

Nanosatellite company announces first commercial Agtech IoT product

SATELLITE communications company Myriota, which was spun out of the University of South Australia in 2015, has announced the first of a string of commercial products that will utilise its low-cost earth-to-satellite transmission technology.

The South Australian company has partnered with fellow Australian business Davey Water Products to add its Internet of Things (IoT) connectivity to Davey's TankSense product range, enabling farmers to receive water level data direct to their mobile phones.

The product is expected to be commercially available in the second half of the year and will be the first mass-market water-level sensor to be connected via Myriota's low-cost earth-to-satellite transmission technology.

Where's there dodgy or no network coverage

It will help farmers manage water usage and monitor livestock water supply in areas where cellular networks are unreliable or simply unavailable.

Myriota CEO Dr Alex Grant said the product would benefit farmers who had faced exorbitant costs for satellite connectivity in the past or struggled to reliably monitor their water systems via existing technology.

The company's technology involves tiny low-cost satellite transmitters that send low powered messages directly to a

constellation of low-earth-orbit nano-satellites – each about 10 x 10 x 30 cm – the size of a loaf of bread.

The small satellites, which are orbiting at an altitude of about 600 km, pass over the poles in an opposite direction to the earth's own orbit. This means they're able to go around the world in 90 minutes – one satellite will actually cover every location on the earth at least four times a day.

These satellites relay the messages to earth where they are decoded and sent to the end user.

"Our technology removes the need for farmers to rely on cellular networks with patchy coverage, or spend large sums of money to connect to high-cost satellites," Alex said.

"We're excited that this partnership will lower the cost of water management in locations that up until now have had no cost-effective way of retrieving data."

About the cost of a loaf of bread per month

By 'cost-effective' Myriota is thinking farmers may well have something like a mobile data plan with the companies supplying the sensors. Some may include connectivity as part of the purchase price – others may offer an ongoing subscription. For most of the typical agtech applications currently in the market, a farmer can probably expect a monthly cost of around five dollars per transmitter.



Myriota CEO Dr Alex Grant with one of Myriota's low-cost, long battery life satellite transmitters.



The low-cost satellite transmission technology will help farmers manage water usage in areas where cellular networks are unreliable or unavailable.

Myriota Business Development Executive Tom Rayner said the Davey Water Products sensor was the first of a number of new product announcements the company expected to make in the coming weeks.

A range of IOT applications

The company is working with other agtech companies like Davey – sensor and equipment manufacturers who make rain gauges, weather stations, soil moisture probes and such. Myriota’s role is to get the captured data to the farmer. They provide the low-cost connectivity that farmers don’t have access to now.

While agriculture is an important industry for Myriota, it is also working on products for utilities metering, environmental monitoring, defence and in the asset tracking and logistics space.

“We’re working with dozens of companies across a whole range of industry verticals and there are quite a few products in development,” Tom said.

“This is the first one we’ve announced and, given the profile of Davey, it’s one that we’re quite pleased about.”

Rayner said 2019 would be the year the company’s products hit the mass consumer market.

“It’s a huge issue for people in Australian agriculture that they don’t have access to reliable, low-cost communications infrastructure, particularly for these IOT applications where the cost has to be ultra-low to make them work so we see a lot of demand here,” Tom said.

“But anywhere that you can’t justify the installation of a terrestrial-based tower this technology has got a place – we’ve already had strong demand from North and South America, Asia and New Zealand – it really is global.”

Water sensors have inbuilt AI capability

And it’s not just the extra-terrestrial, low-cost satellites that are set to amaze. Davey’s on-the-ground sensors are bolstered by an inbuilt Artificial Intelligence (AI) capability. They use algorithms to increase the accuracy of predictions around when a tank will run out of water.

Davey Water Products General Manager Innovation Joel Gresham said the combination of the TankSense product with Myriota’s technology would provide a world first in terms of communicating with remote locations.

It would seem that, when it comes to communications technology, we have reached the stage when we will no longer be totally reliant on ground-based infrastructure. As long as you – or at least your transmitter – can see the sky, then you can connect.

Drawn from the article by Andrew Spence published in The Lead: www.theleadsouthaustralia.com.au

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