



SIG - Geneva Industrial Services



The French-Swiss cooperation

Energy, Electricity, gas, district heating, environment, telecommunications, drinkable water, waste and wastewater treatment... SIG handles utility services distribution for Geneva canton residents and companies. It ensures public utility services while meeting the sustainable development challenge and is dedicated to a better living. Among all its missions, SIG is pumping the required water out from Lake Leman and the water table, treating it to make it drinkable and distributing it to all Geneva's population. For that purpose, about a hundred of drinkable water or wastewater treatment stations are managed over the canton region. For many years, SIG engineers have worked together with ELUTIONS R&D teams in order to adapt the system to the needs for supervision of each site.

“ We are familiar with Wizcon and ControlMaestro, notably through the many discussions we had with the ELUTIONS teams that are regularly visiting the site. Bugs can't be avoided, but they are solved. ELUTIONS hotline service was really helpful, with both speed and quality. ”

Christophe Perriard, Engineer - SIG project manager



The Presentation

A long story

In 1997, the SIG water service integrated Wizcon Supervisor for the first time to insure local supervision of the Arquebuse station, one of the majors pumping station in the canton. In 2001, the Prieuré station (the canton's biggest treatment and pumping plant, located on the shore of Lake Leman) is in turn equipped with Wizcon.

Meanwhile, Wizcon is chosen to supervise the WSNET (CERN's drinkable water) and the cooling system of the SPS and the LHC (the CERN's particles colliders – cf. CERN reference sheet). Similarly, Wizcon allows updates and modifications within the Vessy's water table recharging station.

It was therefore quite naturally that SIG engineer chose to sustain their initial investment upgrading each of their applications to the latest ControlMaestro version.

In 2009/2010, as a proof of the Supervision system sustainability and its ability to evolve, 5 applications running under NT and 2000 since 1998 were perfectly updated to the latest version. Furthermore, these updates were not followed by any training period for the users as the backward compatibility is guaranteed by ELUTIONS. SIG now can serenely consider their further projects regarding Supervision.

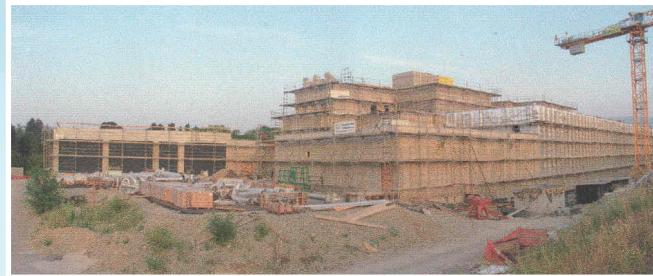
The Situation

ControlMaestro, serving an extensive network

Each year, about 50 millions m³ of drinkable water are distributed over the canton region. The Tuilleries water filtering and pumping station not only serves Geneva but also the European Nuclear Research Center (CERN).

All equipment on each site: pumps, valves, sand or activated carbon filters, ozonation... are supervised and run by ControlMaestro through PLCs which also allow making building access controls on buildings.

The extensive network of collectors and pumping stations designed to carry wastewater to the canton's treatment plants must also be monitored continuously in order to ensure the highest water quality to users, while ensuring flexibility and responsiveness for the shift teams.



Tuilleries station under construction

The Specific features

Applications development

Thanks to the close cooperation between SIG and ELUTIONS, the engineers managed to completely achieve their internal supervision project: imaging, programming, development and animation.

SIGMA Driver

As the former automatic devices of some sites were designed and conceived by SIG engineers, they were not easily compatible with other systems, each using a specific communication language.

The cooperation between SIG and ELUTIONS also resulted in the development of the only compatible driver, the SIGMA communication driver, and in its perfect adaptation to the requested configuration. This ten years old driver is still operational on sites and did not require any modification during the applications update from Wizcon Supervisor to ControlMaestro.

Advantages:

Solution benefits

- Advanced alarm management
- Production control and relative data management
- High modularity and scalability

ControlMaestro benefits

- Easy deployment
- Safe : redundant network
- Quick response to specific needs

Return on investment

- Time saving : quick integration
- Efficiency: optimized targeted data communication
- Maintenance costs reduction

Technical specifications:

Software package

- ControlMaestro, the complete Internet solution for control and information

Architecture

- 2 redundant ControlMaestro stations (Master/Slave)
- Schneider Electric OPC driver

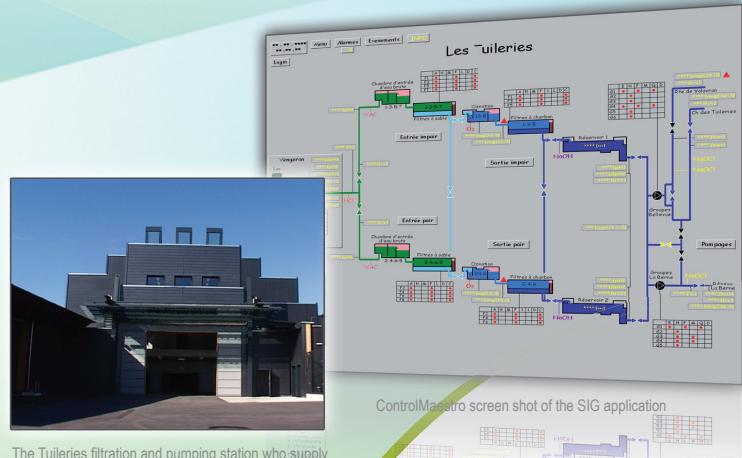
Equipment

- Networked Windows XP PCs
- 13 Modicon Premium networked PLCs
- 2 networked cards by machine (API and PC network)
- 11 pumps

The Benefits

Results

According to operators, this supervision tool is convenient and user friendly as it allows optimized intervention and maintenance conditions. As issues are precisely transmitted, targeted and identified, response time is shortened and work becomes easier.



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