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# Intelligent transport systems — Information for emergency service support via personal ITS station —

## Part 1: General requirements and technical definition

*Systèmes de transport intelligents — Informations pour le support des services d'urgence par l'intermédiaire d'une station ITS personnelle —*

*Partie 1: Exigences générales et définition technique*



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# Foreword

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This document was prepared by Technical Committee ISO/TC 204, *Intelligent transport*.

A list of all parts in the ISO 20530 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.



 

# Introduction

The existing standard on emergency call services (EN 16072) excludes the accident detecting process and focuses on the automotive manufacturer's perspective. In order for emergency call services to be widespread in the automotive industry, a unified system requirement and methodology for accident data gathering and data processing are necessary.

In terms of an accident detection system, the existing emergency call services assess an accident by checking solely impact data. However, impact occurrence from a non-accident incident, such as crossing a speed hump and/or pothole, can be determined as an accident, which can generate a false report. This false report can cause waste of labour, time and expense for eCall service centres (e.g. PSAP [Public Safety Answering Point]). Therefore, it is necessary to define an accident detection process to identify an accident while filtering a false report.

# Intelligent transport systems — Information for emergency service support via personal ITS station —

# Part 1: General requirements and technical definition



## 1 Scope

This document defines the use cases and general requirements for supporting emergency services via P-ITS-S. Any automotive-related service providers can refer to this document for developing eCall service systems into eCall non-supportive vehicles.

The P-ITS-S acts as a monitoring and data transmitting device which gathers a vehicle's speed, impact and airbag deployment signal to assess the accident occurrence and type of accident. Once gathered data has been determined as an accident, accident related information is sent to an emergency service centre.

Only notable events, such as an airbag-deployed event, rollover and stationary accident, are concerned by this document. In addition, the vehicle data gathering device requirement and implementation methodology for the emergency service are not applicable to this document.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 13185-2, *Intelligent transport systems — Vehicle interface for provisioning and support of ITS services — Part 2: Unified gateway protocol (UGP) requirements and specification for vehicle ITS station gateway (V-ITS-SG) interface*

ISO 13185-3, *Intelligent transport systems — Vehicle interface for provisioning and support of ITS Services — Part 3: Unified vehicle interface protocol (UVIP) server and client API specification*

ISO 21217, *Intelligent transport systems — Communications access for land mobiles (CALM) — Architecture*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 13185-2, ISO 13185-3, ISO 21217 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

**3.1**
**accident determination**
judgement of whether an event is a real accident or not, following an analysis based on gathered data

**3.2**
**G-sensor**
<accelerometer> sensor module that detects impact by measuring acceleration change

**3.3**
**gyro sensor**
<yaw-rate sensor> angular rate sensor in roll and pitch axis

**3.4**
**ITS station**
**ITS-S**
entity in a communication network, comprised of application, facilities, networking and access layer components specified in ISO 21217 that operate within a bounded secure management domain

[SOURCE: ISO 13184-2:2016, 3.5]

**3.5**
**personal/vehicle ITS station**
**P/V-ITS-S**
ITS station implemented in a vehicle or mobile device

[SOURCE: ISO 17438-4:2019, 3.1.4]

**3.6**
**stationary vehicle accident**
accident where a stopped vehicle is struck by a moving vehicle

**3.7**
**accident detection system**
system which runs a process for determining accident occurrence based on the data gathered from a P-ITS-S

**3.8**
**accident data**
data relevant to an accident

Note 1 to entry: An example is impact and rollover magnitude gathered during an accident (i.e. vehicle speed, impact magnitude, *airbag deployment signal* [3.9], angular rate). These data are evaluated for an *accident determination* (3.1) process.

**3.9**
**airbag deployment signal**
ECU signal for airbag deployment during an accident which is gathered from the *UVIP server* (3.10)

**3.10**
**UVIP server**
server implementing the UVIP services

**3.11**
**preset threshold**
specified maximum value of impact magnitude which triggers the further *accident determination* (3.1) process

Note 1 to entry: Determining impact threshold value is out of scope of this document.

