

Wireless water resources management for remote installations

S.A. Avlonitis^a, M. Pappas^a, K. Moutesidis^a, A. Chalaris^b, I. Birbilis^b

^aLaboratory of Quality Control and Operations Management, Department of Mechanical Engineering, Technological Educational Institution (T.E.I.) of Halkidas, 34400 Psaxna Evia, Greece

Tel. +30 (22280) 99650; Fax +30 (22280) 99664; email: savlon@teihal.gr

^bMunicipal Company of Water and Sewer of Thira, Fira 84700, Greece

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ABSTRACT

Water companies in Greece, and possibly in other countries, are far from the ideal situation, where all their installations are controlled and supervised continuously from a central control room or from any place through internet. The main reasons for that, taking into account the scarcity of the water resources, are the great distances between the water installations and the ground topology which do not allow a low cost conventional infrastructure for the water resources management. In this work a combination of wireless broadband networks, modern systems of signal control and data acquisition, computers/software and telematics have been used to tackle the problem of the water resources management for remote water installations. An integrated system for central control, supervision and real-time water management have been implemented for a water company of the Municipality of Thira in the Greek Island Santorini. The cost of the system is relatively low so that it can be applied even by small size water companies. The application of the proposed integrated wireless system provides the benefits of central, automatic or manual, real time control and early warning for malfunctions without annual fees for networking or any other expenses. On the other hand the system reduces the labour and maintenance cost and improves productivity. The proposed low cost integrated wireless system for the water resources management has also improved the water quality by optimization of the water resources use.

Keywords: Water resources management; Wireless broadband network; SCADA systems; Quality of water
