A proposal to share equine data and record location

A shared system will need to answer queries such as...

- What is the name and who is the owner of this horse
- What is the medical history of this horse
- Where is this animal located, where has it been, and where is it going
- Provide a list of all horses within say 100k m of a specific location together with their owner's address, PIC and mobile

Except for equines on remote properties or in the wild, every equine in Australia will (soon) have a microchip. The microchip is widely accepted as the best way to uniquely identify animals - it is also used for cats, dogs, etc.

Microchips are low cost (<$5), although they need to be implanted by a vet. Australia has a national agreement on the type of microchip used in animals.

In Australia, microchip scanning is routinely done by all vets, at Shows and other events, and can easily be implemented at interstate or biological control points.

When a microchip is read by a scanner, the answers to these queries ***could be immediately displayed to the user***.

A vet could have immediate access to the history of the animal, an event will be able to verify the animal and the owner, and border control will be able to check on previous movements and ownership.

What would be required is...

1. An application (app) that would get the microchip number from the scanner, check it with all 'compliant' equine databases, and display the results.

2. 'Compliant' equine databases.

1 Application

The application would need to run on portable devices (both ios and android) and on laptops and desktops computers.

It will need to retrieve a list of 'compliant' databases, send the microchip number to each database, and display the data returned from each database.

It will need to be able to communicate with scanners from different manufacturers.

The software provided by some scanner manufacturers displays data from databases, but it would be preferable to have one application that can work with any scanner.

The application could also be configured for other, specific, users. For example, it could be used in abattoirs and knackeries to record animals that have been killed. The operator would only need to find and scan the microchip - all recording would be done by the database that had a record of that microchip.

2 Compliant databases

The technical specification of compliant equine databases are part of an EU initiative. For example, there are currently about 40 'DEFRA Compliant' equine databases in the UK. The specification could be customised for Australia to handle, for example, PIC.

A network of compliant equine databases means that a 'virtual' database is available that links together all equine databases, without the need to set up and maintain a 'central' database. Data about a horse would not need to be double-entered into multiple databases.

It would be the responsibility of each participating database to implement the protocol.

'Compliant' is not just the data transfer protocol - it would also need to specify data integrity and accuracy. Managers of existing databases may need workshops and training in implementing 'compliant'.

A 'default' database could be provided for equines that are not recorded with an existing registry. Alternatively, they could be recorded on one of the existing registries, which typically record 'reference' animals. Those registries offering that service could charge a small fee providing additional income.

3 Managing compliant registries

The compliant databases will need to be managed and authorised by a peak body, or by a government agency.

The management software could also handle authentication of both applications and users - who has the right to see which type of data. For example only approved vets would have access to health records; and only approved abattoirs can mark a microchip as deleted.

4 Other Queries

Queries such as requiring say 'a list of all horses within 100k m of Gatton' will need additional software.

5 Recording GPS location of equines

Current GPS 'modules' are too large to be implanted in equines. The modules need power, and are significantly more expensive than microchips.

When a microchip is scanned, the application will send the microchip number to each compliant database, and the details of the animal is returned.

If, in the same search request, the GPS location of the scanner was also sent to the database, the geographic location of the animal could be recorded by the database.

This would mean, at no extra cost, the geographic location of the horse would be recorded whenever it was scanned. It would not be a continuous, real-time record, but only its location when it was scanned.

But the proposal is scaleable. For example, in the future it could be made mandatory that equines should be scanned as they are put into or removed from a float for transport. Or, if there was a biological emergency, owners could be asked to scan their animals at more frequent intervals.

The GPS location would be recorded automatically, without any paperwork or form-filling.

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