**3.12**
**emergency service centre**
response centre to which accident information is sent

## 4 Abbreviated terms

**ECU** electronic control unit

**UVIP** unified vehicle interface protocol

**ITS** intelligent transport system

## 5 General information

This document specifies the general requirements for the accident detection system via P-ITS-S. It contains information on the following:

— accident detection system structure;

— requirements for impact detection;

— accident determination process by accident case (airbag deployed/rollover/stationary).

The accident detection system consists of the UVIP server, which is a part of an in-vehicle system and a P-ITS-S. The role of a P-ITS-S is to gather accident data from the UVIP server, to analyse this data, and send the location of the accident detected to the emergency service centre.

The accident detection system implementation method differs according to G-sensor availability within a vehicle. Whether there is an in-vehicle or P-ITS-S G-sensor, impact data is gathered and sent to the P-ITS-S for the further accident determination process.

The accident determination process differs according to the accident case (e.g. airbag-deployed, rollover and stationary) as well as the required data. Required data is covered in use case cluster 2. Figure 1 shows the accident detection reference system.

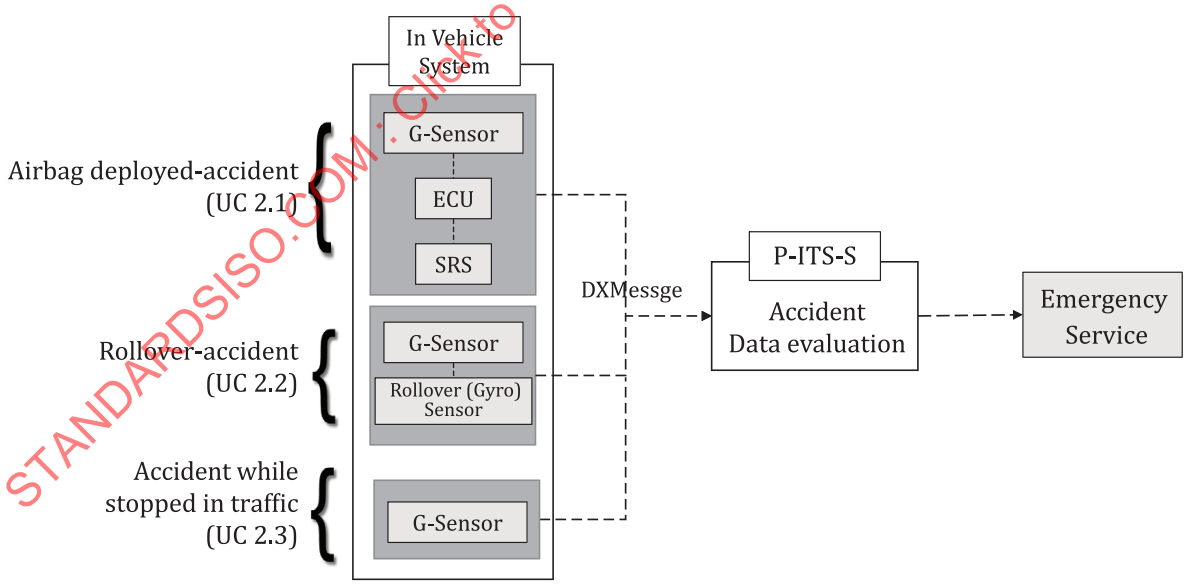


**Figure 1 — Accident detection reference system**

## 6 Use case implementation

### 6.1 Use case clusters and associated use cases

In general, a vehicle accident generates considerable impact along with sudden deceleration, rapid RPM drop, and airbag deployment. This series of data provides a reasonable source of information for

identifying accidents and filtering out false detections. In order for the P-ITS-S to detect an accident properly, the following functionalities are required:

— Exchange of data between the P-ITS-S and the vehicle's UVIP server and ability to monitor vehicle status, such as impact and speed in real time.

