



National Standards Authority of Ireland

IRISH STANDARD

ENV ISO 14816:2000

ICS 35.240.60

**ROAD TRANSPORT AND TRAFFIC
TELEMATICS - AUTOMATIC VEHICLE AND
EQUIPMENT IDENTIFICATION - NUMBERING
AND DATA STRUCTURES (ISO/TR 14816:2000)**

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EUROPEAN PRESTANDARD
PRÉNORME EUROPÉENNE
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English version

**Road transport and traffic telematics - Automatic vehicle and
equipment identification - Numbering and data structures
(ISO/TR 14816:2000)**

Télématique de la circulation et du transport routier -
Identification automatique des véhicules et équipements -
Codification et structure des données (ISO/TR 14816:2000)

Telematik für den Straßenverkehr und Transport -
Automatische Identifikation von Fahrzeugen und Geräten -
Numerierungs- und Daten Strukturen (ISO/TR 14816:2000)

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FOREWORD

This European Prestandard has been prepared by Technical Committee CEN/TC 278 "Road transport and traffic telematics ", the secretariat of which is held by NNI, in collaboration with Technical Committee ISO/TC 204 "Transport information and control systems".

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

INTRODUCTION

This Standard specifies a data structure that enables upwards integration and expansion from the simplest low cost AVI/AEI system to more complex functions. The structure is designed to be flexible and enabling rather than prescriptive.

This Standard has been designed to provide for the differing requirements of AVI and AEI by the use of separate application specific . By retaining these differing requirements within one supervisory document the interoperability is maximised, particularly in the case where both AVI and AEI are required at the same time in the Road Environment.

In order to support systems using both active and passive OBEs, the basic data structures have been minimised. This enables any manufacturer/operator with an OBE with a user addressable memory of only 56 bits to be able to conform a full core identification according to this Standard.

Abstract Syntax Notation One (ASN.1) is widely applied. Its usage provides maximum interoperability and conformance to existing Standards, and meets the specifically defined requirements for a generic Standard model for RTTT in that it:

- Uses existing standard Syntax Notation and Encoding Rules
- Is adaptable and expandable
- Does not include unnecessary information for a specific system
- Incurs a minimum of overhead in storage and transmission.

Readers who are unfamiliar with ASN.1 are advised to read ANNEX C before reading the main body of this preStandard. Readers are also advised to read ISO/IEC 8824:1998, ISO/IEC 8825-1:1998, ISO/IEC 8825-2:1998 and ISO/IEC DIS 8825-3:1992 and other published work on ASN.1 before reading the main body of this preStandard.

ENV 12314-1 provides a Reference Architecture Model for AVI/AEI systems.

Sections 4.1 - 4.6 of ENV ISO 14816 provide a standardised yet flexible and interoperable framework for Numbering Schemes. A structure for AVI/AEI unambiguous identification and several Numbering Schemes associated with AVI/AEI systems are determined in this preStandard.

The core AVI/AEI Numbering Scheme, central to the effective use of many of the constructs, is a structure to provide unambiguous identification. Section 4.7 of this preStandard provides a data element coding for Automatic Vehicle and Equipment Identification (AVI/AEI) in RTTT applications. This coding provides a structure with the possibility of 2^{56} (in excess of 72 million billions) unique identifiers, provided within a 56 bit code structure when ISO/IEC 8825-2 (PER) is used, i.e. no overhead is incurred.

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