

EIServer® Validation and Estimation

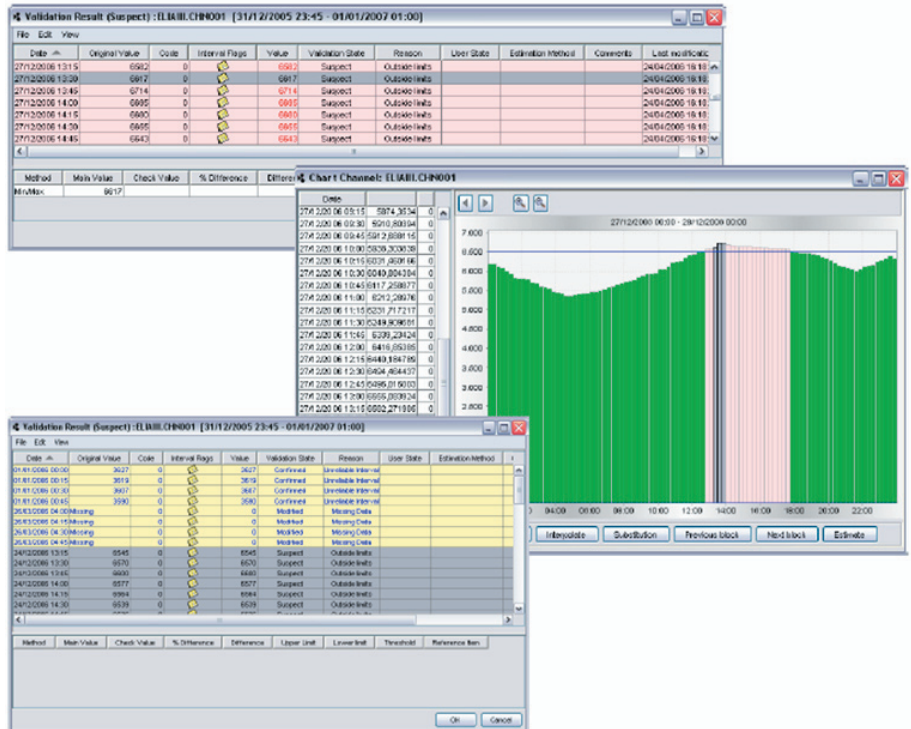
Incoming data that is out of proportion or missing can be very hard to track down manually. Therefore EIServer® is equipped with a validation and estimation functionality. These user-friendly functions allow the user to verify, correct, confirm or replace the raw data coming from meters or data loggers. The validation and estimation process can be automated but manual inspection and correction is possible as well.

Why validate?

When data is collected, it should be 100% reliable. If not, gaps or incorrectly measured values in the central database can lead to the generation of erroneous reports and invoices to the end-customers, misinterpretation of data or wrong EDI-messages. To avoid this, it is of the utmost importance that the data is flawless and free of discrepancies. For this purpose, EnergyICT® has equipped EIServer® with a powerful validation engine. This validation engine tracks every gap or non-conforming value in the data by using several rules that can be adapted to the customer's specific needs. Each of these rules sets a reference value against which the data is compared. For each value that is deemed dubious by the validation engine, the user is offered the choice to either accept or modify the data.

How to validate?

Validation is done on a specific channel of data. Validation rules are country specific and for each channel, different rules can be defined to obtain validation results that are as accurate as possible. Moreover, every validation rule can be adapted to the channel's specific properties. Consequently, the reference value that is defined in the validation rule can differ for every channel. For one channel the reference value can be a fixed value with absolute upper and lower values; for another it can



be a relative value with variable upper and lower limits. Another way to define the reference value is by looking at a reference profile. If the incoming value differs too much from the value in that profile, the data is marked suspicious. The reference profile feature can be very handy when used in combination with the forecasting functionality of EIServer®. The validation engine can then compare the actual and predicted load profiles, and tag discrepant values. Next to these two examples, EIServer® comes with numerous other validation rules that allow precise and accurate validation.

After validation, an overview shows the user three levels of validation results: invalid, modified and confirmed values. With just a few clicks of the mouse button, you can access all important validation data such as: measured values, the time of the most recently measured value, measurement delay, limits and acceptable deviation, visual representation of the values, etc. Furthermore, EIServer® keeps track of all changes on every value and is SOX compliant which is unique. This way, no information is lost.

Why estimate?

Estimation allows replacing channel values based on predefined algorithms. By executing the estimation methods in EIServer® a lot of repetitive manual actions, such as tracking down and correcting the data that needs to be replaced, can be eliminated. This means the user can save on operational costs.

How to estimate?

Traditional systems provide the user with tools that use rather simple methods such as linear interpolation to replace these gaps. But EIServer® goes further. The algorithms used to estimate missing values are far more complex and are therefore more accurate. The estimation engine can use a reference profile for example to take the peaks that might have occurred during the estimated time frame into account. When using linear interpolation, these peaks might not appear in the resulting values, which make the stored data less accurate.

EIServer® comes with standard estimation methods but EnergyICT® can develop country specific or user-required algorithms when needed. Because of the open architecture of EIServer®, these algorithms are easy to implement and can be used with a few mouse clicks. The estimation can be executed automatically as well as manually and user-interfaces are provided to start and follow the estimation process. Extensive logging allows tracking back any change of any value.

Product references

Article Number	Description
ESEM100202	SW EIS VEE Data Validation-Estimation-ComServerJ

These modules are an extension to the EIServer software and need to be ordered separately. The given number in the product description refers to the amount of meters EIServer® is able to collect and process the data of.



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