## VISUALIZATION IN AUTOMATED ENERGY CONTROL AND METERING SYSTEMS FOR COMMERCIAL ACCOUNTING

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Automated energy control and metering system for commercial accounting is an essential tool nowadays in various industry sectors starting with factories, energy facilities and up to household. Although system has a very well-designed structure containing three levels of hardware, each performing a concrete task and errand, there are some major additions that could be extremely useful, but which have not been universally put into service – means of visualization.

Visualization could give metering system operators a wide scope of what exactly is happening within the system being controlled. Mimic panels with display, current meter reading, errors and faults- these are the few instruments that could be used to understand inner processes that are happening. Moreover, PC software could be used to control parameters of first two levels of system. For example, if we are using system built-up from "Energomera" devices we could also use their exclusive software – "AdminTools"

| AdminTools   | -  |           |
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Fig.1.AdminTools Software

AdminTools technology software is designed for configuration, setup and monitoring of electricity meters and Data Acquisition and Transmission Devices (DATDs). It enables the configuration of the required parameters of the connected devices and the viewing of information from the measurement channels for different periods.

Software such as "AdminTools" allows connection via optical port or by using radio modem which may be more convenient in situations where it's difficult to get close enough to metering devices. Visualization software may be installed on personal workstation of a head engineer or, in terms of household, even on personal devices to make system control and maintenance easier.

In terms of take-and-go solutions it is possible to take into consideration "Intellegent energy monitoring". The "Intelligent Energy Monitoring" service is a system for wireless monitoring of equipment and controlling production discipline in an enterprise, which will reduce energy consumption costs. This service provides user with various information regarding energy consumption on their facility and, at the same time, allows him to view analytical charts to better understand the bigger picture.

"Intellegent energy monitoring" is completely web-based, which means that user is allowed to view all of system's indicators wherever there is internet connection.

#### Literature

1. AdminTools Software – AO «Energomera». (n.d.). https://shorturl.at/iqRSU

2. Intellectual energy monitoring by A1. Buisness Solutions. (n.d.). https://shorturl.at/kqsFZ

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# ЭЛЕКТРОННЫЙ КОМПЛЕКС ДИСТАНЦИОННОГО ОБУЧЕНИЯ «ИЗУЧЕНИЕ И ИССЛЕДОВАНИЕ ТАХОГЕНЕРАТОРОВ»

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Развитие информационных технологий и компьютеризации все больше и больше влияет на быт человека, проникает во все процессы (социальные, экономические, политические), подменяя их, помогая им развиваться, является сопутствующим и одновременно неотъемлемым средством предоставления и анализа информации. Быстрое изменение современной