ABC NEWS

AI cameras are now being used to detect bushfires in Tasmania, replacing fire spotters who sit in towers

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Bushfire lookout towers now staffed by AI-powered cameras *(Adam Holmes)*

- **In short:** Australian bushfire detection has long relied on humans sitting in a fire tower for hours on end with a pair of binoculars.
- But increasingly, cameras trained on artificial intelligence are starting to replace this system, scanning horizons for fire 24 hours a day.
- **What's next?** Forestry companies are using the AI cameras to protect their assets, while also keeping an eye on other fires in the landscape.

Fire towers can be found at the top of peaks throughout Australia.

From this vantage point, someone has to scan the horizon with a pair of binoculars for up to 12 hours a day in the heat of summer, looking for signs of smoke and fire.

It can be an arduous task, but is essential for protecting property and lives.

chael Lawson from SFM (left) and Pano AI founder Andrew Prolov with AI bushfire detection cameras in Tasmania's Derwent Valley. *(ABC News: Luke wden)*

Fire towers are also used to monitor fires in forestry assets, including those owned by SFM in southern Australia.

"Literally, people would come to the towers, bring their lunch box, bring all of the problems they carried with them from home, and you hoped that they were able to focus for 10 to 12 hours a day," SFM chief operating officer Mike Lawson said.

"Once they went home, we were flying blind effectively."

But replacements for this human-based system are being developed.

SFM has installed panoramic cameras on fire towers near its plantations, using artificial intelligence to automatically detect smoke and send alerts.

e cameras allow quick detection of fires in managed forests and surrounding properties. *(ABC News: Luke Bowden)*

The system was developed by Pano AI, training the cameras on millions of landscape images to spot the first signs of fire.

On the top of a peak near Mount Field in Tasmania, the cameras are continuously scanning 80,000 hectares, including public and private forests, and surrounding communities.

Any alerts are sent straight to SFM staff at an office in New Norfolk, whose response options include the ability to send a helicopter to the site.

nted maps were an indispensable tool for the fire spotters. *(ABC News: Luke Bowden)*

"We get two notifications, via text message and email," Mr Lawson said.

"We click on the link, it takes us to the camera, there are options to take control of one of the cameras and use the optical zoom to understand the scale of the fire.

"It also gives us some security that if there are other vehicles around, or it's potentially an arson attack, the zoom allows you to pick up the colour and shape of the vehicle."

The staff who used to take turns sitting in the fire towers are now able to spend more time on forest management.

e cameras are trained to tell the difference between smoke, clouds and agricultural dust. *(ABC News: Luke Bowden)*

'Early detection and rapid response' prevent damage

The South Australian Government is also using the cameras in the Green Triangle forests near Mount Gambier.

They are on much flatter terrain than in Tasmania, so more cameras and towers are needed.

They are also at the Delburn wind farm in Gippsland, Victoria.

example of the AI system detecting a fire in a forestry plantation in the US. *(Supplied: Pano AI)*

Head of Pano AI Australia, Andrew Prolov, said its cameras had already been able to detect fires.

"We detected a haystack fire in South Australia," he said.

"Late at night, long after traditional fire tower operators had gone home, that alert was sent to our forestry partners and to the fire agency.

"They deployed five fire trucks, 25 crew, on the spot that the fire started between wind farm and forestry assets.

"Thanks to the early detection and rapid response, the fire was contained and there was no damage to any of the assets."

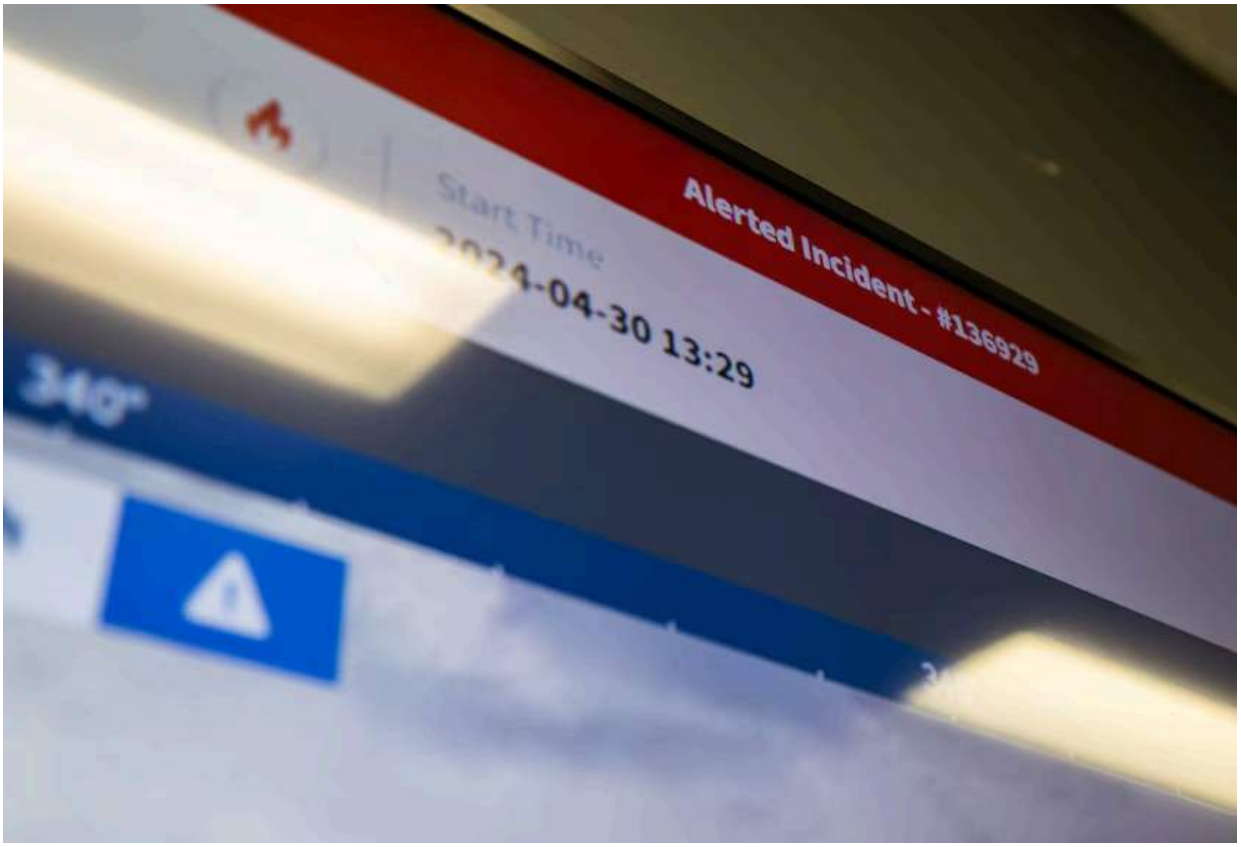
cameras have already helped prevent fire damage by detecting smoke early. *(Supplied: Pano)*

The use of AI in fire detection could become more commonplace in Australia, particularly in a drying climate.

Mr Lawson said SFM was comfortable relying on the cameras at high vantage points, and he believed similar systems could be used elsewhere in the landscape.

"It's got such a wide-ranging use that I think, in time, that is likely to happen," he said.

"A large proportion of the fires that are detected happen outside of our asset base, so we attend fires on other private land, on public land."



erts from the Pano AI cameras are relayed to SFM's New Norfolk offices. *(ABC News: Luke Bowden)*

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