Interface description v3.1

Corresponding with URL https://psb.rdw.nl/bevraging/npr/v3/registration.svc

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1 Introduction

This document describes the interactions with the "**Nationaal Parkeer Register**".

1.1 Goal

This document is aiming at a clear understanding of all possible interfaces to the "Nationaal Parkeer Register" for all potential stakeholders.

1.2 Overview and scope

The NPR enables participants to register rights and retrieve rights information for enforcement and settlement. NPR is hosted at RDW and made accessible through open and standard protocols.

Starting points:

- Stakeholders will be governmental entities like municipalities, private owners of parking garages and private service providers, which connect to the NPR to acquire parking or staying rights or for enforcement;
- The design is driven by NORA;
- Interface will be equal to all stakeholders;

1.3 References

ID	Name
[NORA]	NORA reference architecture https://www.digitaleoverheid.nl/dossiers/nederlandse-overheid-referentie-architectuur-nora/
[OSB]	Overheidsservicebus or Digikoppeling https://www.logius.nl/diensten/digikoppeling

1.4 Definitions

Definition	Description
Area manager	Party responsible for exploitation of parking areas like municipalities, governments or private parties.
Area operator	Party for managing offstreet parking areas, like PMS supplier.
Digikoppeling	Digikoppeling is also known as "Overheidsservicebus" (OSB). In this document, the term OSB is used.
Enforcer	Party responsible for enforcement of the parking rights (i.e. parking officer)
GPK	Disabled parking card.
Identity	PKI enables the use of certificates to assure the integrity and authenticity of the identity of the certificate holder.
KPS	Koppelnet Publieke Sector, closed network dedicated for Dutch governmental parties.
NORA	Nederlandse Overheid Referentie Architectuur (Dutch Government Reference Architecture). Design principles, models and standards regarding e-government.
OIN	Overheids Identificatie Nummer (Government Identification Number). Unique id of the user on a PKI-overheid certificate. An OIN is issued by the Digikoppeling/OSB organisation.
OSB	(or Digikoppeling) OSB is the government's "internal postman". OSB/Digikoppeling comprises a set of standards for electronic messaging between government organizations. If you implement these standards in your own soft-

Definition	Description
	ware, you can easily exchange digital messages with fellow government organizations. This is done through the connectivity of Diginetwerk, the Internet or a different type of connection. OSB/Digikoppeling is an NUP (National Implementation Programme for Service Provision and e-Government) building block. Governmental parties communicating with NPR use the OSB set of standards.
PIN	Private Identification Number. Unique id of the user on an RDW issued certificate. A PIN is issued by RDW.
PKI	Public Key Infrastructure.
Provider	Party for acquiring and registering rights to park or stay, often on behalf of drivers.
PSB	Private Service Bus. A set of standards for electronic messaging between private parties, derived from OSB. See also OSB and Digikoppeling. Private parties communicating with NPR use the PSB set of standards.
NPR	Nationaal Parkeer Register. The information system hosted at RDW premises.
Service	The result or effect of a task of an organization, employee or application based on legal obligations or agreements, which provides the needs of multiple organizations, employees or applications.
Servicebus	An integration infrastructure (middleware) which is necessary to facilitate SOA architectures.
SHPV	Servicehuis Parkeer- en Verblijfsrechten (Service House Parking and Staying Rights), the cooperation that makes NPR available for parties registering, checking and managing parking and staying rights.
Web service provider	A party that publishes a web service.
Web service requestor	A party that consumes a web service.
Web service	A web service is a special occurrence of a service focussed at the service between applications.
WSDL	WSDL is an XML format for describing network services as a set of endpoints operating on messages containing either document-oriented or procedure-oriented information. The operations and messages are described abstractly, and then bound to a concrete network protocol and message format to define an endpoint. Related concrete endpoints are combined into abstract endpoints (services). WSDL is extensible to allow description of endpoints and their messages regardless of what message formats or network protocols are used to communicate, however, the only bindings described in this document describe how to use WSDL in conjunction with SOAP 1.1, HTTP GET/POST, and MIME.
WUS	WSDL/UDDI/SOAP stack. System based on W3C WS-* standards.

2 Global Design

2.1 Context

In figure 1 the context of the NPR is depicted. Concerning the interfaces four significant entities can be defined:

- Enforcers
  By instructions of municipalities and private parties, enforcement of the system will be done. Therefore the enforcer role needs interfaces to check a parking right.
- Area Managers
  Area managers own or operate parking space and regulate and charge the usage. Rights based on other vehicle related usage of streets, areas or buildings can also be registered.
- Providers
  Providers will acquire parking or staying rights for areas on behalf of their customers based on contracts with SHPV. People that want to acquire a parking or staying right, will interact with the providers. For electronic registration of a right, the provider will interact with the NPR system in a few well described, standardized interfaces.
- Area Operators
  Area Operators are operating off street parking facilities on behalf of the Area Manager. Acquired parking rights can be settled using the NPR.

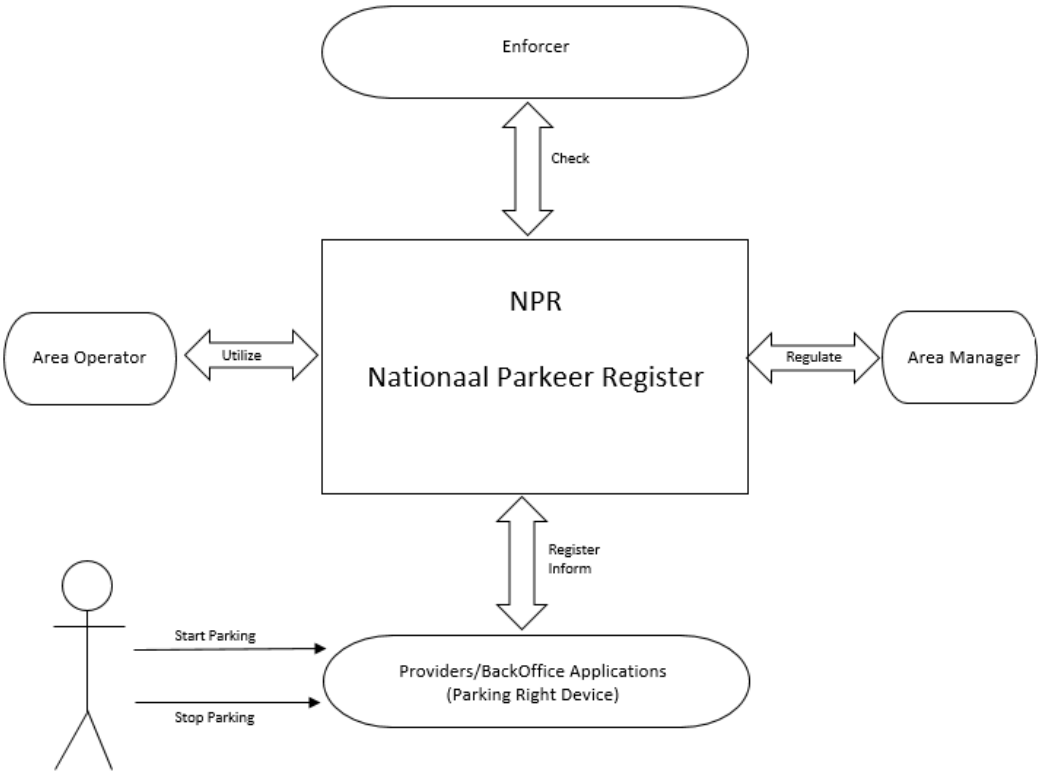

Figure 1 Context Nationaal Parkeer Register

2.2 Usages

The usages that are available for registration in the "Nationaal Parkeer Register" are depicted in the following figure. A list of general usages is shown (Figure 1 Usages).
There are two main categories for usages: The general usage of parking (‘Parkeren’) or parking by means of a EU parking card for people with disabilities (‘GPK’). The general usage ‘Parkeren’ is subdivided in charged parking (‘Betaald Parkeren’) and parking with a license (‘Vergunning Parkeren’). The usage of parking by means of a EU parking card for people with disabilities is subdivided in general usage by a disabled person (‘GPK’), usage by a disabled driver (‘GPKB’), usage by a disabled passenger (‘GPKP’), usage by a combination of disabled driver and passenger (‘GPKBP’) or usage by an institution (‘GPKI’). Area managers can also define new usages if necessary.

Level 1	Level 2	Level 3	Level 4	UsageId
Parkeren				PARKEREN
	Betaald Parkeren			BETAALDP
	Vergunning Parkeren			VERGUNP
		Bedrijfsvergunning		BEDRIJFSP
		Bewoner vergunning		BEWONERP
GPK				GPK
	Bestuurder			GPKB
	Passagier			GPKP
	Combinatie kaart BP			GPKBP
	Instelling			GPKI

Table 1 Usages

2.3 URL versions

Due to changes in messages, temporarily different versions of NPR will be used simultaneously. The previous versions of NPR will be available for at least 18 months after a new version is made available.
The following endpoints are available for the V3 interface.

