Where Is It and What Is It Doing?

LASSO Technologies, LLC

ASSET MONITOR APPLICATIONS

Location of assets at set intervals, report sensor's data from your asset, report when leaving a Geofence, and excessive speed, wandering away from a starting point. Satellite or Cell based flow meter reports, pump run times, tank level sensing. Review all Reports from any web based computer.

REPORTING

- Continuous tracking and tracing.
- Determine precise location & Sensory feedback of your asset.
- Flow Rates Frac Jobx. Pump Status. Tank Level Monitoring.
- Corporate multi-user access permissions and notifications.
- Multi user Corporate access and permissions.
- Monitor Legitimate Usage of Assets.
- Reduce Insurance Rates.

Cell Based

SENSING

- Flow Meters: Modbus, Serial, Pulsed output. GPM, Barrels per Day, total Flow.
- Silo or Oil Brine Tank Level Sensors. Ultrasonic, 4-20mA, Serial, Discrete.
- ECM J1939, ODB2 real time telemetry of engine data and most vehicle sensors.
- ECM option to read faults codes, rpm, engine hours, speed, odometer.
- Discrete Inputs and Outputs for remote control.
- Capable of Reading many types of sensors.

Satellite Based

BENEFITS

- Eliminate need to visit remote locations to take measurements.
- Track your Assets to Improve Business Processes.
- Environmental Responsibility through fleet management.
- Monitor Non productive Idle Time.
- Satisfy Government Regulations.
- Improved Customer Service.
- Better ROI.
- Lower Fuel Expenses. GPM. Emission Reporting.
- Powerful Alert Capabilities.
- Fleet Overview.
- Real time Alerts.
- Maintenance Reporting.
- Integrate planning & Operational Data.
- Made in USA.
- Low Operational Costs.
- Very long battery life.

SUPPORT

- Live Customer support.
- Nationwide and International Coverage available.
- No activation fees.

GPS Telemetry Solutions **Patents Pending**

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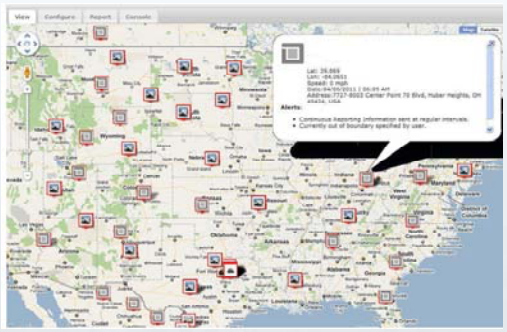
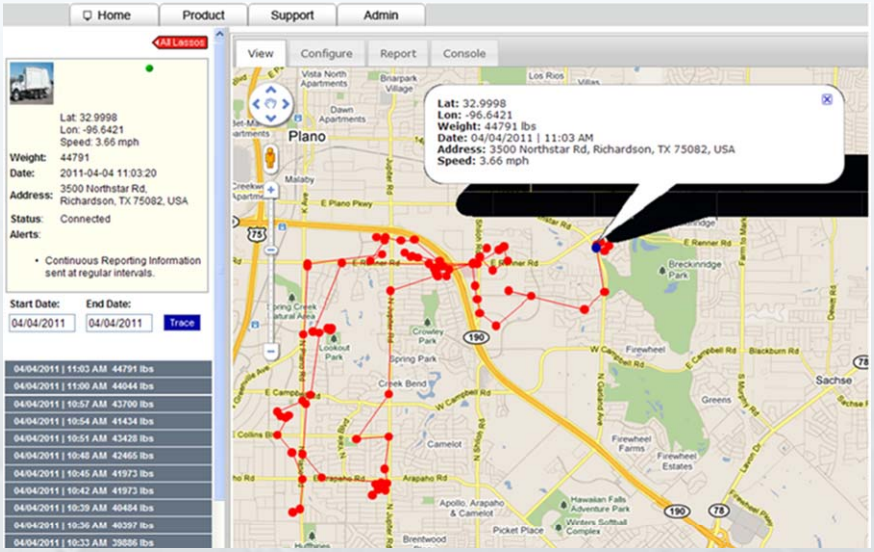
Asset Monitoring

Lasso Technologies provides satellite and cellular based wireless communications technologies that can be used for asset management, location, and machine status.



Asset Real Time Status



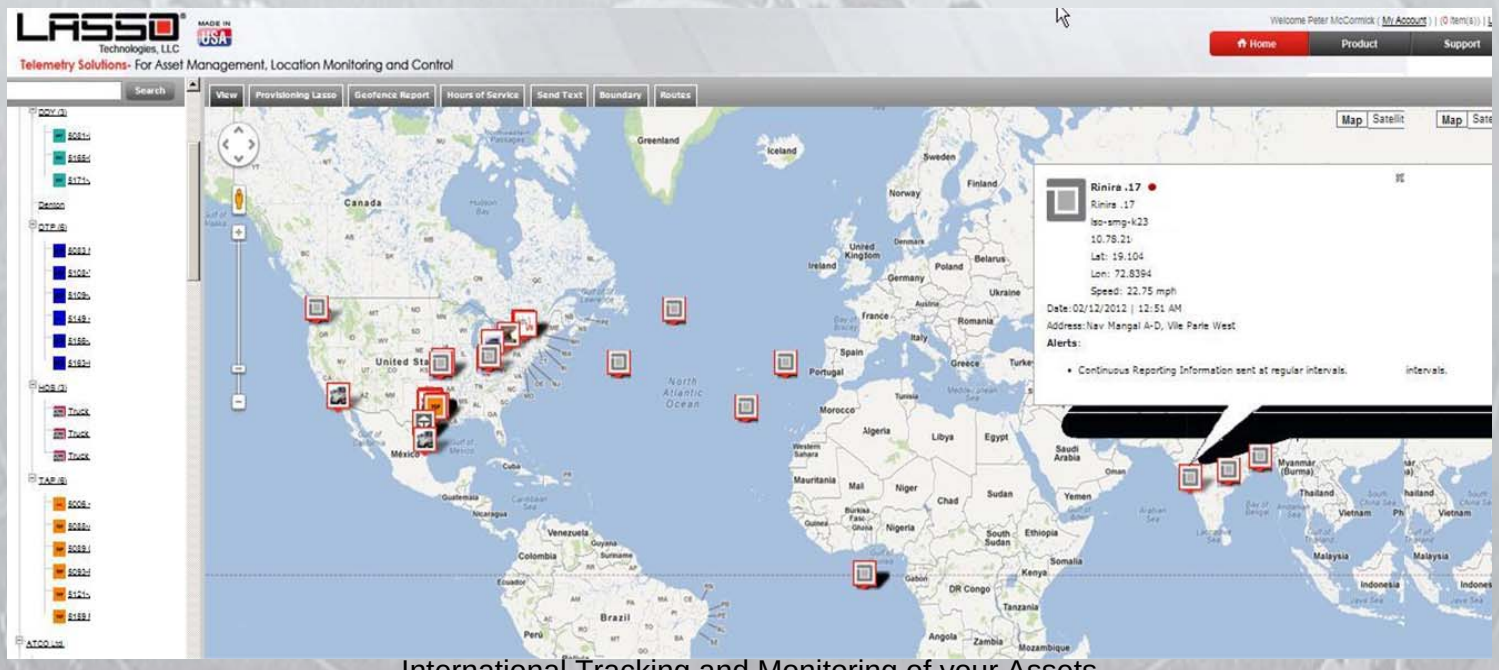
Bread Crumb and Real Time Tracking with Addresses.

MONITORING

- Location
- Access
- Payload weight
- Flow, Temperature, On/Off signals
- Pilferage & Intrusion
- Fixed or Movable
- Motion Detection
- Engine Run Time
- Monitor engine run time
- 3+ Year Battery Life
- Diagnostics and Low Battery Reporting

SATELITE PROVIDER

Globalstar is the world's largest provider of mobile satellite voice and data services. Globalstar has 52 low earth orbit satellites and are affiliated with Loral, Qualcomm, Alcatel, Vodaphone, Hyundai and others.



International Tracking and Monitoring of your Assets

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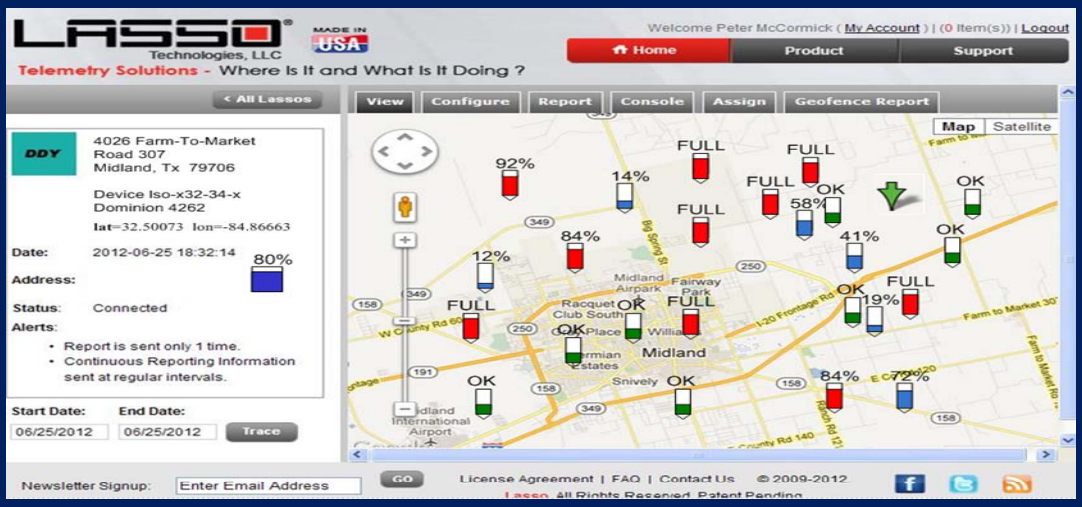
Cell or Satellite Tank Level Monitoring

