

Major Revisions made to High-priority Warning Guideline
in response to the comments received by the end of December, 2009

1. OICA comments on 3.1:Warnings should be noticeable in the driving environment, where modality, location/size, brightness, activation, colour and auditory warnings are described, are taken into account by adding the phases in "Introduction" as follows(underlines are added):

OICA comment: This document is unclear and unverifiable.

Revision:

This document also provides stakeholders with an overview of relevant guidelines and standards and information on how to access them. The principles are, however, not a substitute for any current regulations and standards, which should always be taken into consideration. Accordingly, this document may be referred to when designing the high-priority warning systems but compliance with the principles is not mandatory.

Finally, it should be noted that the objective values in this document are raised as illustrations based on state of the art research results, they can be improved and adjusted according to the further findings. Any future innovations designed to enhance vehicle safety should not be precluded from the scope of these guidelines.

2. OICA comment on two modalities when displaying high-priority warning in 3.1:Warnings should be noticeable in the driving environment:

OICA comment: This may be acceptable as a general guide, but should not be allowed to become a hard and fast rule.

Revision:

As a consequence, two modalities or more are generally recommended to make high-priority warnings more noticeable, however the warnings can be displayed using one modality if it can be ensured that the driver will notice the warning. One modality presentation should be avoided in those cases where the drivers line of sight may deviate from the direction of the visual warnings or, for auditory warnings, where the driver ability to hear the auditory warnings could be impaired.

3. OICA comment on location/size of 3.1: Warnings should be noticeable in the driving environment is modified as follows:

OICA comment: 15 degrees recommendation is very restrictive compared to the current existing HMI guidelines which indicate an angle of 30 degrees,

Revision:

According to the research results, warnings located within 15 degrees of the passenger car drivers expected line of sight can make the warnings more noticeable to the driver. Location of visual warnings will be different between passenger cars and trucks, because of the difference in their vehicle characteristics and dimensions of cockpits.

4. OICA comment on wording in 3.2: High-priority warnings should be distinguishable from other messages in the vehicle are modified as follows:

OICA comment: Recognition takes a finite time.

Revision:

High-priority warnings should be clear to drivers and understood without confusion. They should be easily and quickly recognizable to allow a timely and appropriate driver response. . . .

5. OICA comment on quoted examples in 3.2: High-priority warnings should be distinguishable from other messages in the vehicle are modified as follows:

OICA comment: The quoted examples are misleading

Revision:

Good: The driver is able to discriminate high-priority warnings and other messages, so that they can take appropriate response to avoid the critical situation. For example, the FCW warning signal can be instantly distinguished from ITS service messages such as parking information etc.

Bad: High-priority warning signal 'A' is masked by other warnings, so that the driver is not likely to perform the appropriate avoidance response. For example, visual and auditory displays are almost similar between a FCW warning signal and ITS service message such as parking information etc.

6. OICA comment on "low priority warnings" which are legally required is taken into account by adding the phrase in 3.6: Multiple warnings should be prioritized, and comment on quoted example of low fuel warning are modified as follows:

OICA comment: Prioritization cannot apply to "low priority warnings" which are legally required, and the example of the low fuel warning is not the most relevant tone to illustrate the case in question.

Revision:

When multiple in-vehicle systems are present, different warnings and messages will be presented to drivers at various times. Performance and safety can potentially be affected if these messages are not managed properly and they occur simultaneously (ISO/TS 16951, 2003). Drivers may fail to obtain critical safety information, and lower priority messages might interfere with, and delay, driver responses to high-priority situations. This principle does not apply to "low priority warnings", where the requirements for the warning are set out in legislation, for example safety belt reminders.

Good: ITS service messages such as parking information etc. (low priority) is delayed while forward collision warning is displayed (high priority).

Bad: ITS service messages such as parking information etc. (low priority) and forward collision warning (high priority) are simultaneously displayed, and consequently the driver can not understand the latter.

7. Comment from Swiss Federal Department on auditory warnings in 3.1: Warnings should be noticeable in the driving environment is taken into account by adding the phrase as follows:

Comment from Swiss Federal Department: Elderly people have a restricted hearing for high frequency sounds and we suggest to put under "Auditory Warnings" an additional bullet point, saying that warning signals of a frequency higher than 6'000 Hz should not be used.

Revision:

Care should be also taken for the presentation of auditory warnings to the elderly drivers who may suffer from impaired hearing ability in higher frequency.

8. Comment from JAMA on haptic warnings in 3.1: Warnings should be noticeable in the driving environment is taken into account by adding a word as follows:

JAMA comment: While a foot is traveling from brake pedal to gas pedal or vice versa, it cannot ensure to have continuous physical contact.

Revision:

It may be desirable in many cases for haptic warnings to have continuous physical contact with the driver.
