Vistachrom 1.4.9

Changes and functionalities

Chromatotec®

Contents

- Vistachrom updates

  What are the changes between 1.4.7 and 1.4.9 ?

- The RealTime DataBase

  How does it work ? What is the interest ?

- The Equipment Manager

  What is it ? What is it used for ?

- Vistachrom possibilities to meet your requirements

1. Vistachrom updates

(1.4.7 → 1.4.9)

What is Vistachrom ?

- A software suite, but also the main application program of that suite
  - Main application

    Vistachrom
  - Linked modules

    EquipmentManager, MathModule, MJBus driver, MGS1 driver
  - Standalone applications

    MethodManager, PeakViewer, ServiceGC, UnitManager

What is Vistachrom role ?

- Monitoring one or more analyzers
  - Each analyzer is in real time controlled with a CPU board.

    Detector signal processing, heating and valves monitoring, …
  - Vistachrom communicates with those boards: monitors them, sends and retrieves data.
  - Vistachrom is in charge of analysis configuration and data post-processing.

    Configuration updating, error checking, data saving, output configuration, …

What is new with the 1.4.9 version ?

- Internal data management is now centrally-managed : the RealTime DataBase has been created
  - Only one data repository with an user-friendly interface (*UserInterface no longer exists*)
  - Modular design : each application program of the suite is independent

- AnalogOuput and DigitalOutput drivers are removed. There are replaced with a more generalist driver offering more opportunities : the EquipmentManager.

- Vistachrom is no longer limited to Windows XP

2. The RealTime DataBase

(RTDB - 

)

Data in the software suite 1/2

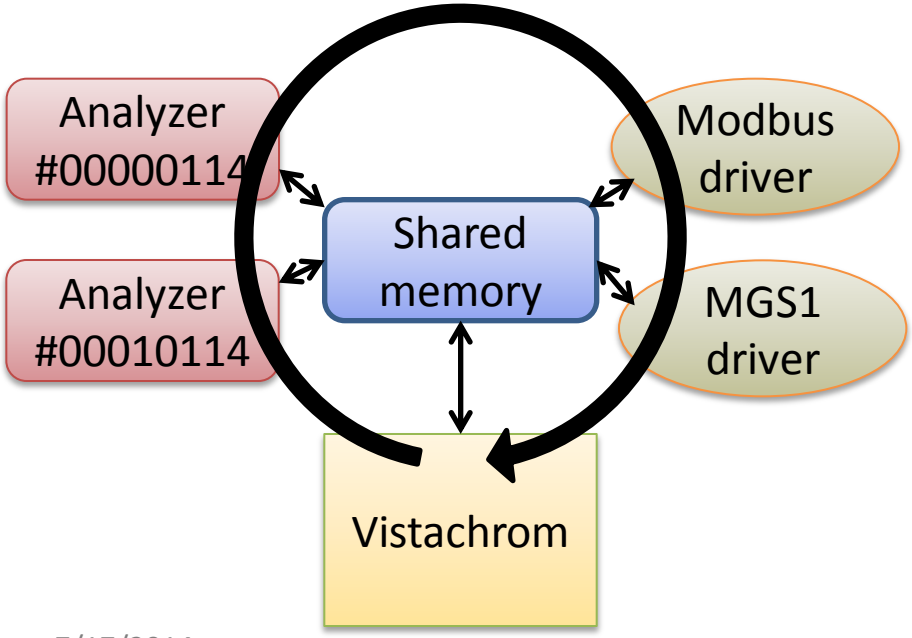
- The real time control of an analyzer is done by the CPU board, the Vistachrom software suite does the supervision.
  - The RealTime DataBase contains analyzer status, detected errors, analysis results
  - No raw acquisition data in it but it can be added. And more widely, all data processed in an application of the suite can be added.

