



WP.1's VMS Unit: on the move

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The VMS Unit –UNECE's WP.1 ad hoc group on VMS



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INTRODUCTION – WP.1 and VMS background

UNITED NATIONS

E



Economic and Social Council

Distr. GENERAL

TRANS/WP.1/2005/6 Rev.1
1 July 2005

Original: English

ECONOMIC COMMISSION FOR EUROPE

INLAND TRANSPORT COMMITTEE

Working Paper on Road Traffic Safety

(Forty-seventh session, 12-17 September 2005,
agenda item 5 (C))

REVISIONS OF THE CONSOLIDATED RESOLUTIONS R.1 AND R.2

Variable message signs (VMS)

Revised document transmitted by the small group

The Small Group on VMS met in Hannover on 2 June 2005. It prepared a revised version of the document presented at the 46th session of the Working Party on Road Traffic Safety. No comments on the first version of the document were received from members of the WP.1 following the 46th session. As requested, the small group also considered VMS signs to be used in tunnels, and its findings appear in the annex to this document.

During the discussion, 2 items emerged that were too complex to solve before the 47th session of WP.1:

1. The problem of priority rules when VMS signs are used on a road where fixed signs also apply. The same goes for priority rules between VMS signs of separate traffic control systems on the same stretch of road. The small group is willing to work on a suggestion for these priority rules.
2. Lane control systems. VMS signs in lane control systems have a special use in traffic control. The restrictions on VMS (including also speed limits) apply per traffic lane. Currently each VMS are described in the Vienna Convention as traffic lights (Chapter III, article 23.11). Here the reality is already different from the rules, since in many systems, speed limits or speed restrictions per lane are used as a "positive" indication that the lane is free, while this is not covered in this article. The small group thinks a

R.E.2 & VMS

2003-2008

UNECE WP.1



Small Group on VMS

2009-...

