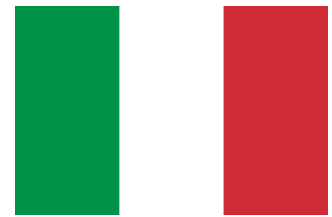




Adaptation, optimisation and maintenance service of the “open” network of the meteo-hydrographic telemetric network



The telemetric network of the Autonomous Region of Valle d'Aosta originated from the union of four existing networks, with provisions from an equal number of companies, at various times.

A call for tenders was launched to adapt the entire **meteo-hydrographic monitoring network** to the most modern data acquisition and transmission technologies, thus focused on providing the maintenance for the entire network, introducing **open and latest-generation technologies**.

Summary

Location: Autonomous Region of Valle d'Aosta, Italy

Work completion: 2019

Focus: Hydraulic and Hydrological Risk

Challenges:

- To upgrade the regional meteo-hydrographic monitoring network
- Maintenance for the entire network and future expansion

CAE solutions:

- Replacement of dataloggers, radio transmission systems and mobile connections
- Renewal of the operational centre
- Transmission system via UHF/IP radio with standard and open protocols
- Complementary services such as maintenance via web portal.

FEATURES

All components of the proposed system can be replaced, both due to maintenance and due to future expansions, with interchangeable components from other manufacturers that implement the same **standard protocols** and communication modes, exceeding the closeness limit of the existing systems.

CAE has offered **Mhaster datalogger**, able to achieve a level of **standardisation and flexibility** in use that is currently unparalleled on the Italian and international market. The Mhaster datalogger is based on an **open Linux operating system with standard protocols**, able to guarantee an easy and quick implementation of any custom procedures and/or solutions directly by the customer.

As an ancillary service supporting maintenance activities, a **web portal** has been provided to track development and maintenance operations throughout the duration of the contract.



COMPOSITION

The telemetric meteo-hydrographic network of the Autonomous Region of Valle d'Aosta is composed of around **100 automatic stations and repeater sites**.

The adaptation, optimisation and maintenance project included the **complete replacement of: dataloggers, operating centre, radio transmission systems and cellular connections**.

Added to this are all the **network commissioning activities**, to ensure the coexistence and proper functioning of the existing networks during the progression of works throughout the transitional period and the **field maintenance and remote maintenance activities** at the end of the changeover operations.

The proposed **UHF/IP radio**, in addition to meet the customer's speed requirements, uses **standard and open protocols** such as **CoAP**, which easily adapt to the needs of use in the field of meteorological monitoring.

The **centre of operations** is equipped with a single system for the acquisition and supervision of the data from the measurement stations located throughout the territory. Among the other software for system management, operators have at their disposal **AEGIS** - the new GIS web platform developed by CAE.

