EXCERPTS FROM

Analysis of the
Convention on Road Signs and Signals of 1968
and the
European Agreement Supplementing the Convention

Part I

Presentation to
Group of Experts on Road Signs and Signals, WP.1, UNECE
M. Pronin, Consultant
5-6 February 2015, Geneva
The purpose:
Search the VC and EA for inconsistencies in numbering and placement of related signs and identify if renumbering is needed.

Abbreviations used:
VC = Convention on Road Signs and Signals of 1968 (2006 version)
EA = European Agreement Supplementing the Convention
VC-RT = Convention on Road Traffic of 1968 (2006 version)
The methodology:

✧ Approach the task as an academic exercise that may lead to practical ideas.

✧ Imagine the signs in the document are being seen for the first time.

✧ Take nothing for granted.
Signs examined for numbering and placement:

- Start and end signs
- Permission and prohibition signs
- Reversal signs
- “Center” and “Side” signs
- Relationship of a/b signs
- Other signs
Do the signs in any of the 6 categories listed on the previous page have consistent numbers and placement? No.

Related signs may or may not be adjacent.

Related signs may be numbered numerically or alphanumerically.
Analysis of the VC and EA
Part IA

Numbering of START and END signs

Examples out of 26 pairs:
Analysis of the VC and EA
Part IA

Numbering of PERMISSION and PROHIBITION signs

Examples out of 10 pairs:

<table>
<thead>
<tr>
<th>PERMISSION</th>
<th>PROHIBITION</th>
<th>PERMISSION</th>
<th>PROHIBITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>C, 17c</td>
<td>C, 13aa</td>
<td>E, 9c</td>
<td>E, 10c</td>
</tr>
</tbody>
</table>

© 2015. M. Pronin. USA.
Numbering and inclusion of REVERSAL signs

Found 58 pairs:

✧ 13 pairs with images, 1 omission
✧ 15 times mentioned in text only
✧ 12 times no image or mention in text, relevant for all countries
✧ 17 times no image or mention in text, relevant for countries with left-hand driving
Analysis of the VC and EA
Part IA

Numbering and inclusion of REVERSAL signs

Examples:

<table>
<thead>
<tr>
<th>LEFT</th>
<th>RIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>A, 1a</td>
<td>A, 1b</td>
</tr>
</tbody>
</table>

“may be reversed”

<table>
<thead>
<tr>
<th>LEFT</th>
<th>RIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>A, 18c</td>
<td>A, 18c</td>
</tr>
</tbody>
</table>

not stated

<table>
<thead>
<tr>
<th>LEFT</th>
<th>RIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>G, 12a</td>
<td>no image</td>
</tr>
</tbody>
</table>

© 2015. M. Pronin. USA.
Analysis of the VC and EA
Part IA

Numbering of “CENTER” and “SIDE” signs
Examples out of 13 groups of 3 signs each:
Relationship of a/b signs

Found 57 pairs:

✧ left/right signs
✧ alternative warning signs for model Aa or Ab
✧ center/side signs
✧ start/end signs
✧ different symbols or signs
✧ general/specific signs
✧ part of a set
Analysis of the VC and EA
Part IA

Relationship of a/b signs

Examples:

LEFT

A, 1a

RIGHT

A, 1b

MODEL Aa

A, 18a

MODEL Ab

A, 18b

START

E, 6a

END

E, 6b

ALTERNATIVE DESIGNS

E, 18a

E, 18b
Analysis of the VC and EA
Part IA

Placement of other RELATED signs
Examples out of 10 pairs:

**STOPPING**
- A, 21a
- A, 17a

**HAZARDOUS GOODS**
- C, 3h
- C, 3m

**NO THROUGH ROAD**
- G, 13
- G, 2b
Part IA also documented numerical overlap, both intentional in the VC and unintentional in RE2. Because renumbering is needed to correct unintentional overlap, a simple log was created to track renumbered signs.

This will make it quick and easy to look up a sign’s history.
The purpose:

✧ Identify those signs that do and do not have counterparts in other sign sections.

✧ Provide information for considering creation of more signs related to existing VC signs.
Analysis of the VC and EA
Part IB

The methodology:

✧ Approach the task as an academic exercise that may lead to practical ideas.

✧ Provide examples of signage from both Contracting and non-Contracting Parties.
Example of gaps in VC signage

<table>
<thead>
<tr>
<th>ROAD USER</th>
<th>A WARNING</th>
<th>C PROHIBITION</th>
<th>D MANDATORY</th>
<th>E CROSSING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pedestrian</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>Horserider</td>
<td>NO</td>
<td>NO</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>Cycle</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>Motorcycle</td>
<td>NO</td>
<td>YES</td>
<td>NO</td>
<td>N/A</td>
</tr>
</tbody>
</table>

The “missing” signs may be in wide use, such as warning of horseriders crossing, or in rare use, such mandatory for motorcycles.
Analysis of the VC and EA
Part IB

