

# Smart probe detects termites by 'hearing' them eat

January 9 2012, By Tony Malkovic

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“It’s a wireless acoustic sensor that listens and recognises the acoustic ‘signature’ of termites chewing on your house.”—A/Professor Osseiran. Flickr Prashanth

Researchers at Edith Cowan University have come up with a sensitive acoustic device that can detect termite infestation by ‘hearing’ them chew through timber.

Once detected, the device can immediately send an SMS or email to a pest control firm -- with the [termites](#)’ GPS location -- so they can take appropriate action to protect the property.

The device can also detect termite activity in timber bridges and wooden power poles.

The developers are looking to commercialize the device in the next 12

months in Australia and say it has the potential to revolutionise the pest control industry.

The device is called WiSPr—short for ‘wireless smart probe’ network for acoustic detection.

Associate Professor Adam Osseiran said the technology consists of a tiny sensor—much smaller than a fingernail—which is attached to a piece of wood and placed around the house or retro-fitted to existing termite stations.

“It’s a wireless acoustic sensor that listens and recognises the acoustic ‘signature’ of termites chewing on your house,” he says.

“You would need about 20 devices placed every few metres around a house and they would be continuously listening and monitoring and providing an effective shield against termite attacks.”

The market for termite control is huge.

“In Australia alone, there are 130,000 houses attacked by termites,” A/Professor Osseiran says, “causing an estimated \$1 billion to \$3 billion dollars damage a year.”

He says in the US, the yearly damage bill for termites tops \$12 billion, and the main three markets for termite control are the US, Japan and Australia.

When placed in the ground, WiSPr can instantly detect termites or, if none are present, can serve as an early warning device if termites ever attack the property.

He says the device could also be used to detect termite activity in timber

bridges and the hundreds of thousands of wooden electricity poles around Australia.

“If termites attack a pole, it could immediately send a signal to maintenance staff,” he says.

“Or by driving past bridges, council staff could ‘interrogate’ the device and find out about the health of the bridges, or poles, while they are driving.

“That could be done by a smartphone application, which is something we are working on.”

Provided by ScienceNetwork Western Australia

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