming parameters.
4. Select the parameter: the data grid is filled with all possible programming properties relative to the selected parameter.
5. Select in the read column in correspondence to the desired property if wishing to read its value, or modify the property value (in the write column, the check enables itself automatically to the variation of the data). It is possible to write and read more properties at the same time.
6. Press the **Enter** push button to send the read or write request of the parameters' properties to the remote station, or press **Cancel** to abort the operation.

   If **Enter** is selected, a dialog window signals the programming progress status: if the station does not respond to the programming commands after a certain amount of time, the user can choose to try again or cancel the operation and erase the pending requests.

5.1.1 Message status display of remote programmed parameters

The user can, at any time view the programming message status.

To carry out this operation: proceed as follows:

1. Select from the menu: **Program** | **Programming message status**

This operation brings up a dialog window whereby it is possible to read and/or set the value of one or more properties of the parameter selected.

2. Select the desired station with the relative selector.
3. Press **Pendents erase** to remove eventual pending messages or press **Cancel** to exit.

1.3. Data send cadence modification

In the systems where the **Supervis** supervision system is not present (for the unloading of data programmed by the stations) and every single station sends its data to the centre, the programming takes place by means of SMS sending with the possibility to set one or more parameters at once in one or more stations.

To change the data send cadence, proceed as follows:

1. Select from the menu: **Program** | **Cadence**
2. This operation brings up a dialog window whereby it is possible to set the data send cadence under *normal* conditions*, alert* conditions or *alarm* conditions, programming it in the remote stations.
3. Select the station or group of stations with the relative selectors (Type, Sub-type, Basin…).
4. Set the cadence under normal, alert and alarm conditions expressed in minutes.
5. Press the **Apply** push button to update the display, **Save** to memorize the current display, **Send** to send the new settings to the remote station and memorize the current display, or press **Cancel** to abort the operation.

1.4. Changing threshold alarm

In the systems where the **Supervis** supervision system is not present (for the unloading of data programmed by the stations) and every single station sends its data to the centre, the programming takes place by means of SMS sending with the possibility to set one or more parameters at once in one or more stations.

To change the alert and alarm thresholds, proceed as follows:

1. Select from the menu: **Program** | **Alert and Alarm threshold**
2. This operation brings up a dialog window whereby it is possible to set the alert and alarm thresholds, programming them in the remote stations.
3. Select the station with the relative selector or all stations.
4. Select the measure with the relative selector or all measures.
5. Set the thresholds for minimum alarm, minimum alert, maximum alert, maximum alarm.
6. Press the **Apply** push button to update the display, **Save** to memorize the current display, **Send** to send the new settings to the remote station and save the current display, or press **Cancel** to abort the operation.

6 Maintenance

The Meteonet system, during its' function cycle produces a series of log and backup files.

These files are not erased by the system as they are documentation of, and can be used to verify the correct functioning of the system in case of malfunction.

Here below the ordinary system maintenance operations to follow, on a yearly basis for small networks or more frequently in the case of complex networks.

- Close all Meteonet applications
- In the folder <INSTALLDIR>\SiapMicros\Supervis\Temp\Storici are contained all of the daily files relative to the download of each station: move the files contained in this folder to a backup unit.
- In the folder <INSTALLDIR>\SiapMicros\Supervis\Backup\Log are contained all of the daily files relative to the operations carried out by the system: move the files contained in this folder to a backup unit.
- In the folder <INSTALLDIR>\SiapMicros\Importa\Ascii\Importa are contained all of the monthly files relative to the download of all stations: move the files contained in this folder to a backup unit.
- In the folder <INSTALLDIR>\SiapMicros\Importa\log are contained all of the daily files relative to the setup operations carried out by the system: move the files contained in this folder to a backup unit.

In systems that use the Microsoft Access database it is necessary to keep in mind that the database can reach a maximum dimension of 1GB.

It is necessary to run a periodic compacting of the data database using the tools provided by Meteonet or by Microsoft Access.

If the data database remains fairly big (in dimension) even after the compacting procedure is complete it is necessary to create annual databases.

In systems that use SQL-Server database it is recommended inserting in the Sql-Server programming a periodic backup for the database. For a detailed explanation of the procedure refer to the Microsoft SQL-Server manual. During this phase it is not necessary to close the Meteonet applications.

If wanting to archive the database files (transaction log and data) as well, it is necessary to close all of the Meteonet applications and close the SQL-Server service.