ORBICA

LOCATION.
DATA.
CONNECTIVITY.

SBAS: SATELLITE-BASED AUGMENTATION SYSTEM

TOWARDS SMARTER CITIES: THE FUTURE OF SATELLITE TECHNOLOGY

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We're all familiar with GPS: think Google Maps, Facebook check-in or flying in a modern plane. But did you know that GPS on phones is only accurate to within 5-10m? Imagine what you could do with an accuracy down to 0.1m: that's what the Satellite-Based Augmentation System (SBAS) is all about.

HOW SBAS WORKS

SBAS augments standalone Global Navigation Satellite System (GNSS) signals with additional corrections received from a geostationary satellite to improve positioning. On top of that, Precise Point Positioning uses highly accurate satellite orbit and clock data to provide even more accurate coordinates. It's currently being trialled across Australia and New Zealand.

ORBICA'S ROLE

Orbica and partner Reveal Infrastructure are trialling SBAS to see if it can pinpoint underground assets that have been dug up in urban environments - such as waterpipes - with a margin of error less than 0.5m, down to 0.1m or better. This could revolutionise the utilities infrastructure industry.
If successful, SBAS would enable companies and organisations that manage underground assets to accurately record their location without paying for costly survey grade equipment unless millimetre accuracy is required.
Traditional surveying of those assets could potentially be supplemented with mobile devices. This would lower the cost and increase the accessibility of more accurate and precise data.

NEXT STEPS FOR ORBICA

Orbica has partnered with Enable Networks and Christchurch City Council and will test SBAS on actual exposed underground assets in the second phase of the project, starting shortly. That's when SBAS's suitability for recording the location of exposed underground assets will become clearer.

SBAS BACKGROUND INFO

Geoscience Australia and Land Information New Zealand are collaborating on a two-year project to improve the positioning capability of both countries. The New Zealand Government contributed an additional $2 million to the initial funding of $12 million from the Australian Government.
There are almost 30 testbed projects being trialled across New Zealand and Australia in 10 industry sectors. The Cooperative Research Centre for Spatial Information (CRCSI) is managing the projects and overseeing the evaluation of the effectiveness of an SBAS for the region, and building expertise within government and industry on its transformative benefits.
The benefits identified in the test projects will inform a business case being developed for an operational SBAS in New Zealand.

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Land Information New Zealand
Toitū te whenua