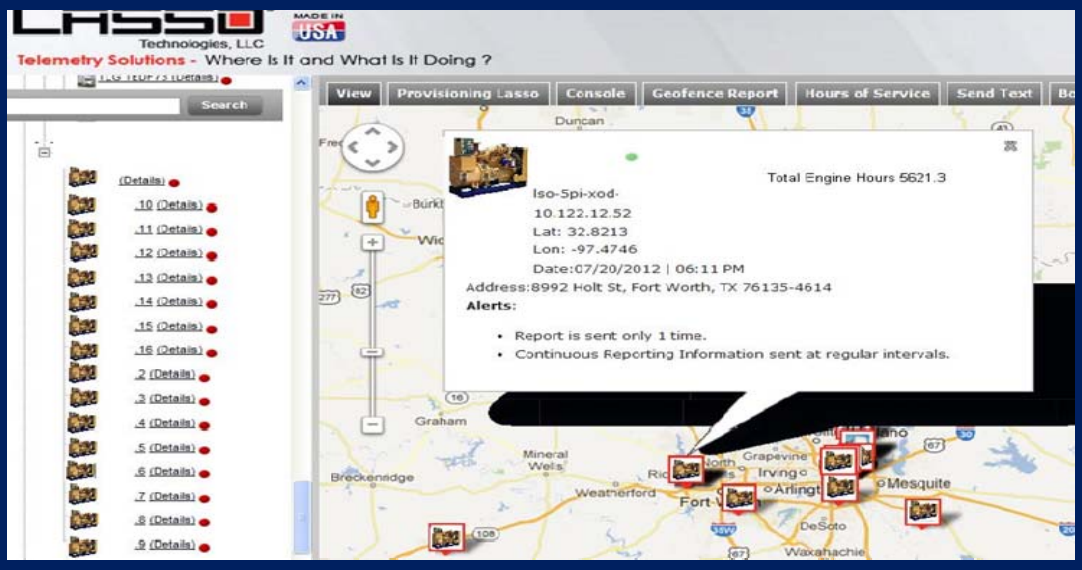
TANK LEVEL

- **Monitor Brine-Oil tank levels remotely.**
- **Email, and automated phone call alerts.**
- **Satellite based so it can be used anywhere.**
- **Solar powered with battery backup for years of life.**
- **Ultrasonic Level sensor impervious to harsh chemicals.**
- **Quick ROI: Eliminates frequent tank checks.**
- **Click on any map indicator for details and address of location.**



% Indication of Tank Level.

Red if Full and needs service. Blue if OK.



Quick Overview of All Assets

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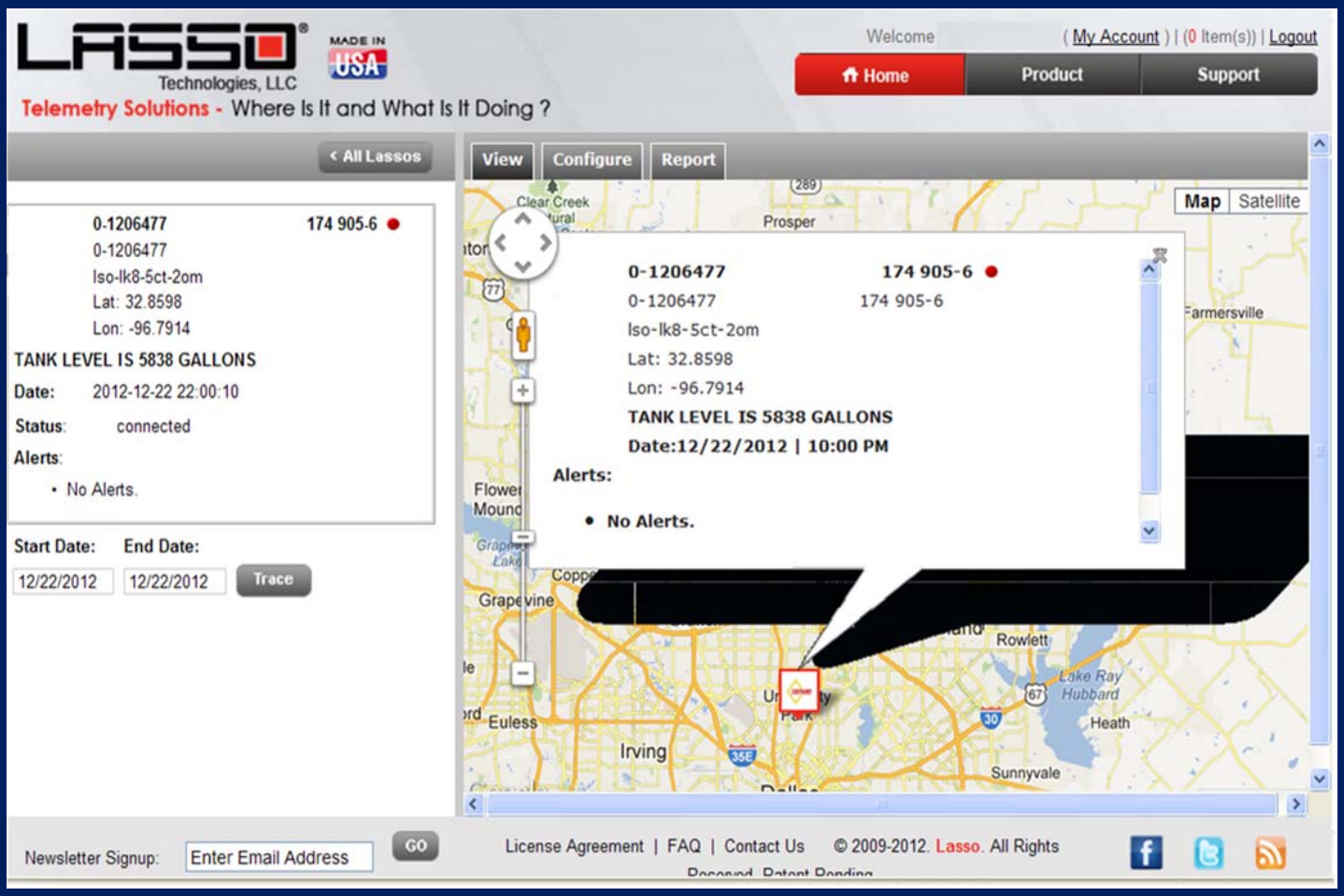
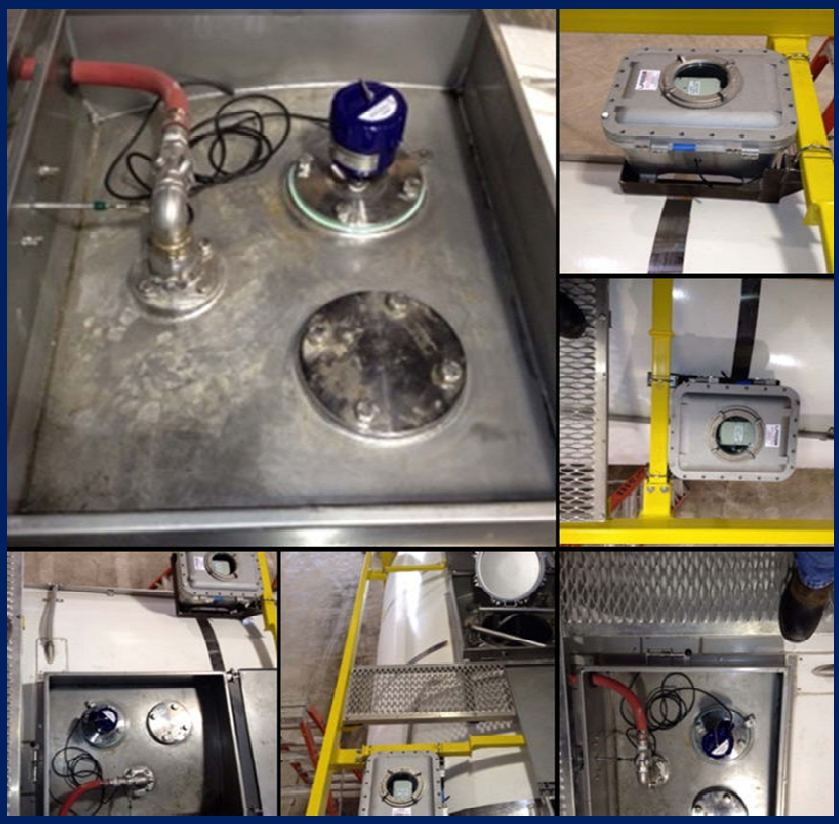
Satellite Based Tank Level





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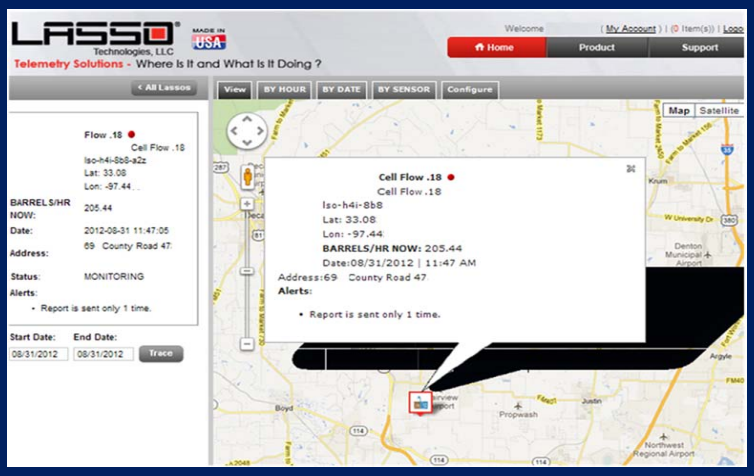
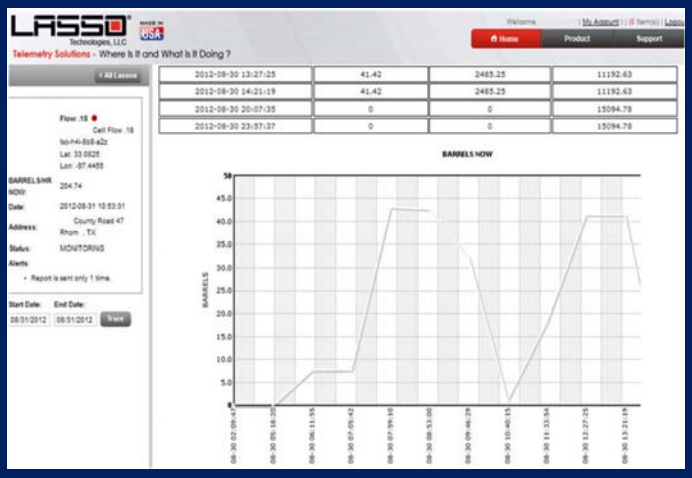
Cell or Satellite Water Flow Monitoring





