



HYPACK
a xylem brand

Sounding Better!

Letter from the General Manager

By Harold Orlinsky

In October 2015, I wrote a message in the *Sounding Better!* newsletter informing our readers about the changes at HYPACK as we became part of the Analytics group at Xylem. Our core mission of providing software for data acquisition and processing for the marine community didn't change. We've done this for the past 30 years, and that was going to continue. At the same time, we were expanding our software solutions across the Analytics platform, with drivers for SonTek (HydroSurveyorM9), YSI (EcoMapper and 6600 sensor) and creating a software solution for the ISS buoy system (ViPer software).

Even if you never used these products, you might have taken advantage of changes to HYPACK® - the new 64-bit SINGLE BEAM EDITOR (SBMAX64), an improved ADCP processing utility and the ability to download and import sound velocity files via blue tooth connection, were all done to support these companies. In the HYPACK® 2018 release, you will find updates to all these programs.

I now have the opportunity to again write about a change happening here at HYPACK. On April 1, 2018, HYPACK will be a founding member of the Xylem Advanced Infrastructure Analytics (AIA) platform.

IMPORTANT: Corporate-wise, we're still HYPACK, a YSI Inc company, our banking doesn't change, and we definitely do not need to do any more novations!

The AIA group will be composed of Pure Technology (puretechltd.com), EmNet (emnet.net), Valor Water Analytics (valorwater.com), Visenti (visenti.com) and HYPACK. The platform has close to 600 employees and has offices around the world. Taken together, these companies will lead the water infrastructure industry with new technology and innovation. As a member of this team, HYPACK will bring our core competencies and share our knowledge across the platform. As in the past, and looking towards the future, new features developed for their system will further enhance the HYPACK® software capabilities, and be beneficial to everyone.

As a way of introducing our new family in the Advanced Infrastructure Analytics platform, I pulled in some fun facts about our new partners:

Valor Water Analytics was founded by Dr. Christine Boyle as part of her PhD work at the University of North Carolina. The Valor Water flagship product started as an appendix of "data anomalies" for a 30-page water economics report delivered to the North Carolina Urban Water Consortium. Valor Water employs two physicists, one of whom was a theoretical physicist at CERN. Valor Water was a women-owned business from 2013 – 2018. Today, they have a majority female leadership team and a commitment to diverse hiring.

EmNet technology can be traced back to a Department of Defense project codenamed NEST (Network of Embedded Systems Technology aka Smart Dust) where the EmNet founder, Luis Montestruque, researched sensor networks for military applications. EmNet technology was used by researchers at the University of Notre Dame to build a homeland security system that would detect the origin and forecast the movement of a gas agent plume in urban

environments. The EmNet distributed control system uses software agents that behave like brokers in a stock exchange and they live in “smart valves”. South Bend, Indiana boasts the first smart sewer sensor network. Deployment in 2008 included 110 sensors over 20 square miles of sewer shed making it the largest real-time urban-scale sensor network and, to this day, the densest sewer system in the US.

The **Visenti** team includes colleagues from 15 countries who speak almost 20 different languages and are spread over 4 continents. One Visenti customer uses the data analytics View platform processes about 8 billion data points per day in real time.

This record will soon be overtaken by another Visenti customer who will use the Visenti View platform to crunch about 35 billion data points per day and identify anomalies in the water network. (Comparatively, Google crunches about 3.5 billion data points/searches per day.)

Pure Technologies was born in Calgary, Canada as Sextant Corporation in 1993. It was founded by Peter and Jamie Paulson, two enterprising brothers who saw a business need to measure pre-stressed concrete. While Pure is highly regarded today for helping utilities manage pipeline deterioration, the company got its start with the remote monitoring of physical changes in buildings, parking structures and bridges. In 1998, Pure installed its first “acoustic” SoundPrint monitoring installation on the Huntington Viaduct in the UK and on the cable-supported roof of the Calgary Saddledome; both systems are still in operation 20 years later. The longest deployment of the PipeDiver condition assessment tool took place in Colorado in 2017, with a 42 mile run in a single day. In 2016, Pure built a monster-size electromagnetic cart to inspect the Kutz Siphon in New Mexico, a PCCP pipeline with a diameter of 210 inches—gigantic enough to run an 18-wheeler through with room to spare.