

Justin von Perger

From: Mike Kenny
Sent: Friday, 22 March 2002 6:16 PM
To: 'geocon@brunet.bn'
Cc: Jim Ball; Mark Eyre; Vern Bastian; Mike Kenny; Mike Grant
Subject: FW: T47-100 and V2.25 Test in Tasmanian Conditions

Importance: High



MetrocountT47-100
andv2.25evalu...

-----Original Message-----

From: Ray Dyer [mailto:Ray.Dyer@dier.tas.gov.au]
Sent: Monday, January 21, 2002 3:59 PM
To: Mike Kenny
Subject: T47-100 and V2.25 Test in Tasmanian Conditions

Mike

I'm attaching a report from Bob Pell that summarises our recent test of the above modification, as you had requested of Bob. We are very pleased that the MetroCount has perfectly classified a video-ed sample of the high-speed semi-trailers that were proving troublesome earlier. Admittedly the sample was not that large, but we are not used to devices that can perfectly classify even a sample of 93 trucks. And although Bob has not yet looked at files from the other devices, they cannot have performed any better (and we would be surprised if they had performed as well). Bob said to tell you that he will send you a copy of the video shortly.

So, in brief, we are impressed. And we are also pleased that you have agreed, as I understand, to update at least all but our oldest MetroCounts at no cost.

Regards
Ray

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Tasmania

DEPARTMENT *of*
INFRASTRUCTURE,
ENERGY *and* RESOURCES

OFFICE OF THE SECRETARY

Memorandum

To: Ray Dyer
From: Bob Pell
CC:
Date: 21 January 2002
File No.:
Subject: METROCOUNT CLASSIFIER TESTING

RAY

In response to our concerns that the MetroCount classifiers were missing axle detections and were therefore miss-classifying semi trailers, Microcom have recently upgraded 5 of our machines with their T47-100 modification and have given us their version 2.25 software update for evaluation.

The following is a report on the testing carried out to date.

TEST SITE

Midland Highway Epping Forest Culway site **Southbound lane only.**

DURATION

Start time 13:00 Monday 14 January 2002.

Finish time 13:00 Monday 21 January 2002.

METHOD

Four types of classifier were used for the evaluation.

1. Golden River Archer.
2. MetroCount with T47-100 modification.
3. Golden River M400.
4. Culway WIM set to register trucks only.

The Archer, MetroCount and M400 were installed consecutively in the southbound lane only.

The tubes for these machines were all the same length and installed with 1 metre separations, the same amount of saddles holding them to the road surface with the same amount of tension on each tube.

The two tape switches used on the Culway were both replaced with new switches.

A video camera was also set up to record all traffic as it passed over the tubes.

Traffic was video recorded for two and a half hours on Tuesday 15 January 2002 from 11:30

to 14:00 and for four hours on Wednesday 16 January 2002 from 09:00 to 13:00.

Interim data was down loaded from the MetroCount machine only on Thursday 17 January 2002 and returned to the office for examination.

EVALUATION

The MetroCount data file was loaded into the version 2.25 software and an individual vehicle report created for all class 8 vehicles (this being the class that showed the most faults in previous machines).

119 class 8 vehicles were identified and no obvious evidence of miss-classification could be found.

Individual vehicle reports for class 6 to class 10 vehicles corresponding to the four hours of video taken on the 16 January were produced and the results then checked against the video evidence (a total of 48 vehicles).

In all cases the vehicle was classified correctly.

An individual vehicle report for class 4 to class 10 vehicles corresponding to the two and a half hours of video taken on the 15 January was produced and the results then checked against the video evidence (a total of 45 vehicles).

In all cases the vehicle was classified correctly.

An individual vehicle report for all classes of vehicles corresponding to the two and a half hours of video taken on the 15 January was produced.

Spot checks of platoons of closely following vehicles containing a mixture of different classes were then checked against the video evidence.

In all cases the vehicles were classified correctly.

Using the audit of data quality chart only 9 vehicles could be identified with missing impulses.

Two class 6 showing an A tube impulse missing when found actually had all impulses. The software appears to have dropped off the last axle in each case. If they are included the vehicle does not fit any class as the rear two axles are too close. The software has apparently fitted them to the nearest class.

One class 2 had an A tube impulse missing. The software identified it as a 1 1 1 instead of a 1 1 2, although as a 1 1 2 it still fitted as a class 2.

The other 6 vehicles with missing impulses appear to have been classified correctly.

CONCLUSION

The updated MetroCount classifier, based on the above evidence appears to be very accurate, almost 100% in fact.

Although to date no comparison has been made with data from the other machines in the evaluation trial, based on the above evidence, if the other machines do not agree then doubt must be cast on the other machines.

RECOMMENDATION

The updated version of the MetroCount firmware and software should be accepted and the offer from Microcom to upgrade our other units free of charge to us be taken up.

Bob Pell
SENIOR TECHNICAL OFFICER ROAD USAGE