Asset Overview with Current Flow Rates

Select any Time Frame with Graphs

DATE	BARRELS NOW	BARRELS/HR	TOTAL BARRELS
2012-08-27 07:28:01	0	0	0
2012-08-27 08:21:32	11.32	679.02	678.99
2012-08-27 09:15:15	44.66	2679.88	3358.86
2012-08-27 10:08:59	44.66	2679.88	3358.86
2012-08-27 11:02:34	45.75	2745.13	6104.02
2012-08-27 11:56:00	35.91	2154.75	8258.79
2012-08-27 12:49:43	0	0.01	8258.79
2012-08-27 13:43:32	0.94	56.3	8315.08
2012-08-27 14:37:03	21.87	1312.36	9627.45
2012-08-27 15:30:42	45.77	2745.94	12373.38
2012-08-27 16:24:12	45.49	2729.24	15102.64
2012-08-27 17:17:50	45.49	2729.24	15102.64
2012-08-27 18:12:14	21.09	1265.61	16368.23

Works with Cameron, Omega, Seametrics & other sensors

Flow Rates Each Hour During Frac Job

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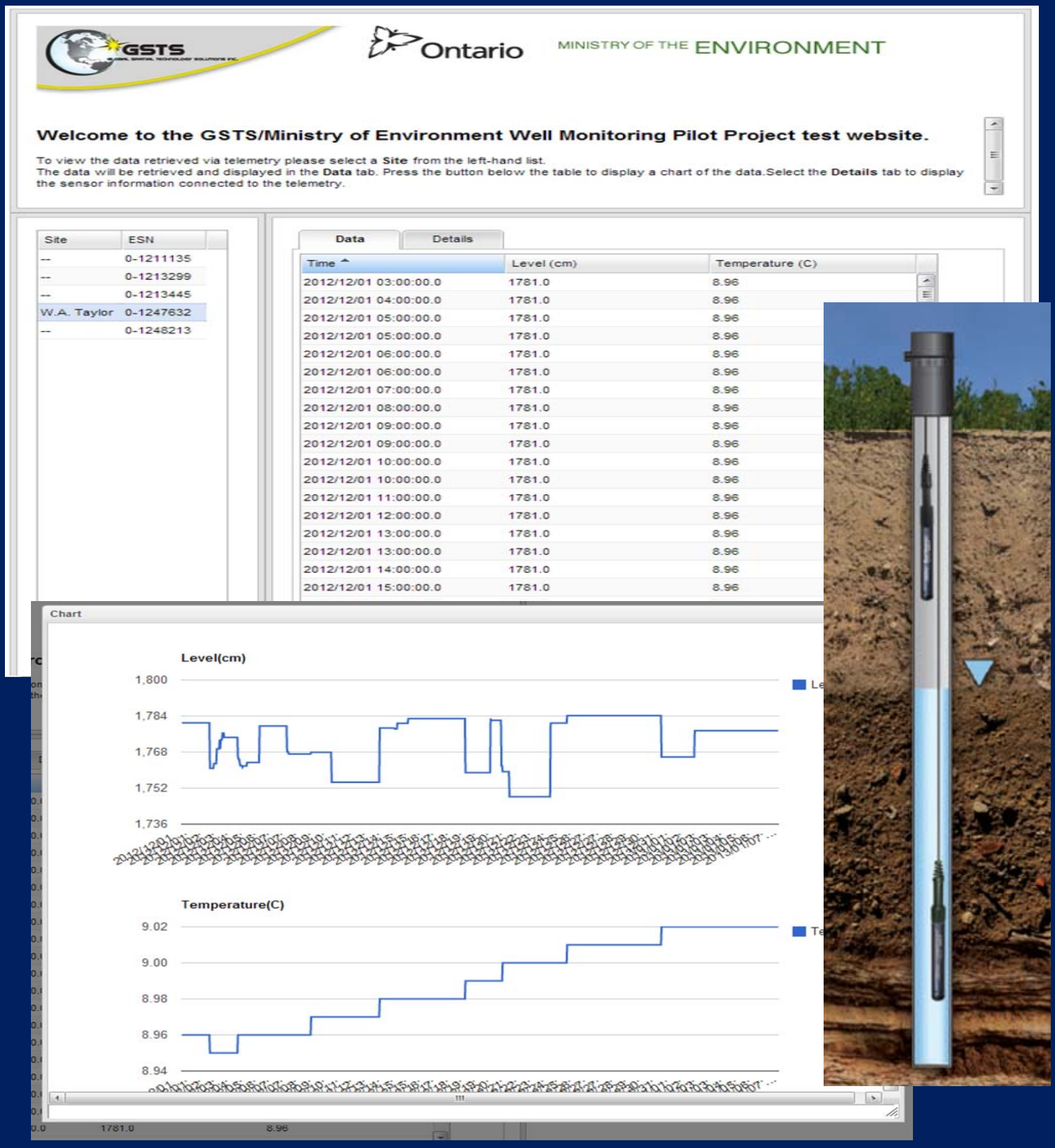
Satellite Based Environmental



Groundwater level and temperature for government of Canada

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Cell or Satellite Pump, Level, Flow Monitoring

LASSO Technologies, LLC — MADE IN USA

Telemetry Solutions - Where Is It and What Is It Doing ?

Welcome (My Account) | (0 Item(s)) | Logout

Home | Product | Support

< All Lassos | View | Monitor | Spreadsheet | Phone List | Monitor All | Configure

.53
.53
Iso-9n9-162
Lat: 32.85
Lon: -96.7

Date: 2012-07-09 10:56:30

Address: Colgate Ave, Dallas, TX

Status: Connected

Alerts:

- Continuous Reporting Information sent at regular intervals.

Start Date: 07/09/2012 **End Date:** 07/09/2012 Trace

Start Date 07/02/2012 **End Date** 07/09/2012 Submit

Date	Pump 1 Starts	Pump 2 Starts	Runtime Hours Pump1	Runtime Hours Pump2
02-Jul-12	0	1	7.6	16.3
03-Jul-12	1	0	12.4	23.6
04-Jul-12	0	0	23.9	23.9
05-Jul-12	0	0	24	24
06-Jul-12	0	0	9.8	9.8
07-Jul-12	0	0	0	0
08-Jul-12	0	0	0	0

Pump Run Times by Day. Start Stop Frequency.

Select Date 08/06/20: Submit Refresh

CELL CONNECTED BAD | SATELLITE OK | WATER LEVEL OK | POWER BAD | Test Unit .50

	Runtime Hours		Starts		Cumulative	
	Today	Previous Day	Today	Previous Day	Runtime Hours	Starts
Pump1	4.2	1.6	41	41	236	7
Pump2	5.7	3.8	171	12	232.9	5
	Current Rate		Total Today		Total Previous Day	
Flow	2165 MGD		698 Gallons		784 Gallons	
	Current Level					
Level	12.6 Feet					

CELL CONNECTED OK | SATELLITE OK | WATER LEVEL OK | POWER OK | Houston School Road LS .51

	Runtime Hours		Starts		Cumulative	
	Today	Previous Day	Today	Previous Day	Runtime Hours	Starts
Pump1	7.7	3.5	14	17	176.7	26
Pump2	1.7	0.1	21	45	90.5	4
	Current Rate		Total Today		Total Previous Day	
Flow	2115 GPM		1254 Gallons		365 Gallons	
	Current Level					
Level	6.7 FT					

CELL CONNECTED OK | SATELLITE OK | WATER LEVEL OK | POWER OK | Test Unit .52

	Runtime Hours		Starts		Cumulative	
	Today	Previous Day	Today	Previous Day	Runtime Hours	Starts
Pump1	7.7	3.6	74	2	176.9	4
Pump2	1.7	0.5	12	2	90.9	5
	Current Rate		Total Today		Total Previous Day	
Flow	2146 GPM		7412 Gallons		8741 Gallons	
	Current Level					
Level	41.2 Ft					

