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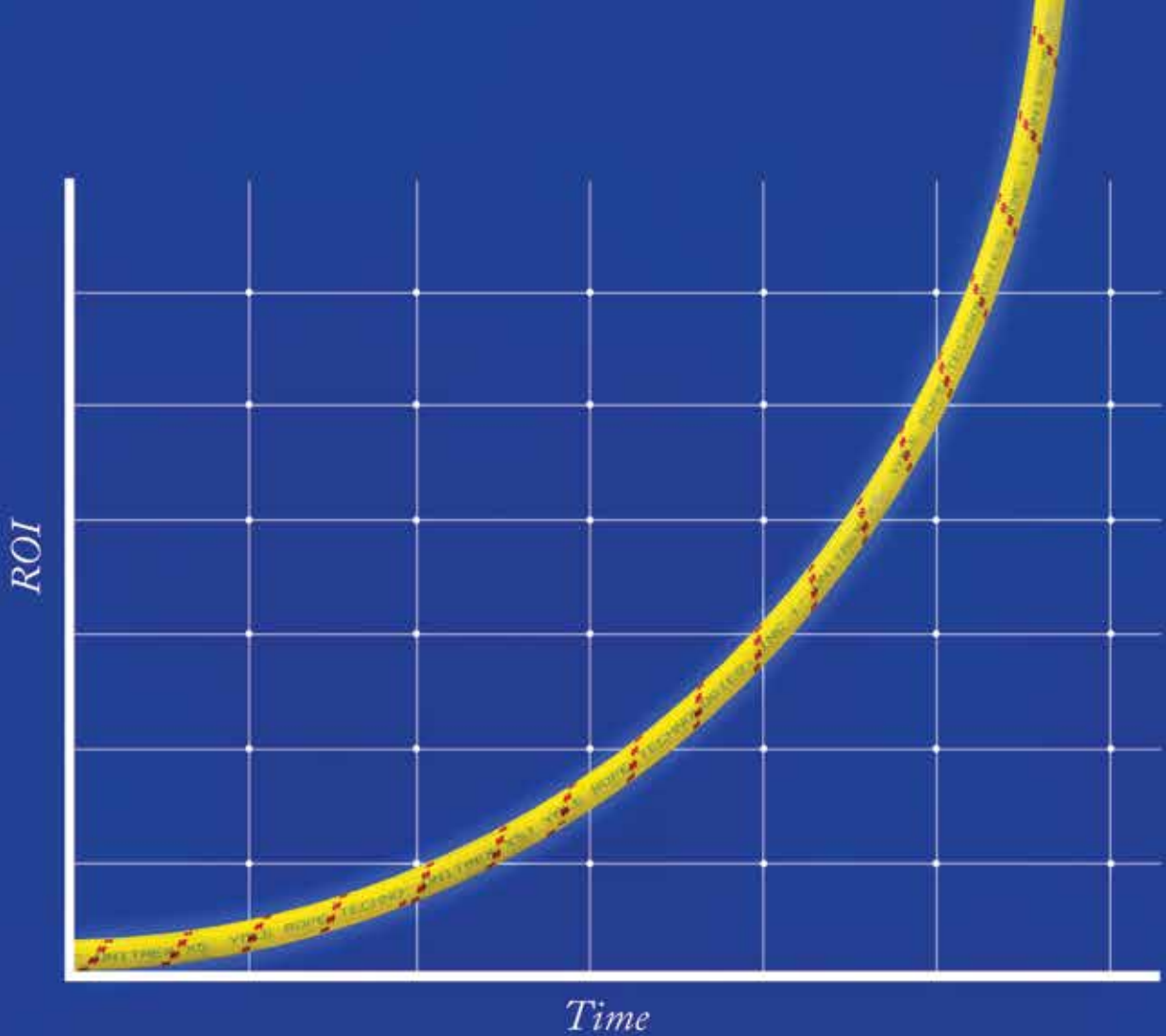
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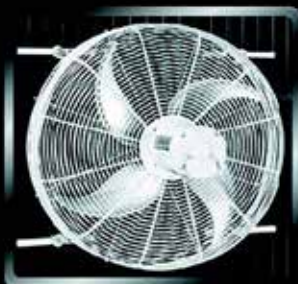
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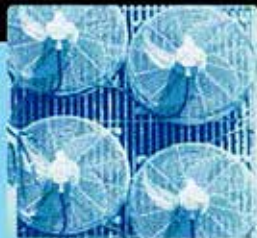
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John Deere Celebrates 50th Anniversary of Skid Steers With Restored Model at CONEXPO-CON/AGG 2020