Test environment
SOAP1.2: https://psb.gatrdw.nl/bevraging/npr-ext/v3/registration.svc
SOAP1.1: https://psb.gatrdw.nl/bevraging/npr-ext/v3/registration.svc/soap11

Production environment
SOAP1.2: https://psb.rdw.nl/bevraging/npr/v3/registration.svc
SOAP1.1: https://psb.rdw.nl/bevraging/npr/v3/registration.svc/soap11

2.4 Disclosure of parking information: List of selling points

The NPR provides an updated list of selling points daily. This list is provided through a URL so it can be downloaded. In figure 2 the URL is shown. It contains two links where, respectively, the production version of the list and a test version of the list can be downloaded: “Productie verkooppunten” and “Acceptatie verkooppunten”. The URL’s of the two versions are:
Production: https://nprverkooppunten.rdw.nl/Productie/verkooppunten.txt
Test: https://nprverkooppunten.rdw.nl/Acceptatie/verkooppunten.txt

The list of selling points contains the following elements: selling point identification; geographical coordinates; area identification; validity of selling point and area; area manager identification, a description of the selling point (if provided by the area manager) and usage of the area. The list contains three types of selling points:
a) selling points for on street parking;
b) selling points for off street parking (range 810000-849999) and;
c) administrative selling points for specific areas and usages e.g. resident permits.

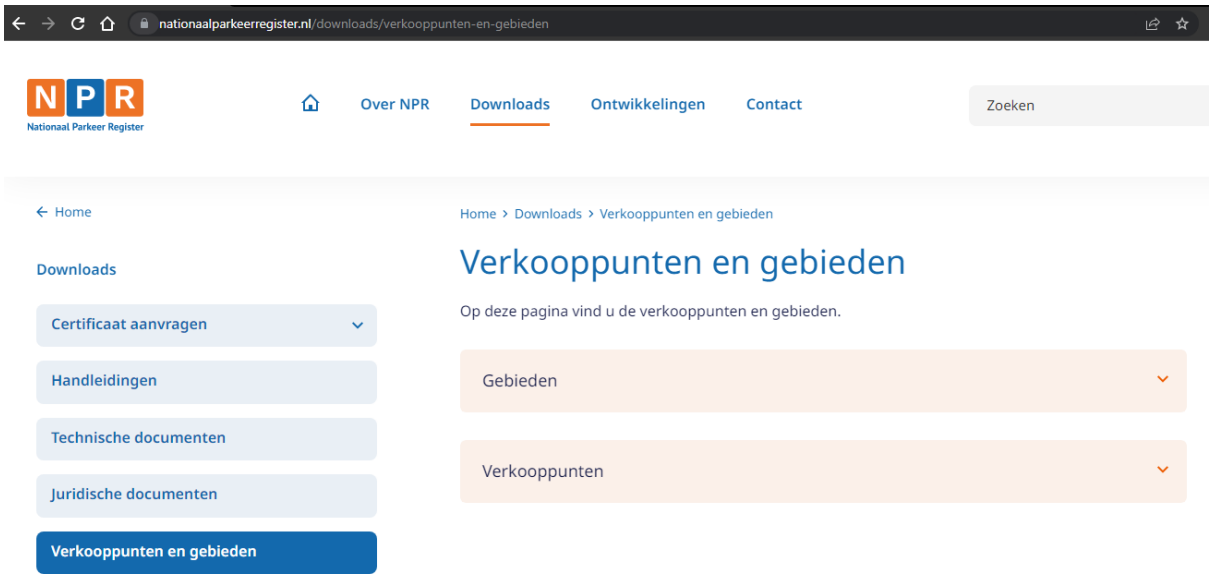

Figure 2 URL: https://www.nationaalparkeerregister.nl/downloads/verkooppunten-en-gebieden **where list of selling points can be downloaded**

2.5 Technology guidelines message exchange

The interfaces will be implemented according to the OSB/Digikoppeling standards. Because OSB/Digikoppeling is reserved for Dutch governments only, private parties will use equivalent standards but different means of authentication. Within the context of NPR, this variant will identified as PSB, Private ServiceBus. The PSB will use the same set of standards and protocols but will use RDW certificates to identify users and will only use Internet as a transport network. The OSB uses PKI certificates and will use Internet instead of the closed network KPS as preferred network.

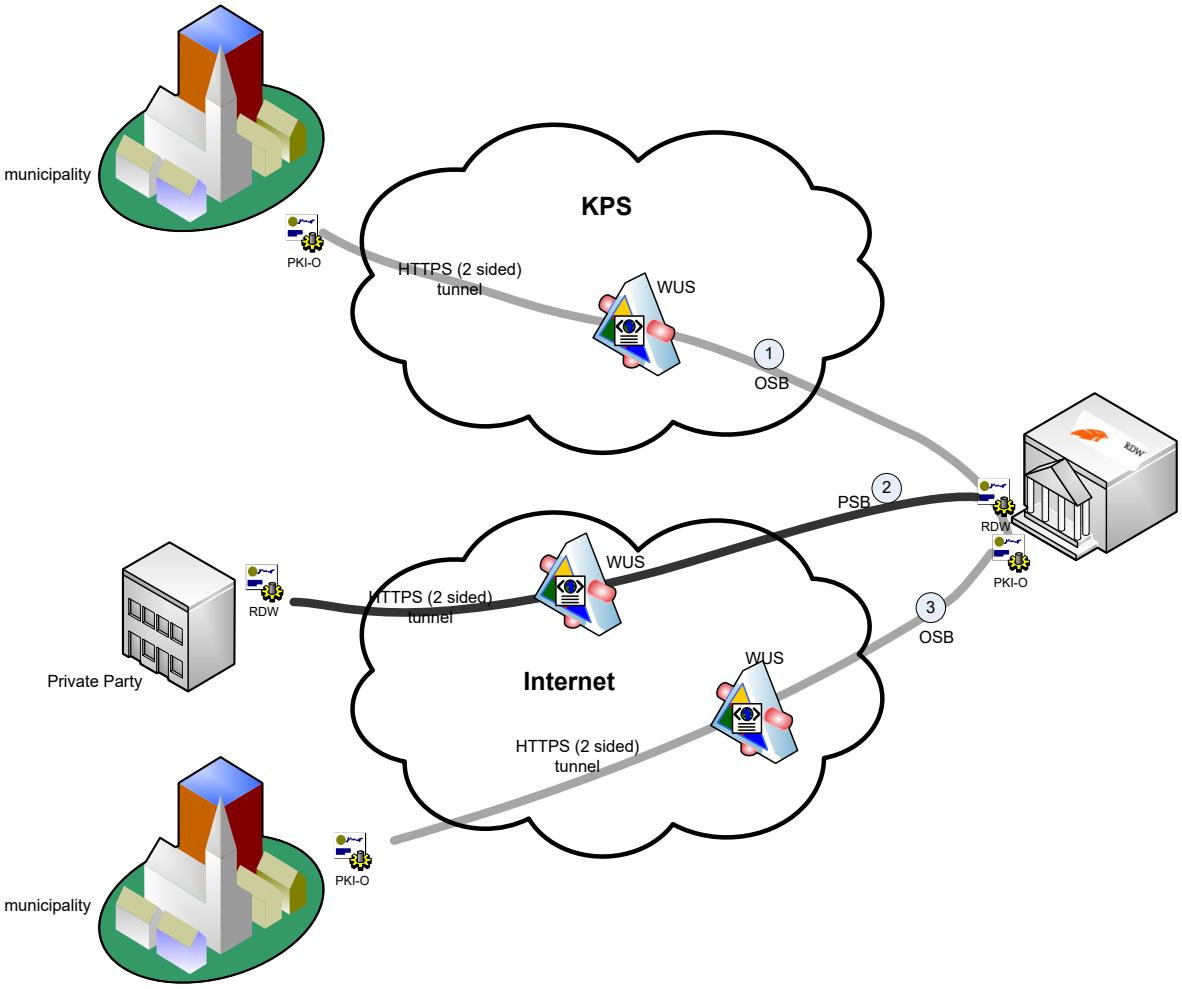

Figure 3 Interaction between RDW, municipalities and private parties

The exchange of information can be divided in 3 layers:

- Transport layer. In this layer the actual connection is established through either Internet or KPS. KPS is a closed network for governmental parties and therefore dedicated for OSB users. For all transport layer communication 2-sided TLS must be used according the OSB2W-be profile.
  For inbound messages from RDW to a receiver (provider or parking operator), there are some additional requirements. For details please see annex D.
- Logistic Layer
  Messages are defined according the OSB standard WUS (WS-*):
  - WS-I BP 1.1 which is based on SOAP 1.1/1.2, WSDL 1.1, XML 1.0 (second edition)
  - WS-I BP 1.2 with respect to the optional parts of WS-addressing and MTOM
  - WS-I BSP 1.0 with respect to message security based on WS-security
  - WS-I Simple SOAP Binding Profile 1.0
- Content Layer
  The content is based on the functional specification. Content definition is based on the starting points in 1.2.

Figure 3 shows some examples of these layers between different entities:

- Flow 1 describes the interaction between RDW and a municipality according to OSB
  - Transport: KPS
  - Logistic: WUS
  - Content: See chapter 3
  - Identification: PKI-O Certificate
- Flow 2 describes the interaction between RDW and a private party
  - Transport: Internet
  - Logistic: WUS
  - Content: See chapter 3
  - Identification: PKI-O Certificate / RDW Certificate
- Flow 3 describes the interaction between RDW and a municipality according to OSB
  - Transport: Internet
  - Logistic: WUS
  - Content: See chapter 3
  - Identification: PKI-O Certificate

2.6 Security

Although OSB is supporting End-to-End security between web service provider and web service requester, only transport level security will be implemented based on OSB OSB2W-be profile. Transport between requester and provider must use 2-sided TLS.

Identification of both web service requester and web service provider will be done by PKI certificates. A PKI certificate will be used to terminate both sides of the transport tunnel.

These certificates will also be used to identify both requester and provider. Parties using a PKI certificate will be identified by the PIN on the certificate.
Therefore the message specification also contains a field which relates to the certificates, see chapter 3 for the specific messages of NPR.