Overview of all Pumps, Flow Meters, Level Conditions

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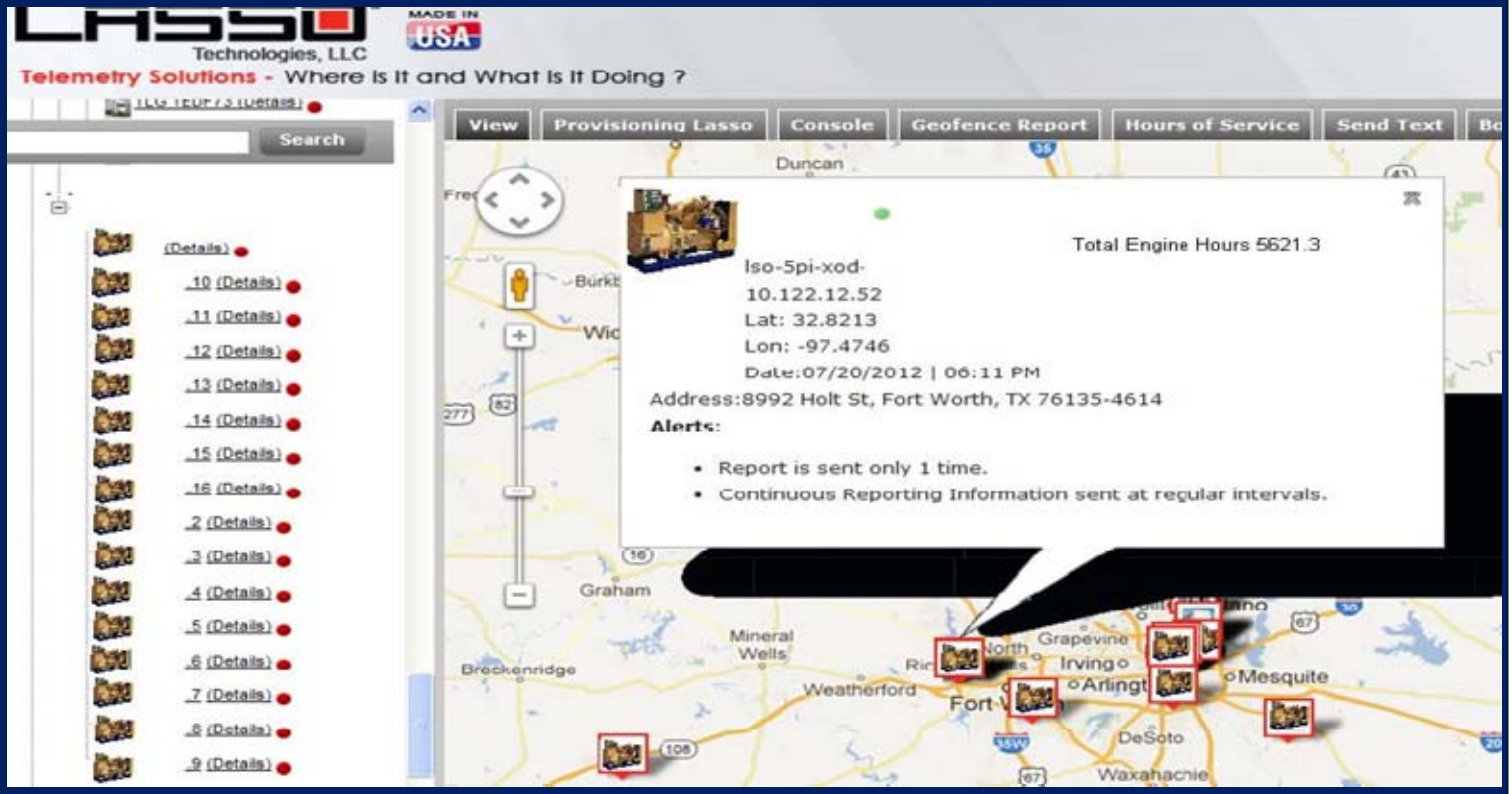
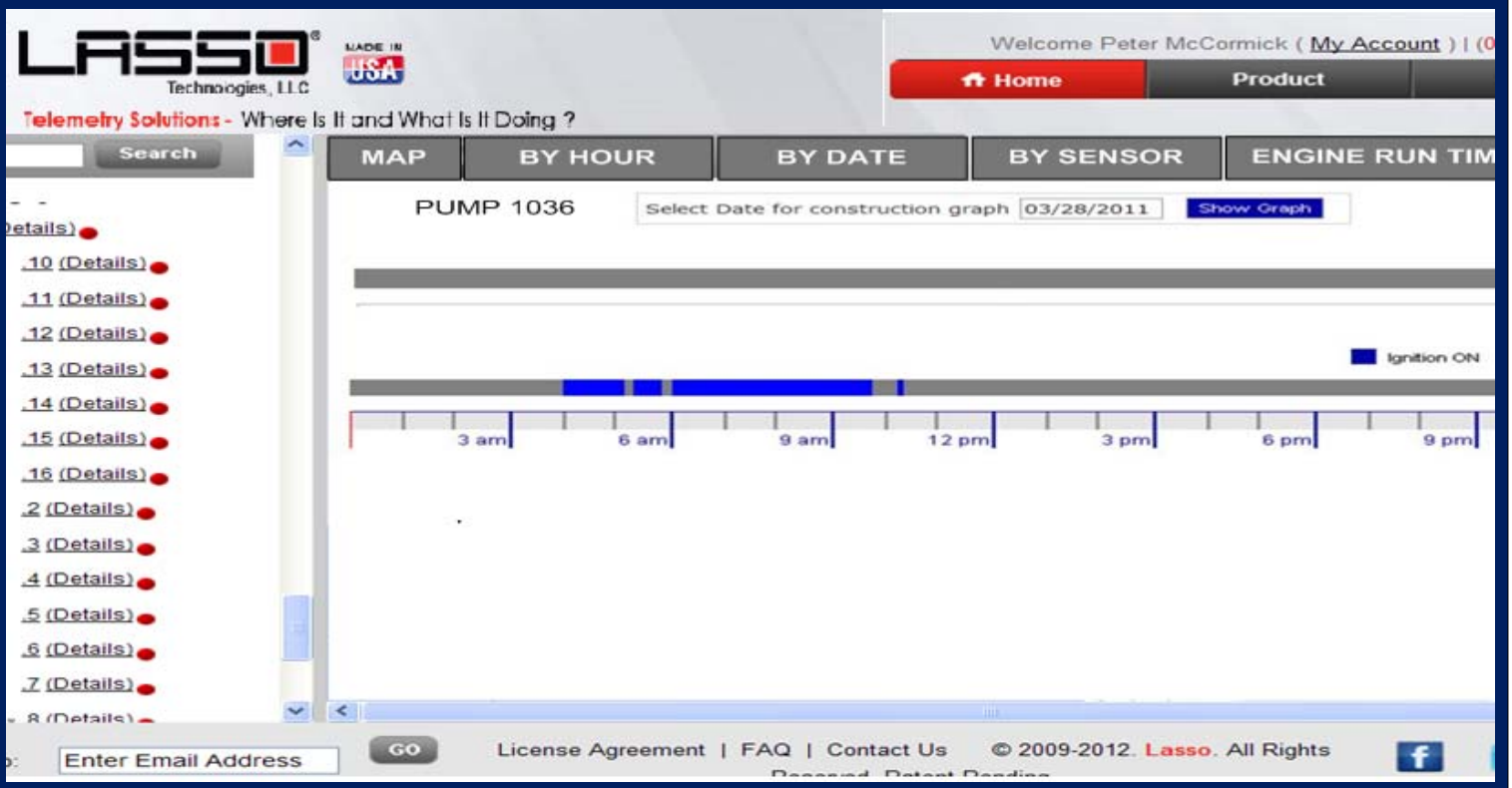
Cell or Satellite Based
Pump or Generator Engine Run Time





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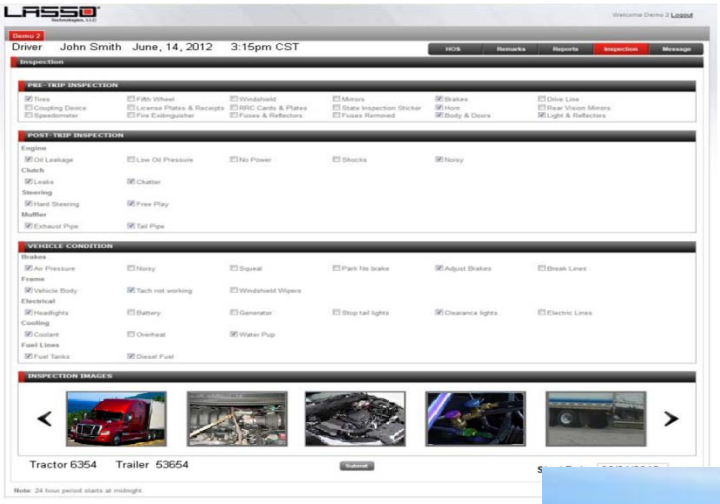
FLEET MANAGEMENT



Where Is It and What Is It Doing?

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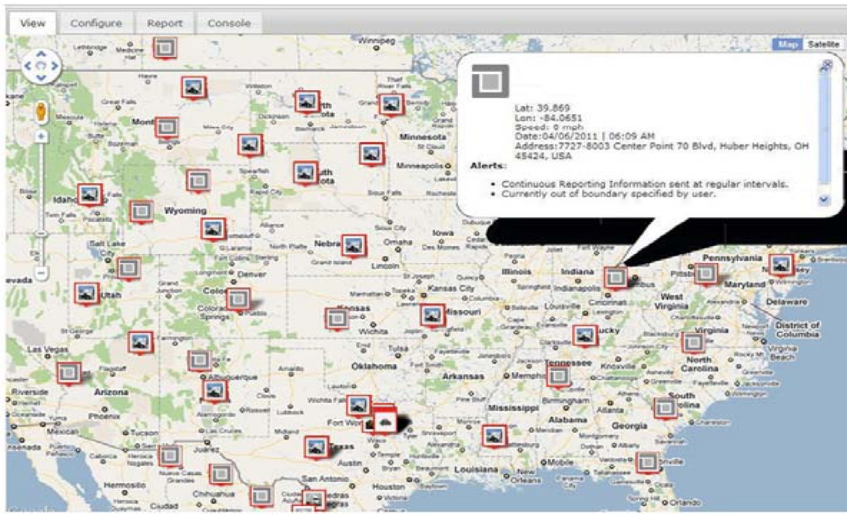
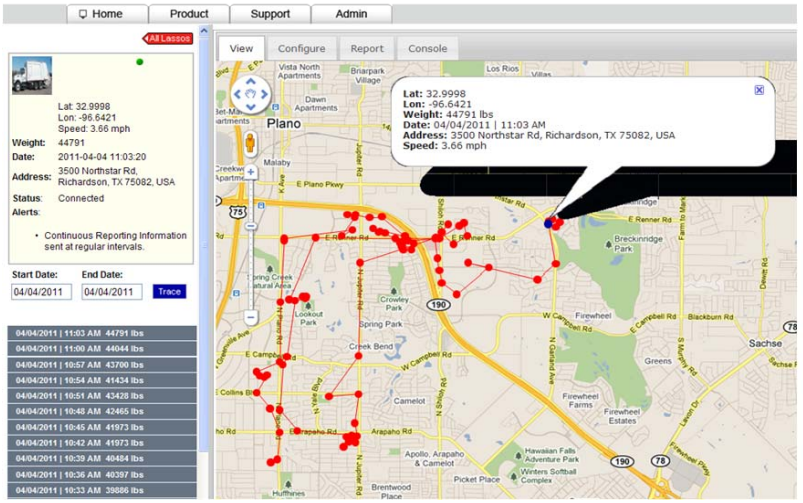
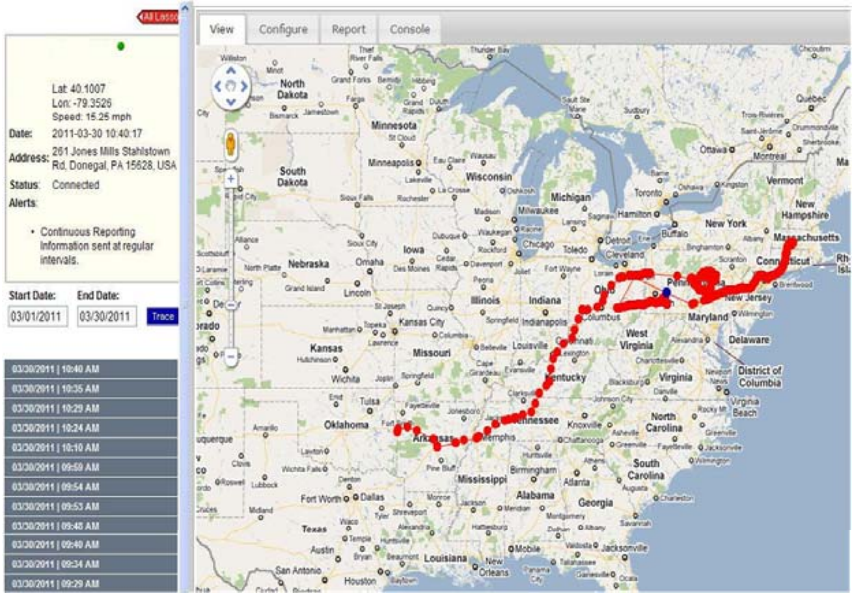