John Deere is commemorating 50 years of being in the skid steer loader business in 2020 and will display a restored JD24 Loader model at CONEXPO-CON/AGG 2020 in Las Vegas, Nevada. Introduced in 1970, the JD24 Loader provided operators with the power to get more done with a compact machine in various construction, landscaping and moving materials in mining applications.

“The anniversary marks half a century of innovation and collaboration between John Deere and our customers,” said Gregg Zupancic, product marketing manager, John Deere Construction & Forestry. “We’re excited to hit this milestone and showcase the model amongst numerous technological advances at CONEXPO-CON/AGG 2020. After all, our skid steer lineup wouldn’t be what it is today without the customers and engineers who brought this machine to life 50 years ago.”

The JD24 entered the market boasting 37 horsepower. Designed as a four-wheel drive system, the loader included a multidisc transmission clutch on each wheel, providing complete machine control. With a sleek, low-profile design for improved visibility, and even weight distribution, operators could feel confident lifting material and maneuvering the machine around diverse terrains. Additionally, the machine frame could rotate 360 degrees, making it an optimal solution for working in tight or

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crammed spaces. The JD24 model featured a machine width of 65 inches (1,651 millimeters), weighed up to 4,750 pounds (2,154.6 kilograms), could travel up to 7 miles per hour and had an auxiliary hydraulics system that could produce up to 18 gallons per minute to power the first hydraulic attachments.

The John Deere skid steer family runs deep with various models and series debuting over the last 50 years, beginning with the JD24 in 1970, then a second Industrial Model 14 skid steer, and two agricultural skid steer models 70/170 (1975), the 60/90/125 (1979), 75-Series (1987), 75-Series II (1994), 200 Series (1998), 200 Series II (2001), 300 Series skid steers and compact track loaders (2004), D-Series skid steers and compact track loaders (2009), E-Series skid steers and compact track loaders (2013), and the latest, G-Series skid steers and compact track loader models (2016/2018).

“Having the opportunity to refurbish a JD24 model is an extraordinary moment for the brand’s history,” said Brian Holst, heritage marketing manager at John Deere. “Showcasing the refurbished JD24 model at CONEXPO/CON-AGG shows our customers where our skid steer production began, and how far we have come in technology and productivity over the last 50 years.”

In celebration of the 50th year of being in the skid steer loader business, customers who purchase a skid steer loader built between March 1 through December 31, 2020, will receive a special decal on the machine. Additionally, die-cast models of the 332G skid steer loader in gold chrome with a 50th anniversary mark will be available for purchase at John Deere factory stores and at the CONEXPO/CON-AGG merchandise store.

To learn more, visit the JD24 display at CONEXPO-CON/AGG 2020, March 10-14, 2020, at booth N12525 or www.JohnDeere.com/vegas2020 •



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GPS Tracking of Industrial Contractor Fleets: Increasing Profitability through Driver Accountability





Drivers that are held to a clear, unbiased standard perform better for the company – and themselves

Industrial contractors are typically involved with the construction or maintenance of small to large facilities that depend on them for safe, reliable, profitable, production.

With such responsibility that can involve big ticket contracts, industrial executives have every right to demand professionalism from their selected contractors, which usually drive work trucks with their company's name and logo emblazoned on it for the public to see. Because of this, any unprofessional actions – even in public spaces by the drivers of industrial contractor vehicles, such as speeding or reckless driving – can hurt the brand, compromise contracts, and even invite liability in the case of serious accidents.