2.7 How to get WSDL and XSD

2.7.1 Outbound messages

The WSDL of the web services that are described in this document can be obtained by typing:
https://psb.rdw.nl/bevraging/rpv/v3/registration.svc?wsdl

The XSD of the web services that are described in this document can be obtained in the WSDL.

2.7.2 Inbound messages

To receive an example of the inbound messages of the NPR, the WSDL of the messages for providers can be obtained by this URL:
https://nprproviderstub.rdw.nl/ParkeerProvider.npr.stub.svc?wsdl
An example of the inbound messages for Operators can be obtained at:
https://nprexploitantstub.rdw.nl/ParkeerExploitant.vwx.stub.svc?wsdl

3 Overview of web service messages

The NPR web service is used by all entities to interact with NPR.

The following messages are available:

- ❑ Messages to be used by rights acquirers (providers) (see Ch 4)
  - Outbound:
    - EnrollPSRight
    - RevokePSRight
    - RetrieveRightInfoForProvider
    - EnrollLink
    - RevokeLink
    - RetrieveLinkInfoForProvider
    - RetrieveAreaCapacityForProvider
  - Inbound:
    - RevokedByThirdParty
    - PreEnroll
    - ActivateEnroll
- ❑ Messages to be used by area operators (see Ch 5)
  - Outbound
    - PaymentStart
    - PaymentCheck
    - PaymentEnd
  - Inbound
    - ActivateAuthorisation
    - CancelAuthorisation
- ❑ Messages to be used by enforcers (See Ch 6)
  - Outbound:
    - CheckPSRight
- ❑ Messages to be used by area managers (See Ch 7)
  - Outbound:
    - RetrieveRightInfo
    - RetrieveCheckInfo
    - RetrieveLinkInfo
    - EnrollDisabledParkingCard
    - RevokeDisabledParkingCard
    - RetrieveDisabledParkingCardInfo
    - EnrollPreferredVehicle
    - RevokePreferredVehicle
- ❑ Messages to be used by all entities (See Ch 8)
  - Outbound:
    - CalculatePrice
    - RetrieveAreasByLocation
    - RetrieveAreaRegulationFareInfo
    - RetrieveAreaManagers
    - RetrieveSellingPoints
    - StatusRequest
    - RetrieveAreaParkingOneLiner
    - RetrieveAreaParkingInfo

Outbound messages being the messages from the described party to the NPR and inbound the messages that will be received from the NPR.

When using messages in periodic batches, the messages should be sent to NPR sequentially and at a reasonable rate with a maximum of 35 messages per second.

The messages of NPR are defined with UTC times unless otherwise described. XML messages described in this document are examples and can diverge from the XML message that should be obtained via WSDL.

4 Messages to be used by providers

4.1 EnrollPSRight

4.1.1 Message dialogue EnrollPSRight

A rights acquirer sends a request message ***PSRightEnrollRequest*** to NPR, containing the data of a PSRight to be registered in NPR. NPR sends a response message ***PSRightEnrollResponse***, containing the message part ***PSRightEnrollResponseData*** if registration was successful. If not, the message contains the element ***PSRightEnrollResponseError***.

The rights acquirer is identified by the OIN or PIN in its certificate. Each request message contains either the OIN or the PIN from the certificate.
The rights acquirer should be authorised for the provided area, if not, the right is not registered and an error message is sent.

The request message contains at least the following information:

- ❑ UUID (*MessageID*) which is the identification of a request and can be used for a resend (see also Ch 10.2).
- ❑ Identification of an area. The way to specify an area should be one of the following:
    1. *AreaManagerId* and *AreaId*.
    2. A location (*LocationPSRight*), consisting of a *Latitude* and *Longitude* in WGS84 format.
    3. *SellingPointId*.
    4. An address (*PSRightAddress*), consisting of *StreetCode* or *StreetName*, *HouseNumber*, *HouseNumberAdditions* and *PlaceOfResidence*.

    If more than one identification is provided, NPR will use the list above to determine priority, e.g. if *AreaManagerId/AreaId* and *LocationPSRight* are provided, the combination *AreaManager/AreaId* will be used to specify the area, and the location will be omitted. If *StreetCode* and *StreetName* are both provided, NPR will use *StreetCode* and omit *StreetName*.
    If the identification provided does not match any of the supported methods, the PSRight will not be recorded and the rights acquirer will receive an error message.
- ❑ Usage of the PSRight (*UsageId*).
- ❑ Identification of a vehicle (*VehicleId).*
- ❑ Date and time when the PSRight starts *(StartTimePSRight).*

Optional information:

- ❑ Country code of a vehicle (*CountryCodeVehicle*).
- ❑ Type of vehicleId used (*VehicleIdType*). Type has to be LICENSE_PLATE or RFID. For parking in combination with a disabled parking card, VehicleIdType needs to be PREF_VEH_TEC_ID. When no type is provided, NPR assumes that the type of VehicleID is a license plate.
- ❑ Date and time when the PSRight ends (*EndTimePSRight*).
- ❑ Validity restriction window. A time window in which a validity restriction period for the PSRight can be defined (*StartTimePSrightDayWindow* and *EndTimePSrightDayWindow*). The validity restriction window has to be defined in a local time format.
- ❑ With *AmountPSright* and *VATPSright* an amount can be registered with the enrollment of a PSRight.
- ❑ Identification or description that can be registered with the PSRight *(ReferencePSRight)*.
- ❑ Data of the Parent Right for which this EnrollPsRight message is used (*ParentRightId, ExternalReferenceParentRight* and *UsageIdParent*). There are two ways of identifying an unique Parent Right, either by ParentRightId of the combination of *ExternalReferenceParentRight* and *UsageIdParent* has to be provided.

- ❑ A (or more) secondary ID which will be registered with the PSRight (*Token* and *TokenType*). Possible entries for Token Type are: QR-CODE, BARCODE, RFID, MAGNET, VOUCHER or PINCODE. An example use with off street parking is to store a preferred door key and send it to a parking operator.

To record a PSRight properly, NPR needs to know the area and the area manager to which the area belongs.
When an area is specified through *AreaManagerId/AreaId*, these data are known immediately.
When an area is specified through a location, NPR collects all areas containing the specified location, and the area corresponding with the specified usage will be selected as the area to record with the PSRight.
If the area determination results in "no area found" or "more than one area found", the PSRight will not be recorded and the rights acquirer will receive an error message.
EndTimePSRight can be provided immediately, but it can also be provided at a later stage, using the request message ***PSRightRevokeRequest***.
Business Rule: A rights acquirer is obliged to terminate any PSRight he acquires, either by immediately providing an *EndTimePSRight*, or provide it later via a *PSRightRevokeRequest* message.

For usage and rules concerning the elements in the request message, see the request example and Annex A.

The Vehicle ID is by default the VRN (license_plate), but other IDs are possible like RFID. In that case the VehicleIdType must specify the type.

Disabled Parking Card
When EnrollPSRight is used to register a parking right in combination with a disabled parking card the disabled parking card number (*DisabledParkingCardNumber*) needs to be sent as a *ExternalReferenceParentRight* and the *UsageIdParent* needs to be filled with the type of the disabled parking card (*CardType*). The *VehicleId* should be filled with the technical ID of a preferred vehicle (*PreferredVehicleTechnicalId*) and the *VehicleIdType* should be 'PREF_VEH_TEC_ID'. The EndTimePSRight can be set equal to the end of the disabled parking card (*EndTimeCard*).
Note: if there are parking rights active with the disabled parking card during the duration of the new parking right, these active rights will be ended.

Long-term parking right
A long-time parking right should be registered on a national area and is valid in participating municipalities who have made agreements with SHPV. To register a long-term (national) parking right with a disabled parking card for a driver preferred vehicle (*TypeOfPreferredVehicle* = 'B'), the *AreaManagerId* has to be '9999', the *AreaId* should be 'CONVENANT' and the '*UsageId*' should be the type of disabled parking card (*CardType*).

Short-term parking right
Parking rights in areas with a maximum parking duration or for passenger vehicles (*TypeOfPreferredVehicle* = 'P') must be registered in the local areas of the area manager and are considered as short term parking rights.
Short-term parking rights with a disabled parking card for a driver or passenger preferred vehicle (*TypeOfPreferredVehicle* = 'B' or 'P') can be registered locally within a municipality with the type of card (*CardType*) as the *UsageId*.

The maximum duration of short term parking rights is set by NPR due to the parking regulation of municipalities or common implementation rules. The EndTimeAdjusted set by NPR is mandatory.

Note: when registering a short-term parking right for a driver preferred vehicle, the same preferred vehicle has to have an active long-term parking right.

Please note that registering parking rights in combination with a disabled parking card can only take place if agreements have been made with SHPV.