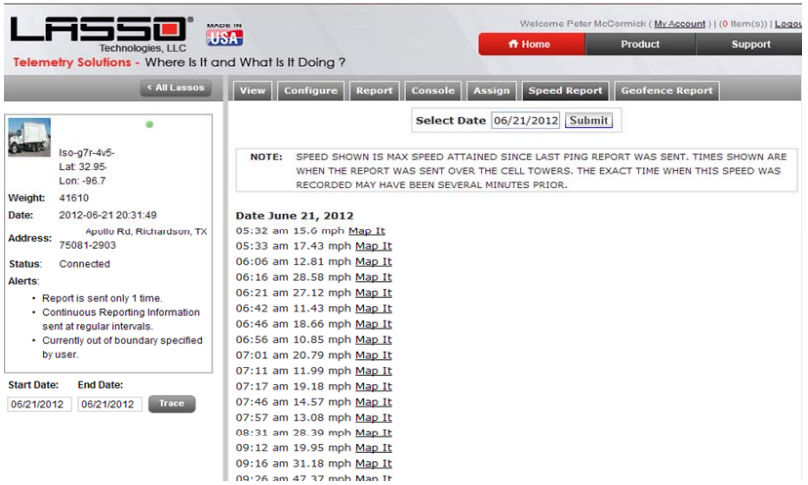
Overview of all Assets



Mouse Over for Details



Tracking Across the Country



Speed Report

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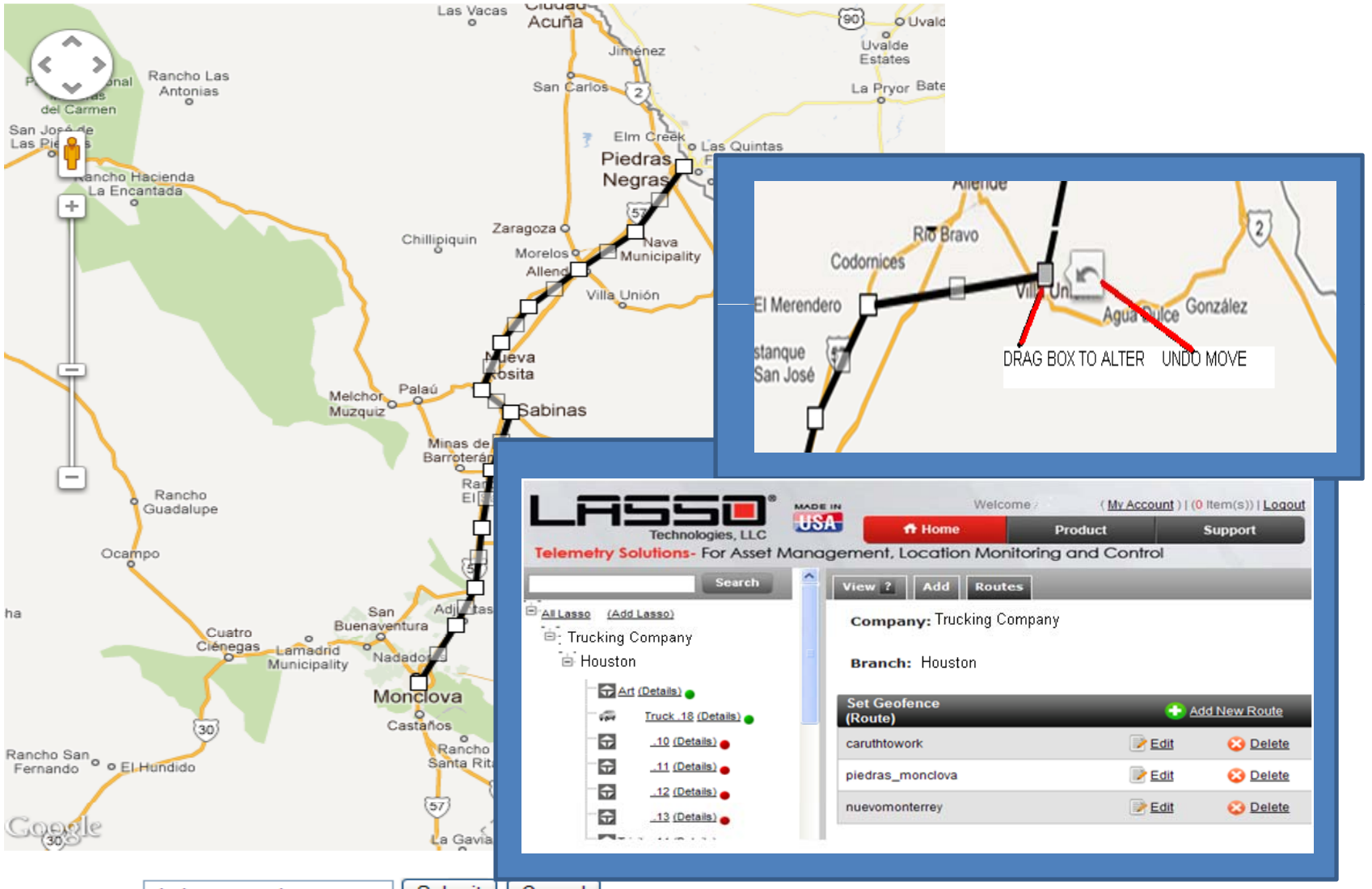
Precious Cargo - Send Alert if Vehicle Leaves Route



Route Name : piedras_monclova Submit Cancel

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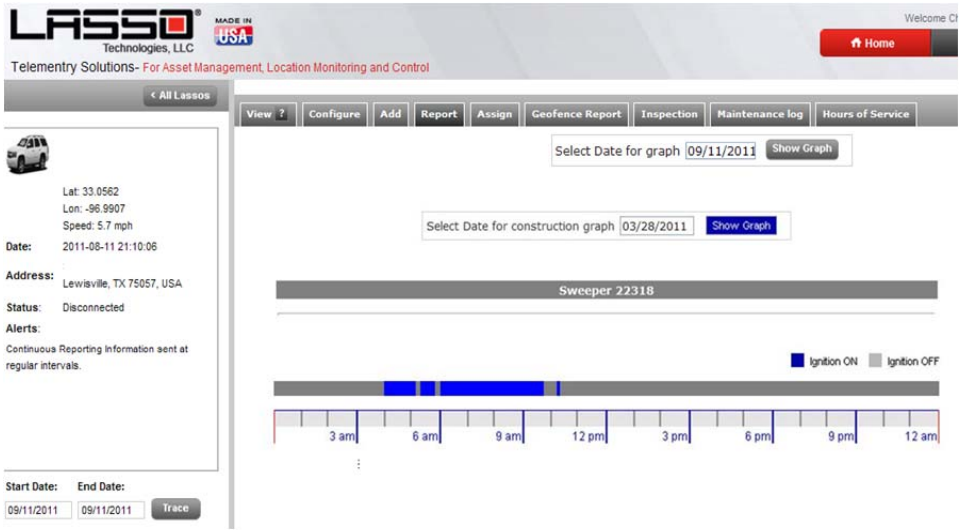

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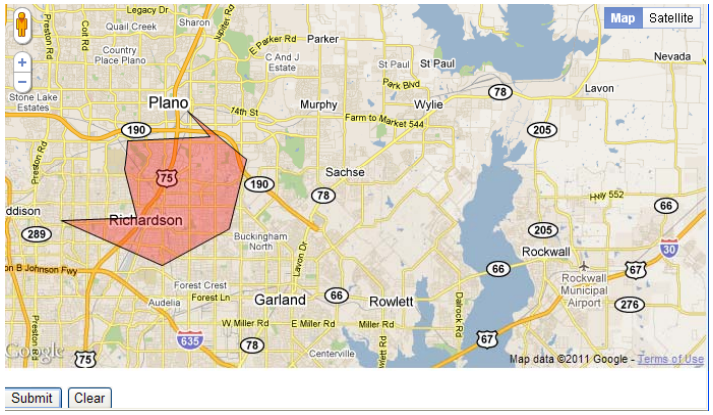
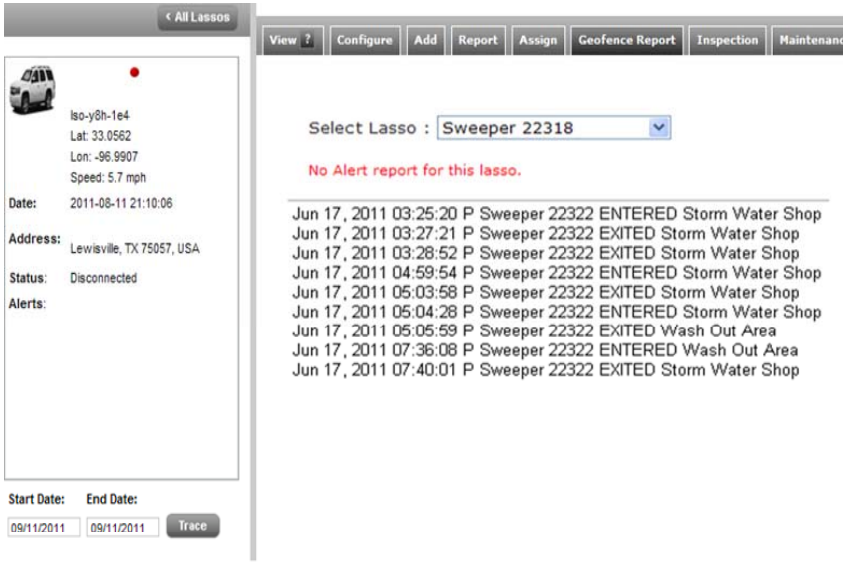
Ignition On-Off Record





