

# Bluesky Uses Mobile Phones to Create 3D Maps



Aerial mapping company Bluesky has completed a research project backed by the UK government's innovation agency, Innovate UK, to develop the use of mobile phones for capturing accurate 3D spatial information.

The nine-month investigation focused on the use of standard smartphone technology to capture and calibrate video footage, then convert it to 3D information. Accurate measurements of essential infrastructure, such as overhead power lines and other utility facilities, could then be extracted using specially developed algorithms and workflows. Designed to provide an accurate record of the feature's location and its environment, the Bluesky project is expected to appeal to electricity Distribution Network Operators (DNO) and other organisations with a dispersed asset base, as a low-cost measurement and

auditing tool.

During the project, Bluesky tested a number of hardware, software and deployment options. These included the use of aerial photography to add control points to the video footage. As the project progressed, it was established that in remote areas there were insufficient features, for example road markings, lamp posts or buildings, to establish the required control. Therefore, alternative innovative methodologies including the use of a calibration object or the measurement of a feature within the imagery was developed.

Working alongside project partner ADAS, Bluesky also undertook rigorous testing of the solution establishing and documenting the field data capture process, identifying minimum hardware requirements, such as camera pixel capacity, and additional developments to the data delivery mechanism. Following minor enhancements and additional trials, the mobile phone mapping tool, complete with data processing and hosting services, should launch in Q2 2018.

"We know from previous work with ADAS, electricity companies and other utility service operators that by providing a more cost-effective data capture, analysis, auditing, and dissemination solution we will significantly decrease maintenance costs releasing essential funds for network upgrades and service improvements. We will also explore other applications of the solution in sectors such as forensics, insurance and emergency response." said Rachel Tidmarsh, Managing Director of Bluesky.

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