Spectrum **X L I** Competitive Comparison

✓ Integrated   ○ Optional   ✗ Not Available

	Sub (m) GPS Data	Land state, use & terrain	Photos	CP Readings	CIS Readings	Pipeline DOC	Water Depth	Coating (Current Attenuation)	Coating DCVG	Coating ACVG	Gas Detect	Display and Processor
XLI	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	640 x 480 624 MHz
DCVG	○	✗	✗	✗	✗	✗	✗	✗	✓	✗	✗	Analog
Product A	○	✓	✗	✓	✓	○	✗	✗	✓	○	✗	320 x 240 400 MHz
Method B	○	✗	✗	✓	✓	✗	✗	✗	✓	✗	✗	320 x 240 20 MHz
Brand C	○	✗	✗	✓	✓	✗	✗	✗	✓	○	✗	320 x 240 206 MHz

* XLI System Price includes the required sub meter GPS system, but not the $920.00 annual OmniStar Correction service, all other systems require $4,500 Sub meter GPS system upgrade for comparable performance.

XLI also eliminates engineer time to process / analyze data through automation of the data processing that is available for an ongoing data processing fee

Spectrum **XLI** Sample Specifications

Field
- Processor Speed: 520 - 624 MHz
- Display: full VGA, screen resolution 640 x 480 color
- Storage: SD Cards, 1-4 GB
- Points per second: (CIS - 75, GPS - 10)
- GPS Accuracy: SubMeter (scaleable from 8m to centimeter)
- Operating Time: 6-12 hrs. between charges (extra batteries field swappable)
- Envronmental

Office
- Falcon software: Requires MS Windows NT, 2000, XP, Vista, 64 MB free

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Spectrum e**X**ternal **L**ine **I**nspection Technologies Inc.

*The Evolution of e**X**ternal **L**ine **I**nspection*

Spectrum XLI is a family of products specifically developed for the Indirect Inspection of pipelines as part of the External Corrosion Direct Assessment (ECDA) process. XLI Office suite is a PC software product for the processing, correlation and analysis of indirect inspection survey data. XLI Field is a collection of specialized instruments for the collection of Indirect Inspection data.

The XLI Indirect Inspection surveys include:

GPS - GPS Centerline
DOC - Depth of Cover
ROW – Right of Way Condition, Inventory using standardized descriptions
ACCA - AC Coating Attenuation
ACVG - AC Voltage Gradient
DCVG – DC Voltage Gradient
CIS - Close Interval Survey (Cathodic Protection)
Water Crossing Profile
Gas Leak Detection
User Comments

THE XLI DATA INCLUDES:

LINE LOCATION
GPS centerline survey

RIGHT OF WAY INVENTORY
Indexed list of Test Stations, Pipeline Marker signs, crossings, roads, etc.

LAND STATUS
Indexed list of:
- Land Use States – Arable crop, pasture, landscaped, Bush, etc.
- Land Uses – Crop, stock, recreation, unused, etc.
- Accessibility – Easy to impassable.
- Terrain – flat, slope, undulating, etc.

PHOTOGRAPHS
Digital photographs are integrated into data for report generation and special reference.

DEPTH OF COVER
Depth of cover corrected for diameter.

DEPTH OF WATER
Sonar or otherwise measured water depth for calculation of depth of cover under water crossings.

COATING CONDITION
Overall condition of coating over longer lengths via AC Attenuation.

Logging of specific coating fault indications via ACVG.

LEAK DETECTION
Logging of leak detection readings during leak surveys.

CATHODIC PROTECTION
Close space survey data correlation and analysis.

PIPELINE ALIAS
Integrated Pipeline ALIAS for universal indexing of pipeline features and anomalies.

XLI Office

XLI Office is specialized software for the processing, correlation and analysis of indirect inspection survey data. The XLI Falcon software can import and automatically process and analyze XLI Field data, as well as data files from most common CIS / ECDA inspection survey data loggers. There is also a universal data template that can be used to import any of the ECDA Indirect Inspection data types handled by XLI.

The advantages of XLI Office and the Falcon software are:
- Increased speed of data processing; reduce data processing, alignment and analysis from hours to minutes!
- Collect the data in any order or direction, Falcon automatically sorts it out
- Increased accuracy of results through code driven analysis.
- Increased functionality through comprehensive correlation of multiple survey data sets in one universal format.
- Increased flexibility though standardized exports of processed data.

XLI Field

The XLI Field suite of products include the state of the art in indirect inspection technologies for ECDA. The heart of the XLI Field suite of products is a rugged data logger with specialized software to log all of the XLI Indirect Inspection data. The XLI Field data logger is upgradeable to be the most comprehensive in the industry with the addition of the XLI Spectrum Controller; a specialized device for the consolidation of multiple instrument readings into one data stream.

PRODUCTS FOR XLI FIELD

- Data Logger – Windows Mobile 5, VGA color touch screen, high speed SD storage card, Integrated CF Digital camera, Bluetooth or serial connectivity.
- Spectrum Controller – Data hub with integrated AC/DC volt meter for consolidation of Line locator, GPS and Sonar or other NMEA compliant survey devices into single data stream to XLI data logger. Class three Bluetooth for wireless connectivity.
- Line Illuminator –100 Watt XLI Line illuminator with remote status monitoring and modular power supply, allows up to 20 miles of line to be illuminated. Optional SeekTech inductive 10 Watt and 5 Watt Line Illuminators are also available for the standard XLI Field system, or use XLI with other commercially available electromagnetic line locating systems.
- Line locator – Compatible with a number of brands.
- Cleats and/or pins for ACVG survey.
- GPS – XLI Field systems can work with most NMEA compliant GPS devices, including handheld units up to high accuracy survey grade systems. The standard GPS receiver for the XLI Field system is a real time differentially corrected system capable of sub-meter accuracy.