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Products and Services for Today's Electric, Telecom, and CATV Utilities

**Making Pole-
Top Damage a
Capital Offense**



**Using Remote
Video Inspection**

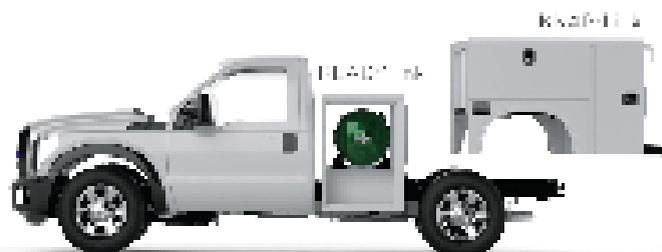
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ICUEE 2013 At A Glance

This Year's Theme: Take Tomorrow for a Test Drive

Tomorrow is right around the corner. For utility contractors and municipalities, we have the keys to prepare for it. Learn about new technologies, innovations, insights and trends affecting the utilities industry – ranging from electric to telecom and water/wastewater to gas.

Demo the latest equipment. Meet with the experts. Network with peers. Put the future in your hands at ICUEE, the International Construction & Utility Equipment Exposition.

The show will feature over 800 exhibitors and is expecting more than 16,600 people to attend.

New for 2013!

An indoor Exhibitor Demo Stage will expand the show's popular outdoor

equipment demonstration component: attendees will have more opportunities for a first-hand look at new technologies and best practices in action.

Machinery exhibited in job-like conditions so attendees can test-drive the equipment, working at ground level, underground and overhead.

You can expect to see Indoor and outdoor exhibits of equipment including:

- Admixtures/Chemicals
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'Hands-on' at ICUEE 2013

Demonstrations and learning opportunities enhance show experience.

Online Exhibitor Demo Schedule & planning tools help attendees maximize time onsite

Advance registrations for ICUEE 2013 continue to outpace the last two events as the show nears opening day about a month away. Utility and contractor professionals attending ICUEE can expect to experience one of the largest and most comprehensive shows in ICUEE history.

In addition to 25 acres of exhibits of the newest products and technologies, the show will feature jobsite safety demonstrations in addition to its numerous working-equipment demos and a new indoor "demo stage."

Attendees will also find a more diverse and targeted education schedule than ever before, and several industry certification programs and exams will be offered.

ICUEE 2013 will be held October 1-3, 2013 at the Kentucky Exposition Center in Louisville, Kentucky.

"Utilities and contractors come to ICUEE to see the latest in equipment and products that can improve efficiency and profitability; hands-on demos help attendees better evaluate and compare product capabilities across multiple brands," stated Sara Truesdale Mooney, ICUEE show director.

"They are also looking to improve their operational proficiency and jobsite safety; ICUEE's educational and safety-related opportunities help attendees learn about best practices and improve their safety awareness and skills," Mooney said.

Mooney noted that continued robust education ticket sales underscored the relevancy of topics to industry professionals. Leading industry groups are co-locating education programs and events at the show that focus on specific industry sectors, adding to the information exchange and networking.

Attendees can use the show's convenient online Exhibitor Demo Schedule to preview what demos they want to check out onsite. (They can use additional show planning tools online to compile a personalized schedule that also includes exhibit booths and education sessions of interest.)

Check Out These Safety and Equipment Demo Opportunities

- The new ICUEE indoor demo stage for educational product demonstrations complements the outdoor equipment demos that are a hallmark of the show; it is centrally located on the show floor.
- The iP Utility Safety Zone pavilion, from Incident Prevention magazine, gathers together exhibitors with products/services focused on incident pre-

vention and jobsite safety.

- The NCCCO Lift Safety Zone pavilion, from the National Commission for the Certification of Crane Operators, will spotlight NCCCO certification programs designed specifically for the utility industry. The zone will feature live demos of the programs' practical CCO examinations, including the new certification for service truck crane operators, as well as certifications for digger derrick and articulating crane operators and riggers (level I and level II).
- The Pike Electric High Voltage Simulator will present "live line" demonstrations throughout the show to highlight the dangers of working with high voltage.
- The ICUEE Ride & Drive test track expands the show's hands-on concept to on-road commercial vehicles. Attendees can take to the "open road" to better evaluate trucks, truck engines and components.

Indoor showcase joins outdoor equipment demos to extend 'hands-on' value

A new indoor Exhibitor Demo Stage at ICUEE 2013 joins the show's popular outdoor working-equipment demonstration component: Attendees will have more opportunities for a first-hand look

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at new technologies and best practices in action.

Show management developed the indoor program in response to attendee feedback for more demo/educational options: 90 percent of utilities and utility contractors in a recent show survey said that demonstrations at ICUEE affect their decision to attend, and 84 percent said that product demonstration opportunities and operating equipment influence their buying decisions.

The new ICUEE Exhibitor Demo Stage will run during show days; exhibitors will offer concentrated 20-minute educational and interactive segments that highlight the performance or merits of a product/service in actual use or simulated situation. A moderator will host the sessions, introducing each segment and facilitating questions and answers.

The 2013 ICUEE, International Construction and Utility Equipment Exposition will be held October 1-3, 2013 at the Kentucky Exposition Center (KEC) in Louisville, Kentucky. The show targets the business needs of utility professionals and utility construction contractors in the electric, telecommunications, cable, water, wastewater and natural gas sectors.

“The demo stage is one more way to get more education and information to our attendees to help them do their jobs better, and to help our exhibitors get in front of their customers,” stated Show Director Sara Truesdale Mooney. “Attendees can see and compare what’s out there to make them more productive; they can test the equipment and talk with the experts to find the products that meet specific company needs.”

Comprehensive Exhibitor Demo Schedule: Preview What to Visit Onsite

The show website will feature an Exhibitor Demo Schedule for attendees to preview demos to participate in or watch at the show, to help plan their time onsite. (They’ll be able to compile a personalized show schedule that also includes exhibit booths and education sessions of interest.) Exhibitors are encouraged to add their demos to the schedule; there is no charge. ICUEE is known for its numerous out-

door equipment demonstrations where attendees can “test-drive” underground, at-ground and aerial equipment in job-like conditions.

