**P R E S S R E L E A S E**

# PI technologies structure large amounts of data in production plants

**Karlsruhe, Germany – Tuesday, March 16, 2021:** The volumes of data currently being generated and processed in industrial production systems are increasing tremendously. At the same time, the range of technologies of PI (PROFIBUS&PROFINET International) is growing, as the latest example omlox shows. Moreover, new applications from the area of Industry 4.0, such as advanced asset management, condition monitoring or AI-based devices, are increasingly being added to existing technologies.

To bring order to this data, it must be related to its object of origin and described. Information models assume these tasks by structuring the large volumes of data and assigning a further description to a variable. To enable the efficient exchange of such data across manufacturers and applications, it must therefore be standardized and made openly available to all users. Without such standardization, data evaluation would incur unnecessary effort and costs, resulting in the utility of the entire information processing being reduced or even called into question.

PI has been working with this methodology since the early 1990s. Consequently, the device description (GSD file) is one of the first examples of an information model for the communication-related data of a PROFIBUS and PROFINET device. Further examples include the proven PI application profiles, such as PROFIBUS PA, PROFIdrive or PROFIenergy. In the past few years, these profiles have greatly simplified the daily work of users, especially in regard to device interfaces. In the future, however, pursing this course using a machine-readable information model will become necessary.

Tried-and-tested application profiles already provide a basis for such an information model. PI therefore only had but one small step to take: namely to provide the OPC UA Companion Specifications for PROFINET and IO Link, as well as the energy management profile PROFIenergy, in cooperation with the OPC Foundation. Other topics are also in the pipeline at present, such as the provision of information models for PA devices (PA-DIM) and for omlox. Step by step, all PI technologies will be processed with regard to their information models and standardized on the basis of OPC UA for use in innovative applications in Industry 4.0 environments.

Technical details and practical examples can be found in the “Information Models” Industry 4.0 highlight under <https://www.profibus.com/technology/industrie-40/>. This section of the PI website deals with current topics, issues and trends from Industry 4.0 applications so that the user can easily implement and realize them in practical work.

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**Graphic:** Information models are just one of the current topics on the PI website.

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