Truck Weight and Plotting

10 Geofences

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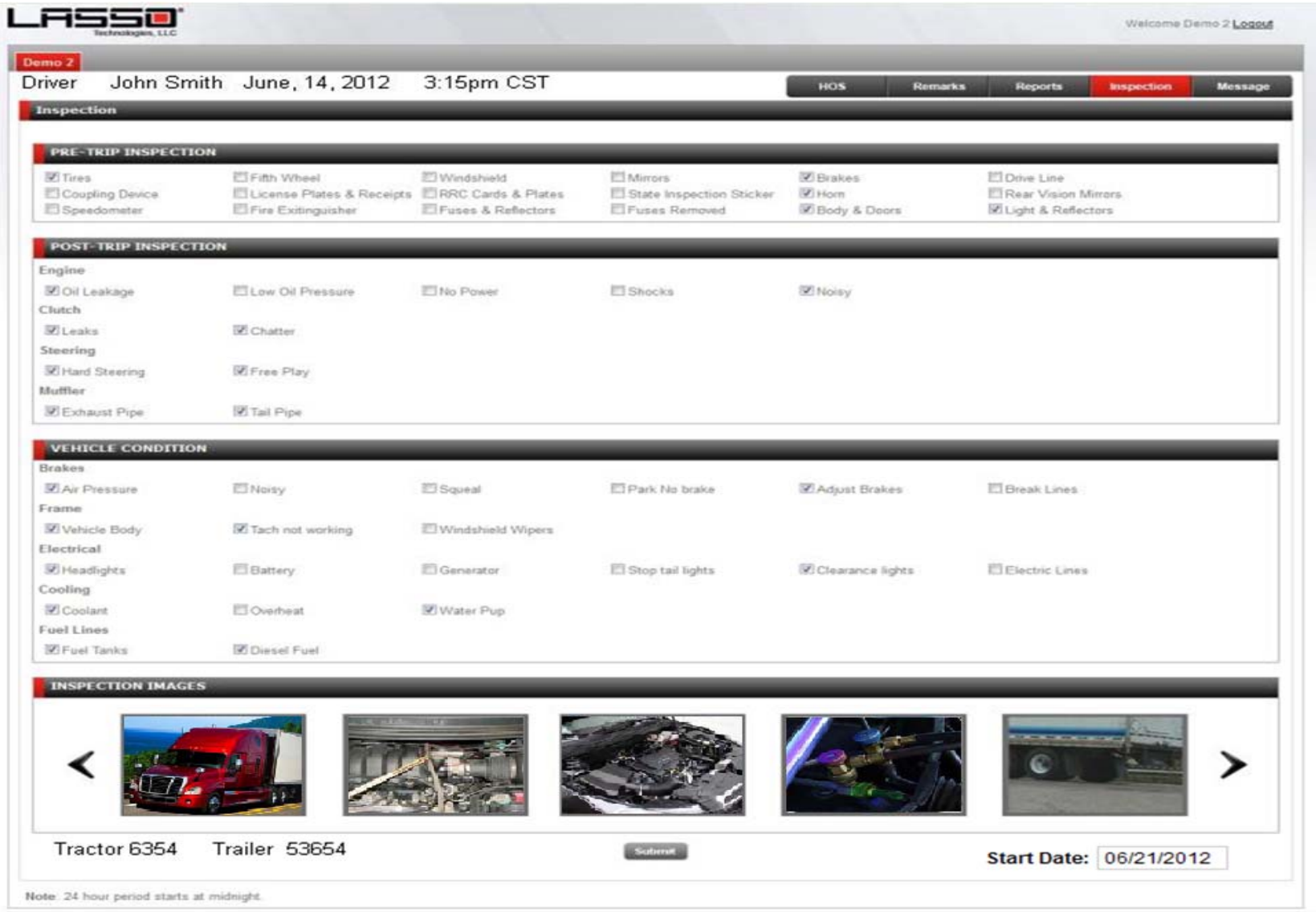
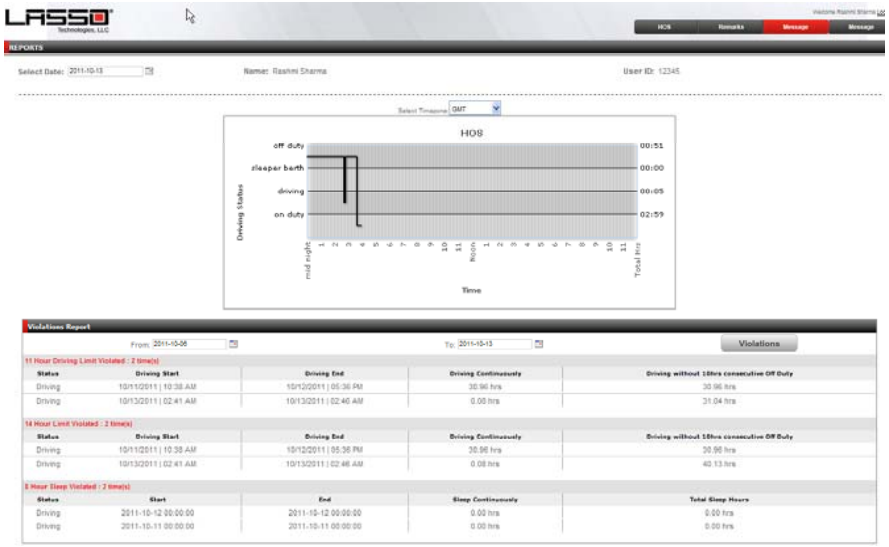
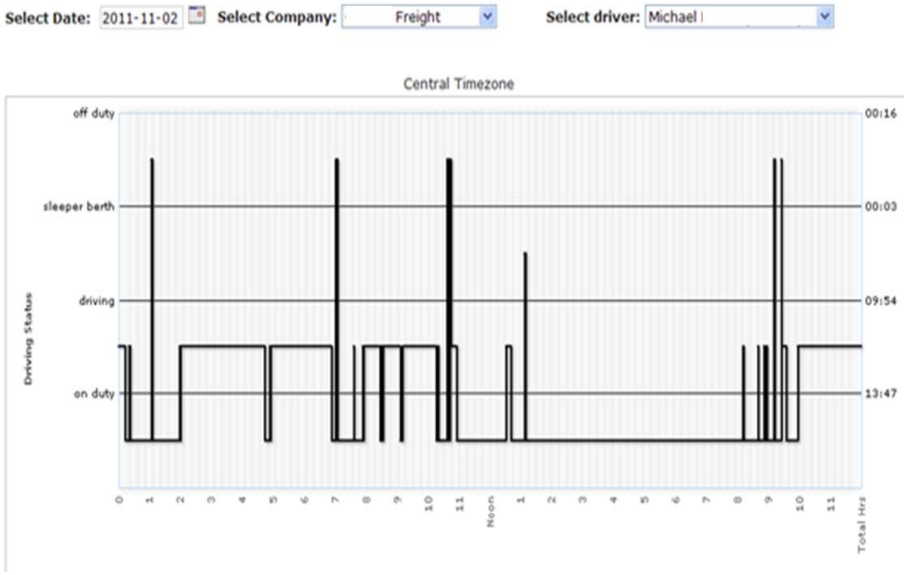
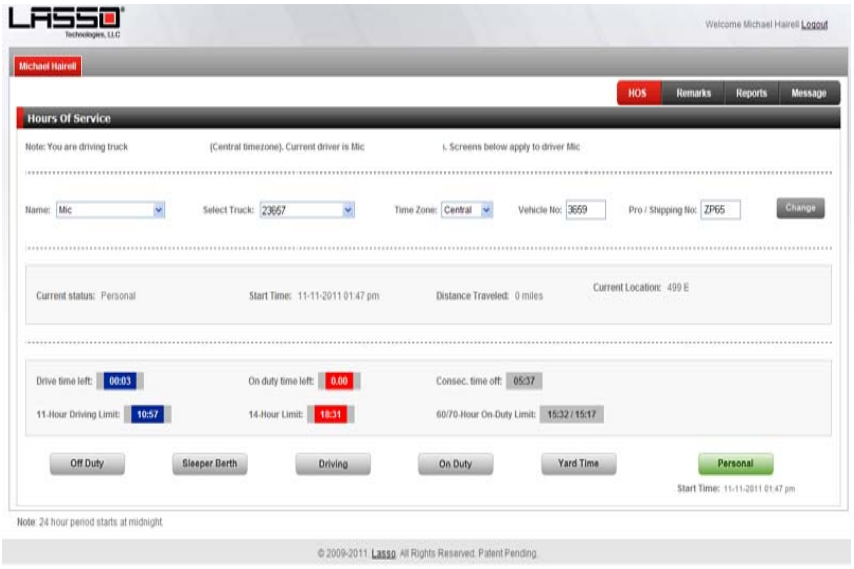
Inspection Report with Thumbnails of Inspection Photos





Hours of Service with Violation Reports





02:10 AM Address: I-35, Faribault, MN 55021
02:02 AM Address: I-35, Owatonna, MN 55060
07:04 AM Address: 800 Happy Trails Ln, Albert Lea, MN 56007-4000
12:02 PM Address: I-35, Sheffield, IA 50475
8:37 PM Address: I-35, Ellsworth, IA 50075
9:52 PM Address: I-35, Ames, IA 50010

