

Intelligent transport systems — Reference model architecture(s) for the ITS sector

Part 6: Data presentation in ASN.1

ICS 03.220.01; 35.240.60

National foreword

This British Standard is the UK implementation of ISO 14813-6:2009.

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A list of organizations represented on this committee can be obtained on request to its secretary.

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**Part 6:
Data presentation in ASN.1**

*Systèmes intelligents de transport (ITS) — Architecture(s) de modèle de
référence pour le secteur ITS —*

Partie 6: Présentation de données dans ASN.1



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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 14813-6 was prepared by Technical Committee ISO/TC 204, *Intelligent transport systems*.

This first edition of ISO 14813-6 cancels and replaces ISO/TR 14813-6:2000.

ISO 14813 consists of the following parts, under the general title *Intelligent transport systems — Reference model architecture(s) for the ITS sector*.

- *Part 1: ITS service domains, service groups and services*
- *Part 2: Core TICS reference architecture* [Technical Report]
- *Part 3: Example elaboration* [Technical Report]
- *Part 4: Reference model tutorial* [Technical Report]
- *Part 5: Requirements for architecture description in ITS standards*
- *Part 6: Data presentation in ASN.1*

Introduction

This part of ISO 14813 is one of a series of documents to provide a form and structure to the reference architectures for intelligent transport systems (ITS). Specifically, this part of ISO 14813 is intended to enable conformance with a resolution of ISO/TC 204, a determination for the consistent use and elaboration of Abstract Syntax Notation One [ASN.1 (ISO/IEC 8824-1, ISO/IEC 8824-2, ISO/IEC 8824-3 and ISO/IEC 8824-4)] within ITS International Standards.

ISO/TR 14813-6:2000 was developed following the decision of the ISO Technical Committee ISO/TC 204 to adopt ASN.1 as its normal syntax notation for data definitions within ITS International Standards and to provide instructions and rules to facilitate interoperability and mobility of data. This part of ISO 14813 represents a revision of ISO/TR 14813-6:2000, clarifying and updating it by setting the use of ASN.1 in context with the use of other notations within ITS International Standards.

To be explicit, the ISO/TC 204 decision does not *require* that all ITS International Standards and systems shall use ASN.1 as their only means of encoding and transfer. In many cases other methods will be used because of industry practices or efficiency in certain situations. The ISO/TC 204 decision requires only that

- where data is defined within an ITS International Standard or data registry, it is elaborated in a consistent form within all ITS International Standards as an ASN.1 module to promote interoperability and reuse, and
- where ASN.1 is the chosen method for encoding, that it is consistently defined according to ISO/IEC 8825.

ASN.1 and its encoding rules provide a means of achieving interoperability of otherwise incompatible data concepts. In order to achieve this, levels of identification are required to precede certain data elements, to enable the comprehension of data messages.

Within the ASN.1 data definition there may be a requirement to use other notations or encoding rules in the transfer of information within a system specified within an ITS International Standard.

ISO 14817 defines the format of data dictionaries and data registries and is consistent to this document in requiring the definition of data according using ASN.1.

