Seabed seismic acquisition is a complex process, involving multiple (and multi-purpose) vessels, asynchronous data flow, various data formats and navigation tasks. The Gator system provides a highly configurable centralized command and control environment for cable and nodal based OBS (Ocean Bottom Seismic) and Electro-magnetic (EM) operations. Gator has been designed to handle a wide range of acquisition techniques and to interface to a wide range of 3rd party systems, sensors and equipment.

Gator is generally supplied as part of complete field IT service comprising a turnkey systems solution with Gator software and hardware, computers and radio networks, supported by experienced field personnel. Gator Processing software can also be integrated to provide spatial coverage and attribute analysis together with source and receiver navigation data processing.

Some of the features within Gator that deliver more efficient OBC surveys include:

**KEY FEATURES**

- **Fault-tolerant radio networks**
  Every vessel is connected by spread spectrum, interference-immune RF networks - with data rates of up to 11Mb/s at ranges up to 20 km.

- **No radio link requirement**
  Gator command and control also supports autonomous vessels with no radio link requirement.

- **Automatic data distribution**
  Demand-driven telemetry of all data types is supported by radio outage management and satellite-link compatibility providing data where it is needed, not where it was created.

- **Remote command and control**
  Remote configuration and monitoring of all vessels allows work instruction delivery, remote data logging and centralized QC, meaning fewer staff, fewer mistakes, more visibility and more flexibility.

- **Total integration**
  Recording systems, source systems and navigation sensors can be fully integrated, together with a wide range of onboard systems such as acoustic positioning and identification systems, first-break pickers, USBL systems, autopilot controllers, gun controllers and dynamic positioning systems.

- **Distributed synchronization**
  50-microsecond event synchronization is distributed throughout the fleet to provide shot control, pinging control and timing QC.

- **First break and acoustic position integration**
  Hybrid solutions and acoustically-calibrated first-break velocity models provide confidence, QC and redundancy.

- **HSE management**
  Fleet-wide vessel tracking augmented by a GIS-based exclusion management system provides safety monitoring and an audit trail.

ION has been delivering solutions to the oil and gas industry for over 40 years, and is the leading provider of real-time, multi-vessel positioning and control systems. For further information contact csl-sales@iongeo.com.