- Data arrangement
  - Before data were “mixed” between applications (1.4.7)
  - Now data are in one reference table : the RealTime DataBase

Data in the software suite 2/2

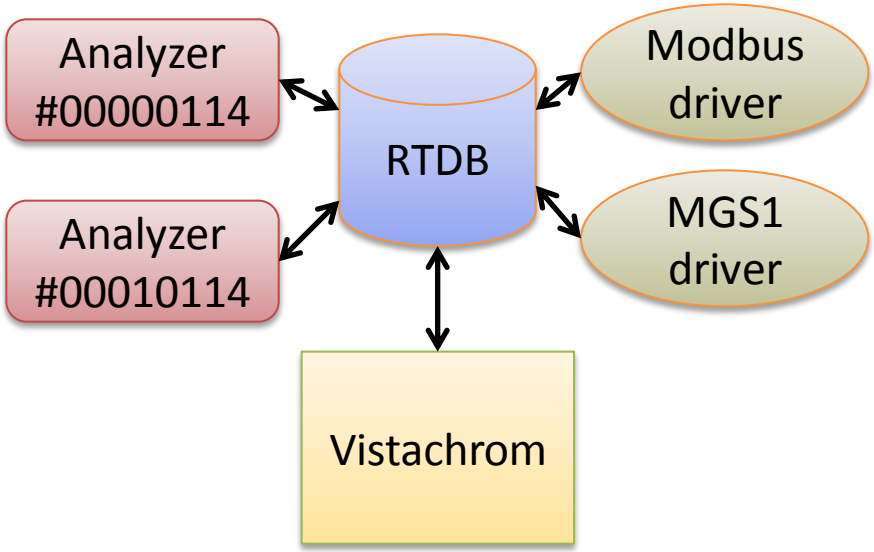
1.4.7

- Using a shared memory space, applications are interconnected and warn when data is updated.



1.4.9

- An application, the RTDB, centralizes all data. All applications connect to it, subscribe to the data of interest. They are therefore notified by RTDB for these data.



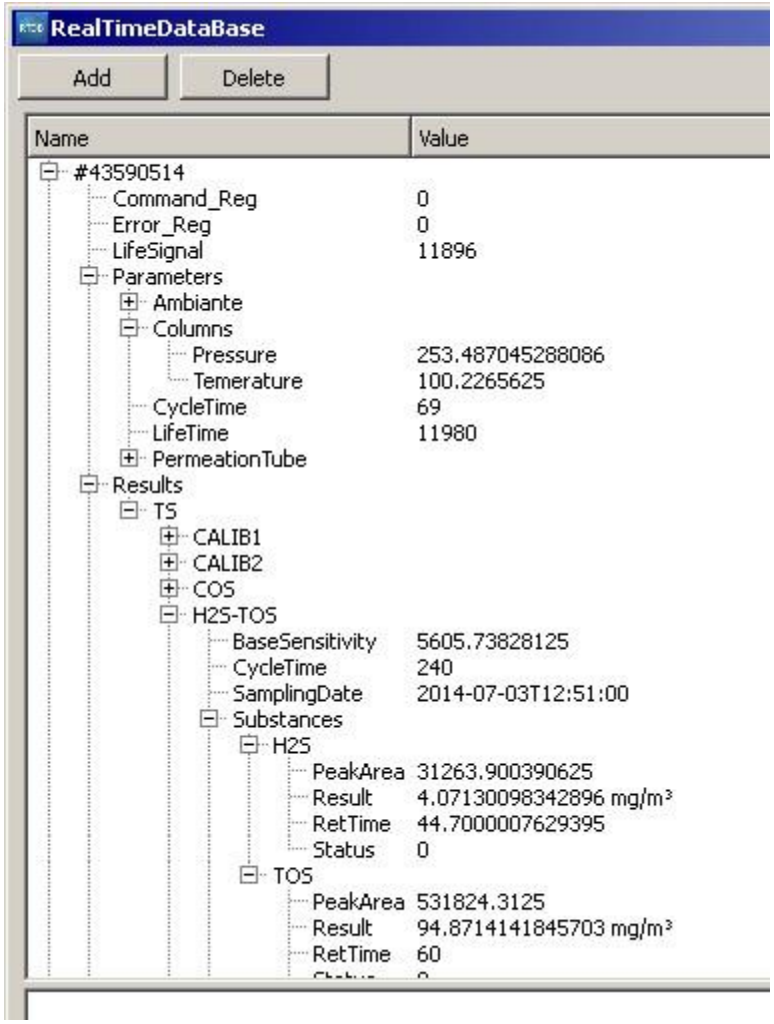
RealTime DataBase specifications

- Each application of the suite connected will subscribe to data interesting it and also update others : it is independent and only works with the RealTime DataBase.
  - Adding a new application to the software suite will be easier
  - Updating applications suite will be less impacting

- The application is launched at Vistachrom startup and it works up to that Vistachrom stops.