UNECE WP.1



VMS Unit

2007-2011

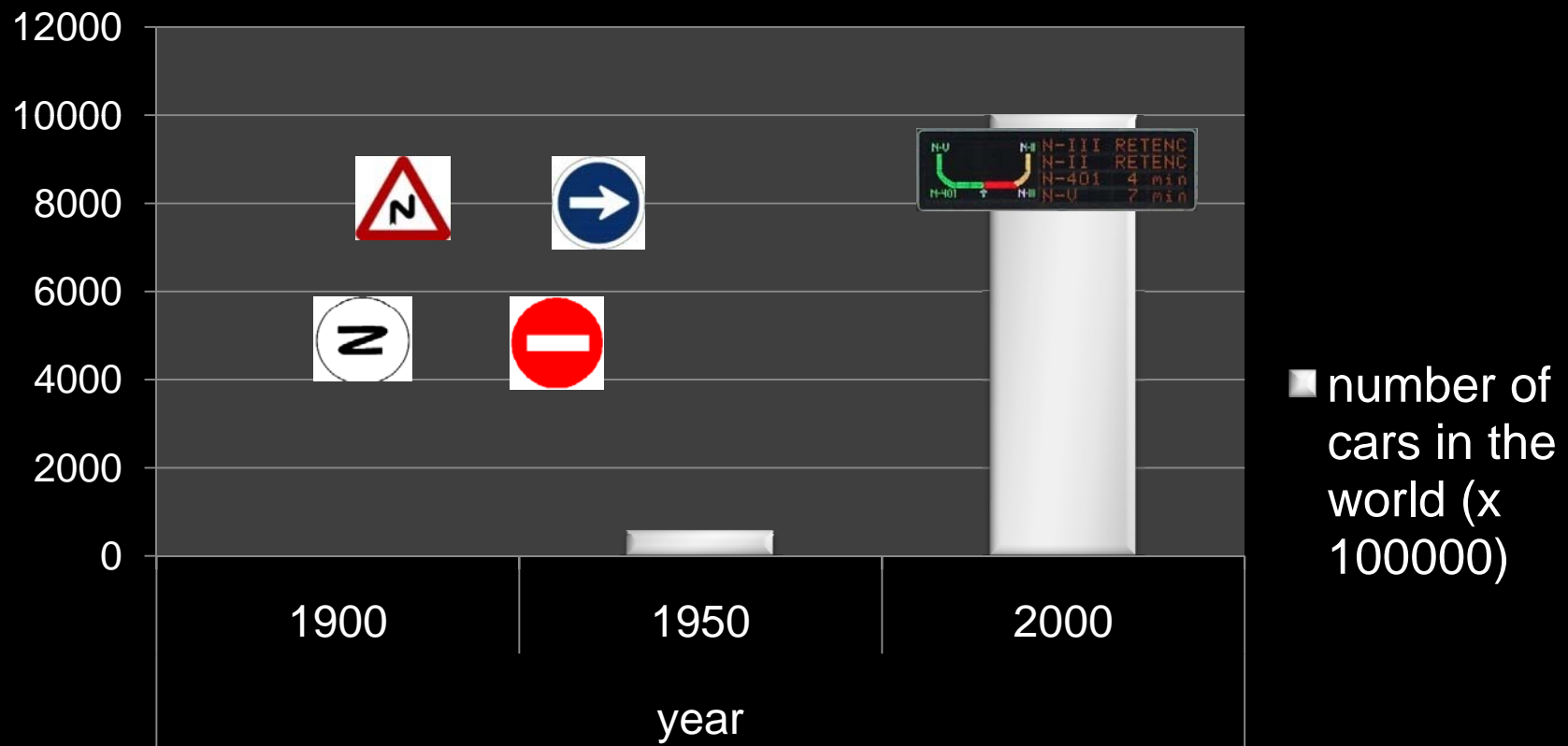


6FP

THE PERSPECTIVE

ROAD INFORMATION: NEW DEVICES, MORE PLACES

Number of cars in the world



FRAMING THE PROBLEM: TRENDS ON ROAD SIGNS DESIGN

FROM A WORD
DEPENDENT ...

... TO A WORD
INDEPENDENT ROAD
SIGNING PHILOSOPHY



VMS Unit: THE PERSPECTIVE

ROAD INFORMATION: A BROADER VIEW THAT CONSOLIDATES

Making road networks safer and
more efficient public spaces worldwide

design

VMS Unit: THE PERSPECTIVE

ROAD INFORMATION:

CLASSICAL, AGE OF CONVENTIONS (1909-1968)



▶ Leipzig, International Transport Forum- UNECE, 26May2010

VMS Unit: THE PERSPECTIVE

ROAD INFORMATION: TELEMATIC AGE, FIRST APPLICATIONS



Leipzig, International Transport Forum- UNECE,
26May2010

VMS Unit: THE PERSPECTIVE

ROAD INFORMATION: NEW DEVICES, MORE PLACES

New devices exist that allow for ubiquitous access to information



**CAN WE IGNORE THEM?
AT WHAT PRICE?**



WAY FORWARD: STRUCTURAL AXIS

Where can we place the information?

THE 1968 CONVENTION ON ROAD SIGNS AND SIGNALS

ROAD MARKINGS



ROAD SIGNS



WAY FORWARD: STEP 1

Where can we place the information?