The show also features the ICUEE Ride & Drive demo track for attendees interested in trucks, truck engines and components. Attendees can test drive commercial vehicles “on the open road” to better examine these products, including transmissions; power systems; clutch and brake systems; safety and collision

warning systems; fleet, fuel and GPS management systems; and hybrid and alternative fuel systems.

And, safety demonstrations are again planned for attendees. Check the show website for the latest details.

For more information on attending or exhibiting at ICUEE 2013, go online to www.icuee.com.

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Using Remote Video Inspection Tools to Improve Safety and Efficiency in Confined Space Entry

Underground vaults and confined spaces can be inherently dangerous for utility workers; in fact, each year about 100 workers in the U.S. die from confined space incidents typically involving combustible and/or toxic atmospheres, moving parts, engulfment hazards, electrical shock hazards, falls, etc.

There are many elements to a utility safety plan designed to comply with OSHA's Confined Spaces Standard, including written procedures, PPE, training, and hazard identification. Adherence to these regulations will increase the safety of any confined space operation, but now there is even more that can be done to reduce the risks.

New technology can be used to increase the safety and effectiveness of those who must enter into a confined space. Remote gas monitors have long been used to identify a hazardous atmosphere condition in advance of inserting an individual into the space. Yet many other hazards also exist that need to be identified prior to a confined space entry. The ideal solution would be to monitor the atmosphere, as well as to visually assess the environment of the confined space prior to entry.

Portable video inspection tools, such as those manufactured by Zistos Corporation of Holbrook, NY, can facilitate a safe visual inspection of the unknown environment prior to putting a worker at risk. Many of the Zistos video inspection tools were developed for special operations in law enforcement and the military to visually identify risks such as IEDs, enemy combatants, and anything suspicious in advance of personnel entering into a danger zone. The same philosophy applies to industrial/utility workers who face a different kind of danger. This "know before you go" philosophy allows the workers to identify and neutralize any risk factors prior to the confined space entry.

A basic system should include a camera mounted on a telescoping pole and an LCD on which images from the camera are viewed. As a camera is lowered into the vault or other confined space, workers can get a full 360 degree, top to bottom view of the area to reveal exposed haz-

ards, entanglement hazards, water, fire hazards, smoldering components, access and egress issues, and even animal/vermin infestation before they enter the confined space. The Zistos Articulating Pole, Color Inspection System, (IAD-USZT-A14), includes a zoom camera on a pole that enables the inspector to see and record the smallest of details. It can also allow the inspector to remotely read identifying labels and tags safely from outside the confined space.

Camera options include color (for reading tags and viewing cable markings), thermal (for identifying heat signatures through smoke and darkness), and zoom (for viewing small details in hard to reach areas). An audio option can also be useful in listening for sounds of electrical arcing. Ideally these options can be deployed and changed quickly (like a socket set), as needed. Some systems have the additional capability of not only viewing still and motion photos, but also recording, annotating, and streaming them live via Wi-Fi from the field to other viewers and locations.

Another option is a videoscope that can be inserted into openings as small as 10mm, such as holes in manhole covers. Powerful, internal illumination that provides a viewing range of 40 feet in complete darkness and superior resolution can make a videoscope a vital part of an inspection system.

Safe access is the primary benefit to a portable video system, but there are other benefits as well, such as the ability to perform an initial visual assessment from above ground to determine what tools and components may be necessary to facilitate maintenance or repair operations. Knowing what is needed before entry can reduce not only the number of entries, but also the time spent on-site. This increases both the safety and efficiency of the crew. One individual can be used to make the initial assessment/inspection of the underground vault without the need to enter the confined space. In addition, this method can often have a positive impact on traffic flow around the vault opening. The footprint of operations from one worker with a video inspection tool is far less than the footprint of a team of workers supporting a confined space entry.

Portable video inspection systems increase safety and save time, while providing, at ground level, inspection of a variety of confined spaces and other difficult to reach areas such as bridge structures, columns, and other difficult to access or dangerous industrial areas.

As a major utility supervisor recently commented, "I breathe a little easier knowing that the cameras are available and we have taken other steps to significantly reduce the risk to our people."





BEFORE



AFTER

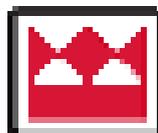
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10-foot radius lifting capacity:

a "working" comparison developed by Terex Utility and the Utility 1000 Club to measure the ability to lift a load within a 10-foot radius of the machine's location.

Research shows that 75 to 80 percent of the time that a digger derrick is in use, it is digging holes and setting poles.

If a digger derrick is used to dig a hole, it has to be able to easily match the size of the digger derrick itself. In the case of a digger derrick, that means the derrick itself. The original part of the derrick leading to the bucket and the bucket itself are small. But the derrick itself is a large, heavy structure. It's the derrick itself that is the hole. It's the digging method of the hole.

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For more information about Work Zone Capacity diggers, Telescopix will send you a free information kit. Call 800-882-8878 to find the representative nearest you.

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Making Pole-Top Damage a Capital Offense

I-Corp Is Changing The Way Poles Are Capped, Treated... and Cost-Accounted?

Nature destroys utility poles, and utility companies repair them. This, it seems, is the circle of life in this industry. Typically, the most vulnerable area is the top 5 to 6 feet of the pole, exposed to birds, insects and wood rot—most unprotected poles eventually show signs of deterioration. Typically, the response is to cap the pole. And typically, the repair is treated as a non-capitalized maintenance expense. I-Corp suggests that it may be time to change the way utilities treat these vulnerable parts of the pole... and how they are treated in the books.

The Problem With Caps

Metal Caps are an easy fix that might end up causing as much damage as they prevent, and they must be installed in the field, tying up crew time. Now you have moisture trapped inside a small dark space, warmed by the sun hitting the metal cap-- the perfect recipe for wood rot.

Tar-based caps, historically, were much more effective than they are now, as they stuck fast and molded to the contours of the pole tops. But, existing tar-based caps are not as sticky, and don't mold as well, leaving unprotected pockets where rot can get a foothold.