As a proactive response, a growing number of industrial contractor managers are turning to GPS tracking of their fleet vehicles to ensure clear driver accountability. This is resulting in safer driving, as well as better fleet management, productivity, and profitability without unauthorized stops, detours or activities.

“We originally implemented GPS tracking to ensure that our drivers were

driving safely, without speeding or reckless driving that could cause complaints, accidents, or hurt our company brand," says Todd Moran, Vice President at M. Davis & Sons Inc., a Wilmington, DE.-based Mechanical/Electrical construction company that builds and maintains corporate plants and facilities across the country along with building & shipping skids internationally.

According to Moran, after implementation M. Davis & Sons drivers and work crews take greater responsibility for their actions because they know they are going to be accountable.

"With the GPS tracking units, they drive safer and more professionally and serve as better ambassadors for our brand," says Moran. "Preventing even one serious driving accident could more than pay for the trackers."

"But implementation has also helped us achieve more efficient vehicle and work crew management," adds Moran. So, we are saving a significant amount in terms of preventing wasted time on the job, and even saving on gas and maintenance, all which helps with profitability."

According to Moran, before GPS tracking the only way the company knew that an employee's driving style was a concern was if they received a complaint.



Moran addressed this issue when he turned to GPS tracking devices from Advanced Tracking Technologies (ATTI), a Houston, Texas-based designer and manufacturer of GPS tracking products, on a few vehicles. Over time, he added additional units, including an advanced model, ATTI's Shadow Tracker Vision III, until about 60 fleet vehicles are now tracked over a four-state area and about 50 work sites.

Compared with typical GPS tracking devices that may only update every few minutes, the device provides real-time location updates every 10-seconds, as well as location, speed and idle time alerts if something is amiss. This data is transmitted via satellite and cellular networks to a smartphone or PC on a 24/7 basis. The system has access to nationwide speed limits in its database.



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According to Moran, via a PC or smartphone app approved by ATTI he can display the real-time location of his entire vehicle fleet on a map, and zoom in on any specific truck. At a glance, he can see if a truck is moving (displays green) or stopped (displays red). If he touches a truck icon, the app will display where the truck has been, where it stopped, and how long it has idled.

“Being above board about tracking vehicle speed and location helps to hold our drivers accountable for driving safely in our company vehicles,” says Moran, who notes that this is an effective way to minimize accidents, potential liability and insurance rates. “Having such data handy could also help us disprove a false accident claim, in terms of speed or location, if one is ever filed.”

He adds that having such data about a vehicle’s real-time location and speed also helps to avoid unprofessional or inefficient driving.

“Because we know where the vehicles are at all times, negative behavior tends to become a non-issue,” says Moran. “This heads off potential problems like unauthorized stops, detours, and late arrival or early departure from the customer site.”

Once, such tracking even helped to get a trusted employee prompt medical attention that quite possibly saved his life when he suffered a stroke and did not report to work on time, as was his habit, says Moran.

According to Moran, the tracking system can also be customized to meet the specific needs of industrial contractors.

To prevent potential temptation for any less scrupulous employees that may consider selling scrap material from the job site for their personal benefit, Moran asked ATTI to place a “geo-fence” alert around the geographic location of scrap yards in the company’s working area. So, if a company vehicle entered a scrap yard, Moran would be alerted, and appropriate action could be taken.

Moran notes how another customization has helped with required regulatory reporting. “We operate in multiple states, so we need to account for fuel tax on miles driven by state for our company vehicles. This used to be done manually but ATTI’s customized reporting for this is integrated with vehicle tracking, done automatically, and emailed to the appropriate people,” he says.

Although there are considerable benefits to GPS vehicle tracking for the fleet managers and executives of industrial contractors, the employees also benefit.

“Now our drivers mostly self-correct so they do not need to be micromanaged,” says Moran. “Because they are generally safer and more productive, this figures into our evaluation reward system, so it benefits them too.”