If an impact is detected which exceeds a preset threshold, then the P-ITS-S shall make a request for airbag deployment signal check through the UVIP server.

Once impact data has been determined as an accident, the P-ITS-S sends accident related information, such as time and accident detected location, to the emergency service centre.

Table 1 provides an overview of the different use cases. The use cases are grouped into use case clusters.

**Table 1 — Overview of use case clusters and associated use cases**

| Title of use case cluster | Brief description |
|---|---|
| 1 - Impact detection | This cluster describes an impact data gathering system which is classified according to G-sensor availability within a vehicle. If a vehicle doesn't support G-sensor, then P-ITS-S shall act as an impact gathering system.<br>**UC 1.1** - Impact detection using in-vehicle G-sensor<br>**UC 1.2** - Impact detection using P-ITS-S G-sensor |
| 2 - Accident determination | Although there are various accident types, this cluster covers three particular use cases: airbag-deployed accident (UC 2.1), rollover accident (UC 2.2) and stationary accident (UC 2.3). After the P-ITS-S gathers impact data and checks with a preset threshold, each accident case shall follow the corresponding accident detection process.<br>**UC 2.1** - Airbag-deployed accident<br>**UC 2.2** - Rollover accident<br>**UC 2.3** - Accident while stopped in traffic |

## 6.2 Use case implementation

### 6.2.1 UC cluster 1 — Impact detection

The P-ITS-S monitors impact data through G-sensor in real-time and checks whether the impact has exceeded a preset threshold. Determining a preset impact threshold is not covered in this document.

This use case cluster involves the case where impact is gathered and sent to the P-ITS-S. The role of the P-ITS-S is differed by G-sensor availability within a vehicle.

#### 6.2.1.1 UC 1.1 Impact detection through in-vehicle G-sensor

Table 2 defines the use case where impact data from G-sensor within a vehicle is gathered. In this use case, the P-ITS-S which communicates with a UVIP server gathers impact data directly from an in-vehicle G-sensor in DXMessage format. The UVIP client within the P-ITS-S shall receive impact data along with an airbag deployment signal and move on to the further process.

**Table 2 — UC 1.1 Impact detection through in-vehicle G-sensor**

| | | | | |
|---|---|---|---|---|
| **Use case** | **Cluster** | **1 - Impact detection** | | Detect an impact from in-vehicle G-sensor (UVIP Server) |
| | **Name** | **UC 1.1 - Impact detection through in-vehicle G-sensor** | | |
| | **Occurrence area** | Vehicle involved in an accident | | |
| | **Provisioning phase** | Check impact data which is gathered from UVIP server | | |
| | **P-ITS-S control** | Gather impact data | | |
| | **Hindrance factor** | False impact | | |
| | **Requirements** | Receive impact data through UVIP server | | |
| **Messages** | **Subclause** | **Name** | **Exe** | **Description** |
| | Not applicable | | | |

#### 6.2.1.2 UC 1.2 Impact detection through P-ITS-S G-sensor

Table 3 defines the use case of using the P-ITS-S acting as an impact gathering entity for an older and low-end vehicle model which does not have an in-vehicle G-sensor.

In this use case, if there is a case where impact data exceeds a preset threshold, the P-ITS-S makes a speed and airbag deployment signal data request to the UVIP server and moves on to the accident detection process.

