The EIServer® software

Multi-vendor multi-protocol multi-energy automatic and remote meter reading (AMR/RMR)

EIServer® interrogates and reads data (pulses, load profiles, registers, files, ...) from a large number of different (electricity, gas, water, steam, ...) meters and concentrators. The software is constantly updated with the latest meter protocols. EIServer® also supports many communication technologies such as PSTN, ISDN, GSM, SMS, GPRS, PLC, RF, Ethernet, RS232, RS485, MODBUS, ... EIServer® has a proven track record of managing very high volumes of data.

Automatic data validation, estimation and editing

EIServer® automatically performs the time-consuming task of data verification, estimation and identification of data errors. The expert system can automatically correct abnormal, erroneous or missing data, choosing between a number of pre-defined e.g. interpolation or custom designed estimation rules.

Billing

EIServer® enables you to configure sophisticated billing structures with tariffs and other complex variables. These billing structures are time dependant, meaning that you can enter future billing structures today.
Based upon the billing structures EIServer® can calculate all invoiced items and transfer them to a financial system for the actual printing/processing of the invoice.

Settlement (Allocation and Reconciliation)

EIServer® supports the settlement process in a deregulated energy market. The settlement process requires an analysis on the differences between the amount of energy fed into the net and the amount of energy taken by the parties involved. Settlement includes sub-processes like allocation and reconciliation.

Switching transaction management

EIServer® enables you to automatically handle and monitor all the necessary transactions and messages between customers, suppliers and network operators when a customer switches from one supplier to another in a deregulated market, e.g. using EDI.

Portfolio management

EIServer® enables you to dynamically group together objects such as access points or sites or machines of a certain type, or objects per supplier, per balance responsible, per ... for follow-up and reporting and benchmarking and to compare one portfolio with another.

Load research

EIServer® helps you to analyse the energy consumption per region, type of customer, type of day, season, ...

Tariff simulation

EIServer® enables the customer to automatically compare different pricing formulas for different suppliers and to choose the best supplier and formula based upon the expected consumption.

Invoice checking

EIServer® enables the customer to check incoming invoices (either manually or automatically) by simulating the invoice and by comparing the result with the actual invoice received.

Automatic energy cost allocation

EIServer® can automatically allocate energy costs to costs centers based upon pre-defined rules e.g. based upon surface area, quantities produced, ...

Forecasting based upon internal and external parameters

EIServer® has a neural network expert system that enables you to forecast power consumption based upon several parameters such as forecasted outside temperature and humidity. The forecasting uses historical data and is self-training, which means that it becomes very accurate quickly and even more accurate when used over a period of time.

Expert energy monitoring and targeting

EIServer® is suitable for all energy management applications and allows reporting for benchmarking, targeting and group reporting. The system is currently used for all aspects of energy management including tenant billing, forecasting (actual compared to forecast with alarms), Monitoring & Targeting, cost per production analysis and many other energy functions. EIServer® allows users to meet their legal obligations such as Climate Change Charges, Kyoto etc.

Real-time maximum demand control, multi-site peak shaving

EIServer® can be programmed to act on specific events. For example, the software can monitor the power consumption in real-time and instruct energy-consuming equipment to switch to a different consumption pattern. The event can be triggered if the power exceeds a predefined energy (financial or other) limit and is effective for single-site or multi-site applications.

Cross-border energy metering on trains

EIServer® is used for the energy metering on trains and cross-border energy cost allocation over different railway operators. Both, the energy consumed (reading a meter) and the exact location (connecting to GPS) are registered in real time. This combined information is automatically sent to the EIServer® database for further processing.

Watchdog and exception reporting

EIServer® can automatically monitor data and trigger actions e.g. sending a SMS or an e-mail in the event that the data does not behave as expected or if certain limits are exceeded. This functionality can save your organization time and money as it replaces manual analysis of data with an automatic system which can perform extremely complex analysis to ensure only the critical data is sent to the right person at the right time.

Data mining

EIServer® enables you to explore the wealth of data in your database from different angles. Data mining slices up, combines, wraps and stretches data to discover information that otherwise may have stayed hidden.

Technical features of EIServer®:

- For each object you can define the properties you want to store in the database
- These properties per object and their values can change over time
- Mathematical and statistical functions such as aggregation and disaggregation
- Extensive reporting and graphing possibilities
- Fully compatible with Excel for custom reporting
- Automatic scheduling of (communication) tasks
- Traditional PC client as well as thin web client
- Designed for very large volumes
- Elaborate security system
- Extensive data and transaction logging
- Open system using industry standards: Java, JDBC, API's, ...
- Native DBMS is Oracle
- XML API for seamless integration with other applications, ...
- Extensive import and export facilities using EDI, CSV, XML, ...
- Multi-lingual, multi-currency, multi-country, multi-time-zone, ...

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