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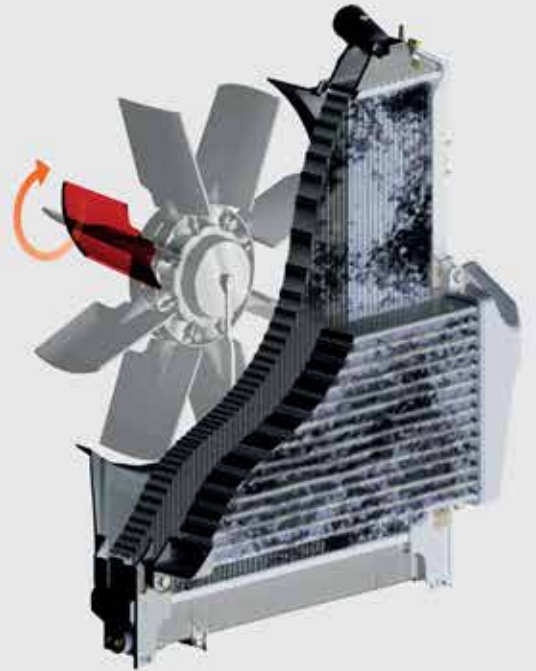
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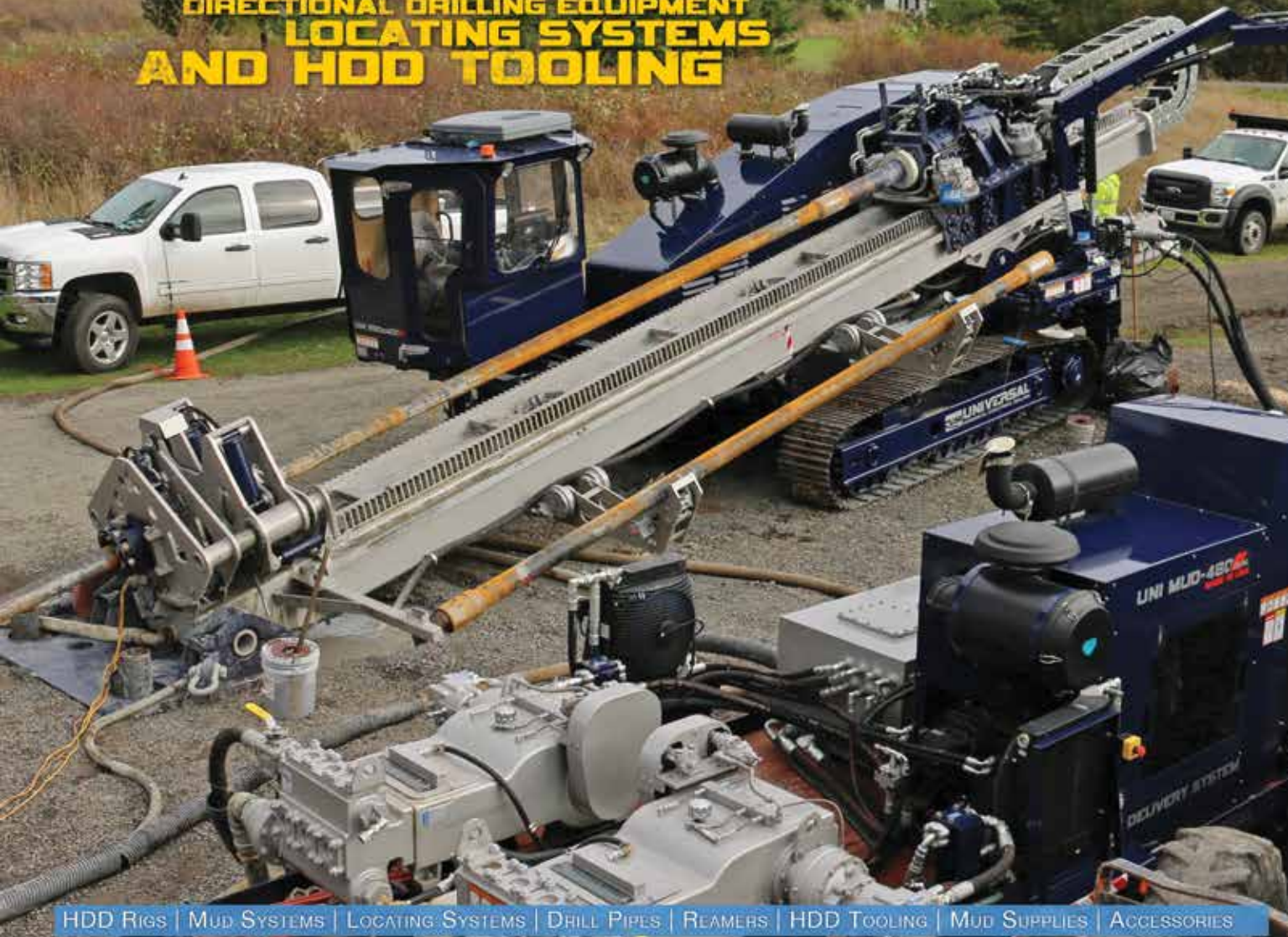
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Advancements in Substation Automation Solutions Transform Usability for Field Teams

