

Evaluation of the comprehensibility of various designs of a Full Colour Information Panel

Albert-jan Roskam¹, Everd Uneken¹, Dick de Waard¹, Karel Brookhuis¹,
Sascha Breker², & Stefan Rothermel²

¹Department of Psychology, University of Groningen, The Netherlands

²Institut für Arbeitsphysiologie an der Universität Dortmund (IfADo), Germany

Abstract

Four studies with respect to information displayed on a new type of traffic sign, a so-called Full Colour Information Panel (FCIP), were carried out. The following results were found: there is always a serious risk of information overload and as little information elements as possible should be used; a new traffic sign design should be thoroughly tested on comprehensibility. Information overload can be counteracted by using colour, symbols, and diagrammatic road layout. The number of colours used should, however, be kept to a minimum (i.e. only functional). The study indicated that colour intensity is not an appropriate technique to indicate flow / a preferred route on a FCIP. Red should only be used to indicate blocked roads. Pictograms are in general to be preferred to text, since these are language-free, but they do need to be obvious and have a clear visual appearance. Cost, duration, and comfort of the trip seem to be the most important motives for choosing a route alternative, suggesting that an effective FCIP should at least contain these information elements to be effective. However, it was also found that the travel time indication was not always correctly understood.

Introduction

FCIP, Full Colour Information Panel, is the “next-generation” VMS (Variable Message Sign). The municipality of The Hague (The Netherlands) has ordered such a sign to be used to display the fastest route to the beach of Scheveningen, a nearby popular beach resort. As part of the EU sponsored project TRAVELGUIDE (TRAVELLER and information systems: GUIDELINES for the enhancement of integrated information provision services, GRD1-1999-10041), and the municipality of The Hague, it was studied in what format this information could be best displayed. The primary objective for Travelguide, and is to develop design guidelines with respect to increased information overload and alternative information presentation, in this case for roadside information systems. Primary objective for the city of The Hague is to reduce traffic congestion by increasing the efficiency of the use of the existing road network (‘capacity re-allocation’). In

In D. de Waard, K.A. Brookhuis, J. Moraal, and A. Toffetti (2002), *Human Factors in Transportation, Communication, Health, and the Workplace* (pp. 231 - 244). Maastricht, the Netherlands: Shaker.