

## COASTAL PROTECTION: A PRIORITY FOR THE PRINCIPALITY OF MONACO

*For Monaco, sanitation is a major sanitary and ecological question*

The sanitation service of the town planning department manages about 30 remote control automatons gathered on all the installations.

These automatons are installed on the waste water networks, the main lifting stations, three storm overflows, a storm tank, as well as a waste water pre-treatment station. The whole automatons allow information necessary to the regulation of the hydraulic system of the water treatment network to be gathered.

The rain water and the waste water are sent to the pre-treatment station where they are cleared of muds, sands, oils and other, before being completely cleaned up by the treatment station. When they are cleaned up, these waters are thrown back to the sea, off the Principality of Monaco, at 80 meters deep.

Of course, the risk of sea pollution in case of failure of the system is huge, as well for the littoral (its fauna, its flora, and its summer-makers!) as for the famous oceanarium of the Principality, the basins of which are permanently supplied with water pumped in the open sea.

« The supervision of the installations is a major sanitary and ecological question. It was thus essential to find a reliable system enabling to find all the technical deficiencies or repercussions on the system and prevent the right persons so that they could intervene rapidly at the right place”, said François GERARD, Foreman and Responsible for the software project.

### ***A technical challenge: the multi-protocols centralized management***

In fact, the Town Planning Service of the Principality of Monaco is composed of four main departments: sanitation, energy, gardens and roads. Initially, the sanitation department only was supervised by software products that scrutinize the remote control automatons and report the technical defaults.

But the functionalities soon became insufficient, as well for the management of the complex technical characteristics peculiar to the Sanitation Section as for the interface with other heterogeneous systems in terms of communication protocol. The integrated vocal on-call management system was very limited.



*Visualization of the littoral collector of the Princesse Grace Avenue on PcVue*



*Visualization of the valley of La Rousse on PcVue with level and flow.*

«Three years ago, it was thus decided to redimension and uniformize the system and to implement a range of remote control automatons much more efficient because combining several lays dedicated to different profession», said François GERARD. The supervision part is controlled by PcVue, a software developed by the company Arc Informatique. PcVue is combined with ALERT, the on-call management software product by Micromedia International for the management of the alarms.

### ***ALERT perfectly complements the PC VUE system***

More than 1200 parameters supervised by PcVue are partly integrated in ALERT (flow, water level, speed, pollutions, and malfunctioning...), only for the sanitation.

The information collected by the 30 or so supervised equipments are transmitted to PcVue by radios or PSTN modems from automatons and transmitters installed on site. A refresh is made every 10 seconds for standard installations and even in real time for the pre-treatment station.

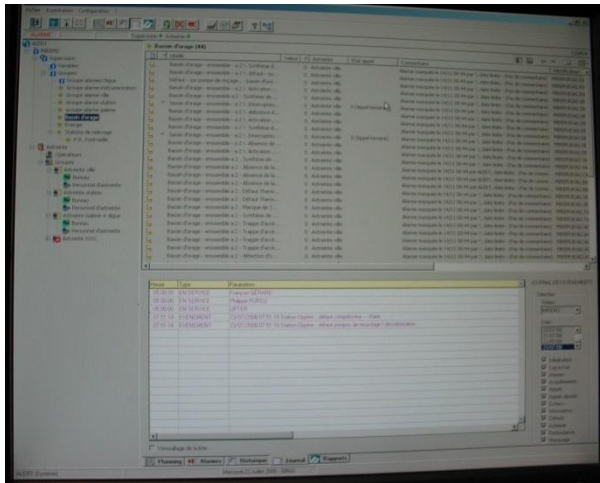
When the threshold values are defined in PcVue are reached, ALERT triggers call procedure.

About 20 persons are spread in two on-call management teams. One of these teams is dedicated to the installations of the Principality (manhole, lifting station...), the other is linked to the pre-treatment of the residual waste water. The transmission of the information is made by voice synthesis on mobile phones, if need be on fixed telephones, always with a vocal message.

As long as the alarm is not acknowledged (directly on the telephone), by an operator who takes the problem in charge, ALERT follows on its call procedure, in the defined order.

« Certain supervision tools integrate a vocal on-call management, but ALERT has many original functionalities, that are not included in the classical systems, especially in terms of tracability », stipulates François GERARD.

Event logs, histories, reports ... are very useful and ergonomic resources which enable follow-up of the installations from the Principality and optimization of the security.



Alarm log on storm basin in ALERT.