

VEHICLE ON BOARD COMPUTERS

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AUSTRALIA

Presented to the

Institute of Road Transport Engineers of New Zealand

FOURTH INTERNATIONAL HEAVY VEHICLE SEMINAR

AUCKLAND

3 - 5 March 1992

SUMMARY OF PRESENTATION ON:- "VEHICLE ON BOARD COMPUTERS"

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The development of commercial vehicle "On Board Computers" started in the early eighties (80's). This development was triggered by the availability of mass produced Micro Processors.

What happened since that time in the office personal computer market in terms of price/performance ratio happened also in the "Vehicle on Board Computer Market".

More and more storage capacity for less and less money.

The Vehicle on Board Computer, VDO is marketing is manufactured by MANNESMANN KIENZLE in Germany. Kienzle has been involved in manufacturing of Vehicle on Board Recorders since 1930. The most prominent recorder manufactured is the 'TACHOGRAPH'.

Kienzle today is not only the major manufacturer of TACHOGRAPHS but also of "Vehicle on Board Computers".

It started all in 1982 in Germany and since then in excess of 20,000 on board computers have been built.

Because of the strictly regulated market in the European Community where TACHOGRAPHS are required by law for any commercial vehicle, it had to start somewhere else.

Somewhere else was North America where regulations did not hinder the development of "Vehicle on Board Computers".

Argo Instrument Inc., subsidiary of MANNESMANN KIENZLE in the United States was taking a leading role in marketing the Kienzle "On Board Computer" which was called FMS 1330.

Running the lecture the following aspects of the FMS 1330 will be discussed and demonstrated.

- Hardware Concept
- Software Concept
- The benefits of "On Board Computer"
- The implementation

HARDWARE CONCEPTS

From the very beginning flexibility was the most important issue. Flexibility in terms of what can be firstly monitored on a vehicle at any one time (6 channels for frequency input signals, 24 statical input for on/off signals, three output signals). The portability of; the data was secondly important leading to the use of battery powered ram chips.

Later on the use of cable connection to transfer data was developed called direct extraction. The need for having facilities to enter data like location, job performed, quantity delivered etc. lead to the development of a driver entry key pad.

These key pads will be further developed into mini handheld portable computers which can be used for logistic data transfer.

Data transfer of vehicle performance data will be via the mini hand held key pad/computer together with the logistic data.

SOFTWARE CONCEPT

Similar important is the software. In Australia VDO is using the American ARGO Instrument software. This is simply for practical reasons. American conditions are very similar to those in Australia and for that reason the software is very suitable.

BENEFITS OF "ON BOARD COMPUTERS

Only the combination of a correctly chosen vehicle and a good, well motivated, skilled driver going on a well planned route gives maximum return on investment.

On Board Computer do record:-

- vehicle performance
- driver performance
(in a direct manner)
- logistic data as a side product.

The benefits in \$ terms become immediatley obvious, if we talk about waste.

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VEHICLE

Fuel waster, tyre waste, high maintenance costs due to high number of brake applications, temp. too high over revving. All very much related to speed.

DRIVER

Agressive driving style, high speed braking, driving in neutral. Too long break periods, long idle periods driving cold engine, not allowing cool down of engine.

LOGISTIC

Too long waiting time for loading, unloading route not planned to suit customer and traffic condition readings.

IMPLEMENTATION

An independent focus group discussion conducted with professional truck drivers was produced 1988 by Newport Research in the U.S.A.

The lecture will elaborate on those research findings which show very much how to implement an on board computer in a fleet. This of course is backed up by experiences we have in Australia.