Feedback Screen for Hours of Service

Typical Driver Screen

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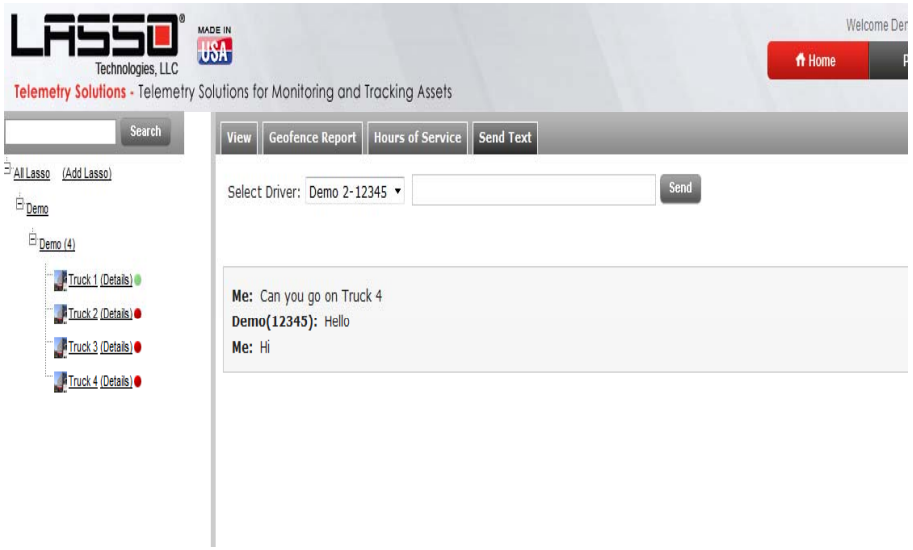
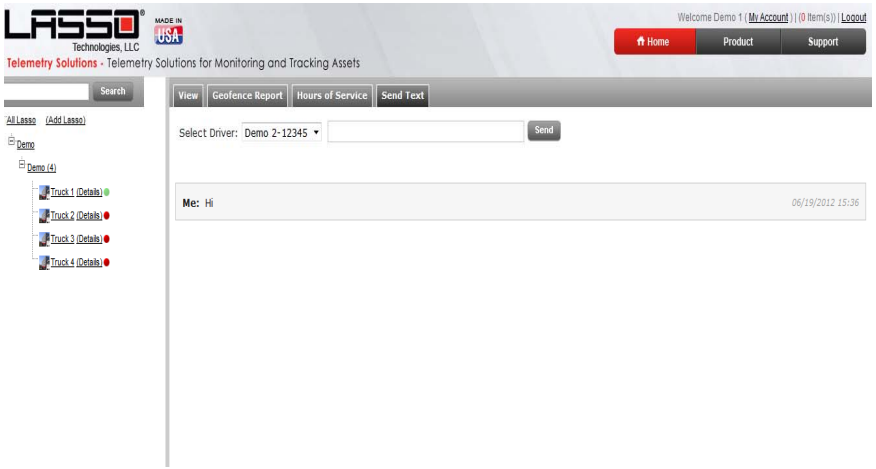
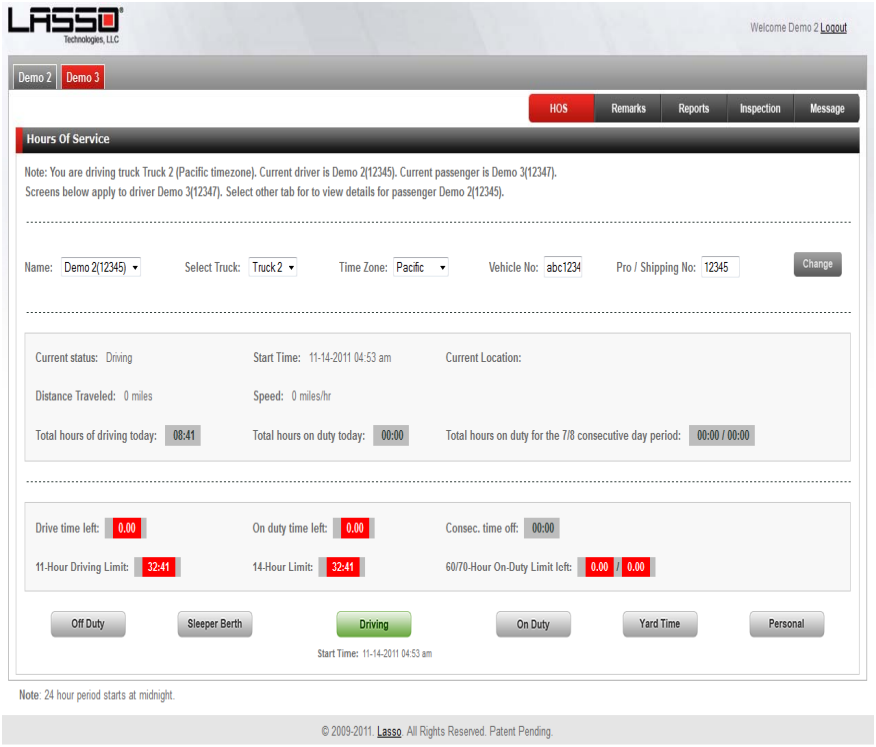




Driver – Dispatcher Messaging

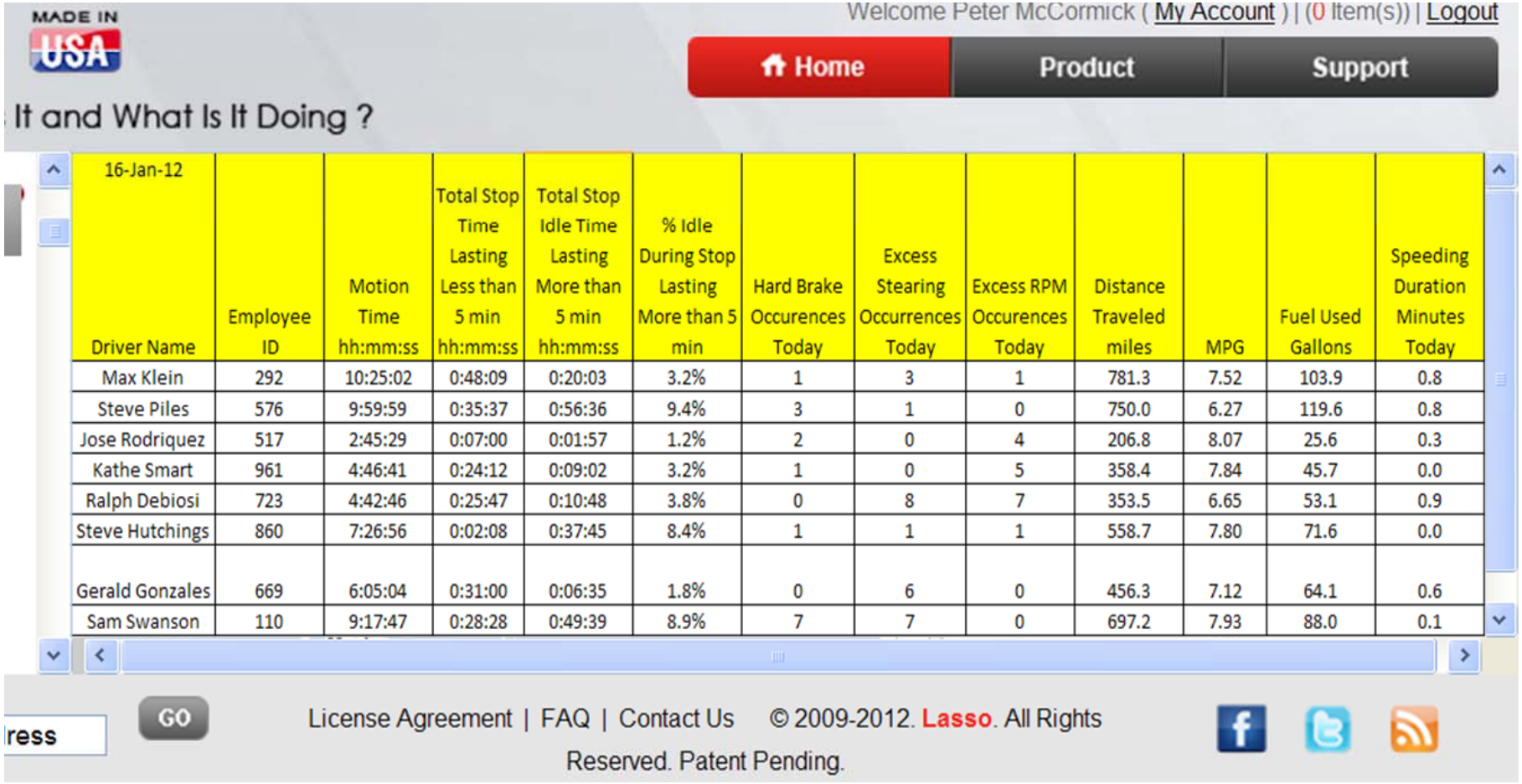
LASSO
Technologies, LLC



Hours of Service Multiple Drivers

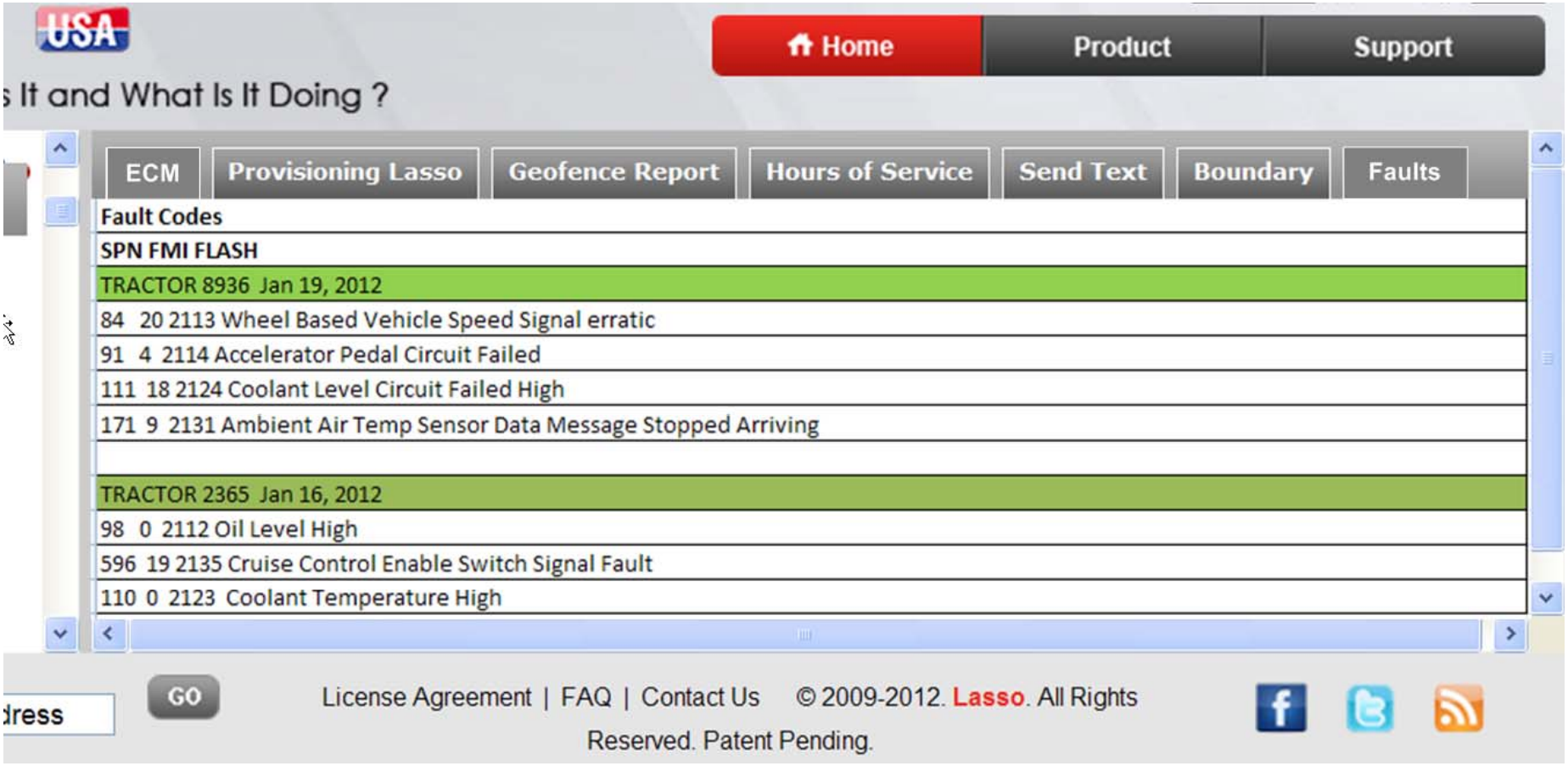
Electronic Control Module Data by Driver

- Idle Time, Hard Braking, Excess Steering, Excess RPM, Distance Traveled, MPG, Fuel Used, Speeding.
- The Accelerometer detects excess braking when deceleration exceeds 8 mph in 1 second.
- Excess Steering occurs when the accelerometer detects a lateral acceleration of greater than 1.5G for 1 second.
- Idle Time is recorded when a stop lasts more than 5 minutes.



