Latest Construction Technology Releases

New technologies have entered the marketplace, designed to help contractors do their jobs. Here are some of the most recent releases from this fall.

Leica Geosystems

The Leica BLK2FLY — an unmanned aerial vehicle from Leica Geosystems, part of the Stockholm-based digital reality company Hexagon — is now able to scan inside small structures. Like the original model, this new version of the BLK2FLY uses Leica lenses, light detection and ranging (LiDAR) autonomous navigation and simultaneous localization and mapping (SLAM) technology to create 3D digital scans.

Advanced coding of the SLAM algorithms improves BLK2FLY's autonomous navigation system by making short-range obstacle detection and avoidance more sensitive. New enhancements also fill in mapping gaps created by shadows, textures or holes. According to the company, these added features allow the UAV to operate inside difficult or dangerous-to-scan structures, such as power plants, tunnels and warehouses.

Now able to scan both exteriors and interiors, BLK2FLY can create more complete digital scans that connect with Hexagon's cloud-based 3D modeling platform. Users can operate, scan, upload and manipulate images from a single tablet control panel. These improvements are available at no extra cost to current BLK2FLY users.

Bluon

Bluon is applying generative artificial intelligence to a new troubleshooting tool for HVAC technicians. The company says its MasterMechanic — now in beta testing phase open to public use for a limited time — is like ChatGPT for the trades. Users type in a question about HVAC systems, problems or installation issues and get an instant response in plain language.

This AI system provides detailed responses answering setup questions, diagnostics problems, step-by-step instructions on repairs, recommendations about best practices for maintenance and more. If an issue can't be resolved through the tool, technicians are connected to representatives with specific knowledge related to the question.

The company states it input comprehensive data for nearly 50,000 problem scenarios. The firm tapped into the skills of HVAC mechanics with a broad variety of expertise from residential to commercial settings, including complex, high-efficiency and energy-saving systems.

Beck Technology

Preconstruction data company Beck Technology has partnered with Togal.AI, a takeoff software firm, to integrate machine learning into its Destini Estimator tool. This collaboration allows the estimation program to include 2D takeoff plans along with the construction estimate in a single process. The company claims the merging of these two automated processes can save time spent on takeoffs and estimates by up to 90%.

AIA measurement standards are used to generate accurate plans and material lists in the takeoffs. Including takeoffs in a digital estimation program can give contractors more time for higher-value tasks, such as contingency calculations, data analysis and bidding new jobs, says the firm. The AI-generated takeoffs feature is in addition to this purpose-built construction estimating program's historical bid and risk-assessment data features.

National Utility Contractors Association

The National Utility Contractors Association recently released new features for its jobsite reporting app. NUCA-WINS allows supervisors to document incidents — injuries, illnesses, site damage, safety or conduct issues and near misses — as soon as they happen. According to the association, version 3.0 of NUCA-WINS now offers users even more tools, including the ability to add videos or photos, record audio statements, make sketches, track user inputs, customize data collection and the analysis dashboard, and collate all jobsite reports.

Available on iOS and Android platforms, the app uses data collection software from Compatica for streamlined information storage and report generation. Companies can customize those reports as well as personalize their workflow when using the app, says the association, which also points out how delayed reporting of incidents increase companies' liability risks. NUCA-WINS records all required data for FROI, OSHA and other workplace incident forms.

Topcon Positioning Systems

A new project management integration platform for large civil construction jobs is offered by Topcon Positioning Systems. Aptix connects third-party software with Topcon management systems for automation of data gathering, storage and presentation. The platform allows construction teams to use a single program for controlling and viewing information as varied as construction models, machine locations or diagnostics, project schedules, along with the data and location of everyone currently working on the jobsite. According to the firm, the platform also tracks emissions to help crews measure carbon footprint for meeting sustainability goals.

This new tool brings together various apps to make controlling project timelines and budgets more efficient, adds the company. Aptix automatically updates schedules and tasks associated with change orders while distributing them to the relevant subs or personnel. The program also integrates with common construction industry collaboration platforms like Microsoft OneDrive and Autodesk Construction Cloud and alerts stakeholders if a new construction file gets uploaded.

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