

**Radio Remote Controls**



**Communications**



**HLS HARD-LINE SOLUTIONS INC.**  
**COMPANY PROFILE 2009**

**Video**



**Service**



**HLS  
HARD-LINE**

**Solutions  
Inc.**

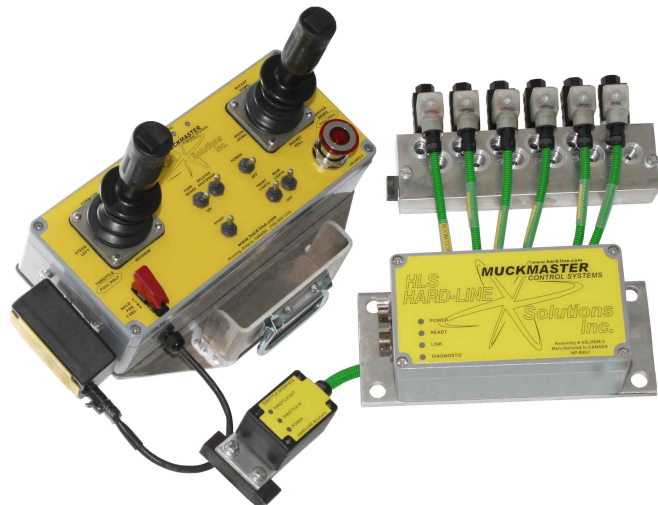






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## COMPANY OVERVIEW

### EXECUTIVE SUMMARY

HLS HARD-LINE Solutions Inc. has developed mining automation products since the company's conception in 1996. The company has completed numerous projects during this period.

### COMPANY STRUCTURE

Date of Incorporation: 1996, under provincial charter.

### COMPANY BACKGROUND

HLS HARD-LINE Solutions Inc. was established in 1996, in Sudbury, Ontario. Company officers include Walter Siggelkow, President, Ryan Siggelkow, Special Projects Manager, Philippe Pelland, Technical Service Project Manager, Darryl Green, Production Manager, and Yanick Dequanne, Controller. These individuals also function as senior management staff.

HARD-LINE expanded out of its leasehold location in 2000, purchasing a property (40,000-sq. ft.) in Dowling, Ontario. This is about 20 miles north of Sudbury on Hwy 144 in the heart of Ontario's mining capital. The building (14,000 sq. ft.) has enabled the company to provide a better, more productive work place for employees, and provided room for expansion. This expansion was important for the innovative aspect of the business, which is core to continual participation in the industry.



*Sprawling 14,000 square feet, 53 Main Street in Dowling, Ontario is the ideal location for HARD-LINE - right in the heart of Ontario's mining capital.*





## COMPANY OPERATIONS

Employees at HARD-LINE have hundreds of years of combined expertise in electronics, electrical design, mechanics (mobile and stationary) and mining. HARD-LINE's strength as a company lies in its diverse staff and their ability to complete technological projects economically and efficiently. Services include the design, manufacturing, and diagnostics, as well as maintaining and repairing of electrical, electronic, mechanical and hydraulic control systems for mobile and stationary equipment. The company also provides and integrates new leading edge technologies into existing systems.

HARD-LINE now employs over 30 individuals on a full-time basis, many of whom are qualified technicians, fully trained to operate in their appropriate fields. The company does everything from designing PC board layouts, to the actual installation of the finished product on the machine.

HARD-LINE attained ISO 9001:2000 certification to ensure that quality products and services are continuously provided to clients. Improvements in productivity, consistency, and quality have resulted. Reduced costs have therefore been realized helping HARD-LINE compete in the global market it has positioned itself in.

General company management has been streamlined through the timely and innovative development and implementation of computer software and hardware systems and the selective hiring of skilled and knowledgeable personnel. Day to day operations run smoothly, freeing the company's innovative personnel to concentrate on development projects instead of paperwork.



*HARD-LINE maintains an inventory, which is valued at approximately \$750,000.00 so as to support customers who rely on HARD-LINE's products in their production environments. All HARD-LINE operations are ISO 9001:2000 certified.*



All jobs, whether normal sales, service, or projects are accurately tracked for both time and materials using real time data captured into a database. Time and a description of work accomplished are entered electronically when the work is done. Materials and expenses are charged to the job during data entry or when the materials are removed from inventory. HARD-LINE maintains an inventory, which is valued at approximately \$750,000.00 so as to support customers who rely on HARD-LINE's products in their production environments. All component work is processed using an inventory database identified by part number, picture label and Universal Product Code (UPC). Inventory items are stored and organised to facilitate timely deployment.

HARD-LINE's staff of design, mechanical, manufacturing, and service professionals pool a wide knowledge base and decades of "real world" experience to provide complete, reliable, turnkey operating solution packages.

