

UN/EDIFACT

DRAFT DOCUMENT

Traffic or travel route guidance and planning message

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This message has undergone only an initial technical assessment which may have found certain technical and presentation problems. These will be solved before the message is submitted as a request for Status 1. Anything shown under Section 5 (or, in some cases, which should have been shown in Section 5 - directory variations) is NOT approved at this stage. Further information on the development of this message can be obtained from the Rapporteur's EDIFACT Board Secretariat. This document is issued for information and comments and is not intended for implementation.  
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## 0. INTRODUCTION

This specification provides the definition of the Traffic or travel route guidance and planning message (TRAILS) to be used in Electronic Data Interchange (EDI) between trading partners, involved in administration, commerce and transport.

### 1. SCOPE

#### 1.1 Functional Definition

A message to serve parties that send and/or receive traffic or travel information (e.g. traffic or travel information or control centres, road authorities, public transport operators, breakdown or rescue services, freight operators, individual travellers), conveying data (such as flows, speeds or times) relating to one or more locations in a traffic or travel network, in order to support traffic or travel planning, management and/or intelligent navigation systems.

#### 1.2 Field of Application

The Traffic or travel route guidance and planning message may be used for both national and international trade. It is based on universal commercial practice and is not dependent on the type of business or industry.

#### 1.3 Principles

Traffic or travel planning and system management by road authorities

(or other responsible organisations) requires exchanges of traffic or travel data such as traffic flows, speeds and classified traffic counts.

Also, in-vehicle route guidance systems have been developed by the major automobile and consumer electronics companies in the world. On-board computers calculate minimum paths from traffic or travel network data, which must be updated in real time.

The TRAILS message has been designed to meet operational requirements in this area. Data transmitted through this message provide basic planning and management information for road and traffic authorities, police forces, etc.. They can also be used to provide traffic-responsive route selection recommendations in real time, for processing in on-board navigation systems.

The TRAILS message will allow public and private sector service providers to exchange these data in compatible formats.

1. One message conveys data about one or more locations on a transport network, such as links in a route guidance system.
2. One message can be used to describe basic traffic or travel data for one or more locations, such as flows, occupancies, link speeds, link times, etc..
3. One message may relate to all relevant data about the locations, or to a part of these data. The data may be split in different messages, e.g. as known at different times.
4. The TRAILS message has to cater for frequent updates (changes or deletions). For these purposes, a number of generic terms are used in this specification, to be described as:

start time - the time from which the data will become effective

expiry time - the time at which the data shall be deleted from the receiving database

5. A TRAILS message may be sent according to existing agreements with the recipient, or in response to an earlier Traffic or travel information request message (TRAREQ).

## 2. REFERENCES

See UNTDID, Part 4, Section 2.6, UN/ECE UNSM - General Introduction, Section 1.

## 3. TERMS AND DEFINITIONS

See UNTDID, Part 4, Section 2.6, UN/ECE UNSM - General Introduction, Section 2.

## 4. MESSAGE DEFINITION

### 4.1 Data Segment Clarification

This section should be read in conjunction with the Branching Diagram and the Segment Table which indicate mandatory, conditional and repeating requirements.

0010 UNH, Message header

A service segment starting and uniquely identifying the message. The message type code for the Traffic or travel route guidance and planning message is 'TRAILS'.

Note: Traffic or travel route guidance and planning messages conforming to this document must contain the following data in segment UNH, composite S009:

Data element 0065 TRAILS  
0052 0  
0054 1  
0051 RT

- 0020 BGM, Beginning of message  
A segment to indicate the beginning of a message and to transmit the identifying number (when taken in combination with the message sender). The segment can also be used to provide further specification of the message type (by data element 1001: Document/message name, coded).
- 0030 DTM, Date/time/period  
A segment to time-stamp the message. This segment can also be used to indicate other dates and/or times which apply to the message as a whole, such as: - message sending time - input time - expiry time
- 0040 ERC, Application error information  
A segment to indicate that an information request cannot be (wholly) fulfilled, for a reason coded.
- 0050 GIS, General indicator  
A segment to provide a general indicator relating to the whole message, such as: - message priority - forecast indicator - quality index
- 0060 LOC, Place/location identification  
A segment to indicate a location relevant to the dissemination of all the data in this message, such as: - distribution area
- 0070 Segment Group 1: RFF-DTM  
A group of segments to specify references relating to the whole message, and associated dates and/or times.
- 0080 RFF, Reference  
A segment to indicate a reference applying to the whole message, such as contract number.
- 0090 DTM, Date/time/period  
A segment to provide a date and/or time relating to the reference.
- 0100 NAD, Name and address  
A segment to indicate the identity of the message sender within the application. It can also be used to specify the source of the information.
- 0110 Segment Group 2: STA-RFF-LOC-TDT-DTM-SG3-SG4  
A group of segments to provide traffic or travel data for a specific location. The data provided can be route guidance data, either current or a forecast based on statistical

interpolation techniques. Table data can also be provided, such as table data for an individual vehicle or a table of periodic data.

