SIEMENS

Background information

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Hannover Messe 2019, Hall 9, Booth D35

PlantSight – Managing Dark Data and Visualizing the Digital Twin

Every industrial facility is characterized by cumulative data evolution. Massive quantities of asset data are generated throughout all phases of the asset lifecycle. This data is spread over a multitude of software applications, databases, and paper files throughout the enterprise and at site. As a result, the information available to decision makers is often inaccurate, out-of-date, incomplete, inconsistent, and/or poorly synchronized. Low level data integration only tells part of the story, creating challenges and inefficiencies that can lead to the wrong decisions being made, and in some cases major damage.

Siemens has been engaged with Bentley Systems in a strategic alliance based on their highly complementary software portfolio with the goal to extend opportunities for deeper data utilization and make digital twins even more efficient. The result of this collaboration is PlantSight.

PlantSight is an open-architecture, cloud-based solution that delivers a collection of microservices including process and plant engineering, physical layout modeling, project and construction planning, maintenance, and asset performance modeling. It also supports federating data from underlying services and related applications to eliminate data duplication and its implied latency within the solution architecture.

The solution provides access to traditionally inaccessible data, through intelligent scanning and interpretation. Services to validate data and link it to other information, combined with change tracking, improve the degree of accuracy, completeness and

trustworthiness of asset data and documentation, enabling better and faster decisions.

PlantSight brings all asset information together, contextualizes it, validates it, and visualizes it. It transforms raw data into a comprehensive digital twin. It provides one complete digital twin that is continuously updated, faithfully emulates its physical counterpart both in behavior and informational context and empowers users with the information they need to know what to do next. Whether you are a site manager, operator, engineer, or operations manager of a plant, you will benefit from reliable and updated information.

This new approach from Siemens and Bentley represents a key step towards the process industries' top priority in 'going digital'— the digital twin enablement of operating plant engineering, without disruption to the existing physical or virtual environment.

Simply put: PlantSight opens your eyes to insights; invaluable insights that will help our customers to discover new possibilities, make informed decisions faster, and drive the profitability of their plant in the long run. All with just one, simple, easy-toaccess web portal. PlantSight is a portal through which users can see past 2D and 3D visualizations to the information and connections behind. Conversely, PlantSight also enables our customers to see past pure data to understand how it all comes together in a visual form; always from the right perspective, anytime, anywhere.

With its cooperation partner, the industrial services provider Bilfinger SE, Siemens is also working in the context of PlantSight to further strengthen optimized process efficiency with artificial intelligence. The newly developed software solution PIDGraph from Bilfinger automatically converts piping and instrumentation diagrams (P&IDs) into an intelligent digital version. This extends the ability of PlantSight to speed up the process of importing non-intelligent data. Siemens is planning to extend the cloud based PlantSight Services with this offering, which can be offered as a cloud service, too. Both services are supporting Protheus Data structures.



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This background information and press pictures are available at www.siemens.com/press/hm19

For further information on Siemens at Hannover Messe 2019, please see <u>www.siemens.com/hannovermesse</u>

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Siemens AG (Berlin and Munich) is a global technology powerhouse that has stood for engineering excellence, innovation, quality, reliability and internationality for more than 170 years. The company is active around the globe, focusing on the areas of power generation and distribution, intelligent infrastructure for buildings and distributed energy systems, and automation and digitalization in the process and manufacturing industries. Through the separately managed company Siemens Mobility, a leading supplier of smart mobility solutions for rail and road transport, Siemens is shaping the world market for passenger and freight services. Due to its majority stakes in the publicly listed companies Siemens Healthineers AG and Siemens Gamesa Renewable Energy, Siemens is also a world-leading supplier of medical technology and digital healthcare services as well as environmentally friendly solutions for onshore and offshore wind power generation. In fiscal 2018, which ended on September 30, 2018, Siemens generated revenue of €83.0 billion and net income of €6.1 billion. At the end of September 2018, the company had around 379,000 employees worldwide. Further information is available on the Internet at www.siemens.com.