Building A Better Cap

I-Corp has solved all of these problems and more with one product: IPOLE Asphalt-Enhanced Pole Capping Putty.

IPOLE Asphalt-Enhanced Pole Capping Putty is an asphalt-enhanced polymer putty that comes in a caulking tube-- a comprehensive woodpecker deterrent that can be applied with a putty knife. You simply spread it on as you would filler putty on drywall, so an entire crew isn't needed to make the repair. It can also be applied on its side while in the pole pile

IPOLE Asphalt-Enhanced Pole Capping Putty is infused with Sniff'n'Stop, I-Corp's proprietary non-toxic, all-natural Woodpecker repellent. So not only does it seal the pole against rot, it keeps the woodpeckers from coming anywhere near the top of the pole.

IPOLE Asphalt-Enhanced Pole Capping Putty fills all holes, grooves and grain contours, providing complete coverage of the pole. The putty can be applied to the area around the shield wire bolt as well to seal and protect. A single solution that seals the business end of the pole in its entirety AND runs the woodpeckers and other pests off, without hurting them.

Unlike other caps, IPOLE Asphalt-Enhanced Pole Capping Putty can be applied to the pole on the ground before it is installed in the field, and furfuryl alcohol in the product rejuvenates the wood's preservatives preventing the need for repairs from day one and extending the effective life of the pole.

In addition, IPOLE Asphalt-Enhanced Pole Capping Putty's actives are pure essential oils—natural plant derivatives--combined in a way that woodpeckers avoid because they don't like the smell. It won't hurt crews, and it won't hurt the woodpeckers.

Putting the Cap In Capitalized

Some utilities argue that, unlike traditional pole caps and patches, since you're preserving the wood and repairing damage, you are extending the life of the pole, therefore the expense of capping poles should be capitalized. IPOLE Asphalt-Enhanced Pole Capping Putty adds extra weight to the argument by actively preventing future woodpecker damage (some of the original test poles are still woodpecker free seventeen years later).

In regards to FERC Regulations in considering the life extending nature of Wood Pole Capping as capitalizable, a few items from the IRS's Capitalization v Repairs Audit Technique Guide, Sections 8 and 9 stand out. According to FERC, a cost can be capitalized if it (8.4.6) "Extends the useful life of the property," and (9.1.2) "appreciably prolong(s) UOP's economic life."

It would seem difficult to argue against the fact that pole capping fits these requirements. If it repairs damage, seals against rot AND actively prevents future deterioration and pest damage, then there is little doubt that capping with IPOLE Asphalt-Enhanced Pole Capping Putty will extend the useful and economic life of utility poles.

I-Corp supports those advocating for this change after talking with utility clients who feel it makes sense. According to Phil Landers, Director of R&D at I-Corp, the whole point of IPOLE Asphalt-Enhanced Pole Capping Putty is to save utility companies time and money. "Until now, that's been by mitigating and eliminating Woodpecker threats. I'm neither an attorney or an accountant, but if IPOLE Asphalt-Enhanced Pole Capping Putty turns out to be as effective a tool in cost accounting as it is in pest control, then why wouldn't we help support such a change?"



Hear That?



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Anritsu Company Introduces BTS Master™ with Improved Performance in Thinner and Lighter Design

Anritsu Company introduces the MT8220T BTS Master, a multi-function handheld durable tester with all the capabilities network operators, sub-contractors, installers, and regulatory authorities need when measuring base stations. The third generation of Anritsu's field-proven BTS Master family, the MT8220T has improved performance, including a standard GPS receiver, enhanced two-port dynamic range, faster LTE scanner, and expanded spectrum analysis capability, in a design that is thinner and lighter than previous models.

Combining a cable and antenna analyzer, spectrum analyzer, and internal power meter, the MT8220T BTS Master offers line sweeping, comprehensive wireless measurements, ultra-sensitive spectrum analysis and sophisticated interference tracking in a compact handheld solution. It also features a standard GPS receiver with antenna. By providing multiple testing capabilities, including comprehensive Over-the-Air (OTA) measurements to support Remote Radio Heads (RRH) and MIMO, the MT8220T is well suited for co-siting of new systems, such as LTE, with existing networks.

Improving the cable and antenna analyzer two-port dynamic range to >100 dB (typical 110 dB) over the key cellular frequency range of 400 MHz to 2800 MHz allows users to conduct cellular repeater testing where isolation measurements up to 100 dB are required. Dynamic range is also enhanced to >90 dB between 2800 MHz and 4000 MHz, and >85 dB up to 6000 MHz.

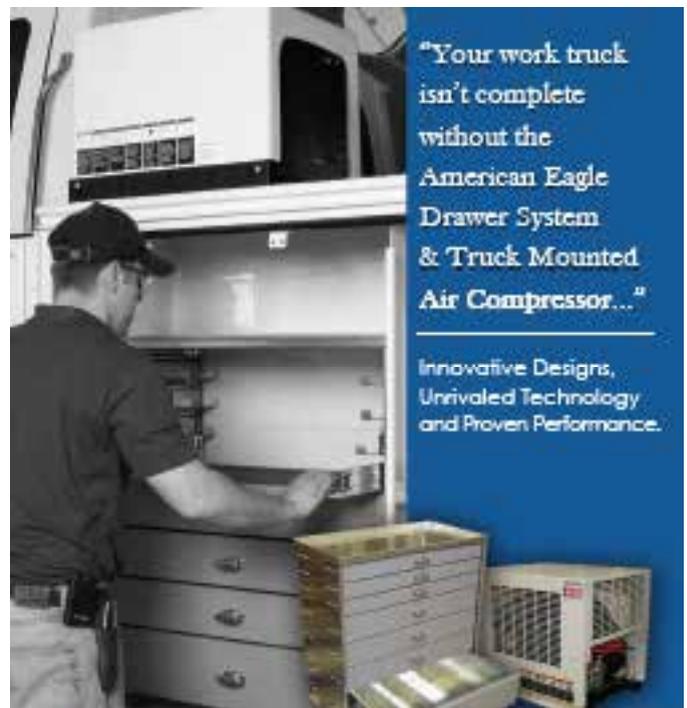
The built-in spectrum analyzer, which provides frequency coverage of 150 kHz to 7.1 GHz, has enhanced sweep modes, including Fast, Performance, and No FFT. The MT8220T BTS Master also features Burst Detect, so users can capture and analyze fast, transient signals down to 200 microseconds duration and 1% duty cycle in a span up to 15 MHz. This

simplifies direction finding and signal locating of problematic interference signals.