RE-STRUCTURE THE 1968 CONVENTION ON ROAD SIGNS AND SIGNALS

ROAD MARKINGS

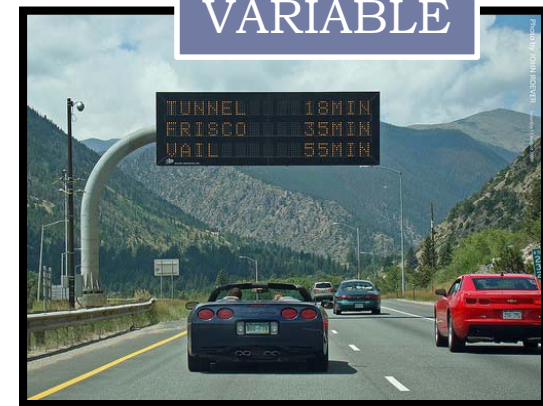


ROAD SIGNS

FIXED



VARIABLE





Warning:
You approach
a swing bridge



Warning:
swing bridge
opened

REASONS FOR IT

FIXED AND
VARIABLE SIGNS:
SAME SIGNS,
DIFFERING
COMPREHENSION

continuous

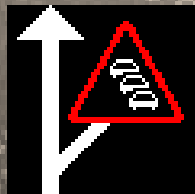
pixel based



matrix size



reshaping



REASONS FOR IT

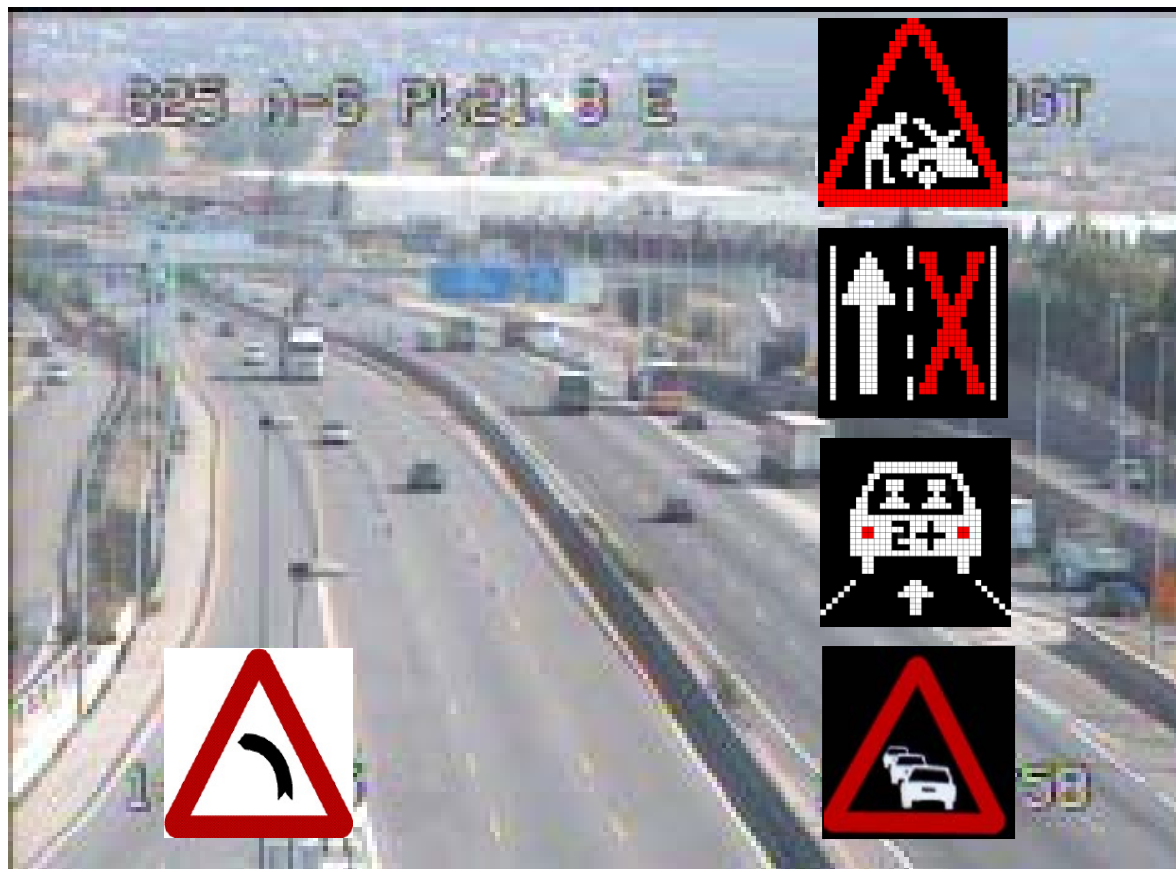
NEED TO
ADMINISTER
DIFFERING

VISUAL
PARAMETERS

RESPECT

“INDIVIDUAL”

