

## **Adding an event-based scheduling interface to a Research Vessel's data acquisition system**

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*Abstract:* Flanders Marine Institute (VLIZ) runs an in-house developed DA system on board the RV Simon Stevin to provide continuous real-time weather, navigation and water quality parameters during campaigns. When in 2015 the ICOS project started, a much stricter and thorough calibration and verification process of a real-time pCO<sub>2</sub> gas analyzer was demanded. At an early phase, this could be implemented in hardware. But due to increasing complexity it was opted to implement it in the DA system. Given that this process involves controlling multiple devices while gathering data from sensors and doing calculations on it. This meant implementing a script-able scheduling interface. This interface needed to allow –among other things- to send a specific string to a chosen device at a certain time if a real-time value was within preset parameters... and maybe report about it in an email. In short, the DA system needed to evolve from simple 'gather-data-and-make-sure-it's-stored' to a system that can actively interact with devices.