**Table 3 — UC 1.2 Impact detection through P-ITS-S G-sensor**

| | | | | |
|---|---|---|---|---|
| **Use case** | **Cluster** | **1 - Impact detection** | | Detect impact from a G-sensor of P-ITS-S. |
| | **Name** | **UC 1.2 - Impact detection through P-ITS-S G-sensor** | | |
| | **Occurrence area** | Vehicle involved in an accident | | |
| | **Provisioning phase** | Check impact data which is gathered from P-ITS-S | | |
| | **P-ITS-S control** | Gather impact data | | |
| | **Hindrance factor** | False impact | | |
| | **Requirements** | Receive impact data using a G-sensor of P-ITS-S | | |
| **Messages** | **Subclause** | **Name** | **Exe** | **Description** |
| | Not applicable | | | |

### 6.2.2 UC cluster 2 — Accident determination

Although there are various types of vehicle accident, the accident determination process covers particularly airbag-deployed accidents (UC 2.1), rollover accidents (UC 2.2) and stationary accidents (UC 2.3). After the P-ITS-S collects impact data and checks with a preset threshold, each accident case shall follow a different detection process.

#### 6.2.2.1 UC 2.1 Airbag-deployed accident

Table 4 defines the use case where a vehicle is involved in an airbag-deployed accident.

**Table 4 — UC 2.1 Airbag-deployed accident**

| | | | | |
|---|---|---|---|---|
| **Use case** | **Cluster** | **2 - Accident determination** | | Detect vehicle's impact along with vehicle's speed and check SRS sensor for airbag deployment occurrence. |
| | **Name** | **UC 2.1 - Airbag-deployed accident** | | |
| | **Occurrence area** | Vehicle involved in an accident where the airbag has deployed | | |
| | **Provisioning phase** | 1) Check whether a vehicle has gathered impact through G-sensor<br>2) Check vehicle speed<br>3) Check airbag deployment<br>4) Send accident coordinate data | | |
| | **P-ITS-S control** | Gather impact and speed data | | |
| | **Hindrance factor** | False impact | | |
| | **Requirements** | Check airbag deployment | | |
| **Messages** | **Subclause** | **Name** | **Exe** | **Description** |
| | 7.2 | `impact-detection` | P/V | Gather impact data from G-sensor. After impact data exceeds a threshold, check vehicle speed |
| | 7.3 | `vehicle-speed` | P/V | Check speed of a vehicle |
| | 7.4 | `airbag-deployment` | P/V | Check airbag deployment |
| | 7.6 | `send-accident-data` | P | Send accident coordinate data to service provider |

### 6.2.2.2 UC 2.2 Rollover accident

Table 5 defines the use case where a vehicle is involved in a rollover accident.

**Table 5 — UC 2.2 Rollover accident**

| | | | | |
|---|---|---|---|---|
| **Use case** | **Cluster** | **2 - Accident determination** | | When a vehicle is involved in a rollover accident, P-ITS-S checks rollover occurrence from yaw rate sensor along with impact data and checks airbag deployment. |
| | **Name** | **UC 2.2 - Rollover accident** | | |
| | **Occurrence area** | Vehicle involved in an accident where the airbag has deployed | | |
| | **Provisioning phase** | 1) Check whether a vehicle has gathered impact through G-sensor<br>2) Check vehicle yaw rate<br>3) Send accident coordinate data | | |
| | **P-ITS-S control** | Gather impact and yaw rate | | |
| | **Hindrance factor** | False yaw rate | | |
| | **Requirements** | Check airbag deployment occurrence | | |
| **Messages** | **Subclause** | **Name** | **Exe** | **Description** |
| | 7.2 | `impact-detection` | P/V | Gather impact data from G-sensor. After impact data exceeds a threshold, check vehicle speed |
| | 7.5 | `rollover-check` | P | Check yaw rate of a vehicle |
| | 7.6 | `send-accident-data` | P | Send accident coordinate data to service provider |

#### 6.2.2.3 UC 2.3 Stationary vehicle accident

Table 6 defines the use case where a vehicle is involved in a stationary vehicle accident.