The company's sales have grown at an average yearly growth rate of approximately 23%! Even during the recession of 1999, which impacted most industries, HARD-LINE increased its sales by 24% (fiscal 1998 to 1999). Since its inception, HARD-LINE has been continuously profitable. This profit is always invested back into the company in the form of new equipment, improved work environment, and inventory. South America is a major market (especially Chile, Peru, and Bolivia), and HARD-LINE has been systematically increasing its presence there, with sales agents domiciled in Peru, Chile, and Brazil supported by a Spanish text web site. HARD-LINE has expanded its target into Africa, Europe, The United States of America, Australia, China, and Central America. In the coming years, HARD-LINE will continue to support an international community and more emphasis will be placed on the expansion of the communications system product line.



*HARD-LINE manufactures their units on site, meaning the staff who repair and service the HARD-LINE product are very familiar with how they function. All administration is also performed at the HARD-LINE building, allowing everything from manufacturing to sales to be conducted in one location.*







## PRODUCT LINES

### RADIO REMOTE CONTROL SYSTEMS

Proportional and ON/OFF radio remote control systems for underground and surface applications such as: LHD, Locomotive, Excavator, Dozer, Skid Steer, and more. All HARD-LINE control systems are bi-directional allowing not only for control of the equipment, but response back to the operator for the ultimate level of security and safety.



### EXTENDED LINE OF SITE VIDEO OPTIONS

An option for addition to the Radio Remote Control Systems. The extended line of site video option increases the range of conventional remote control systems by adding video capabilities. With these capabilities, heavy machinery can be maneuvered more effectively around corners, or farther into a draw point. Operators of LHDs are given a view of the material being loaded into the bucket, thereby ensuring that a full load is acquired before the machine is backed out. The use of this HARD-LINE product heightens the efficiency of the LHD process.

### TELE-OPERATED CONTROL SYSTEMS

Tele-operated systems to control one or more Rockbreakers, LHDs, Drills, etc. from a central control station. These systems make it possible for a single operator to run multiple pieces of equipment located in different places. The end result may be reduction in work force or removing the operator from a hazardous environment. The control link can be RF, Hardwire or Fiber Optic technologies or a combination. These systems include video, audio, data, and hydraulic interface components.



### RF/IP/SURVEILLANCE VIDEO SYSTEMS

Radio Remote Video Systems for fixed or mobile applications. Capable of operating as line of sight or over an underground communications network. These video systems can include audio with color or black and white display. Usually used as an add-on to a Radio Remote Control System, they are also used as a surveillance system in harsh underground environments.



## SKID STEER RADIO REMOTE SYSTEM

Skid steer radio remote control systems give the operator the feel of actually being on the machine. The function layout and operations are the same in both manual and remote operation. Fully integrated electronic interface with trouble-shooting LED modules are provided. Full proportional outputs (standard on all HARD-LINE control systems) give the operator extremely fine control, making the most demanding jobs easy.



## LOCOMOTIVE SPEED CONTROLLER SYSTEMS

Fully compatible with the MUCKMASTER LOCOMOTIVE radio remote control system. The unique integrated design incorporates a powerful microprocessor together with MOSFET power electronics to perform simultaneous control of pump and traction systems.

## DIGITAL WIRELESS COMMUNICATION

A mine wide approach to communication (data, voice, video). Everything is linked together over a standards-based wireless network which provides the foundation for productivity reporting, automated process control, downtime reconciliation, immediate resource dispatch, etc. This system is light years ahead of the competition. Customers asked for a system with many more abilities and HARD-LINE delivered.



## SOFTWARE APPLICATIONS

Capability to track the location of all enabled mobile resources throughout the mine. The system uses worldwide wireless standards to communicate with machinery (even Man-Along tags) to determine their whereabouts throughout the operations, and all this in real-time. A managers dream, - this system provides the what, where, when, and who - information that can not be doctored. This trusted information that can be used to make knowledgeable business decisions.



## HAZARDOUS WASTE REMOVAL

Wireless Tele-operated systems to control excavators and bulldozers and processing plants from a remote location. This system moves the operator out of harms way. Fully functional with HARD-LINE 2.4GHz wireless video system, it can operate up to 4 pieces of equipment from one station. Full proportional controls give the operator an excellent feel for the machine.



## SHAFT MANAGEMENT SYSTEM

This system wirelessly transfers door latch status, skip contents weight and level as well as battery voltage from the skip to a programmable logic controller in the loading pocket and in the head frame. This integrates seamlessly into the clients shaft automation system. Wireless telephone service can be added to the shaft management system.

## NUCLEAR CLEANUP

Provides full tele-operation for disposal of unknown nuclear waste sites. In order to completely remove the operator from exposure to extreme radiation hazards, the HARD-LINE nuclear cleanup applications uses the MAN communication infrastructure to connect the operator's site with the excavation location. This allows for increased safety as well as efficiency.

