

How digital technologies can make trapping 80,000 times more efficient

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While this may sound unlikely trapping could become 80,000 times more efficient we are putting together the evidence that this is indeed possible. The high level summary is we can use long life solar powered digital lures (sound and image) that act over a longer distance than food lures to draw pest in and use image recognition to identify and kill them with methods that do not need reset and work close to 100% of the time.

While there are complexities with digital lures and fully automated trapping it seems like a very promising option for the following reasons:

- Potentially the lure can last 10 times longer than food being solar powered (vastly lower labour cost)
- Potentially only require 1/100th the number of traps as they can act over ten times the distance (100 times the area)
- One trap could target any pest – possum, rat, stoat, and feral cats. Hence ¼ number of traps
- Kill percentage could be closer to 100% rather than less than 5% for many current traps
- Moore's law means there is likely to be a consistent exponential drop in cost and or improvement in performance over time
- Project is totally open source so any time there are improvements made they can be rolled out to all the networked traps around the country

These collective improvements mean theoretically the traps could be 80,000 times more efficient - 10 (lure life) * 100 (trap intensity) * 4 (one trap 4 pests) * 20 (kill ratio).

We have already demonstrated how relatively inexpensive electronics and AI can identify the difference between rats stoats and possums. This will allow mass experimentation on the luring and elimination.