



Marine Survey and Construction Software

About Ilex Computing ...

Ilex Computing Ltd. is an established software company providing software development primarily for the offshore survey, exploration and construction industry. The company provides bespoke development services for PC based systems, whether they are networked or stand-alone systems. We assist the client in all phases of the development cycle of a product, from initial concept through development to delivery, installation and training. Rapid response are key words in the Offshore Exploration Industry and Ilex carries this through to industry in general and tries to provide solutions ON-TIME and IN-BUDGET plus lifetime support of a product.

TGuard32 ... FPSO & Tanker SBM Excursion Monitoring System & Environment Monitoring

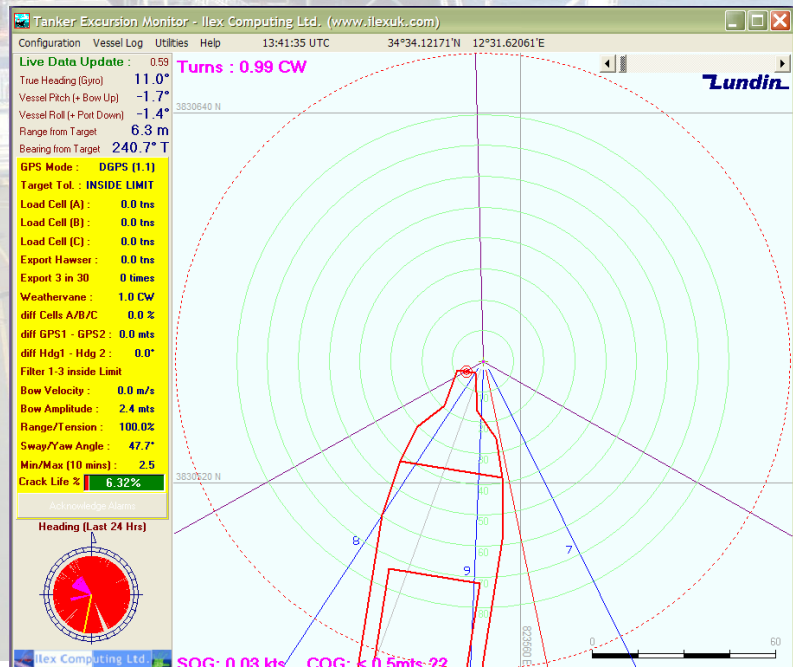
"TGuard32" is a software package that interfaces to up to 2 DGPS positioning systems, plus heading and Pitch/Roll sensors to provide 100% redundancy of positioning with real-time comparisons between systems. The package provides position monitoring relative to a node or SBM mooring position. It can display a DXF background information on the field layout plus a bullseye for the optimal mooring location. The system also interfaces to an 8 channel analogue – digital converter so that load cells on the mooring system, weather monitors or other analogue devices can be logged and displayed. There are spoken audible alarms to alert the watch keepers of particular problems where systems have exceeded the tolerance levels set by the user.

Some Typical Applications :

- FPSO Position Monitoring
- Semi-sub rig location monitoring
- Flotel position monitor
- SBM excursion monitoring

Description

The display on the right shows a typical display with the main body of the screen given over to the plan view of the node, the vessel monitoring point and the field layout detail. Down the left side of the screen are various data displays, the top relates to real-time position while the yellow area provides alarm information when load cells or positions exceed tolerance levels. The alarms are configured by the user



Typical main display showing vessel and node centre.



and any three channels can be compared to provide a redundant computation, e.g. if there are 3 load cells on a mooring system and one drifts the system will automatically determine which and raise the alarm. All data is logged to disk and zipped to preserve space. Data files are comma separated for ease of analysis however a statistics program is provided to ensure that data is correctly logged and to review the data.

A database or **Fieldbook** is maintained which contains the Spheroid, Projection and Datum Shifts information which can all be defined by the user. This is also used to select default offsets, import a DXF background drawing file, and set the alarm limits. Typical pages are shown here ...

A typical installation is shown here from the IKDAM utilising dual Vector Pro DGPS units and a dual analogue system to provide 100% backup and comparison.



The alarm panel is shown here, the items in red are outside of limits and the cross to the right of a non-red item indicates that it was outside limits but has returned inside limits now.



This system is installed on the superstructure and as such there are no live antennae forward of the bridge, reducing the likelihood of damaged cables etc. and keeping costs down.

GPS Mode :	DGPS (4.0)
Target Tol. :	OUT OF LIMIT X
Load Cell (A) :	0.0 tns
Load Cell (B) :	0.0 tns
Load Cell (C) :	0.0 tns
Export Hawser :	0.0 tns
Export 3 in 30 :	0 times
Weathervane :	0.9 CW
diff Cells A/B/C :	0.0 %
diff GPS1 - GPS2 :	0.0 mts
diff Hdg1 - Hdg 2 :	0.0°
Filter 1-3 inside Limit :	X
Bow Velocity :	0.0 m/s
Bow Amplitude :	0.0 mts
Range/Tension :	-999.0% X
Sway/Yaw Angle :	4.0°
Min/Max (10 mins) :	38.7 X
Crack Life % :	0.00%
Acknowledge Alarms	