



HYDROLOGIC VIDEO MONITORING STATION FOR REGIONAL CIVIL DEFENCE PURPOSES

24/7 hydrologic and video monitoring station
for civil defence purposes

Supply: 2016 | Region: **Marches** | Sector: **Civil Defence**



CHALLENGE

Execution of a stand-alone monitoring station integrated in the Marche's civil defence regional network able to automatically manage hydrologic alert situations using PTZ cameras and hydrometric sensors.

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 station that this case history concerns, called **Ponte Garibaldi**, is inserted in the Marche's regional monitoring network. The network supplied, installed and configured by ETG for the Civil Defence of the Marche Region is made up of over 140 hydro-thermal-pluviometric and snow gauge stations. The network communicates through a primary SHF radio transmission vector made up of 17 repeaters and a secondary UHF network with 4 provincial backbones. The entire system is controlled by the regional control and supervision centre of the Ancona operations centre consisting of 8 hot reserve servers and an HDSL line data communication system, a system for remote maintenance and a system for alerting personnel on call by voice synthesis and data exchange with DPC in Rome. ETG currently performs its maintenance.

SOLUTION

The station in question, equipped with **PLS piezometric level sensor** and **datalogger produced by ETG** with the trade name iLogger continuously measures the hydrometric level and transmits it to the regional control centre. A **PTZ camera** properly configured to capture and transmit video data streaming from the periphery to the centre was also installed. The centre has a specific specialised image monitoring application we made so that periphery detail can be analysed only using video data.

BENEFITS

Having a hydrometric and video monitoring system provides dual security of the data measured in the field and of any threshold passing alarms received by the personnel on call.

Depending on the threshold data established by the customer, it is possible to position a set of colour lines easy for the observer to interpret on the level video streaming. They represent the current state of the hydrometric level (sky blue) compared to the pre-alarm (orange) and alarm (red) thresholds. Please refer to the images presented hereunder at any time for more information.

If the hydrometric level measured by the piezometric sensor activates an alarm at the centre, the operator on call can connect to the station and its camera and check the real state of the river section monitored in real time.

This will provide an immediate understanding of whether the alarm received is actually present and so its importance can be assessed.

CONCLUSION

The station in question is particularly interesting as it perfectly represents the ongoing updating and technological development in the field of environmental monitoring.

The last monitoring frontier is in fact represented by image monitoring and **motion detection**. ETG in collaboration with the Marche Region - both on the cutting edge in the sector - worked for years on the topic and has developed a multitude of both software and hardware solutions similar to the one made for the **Ponte Garibaldi** station.