16-Jan-12 Driver Name	Employee ID	Motion Time hh:mm:ss	Total Stop Time Lasting Less than 5 min hh:mm:ss	Total Stop Idle Time Lasting More than 5 min hh:mm:ss	% Idle During Stop Lasting More than 5 min	Hard Brake Occurences Today	Excess Stearing Occurrences Today	Excess RPM Occurences Today	Distance Traveled miles	MPG	Fuel Used Gallons	Speeding Duration Minutes Today
Max Klein	292	10:25:02	0:48:09	0:20:03	3.2%	1	3	1	781.3	7.52	103.9	0.8
Steve Piles	576	9:59:59	0:35:37	0:56:36	9.4%	3	1	0	750.0	6.27	119.6	0.8
Jose Rodriquez	517	2:45:29	0:07:00	0:01:57	1.2%	2	0	4	206.8	8.07	25.6	0.3
Kathe Smart	961	4:46:41	0:24:12	0:09:02	3.2%	1	0	5	358.4	7.84	45.7	0.0
Ralph Debiosi	723	4:42:46	0:25:47	0:10:48	3.8%	0	8	7	353.5	6.65	53.1	0.9
Steve Hutchings	860	7:26:56	0:02:08	0:37:45	8.4%	1	1	1	558.7	7.80	71.6	0.0
Gerald Gonzales	669	6:05:04	0:31:00	0:06:35	1.8%	0	6	0	456.3	7.12	64.1	0.6
Sam Swanson	110	9:17:47	0:28:28	0:49:39	8.9%	7	7	0	697.2	7.93	88.0	0.1

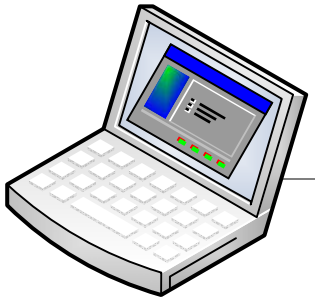
Electronic Control Module Fault Error Codes



GlobalStar Smartone Translator reads vehicle or sensor data and sends it to Globalstar

VEHICLE ON BOARD DATA

VARIETY OF SENSOR DATA



PROGRAMMING INTERFACE TO CONFIGURE HOW LASSO WILL BE USED AND SLEEP TIMING. ALSO MONITOR DEBUG MESSAGES.

SPECIFICATIONS	PN 904256 Not waterproof.	PN 904187 Waterproof
Dimensions	30x65x50MM 3.85 X 2..5 X 1.25”	98X64X32MM 3.6 X 1.95 X .95”
Housing	Polystyrene	Polystyrene
Weight	3.9 oz .110kg 110g	6.3 oz .177kg 177g
Operating Temperature	-30C to 80C (-22F to 176F)	-30C to 80C (-22F to 176F)
Communication	DUAL & QUAD-BAND 850/900/1800/1900 GPRS Multislot Class 10 TRANSMIT POWER Class 4 2W @G50/900MHz Class 1 1W @ 1800/1900Mhz GPRS Packet Data Class B, Multislot Class 10. GSM/GPRS Release 97 GSM Functionality AMR, EFR, FR & HR Asynchronous; 14.4kb Cell communication typically through T-Mobile, O2, or Telefonica.	
GPS Characteristics	Channels 48 parallel tracking. SiRFstarIV, Correlators 200,000 plus. Frequency 1575 Mhz. Tracking Sensitivity -163dBm. Position Accuracy <2.5m. TTFF /.1S Hot start <1s Warm <32s Cold <35s. Tracks up to 8 CW jammers. Advanced power management, high performance GPS engine, fast location fixes, active jammer removal, single-SAW design. Stores 40,000 most recent positions, time, date, and sensor data for remote upload.	
Motion	Tilt and motion, Event recorder, anti theft +/-1.5G in 3 axis. Detection of engine rpm done using 3 axis motion sensors and FFT analysis of real time dynamic vibrations. Vibration 0-1.5G in 3 axis. Uses 3 analog channels so Motion sensor cannot be used with user A/D channels.	
Vibration Sensor Theft Detection	Mechanical ball in cup movement sends interrrupt to wake Lasso and send alarms.	
Vehicle Computer J1939, ODBII*	ECM update of VIN, faults codes, rpm, engine hours, speed, odometer, fuel GPM or MPG, RPM, Oil Pressure, Coolant Temperature, Fuel Level, Battery	
Humidity Sensing *	0-100% Humidity if equipped with environmental option.	
Barometric Pressure *	40kPa to 110kPa (.4-1.1atm) if equipped with environmental option.	
Temperature Sensing	On board sensors -40C to 125C on all Lasso devices. External temperature sensor.	
J Temp Thermocouples *	Two 0-750C (32-1382F). Accepts Termocouples from many suppliers..	
Analog Inputs (3 Inputs) *	0-3.3V	
4-20 mA inputs (3 inputs) *	External board option uses 3 analog ports.	
Discrete Inputs (4 Inputs) *	5, 12, 24VDC or 120VAC inputs.	
Serial *	2 ports RS-232 or SCI. Custom software will be written to communicate and handshake with external devices at any baud rate needed.	
2 Discrete Outputs	24VDC or 120VAC .2A each. Latching relay.	
Strain Gauge (2 Inputs) *	3mV/V or 1mV/V Excitation 5V. Accepts strain gauges from many suppliers .	
Human, Animal Detection *	Pyroelectric 5m (16.4 ft)	
Battery	Li-Ion 2000mAh, Charge 3 hours, Operating Temp 0-45C.	
120V USB adapter	INPUT 11-254VAC, 47-63Hz. FCC Part 15, Subpart B Class B & EN55022.	
12-24V charging cable	12-24 VDC input. 500mA. 30mA typical. Optional cable provides external ability.	

* Optional Piggyback board provides feature.

Management

Peter McCormick - peter@lasso.com Peter has extensive experience in the development of mechanical devices, software, algorithms, patents and industrial automation products and controls. He was President and co-founder of an Industrial Robotics company. Peter lead a team of product innovators, engineers, manufacturing resources and marketing teams to develop revolutionary new products for the automation industry. The company was acquired by the Dover Corporation. After the sale, the division became the Advanced Development group and developed new Computer controlled Sensors, motion & automation products for sister companies. Peter is a member of: Tau Beta Pi, Eta Kappa Nu, IEEE, SME, ASME, and is a licensed Professional Engineer in Texas. Peter holds 22 patents and 3 pending patents dealing with mechanical automation components, control systems, control algorithms, GPS devices, Wireless Telemetry, and electro-mechanical products used in a variety of industries. Prior experience at Lockheed and Schlumberger Paris. Experience with many robotic systems, software languages, circuit design, microcontrollers, low power sensors, Wireless GSM/GPRS/Satellite modems, GPS modules, and electro-mechanical devices used in a variety of industries. Peter holds a BS and MS in electrical engineering from Rensselaer.

Richard S. Kumpf - rick@lasso.com Rick has many years of experience in software development and business services. After a career practicing securities law, Rick purchased a small travel agency in 1986 and built it into a large corporate travel management company that ranks in the top 50 in the nation. The company has grown to several international cities through acquisitions, software products & licensing and has achieved several industry awards. Rick has founded several software companies which became a catalyst to several brand-named internet sites today. Rick was instrumental in creating the strategy, raising substantial equity through venture capital and investment banks, recruiting a world-class management team, operating the company, creating widely used products, and structuring key relationships with strategic software, content and content partners. Rick's entrepreneurial experience with direct marketing, technology and e-commerce has led to positions as a consultant, advisory board member and board member. Rick holds a Bachelor of Science degree in Engineering from Texas A&M University and a JD in Law from Texas Tech University.

Joel M. Buys - joel@lasso.com Joel has extensive management and acquisition experience in the high-tech and financial industry. Joel worked for Verizon Wireless and was responsible for M2M Business Development and the Alliance partnership. Prior to Verizon Wireless, he was with Qualcomm as Director of Business Development focused on Mobile Commerce and M2M initiatives for six years. He was with Nokia from 1999- 2007 where he held various management positions in Sales and Business Development across Nokia Mobile phones and Nokia Ventures Organization. While working at Nokia, Joel was the Director of Sales, Americas Region for Nokia Mobile Phones, Inc. which was charged with introducing Nokia M2M Platform into the Americas Region. He worked to develop the ecosystem of partners including Hardware OEMs, System Integrators, Technology Vendors and Consulting Organizations focused on M2M (Machine-to-Machine) and Smart Services along with industry publications such as M2M Magazine (referred today as Connected World Magazine). His last role at Nokia was Head of Sales and Business Development, for the Americas Region responsible for Nokia's NFC and RFID group. Prior to Nokia he worked in the Financial Industry in various senior management positions. Joel received a BBA from Baylor University and is active in various community activities.

Bijal Modi - bijal@lasso.com Bijal has over 20 years of research and software architecture experience in the web, mobile and telecommunications industries. Dr. Modi received a B.S. in Mechanical Engineering from the Indian Institute of Technology, Mumbai and M.S. and Ph.D. degrees in Nuclear Engineering from the University of California, Berkeley.