Intuitive interfaces and 'one-box' consolidations part of a new generation of RTUs

Electric utilities face the challenge of managing aging and unsupported legacy automation and monitoring equipment at their substations and pole-tops. This equipment is critical for accessing data from intelligent electronic devices (IEDs) for measurement and protection, automating key functions and enabling remote users to securely control power-system devices.

Increasingly, outdated legacy technology such as remote terminal units (RTUs) needs to be updated to keep up with evolving performance requirements, communication needs and increased security compliance protocols. The need can also be driven by concerns over vendor support or when there is a major deficiency a vendor is not addressing with the equipment.

When this occurs, utilities often take the opportunity to pilot and deploy new substation automation platforms as part of the upgrade. Given recent advances in automation, new all-in-one solutions effectively reduce the number of hardware components in each substation, improve integration with existing IEDs and RTUs, simplify data access and configuration through integrated, web-based HMI, SCADA and alarm annunciator interfaces and facilitate cybersecurity compliance to meet NERC CIP requirements.

A window of opportunity for SRP

Today, Salt River Project (SRP) is in the process of updating its substation automation platforms. The energy company manages a large field operation of over 300 substations across a 2900 square mile service area in central Arizona in support of over one million customers.

For SRP, the process of exploring upgrade options began more than two years ago when the vendor that supplied its RTUs discontinued support for the product.

"We have been using the primary RTUs in our system since the mid-nineties and they were simply outdated," said Josh Manski PE, senior engineer at SRP. "Although we began the project because our vendor discontinued support for the RTU, we really saw it as an opportunity to integrate the next generation of substation automation systems to assist our security compliance efforts and provide greater interoperability with other parts of the system."

After sending out a Request for Information/Proposal (RFP) to the nation's top vendors of RTUs and also communication and automation processors, SRP scheduled demos and conducted a full lab evaluation of all the products involved.

SRP ultimately selected Pennsylvania-based NovaTech, as their substation automation provider. The company has worked with customers in the electric power transmission and distribution substation market for more than 30 years.

The company's Orion Substation Automation Platform is a communication and automation processor that can connect to nearly any substation device in its native protocol, perform advanced math and logic, and securely present the source or calculated data to any number of clients in their own protocol.

The Orion can be integrated with any equipment, including competitors, and is often connected to microprocessor-based relays, meters, event recorders, IEDs and RTUs. It is then connected to an existing enterprise network or SCADA system.

According to Manski, NovaTech was selected, in part, based on its willingness to configure features of the Orion platform to meet SRP's specific requirements.

"Our engineering team tried to be really forward-thinking as we were implementing these upgrades," explains

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Manski. "We kept asking ourselves how we could configure the product so it would make our life a lot easier going forward."

For SRP this included ensuring field engineers or technical staff could modify the master configuration files to tailor the system to each site.