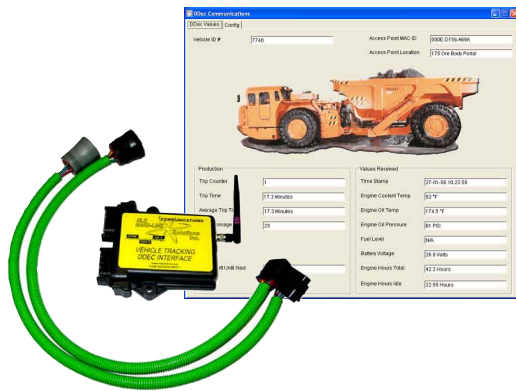
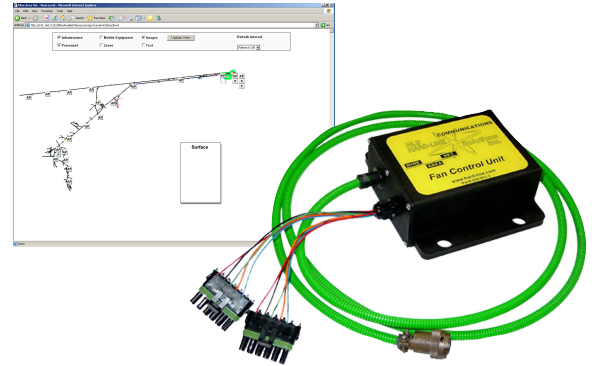


## MILITARY APPLICATIONS

A complete lightweight, high speed tele-remote attachment which enables a standard six wheel all-terrain vehicle to be driven by wire control. This unit is self-contained, amphibious, and can be operated completely from a remote location.

## VENTILATION ON DEMAND

Works over the digital communications system to monitor and control main and auxiliary vent fans in mines. This allows mine personnel to keep apprised of the function of individual fans throughout the premises, which means clean air is provided for workers without unnecessary fan usage.

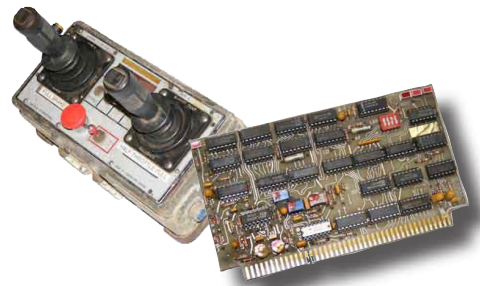


## ENGINE AND MACHINE DIAGNOSTICS

This application allows for the assessment of how productive a machine has been throughout a shift, thereby providing the necessary individuals with the ability to oversee production more accurately. This HARD-LINE product also ensures that cost and efficiency is maximized.

## REPAIR BUSINESS

A service HARD-LINE has consistently provided with quality since it's inception. The staff maintains versatile knowledge of remote systems so that they can perform repairs even on their competitor's units.



## FIELD SERVICE WORK

A second service branch HARD-LINE has maintained for years. Service technicians will conduct onsite visits for the installation of electronic control systems, callibration of underground leaky feeder based radio systems, service of mobile machine wiring and control systems, and more. This support is also available 24 hours a day, seven days a week. Since HARD-LINE maintains an inventory of parts valued at \$750,000, the necessary items are readily available for the fastest service possible.



## 1996–PRESENT

### RADIO REMOTE CONTROLS INSTALLED ON MOBILE EQUIPMENT IN MINES

Each machine used in underground mines tends to be slightly different. Thus, almost every sale creates a new project. HARD-LINE sells and installs approximately four radio remote control systems per month on loaders, locomotives, drills, etc. Every system sold works as stated. HARD-LINE has never lost a client once they converted to HARD-LINE products.

## 1997–1998

### LOW COST RADIO REMOTE DIGITAL SWITCH

Project was to design a device to remotely control equipment such as fire doors and loading chutes. Project was successful and incorporated into HARD-LINE product lines.

## 1997–1998

### PERSONNEL PROXIMITY DETECTOR

Project was to develop a device to create a protective zone around mining personnel who must work underground near remote control mobile equipment. Device automatically stops vehicle if protected zone is intruded upon. Project was successful and incorporated into HARD-LINE product lines.

## 1997–1998

### TELE-OPERATED MULTIPLE ROCK BREAKER SYSTEM

Project was to develop a system to enable mining personnel to operate multiple breakers located in different parts of the operation. As the mine aged, ore is transported to different ore passes. The same amount of ore is hoisted out of the mine and milled, but from different locations. In a four on four off schedule, four additional people would be required without any increase in revenue. This project was successful and expanded in the following years. Many additional systems are in operation around the world today. Details are as follows:

### Tele-Op Control Station

- Ergonomic control chair
- Joysticks and control panel mounted in the chair
- 2 Standard 21 inch NTSC video monitors
- NTSC video cameras with 0 lux 40x auto zoom
- 360 pan/tilt functions
- 802.11 M.A.N. communication system



The HARD-LINE  
Tele-Operated Control  
Station

HLS HARD-LINE Solutions Inc. has developed mining automation products since its conception in 1996. The company has completed numerous projects during this period.