When no error occurs, the PSRight is recorded in NPR. The response message sent by NPR contains:

- ❑ Identification of the enrolled PSRight (*PSRightId*).
- ❑ The area manager and area for which the PSRight is recorded, except when these were already specified in the input (*AreaManagerId/AreaId*).
- ❑ The selling point which is closest to the location for which a PSRight is recorded (*SellingPointId*). The selling point is not specified when the area manager and area for which the PSRight is recorded already were specified in the input.
- ❑ Calculated price (*AmountPSRightCalculated, VATPSRightCalculated*), based on the regulation imposed on the area by the area manager or area operator. A price calculation is done only when *EndTimePSRight* was provided in the request message. A specification of the calculated price is added if the calculation involved another regulation than the standard regulation, or when more than one regulation was involved in the calculation. In these cases, the price is lower than the usual price according to the standard regulation, because a rebate applies. Examples of rebate regulations are day tickets, evening tickets etc.
  For parking garages a temporarily amount (*AmountInterimCalculated , VATInterimCalculated*)will be provided by NPR or the area operator when no *EndTimePSRight* was provided in the request message.
  NOTE 1: if NPR was not able to do a calculation, *AmountPSRightCalculated* and *VATPSRightCalculated* will be absent.
  NOTE 2: A PSrightWindow is not taken in account in the calculation of *AmountPSRightCalculated*.
- ❑ Minutes of the PSRight which fall within a timeframe (*RegulatedMinutesPSRightCalculated*). These minutes are only given when *EndTimePSRight* was provided in the request message.
- ❑ Remarks (*PSRightRemarkList)*, if applicable. For more information on remarks, see Annex B.
- ❑ Adjusted start time (*StartTimePSRightAdjusted*). When a parking operator has indicated a different start time; being the time of entry of the vehicle to the off street parking area.
- ❑ Adjusted end time (*EndTimePSRightAdjusted*).
  NPR will provide an adjusted end time in these cases:
  - When a right can only be acquired for a limited duration (e.g. maximum parking time one hour). In this case an adjusted end time will be given when no EndTimePSRight was provided, and also when an EndTimePSRight was provided that extends the maximum allowed duration.
  - When the EndTimePSRight was provided in the request, and it is possible to extend duration for the same PSRight price.
  - When in an area with parking interruption a right is registered when a future right is already present. In these cases the end time of the newly registered right will be adjusted, because the parking interruption needs to be maintained (see also PSRightRemark Type 3, Annex B).

  An adjusted end time overrules the end time provided by the rights acquirer (but does not take away the obligation for the rights acquirer to terminate the PSRight).
- ❑ Information from the parking facility (*ParkingAuthorizationData* containing *ExtraInfoCode* and (*ExtraInfo*).

- ParentRight information (*ParentRightId*). ParentRightId can be used for enrolling associated rights (ChildRights).
- One (or more) secondary ID which is registered with the PSRight (*Token* and *TokenType*). These can also come from a different party (e.g. a doorkey from a parking operator).

4.1.2 Example request message

```
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope" xmlns:ns="http://rdw.nl/rpv/3.0">
  <soap:Header>
    <ns:MessageID>?</ns:MessageID>
  </soap:Header>
  <soap:Body>
    <ns:PSRightEnrollRequest>
      <ns:PSRightEnrollRequestData>
        <ns:VehicleId>?</ns:VehicleId>
        <!--Optional:-->
        <ns:VehicleIdType>?</ns:VehicleIdType>
        <!--Optional:-->
        <ns:CountryCodeVehicle>?</ns:CountryCodeVehicle>
        <!--Optional:-->
        <ns:AreaManagerId>?</ns:AreaManagerId>
        <!--Optional:-->
        <ns:AreaId>?</ns:AreaId>
        <!--Optional:-->
        <ns:LocationPSRight>
          <ns:Latitude>?</ns:Latitude>
          <ns:Longitude>?</ns:Longitude>
        </ns:LocationPSRight>
        <!--Optional:-->
        <ns:PSRightAddress>
          <!--Optional:-->
          <ns:StreetCode>?</ns:StreetCode>
          <!--Optional:-->
          <ns:StreetName>?</ns:StreetName>
          <ns:HouseNumber>?</ns:HouseNumber>
          <!--Optional:-->
          <ns:HouseNumberAdditions>?</ns:HouseNumberAdditions>
          <ns:PlaceOfResidence>?</ns:PlaceOfResidence>
        </ns:PSRightAddress>
        <!--Optional:-->
        <ns:SellingPointId>?</ns:SellingPointId>
        <ns:UsageId>?</ns:UsageId>
        <ns:StartTimePSright>?</ns:StartTimePSright>
        <!--Optional:-->
        <ns:EndTimePSright>?</ns:EndTimePSright>
        <!--Optional:-->
        <ns:PSRightWindowList>
          <!--Zero or more repetitions:-->
          <ns:PSRightWindowData>
            <!--Optional:-->
            <ns:StartTimePSrightDayWindow>?</ns:StartTimePSrightDayWindow>
            <!--Optional:-->
            <ns:EndTimePSrightDayWindow>?</ns:EndTimePSrightDayWindow>
            <!--Optional:-->
            <ns:StartTimePSrightWindow>?</ns:StartTimePSrightWindow>
            <!--Optional:-->
            <ns:EndTimePSrightWindow>?</ns:EndTimePSrightWindow>
          </ns:PSRightWindowData>
        </ns:PSRightWindowList>
        <!--Optional:-->
        <ns:AmountPSright>?</ns:AmountPSright>
        <!--Optional:-->
```

```
        <ns:VATPSright>?</ns:VATPSright>
        <!--Optional:-->
        <ns:ReferencePSRight>?</ns:ReferencePSRight>
        <!--Optional:-->
        <ns:PSRightParentData>
          <!--Optional:-->
          <ns:ParentRightId>?</ns:ParentRightId>
          <!--Optional:-->
          <ns:ExternalReferenceParentRight>?</ns:ExternalReferenceParentRight>
          <!--Optional:-->
          <ns:UsageIDParent>?</ns:UsageIDParent>
        </ns:PSRightParentData>
        <!--Optional:-->
        <ns:TokenList>
          <!--Zero or more repetitions:-->
          <ns:TokenListData>
            <ns:Token>?</ns:Token>
            <ns:TokenType>?</ns:TokenType>
          </ns:TokenListData>
        </ns:TokenList>
      </ns:PSRightEnrollRequestData>
    </ns:PSRightEnrollRequest>
  </soap:Body>
</soap:Envelope>
```

4.2 RevokePSRight

4.2.1 Message dialogue RevokePSRight

A rights acquirer sends a request message ***PSRightRevokeRequest*** to NPR, containing the identification of a PSRight, and a time at which the right should end. NPR sends a response message ***PSRightRevokeResponse***, containing the message part ***PSRightRevokeResponseData*** if registration was successful. If not, the message contains the element ***PSRightRevokeResponseError***.

The rights acquirer is identified by the OIN or PIN in his certificate. Each request message contains either the OIN or the PIN from the certificate. The rights acquirer revoking the right should be the same as the one that registered the PSRight.
If the right already has an EndTime, it is possible to shorten the duration of the right, but it is also possible to extend the duration. Extending a right is only allowed when the original EndTime of the PSRight has not passed yet. To cancel a right, the EndTime should be equal to or earlier than the StartTime (or StartTimeAdjusted in case of off-street parking).

The request message contains at least the following information:

- ❑ UUID (*MessageID*) which is the identification of a request and can be used for a resend (see also Ch 10.2).
- ❑ Identification of a PSRight (*PSRightId*).
- ❑ Date and time when the PSRight should end (*EndTimePSRight*).

Optional information:

- ❑ With *AmountPSright* and *VATPSright* an amount can be registered with the revoke of a PSRight.

If no error occurs, the response message sent by NPR contains:

- ❑ Calculated price (*AmountPSRightCalculated, VATPSRightCalculated*), based on the regulation imposed on the area by the area manager. A specification of the calculated price is added if the calculation involved another regulation than the standard regulation, or when more than one regulation was involved in the calculation. In these cases, the price is lower than the usual price according to the standard regulation, because a rebate applies. Examples of rebate regulations are day tickets, evening tickets, etc.
  When no tariff is attached to the regulation of an area, the response message is empty.
  NOTE 1: if NPR was not able to do a calculation, *AmountPSRightCalculated* and *VATPSRightCalculated* will be absent.
  NOTE 2: A PSrightWindow is not taken in account in the calculation of AmountPSRightCalculated.
- ❑ Minutes of the PSRight which fall within a timeframe (*RegulatedMinutesPSRightCalculated*).
- ❑ Remarks (*PSRightRemarkList*), if applicable. For more information on remarks, see Annex B.
- ❑ Adjusted end time (*EndTimePSRightAdjusted*).
  NPR will provide an adjusted end time in these cases:
  - When a right can only be acquired for a limited duration (e.g. maximum parking time one hour). In this case an adjusted end time will be given when no EndTimePSRight was provided, and also when an EndTimePSRight was provided that extends the maximum allowed duration.
  - When the EndTimePSRight was provided in the request, and it is possible to extend duration for the same PSRight price.
  - When in an area with parking interruption a right is registered when a future right is already present. In these cases the end time of the newly registered right will be adjusted, because the parking interruption needs to be maintained (see also PSRightRemark Type 3, Annex B).

- When an area operator sends an adjusted end time (off-street parking). For example, when the amount is valid for a longer parking duration.

An adjusted end time overrules the end time provided by the rights acquirer (but does not take away the obligation for the rights acquirer to terminate the PSRight).

4.2.2 Example request message

```
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope" xmlns:ns="http://rdw.nl/rpv/3.0">
  <soap:Header>
    <ns:MessageID>?</ns:MessageID>
  </soap:Header>
  <soap:Body>
    <ns:PSRightRevokeRequest>
      <ns:PSRightRevokeRequestData>
        <ns:PSRightId>?</ns:PSRightId>
        <ns:EndTimePSRight>?</ns:EndTimePSRight>
        <!--Optional:-->
        <ns:AmountPSright>?</ns:AmountPSright>
        <!--Optional:-->
        <ns:VATPSright>?</ns:VATPSright>
      </ns:PSRightRevokeRequestData>
    </ns:PSRightRevokeRequest>
  </soap:Body>
</soap:Envelope>
```

4.3 RetrieveRightInfoForProvider

4.3.1 Message dialogue RetrieveRightInfoForProvider

This message can be used to retrieve the rights that were present for a certain vehicle in a specified time frame. Example of usage: in cases of parking tax additional assessments, or objections/appeals to additional assessments.