**Table 6 — UC 2.3 stationary vehicle accident**

| | | | | |
|---|---|---|---|---|
| **Use Case** | **Cluster** | **2 - Accident determination** | | If a vehicle gets into an accident while stopped in traffic, P-ITS-S gathers impact data and send the data to the service provider for an event verification. |
| | **Name** | **UC 2.3 - Accident while stopped in traffic (stationary accident)** | | |
| | **Occurrence area** | Vehicle involved in an accident where the airbag has deployed | | |
| | **Provisioning phase** | 1) Check whether a vehicle has gathered impact through G-sensor<br>2) Send accident coordinate data | | |
| | **P-ITS-S control** | Gather impact data and send accident coordinate | | |
| | **Hindrance factor** | False impact | | |
| | **Requirements** | Make a call to verify the event | | |
| **Messages** | **Subclause** | **Name** | **Exe** | **Description** |
| | 7.2 | `impact-detection` | P/V | Gather impact data from G-sensor. After impact data exceeds a threshold, check vehicle speed |
| | 7.6 | `send-accident-data` | P | Send accident coordinate data to service provider |

# 7 Data eXchange messages definitions

## 7.1 General

The accident detection system uses the Data eXchange Message (DXM) format. Data type and configuration shall be in accordance with Annex A and Annex B. The definition of each message is given with name, data type, whether it is mandatory or optional, and maximum number of occurrences. Figure 2 shows the message flow of the impact detection system along with a brief description of each message.

