

OSIsoft Regional Seminar in Japan Addresses Turning Insight into Action

By Kaoru Yanagimoto

Summary

On October 14, 2011, OSIsoft hosted its Regional Seminar Japan at Tokyo Conference Center in Tokyo. More than two hundred people registered for the event, at which OSIsoft end users', Fujitsu, Tokuyama, and Kyowa

The Internet now makes huge amounts of data widely available. This "big data" can bring tremendous benefits, but many companies still lack the ability to extract insight from this data. Companies that can do so will survive in the Internet world.

Hakko Chemicals gave presentations; along with event sponsor, Microsoft, and of course, OSIsoft.

A representative from Fujitsu presented the company's experience using OSIsoft's PI system in a cloud-computing environment. A representative from Tokuyama, a leading Japanese manufacturer of chemicals, specialty products, and cement presented its experience integrating plant information systems in its Tokuyama plant. This involved organizational integration as well as system (hardware and software) integration.

A representative from Kyowa Hakko Chemical presented the company's experience using PI WebParts and how this technology enables even less sophisticated users in the plant to gain access to needed data. OSIsoft gave two presentations and two tutorial sessions on the company's PI system.

Finally, a speaker from seminar sponsor, Microsoft, provided its scope and services for manufacturing plant leveraging OSIsoft's real-time computing products.

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Era of Big Data

In his opening presentation, "Turning Insight into Action," Jon Peterson, OSIsoft's Vice President of Marketing, pointed out that the era of "big data" has arrived. He referred to a statement by Kenneth Cukier in a February 25, 2010 article in *The Economist*. According to Mr. Cukier, "Information has gone from being scarce to being superabundant. This brings huge new benefits." Mr. Peterson added that the Internet now makes huge amounts



of data widely available. “But what’s lacking is the ability to extract insight from these data.” According to Peterson, PI is the only system that can handle more than petabyte data as a real-time database. As a closing message, he listed three requirements for survival in this Internet world:

- 1) Know where your business is now. Big data is vital in maintaining situational awareness of your company.
- 2) Be a “learning company.” Big data is the cornerstone of continuous improvement.
- 3) Build longevity and competitiveness. Big data provides the foundation for sustainability and innovation.

PI Under Cloud Enables Quick and Easy Expansion

Mr. Nishijima, Manager of Fujitsu’s Environmental Business Unit, presented the company’s success in energy conservation by using PI in a cloud-computing environment. Fujitsu established its middle-term environmental vision, “Green Policy 2020,” in 2008. The goal is to reduce carbon emissions by 30 million tons by 2020. One action item is to reduce energy usage in its facilities. Fujitsu accelerated this activity due to the power shortages in eastern Japan following the March 11, 2011 tsunami disaster.

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facturing facilities in eastern Japan. Fujitsu developed an energy dashboard at its head office to monitor real-time energy usage in the facilities. The company uses this information to optimize operations at the four facilities by minimizing energy usage and adjusting the output from it

captive power generation unit to keep purchases of peak load electricity below target levels. In the future, Fujitsu plans to expand monitoring of energy usage to all 39 of its facilities in eastern Japan. According to Mr. Nishijima, “The expansion to 39 facilities should be extremely easy to accomplish, because the cloud-based infrastructure can easily expand to provide the additional resources required, including both database size and processing power. PI can also manage big data in real time. PI enables us to extract insight of current operations and take necessary action to minimize energy usage and carbon emissions. “

PI for Renewable Energy

Mr. Doug Taylor, Marketing Development Executive, OSIsoft, introduced the case of applying PI for renewable energy. He explained that use of renewable energy is increasing rapidly, but while the primary energy (solar or wind) is free, renewables come with their own set of challenges, which Mr. Taylor referred to as the “renewables blues.” These include remote sites, often in environments that are hard on equipment; a multiplicity of resources; and many small facilities. Also, while the primary need right now is for reliable and predictable power generation, renewables tend to be less reliable and less predictable. “To solve the blues, you need real-time management of the total system. It’s essential to be able to monitor data from every facility in real time, extracting insights and turning these into actions,” said Taylor.

“An energy services company monitors more than 550 power plants widely spread around in the globe 24 hours a day, 365 days per year using PI. The company provides current performance of each customer site through a secure web portal,” said Taylor. “Can you imagine how much data must be handled in the total system?”

Another company, a solar power generation company, operates many sites worldwide and monitors those facilities on a centralized management system. It not only monitors the amount of power being generated in real time, but also diagnoses its facilities in detail. Its diagnosis finds errors in specific solar cell modules. “PI is the system fit for big data management, and monitoring data in real time enables quick responses actions to every incident or event,” Taylor concluded.

Long- and Short-Interval Trends Provide Awareness

Mr. Kurahashi from Rakura International Consulting presented the importance of monitoring data in real time to gain necessary insights. He based his presentation on his many years of experience in beer breweries. He mentioned that “kizuki,” or “awareness,” is very important to improve plant operation. Kizuki brings ideas to improve plant operations and reveals issues to be solved. Kizuki requires plant operations trend data. “Get answers at a glance on a trend graph,” he emphasized. Mr. Kurahashi explained, “The trend graph brings us six important findings: actual plant status, root causes of the events, structure of the problems, relations of the events, existing problems, and issues to be resolved.” In conclusion, Mr.

Kurahashi stated, "To be able to resolve issues, it's important to have both long-term trend and higher resolution, time-sliced data. This leads quickly to big data, which require an excellent tool to handle and access within a reasonable amount of time. OSIsoft's PI system is the only system I know that satisfies those requirements."

Ease of Use

In tutorial sessions, OSIsoft demonstrated the latest versions of its products and soon-to-be-released products. A new product demonstrated was PI Coresight, which the company designed to make it easier for users to create HMIs. To create a new HMI display, users must specify many things, such as tag names, data items to be displayed, and the shape and location of display parts. PI Coresight uses Microsoft Silverlight technology, which supports real-time data update on a web portal. PI Coresight is designed to enable users to build displays using web parts for real-time data, trend, tables, bar charts, and so on, in easy drag-and-drop fashion. Users only need to select necessary web parts from the pallet, drop each into the display area, and then select the tag name of the required data. There's no need to set the locations of the parts in a display or worry about the size of each web part, since the system automatically selects the right size and position.

Last Word

Thanks largely to the Internet, we are now in an era of big data. However, data itself cannot create value. When we convert data to information, extract insights from the information, and take action, we can begin to gain benefit from the data. During the daily operation of any company, huge series of real-time data are being generated. To analyze those data, users also often need to gather additional data from outside of the company. To extract insights from those time series data quickly, users require tools to capture big data and to generate ad hoc trend graphs as a first step toward utilizing big data to improve operations. Today's easy-to-use information technology enables this and we can expect to see additional developments in the near future.

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