The provider sends a request message ***RetrieveRightInfoForProvider***. NPR responds with a message ***RetrieveRightInfoForProviderResponse***.

The provider for which information is retrieved, is identified by the OIN or PIN in its certificate. Each request message contains either the OIN or the PIN from the certificate.
The information acquirer should be the same as the one that registered the PSRight.

The request message contains at least the following information:

- ❑ UUID (*MessageID*) which is the identification of a request.
- ❑ Identification of a vehicle (VehicleId) or identification of a right (*PSRightId*).

Optional information:

- ❑ When retrieving rights with a vehicle id (VehicleId) the *StartTimePSRights* and *EndTimePSRights* must be provided. This is not necessary when retrieving rights with the identification of a right (*PSRightId*).

The response message contains the following information:

- ❑ Identification of a vehicle (*VehicleId).*
- ❑ Identification of a right (*PSRightId*).
- ❑ Description or reference of a right (*ReferencePSRight*).
- ❑ Country code of a vehicle (*CountryCodeVehicle*).
- ❑ Type of vehicleID used (*VehicleIdType).*
- ❑ Identification of a selling point (*SellingPointId*).
- ❑ Start time and date when a PSRight has started (*StartTimePSRight*).
- ❑ Adjusted start time and date when a PSRight has started (*StartTimePSRightAdjusted*).
- ❑ End time and date when a PSRight has ended (*EndTimePSRight*).
- ❑ Adjusted end time and date when a PSRight has ended (*EndTimePSRightAdjusted*).
- ❑ List of validity windows of a PSRight (*PSRightWindowList*).
- ❑ Identification of an acquirer (*PSRightAcquirerCode*).
- ❑ Description of an acquirer (*PSRightAcquirerDesc*).
- ❑ Identification of an area manager (*AreaManagerId*).
- ❑ Description of an area manager (*AreaManagerDesc*).
- ❑ Identification of an area (*AreaId*).
- ❑ Description of an area (*AreaDesc*).
- ❑ Identification of a usage (*UsageId*).
- ❑ Description of a usage (*UsageDesc*).
- ❑ Time and date of registration when a right has been registered in NPR (*Registration-TimePSRight*).
- ❑ Time and date of registration when a right has been stopped in NPR (*RegistrationEnd-TimePSRight*).
- ❑ Geographical position which was provided with the registration of a right (*LocationPSRight*) consisting of a *Latitude* and *Longitude* in WGS84 format.
- ❑ The price for a parking right as determined by the provider (*AmountPSRight*).
- ❑ The value added tax (V.A.T.) of the price for a parking right as determined by the provider (*VATPSRight*).

- The price for a parking right as determined on basis of the data in NPR (*AmountPSRightCalculated*).
- The value added tax (V.A.T.) of the price for a parking right as determined on basis of the data in NPR (*VATPSRightCalculated*).
- Minutes of the PSRight which fall within a timeframe (*RegulatedMinutesPSRightCalculated*).
- The maximum amount for a parking right as determined by the authorising provider (*MaxAmountPSRight*).
- The value added tax (V.A.T.) of the maximum amount for a parking right as by the authorizing provider (*VATMaxAmountPSRight*).
- The price for a parking right as recalculated on basis of the data in NPR (*AmountPSRightRecalculated*).
- The value added tax (V.A.T.) of the price for a parking right as recalculated on basis of the data in NPR (*VATPSRightRecalculated*).
- Time and date when the price and V.A.T. of a parking right were recalculated for the last time (*TimeRecalculation*).
- List of one or more secondary IDs which are registered with the PSRight (*Token* and *TokenType*).

4.3.2 Example request message

```
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope" xmlns:ns="http://rdw.nl/rpv/3.0">
  <soap:Header>
    <ns:MessageID>?</ns:MessageID>
  </soap:Header>
  <soap:Body>
    <ns:RetrieveRightInfoForProviderRequest>
      <ns:RightInfoRequestData>
        <!--Optional:-->
        <ns:VehicleId>?</ns:VehicleId>
        <!--Optional:-->
        <ns:VehicleIdType>?</ns:VehicleIdType>
        <!--Optional:-->
        <ns:CountryCodeVehicle>?</ns:CountryCodeVehicle>
        <!--Optional:-->
        <ns:PSRightId>?</ns:PSRightId>
        <!--Optional:-->
        <ns:StartTimePSRights>?</ns:StartTimePSRights>
        <!--Optional:-->
        <ns:EndTimePSRights>?</ns:EndTimePSRights>
      </ns:RightInfoRequestData>
    </ns:RetrieveRightInfoForProviderRequest>
  </soap:Body>
</soap:Envelope>
```

4.4 RevokedByThirdParty

4.4.1 Message dialogue RevokedByThirdParty

When an area operator has stopped a parking right the rights acquirer of this right will be informed with the use of RevokedByThirdParty. NPR sends this messages to the rights acquirer (inbound message).

The request message contains at least the following information:

- ❑ Identification of a PSRight (*PSRightId*).
- ❑ Date and time when the PSRight ends (*EndTimePSRight*).
- ❑ With *AmountPSRight* and *VATPSright* the rights acquirer is informed about the price of the parking right.

The response message contains the following information:

- ❑ Identification of a PSRight (*PSRightId*).

NPR has implemented a resend mechanism which will become active when the message send to the rights acquirer cannot be delivered. NPR will resend the RevokedByThirdParty messages every five minutes for over 24 hours.

4.4.2 Example request message

The example request message can be found with the help of Chapter 2.7.2..

4.5 PreEnroll

4.5.1 Message dialoge PreEnroll

This message will be send to the rights acquirer after an area operator has send a PaymentCheck to NPR (inbound message). With PaymentCheck a check is performed to determine whether a vehicle can enter a parking facility or not. When NPR receives a PaymentCheck a PreEnroll message will be send to the rights acquirer.

The request message contains at least the following information:

- ❑ Identification of a vehicle (*VehicleId).*
- ❑ Identification of an area manager (*AreaManagerId*).
- ❑ Identification of an area (*AreaId*).
- ❑ Identification of a usage (*UsageId*).
- ❑ Date and time for which the area operator wants to perform the PaymentCheck (*CheckTime*).

Optional information:

- ❑ Type of vehicleID used (*VehicleIdType*).
- ❑ Country code of a vehicle (*CountryCode*).

The response message contains the following information:

- ❑ Answer given by the rights acquirer at a PreEnrollRequest to check whether a certain vehicle can enter a parking facility (Y/N)(*Checkanswer*).
- ❑ Identification of the usage for which authorisation is given (*UsageId*). This usage is only necessary if the usage from the request has to be subdivided.

4.5.2 Example request message

The example request message can be found with the help of Chapter 2.7.2..

4.6 ActivateEnroll

4.6.1 Message dialoge ActivateEnroll

This message will be send to the rights acquirer after an area operator has send a PaymentStart to NPR (inbound message). With Paymentstart an area operator sends a message to NPR that a parking rights needs to be registered on behalf of a rights acquirer for a specific vehicle. When NPR receives a PaymentStart an ActivateEnroll message will be send to the rights acquirer.

The request message contains at least the following information:

- ❑ Identification of a PSRight (*PSRightId*).
- ❑ Identification of a vehicle (*VehicleId).*
- ❑ Identification of an area manager (*AreaManagerId*).
- ❑ Identification of an area (*AreaId*).
- ❑ Identification of a usage (*UsageId*).
- ❑ Date and time of the start of a parking right (*StartTimePSRight).*

Optional information:

- ❑ Type of vehicleID used (*VehicleIdType*).
- ❑ Country code of a vehicle (*CountryCodeVehicle*).
- ❑ Date and time of the end of a parking right (*EndTimePSRightAdjusted).*
- ❑ A registered amount with the PSRight (*AmountPSright* and *VATPSright)*.
- ❑ A (or more) secondary id (*Token* and *TokenType*). An example use is to receive a door key from a parking operator.

The response message contains the following information:

- ❑ Answer given by the rights acquirer at an ActivateEnroll request to register a parking right for a certain vehicle (Y/N)(*Granted*).
- ❑ Maximum amounts can be registered for a PSRight with *MaxAmountPSRight and VATMax-AmountPSRight.*
- ❑ Adjusted end time by rights acquirer (*EndDateTimeAdjusted*).
- ❑ A (or more) secondary id (*Token* and *TokenType*). Possible entries for TokenType are: QR-CODE, BARCODE, RFID, MAGNET, VOUCHER or PINCODE. An example use is to send a preferred doorkey to a parking operator. secondary id (*Token),* not used for matching but optional to give access to pedestrian entrances of parking facilities.
- ❑ Identification of the usage for which authorisation is given (*UsageId*). This usage is only necessary if the usage from the request has to be subdivided.

4.6.2 Example request message

The example request message can be found with the help of Chapter 2.7.2..

4.7 EnrollLink

4.7.1 Message dialogue EnrollLink

A rights acquirer sends a request message ***EnrollLinkRequest*** to NPR, containing the data of a link between the rights acquirer and a vehicle to be registered in NPR. NPR sends a response message ***EnrollLinkResponse***, containing the message part ***EnrollLinkResponseData*** if registration was successful. If not, the message contains the element ***EnrollLinkResponseError***.

