

## DEVELOPMENT OF AN AUTOMATED ACCOUNTING SYSTEM FOR MECHANICAL ENERGY COUNTERS

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Nowadays counters are installed in the basements of every single building and house. The purpose is to provide information to services suppliers such as gas, water and electricity companies, about the usage of these products. The problem is that people have to go down to the basement and take data from the counters manually. This is very inconvenient, especially if large quantities of data need to be gathered to create an accurate graphic of the water expenses for the month.



Fig. 1 – Snapshot of the water counter

An automated accounting system for mechanical counters was developed in scope of this work. This system consists of a personal computer and web-camera.

The main program was written using C++ language. This application analyzes pictures taken by the web-camera and recognizes numbers. The input data is picture with \*.png extension and  $640 \times 480$  resolution, such as the one shown in Fig. 1. The output is the number which determines current expenses of the water for e.g.