At SRP's distribution sites, there is greater consistency and the Orion platform easily supported existing standards and configurations used for decades. However, there was more variability in terms of configuration at each transmission substation and so a templated approach did not work as well.

Using Orion, Manski and his team were able to build a master configuration file that encompassed SRP's base standards, but still allowed the field engineer to modify or delete aspects that did not apply to a given site.

This also simplified training, an important feature given SRP rotates new engineers through a variety of roles every six months as part of a two-year onboarding program. The training includes learning all the equipment, including the Orion, and how to program it.

"Our new and experienced engineers were very impressed by the ease of configuration and intuitiveness of the Orion platform - so much they stated they preferred working on it over the legacy equipment," says Manski.

The system also uses open-source web technologies and pre-configured template pages to simplify the building of interactive SCADA and local HMI screens to view data from connected IEDs and RTUs using standard web browsers.

Beyond interface design improvements, the integration of key features such as an alarm annunciator application, is one of the areas that substation automation platforms have advanced significantly.

The alarm annunciator in the NovaTech platform is managed through the same WEBserver software and includes pre-configured pages for data archiving/sequence of events recording, alarm annunciation, one-line diagrams, IED faceplates, control screens, alarms, trending and communications diagnostics.

For example, any data point in the Orion database, either obtained from attached IEDs or calculated, can be designated as an alarm point and displayed on the tile annunciator.

This can save substantial time when upgrading sites with thousands of alarms.

"It used to take hours for us when we were upgrading a transmission site that had almost a thousand alarms," says Manski.

Now two years removed from a successful pilot implementation, SRP this year is upgrading 6 transmission substations and 9 distribution sites, with additional generation and distribution feeder automation planned. The utility anticipates it will ultimately replace more than 300 RTUs and install 500-600 Orion systems.

Automation Upgrade at Hoosier Energy

In the Midwest, Bloomington Indiana-based Hoosier Energy also had to review its substation automation technologies. The electric cooperative, founded in 1949, provides wholesale power and services to 18 members through a nearly 1700-mile transmission network.

"Our RTU vendor went out of business," explains Lance Simpson, a Hoosier Energy communication engineer. "We needed a vendor that would be a reliable source of maintenance and spare parts."

The energy company used an extensive RFP process before selecting NovaTech.

"A large driver for our choice of system was the user interface and how comfortable our technicians felt with it," says Simpson. "It needed to be user friendly not only from engineering design perspective, but also from the technicians' perspective. The ease of building master configuration files using the NovaTech Communications Director [NCD] makes their work easier."

Hoosier Energy technicians often use the terminal interface to view traffic on the various communications ports. They also move files and save multiple configurations on the same box for the HMI. "With everything organized through the same interface, there is less training to do because the learning curve is not nearly as steep," says Simpson.

The utility finds the simplicity of the interface particularly useful for testing when it will need to pull alarm logs off to view them and trend values over time.

Consolidation of features in a single unit has also saved Hoosier Energy space and money. According to Simpson, "having an integrated tile annunciator tool has allowed us to install annunciator displays in stations where costs or space previously prohibited us from doing so"

While the utility primarily sources off-the-shelf RTUs and parts such as terminal blocks, field wiring and power supplies from NovaTech, it also sources integrated distribution enclosures. These are complete cabinets or enclosures designed for distribution SCADA applications in outdoor environments. Due to the challenging environmental conditions, these are larger in scope and require a separate battery charging system and environmental controls.

The combined efficiencies that Hoosier Energy has discovered using the integrated technologies has had a significant overall impact. "Based on all the things the Orion platform can do, we have certainly seen a cost savings and just an overall improvement in ease-of-use," said Simpson.

Since 2012, Hoosier Energy has deployed 10 new large RTUs at its transmission stations and 20 more smaller applications at the distribution level. According to Simpson, the energy company will continue to replace and upgrade its technology at the rate of 2-5 transmission substations each year.

For more information on substation automation platforms, visit the NovaTech website at www.novatechweb.com or call 1-844-668-2832. •

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