- 2.4 GHz Wireless Communication Network (Mine Area Network)
- 2.4 GHz Wireless Video System
- 900 MHz Digital High Speed Data Radio
- Tele-Op Fiber Optic Control System
- Electric/Hydraulic Control System

Previous projects have increased HARD-LINE capabilities of supplying innovative products to the mining industry. The ability to expand the product line by exploiting the technological testing and development has proved to be indispensable to the company's growth. The majority of HARD-LINE's support has come from SR&ED Tax Grants.

## 1996–1997

### 900MHZ DIGITAL BI-DIRECTIONAL RADIO REMOTE CONTROL

Project was to design a 900MHz digital bi-directional spread spectrum radio to remotely control equipment such as front end loaders, locomotives, jumbo drills, concrete sprayers, etc. End product needed to be easy to program and reconfigure. Project was successful and became the basis for HARD-LINE product lines. Details are as follows:

### Electronic over Hydraulic Control System

- Microprocessor controlled electronic
- C.A.N. Bus SAE J1939 compliant
- 100Hz pulse width modulated valve drivers
- 4 to 20 milli-amp or 0 to 10 volt inputs
- 24vdc proportional pressure reduce pilot valves
- Hydraulic 3 way 4 position aluminum valve manifold





2000

**SHAFT TELEMETRY MANAGEMENT SYSTEM**

Project was to develop a communication system to transfer door latch status, skip ore weight and ore level from the skip to a programmable logic controller in the loading pocket and at the head frame. System also provides half-duplex telephone quality transmission. Project was successful and incorporated into HARD-LINE product lines.

2000-2003

**HIGH BANDWIDTH DIGITAL MINE WIDE COMMUNICATIONS SYSTEM**

Project was to develop a communication system that could be deployed throughout an entire mine complex at a competitive cost. System includes Voice Over IP (VOIP) audio communications, both surveillance and real time digital video, and high speed hard wired and wireless data communications. System consists of mini cell sites all connected together by a standards based Ethernet infrastructure. Project was successful and spun off the second major product line, Mine Area Net (MAN) for HARD-LINE. Details are as follows:

**High Speed Wireless Communication Infrastructure**

- IEEE 802.3 compliant full duplex network with spanning tree protocol
- IEEE 802.11 compliant 2.4GHz, 11/54 Mbps spread spectrum wireless devices
- Multi-mode fiber optic or unshielded twist pair network connectability
- EtherFast 10/100 Workgroup Switching
- SVP for audio communication
- Network application server
- Cisco I/P PBX Telephony solution
- 120vac uninterrupted power supply



2001

**RADIO REMOTE CONTROLLED DOUBLE ENDED LOCOMOTIVES**

Project was to convert an underground track haulage system to radio remote connection between the two locomotives and provide radio remote control operation. The train consists of two fifteen ton Goodman 120VDC battery powered locomotives separated by fourteen ore cars. The train must be operated from ether end so that the operator is always in the front no matter which direction traveled. This hardwired connection was extremely problematic. The train must also be operated from a loading station with no personnel on the machine. The radio remote control aspect of this project was attempted three times by different competitors before HARD-LINE did. The resulting complicated systems often broken down and were expensive to repair, requiring outside personnel. Once HARD-LINE took on this task, however, the project was a total success with an added benefit. As a result of the fine proportional control available with the HARD-LINE system, operation is much smoother, resulting in reduced wear and tear on the mechanical components of the locomotives.

2001

**RADIO REMOTE CONTROLLED BOBCAT SKID STEER LOADER**

Project was to convert a standard Bobcat skid steer loader to radio remote control to increase the distance of the operator from high radiation ore at Cameco's, McArthur River Uranium Mine. Project was successful and a second machine was supplied in 2003.

2001-2002

**TELE-VIDEO OPERATED RADIO REMOTE CONTROLLED HITACHI HYDRAULIC EXCAVATOR, JOHN DEERE BULLDOZER, AND CATERPILLAR TRACK LOADER**

Project was to convert two Hitachi hydraulic excavators, one John Deere bulldozer and one Caterpillar track mounted loader to radio remote control. All equipment was to operate in one location, within several meters, and allow an operator to control each piece of equipment from a remote location independently without interfering with each other. Project was successful and Iron Horse Earthworks, a Calgary-based environmental construction company, is cleaning up a hazardous waste site (what used to be a munitions testing ground) on the Tsuu T'ina Indian Nation Reserve south-west of Calgary with the HARD-LINE equipment machines.