- An interface allows you to see all data it contains and the values updating in real time.

The RealTime DataBase



- All data of the software suite needing to be exchanged between applications is in this data base.
- Data saved and displayed in a tree structure.
- Displays the added data and updated values in real time.

3. The Equipment Manager

(EM - )

What is EquipmentManager role ?

- Application to communicate with external instruments using the Modbus communication protocol
  - Modbus, Master node (*MJBus driver is a slave node*)
  - RTU, ASCII and TCP compliant

- Replaces AnalogOutput and DigitalOutput drivers because it can control our output modules.

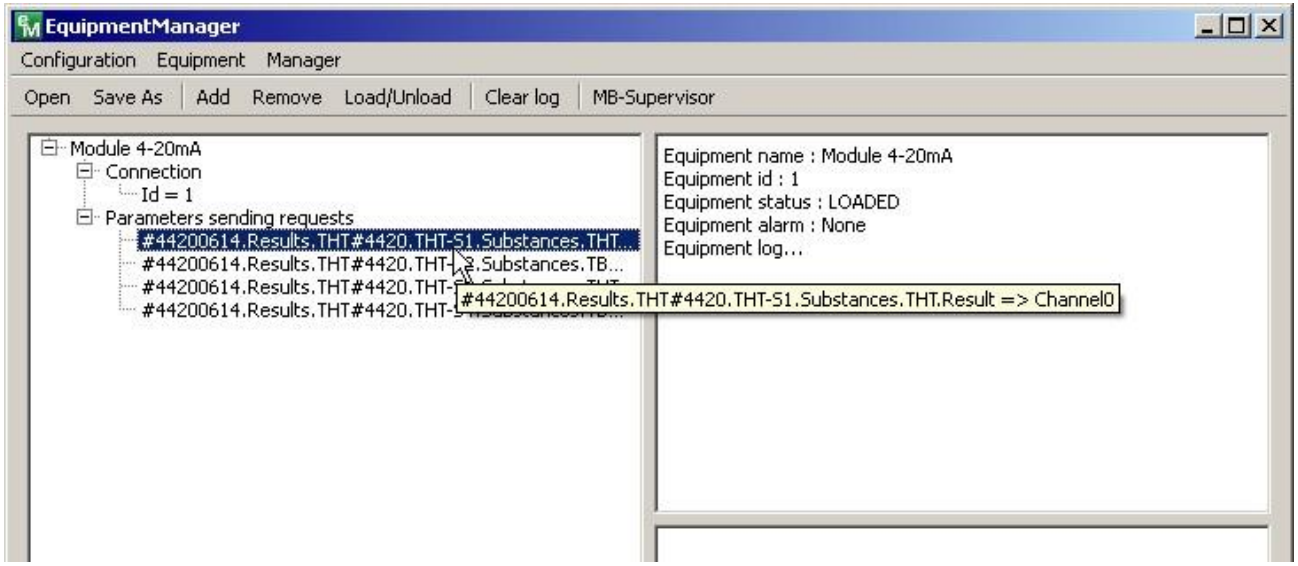
- More widely, it allows to communicate with a lot of industrial devices. And so, it is useful to bring back information and data in the RealTime DataBase.
  - For example, it can communicate with the H2 generator and bring back its pressure in the RTDB

EquipmentManager specifications

- Application configuration “open”
  - First level for customers, distributors, after-sales service, …
  - Second level for more opportunities but dedicated to the software department

- Two interfaces but little useful for a daily use
  - The first to check communication log and control the links “RTDB data ↔ instrument output”
  - The second to force output or send Modbus requests is dedicated to the maintenance

The EquipmentManager



- Currently used for the 4-20mA and relay outputs
- An example of improved outputs, the 0-4/20mA : thanks to the manager configuration and to the post-processing possibilities of Vistachrom

4. Vistachrom possibilities to meet your requirements

Data outputs proposed

- The device containing Vistachrom can output its data within :
  - 4-20 mA output
  - Relay output
  - Modbus/JBus output (only serial port, RTU-ASCII)
  - MGS1 output (serial port)