The rights acquirer is identified by the OIN or PIN in its certificate. Each request message contains either the OIN or the PIN from the certificate.

The request message contains at least the following information:

- ❑ UUID (*MessageID*) which is the identification of a request.
- ❑ Identification of a vehicle (*VehicleId).*
- ❑ Type of vehicleID used (*VehicleIdType*). Type has to be LICENSE_PLATE or RFID. When no type is provided, NPR assumes that the type of VehicleID is a license plate.
- ❑ Date and time when the link starts *(StartTimeLink).*
- ❑ Usage of the link (*UsageId*).

Optional information:

- ❑ Identification of an area (*AreaManagerId* or *AreaManagerId* and *AreaId*). This results in the link only being valid in areas of the specified area manager or in one specific area.
- ❑ Country code of a vehicle (*CountryCodeVehicle*).
- ❑ Date and time when the PSRight ends (*EndTimeLink*).

If no error occurs, the response message sent by NPR contains:

- ❑ Identification of the registered link (*LinkId*).

Business rule: A commercial mobile provider should register a Link without an AreamanagerId and AreaId. Providers who register permits should register a Link with an AreaManagerId and AreaId.

4.7.2 Example request message

```
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope" xmlns:ns="http://rdw.nl/rpv/3.0">
  <soap:Header>
    <ns:MessageID>?</ns:MessageID>
  </soap:Header>
  <soap:Body>
    <ns:EnrollLinkRequest>
      <ns:EnrollLinkRequestData>
        <!--Optional:-->
        <ns:AreaManagerId>?</ns:AreaManagerId>
        <!--Optional:-->
        <ns:AreaId>?</ns:AreaId>
        <ns:VehicleId>?</ns:VehicleId>
        <ns:VehicleIdType>?</ns:VehicleIdType>
        <!--Optional:-->
        <ns:CountryCodeVehicle>?</ns:CountryCodeVehicle>
        <ns:UsageId>?</ns:UsageId>
        <ns:StartTimeLink>?</ns:StartTimeLink>
        <!--Optional:-->
        <ns:EndTimeLink>?</ns:EndTimeLink>
      </ns:EnrollLinkRequestData>
    </ns:EnrollLinkRequest>
  </soap:Body>
</soap:Envelope>
```

4.8 RevokeLink

4.8.1 Message dialogue RevokeLink

A rights acquirer sends a request message ***RevokeLinkRequest*** to NPR, containing the identification of a link, and a time at which the link should end. NPR sends a response message ***RevokeLinkResponse***, containing the message part ***RevokeLinkResponseData*** if registration was successful. If not, the message contains the element ***RevokeLinkResponseError***.

The rights acquirer is identified by the OIN or PIN in its certificate. Each request message contains either the OIN or the PIN from the certificate.

The request message contains at least the following information:

- ❑ UUID (*MessageID*) which is the identification of a request.
- ❑ Identification of a link (LinkId).
- ❑ Date and time when the link should end (EndTimeLink).

If no error occurs, the response message sent by NPR contains:

- ❑ Identification of the registered link (*LinkId*).

4.8.2 Example request message

```
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope" xmlns:ns="http://rdw.nl/rpv/3.0">
  <soap:Header>
    <ns:MessageID>?</ns:MessageID>
  </soap:Header>
  <soap:Body>
    <ns:RevokeLinkRequest>
      <ns:RevokeLinkRequestData>
        <ns:LinkId>?</ns:LinkId>
        <!--Optional:-->
        <ns:EndTimeLink>?</ns:EndTimeLink>
      </ns:RevokeLinkRequestData>
    </ns:RevokeLinkRequest>
  </soap:Body>
</soap:Envelope>
```

4.9 RetrieveLinkInfoForProvider

4.9.1 Message dialogue RetrieveLinkInfoForProvider

A rights acquirer sends a request message ***RetrieveLinkInfoForProviderRequest*** to NPR, containing the identification of a vehicle or link, and optional a search period or type of vehicle. NPR sends a response message ***RetrieveLinkInfoForProviderResponse***, containing the message part ***RetrieveLinkInfoForProviderResponseData*** if registration was successful. If not, the message contains the element ***RetrieveLinkInfoForProviderResponseError***.

The rights acquirer is identified by the OIN or PIN in its certificate.

The request message contains at least the following information:
- ❑ UUID (*MessageID*) which is the identification of a request.
- ❑ Identification of a link (*LinkId)* or identification of a vehicle (*VehicleId*).

Optional information:
- ❑ Type of vehicleId (*VehicleIdType*).
- ❑ Search period (*StartTimeLink* and/or *EndTimeLink*).

If no error occurs, the response message sent by NPR contains:
- ❑ Type of vehicleID used (*VehicleIdType).*
- ❑ Country code of a vehicle (*CountryCodeVehicle*).
- ❑ Country name of a vehicle *(CountryName).*
- ❑ Identification of an area manager (*AreaManagerId*).
- ❑ Description of an area manager (*AreaManagerDesc*).
- ❑ Identification of an area (*AreaId*).
- ❑ Description of an area (*AreaDesc*).
- ❑ Identification of a link (*LinkId*).
- ❑ Identification of a usage (*UsageId*).
- ❑ Description of a usage (*UsageDesc*).
- ❑ Start time and date when a link has started (*StartTimeLink*).
- ❑ End time and date when a link has ended (*EndTimeLink*).

4.9.2 Example request message

```
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope" xmlns:ns="http://rdw.nl/rpv/3.0">
  <soap:Header>
    <ns:MessageID>?</ns:MessageID>
  </soap:Header>
  <soap:Body>
    <ns:RetrieveLinkInfoForProviderRequest>
      <ns:RetrieveLinkInfoRequestData>
        <!--Optional:-->
        <ns:VehicleId>?</ns:VehicleId>
        <!--Optional:-->
        <ns:VehicleIdType>?</ns:VehicleIdType>
        <!--Optional:-->
        <ns:LinkId>?</ns:LinkId>
        <!--Optional:-->
        <ns:StartTimeLink>?</ns:StartTimeLink>
        <!--Optional:-->
        <ns:EndTimeLink>?</ns:EndTimeLink>
      </ns:RetrieveLinkInfoRequestData>
    </ns:RetrieveLinkInfoForProviderRequest>
  </soap:Body>
</soap:Envelope>
```

4.10 RetrieveAreaCapacityForProvider

4.10.1 Message dialogue RetrieveAreaCapacityForProvider

A rights acquirer sends a request message ***RetrieveAreaCapacityForProviderRequest*** to NPR, containing a location. NPR sends a response message ***RetrieveAreaCapacityForProviderResponse***, containing the message part ***RetrieveAreaCapacityForProviderData*** if the consult was successful. If not, the message contains the element ***RetrieveAreaCapacityForProviderError***.

The rights acquirer is identified by the OIN or PIN in its certificate.

The request message contains at least the following information:

- ❑ UUID (*MessageID*) which is the identification of a request.
- ❑ Identification of an area. The way to specify an area should be one of the following:
    1. *AreaManagerId* and *AreaId*.
    2. A location (*LocationPSRight*), consisting of a *Latitude* and *Longitude* in WGS84 format.
    3. *SellingPointId*.
    4. An address (*PSRightAddress*), consisting of *StreetCode* or *StreetName*, *HouseNumber*, *HouseNumberAdditions* and *PlaceOfResidence*.

    If more than one identification is provided, NPR will use the list above to determine priority, e.g. if *AreaManagerId/AreaId* and *LocationPSRight* are provided, the combination *AreaManager/AreaId* will be used to specify the area, and the location will be omitted. If *StreetCode* and *StreetName* are both provided, NPR will use *StreetCode* and omit *StreetName*.

    If the identification provided does not match any of the supported methods, the message will not be handled and the rights acquirer will receive an error message.
- ❑ Usage for which the capacity applies (*UsageId*).

Optional information:

- ❑ Reference date-time *(CheckTime)*.
  If no reference date-time is provided, the current data will be retrieved, otherwise the data that is valid on reference date-time will be retrieved.

If no error occurs, the response message sent by NPR contains:

- ❑ Used capacity of the rights acquirer for the specified area and usage (*AreaCapacityUsed).*
- ❑ Remaining capacity for the rights acquirer for the specified area and usage (*AreaCapacityRemaining*).
- ❑ Maximum capacity for the rights acquirer for the specified area and usage *(AreaCapacityMaximum).*

These capacities are a snapshot at the specified reference date-time or, if the CheckTime is not provided, at the moment of sending the request.

4.10.2 Example request message

```
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope" xmlns:ns="http://rdw.nl/rpv/3.0">
  <soap:Header>
    <ns:MessageID>?</ns:MessageID>
  </soap:Header>
  <soap:Body>
    <ns:RetrieveAreaCapacityForProviderRequest>
      <ns:RetrieveAreaCapacityForProviderRequestData>
        <!--Optional:-->
        <ns:AreaManagerId>?</ns:AreaManagerId>
```

```
        <!--Optional:-->
        <ns:AreaId>?</ns:AreaId>
        <!--Optional:-->
        <ns:AreaLocation>
          <ns:Latitude>?</ns:Latitude>
          <ns:Longitude>?</ns:Longitude>
        </ns:AreaLocation>
        <!--Optional:-->
        <ns:RequestAddress>
          <!--Optional:-->
          <ns:StreetCode>?</ns:StreetCode>
          <!--Optional:-->
          <ns:StreetName>?</ns:StreetName>
          <ns:HouseNumber>?</ns:HouseNumber>
          <!--Optional:-->
          <ns:HouseNumberAdditions>?</ns:HouseNumberAdditions>
          <ns:PlaceOfResidence>?</ns:PlaceOfResidence>
        </ns:RequestAddress>
        <ns:UsageId>?</ns:UsageId>
        <ns:ReferenceTime>?</ns:ReferenceTime>
      </ns:RetrieveAreaCapacityForProviderRequestData>
    </ns:RetrieveAreaCapacityForProviderRequest>
  </soap:Body>
</soap:Envelope>
```

5 Messages to be used by area operators

There are inbound and outbound messages for area operators for communication with NPR about off street parking.
Inbound messages are sent from NPR.
Outbound messages need to be sent to NPR.

