ISO/TS 16951:2021 (E)

Road vehicles — Ergonomic aspects of transport information and control systems (TICS) — Procedures for determining priority of on-board messages presented to drivers

Contents

Foreword

Introduction

1 Scope

2 Normative references

3 Terms and definitions

4 Data collection for the priority index procedure

- 4.1 General
- 4.2 Appoint an examiner
- 4.3 Identify and assemble messages
- 4.4 Define driving context and situation
- 4.4.1 Consider the sensing capability of the vehicle
- 4.4.2 Factors to consider in developing the driving scenarios
- 4.4.2.1 Trip context
- 4.4.2.2 Road environment
- 4.4.2.3 Traffic situation
- 4.4.2.4 Vehicle condition
- 4.4.3 Document the driving context and situation
- 4.5 Select the evaluators
- 4.6 Evaluate criticality and urgency of a message
- 4.7 Instructions for the examiner
- 4.8 Alternative method for determining message priority

5 Data analysis for priority index

- 5.1 General
- 5.2 Select weights
- 5.3 Calculate priority, pij
- 5.4 Calculate arithmetic mean and standard deviation of priority index across evaluators for each message
- 5.5 Calculate Pj and σj
- 5.6 Determine priority order
- 5.7 Evaluate data quality

6 Application of results

- 6.1 Prioritization of priority ranking
- 6.2 How to deal with additional messages
- 6.3 Documentation
- 6.4 Other

Annex A (normative) Priority matrix method

- A.1 Overview of method
- A.2 Advantages and disadvantages of method
- A.3 Requirements for examiner and evaluators
- A.3.1 Examiner
- A.3.2 Expert evaluators
- A.3.2.1 Expert opinion
- A.4 Procedure
- A.4.1 Identify and assemble messages

A.4.2 Define driving context and situation
A.4.2.1 Clarify driving context
A.4.2.2 Differentiate between situations
A.4.2.3 Document the driving context and situation
A.4.3 Evaluate the priority of messages
A.5 Instructions for the examiner
A.6 Documentation

Annex B (informative) System reaction matrix for priority matrix method

B.1 System reactions to prioritized messages
B.2 Examples

Annex C (informative) Rationale for recommended number of evaluators for priority index method

C.1 Objective
C.2 Detailed explanation of the procedure
C.2.1 Conduct pilot study
C.2.2 Calculate the number N

Annex D (informative) Example evaluator profile

Annex E (informative) Driving scenarios

Annex F (informative) Criticality and urgency as the evaluation criteria

Annex G (informative) Deriving weight kc and ku

Annex H (informative) Sample report format

Annex I (informative) “Acceptable” standard deviations σj for priority indexes

Page count: 31