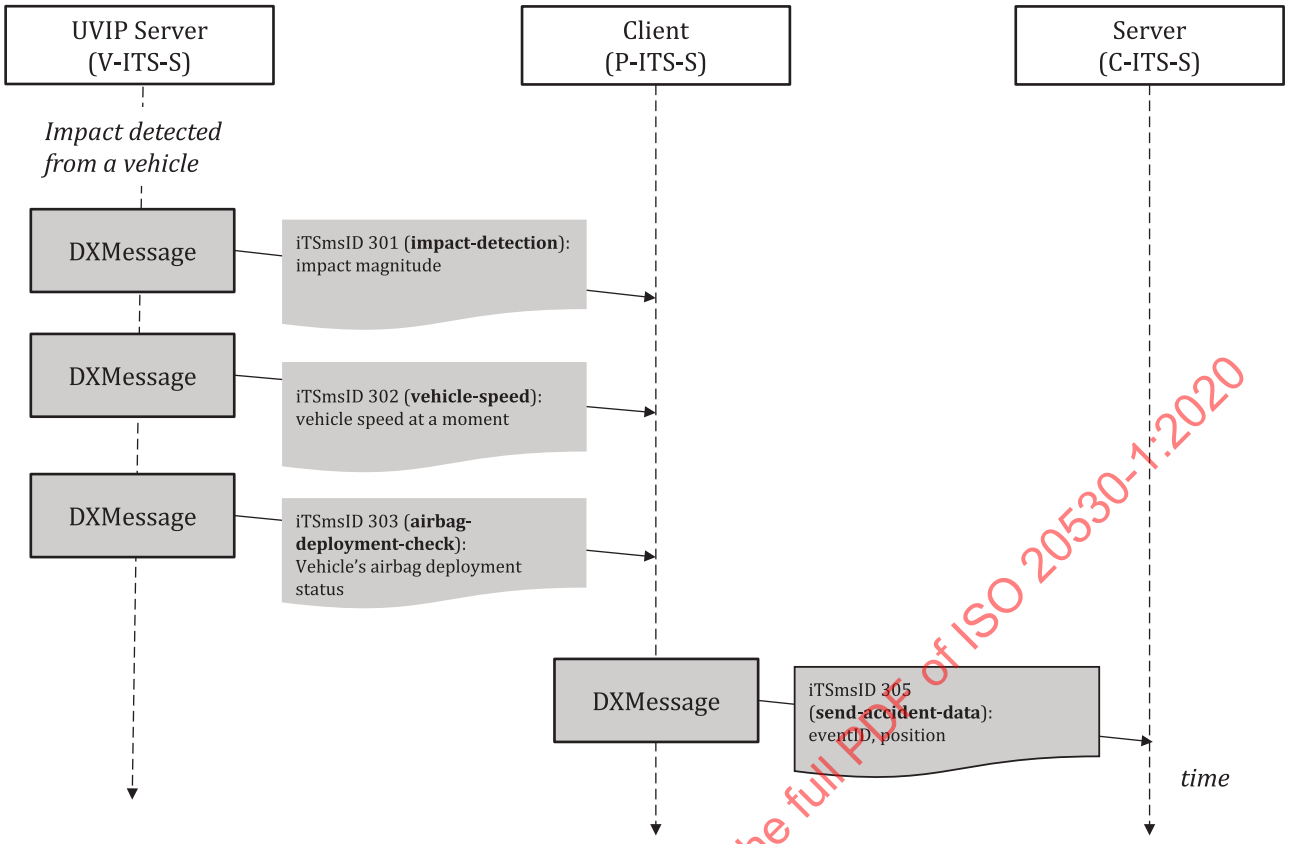


**Figure 2 — Message flow of impact detection**

## 7.2 impact-detection

Table 7 defines the Data eXchange message `impact-detection` for gathering impact data via G-sensor, either from the P-ITS-S or in-vehicle G-sensor through the UVIP server.

**Table 7 — Definition of impact detection**

<table>
<tr><td rowspan="3">Msg</td><td>Id</td><td>1</td><td colspan="3" rowspan="3">Gather impact data via G-sensor</td></tr>
<tr><td>Name</td><td>impact-detection</td></tr>
<tr><td>Exec</td><td>V-ITS-S</td></tr>
<tr><td rowspan="3">Data parameter</td><td colspan="2">Name</td><td>DataType [Unit]</td><td>Description</td><td>Cvt</td></tr>
<tr><td colspan="2">notificationNumber</td><td>numeric []</td><td>Independent number of the notification. The same number is used to update or release an existing notification.</td><td>M</td></tr>
<tr><td colspan="2">impactdetection</td><td>structure</td><td>Impact parameters containing latitude, longitude, vertical values.</td><td>M</td></tr>
<tr><td>DXMConfig</td><td colspan="5">msg {<br>{ iTSmsID 301, name { textId 10800, longname "impact-detection"},<br>type info, executer ‘1100’B, dataParamList { 28, 12 } },</td></tr>
<tr><td>VIDFConfig</td><td colspan="5">dataParam {<br>{ rvId 28, name{textId 10419, longname "notificationNumber"} ,dataTypeId 39<br>accessType write-internal, dataParamProperty other },<br>{ rvId 12, name { textId 10004, longname "impactdetection" }, dataTypeId 32,<br>accessType '10000'B, dataParamProperty collection },<br>dataType {<br>-- refer Annex A.1 for dataTypeId 32 --<br>}</td></tr>
<tr><td>XML schema example</td><td colspan="5"><xs:element name="impact-detection" type="impact-detection"/><br><xs:complexType name="impact-detection"><br><xs:sequence><br><xs:element name="longitudinal" type="xs:integer" minOccurs="1" maxOccurs="0"/><br><xs:element name="lateral" type="xs:integer" minOccurs="1" maxOccurs="0"/><br><xs:element name="vertical" type="xs:integer" minOccurs="1" maxOccurs="0"/><br></xs:sequence><br></xs:complectType></td></tr>
</table>

## 7.3 vehicle-speed

Table 8 defines the Data eXchange message `vehicle-speed` for gathering vehicle speed data through the UVIP server.