2001-2002

**RESOURCE TRACKING SOFTWARE PACKAGE FOR COMMUNICATIONS SYSTEM**

Project was to develop a database driven software package to track all resources (personnel and equipment) in the mine complex. Due to the fact that the communication system consists of mini cells, resources can be tracked as they move from area to area. Project was successful and became the core of a suit of applications.

2003

**RADIO REMOTE CONTROLLED BOBCAT MT50 WALK BEHIND SKIDSTEER LOADER**

Project was to convert a standard Bobcat MT50 skid steer loader to radio remote control for use in confined space cleaning of storm sewers under freeways. Project was successful and is in operation in Pittsburgh, Pennsylvania.

2003

**MACLEAN ENGINEERING BLOCK HOLE DRILL**

Project was to convert a MacLean Block Hole Drill to radio remote control. The machine was outfitted with a competitors remote control system which was very unstable and unreliable. The customer standardized on the MUCKMASTER radio remote control system mine-wide and the overall machine is now reliable and more cost-effective. Project was successful and more machines are being looked into for future projects.





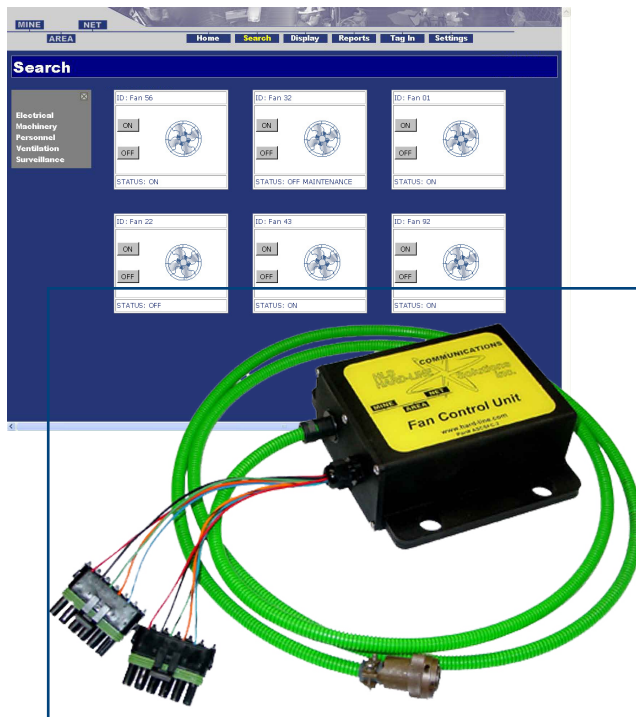
## & INNOVATIONS CONTINUED

### 2004 SECURITY ROBOT

Project was to convert three standard six (6) wheel ARGO all terrain vehicles to drive by wire control. Cost was the most important factor for this project. The target customers were not industrial clients who were used to paying high prices for this sort of technology. These machines are operated via radio remote control (maintenance), on board navigation systems, or computer terminals. All wireless is ethernet. The first ARGO was delivered in only five (5) weeks. This provided a platform for the navigation system prototyping. Several areas for improvements were identified and implemented into the final delivered machines, four (4) months later. Project is ongoing.

### 2004 ATLAS COPCO SIMBA DRILL WIRELESS TELE-VIDEO LINK

Project was to convert an Atlas Copco Simba Drill to Radio Remote Control with a Tele-video link. A system was developed to handle all of the I/O that the machine required. It proved to be a difficult job which was accomplished by replacing a cable with a wireless link capable of 72 signals. Project was successful thus adding to HARD-LINE's vast knowledge base of Machine Interfaces.



Ventilation Monitoring and Control Application

### 2004-2005

#### VENTILATION MONITORING AND CONTROL APPLICATION

As energy costs and concerns rise, companies are always looking for ways to help the environment and lower expenses. The HARD-LINE ventilation monitoring and control application works over the digital communications system to monitor and control main and auxiliary vent fans in mines. Previous to this system's development, companies had no way of knowing which fans were on or off. As a result of this lack of knowledge, all fans were left running at all times to ensure the provision of clean air for workers. With this application, mines can now monitor, control, schedule, and automate the use of fans within their work setting.



