



## A new type of information panel on Dutch motorways

Along the Amsterdam A10 ring road, and on four motorways leading towards it, six so-called “bermDRIPs” have been erected during the summer of 2006. Where “berm” means shoulder (or verge), and DRIP means Dynamic Route Information Panel.

It is expected that a great number of these signs will be used in the coming years. Unlike the well known big information panels with 3 lines of text, in most cases positioned over the road, these signs will in most cases not inform about queues but will mainly be used for giving information about events like accidents, (future) road works, diversions, etcetera.



### Background

DRIPs are being used since 1990 on Dutch motorways. Their main use is to display the amount of queuing on the road, on many occasions for two alternative routes leading to a common destination. During the last few years the road owners found there was a need for information panels displaying a different sort of information. This led to a big variety of new information panels, sometimes of doubtful quality. In 2005 the Rijkswaterstaat Transport Research Centre of Rijkswaterstaat (AVV)

started an initiative with the goal of agreeing a common definition of the information panel that was needed. It turned out that the wishes of the various users were quite similar. Foreseen messages were for instance: information related to road works, warnings in case of unforeseen circumstances like accidents, information provision in relation to events (Parking or Park and Ride information) or giving advice about diversions. It was not difficult to reach an understanding about the layout of the future signs. Most parties wanted an information panel that is able to display combinations of text and graphical elements (for instance warning signs or other signs from the road code). As to the size, it should be considerably smaller than the standard DRIP, and it should be possible to mount it at the roadside. Generally a rectangular sign was what was wanted, with the relationship between width and height more or less like a computer screen.



### The result: a new uniform type of sign

It was known that the UK had used such a sign for a number of years, the so-called MS4 (Motorway Signal number 4). This panel measures about 3x4 metre, uses two colours (red and amber) and has a full matrix (freely programmable) display surface. It is currently mainly used for displaying text lines. However, extensive experiments with combinations of text and pictograms have been carried out, both on the (TRL) test track and on the motorway (M4). And the results were quite positive.

To save time and resources it was decided to use this MS4 as a basis for defining the new Dutch panel. The advantages were that much research experience was available and that various manufacturers were already experienced in building this type of sign. Since then things went fast. The UK Highways Agency was very cooperative and even supplied us with one of their MS4 signs, for testing purposes



at the AVV test centre in Delft. A specification for the new sign has since been made, using both the UK experience and the new European Standard on Variable Message Signs. Some small changes have been made to comply with Dutch regulations: instead of the combination red/amber it was decided to use red/white, and a different sort of mounting was specified which leads to better possibilities for reaching the sign for maintenance purposes.

### Uniformity in the layout

Using a panel with full graphical capabilities means that there is a risk of too much variety in the display of messages. This could be confusing for drivers and pose a safety risk. That is why during the year 2006 a new guideline on the information that may be provided on these signs has been published. This defines some standard layouts, and gives rules for the use of text, pictograms, and symbols in the text. Examples are given below:



### User surveys and testing

In the abovementioned guideline a number of choices has been made, in most cases based on existing (UK) experience, for instance letter height and type, as well as the thickness of the sides of the triangles. AVV will also stage some trials in the Netherlands, which may in future lead to an improvement of the visibility and readability of these panels. At the end of 2006 one of the signs will be installed at the test track of the Vehicle Technology Division in Lelystad. This will be used for both static and dynamic testing. Apart from that some user surveys will be organised. We expect to finish the investigations during 2007.

### New possibilities

Since these new signs have a full matrix display, it is also possible to use them for a graphical representation of the network, as shown in this photograph. In a highly stylized picture of the Amsterdam ring road the congested parts of the road are shown in red. Experiments with this concept are foreseen soon.

### Further Information

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