**Table 8 — Definition of vehicle-speed check**

| | | | | |
|---|---|---|---|---|
| **Msg** | **Id** | 2 | Check vehicle speed through V-ITS-SG | |
| | **Name** | vehicle-speed | | |
| | **Exec** | V-ITS-S | | |
| **Data parameter** | **Name** | **DataType [Unit]** | **Description** | **Cvt** |
| | speed | numeric[m/s] | Vehicle speed expressed in signed units of meters per second. | M |
| **DXMConfig** | msg {<br>{ iTSmsID 302, name { textId 10801, longname "vehicle-speed"}<br>executer '1100'B, dataParamList { 7 } }, | | | |
| **VIDFConfig** | dataParam {<br>{ rvId 7, name { textId 10006, longname "speed", dataTypeId 3,<br>AccessType read-only, dataParamProperty sensor },<br>dataType {<br>{ dataTypeId 3, type numeric: { decimalPlaces 2, unitId 60,<br>factor 1, quotient 100, addend 0, min -32765, max 32765 } },<br>} | | | |
| **XML schema example** | <xs:element name="VehicleSpeed" type="VehicleSpeed"/><br><xs:complexType name="VehicleSpeed"><br><xs:sequence><br><xs:element name="speed" type="xs:integer" minOccurs="1" maxOccurs="0"/><br></xs:sequence><br></xs:complectType> | | | |

## 7.4 airbag-deployment-check

Table 9 defines the Data eXchange message `airbag-deployment-check` for checking airbag deployment occurrence through the UVIP server during the event.

**Table 9 — Definition of airbag-deployment check**

| | | | | |
|---|---|---|---|---|
| **Msg** | **Id** | 3 | Request the current airbag ECU signal through V-ITS-SG | |
| | **Name** | airbag-deployment-check | | |
| | **Exec** | V-ITS-S | | |
| **Data parameter** | **Name** | **DataType [Unit]** | **Description** | **Cvt** |
| | airbag-deploy | enumString | P-ITS-S checks airbag-deployment occurrence through airbag ECU sensor. | M |
| **DXMConfig** | msg {<br>{ iTSmsID 303, name { textId 10802, longname "airbag-deploy-status"}<br>executer '1100'B, dataParamList { 8 } }, | | | |

**Table 9** *(continued)*

| | |
|---|---|
| **VIDFConfig** | dataParam {<br>{ rvId 8, name { textId 10420, shortname "airbag", dataTypeId 41,<br>AccessType read-only, dataParamProperty airbag-ecu-signal },<br>dataType {<br>-- refer Annex B.1 for dataTypeId 41 --<br>} |
| **XML schema example** | <xs:element name="airbagStatus" type="airbagStatus"/><br><xs:complexType name="airbagStatus"><br><xs:sequence><br><xs:element name="airbagStatus" type="xs:string" minOccurs="1" maxOccurs="0"/><br></xs:sequence><br></xs:complectType> |

## 7.5 roll-over-check

Table 10 defines the Data eXchange message `roll-over-check` for checking a rollover event through the P-ITS-S.

**Table 10 — Definition of rollover check**

| | | | | |
|---|---|---|---|---|
| **Msg** | **Id** | 4 | | |
| | **Name** | roll-over-check | Gather yaw rate data from sensor | |
| | **Exec** | V-ITS-S | | |
| **Data Parameter** | **Name** | **DataType [Unit]** | **Description** | **Cvt** |
| | notificationNumber | numeric [] | Independent number of the notification. The same number is used to update or release an existing notification. | M |
| | rollover | structure [] | Impact parameters containing yaw, roll, pitch values. | M |
| **DXMConfig** | msg {<br>{ ITSmsID 304, name { textId 10803, longname "roll-over"}<br>executer '1100'B, dataParamList { 28, 11, 12 } }, | | | |
| **VIDFConfig** | dataParam {<br>{ rvId 28, name{textId 10419, longname "notificationNumber"},dataTypeId 39<br>accessType write-internal, dataParamProperty other },<br>{ rvId 11, name { textId 10420, longname "yaw" }, dataTypeId 35, accessType read-only, dataParamProperty sensor<br>{ rvId 12, name { textId 10421, longname "roll" }, dataTypeId 35, accessType read-only, dataParamProperty sensor<br>{ rvId 13, name { textId 10422, longname "pitch" }, dataTypeId 35, accessType read-only, dataParamProperty sensor },<br>dataType {<br>-- refer Annex A.3 for dataTypeId 12 --<br>} | | | |

