

INNOVATION, SUSTAINABILITY + DIGITAL IN PRACTICE

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ISDIP 041	ViDoc Scanning
Date	March 2023
Business Unit	BPC, Engineering Services
Project & Region	Snells Beach WWTP, Northern Region
ISC Themes	<ul style="list-style-type: none">Emissions, Pollution and WasteInnovation

1 What Happened?

Last year several Engineering Services team members visited the Sydney Build expo, Australasia's largest construction event.

Among the many interesting innovations on display from over 500 exhibitors, one truly stood out: the Vidoc unit. A handheld scanning device, the unit enables us to do high quality scanning and point cloud creation within minutes from an iPhone (13 plus or higher).



2 What Are We Doing Differently?

Vidoc is the combination of the iPhone Lidar scanning and a GPS antenna mounted on the phone cover. This allows us to scan our work and georeference the scans with high accuracy. Vidoc was first used at the Snells Beach WWTP project to excellent effect during the drainage and service lines as-builts. Using traditional as-built information gathering methods, only two points and a line are used to represent the start and end invert levels of a specific line. Entering a deep excavation trench is considered a confined space entry. A surveyor is required to have confined space training, a spotter, and an evacuation

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plan in place before entering the trench. In addition, they must have a good line of sight. Multiple Total station location set ups take time for what is a simple task.

Using Vidoc all the above steps are eliminated. A trained person, not even necessarily a surveyor, can walk along the trench, scan the line from the top, and upload to a PIX4D catch processing platform. The whole process takes around 1-2 minutes to complete. The processing period is file size dependent and takes from 15-60 minutes.

This change in methodology significantly improves the data collected in the as-built survey from lines and points to 3D mesh/models. By scanning from the top of the trench it eliminates risky and confined space set up and entry. The time to gather and process the data is reduced, allowing the surveyors and site teams to progress the works more efficiently.



The ViDoc can be seen in use in this digital transformation video - <https://vimeo.com/768380490>

3 More Information

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