STAND-ALONE MONITORING, AUTOMATION AND REMOTE CONTROL SYSTEM FOR MANAGING HYDRAULIC COMPONENTS

Consortium monitoring, automation and remote control system equipped with Open Source monitoring stations and WinNET6 management and display system with integrated alarm system

Supply: **2008-today** | Region: **Veneto**

CHALLENGE

Execution of a stand-alone monitoring, remote control and automation system able to automatically manage and monitor hydraulic components and to communicate with the control centre by radio vector.

WHY ETG?

The wealth of experience that ETG has acquired in the weather instrumentation sector and in real-time monitoring data acquisition, archiving, processing and circulation makes it a valuable collaborator.

INTRODUCTION

The monitoring, automation and remote control system in question consists of over 20 stations communicating by **UHF radio modem** with the **Control Centre** located in **Portogruaro**.

The monitoring stations communicate through the UHF radio network with a control centre on which the ETG platform - called WinNET6 - was installed

The system is equipped with a special alarm software package able to send **alarms agreed upon with the customer**, necessary for notifying malfunctions to the monitored system or significantly important situations, such as the passing of an alarm threshold linked, for example, to a hydrometric level, pipe pressure, etc.

The system has two pluviometric monitoring stations made in **Open Source** technology.

As already done by ARPAE-SIMC, ETG promotes and works constantly on projects tied to the building of Open Source systems and to defining **non-proprietary and free standards**.

SOLUTION

The system, made up of the elements described above, is able to monitor weather and hydrologic parameters and to control the system and its hydraulic and mechanical components remotely.

BENEFITS

The remote control system built by ETG has allowed the Consortium to enjoy many benefits.

In systems like manual ones, all the activities in the field were performed by Consortium technicians, who at any time of day or night manually carried out any activity, whether checking hydraulic and mechanical components or monitoring and alert components, when responding to reports or checking directly in the field. Activities like hydraulic regulation, reclamation and irrigation demand a very high number of operations. By using an automation and remote control system like the one introduced by ETG, these operations have exponentially reduced the costs due to movements and to prompt intervention in the field.

A system built this way was totally integrated in the platform designed by ETG, which goes by the trade name **WinNET6**.

This application guaranteed that the Consortium would have complete knowledge of the network's state, thus allowing it to totally monitor it also using graphic supports and a customised alarm service used by the personnel on call.

As previously mentioned, innovative Open Source stations made with Open Hardware and Software are also inserted in the network. This innovative approach disengages the customer from the supplier, giving the customer total freedom and at the same time a high performance level.

CONCLUSION

Every new monitoring, automation and remote control system engineered by ETG entails peculiarities that can be solved only by those - like our company - that have been working in the sector for years.

In the case of the system built for Consorzio di Bonifica del Veneto Orientale, the major challenge ETG had to face was to take such a complex system made up of such different elements and situations and integrate it in a software platform that would provide complete monitoring and totally manage its functions.

All of this is to get a system that would allow integrating Open Source technologies as well, taking and accompanying the Consortium into the future.

With the instruments and approaches used by ETG, the system has become easy to manage and provides the Consortium with an **easy to use** tool that at the same time is **in step with the times** and future-oriented, i.e. **Open Source**.