**Table 10** *(continued)*

| | |
|---|---|
| **XML schema example** | <xs:element name="rollOver" type="rollOver"/><br><xs:complexType name="rollOver"><br><xs:sequence><br><xs:element name="rollOver" type="xs:integer" minOccurs="1" maxOccurs="0"/><br></xs:sequence><br></xs:complectType> |

## 7.6 send-accident-data

Table 11 defines the Data eXchange message `send-accident-notification` for sending event information to C-ITS-S.

**Table 11 — Definition of send-accident-data**

| | | | | |
|---|---|---|---|---|
| **Msg** | **Id** | 5 | Send accident coordinate to C-ITS-S | |
| | **Name** | send-accident-data | | |
| | **Exec** | P-ITS-S | | |
| **Data parameter** | **Name** | **DataType [Unit]** | **Description** | **Cvt** |
| | notificationNumber | numeric [ ] | Independent number of the notification. The same number is used to update or release an existing notification. | M |
| | accidentCoordinate | structure | GPS position of the accident with latitude, longitude, elevation. | M |
| **DXMConfig** | msg {<br>{ iTSmsID 305, name { textId 10804, longname "send-accident-data"}<br>executer '1100'B, dataParamList { 28, 9 } }, | | | |
| **VIDFConfig** | dataParam {<br>{ rvId 28, name{textId 10419, longname "notificationNumber"},dataTypeId 39,<br>accessType write-internal, dataParamProperty other },<br>{ rvId 9, name{textId 10401, longname"GPS position"},dataTypeId 42,<br>datatype {<br>{ dataTypeId 39, name { textId 10419, longname "notification number"}, type numeric: { decimalPlaces 0, unitId 0, factor 1, quotient 1, addend 0}},<br><br>-- refer Annex A.2 for dataTypeId 42 -- | | | |
| **XML schema example** | <xs:element name="sendAccidentData" type=" sendAccidentData"/><br><xs:complexType name="sendAccidentData"><br><xs:sequence><br><xs:element name="reportAccident" type="xs:string" minOccurs="1" maxOccurs="0"/><br><xs:element name="s" type="xs:string" minOccurs="1" maxOccurs="0"/><br></xs:sequence><br></xs:complectType> | | | |

# Annex A
(normative)

# Data Type

## A.1 Impact

| **Type** | **Name** | Impact detection (acceleration) | | |
|---|---|---|---|---|
| | **Description** | Acceleration value of vehicle in coordinate | | |
| **Attributes** | | | | |
| **Name** | **Type** | **M/O** | **MO** | **Description** |
| eventId | string | M | 1 | Identifier of an event. |
| longitudinal | Real | M | 1 | Signed acceleration of the road user along the longitude axis in units of 0,01 m/s$^2$. A range of over 2 Gs is supported. Accelerations in the directions of forward and to the right are taken as positive. |
| lateral | Real | M | 1 | Signed acceleration of the road user along the lateral axis in units of 0,01 m/s$^2$. |
| vertical | Real | M | 1 | Signed vertical acceleration of the road user along the vertical axis in units of 0,080 m/s$^2$. This provides a range of over 1 G in each direction in a one-byte value. |
| **Note** | | | | |
| Acceleration value is measured based on 6-axis gyro sensor. | | | | |
| **VIDF Config** | | | | |

```
datatype {

   { dataTypeId 30, type string: { } },

   { dataTypeId 31, name { textId 20000, longname "accelerometer"}, Type lnumeric: {
decimalPlaces 5, unitId 69, factor 1, quotient 80000000, Addend 0, min -1440000000, max
1440000000} },

   { dataTypeId 32, name { textId 20001, longname "impactDetected"}, type structure: {30,
31, 31, 31} }

}
```