

Clevest Automatic Vehicle Location Create real-time visibility into your field operations

Connect the field and the office with the most usable, functional and visually appealing browserbased automatic vehicle location (AVL) solution available to utilities today.

With Clevest AVL, utilities increase the safety and productivity of field operations, shorten outage response times, improve customer satisfaction and control fleet costs while reducing fuel consumption and vehicle emissions to support green initiatives.



For even greater control over field operations, utilities can integrate Clevest AVL with Clevest Mobile Workforce Management (MWFM) to wirelessly manage crews and their work directly from a map view. Utilities can also integrate the solution with Esri ArcGIS and extend enterprise geospatial asset information to both the field and the office. And, to respond more quickly and effectively to outage work, Clevest AVL interface is MultiSpeak® certified to interoperate with leading outage management systems (OMS) engineered to the same standard. Clevest AVL is a highly flexible solution that may be hosted by a utility within its enterprise or by Clevest.

Why Clevest AVL?

- Utility-focused AVL solution that is fully integrated with leading GIS systems to provide a comprehensive view of a utility's GIS assets with respect to the location of their field personnel
- Pre-integrated with Clevest MWFM to provide office staff and supervisors with actionable insights into their field operations
- Real-time alerting capabilities and support for safety timer and lone worker pendant provide utility's crews and solo workers with peace of mind, knowing that help is just a click away
- Support for mutual aid programs and integrated AccuWeather® overlays provide enhanced safety for crews in the field during natural disasters



Real-time visibility into your field operations from Clevest AVL's WebMap

- Support for a wide variety of in-vehicle hardware and ability to interface with third party AVL systems helps utilities leverage their existing investments
- Reduces reliance on and lowers the costs of radio communication
- Hosted by Clevest or at the customer's premise as per a utility's business needs

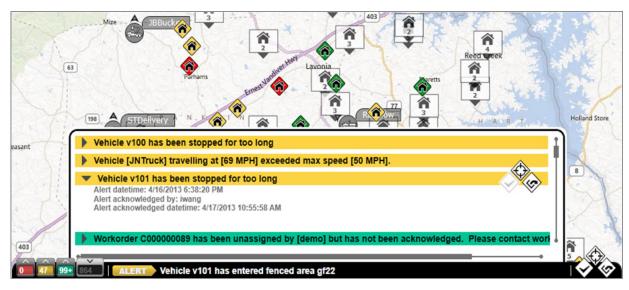
"By integrating Clevest AVL with our Clevest mobile workforce management system, our team in the office has real-time visibility into field operations and can manage field workers directly from the AVL map. We now have a single mobile solution that unifies our enterprise applications suite to support all types of utility field work, from fast-paced, high pressure outage tickets to the full range of service work we perform. The combined technologies afford us significant new opportunities to increase our overall productivity and service delivery."

- Wayne Hannah, Vice President of Information Technology, SVEC

Clevest AVL Features

- Browser-based map view
- Real-time alerting through alerts dashboard and via email
- Interface with third party AVL systems
- Out-of-the-box integrations with leading OMS and GIS systems
- MultiSpeak-certified OMS interface
- Support for utilities' mutual aid programs
- Fleet maintenance module
- Driver behavior activity reports and alerts
- AccuWeather® integration (optional)
- Lone worker pendant support (optional)
- Integration with Clevest MWFM on the same platform (optional)

- Garmin interface for messaging (optional)
- Route geofence (optional)
- Multiple-sensors support (optional)
- Support for engine diagnostics (optional)
- Option to export vehicle location to Partner Software
- Asset/trailer tracking (optional)
- Diagnostic trouble code alerts (optional)
- Choice of in-vehicle hardware
- PTO hours reporting for gas tax credits
- Clevest-hosted or hosted at the utility's site



Alerts dashboard in WebMap provides an actionable view of alerts

"We had a great experience working with Clevest on our AMI implementations so, when it came time to evaluate AVL systems, we definitely wanted a more in depth look at what they had to offer. With AVL now in place, we can better connect and coordinate the field and the office thanks to real-time information on the status and location of our crews. We can also respond more quickly and safely to outages by leveraging the proven integration between Clevest's solution and our OMS."

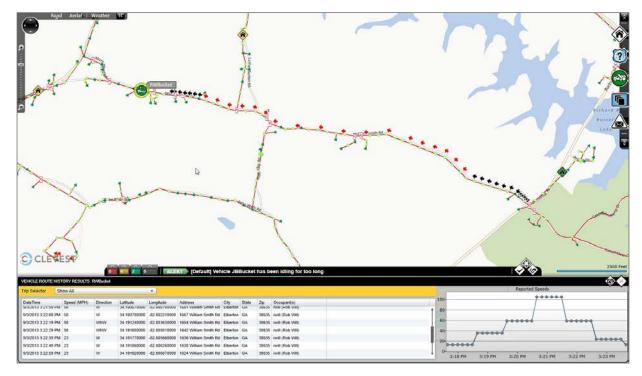
- Oscar Codopony, Director of Operations, Caddo Electric

Clevest AVL Reports

Easy-to-generate, utility-specific reports help utilities better manage fleet operations and improve reporting to regulators.