DIFFERENCES



Posted signs:
domain of (fixed)
road conditions

Electronic signs:
domain of (changing)
traffic situations

REASONS FOR IT

CONTEXT ,
REFERENTS
AND DESIGN
PARAMETERS

*BOTH ROAD
SIGNS, BUT
DIFFERING
REFERENTS*

WAY FORWARD: STEP 1

RE-STRUCTURE 1968 CONVENTION ON ROAD SIGNS AND SIGNALS

ROAD MARKINGS

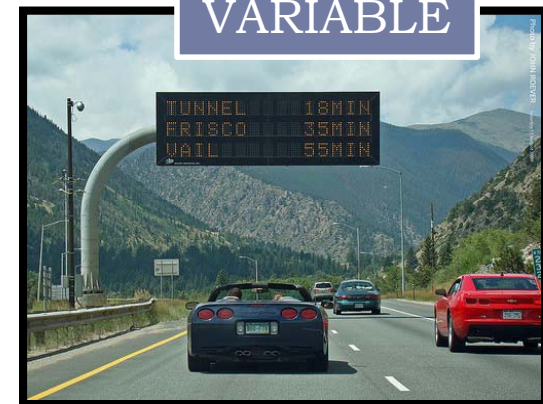


ROAD SIGNS

FIXED



VARIABLE



VMS Unit: THE PERSPECTIVE

ROAD INFORMATION: NEW DEVICES, MORE PLACES



▶ Leipzig, International Transport Forum- UNECE, 26May2010

VMS Unit: THE PERSPECTIVE

ROAD INFORMATION: NEW DEVICES, MORE PLACES



VMS Unit: THE PERSPECTIVE

ROAD INFORMATION: NEW DEVICES, MORE PLACES



Leipzig, International Transport Forum- UNECE,
26May2010

VMS Unit: THE PERSPECTIVE

ROAD INFORMATION: NEW DEVICES, MORE PLACES



VMS Unit: THE PERSPECTIVE

ROAD INFORMATION: A CHANGING LANDSCAPE

from

permanent

static

one-dimensional

passive

to

temporary

Variable, ubiquitous

multidimensional

proactive

USE OF INFORMATION: **WHY**

ROAD MARKINGS

TO **FACILITATE**
POSITION,
TRACKING
AND LOCATION
ON THE ROAD

POSTED SIGNS

TO **POINT TO**
DANGEROUS
OR
STRUCTURAL
STABLE
CONDITIONS
OF THE ROAD
ON SITE

POSTED VMS

TO WARN /
INFORM
ABOUT
DIFFERENT
CHANGING
ROAD /
TRAFFIC
EVENTS ON
AND **OFF SITE**

USE OF INFORMATION: **ONCOMING**

IN-VEHICLE

- ▶ TO WARN / INFORM ABOUT **WHATEVER TRAFFIC INFORMATION**, AT **WHATEVER POINT OR MOMENT**

INTERNET

- ▶ TO **ACTIVELY SEEK INFORMATION** ABOUT **WHATEVER TRAFFIC RELATED ISSUE**, AT **WHATEVER PLACE OR MOMENT**

WAY FORWARD: STEP 2

Where can we place the information?

FUTURE (?) 1968 CONVENTION ON ROAD SIGNS AND SIGNALS

ROAD
MARKINGS



ROAD SIGNS



IN-VEHICLE
SIGNS



PRESENT: INTELLIGENT TRUCK PARKING

AVAILABLE ANYWHERE AND FOR EVERYBODY



fre



EXAMPLE I: CHALLENGES ALREADY HERE

NEAR FUTURE: GHOST DRIVERS

BEWARE OF THEM - ALSO *IN-CAR*!



EXAMPLE II: FORTHCOMING CHALLENGES

NEAR FUTURE? PLATOONING

SOCIAL DIVISION OF LABOUR, ON ROAD



REASONS FOR 3 AXIS

MAKING THE
MOST OF **FULL
MATRIX VMS:**

*AN EASY
TRANSFER
PLATFORM OF
“CORRECT”
WP.1 DESIGN
STYLE*





REASONS FOR 3 AXIS

MAKING THE
MOST OF **FULL
MATRIX** VMS:

NEED TO

HARMONISE

SIGNS

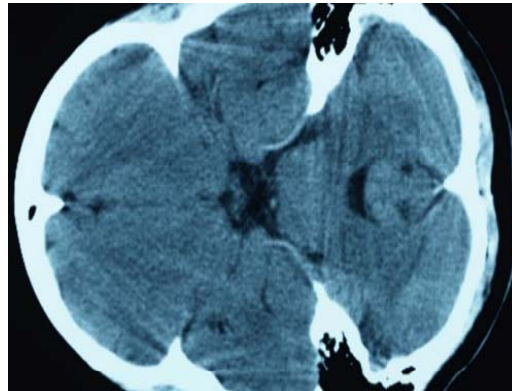
THEMSELVES

HOWEVER...

THE “LEGAL
PROBLEM”



THE
“ERGONOMIC
PROBLEM”



THE “PUBLIC-
PRIVATE”
PROBLEM



WHERE ARE THE (NEW) LIMITS?

THANKS FOR YOUR
ATTENTION!
(ANY QUESTION?)

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