Inertial Measurement Unit (IMU)

An Inertial Measurement Unit () is the principal sensor for directly sensing vehicle motion in an It consists of a set of triaxial orthogonal accelerometers and a set of triaxial orthogonal gyroscopes. The accelerometers measure translational acceleration on the x, y, and z axes in the instrument frame. The gyroscopes measure rotational velocities about the x, y, and z axes (φ, θ, and ψ respectively).

IMUs are generally grouped by the fundamental sensing technologies used in the accelerometers and gyroscopes. The differences in these technologies present trade-offs in size, power, cost, and performance the system integrator has to consider when selecting a sensor for use in an . Generally speaking, common IMUs used in the subsea industry fall into two basic categories, MEMS and optical, with several categories within each that address the specific technology used. These categories usually speak to the type of gyros used in the rather than the types of accelerometers used.

Greensea's workspace shows the following information from the .

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Source URL: http://localhost:8888/kb2017/inertial-measurement-unit-imu

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