



Introduction

UV-Vis spectrometry can be used to monitor changes in water quality. The aim of WP3.5.2 is the exploitation of this ability of on-line UV/Vis spectrometry to monitor distribution networks and manage the large number of monitoring stations needed for this task as well as manage the large amount of measurement data generated in such an application. Furthermore, in WP3.5.2 a portable monitoring station has to be developed.

Importance

For a long time operators of larger monitoring networks have suffered from the absence of software that allows quality-controlled and validated operation of sensors in order to reliably turn data into information. The need was firstly identified in *process control applications* where drifting sensors cause unnecessary costs. The need became urgent in *event detection and water security systems* that cannot work using unreliable, poorly-documented sensor data without constantly causing false alarms. Last, but not least, such software is required to provide wider acceptance of online sensors in the fields of *compliance monitoring* for drinking water, waste water and industrial environments. Previously, sensor and terminal operation software has not adequately addressed any of these needs. Therefore, it regularly happens that measurement results can not be interpreted as a result of very basic but untraceable causes.

Approach

The deliverable describes the development of a software package that integrates sensor and station management, data validation and event detection in a modular software environment. This software tool has been optimised to utilise the high density information provided by spectral measurement but is open to include any type of instrument from any manufacturer. All events on a monitoring station are recorded (including service and maintenance), the produced results are validated online and then they are made available to a number of both simple as well as advanced event detection algorithms.

Result

A management and operational concept for online sensors is described. This concept includes mathematical functionalities such as automatic data validation and event detection. The mathematical methods used are briefly described. The concepts and mathematical tools have been developed as prototype software tools. A full scale test of these tools will be executed in TECHNEAU work package 3.6. The tools described in this deliverable are being implemented in a commercial software package that will become available in 2010.

More information

Full details on this deliverable can be found under D3.5.xx. Further information can be requested from:

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