### 2004-2005

#### DC SOLUTION DIGITAL COMMUNICATIONS SYSTEM

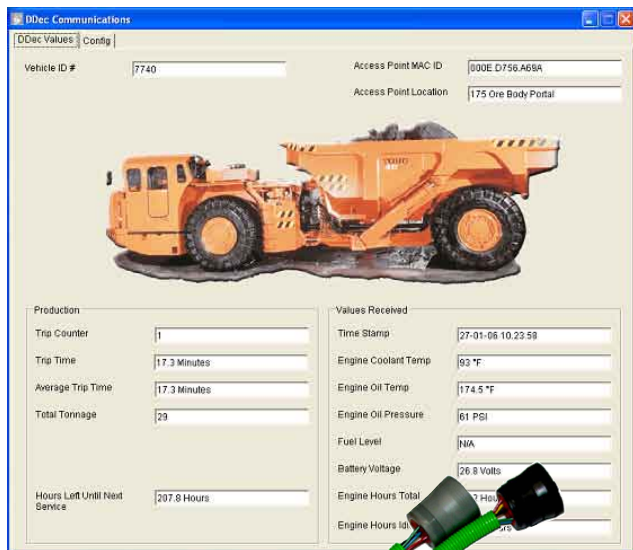
The communications system developed between 2000 and 2003 used AC power and this proved to necessitate very expensive and time-consuming installations. HARD-LINE decided DC power would eliminate many of the issues created as a result of the previous design. New infrastructure components and power were designed using the backbone described in the 2000-2003 High Bandwidth Digital Mine Wide Communications System project. Software applications and industry-driven uses are being developed on a daily basis.

**2004**  
**MINING CAPLAMP BATTERY**  
**WIRELESS ETHERNET PAGER**

Project was to develop a wireless pager that would be incorporated into a miner's cap lamp battery and supported by the M.A.N. Digital Communications System. Project was successful and has been added to the many applications for the M.A.N.

**2004**  
**MOBILE EQUIPMENT VEHICLE MOUNTED**  
**WIRELESS ETHERNET**  
**TRACKING/PAGING/DISPATCHING DEVICE**

Project was to develop a wireless mobile terminal that was to serve as a tracking/paging/dispatching service from the surface to the underground mobile machines. This terminal gets its power from the machine that it is running on and communicates with the M.A.N. wirelessly. Project was successful and has been added to the M.A.N. product line.

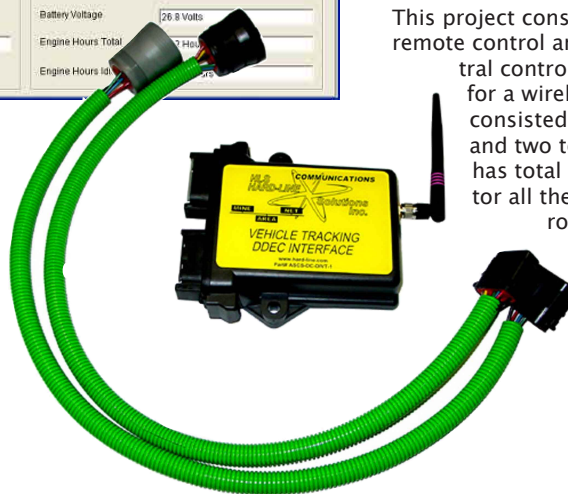


**2005**  
**ENGINE AND MACHINE DIAGNOSTICS**

Previous to the development of HARD-LINE Engine and Machine Diagnostics mine personnel could not monitor how long machines were running, the location of the machines, and other pertinent information regarding the use of equipment within the mine. This application allows for the assessment of how productive a machine has been throughout a shift, thereby providing the necessary individuals with the ability to oversee production more accurately.

**2005**  
**TELE-OPERATED CONTROL, VIDEO, DIAGNOSTICS,**  
**AND INFRASTRUCTURE FOR NUCLEAR WASTE CLEANUP**

This project consisted of converting an excavator-type machine to remote control and monitoring all inputs and outputs from a central control station. A network infrastructure was required for a wireless data link to the machine. The final system consisted of a controlled chair with joysticks, foot pedals, and two touch screens. From these devices, the operator has total control of all machine functions and can monitor all the machine's diagnostic gauges as well as the cab rotation position. The customer can now keep its personnel from entering the radioactive environment, thereby not putting their employees at risk. In addition to the obvious safety benefits, the use of this system increases productivity by eliminating time-consuming operations.



*Engine and Machine Diagnostics*





## PROJECT TEAM

### ELECTRICAL AND ELECTRONIC DESIGNERS

*Terry Wurster, Ken Winkleman, and Walter Siggelkow*

design, plan and manage, research, evaluate and test electrical and electronic equipment and systems. They all have experience in designing electrical utilities, communications, manufacturing of electrical and electronic equipment, consulting firms, as well as processing and transportation industries and government.

### MECHANICAL DESIGNERS

*Walter Siggelkow, Robert Siggelkow,  
Ryan Siggelkow, and Darryl Green*

design, plan and manage, research, evaluate and test mechanical and hydraulic actuators, motors, cylinders and booms. They all have experience in the design of hydraulic systems and heavy equipment, manufacturing product with tools like CNC mills and lathes, vertical mills, ironworkers and hydraulic press brakes, welding machines, flame and plasma cutters.

### MANUFACTURING AND PRODUCTION

*Darryl Green, Lori Burke, Terry Wurster,  
Garry Dolson, Kevin Dallaire,*

are trained to assemble parts so as to produce HARD-LINE products, as well as to repair any equipment that comes into the shop. Their experience has allowed them to become experts on the particulars of how the HARD-LINE product line operates.