5.1 ActivateAuthorisation

5.1.1 Message dialoge ActivateAuthorisation

This message will be send to the area operator after an EnrollPSRightId message was send by a rights acquirer for an area which has an area operator (inbound message).

The request message contains at least the following information:

- ❑ Identification of a vehicle (*VehicleId*).
- ❑ Identification of an area manager (*AreaManagerId*).
- ❑ Identification of an area (*AreaId*).
- ❑ Identification of a parking right as determined by the NPR. Within NPR called PSRightId (*PaymentAuthorisationId*).
- ❑ Identification of a provider (*ProviderId*).
- ❑ Date and time of the start of a parking right (*StartDateTime).*

Optional information:

- ❑ Type of vehicleID used (*VehicleIdType*). Type has to be LICENSE_PLATE or RFID. When no type is provided, NPR assumes that the type of VehicleID is a license plate.
- ❑ Country code of a vehicle (*CountryCode*).
- ❑ Date and time when the parking right ends (*EndDateTime*).
- ❑ A (or more) secondary id (*Token* and *TokenType*). An example use is to receive a preferred door key from a provider.

The response message contains the following information:

- ❑ The response to the authorization request (Y/N) (*Granted*).
- ❑ Adjusted start time (*StartDateTimeAdjusted*). When a parking operator states a different start time, being usually the time a vehicle entered the area.
- ❑ Date and time when the parking right ends (*EndDateTimeAdjusted*).
- ❑ Id of the Remark (*RemarkId*).
- ❑ A description of the notification regarding the authorization request (*Remark*).
- ❑ With *Amount* and *VAT* an amount can be returned, being the costs between time of entry (adjusted start time) and the time of the response (actual time).
- ❑ A (or more) secondary id (*Token* and *TokenType*). Possible entries for TokenType are: QR-CODE, BARCODE, RFID, MAGNET, VOUCHER or PINCODE. An example use is to send a door key to a provider.

5.1.2 Example request message

The example request message can be found with the help of Chapter 2.7.2..

5.2 CancelAuthorisation

5.2.1 Message dialoge CancelAuthorisation

This message will be send to the area operator in two situations:

1. The rights acquirer makes an annulation of the parking right (end time will be the same as start time).
2. The rights acquirer sends a confirmation of payment (end time will be later than start time). If ending a parking right by a rights acquirer is not supported, an error code should be returned by the area operator.

This is an inbound message.

The request message contains at least the following information:

- ❑ Identification of a parking right as determined by the NPR (*PaymentAuthorisationId*)

Optional information:

- ❑ The end time of a parking right (*CancelDateTime*).

The response message can contain the following information:

- ❑ The response to the authorization request (true/false) (*Granted*).
- ❑ Id of the Remark (*RemarkId*).
- ❑ A description of the notification regarding the authorization request (*Remark*).
- ❑ With *Amount* and *VAT* an amount can be registered with the ending or cancellation of the PSRight.
- ❑ Adjusted end time by rights acquirer (*EndDateTimeAdjusted*).

5.2.2 Example request message

The example request message can be found with the help of Chapter 2.7.2..

5.3 PaymentCheck

5.3.1 Message dialoge PaymentCheck

The area operator will send this message to check whether a vehicle can enter the parking facility or not. At this stage there will be no parking right registered at NPR yet. NPR sends this request to the rights acquirer with the use of the message PreEnroll.

The request message contains at least the following information:

- ❑ UUID (*MessageID*) which is the identification of a request.
- ❑ Identification of a vehicle (*VehicleId*).
- ❑ Date and time at which must be checked whether or not a vehicle can enter the parking facility. *(CheckDateTime).*
- ❑ Identification of an area manager (*AreaManagerId*).
- ❑ Identification of an area (*AreaId*).
- ❑ Identification of a selling point (*SellingPointId*).

Location has to be stated with either AreaManagerId and AreaId or SellingPointId.

Optional information:

- ❑ Type of vehicleID used (*VehicleIdType*). Type has to be LICENSE_PLATE or RFID. When no type is provided, NPR assumes that the type of VehicleID is a license plate.
- ❑ Country code of a vehicle (*CountryCode*).
- ❑ Usage that is checked (*UsageId*).
- ❑ One (or more) secondary id (*Token* and *TokenType*). Possible entries for TokenType are: QR-CODE, BARCODE, RFID, MAGNET, VOUCHER or PINCODE. An example use is to send a door key to a provider.

The response message can contain the following information:

- ❑ Identification of a provider (*ProviderId*).
- ❑ The response to the PaymentCheck request (Y/N) (*Granted*).
- ❑ Identification of an area manager (*AreaManagerId*).
- ❑ Identification of an area (*AreaId*).
- ❑ Usage that is checked (*UsageId*).

5.3.2. Example Request message

```
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope" xmlns:ns="http://rdw.nl/rpv/3.0">
  <soap:Header>
    <ns:MessageID>?</ns:MessageID>
  </soap:Header>
  <soap:Body>
    <ns:PaymentCheckRequest>
      <ns:PaymentCheckRequestData>
        <!--Optional:-->
        <ns:AreaManagerId>?</ns:AreaManagerId>
        <!--Optional:-->
        <ns:AreaId>?</ns:AreaId>
        <!--Optional:-->
        <ns:SellingPointId>?</ns:SellingPointId>
        <ns:VehicleId>?</ns:VehicleId>
        <!--Optional:-->
        <ns:VehicleIdType>?</ns:VehicleIdType>
        <!--Optional:-->
        <ns:CountryCode>?</ns:CountryCode>
        <ns:CheckDateTime>?</ns:CheckDateTime>
        <!--Optional:-->
        <ns:UsageId>?</ns:UsageId>
```

```
        <!--Optional:-->
        <ns:TokenList>
          <!--Zero or more repetitions:-->
          <ns:TokenListData>
            <ns:Token>?</ns:Token>
            <ns:TokenType>?</ns:TokenType>
          </ns:TokenListData>
        </ns:TokenList>
      </ns:PaymentCheckRequestData>
    </ns:PaymentCheckRequest>
  </soap:Body>
</soap:Envelope>
```

5.4 PaymentStart

5.4.1 Message dialoge PaymentStart

The area operator sends this message to NPR when a vehicle enters a parking facility and a parking rights needs to be registered.

The request message contains at least the following information:

- ❑ UUID (*MessageID*) which is the identification of a request and can be used for a resend (see also Ch 10.2).
- ❑ Identification of a vehicle (*VehicleId*)
- ❑ Date and time of the start of a parking right (*StartDateTime)*
- ❑ Identification of an area manager (*AreaManagerId*).
- ❑ Identification of an area (*AreaId*).
- ❑ Identification of a selling point (*SellingPointId*).

Location has to be stated with either AreaManagerId and AreaId or SellingPointId.

Optional information:

- ❑ Type of vehicleID used (*VehicleIdType*). Type has to be LICENSE_PLATE or RFID. When no type is provided, NPR assumes that the type of VehicleID is a license plate.
- ❑ Country code of a vehicle (*CountryCode*).
- ❑ Date and time of the end of a parking right (*EndDateTime).*
- ❑ With *Amount* and *VAT* an amount can be registered with the enrolment of a PSRight.
- ❑ A (or more) secondary ID which will be registered with the parking right (*Token* and *TokenType*). An example use is to store a door key (which will also be sent to a provider if necessary). Possible entries for TokenType are: QR-CODE, BARCODE, RFID, MAGNET, VOUCHER or PINCODE.
- ❑ Usage for which the payment has to start (*UsageId*). This can be used to exclude certain usages (e.g. by filling in 'VERGUNP', to allow permits only and not ask authorisation for payed parking).

The response message contains the following information:

- ❑ Identification of an area manager (*AreaManagerId*).
- ❑ Identification of an area (*AreaId*).
- ❑ Identification of a provider (*ProviderId*).
- ❑ Usage for which the payment starts (*UsageId*).
- ❑ Identification of a parking right as determined by the NPR (*PaymentAuthorisationId*)
- ❑ Max amount for which a parking right is authorised (*AuthorisationMaxAmount*)
- ❑ Adjusted end time by rights acquirer (*EndDateTimeAdjusted*)
- ❑ One (or more) secondary ID which is registered with the parking right (*Token* and *TokenType*). These can also come from a different party (e.g. a preferred door key from a provider)

5.4.2 Example request message

```
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope" xmlns:ns="http://rdw.nl/rpv/3.0">
  <soap:Header>
    <ns:MessageID>?</ns:MessageID>
  </soap:Header>
  <soap:Body>
    <ns:PaymentStartRequest>
      <ns:PaymentStartRequestData>
        <!--Optional:-->
        <ns:AreaManagerId>?</ns:AreaManagerId>
        <!--Optional:-->
        <ns:AreaId>?</ns:AreaId>
        <!--Optional:-->
        <ns:SellingPointId>?</ns:SellingPointId>
```

```
        <ns:VehicleId>?</ns:VehicleId>
        <!--Optional:-->
        <ns:VehicleIdType>?</ns:VehicleIdType>
        <!--Optional:-->
        <ns:CountryCodeVehicle>?</ns:CountryCodeVehicle>
        <ns:StartDateTime>?</ns:StartDateTime>
        <!--Optional:-->
        <ns:EndDateTime>?</ns:EndDateTime>
        <!--Optional:-->
        <ns:UsageId>?</ns:UsageId>
        <!--Optional:-->
        <ns:Amount>?</ns:Amount>
        <!--Optional:-->
        <ns:VAT>?</ns:VAT>
        <!--Optional:-->
        <ns:TokenList>
          <!--Zero or more repetitions:-->
          <ns:TokenListData>
            <ns:Token>?</ns:Token>
            <ns:TokenType>?</ns:TokenType>
          </ns:TokenListData>
        </ns:TokenList>
      </ns:PaymentStartRequestData>
    </ns:PaymentStartRequest>
  </soap:Body>
</soap:Envelope>
```

5.5 PaymentEnd

5.5.1 Message dialoge PaymentEnd

This message will be send by the area operator to end a parking right (outbound message). A provider will be notified of this action by the use of the message RevokedByThirdParty (Ch 4.4).

