UIC CODE 918-6

3rd edition, June 2013

Original

O

Electronic reservation of assistance for persons with reduced mobility - Exchange of messages

(This leaflet is to be published only in English)

INTERNATIONAL UNION OF RAILWAYS

AVA Documents
Document Sharing Hub

Full document details: UIC 918-6 2013

Leaflet to be classified in volumes:

IX - Information, Technology, Miscellaneous

Application :

With effect from 1.6.2013
All members of the International Union of Railway

Record of updates

1st edition, July 2011	First issue
2nd edition, September 2012	Changes in code lists
3rd edition, June 2013	Editorial changes requested by CER

The person responsible for this leaflet is indicated in the UIC Code

Documents
Document Sharing Hub
Full document details: UIC 918-6 2013

Contents

Summary **1**

1 - Overview **2**

2 - Stakeholder involved in booking of PRM assistance **3**

3 - Use Case Model **4**

4 - Structural model for PRM booking standard **8**

4.1 - Definition of data model 8
4.2 - Entity "Address" 10
4.3 - Entity "Assistance" 10
4.4 - Entity "Booking" 10
4.5 - Entity "Customer" 11
4.6 - Entity "Handicap/Disability" 11
4.7 - Entity "Handicapped Card" 11
4.8 - Entity "Local Facility" 11
4.9 - Entity "Platform" 12
4.10 -Entity "PRM" 12
4.11 -Entity "PRM Booking System" 12
4.12 -Entity "Station" 13
4.13 -Entity "Tools" 13
4.14 -Entity "Train" 13
4.15 -Entity "Train stop" 14
4.16 -Definition of code lists 14

5 - Functional model for PRM booking standard **19**

5.1 - Availability and Booking without failure 20
5.2 - Cancellation 21
5.3 - Error scenario - Lost communication 22
5.4 - Manual Booking without failure 23
5.5 - Manual booking with failure 24

Documents
Document Sharing Hub
Full document details: UIC 918-6 2013

5.6 - Request status 25

6 - XML message specification 26

6.1 - XML message specification basics 26

6.2 - XML specification documents 26

6.3 - Additional documentation files 27

6.4 - Referenced documentation files 27

6.5 - XML Versioning 28

6.6 - XML Versions 28

6.7 - Recommendations for XML implementation 29

List of abbreviations 30

Bibliography 31

Documents
Document Sharing Hub
Full document details: UIC 918-6 2013

Summary

UIC Leaflet 918-6 describes the regulations and procedures to be observed when exchanging messages between a RU that to book assistance for persons with reduced mobility (PRM) at stations.

The arrangements contained in these Leaflets enable a RU to request assistance for a PRM at a station managed by another RU.

This leaflet document is accompanied by XML schema files defining the messages. These schema file are part of the leaflet. Future changes of the leaflet have to ensure to keep the model definition in the Leaflet document and the accompanying schema files consistent.

The leaflet is accompanied by a XSD scheme file documentation generated from the schema files. This documentation is provided for the convenience of the reader only, the valid specification is defined in the schema files.

This document does not cover:

- Processes needed for organizing the assistance between the different RU organizations involved.

UIC implemented a web application called UIC PRM ABT. It is in production since November 1st, 2010. Currently CFL, CFR, DB, DSB, ÖBB, PKP, RENFE, SBB, SJ, SNCB, SNCF, VR are using the system.

The UIC PRM ABT XML link is in production with SNCB since May 25th, 2011.

Documents
Document Sharing Hub

Full document details: UIC 918-6 2013

1 - Overview

The specification defines messages and functions to be used for requesting the availability of assistance and to book assistance. The messages support an automatic allocation system and an allocation system including manual steps for allocation of assistance. Both implementation models are fully interoperable.

The leaflet consists of the following parts:

- Stakeholder
  There all systems and roles involved in the booking of assistance are defined if they are required for the booking functionality specified in the leaflet.

- Use Cases
  All Use Cases supported by the specification are listed.

- Structural Model
  The structural model provides a data model for all information object involved. The structural model is the base reference for the exchange of information defined by the messages.

- Functional Model
  The functional model defines the scenarios as sequence diagrams and links the functions with the messages used.

- Message definition
  The message definition referees to the XML schema files (see List of abbreviations - page 30) and the documentation generated from the schemas. This section specifies additionally the versioning of the messages.

The diagrams used in this document follow the UML 2 specification (see List of abbreviations).