- Vehicle route history (breadcrumb)
- Post-incident
- After hours usage
- Daily vehicle
- Ignition on/off

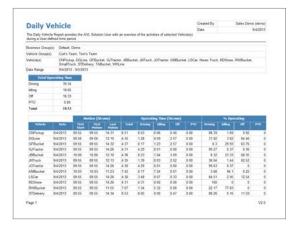
- PTO hours
- Start stop
- Start/stop enhanced
- Vehicle excess idling
- Vehicle long stop
- Vehicle speeding
- Vehicle maintenance
- Vehicle activity
- Vehicle sharing
- Vehicle health monitoring



Vehicle route history report provides a breadcrumb trail

Business Group(s) Vehicle Group(s) Vehicle(s) Date Range		Debuk Demi Curts Fam, Timin Tiani Olehisup Olcimi, Gifbeiter, Olfactor, JBbucket, Jilliuck, JOTastor, KMBucket, LSGw. Newc Teck, RDSnee, SRIDbucks, SIDbinny, ToBucket, WHCare SI2221 - SS2221									
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LSCM	Car	lacrost.	1	1.00	34	34	2:48:57				0:07:59
Muchet	LargebucketTr uck	n/a			11						
INTruck	Truck	ynifco			17						
AbSnow	Showcat	rdreikai			34						
GFBucket	BucketTruck	gfleming			6						
xMBucket	BucketTruck	kmaclachlan			7						
STDelvery	DeliveryTruck	stok.			14						
JOTrador	Trador	joloughte			15						
WHLINE	LineTruck	whaung			15						

Vehicle productivity report provides summary data on the utilization of utility vehicles based on the number of orders



Daily vehicle report provides an overview of the activities of selected vehicle(s) during a user-defined time period

Frequently asked questions

Q: What makes AVL utility-specific?

A: Clevest's AVL solution design reflects our deep domain expertise in utility field operations. For example, our MultiSpeak-certified standard interface, out-of-the-box integration with leading OMS solutions, support for utilities' mutual aid programs and integration with AccuWeather® overlays all demonstrate Clevest's commitment to transform utility field operations. As well, the Esri ArcGis server interface feature, which allows a utility to bring point-of-interest overlays into the AVL map, reflects our understanding of the assets that a utility needs to constantly monitor.

Q: Is AVL interoperable with Clevest's MWFM solution?

A: Absolutely, the combined solution provides a single, powerful view of crews in the field combined with the work they are performing. Directly from the WebMap, assigned orders can be viewed and progress monitored with real-time status indicators. Utilities can also use the WebMap to create orders by clicking a GIS asset, physical location, address or latitude/longitude coordinates to assign orders to the most appropriate crews, as well as to reassign or cancel orders as required. This powerful solution enables the utility to direct crew activities more productively and respond to emergencies faster.

Q: Can AVL integrate with other applications such as OMS?

A: Yes, by integrating AVL with other applications using Clevest interface options, utilities can better leverage existing IT investments and the productivity of other applications already in use. AVL can interface to other critical utility systems via web services, flat file, island database, message queues, etc. Clevest AVL is MultiSpeak-certified for easy integration with any third party system that meets MultiSpeak standards.

Q: What in-vehicle hardware does Clevest AVL support?

A: Clevest AVL supports a variety of in-vehicle modem gateways from leading M2M manufacturers including Sierra Wireless, Cypress, Mobile Devices and CalAmp, and from 2G GSM/CDMA networks all the way to LTE. Modems with Wi-Fi options enable utilities to create mobile hot-spots from their vehicles while support for diversity antennas ensures optimal wireless coverage in high density areas. Clevest AVL also supports the Tait DMR system.

Q: How does Clevest AVL support worker safety?

A: Clevest AVL incorporates a number of key features to enhance worker safety, including real-time alerting, the lone worker pendant, safety timers, geofences, AccuWeather overlays and integrated, map-based support for mutual aid programs.

Q: How does Clevest AVL support reporting to regulators?

A: Clevest AVL preserves time-stamped audit trails on all field work and offers sophisticated reporting capabilities on current and historical field operations data (e.g., vehicle sharing in mutual aid scenario) and key metrics (e.g., SAIDI and CAIDI) to help utilities generate timely and accurate reports and improve compliance with regulatory requirements.

Clevest provides software for mobile workforce management and smart grid operations exclusively for electric, gas and water utilities. We are specialists at enabling utilities to transform their field operations by rapidly automating and optimizing virtually any field work activity or process to improve response time and effectiveness.