Housing improvements have also been made. The MT8220T BTS Master has a thinner design and weighs less (4.6 kg) than previous generations. A high-contrast, touchscreen display and backlit key panel enable convenient operation in both bright sunlight and dim conditions. The user has access to an options menu, which has the capability to place time-saving short cuts for frequently used functions on the main menu screen, and a virtual keyboard for fast and easy naming of saved files.

A number of options are available with the MT8220T BTS Master to add versatility and allow it to be used on almost any installed network. Bundled wireless measurement options allow users to conduct RF, demodulation, and OTA

measurements on technologies such as CDMA and EV-DO, LTE FDD and LTE TDD, and Fixed and Mobile WiMAX.



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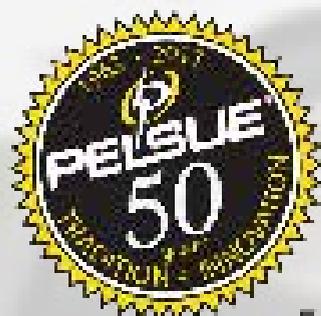
Alerts you in the operator with an audible statement: "Warning, full attachment not connected".



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Honeywell

Announces Cloud API Program
With Home Automation
Software Developers



Honeywell now offers an application programming interface (API) program that enables development partners to build application software that interfaces with numerous Honeywell Wi-Fi thermostats including the color-customizable Wi-Fi Smart Thermostat. Honeywell is initially partnering with Akuacom, Opower, Control4, and Lutron on the API offering. The new Comfort Control API will allow additional development partners to offer creative, innovative experiences, value-add services and custom applications that integrate with Honeywell Wi-Fi thermostats.

For homeowners, the Comfort Control API means their Wi-Fi enabled Honeywell thermostats will integrate seamlessly with products and services from like-minded companies striving to

give people control over their home's energy efficiency via smartphone, tablet or computer.

The Comfort Control API is an effort by Honeywell to accelerate energy efficiency, innovation, and expand the seamless integration of products and services. "Honeywell subscribes to the belief that peoples' lives are made easier – and better – if devices and products talk to each other," said Tony Uttley, general manager home comfort and energy systems at Honeywell. "With the Comfort Control API, our thermostats will communicate with other apps and devices, which gives consumers a greater experience of convenience, control, an energy management within their home."

"We are excited to take this next step in our partnership," said Alex Kinnier,

senior vice president of product management for Opower, which provides tools, information, and incentives that consumers need to make smarter decisions about their energy usage. "Opower's focus is on expanding the suite of tools our utility partners can use to support their energy efficiency, demand response and customer engagement objectives. We're looking forward to the release of additional services on this platform across the coming year."

Honeywell is in beta testing program with the following companies:

- Akuacom, a Honeywell company and pioneer of Open Automated Demand Response (OpenADR), is the leading SaaS for connecting energy providers

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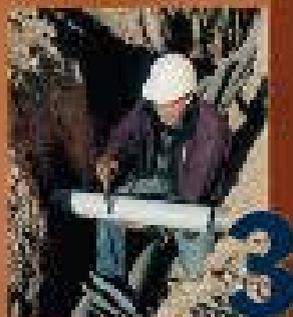
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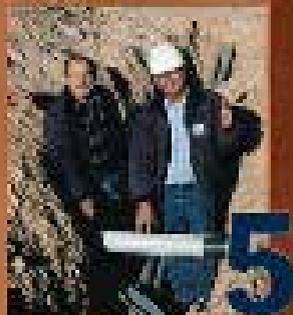
Step 2: Cut Split
Duct Conduit to Fit



Step 3: Snap in
Place



Step 4: Attach
Adapters



Step 5: Finish Job
in Record Time

to their residential, commercial and industrial customers. The Akuacom platform uses the Comfort Control API and links to the Honeywell Total Connect Comfort app to alert homeowners when temperatures are briefly adjusted to trim electricity consumption. Consumers agree to these changes in advance and receive incentives from their utility for helping stabilize the electrical grid on the hottest, most energy-intensive days of the year.

- Opower is the world's leading provider of customer engagement solutions for the utility industry. Deployed by 85 utility partners to more than 18 million consumers across seven countries, Opower's engagement platform, Opower 4, will use the Comfort Control API to integrate Honeywell's suite of WiFi connected thermostats into utility programs that drive measurable energy efficiency, demand response and customer engagement.
- Lighting control leader Lutron Electronics provides homeowners with simple energy saving solutions including dimmers for any type of light bulb, occupancy sensors that ensure lights are never left on in unoccupied rooms, and motorized window treatments that help keep HVAC costs in check through every season. By utilizing the Honeywell Comfort Control API, Lutron will provide homeowners with enhanced control of their home environment, including lights, shades, and heating and cooling

systems.

- Control4 a leading provider of automation systems for homes and businesses, unlocks the potential of connected devices, making entertainment systems easier to use, homes more comfortable and energy efficient, and families more secure. By utilizing the Honeywell Comfort Control API, Control4 is poised to extend the interoperability and integration with Honeywell thermostats via the simplicity of the Control4 platform. Once integrated, Control4 customers will be able to control and monitor their Honeywell thermostats using their Control4 remotes or touch panels, as well as their smartphones, tablets or computers.

ultimately means greater savings.”

“Collaborating with a trusted brand like Honeywell on the cloud API program gives homeowners yet another way to live an energy-efficient lifestyle,” said Rob Weinberg, senior vice-president of Lutron's residential business. “We're looking forward to offering homeowners even more options for integrating energy-saving temperature control into their Lutron lighting and shade control systems.”

