Construction Technology and Software Rundown: November 15, 2019

November 13, 2019 - Marla McIntyre

APPS
My Epiroc digital fleet management solution provides workflow optimization assistance, helping users track productivity with relevant alerts and status updates. My Epiroc highlights essential items that need immediate attention.

SOFTWARE & IN THE CLOUD
INDUS.AI construction analytics platform counts trucks and material arrivals, and measures equipment productivity using live video streams from IP cameras. The platform provides real-time project controls for reconciling over-billed charges and correcting schedules. The software is powered by a proprietary machine vision neural network that can accurately recognize 100+ types of construction equipment and activities.

Collaboration for Civil 3D, now included with Autodesk's BIM 360 Design subscription, allows subscribers to work collaboratively with project partners regardless of team locations and disciplines. With the existing Revit Cloud Worksharing capabilities and the addition of Collaboration for Civil 3D to the same platform, designing airports, rail stations and other complex projects with vertical and horizontal structures is simpler and more efficient.

Unity is testing a new software called Reflect that connects with existing software suites like Revit and Trimble to leverage data to create new visualizations, simulations, AR and VR experiences. Users can view and collaborate across BIM software and Reflect, which are synchronized in real-time across multiple devices for both desktop and mobile.

Bluebeam's Revu 2019 features a redesigned graphics engine with faster pan and zoom on complex linework; a new configuration editor that streamlines the deployment process across teams and organizations; and improves quantity takeoff accuracy by automatically prompting scale settings, minimizing risk and maintaining data integrity throughout the project. The cloud-based collaborative workflows keep teams on the same page through the design process, help move the project forward during construction and preserve important project data through handover and beyond.

PARTNERSHIPS & ACQUISITIONS
Triax Technologies and EarthCam are partnering on solutions to increase visibility into jobsite perimeters, enhancing safety and security. Using Triax's Spot-r network, the two companies are enabling EarthCam's high-resolution video cameras to provide real-time, independent visual verification of data identified through a worker's wearable Spot-r Clip as it is swiped by each person entering and exiting the jobsite.

DroneDeploy is partnering with Airbus UTM (Unmanned Traffic Management) to add airspace evaluation and LAANC Authorization so DroneDeploy pilots can plan and schedule flight operations ahead of time, apply for LAANC authorization with Airbus UTM, and then monitor that authorization in case the status changes. It's also partnering with Skydio so contractors can inspect critical infrastructure at close range while flying at low altitudes autonomously. Platform updates include improved 3D visualizations, drone support and flight modes (3D crosshatch) to make inspections possible; improvements to Drone Operations Management reports to visually show progress and scale; and Auto Exports support for 12 integrations including Autodesk BIM 360, Procore, Plangrid and Bluebeam, Egnyte, Google Drive and Azure.

VIDEO & COOL STUFF
For all the times when contractors can use an extra hand, OpenAI has developed a robotic hand called Dactyl that can solve a Rubik's Cube in about 20 moves. The neural networks are trained entirely in simulation, using the same reinforcement learning code as OpenAI Five paired with a new technique called Automatic Domain Randomization. The hand shows that reinforcement learning can solve physical-world problems requiring unprecedented dexterity.

Fast Company reported on a new skyscraper design that brings more light and air to an otherwise dense New York City. The design, by The Studio Gang, has two facades that allow sunlight to pass by at inverse angles. The tall narrow structure features a terrace, pedestrian park and gardens, as well as a rooftop deck.