Documents
Document Sharing Hub

Full document details: UIC 918-6 2013

2 - Stakeholder involved in booking of PRM assistance

Table 1 : Actors

Actor	Description
PRM customer	Person with reduced mobility for which the assistance is required.
Accompanying Person of PRM	Person accompanying the PRM (see List of abbreviations) on its journey or at least on the part of the journey where the assistance is required.
Contact Person of PRM	Person to be contacted in case of problems in providing the assistance.
Point of Sale	Point of Sale, where the Customer is requesting the assistance for the whole journey. This includes also internet booking functions and call center.
Assistance coordinator of the requesting RU (see List of abbreviations)	Coordinator of the assistance booking at the RU handling the customer request (Point of Sale). This is the person, that receives the customer requests for assistance on the whole journey.
Assistance coordinator of allocating RU	This is the person for handling the requests for assistance on a set of stations.
Staff on board / station	Staff on board of a train or at a station providing the services for the PRM.

Table 2 : Systems

System	Description
Requesting system	System to request availability and booking of PRM assistance via the specified interface. The system is responsible for requests of the RU of the Point of Sale.
Allocating system	System to receive requests for availability and booking of PRM assistance. The system is responsible for a set of stations.

Documents
Document Sharing Hub

Full document details: UIC 918-6 2013

3 - Use Case Model

The use cases are defined to support two different implementations:

- Implemented as a synchronous booking function the booking would be made directly by a booking system and the booking reply would be given instantaneously. This implementation is called "synchronous model during the description. The rules for the decision to provide or not to provide assistance must be formally defined and implemented in the system.
  The process flow would be less complex in this case, but the implementation would be complex. Currently none of the railways has implemented such a system.

- An asynchronous booking function would only implement the process flow and standardize the existing processes. This implementation is call "workflow model" during the description. The booking itself would be organized manually by the coordinator of the requesting RU and the coordinators responsible for the stations of RUs. In this implementation there are additional use cases for the tasks of the coordinators. There is also an additional use case for the customer, as the customer does not get an immediate confirmation, so there must be a possibility for the customer to request the booking status later.

Table 3 : Uses cases

Use case	Description
Request facilities and availability of assistance on station	Requesting the availability of assistance at stations or the available facilities at a station or on board either by the customer (i.e. Internet) or a sales office or a call center.
Book assistance for journey at stations	Request booking of assistance either by the customer (i.e. Internet) or a sales office or a call center.
Cancel booking request	Request to cancel a booking or booking request by the customer (i.e. Internet) or a sales office or a call center.
Retrieve booking status	Request the status of a booking by the customer (i.e. Internet) or a sales office or a call center. This use case is part of the use cases needed in case of manual asynchronous booking procedures. The use case is used in synchronous booking functions for error handling.
Inform customer on failed booking	Inform the customer in case, that the assistance can not be provided as requested. This use case is part of the use cases needed in case of manual asynchronous booking procedures. Additional information on alternatives might be given.

Documents
Document Sharing Hub

Full document details: UIC 918-6 2013

Table 3 : Uses cases

Use case	Description
Forward booking request to coordinator of stations	The coordinator of the requesting RU forwards the request to the system responsible for the station. This use case is part of the use cases needed in case of manual asynchronous booking procedures. In case of synchronous booking systems this would have to implement the functionality internally.
Cancel rest of failed booking	The coordinator of the requesting RU cancels the requests he has sent to other systems in case that one of the systems could not book the assistance. This use case is part of the use cases needed in case of manual asynchronous booking procedures. In case of synchronous booking systems this would have to implement the functionality internally.
Inform requesting RU on booking result	The coordinator of the stations informs the requesting RU system on the success or failure of the booking. This use case is part of the use cases needed in case of manual asynchronous booking procedures. In case of synchronous booking systems this would have to implement the functionality internally.

Documents
Document Sharing Hub
Full document details: UIC 918-6 2013

The defined use cases are:

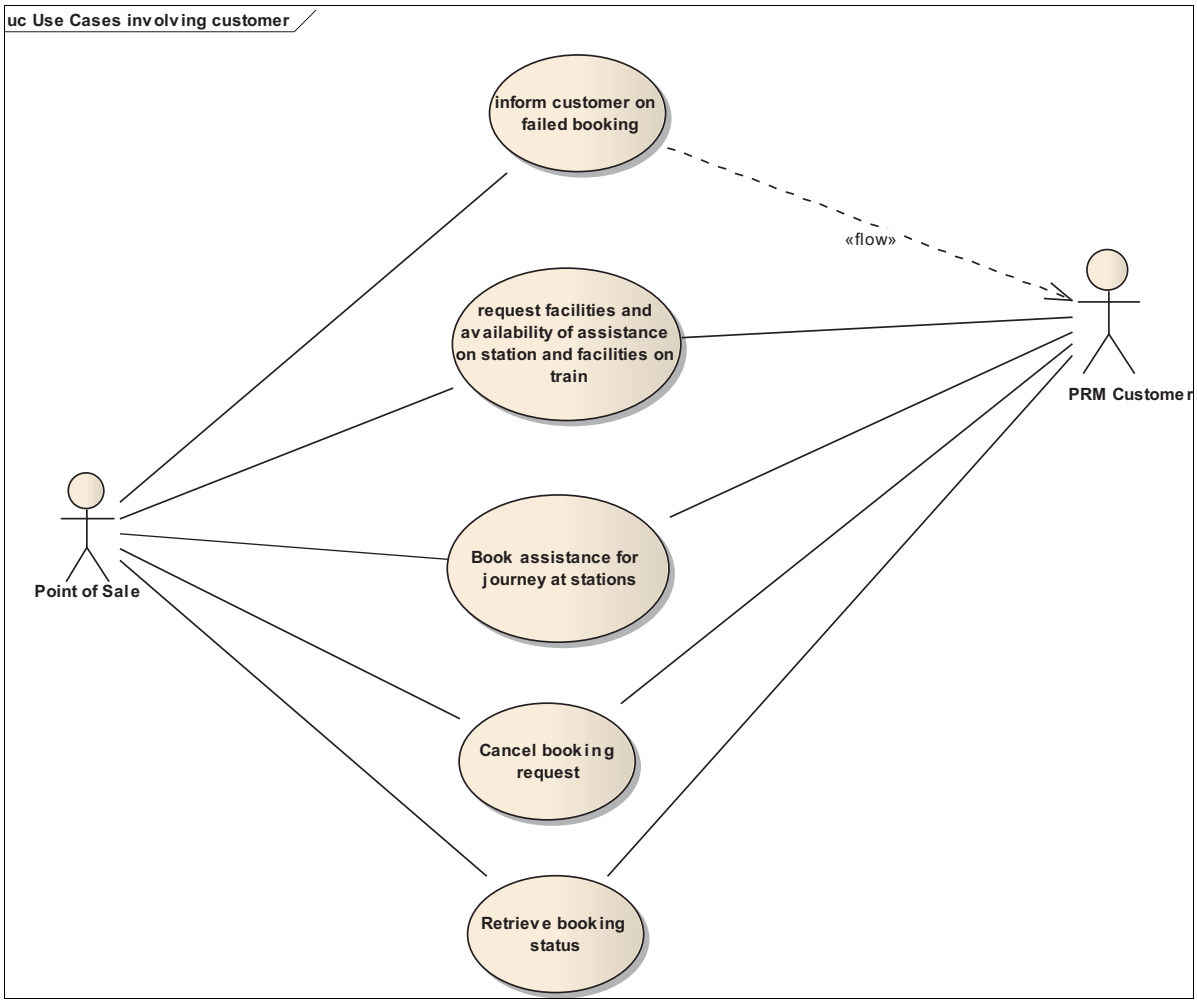

Fig. 1 - Use cases with customers

Documents
Document Sharing Hub
918-6
O
Full document details: UIC 918-6 2013

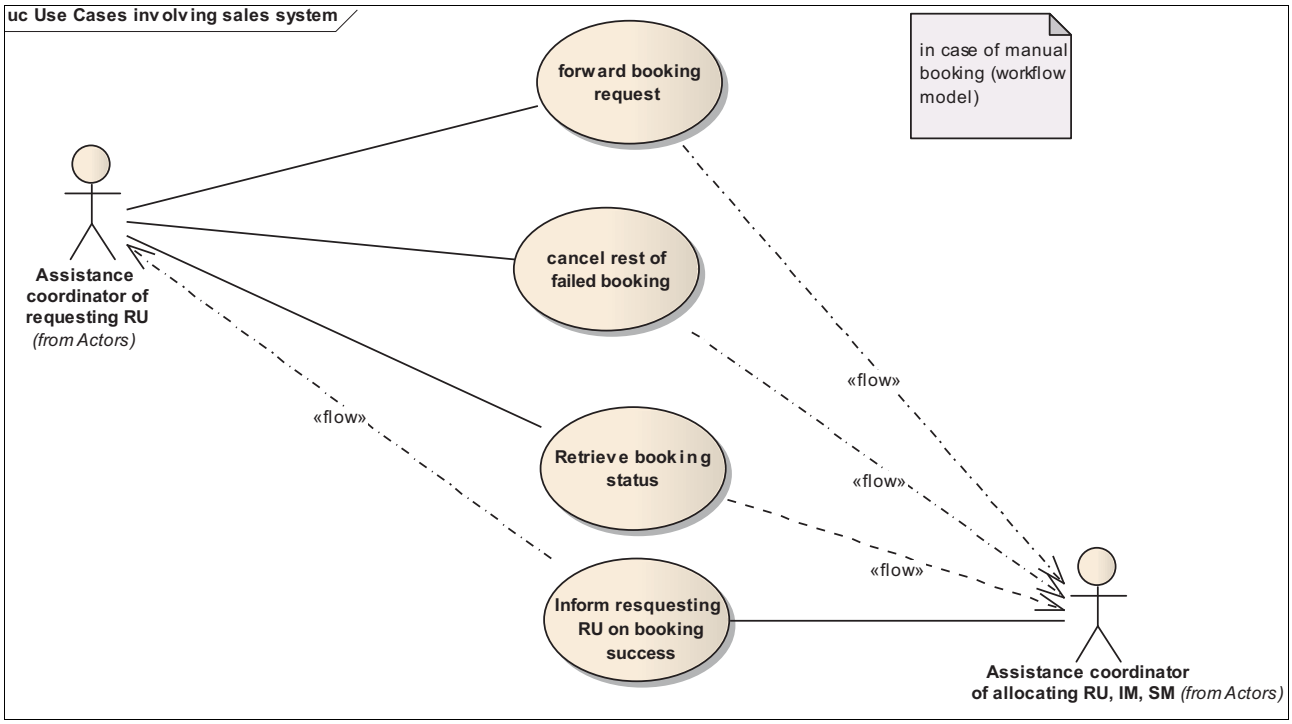