Honeywell's Total Connect Comfort API is available to software developers, product integrators and retailers interested in integrating with Honeywell's proven technology. Prospective partners of Honeywell's API program can visit www.ecc.honeywell.com/api for more information.

“With Akuacom, we've been helping utilities connect with their customers to manage energy use for decades,” said Jeremy Eaton, vice president and general manager for Honeywell Smart Grid Solutions. “The key to these efforts is using innovative technology to help utilities offer comfort, convenience and control to their customers. The API creates a tighter bond between our utility and consumer technology, which

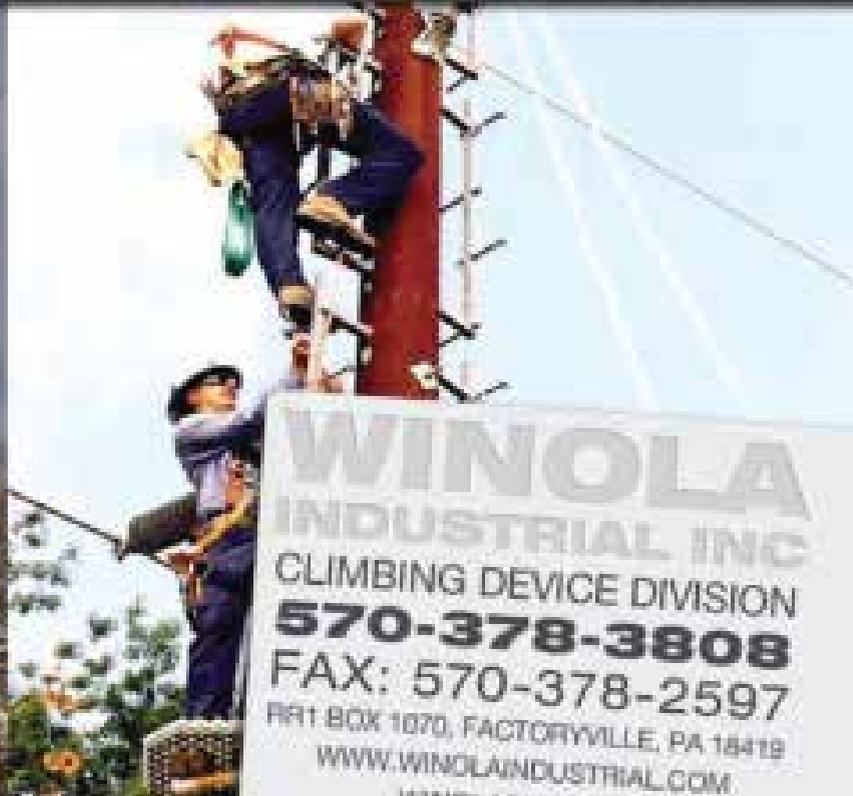


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OVER 4 MILLION LADDERS PRODUCED SINCE 1971

“Apps”, Shields, Programmability, Arduino-capability & Hackability....on a light bulb?

NliteN has just added the dimmable 2D-Lux™ Smart LED Disk (SLEDD) to its campaign on Indiegogo. The 2D-Lux SLEDD, a 60W-incandescent-replacement LED smart “bulb”, adds an Atmel (NASDAQ: ATML) AVR microcontroller, USB interface, and hardware-expansion pins to the 2D-Lite™ LED Disk (Sept 4, 2013 PR here), bringing intelligence, programmability, additional hardware functions, and the ability for consumers to install, and run, light bulb apps, including smartphone control, at very low cost -- about the average price of “dumb”, connectivity-incapable, LED bulbs at most retailers - \$25.

Both disks are based on patent-pending 2D-Light™ LED Disk technology featuring point-source spherical LED illumination pattern, automated assembly, and utility load shedding capability with an eye towards encouraging rebates.

The 2D-Lux SLEDD’s functionality can be augmented and customized by using its expansion connector to add “shields” – small, low-cost plug-in circuit board modules. Shields can add any number of hardware functions to the 2D-Lux SLEDD, including microphones (clap on, clap off, clap dim, loudness sensitive brightness, etc), motion sensors, Zigbee, Bluetooth, WiFi, Linux web appliance, and battery-backed-up clock-calendars, among others. The functions on the shield are then utilized by a light disk “app” (LDA™) that the consumer downloads into the AVR microcontroller via the SLEDD’s integrated USB connector - fully defining SLEDD functionality.

One of the first apps/shield combinations being planned, as a crowdfunding stretch goal, enables the remote control of a SLEDD using a standard Android or iPhone mobile device for such functions as on, off, dimming, timed functions, etc. Using a WiFi shield, its LDA and smartphone app, all purchased from NliteN’s online store, SLEDDs can be addressed and controlled individually, or as a group, over an internet or LAN connection without lowering lumen light output, needing a special bridge device, or limiting the number of LED Disks that can be controlled.

Consumers will be able to download LDAs from NliteN’s online store, iLumens™, install them via the integrated USB connector, then run these firmware applications to define various lighting

functions and modes. A set of basic, free, apps are planned, enabling the SLEDD to perform simple tasks, such as using the AVR’s on-board timer to turn its LEDs on or off at defined intervals.

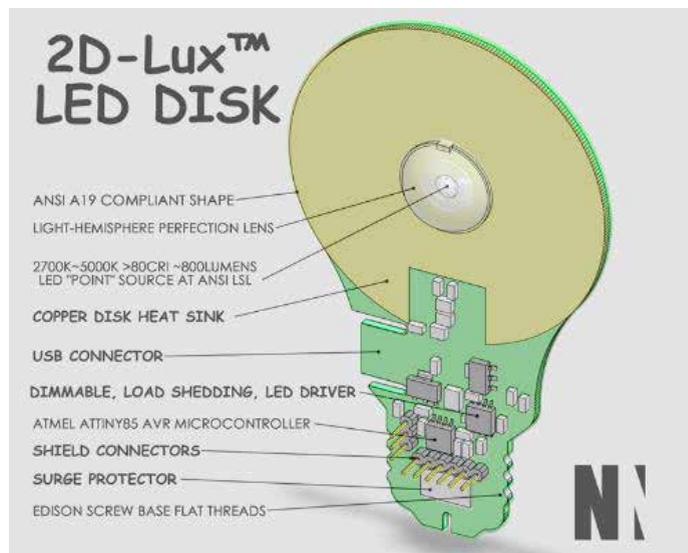
“The low power sleep modes found in Atmel’s AVR, as well as its wide voltage operating range, has allowed NliteN