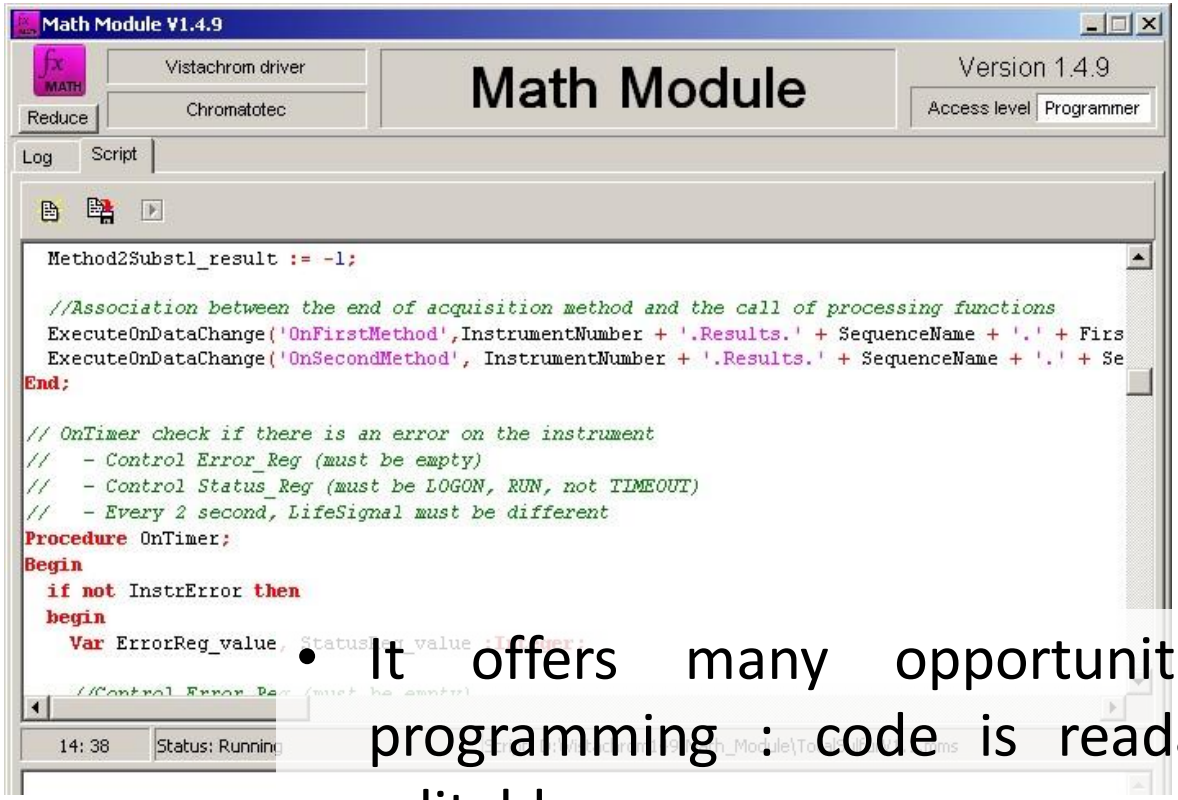
- For particular cases, there is the possibility of adding physical gateways and therefore increase the number of proposed choices :
  - Profibus
  - Modbus output for Ethernet (TCP) : *under study*

Data post processing possibilities

- The MathModule allows to retrieve data from the RealTime DataBase, to process them and also to add new ones.

- The MathModule is an opened access to data which offers post processing possibilities on-demand.
  - 0-4/20mA : *Set 0 mA to the output if an error occurred during the analysis*
  - TotalSulfur : *Control analysis and sum defined substances to obtain the total sulfur concentration*
  - Alarm&Stats : *Alarm positioning and statistics calculations*

The MathModule



- It offers many opportunities, but it needs programming : code is readable, but not easily editable.
- The software department is in charge of feasibility studies and implementation.

Conclusion

- New Vistachrom version
  - Modularity and better data management thanks to RealTime DataBase
  - Ease of integration for external devices thanks to EquipmentManager
- Vistachrom offers many opportunities to meet the needs
- But software department is often essential to achieve it

Thank you for your attention !