- 0120        STA, Statistics  
A segment to specify the statistical type which applies to the collection of data as provided in this segment group, such as: - current data - polyline (i.e. linear interpolation) - 3rd order B-spline - cubic spline etc.
- 0130        RFF, Reference  
A segment to specify a reference relating to table data, such as: - lane position reference - cross-reference to a related traffic or travel situation
- 0140        LOC, Place/location identification  
A segment to indicate the specific location to which the collection of data as given in this segment group applies, such as: - route guidance location - traffic data location The segment can also be used to indicate a location relevant to the dissemination of the collection of data as given in this specific segment group, such as: - distribution area
- 0150        TDT, Details of transport  
A segment to indicate a specific vehicle class to which the given collection of data applies.
- 0160        DTM, Date/time/period  
A segment to specify a date and/or time relating to the collection of data as given in this segment group, such as: - input time - expiry time The segment can also be used to indicate a link time or turn delay for current route guidance data.
- 0170        Segment Group 3: QTY-DTM  
A group of segments to provide route guidance data which are quantities and, eventually, a related period of forecasted applicability.
- 0180        QTY, Quantity  
A segment to provide route guidance data which is a quantity, such as: - link speed - link speed adjustment
- 0190        DTM, Date/time/period  
A segment to indicate a prediction interval or a prediction period to which the route guidance data in the QTY segment applies.
- 0200        Segment Group 4: LIN-RFF-DTM-QTY-TDT-GDS  
A group of segments to provide a table of periodic data or a table of individual vehicle data. The group of segments can also be used to provide route guidance data which is a date and/or time, together with its related period of forecasted applicability.
- 0210        LIN, Line item  
A segment to number the collection of data as given in

this segment group, e.g. each line of a table of data.

- 0220 RFF, Reference  
A segment to indicate a reference for a table of individual vehicle data, such as: - lane position reference
- 0230 DTM, Date/time/period  
A segment to provide table data which is a date and/or time, such as: - passage time The segment can also be used for (forecasted) route guidance data which is a date and/or time, and also to provide its related prediction interval or prediction period.
- 0240 QTY, Quantity  
A segment to provide table data which is a quantity, such as: - average speed - number of axles
- 0250 TDT, Details of transport  
A segment to indicate a specific vehicle class to which the collection of data as given in this segment group applies, or to provide the identification of an individual vehicle.
- 0260 GDS, Nature of cargo  
A segment to indicate the type of load carried by an individual vehicle.
- 0270 UNT, Message trailer  
A service segment ending a message giving the total number of segments in the message and the control reference number of the message.

#### 4.2 Data Segment Index (Alphabetical Sequence)

BGM Beginning of message  
DTM Date/time/period  
ERC Application error information  
GDS Nature of cargo  
GIS General indicator  
LIN Line item  
LOC Place/location identification  
NAD Name and address  
QTY Quantity  
RFF Reference  
STA Statistics  
TDT Details of transport  
UNH Message header  
UNT Message trailer

#### 4.3 Message Structure

##### 4.3.1 Segment Table

POS	TAG NAME	S	R
0010	UNH Message header	M	1
0020	BGM Beginning of message	M	1
0030	DTM Date/time/period	M	9
0040	ERC Application error information	C	1
0050	GIS General indicator	C	9





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³ RFF ³	³ DTM ³	³ QTY ³	³ TDT ³	³ GDS ³
3				
ÃÄÄÄÄÄÄÄ´	ÃÄÄÄÄÄÄÄ´	ÃÄÄÄÄÄÄÄ´	ÃÄÄÄÄÄÄÄ´	ÃÄÄÄÄÄÄÄ´
³C³ 9 ³	³C³ 9 ³	³C³ 99 ³	³C³ 1 ³	³C³ 1 ³
ÀÄÄÄÄÄÄÄÙ	ÀÄÄÄÄÄÄÄÙ	ÀÄÄÄÄÄÄÄÙ	ÀÄÄÄÄÄÄÄÙ	ÀÄÄÄÄÄÄÄÙ

ÚÄÄÄÄÄÄÄ¿  
 ³ DTM ³  
 ÃÄÄÄÄÄÄÄ´  
 ³C³ 1 ³  
 ÀÄÄÄÄÄÄÄÙ

## 5. DIRECTORIES

### 5.1 Directory References

See DRAFT Directory D.94A.

### 5.2 Explanation of Directory Variations

There are no directory variations.

#### 5.2.1 Segment Variation

#### 5.2.1 Segment Variation

#### 5.2.2 Composite Variation

#### 5.2.3 Data Element Variation