to eliminate expensive AC to DC power supplies, as well as eliminating the need for large electrolytic capacitors which are a huge reliability and lifetime concern in Solid State Lighting today”, said Andreas Eieland, Atmel’s Sr. Product Marketing Manager of Standard Microcontrollers. “The AVR’s high processing throughput allows inexpensive, direct, USB interfacing to the AVR, facilitating the ability of an owner to download apps by simply attaching a PC’s USB cable to the integrated connector on the bulb. Our low noise, high precision, on-chip analog to digital converters enabled NliteN’s designers to measure system temperatures to prevent system overheating in enclosed fixtures, as well as monitor AC power waveforms and implement a planned low-cost power-line receiver communications capability similar to the BSR X10”.

Where do those brilliant apps come from?

As part of its mission to create excellent, affordable lighting products, NliteN’s product strategy includes supporting, and conspiring in, the exciting new collaborative business models that are fueling the revival of Western manufacturing economies by enabling individual, or small teams of, innovators to bring their products to market quickly. The 2D-Light technology platform was designed to welcome and support third-party hardware and software applications.

In addition to funding the 2D-Lux Smart LED Disk’s and its shields’ development, NliteN plans to use a portion of its crowd-sourced funding to create an apps store, as well as an on-line forum where developers can apply their technical skills and imagination to create and market a wealth of innovative shields, LDAs



and smartphone apps, unleashing the full potential of 2D-Lux SLEDD-based products.

Code warriors, lighting enthusiasts, professionals, hackers, and Maker-inspired hobbyists, will be welcomed at the members-only developers’ forum, via NliteN’s 2D-Light.com website, where community support for developers, and interaction with 2D-Light LED Disk owners in the site’s public area, will be facilitated. Developers creating hardware shields, SLEDD LDAs, and smartphone apps, will then offer them to consumers via NliteN’s iLumens™ online store, with a portion of each purchase returning an attractive royalty to its developer. Although the SLEDD can easily be configured as an Arduino-compatible device by Makers and artists for their own use, SLEDDs, LDAs, and SLEDD hardware shields are not open-sourced, nor licensed for commercial use.

Visitors to the iLumens store will be able to select, pay for and download the apps and LDAs, (some may be available at no charge) as well as purchase shields and other hardware in a secure online environment. LDAs are then transferred to the SLEDD via the LED Disk’s integrated USB connector. Hardware shields can be easily attached using the SLEDD’s shield interface.

The 2D-Lux SLEDD realizes several aspects of the NliteN’s core mission: to make low cost, efficient, affordable, high-quality lighting available - as both a basic human necessity and as a means for enhancing people’s quality of life”, stated Andy Turudic, inventor of the 2D-Light LED Disk Technology and architect of the 2D-Lux SLEDD. “In developing the 2D-Lux Smart LED Disk,

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• **New Product News**

we thought long and hard about how Makers, artists, developers, hackers, and consumers have been left in the dark by most lighting manufacturers. Although NliteN's SLEDD is not open-sourced, all of the information needed for developers to create light disk, and smartphone, apps and hardware shields licensed for use on high volume-manufactured SLEDDs will be provided."

Two New Clamp-on Resistance Testers from Megger Help Prevent a Rise in Voltage in Earth/Ground Systems

Megger, one of the world's leading manufacturers and suppliers of test equipment and measuring instruments for electrical power applications, now offers two earth/ground digital clamp-on resistance testers that are easy to use, versatile and safe. Testing with the DET14C and DET24C can help prevent a rise in voltage caused by fault current, surges and lightning strikes in earth/ground systems.

The new testers offer improved reliability over other testers with interlocking teeth. Designed with flat core ends that help prevent dirt build up and ensure measurement integrity, these new elliptical shaped clamp testers are ideal for a variety of applications. Uses include pole grounds, service entrance/meter electrodes, service panels, pad mount transformer earth,



transmission towers, telephone pedestals, telephone cabinets and lightning protection electrodes.

The slim profile and clamp design of the

two units allow for easier access and testing of round conductors. The DET14C and DET24C can clamp round cables up to 37 mm in diameter and earth tapes/straps up to 50 mm wide. These testers can measure ground resistance from 0.05 ohm to 1,500 ohm and true RMS ground leakage current up to 35 A.

The units feature a large backlit digital display for low light conditions, a noise filter function that alerts the user to the presence of noise during testing as well as an alarm limit function that can be set for resistance and current limits. Both the DET14C and DET24C offer advanced test result management that includes time

and date stamp stored results that can be reviewed on screen.

The DET24C offers additional features including an IrDA USB interface to a PC, advanced memory functionality that can transfer data to a PC or a laptop, as well as compatibility with Megger's PowerDB/PowerDB Lite acceptance and maintenance test data management software.

Both the DET14C and DET24C are safety rated to CAT IV 600 V, the highest level of safety available. These dependable units feature ultra-long battery life.

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• **New Product News**

New Fluke 1730 Three-Phase Electrical Energy Logger simplifies the discovery of electrical energy waste

Fluke Corporation introduces the Fluke 1730 Three-Phase Energy Logger, an intuitive, easy-to-use tool with professional-level energy data gathering capabilities. The Fluke 1730 breaks new ground by enabling a broader category of multi-disciplinary maintenance professionals to confidently gather energy data, while the accompanying Fluke Energy Analyze software scales from the analysis and reporting needs of the facility manager to the advanced analytical requirements of electrical engineers.

Even well run facilities can experience energy waste, most commonly through equipment and system inefficiencies or by operating at expensive times of day on the utility rate schedule. Detecting those wastes requires logging energy consumption over time, using expensive power quality analyzers operated by engineers with advanced training. Unfortunately, those cost and skill barriers have made energy audits impractical for many facilities.

