

## Radio Solution brings real-time monitoring benefits for water supplier

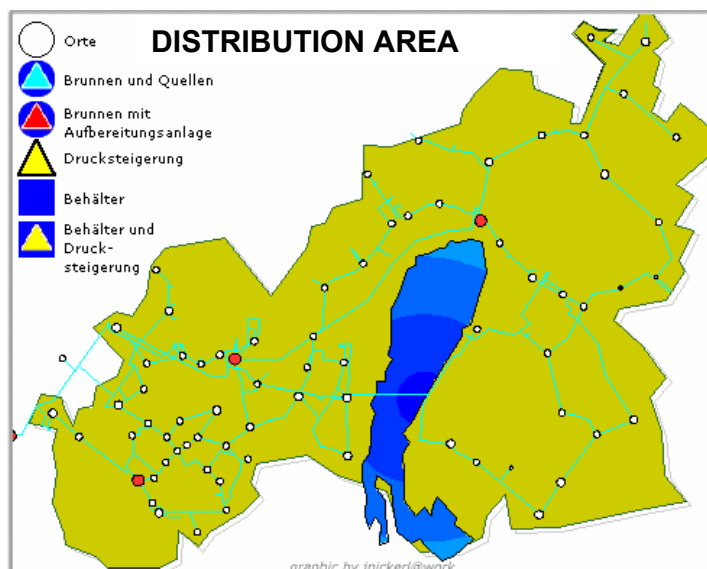
### Introduction of wireless data collection and analysis improves leak detection and water supply efficiency

Companies whose business is the delivery of water to consumers not only have a responsibility to provide high quality drinking water to both domestic and industrial users, but also to ensure that it is done so economically and reliably.



The WLV association operates a 1700 kilometer network of pipelines that covers most of Northern Burgenland in Austria; an area of over 2000 square kilometres. It serves 69 communities with around 130,000 inhabitants; during the holiday months this can increase to more than 200,000. The economical operation of plants and the identification of any required maintenance to the

network was, in the past, achieved by the work of eight inspection teams. These teams would inspect every single transfer shaft and transfer meter once every month.



To largely reduce the time consuming and expensive work of the inspection teams the WLV has built a complete coverage network, starting with some 80 stations in the year 2000. At present (December 2005) it contains about 260 Adcon RTU's, a mix of A723 addIT's and A733 addWAVE's, all solar powered, that read major water meters and monitor processes in the distribution network. Each such RTU is connected to up to 4 mechanical water meters,

mostly of Woltman-type, outputting pulses per consumption unit (usually measured in 1, 3 or 5m<sup>3</sup> per pulse) via standard reed switches.

Two A840 Telemetry Gateways, located at the WLV headquarters in Eisenstadt, collect the data of each station every 15 minutes. The effective transmission range of

each remote metering unit is approximately 20km. To achieve greater transmission distances, data from the furthest stations is relayed via other units to the gateway which allows for large scale monitoring networks.

Compared to the previous pipe inspection practice, around two thirds of the working hours and more than 10,000 kilometres of mileage driven by inspectors per year were saved. Pipe bursts are now detected up to 95 per cent faster than in the past. The experience of the past three years has shown that on average more than one pipe burst per month was detected literally “over night” and thus a water loss of on average 8,000 m<sup>3</sup> (per burst) could be avoided. This corresponds to a total of more than 100,000 m<sup>3</sup> per year – the equivalent consumption on three normal winter days of the total WLV supplied, Northern Burgenland area.

What counts even more are the many little leaks uncovered by the system. While pipe bursts are usually detected very fast – either by citizens alarming the supply company via mobile phone or by an immediate drop in pressure – it’s the small leaks that are usually hard to find, but still cause tremendous losses.

For the years to come a further expansion of the existing network and the addition of a permanent pipeline pressure monitor system are planned. This will not only guarantee a uniform supply pressure, but also detect and give warning of pressure blows that can cause enormous damage and severely disrupt supply.

Commenting on the implementation of Adcon Telemetry’s remote radio metering system Wolfgang Thurner, General Manager of East-Austrian Water Distribution said: “The Adcon system helps us to detect leakages within a very short period of time, often on the next morning. This is an incredible improvement to prior practice and means a significant reduction in controlling efforts which enables us to manage precious staff resources much more efficiently.”