Example of gaps in VC signage

<table>
<thead>
<tr>
<th>A</th>
<th>A / B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
</tr>
</thead>
<tbody>
<tr>
<td>WARNING</td>
<td>PRIORITY</td>
<td>PROHIBIT</td>
<td>MANDATORY</td>
<td>SP REG</td>
<td>ZONE</td>
<td>INF/FAC/SERV</td>
<td>DIR/POS/INDIC</td>
<td>PANELS</td>
</tr>
<tr>
<td>ped crossing</td>
<td>A, 12a</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ped crossing</td>
<td></td>
<td>pedestrian</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>pad on road</td>
<td>A, 33 VMS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>pad on road</td>
<td></td>
<td>pedestrian</td>
<td>C, 3i</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>pad on road</td>
<td></td>
<td>pedestrian</td>
<td>D, 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ped crossing</td>
<td></td>
<td>no ped cross</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

© 2015. M. Pronin. USA.
EXCERPTS FROM

Analysis of

The Convention (1968) and The EA (1971)

Part II
The purpose:

✧ With the focus on vertical signage, search the VC and EA for all types of flaws, including inconsistencies, ambiguities, and omissions.

✧ Document and illustrate how these flaws adversely affect the international community.

✧ Recommend practical and innovative ways to improve the VC.
The methodology:

✧ Approach the VC and EA from the point of view of an editor and a graphic designer.
✧ Consider the signage from the perspective of a pedestrian and a car driver on a road with poor visibility.
✧ View the signage within the context of actual application throughout the world.
The discoveries:

✧ Definitions of VC terminology and sign meanings need updating and more precision.
✧ Definitions are needed for more terms.
✧ More rules should be considered to reflect new trends in signage.
✧ Some “do not” rules are not followed by “how to” rules to convey a needed message.
The discoveries:

✧ Some sign names are inaccurate.

✧ The VC signs are not as specific as new signs that many countries have introduced. This has changed how some signs are defined.

✧ Inclusion of rarely used signs has created a complicated VC sign system.

✧ Some types of signage have rules for design or are discussed, but no images are shown.
The discoveries:

✧ The categorization of some signs should be questioned.

✧ Many traffic managers in non-Contracting Parties cannot extrapolate from the VC signs designs. They need more examples of signs.

✧ Guidance is needed for sign assemblies.
Definitions of VC terminology and sign meanings need updating and more precision.

Should the definition of “pedestrians” be updated to include persons traveling on skis, skates, skateboards, or non-motorized scooters?

Where do snowmobiles fit into the various definitions of motor vehicles?
Definitions are needed for more terms.

Road sign
Road marking
Traffic light signal
VMS
Bicycle path?
More rules should be considered to reflect new trends in signage.

Should signs be enclosed in boards? If yes, should colors be contrasting?
Some “do not” rules are not followed by “how to” rules to convey a needed message.

No more than 2 languages on a sign.

No more than 2 symbols in non-urban areas and 3 symbols in urban areas on C, 4 signs.
Some sign names are inaccurate.

Example of too narrow term:

Swing bridge
(parts horizontally)

Drawbridge
(parts vertically)

Opening bridge or Moveable bridge
(better terms; include both horizontal and vertical)
VC signs are not as specific as newer signs that many countries have introduced. This has changed how some signs are defined.

VC definition: cyclists enter or cross the road
Inclusion of rarely used signs has created a complicated VC sign system.

Countries may use Reservations and Declarations to retain specific signs and symbols.
Some types of signage have rules for design, but no images are shown.

Temporary hazard markers
Level crossing gates
Place identification signs
Some types of signage are discussed, but no images or design guidelines are provided. *

* The EA of VC-RT, Article 27 ter, page 100
The categorization of some signs should be questioned.

Permanent hazard markers are vertical signs. Do they belong in Road Markings?
Many traffic managers in non-Contracting Parties cannot extrapolate from the VC sign designs. For U turn permitted, at least 19 countries use a blue roundel...

...because they base the sign on D, 1a.
Many traffic managers in non-Contracting Parties cannot extrapolate from the VC sign designs. Direction is defined for countdown markers, but not for hazard markers.
Guidance is needed for sign assemblies.
The VC often offers a choice: place panels on the top or bottom of the sign.
Guidance is needed for sign assemblies.
Guidance is needed for sign assemblies.
The purpose:

✧ Provide an example of one rearranged VC sign section.

✧ Provide several examples of a new numbering system for VC signs.

✧ Present an alternative writing style for the VC document.

✧ Consolidate recommendations from Part IIA and suggest steps for achieving their goals.
Analysis of the VC and EA
Part IIB

Actions needed:
✧ Review application of VC signage by Contracting Parties  PARTIALLY DONE
✧ Identify unclear points in the VC document  DONE
✧ Make decisions to clarify these points
✧ Correct errors
✧ Add definitions for undefined terms used throughout the VC
Definition example:
Warning sign – a road sign or marking notifying drivers in advance of a hazard or an unexpected condition that may lead to a collision

With no definition, signs not in VC section A may treated as warnings.

THE WARNING
Speed cameras are on the road.

THE HAZARD
Speeding drivers may be fined.
Actions needed:
- Identify which signs may be deleted
- Identify gaps in sign coverage **DONE**
- Determine which of these “missing signs” are in wide use **“DONE”**
- Choose whether to add any of these signs
- Do the same for new sign concepts
- Identify which signs fit for VMS and add them
- Rearrange and renumber signs
- Create procedure for future review of signs