Fig. 2 - Use cases without customer

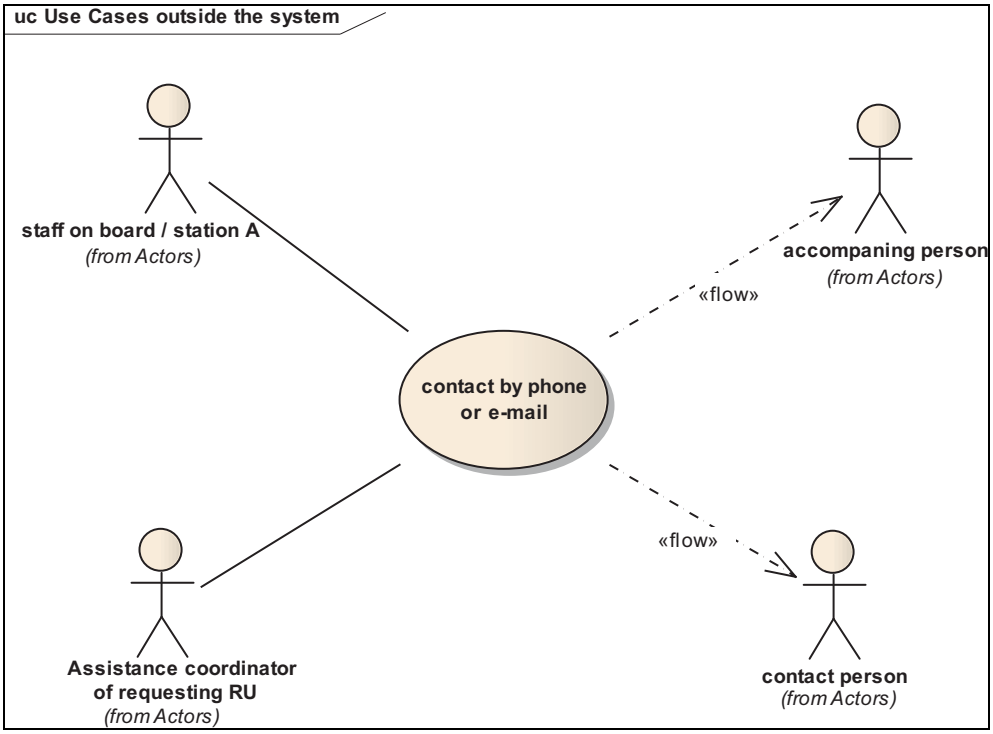

Fig. 3 - Use case "contact customer" (outside the system)

Documents
Document Sharing Hub
Full document details: UIC 918-6 2013