

EcoSphere expansion flags real-time advance

Andy Nelson, Senior Software Engineer, Tendeka

Upstream, August 2020

Aberdeen-headquartered independent global completions service company Tendeka's decision to join OSIsoft EcoSphere, announced on 15th July, represents another advance for a system that is designed to help companies transform their business by providing real-time actionable insights.

OSIsoft EcoSphere is a collection of more than 300 industrial leaders that provide products, applications, and services for the PI System – an open enterprise infrastructure that connects sensor-based data, systems and people.

As a member, Tendeka will provide downhole monitoring, analysis and modelling products to support customers in their digital transformation and integration strategies. These new data sources are designed to bolster the value of the existing real-time information that oil and gas customers are currently storing in their PI Systems.

As Andy Nelson, senior software engineer at Tendeka noted, oil and gas producers are currently being bombarded with an ever-increasing volume of digital data from fibre optic systems to IoT sensors and devices. “More of this information is being processed in the field as edge-analytics comes into play. In the downhole environment this edge decision making is affording the producers the ability to start optimising their assets in a real-time manner,” he said.

The partnership will enable OSIsoft's PI System customers, which include thousands of industrial and oil and gas producers worldwide, to deploy sophisticated solutions across their downhole operational environments and take advantage of constantly evolving digital oilfield technologies.

OSIsoft essentially provide technology to a wide scope of industries, everything from power generation to oil and gas to manufacturing on. The core of their products allows them to store measurement data from different sources, which in the oil and gas space would cover pressure or temperature gauge readings, instrumentation off of pumps and similar.

As Nelson told Upstream Intelligence, a lot of companies take the data that is stored there and combine that with other data that's come out – perhaps distributed temperature information from the fibre system, and then be able to use that in conjunction with each other to make determinations on recommendations on optimization of their wells, being able to

increase the efficiency of operations and so on. “It's not just everything that happens downhole, it's basically across their entire pipeline,” he said.

“OSIsoft EcoSphere essentially provides a mass storage mechanism for it and the partner programme allows companies like Tendeka to work with them to be able to integrate our software with their software, so that we can leverage their base pool information, but actually provide more value to the customer by being able to combine that with other information that we might have to be able to provide a better service to our customers,” said Nelson.

The EcoSphere can apply to everything from reducing carbon emissions, hydrocarbon extractions, to making complex resources viable.

Given that many of the major oil and gas operators, and even some of the midsize operators all use this in their organisation already, it made logical sense for Tendeka to join OSIsoft EcoSphere. “At Tendeka, we really believe that leveraging the advances in the reservoir management solutions provides the best opportunity for the customer to increase their production efficiency and reservoir recovery,” said Nelson.

Collaboration is key

OSIsoft EcoSphere is an example of the collaborative theme increasingly evident across the digital transformation of the oil and gas space.

“As a developer of software, I look at things and anytime there's a closed system or closed loop that I can't get into, that creates a whole host of problems,” said Nelson. “Whether that comes from the integration side to other systems, whether it comes from just my ability to be able to share information for my system, I have a view of the world that looks at it and says that we should have the ability to collaborate. And we should have the ability to share information across different systems and different vendors, and be able to provide that in the most optimal way possible.”

There is still a big barrier to overcome in facilitating collaboration. Across many industries, vendors are still very closed in and they don't like to push out other than just the tiny little bits of information from their systems outwards.

But, said Nelson, in order to participate and play in the visual reservoir management concept, it is essential to be able to integrate with other systems, third party and partner systems --even competitors systems, “because you never know whether that one piece of their conceptual pipeline, is the thing that will stop your solution from being adopted or implemented, or would stop something down the chain from being adopted or implemented because suddenly you can't transpose or share that information.”

Looking ahead, the process has some real opportunity in some of the emerging markets and in areas like carbon capture and carbon reduction and increasing the value of mature assets.

“One the benefits that this has provided now we have the ability to potentially be able to do things that we weren't able to do before. For example, we are able to monitor carbon capture in a well without actually having to flow the well in any way. So that capability means that we've got the opportunity to help companies, make sure we meet their compliance with requirements, whether their carbon neutral and carbon capture goals. So that speaks volumes to the ability to be able to provide for what we need to do in order to help our planet as well,” said Nelson.

Author



Andy Nelson is a senior software engineer with Tendeka and for the past 25 years has been working in software engineering and integration. Prior to Tendeka, he held posts at TellX, a company that specialized in managing digital film assets to create interactive special affects for the movie industry; MITEM Corporation, who provide legacy integration to government and healthcare; and iManage, an industry leader in content management solutions for the fortune 500.

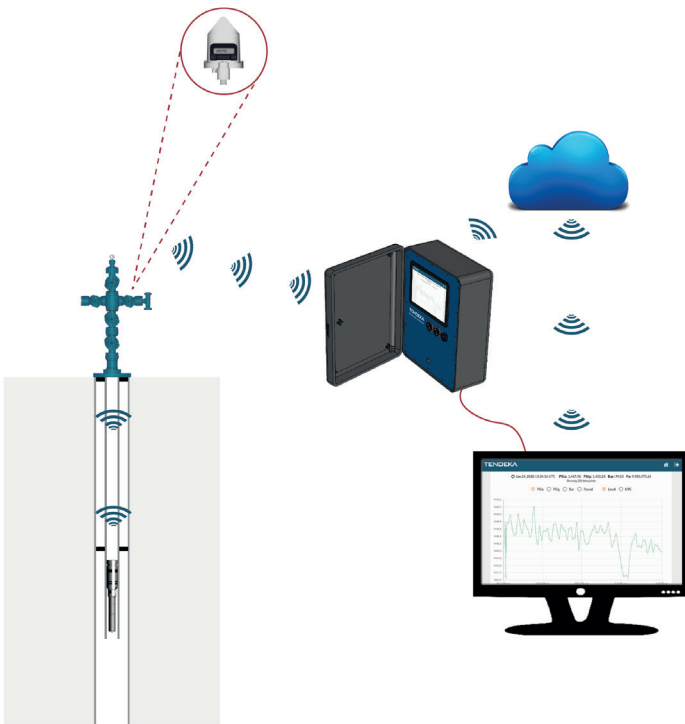


Figure 1: Tendeka's PulseEight surface equipment – full systems integration