

ERUC now all go

Teenagers text, grandmothers text, and now – thanks to world-first electronic technology developed in New Zealand – even trucks text.

Well, they may not send texts, but they can receive them, as part of an automatic system of payment for Road User Charges (RUC). New Zealand Trucking checked it out.

It's been a long road but Brian Michie finally has legal approvals for his EROAD system, including the sign-off on the electronic measuring device to replace mechanical hubodometers. "We've got over 100 fleets already and only got completely signed off today," Brian said.

EROAD has developed eRUC, a web-based programme which makes it as easy to buy RUC as it is to do internet banking. It is the first completely wireless system for electronic road user charges in the world but it is expected other countries will follow soon, especially Sweden which has been running trials for several months.

Brian says that New Zealand's current RUC system is well-founded and does a good job of fairly apportioning the costs of roading, but the existing technology is out-dated and cumbersome. Using his eRUC system, an operator buys the RUC on the internet and the updated RUC is automatically transmitted to the vehicle, wherever it is in the country, through text-message style technology. The new RUC appears on



eRUC WTF?

Electronic RUC and the Dimension and Mass Rule have brought a plethora of acronyms and abbreviations. Here's a run-down on the new ones and a reminder of the old ones.

eRUC	Electronic road user charges
eHubo	Electronic hubometer display
tHubo	Trailer electronic hubometer
dEPot	Electronic depot, the computer interface with the electronic system.
HPV	High productivity vehicle – the term used for combination vehicles weighing over 44 tonnes.
RUC	Road user charges
GVM	Gross vehicle mass – the manufacturer's maximum weight rating of the vehicle and its load. This must be approved by NZTA and may be altered with their approval.
Tare	Unladen weight
VDAM	Vehicle Dimension and Mass Rule

a screen in the same format as the current paper label. Off-highway refund applications are generated automatically as soon as the purchased RUC reaches its distance limit and expires.

Steven Newman, the CEO of EROAD, is more outspoken than Brian about the disadvantages of the current option. "The approval of the first electronic distance recorder is a breakthrough for the transport industry in New Zealand," he says. "As every truckie knows, the dreaded mechanical hubometer is unreliable, inaccurate and prone to sudden failure, always at the most inconvenient time and place. They are an outdated technology that is undermining the credibility of the RUC regime. By comparison, the eHubo is reliable, accurate and secure, and,

with no moving parts, could last the lifetime of a vehicle."

There are three elements to the fully electronic RUC system:

1. An electronic display, in the same format as the current label, on a permanently mounted unit.
 2. An electronic hubo – mechanical hubos can be thrown away. The electronic device accurately measures distance, taking its reading from a rotating component on the vehicle, often an ABS rotor, and is self-calibrating through a GPS system that automatically accounts for tyre wear and other factors that can affect distance recorders.
 3. An agency interface, the web-based programme that allows RUC purchase over the internet. Purchases can be made at anytime, with a computer or smart phone, or the system can be set up to automatically purchase a nominated distance and weight as soon as the current RUC reaches a pre-determined distance, so that no operator action is required. Online payments can be made using credit card or direct debit.
- The truck display unit, called an eHubo, sits in the dash and is powered by the vehicle's electrical system. Two options of trailer unit, tHubo, are available. The first is a slave unit connected to the truck through the trailer wiring plug. The second option is a self-contained unit, including

Tony Milham with one of the eHubo display screens from the truck windscreen.



Brian Michie and EROAD

EROAD's founder, Brian Michie (left) and project manager, Angela Gray.

Brian is a New Zealander of Canadian descent; he is an infrastructure economist, but has been in transport for years. He has been involved in telecommunications, in Australia, the USA and New Zealand.

EROAD's development began in 2000 when Brian started planning an electronic RUC system. "The idea of GPS tolling has been around for a long time. It's not my idea, but ideas are cheap. The real hard work is in the commercialisation."

Since then, a lot of research, development and money has gone into EROAD. It is 100 percent New Zealand-owned and employs about 20 people. Most of the shareholders are staff, plus a few high-profile shareholders, and Brian says all staff are experts in their specialist fields and are the key to the company's success. When it comes to the future of electronic RUC, Brian says, "It is huge, absolutely massive." Opportunities are rapidly opening up throughout Europe and North America.

a battery. This option is ideal for trailers that are towed by different trucks, including those without an eHubo. The trailer units are mounted in an easily visible position and are waterproof.

On a 36-month lease, the truck master unit costs \$109 + GST per month; the trailer slave unit is \$79 + GST; and the trailer master unit is \$119 + GST. There are no capital costs to the user, except installation by an EROAD-approved installer, which will typically take about one and a half hours per truck.

According to EROAD's sales brochure: "It is highly likely that use of the eHubo product will give returns that are more than double your investment and provide advanced fleet tracking at no extra charge." This claim seems realistic, after looking at the refunds from the off-highway components of RUC and the potential saving in not having to physically run around ensuring vehicles have sufficient RUC and are carrying the correct label. As a bonus, operators can get

rid of the dreaded mechanical hubo forever.

Because eHubo has GPS functionality, full GPS tracking is available through the system at no extra charge. This means that the operator can track his fleet and set alerts to cover speeding and excessive idling, and take advantage of the other options offered by GPS tracking. The system is protected so that it is accessible only to approved operators, who may also have different levels of access.

The units are virtually tamperproof, but a flashing blue light will alert the driver to a fault or any attempt to open or reset the unit.

At a meeting in Rotorua recently NZTA commercial operators policy manager, Delaney Myers, took the opportunity to clarify a few issues. She pointed out that EROAD is a private sector enterprise and that legislation was changed to allow the use of such systems, theirs is the first to be fully approved by Secretary for Transport. The electronic interface between EROAD and NZTA's system is there only to supply RUC; NZTA cannot track the users' vehicles and it does not have access to any data except that required for the purchase and supply of RUC.

Tony Milham from Auckland-based A One Movers was impressed when he first came across EROAD's system about a year ago and offered his vehicles for trials. "It's an amazing piece of New Zealand technology, absolutely amazing," he says.

Tony says that a lot of RUC has been 'overbought' in the past, but with EROAD's system it is simple to buy supplementary weight or a new label. As for the monthly fee, he says, "Mate, you make it back in the first week of every month."

A One Movers have set up some of their big customers with limited access to their fleet tracking, so they can see where their deliveries are and estimate their arrival. □

Vanessa (right) and Tony Milham ceremoniously bin a mechanical hubo.