### ELECTRICAL AND ELECTRONICS ENGINEERING

#### TECHNOLOGISTS AND TECHNICIANS

*Walter Siggelkow, Philippe Pelland, Terry Wurster,  
Doug Elvidge, Darryl Green,  
Garry Dolson, Maxime Denis, Josiah Carriere*

provide technical support and services in the design, development, testing, production and operation of electrical and electronic equipment and systems. They have experience in servicing electrical utilities, communications companies, with manufacturers of electrical and electronic equipment, consulting firms, in a wide range of manufacturing and processing methods.

### SOFTWARE PROGRAMMERS

*Ken Winkleman, Jim Doyle,  
and Rob Hoffmann*

research, design, and develop computer software systems, in conjunction with hardware product development, for communications in the mining industry, applying principles and techniques of computer science, engineering, and mathematical analysis. These individuals analyze software requirements to determine feasibility of design within time and cost constraints. They also develop and direct software system testing procedures, programming, and documentation, as well as consult with customers concerning maintenance of software systems along with coordination of software system installation. They have experience with .NET programming in C#, embedded software development with x86, Rabbit semiconductor architecture, network and database programming.

### HEAVY DUTY EQUIPMENT MECHANICS, WELDERS, AND MACHINISTS

*Walter Siggelkow, Philippe Pelland,  
Doug Elvidge, Robert Siggelkow,  
Donald Boyer, Kyle Thaxter, and Philippe Michaud*

repair, troubleshoot, adjust, overhaul and maintain mobile heavy-duty equipment used in construction, transportation, forestry, mining, oil and gas, material handling, landscaping, land clearing, farming and similar activities. They have experience with companies, which own and operate heavy equipment, heavy equipment dealers, rental and service establishments, railway transport companies and urban transit systems. They also possess a range of skills, which allow them to operate welding equipment to weld ferrous and non-ferrous metals. They have experience with companies that manufacture structural steel and plate work, boilers, heavy machinery, aircraft and ships and other metal products, welding contractors and welding shops. In addition, they have a range of knowledge, including engineering drawings, layout procedures and mathematics, as well as skills in machining and assembly. They possess skills and sound knowledge of the properties of metals and related machine-able materials as well as the ability to determine cutting speed. They are proficient in mathematics and the interpretation of engineering drawings.

### CUSTOMER SERVICE, SALES, AND PROJECT SUPPORT

*Ryan Siggelkow, Laurie Kulik, Brad Dowdall,  
AJ Labelle, Lindsay Tycholiz, Tracy Carter,  
Stephen McIntosh, Martin Verastegui  
and Yanick Dequanne*

contribute all the necessary sales and administrative skills to the HARD-LINE team. Taking charge of account managing, and customer inquiry support, their responsibilities take in compiling project proposals, conducting extensive sales trips, research, and the essential processes it takes to ensure that the HARD-LINE office runs smoothly. Projects are brought from initial contact through to final customer acceptance by experienced people in contact with the client to ensure that the project is completed in a manner that is required.







## COMPANY RECOGNITION

In the recent years, HARD-LINE has received the following prestigious awards.



**NORTHERN ONTARIO BUSINESS AWARD FOR INNOVATION 2005**  
 Awarded to a successful company headquartered in Northern Ontario, developing state-of-the-art technologies and thereby contributing to the posterity of the north

**ONTARIO GLOBAL TRADERS AWARD FOR EXCELLENCE IN EXPORT – INNOVATION CATEGORY 2004**

Awarded to an Ontario based company for their success in exporting new technologies to international markets

**ONTARIO GLOBAL TRADERS AWARD FOR EXCELLENCE IN EXPORT– MARKET EXPANSION SERVICE – GOLD CATEGORY 2005**

Awarded to an Ontario based company for their success in exporting superior service to international markets, thereby improving the reputation of Canadian companies worldwide

**NRC-IRAP REGIONAL AWARDS FOR NEW TECHNOLOGY, ONTARIO REGIONAL FINALIST 2006**

Awarded to a company whose staff has developed a marketable new technology which has been proven in application. Received for the development of a Tele-operated Control System, which allows for remote cleanup of hazardous environments.

**CANADIAN MANUFACTURERS & EXPORTERS, CANADIAN INNOVATION AWARD CERTIFICATE OF RECOGNITION FOR NEW PRODUCT DESIGN AND COMMERCIALIZATION, 2006**

Awarded to a Canadian company for excellence in new product design and commercialization, Received for the MINE AREA NET Digital Communications System

**ONTARIO GLOBAL TRADERS MARKET EXPANSION AWARD BRONZE LEVEL 2007**

HARD-LINE received this award in light of the company's exceptional export sales for the year 2006. It is awarded to a company that has successfully established itself in new export markets as well as those it is already selling to. The company should also demonstrate that obstacles were overcome in order to achieve benefits such as, of course, higher sales, but also job creation.

