Signs for

SMASH THE GATE

Presentation to

Expert Group on Road Signs and Signals

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Geneva
COLOR OF GATE SYMBOL

From 2016, my designs with gate color changes
Should the gate symbol color match or not match the real gate colors?

The Convention’s 4 color choices for gate arms; stripe style may vary
COLOR OF GATE SYMBOL

One color for gate symbol according to style of Convention signs

- **5**
  - Break Gate Now!
  - Bryt Bom Nu!
  - Inscription may be on sign or on an additional panel

- **6**
  - Break Gate Now!
  - Bryt Bom Nu!
  - Yellow may be more visible than white

- **7**
  - Break Gate Now!
  - Bryt Bom Nu!
  - Arrow is optional. If arrow is included, broken gate must be below the car.

As I stated in 2016, bilingual text would increase comprehension.

**CHOICES**
- 2 National languages
- National language + English
- National language + other language
COLOR OF GATE SYMBOL

Most prevalent gate colors
in terms of number of countries using this color

Color patterns appear more compelling than solid black. However, if a Convention color pattern is preferred, all 4 color pattern options should be offered.
There is enough time to absorb a double message.

A double message may increase comprehension.

As seen in the G category, the Convention permits signs to have more than one panel.
DOUBLE SIGN

Add light atop sign for conspicuity
DOUBLE SIGN

Additional symbols for comprehension

Arrow and tracks are optional

This sign may be slightly more comprehensible than the sign on the previous slide, but would additional symbols slow reaction time?
Automatic gates are electrified and many already have lights. Changeable message signs are possible on these gates.
CHANGEABLE MESSAGES

Impractical today, but progress begins with the impractical. A sensor to trigger the sign when a vehicle is trapped would be needed.

ADVANTAGES
- Repetition of messages
- Reprogrammable
- High conspicuity
- Legibility: glare should not be an issue

CONCERNS
- More costly than static signs
- More maintenance required
- Must be lightweight
- Must be theft-proof
- Speed: can message change quickly enough?

This is not a video screen or electronic VMS. The messages rotate on non-glare plastic.

Alternative lighting style
Audio may provide more detailed instruction in more than 2 languages and the commands may be repeated.

Ideally, audio would be activated only when a trapped vehicle is detected. A talking gate when open or tracks are clear is not an optimal solution.

If you are trapped on the tracks, the barrier is easy to break. Drive through the barrier! ¡Rome la barrera! ¡Ahora! Brisez la barrière! Maintenant!

Audio would not benefit all drivers due to loud music in vehicle, hearing impairment, or level crossings with warning bells.

For driving on right-hand side of road
How should a Smash Gate sign be chosen?  
Based on test results for comprehension and reaction time in a "realistic" simulated environment.

### Questions to consider when choosing the signs for testing

<table>
<thead>
<tr>
<th>THE ISSUE</th>
<th>ANSWER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Should the sign have a border or rim?</td>
<td></td>
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<tr>
<td>Which motor vehicle should be on the sign?</td>
<td></td>
</tr>
<tr>
<td>Should the view of the vehicle be front, back, or side?</td>
<td></td>
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<tr>
<td>Should a gate arm be on the sign?</td>
<td></td>
</tr>
<tr>
<td>If yes, should the gate arm be above, below, or level with the vehicle?</td>
<td></td>
</tr>
<tr>
<td>If yes, should the colors vary per CP national code or, e.g., be red/white, solid red, black per the main Convention style, or white per G, 23/24?</td>
<td></td>
</tr>
<tr>
<td>Should a crash image be on the sign?</td>
<td></td>
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<tr>
<td>Should a train be on the sign?</td>
<td></td>
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<tr>
<td>If yes, should a train be shown on one side or both sides of the sign?</td>
<td></td>
</tr>
<tr>
<td>If yes, should the train be old (as on A, 26) or modern?</td>
<td></td>
</tr>
<tr>
<td>Should rail tracks be on the sign?</td>
<td></td>
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<tr>
<td>Should an arrow be on the sign?</td>
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<tr>
<td>If yes, the arrow should point in which direction?</td>
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<tr>
<td>Should &quot;SOS&quot; or &quot;SOS ?&quot; be on the sign?</td>
<td></td>
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<tr>
<td>Are double panel signs acceptable or even preferable?</td>
<td></td>
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<tr>
<td>Is an inscription necessary?</td>
<td></td>
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<tr>
<td>If yes, should an inscription be on the sign or on an additional panel?</td>
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<tr>
<td>If yes, should an inscription be bilingual?</td>
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<tr>
<td>If yes, which 2 languages should be chosen?</td>
<td></td>
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<tr>
<td>If yes, should the inscription be below or beside the sign?</td>
<td></td>
</tr>
<tr>
<td>What colors should the chosen elements be – sign border/rim and ground, vehicle, crash image, train, tracks, arrow, SOS, inscription, additional panel border/rim and ground?</td>
<td></td>
</tr>
</tbody>
</table>
**SOS**

“**SOS**” does not belong on the Smash Gate sign.

**SOS** is a distress signal, a call for help, for others to rescue you. It means you cannot help yourself. If trapped at a level crossing, you do not wait for rescue. You must help yourself.

**SOS** has several other meanings, including Save Our Souls, and it is the name of a brand of soap pads popular in 26 countries.
Per the Convention, CP signage associates **SOS** with *receiving* help.

Be passive, patient, wait.

Help yourself  

Call for help  

Help yourself
At level crossings

CALL FOR RESCUE

On motorways

Courtesy of H. Georg, Highway in Germany, 2006.
Indica l'esistenza di una piazzola con dispositivo di chiamata di soccorso o di assistenza.
OTHER THOUGHTS

DRIVER CONCERN
During a discussion I had with USA drivers about smashing gates, a surprising concern arose. The height of many gate arms is at the level of the windscreen of most cars. Therefore, would driving into the gate break the windscreen and decapitate the driver? How many share this unrealistic fear? Such a belief would cause drivers to abandon their car on the tracks and flee on foot to safety.

HEAVY BARRIERS
Some CPs have old unbreakable steel gate arms. Other countries are automating rather than replacing old manual gates.

PANIC
Not all trapped drivers panic. Some wait in the vehicle and expect the train to stop.

The Convention’s 2 color choices for fence-type gates are solid white and solid yellow plus a large red center disc; variation in gate styles are permitted.

Can all cars at low speed easily break this type of gate? Should the Convention continue including such barriers?

Article 35, ¶1
Thank You

Courtesy of © Santtu37, Diagonal Guarded Level Crossing at Sipoo, Finland, 2014.