The Fluke 1730 Energy Logger changes that. A streamlined energy logging tool with a straightforward, intuitive design, the Fluke 1730 allows technicians to load studies and energy logging right out of the box. The results provide facility managers with the information necessary to identify and prioritize energy saving projects.

The compact energy logger conducts key measurements of voltage, current, power, and power factor to identify areas of energy waste. All measured values are logged automatically and can be reviewed during logging. Common setup errors are rectified, through re-engineered cables, digital check and auto-correct of all connections, and an on-screen wizard for interval setup. It has the highest safety rating in the industry (600 V CAT IV/1000 V CAT III), can be powered directly from the measured circuit eliminating the need to find a power outlet, and has two USB ports for fast data downloads to PCs or standard thumb drives.

Data logged by the 1730 can be imported into the Fluke Energy Analyze software for further processing and archiving. The software allows users to analyze energy or load profiles, including zoom-in and zoom-out on details; add comments, pictures, and other information to data; overlay different logging sessions; create reports; and export measurement results.



Ventyx Cloud Risk Analytics Solution to Help Energy Companies Improve Profitability and Mitigate Risks

Ventyx, an ABB company, today announced in conjunction with Wipro Ltd. and Microsoft the introduction of a new cloud-based solution that will enable electric utilities and power generation companies to improve profitability by enhancing mitigation of market risks, while avoiding costly investments in IT infrastructure and ongoing maintenance.

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• New Product News

and utilities have used Monte Carlo simulations to model revenues/profit and analyze hedging strategies related to their physical assets (e.g., power stations) in order to make key financial decisions. Such complex simulations consume vast computing resources, and companies typically need to wait many hours for the results of critical analyses. Accelerating the process to deliver simulation data within a few hours would enable energy market participants to better mitigate risk and seize trading opportunities.

“We are moving risk analysis from overnight, to over lunch,” said Tom O’Meara, General Manager for Ventyx Energy Portfolio Management. “In a secure, high-performance environment, our solution enables customers to analyze more variables, in more iterations, run more frequently, which ultimately delivers a better understanding of market position and related risks.”

With this new solution, Ventyx will move its Planning & Risk solution onto the Windows Azure cloud platform, providing generation companies with a high-end computing environment to analyze their asset portfolio more frequently. Modeling asset portfolios in this way helps customers to improve fuel budgeting, resource planning, transaction evaluation and risk management.

“Managing generation portfolios has never been more complicated than it is today,” said Dr. Gary M. Vasey, partner and managing director for commodity technology market advisory firm ComTech Advisory. “Yet, committing the computational resources required to optimize risk analytics is an expensive and time-consuming proposition. Off-loading these complex simulations to ‘the cloud’ provides numerous potential advantages – allowing companies to perform more frequent analyses without a requisite increase in IT infrastructure spending.”

Wipro will deliver the Ventyx risk analytics application as a managed service on Windows Azure, allowing Ventyx customers to pay for the advanced infrastructure on a pay-per-use basis. By taking advantage of the cloud, customers will quickly realize returns through timely and accurate analysis and by lower overall IT costs. Additionally, information is encrypted for off-site processing, an environment as secure as on-site environments.

Subbi Lakshmanan, Domain Practice Head, ENU, Wipro, said, “We believe this could be a ‘game changing’ solution, bringing together the best-of-breed business tool from Ventyx and the latest technology platform from Microsoft. This offers business users the flexibility to

perform extensive risk analysis at short notice without heavy IT infrastructure investment upfront and pay only for what they use. The solution can be extended to other computation-intensive business scenarios like end-of-day processing, generation optimization & planning and asset valuation studies; hence, a promising first step.”

Hosted on the Windows Azure cloud platform, this solution provides a cost-effective option for generation owners to perform detailed hourly deterministic or stochastic simulations for short- and long-term analysis, risk assessment and modeling of a portfolio of assets, whether existing or potential, including physical or financial contractual positions, generation, customer loads and fuels, for improved budgeting, planning and reporting.

“Analysts indicate that cloud solutions for utilities will experience dynamic growth in the coming years, and the Microsoft Azure cloud platform provides companies with high levels of performance, scalability and resilience,” said Jon C. Arnold, managing director, Worldwide Power and Utilities Industry, Microsoft. “Wipro’s choice of Microsoft is an excellent example of how we collaborate with innovation leaders to help customers gain the benefits of cloud services.”

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Soitec Launches New Solar-energy Module Featuring 31.8% Efficiency - The Highest of Any Commercial Module Being Mass Produced Today

Soitec (Euronext), a world leader in generating and manufacturing revolutionary semiconductor materials for the electronics and energy industries, today announced its newest concentrated photovoltaic (CPV) module featuring a record power-generating efficiency of 31.8 percent. Soitec's new module, which is already in industrial volume production, has the highest efficiency of any commercial product available for multi-megawatt installations.

Using an optimized anti-reflective coating, Soitec's CX-M500 module increases nominal peak power output over previous generations from 2,335 Wp to 2,450 Wp. The new module has been certified according to the International Electrotechnical Commission's (IEC) and Underwriters Laboratories' (UL) standards (IEC 62108, IEC 62688, UL 62108 and UL SU 8703), confirming that it meets product safety, performance and reliability requirements in both the US and European markets.

"With this new product, Soitec is continuing to raise the bar for solar-power efficiency and, looking ahead, the potential for further improvement is significant," said Gaetan Borgers, executive vice president of Soitec's Solar Energy Division. "Based on our current work in solar-cell development, we are well positioned to achieve even higher module efficiencies in the near future. With our newest commercial modules and their higher efficiencies, we are delivering on our cost-competitiveness roadmap."

Additionally Soitec's new module complies with the California Solar Initiative, so power-plant installations using it can qualify for performance-based incentives from the California Energy Commission (CEC). The module also bears the CE mark, indicating its compliance with the relevant European Union directives, regulations and standards.