**CANADIAN MANUFACTURERS AND EXPORTERS INNOVATION AWARD FOR THE DIVERSIFICATION OF EXPORT MARKETS 2007**

The award was presented to a company who has achieved success in market expansion through market diversification and adapting product and sales techniques to develop new export markets during the last five years. HARD-LINE and staff have worked hard to adapt their products and service properly to serve international markets and received this award for their efforts. This award was given to HARD-LINE as the top achievers in this category for all of Canada.

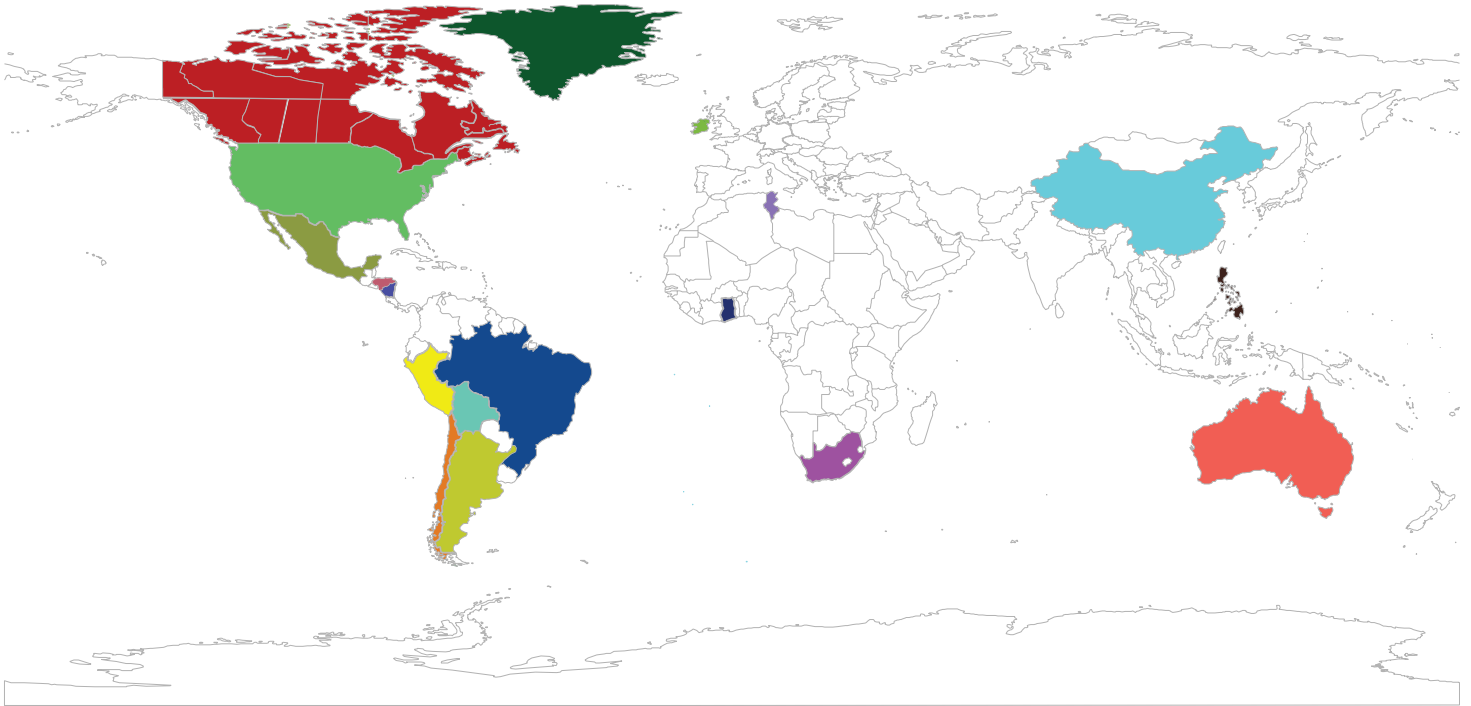


**ONTARIO CHAMBER OF COMMERCE ONTARIO GLOBAL TRADERS AWARD FOR EXPORT MARKET EXPANSION– GOLD LEVEL 2009**

This award was presented to a company that showed outstanding achievement engaging in export of their product. This specific category recognized companies that excelled when adapting to new global locations, ensuring that international clients receive the specific service they require. In previous years, HARD-LINE received similar recognition for the northern Ontario region. This year was particularly exciting for HARD-LINE since this gold level award was presented on a provincial level, for all of Ontario.



HLS HARD-LINE SOLUTIONS INC. –  
PRODUCTS AND SERVICES TRUSTED WORLDWIDE



\*Countries highlighted in colour are home to mines and other businesses that trust HARD-LINE products and services.



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