Dynamic Positioning Data Using OPC Data Exchange Standard

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Abstract

External data logging for dynamic positioning and vessel management systems has historically presented many problems. Many systems provide data in proprietary formats that require custom drivers to parse and store the data into a standard database software package. Some data points require high rates of logging causing problems due to large database storage files. Many data loggers are not “user- friendly” limiting the data extraction process. This problem is not limited to marine systems.

In recent years standards have been formulated to address the process of data exchange. For industrial systems the OPC standard has been developed. This paper will give an overview of the standard and its’ application to dynamic positioning and vessel management systems. Generic system configurations show how the standard is used to provide common data exchange interfaces. Guidelines are given for configuring database groups based on log frequency requirements in relation to storage file sizes. Typical dynamic positioning system data groups are configured for efficient database utilization. Backup software methods are presented for storing database files. Various hardware mass storage devices are compared for optimum performance.

Software tools for data analysis are configured within the generic system. These tools allow for data trending and enhanced analysis. Data transfer and reduction for presentation in common software packages are discussed. Data reduction for real time transmission is presented.

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