Using Soitec's proven Concentrix™ technology, each Soitec CPV module comprises a Fresnel lens plate and a bottom plate on which high-performance solar cells are mounted. The Fresnel lenses focus sunlight concentrated by a factor of 500 on the solar cells beneath. The cells are precisely mounted on the bottom plate, enabling the focused sunbeam

to align perfectly with the tiny solar cells. In constructing its modules, Soitec uses elements from the circuit board and dual pane window industries, which are both cost effective and have been proven reliable over many years.

The modules are used in assembling Soitec CPV systems. Soitec's tracker-based systems are designed to build high-capacity solar-power plants with low construction and maintenance costs. Soitec's CPV systems can significantly improve the Levelized Cost of Electricity (LCoE) for mid-sized to very large solar-power plants.

Duke Energy's battery storage project in Texas wins top North American award

Duke Energy's Notrees Battery Storage Project, located in Ector and Winkler counties, Texas, was recently honored with the top utility-scale energy storage innovation award at the 2013 Energy Storage North America (ESNA) Conference and Expo in San Jose, Calif.

The project's 36-megawatt (MW) advanced lead acid battery helps smooth the naturally variable output from Duke Energy's 153-MW Notrees Wind Power Project. By storing energy generated by the wind farm, the project can respond quickly to regulate frequency and provide ancillary services for grid management.

"Incorporating energy storage will make the electric industry more efficient," said Jeff Gates, managing director in Duke Energy's Commercial Transmission business, and lead developer on the



project. "This project has proven the technology can be deployed at commercial scale – and the flexibility and speed of response has provided tremendous benefit to the grid operator."

The project has been operating since late 2012. Duke Energy matched a \$22 million Department of Energy grant to develop the project, and Texas-based Xtreme Power designed and installed the battery.

Award winners were judged on services provided to the grid, financing options, ownership model and technology strengths.

"The Notrees project is a success story at taking forward-thinking innovation and creating business value," said David Mohler, vice president, Emerging Technology at Duke Energy. "It shows that energy storage, as part of the ecosystem for delivering electricity, has an exciting future."

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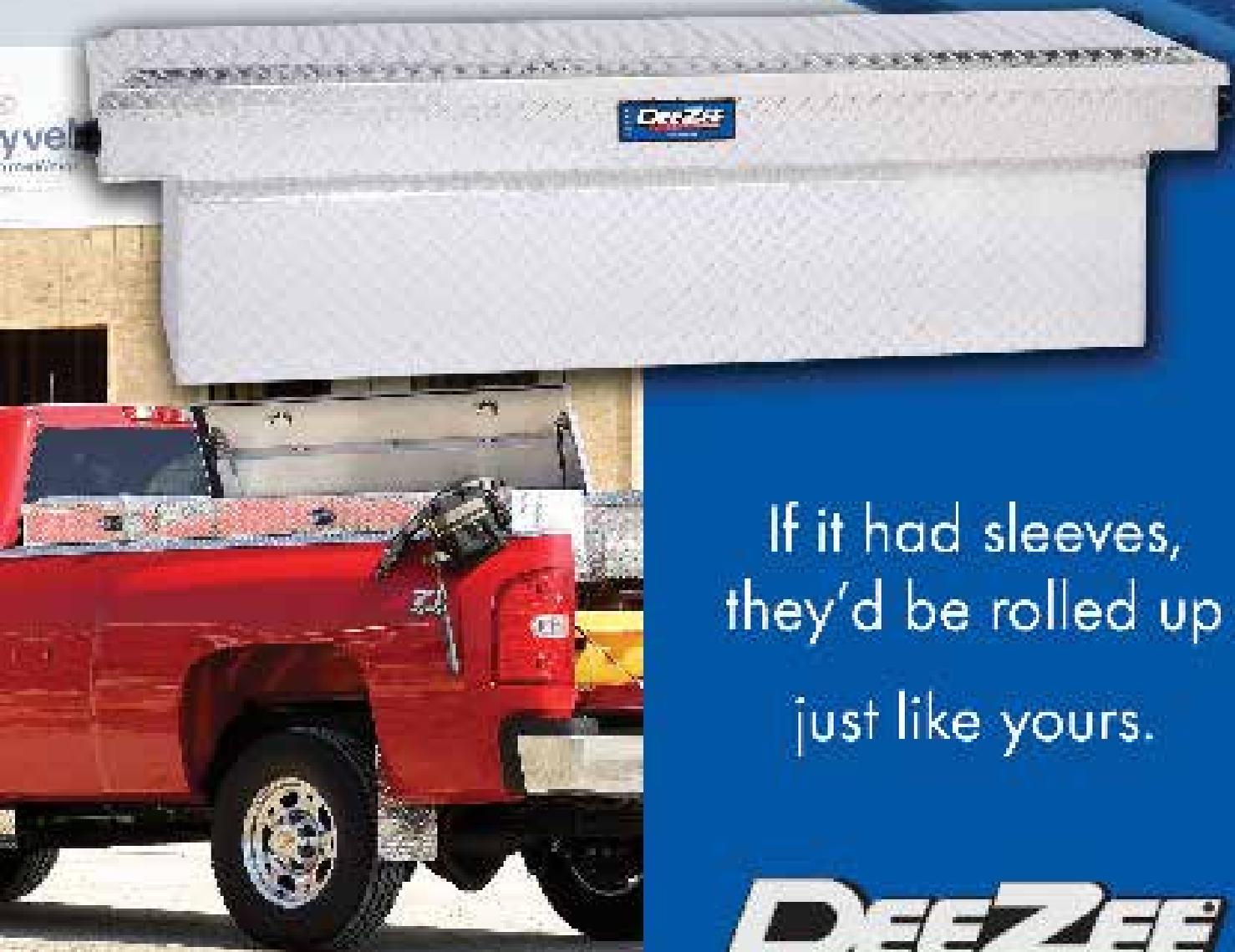
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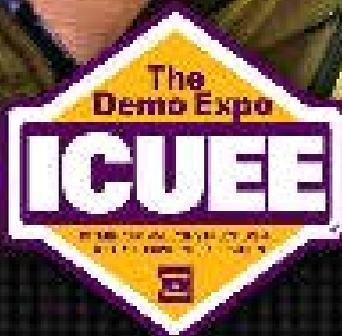
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