Business Rule: A area operator is obliged to terminate any PSRight that is acquired in the off street parking area.

The request message contains at least the following information:

- UUID (*MessageID*) which is the identification of a request and can be used for a resend (see also Ch 10.2).
- Identification of a parking right as determined by the NPR (*PaymentAuthorisationId*).
- Date and time when the parking right ends (*EndDateTime*).

Optional information:

- With *Amount* and *VAT* an amount can be registered with the settlement of a parking right.

The response message contains the following information:

- Identification of a parking right as determined by the NPR (*PaymentAuthorisationId*).
- Adjusted end time by rights acquirer or NPR (*EndDateTimeAdjusted*).
- The price and value added tax (V.A.T.) for a parking right as determined on basis of the data in NPR (*AmountCalculated* and *VATCalculated*).
- The maximum amount and V.A.T. for a parking right as determined by the authorizing provider (*AuthorisationMaxAmount* and *VATMaxAmount*).

5.5.2 Example request message

```
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope" xmlns:ns="http://rdw.nl/rpv/3.0">
  <soap:Header>
    <ns:MessageID>?</ns:MessageID>
  </soap:Header>
  <soap:Body>
    <ns:PaymentEndRequest>
      <ns:PaymentEndRequestData>
        <ns:PaymentAuthorisationId>?</ns:PaymentAuthorisationId>
        <ns:EndDateTime>?</ns:EndDateTime>
        <!--Optional:-->
        <ns:Amount>?</ns:Amount>
        <!--Optional:-->
        <ns:VAT>?</ns:VAT>
      </ns:PaymentEndRequestData>
    </ns:PaymentEndRequest>
  </soap:Body>
</soap:Envelope>
```

6 Messages to be used by enforcers

6.1 CheckPSRight

6.1.1 Message dialogue CheckPSRight

A checking organisation sends a request message ***PSRightCheckRequest***. NPR responds with a message ***PSRightCheckResponse***, containing the message part ***PSRightCheckResponseData*** if the message was processed successfully. If not, the message contains the element ***PSRightCheckResponseError.***

The checking organisation is identified by the OIN or PIN in its certificate. Each request message contains either the OIN or the PIN from the certificate.
The checking organisation should be authorised to check for PSRights in the specified area, if not, NPR will send an error message and no information is given.

The request message contains at least the following information:

- ❑ UUID (*MessageID*) which is the identification of a request and can be used for a resend (see also Ch 10.2).
- ❑ Identification of an area. The way to specify an area should be one of the following:
  1. *AreaManagerId* and *AreaId*.
  2. A location (*CheckLocation*), consisting of a *Latitude* and *Longitude* in WGS84 format.
  3. An address (*CheckAddress*), consisting of *StreetCode* or *StreetName*, *HouseNumber*, *HouseNumberAdditions* and *PlaceOfResidence*.
     If more than one identification is provided, NPR will use the list above to determine priority, e.g. if *AreaManagerId/AreaId* and *CheckLocation* are provided, the combination *AreaManager/AreaId* will be used to specify the area, and the location will be omitted. If *StreetCode* and *StreetName* are both provided, NPR will use *StreetCode* and omit *StreetName*.
     If the identification provided does not match any of the supported methods, NPR will return an error message and no information will be given.
- ❑ Usage that is checked (*UsageId*).
- ❑ Identification of a vehicle (*VehicleId).*
- ❑ Type of vehicleID used (*VehicleIdType*). Type has to be LICENSE_PLATE, GPK or RFID. When no type is provided, NPR assumes that the type of VehicleID is a license plate.
- ❑ Date and time at which must be checked whether or not a PSRight is present *(CheckTime).*
- ❑ *ExtraInfoIndicator*. If this indicator is set to "N" (no), the checking organisation wants a response that consists of a CheckAnswer only. If this indicator is set to "Y" (yes), a response is given that consists of a CheckAnswer with additional information if available.

Optional information:

- ❑ Country code of a vehicle (*CountryCodeVehicle*).
- ❑ Identification or description that a checking organisation can register with the logging in NPR of a check (*ReferenceCheckOrg*).
- ❑ Indicator (Y/N) to check a vehicle status (*CheckVehicleStatusIndicator*) (see also Ch 8).
- ❑ Indicator (0-100) which states the degree of reliability of the VehicleID (*VehicleIDConfidenceLevel*). An entry of 100 indicates a high reliability of the VehicleID, 0 indicates low reliability (see also Ch 8).
- ❑ When multiple Areas need to been checked at once, and AreaManagerTable can be used with multiple AreaManagerId and AreaIds.

To check for PSRights properly, NPR needs to know the area that is checked and the area manager to which the area belongs.

When an area is specified through one *AreaManagerId/AreaId* or a table with *AreaManagerId/AreaIds*, these data are known immediately.
When an area is specified through a *CheckLocation*, NPR collects the areas containing the specified location.
When an area is specified through a *CheckAddress,* the location of the address is determined, and the resulting *CheckLocation* is used to determine the areas to consider.
If more than one identification is provided, NPR will use the list above to determine priority, e.g. if AreaManagerId/AreaId + CheckLocation are provided, the combination AreaManager/AreaId will be used to specify the area, and the location will be omitted.

All areas with a usage either matching the specified usage, or with a usage that is more specific than the specified usage, will be considered in the check for PSRights (Note: a checking organisation receives only information about areas where the organisation is authorised to check).
If the area determination results in "no area found", NPR will return an error message and no information will be given.

Instead of a vehicle ID a disabled person's parking card ID can be provided in the request message (*VehicleId*). When checking a disabled person's parking card ID the VehicleIdType has to be 'GPK'. Note that when a EU parking card for people with disabilities is used as a vehicle ID the area manager is always The Netherlands (area manager ID is '9999') and the area is always The Netherlands (area ID is 'NEDERLAND'). The value of the usage in this situation reflects the type of EU parking card for people with disabilities used to register a parking right: a card for a disabled driver, a card for a disabled passenger or a card for an institution.

If no error occurs, the response message contains the following information:
- ❑ Answer given by NPR at a request to check for a PSRight for a certain vehicle in a specified area at a specified time (*CheckAnswer*).
- ❑ Identification of an area manager in which has been checked (*AreaManagerId*).
- ❑ When a (nearby) address is present a *CheckAddress* containing *StreetCode*, *StreetName*, *HouseNumber*, *HouseNumberAdditions* and *PlaceOfResidence* is returned
- ❑ Table containing the data of 1 or more areas. (*Areatable*).
- ❑ Identification of an area that has been checked (*AreaId*)
- ❑ Table containing 1 or more regulations for the area that has been checked (*AreaRegulationTable*)
- ❑ A regulationId which belongs to the area (*RegulationIdArea*).
- ❑ Identification of a usage (*UsageId*).
- ❑ Description of a usage (*UsageDesc*).
- ❑ The price to pay for one hour of parking (*PriceOneHourParking*).
- ❑ Element containing a list of 1 or more PSRights associated with the check for PSRights and for which information is given (*PSRightCheckPSRightList* with *PSRightCheckPSRightData*).
- ❑ Identification of a right (*PSRightId*).
- ❑ Identification of an area manager (*AreaManagerId*).
- ❑ Identification of an area (*AreaId*).
- ❑ Description of an area (*AreaDesc*).
- ❑ Date and time of the start and end of a PSRight (*StartTimePSRight* and *EndTimePSRight*).
- ❑ Adjusted end time and date when a PSRight has ended (*EndTimePSRightAdjusted*).
- ❑ List of validity windows of a PSRight (*PSRightWindowList*).
- ❑ Description or reference of a right (*ReferencePSRight*).
- ❑ Identification of a selling point (*SellingPointId*).
- ❑ Description of a selling point (*SellingPointDesc)*
- ❑ Identification of a usage (*UsageId*).
- ❑ Description of a usage (*UsageDesc*).

- ❑ Description of a regulation imposed by the area manager (*RegulationDesc*).
- ❑ Grace period of the parking area (*GracePeriodBefore* and *GracePeriodAfter*).
- ❑ Element containing a list of information about the vehicle that has been checked (*VehicleInformation*).
- ❑ Description of the vehicle category (*CategoryDesc*).
- ❑ Description of the manufacturer of the vehicle (*ManufacturerDesc*).
- ❑ Description of the vehicle type (*TypeDesc*).
- ❑ The registered colour of the vehicle (*ColourDesc*).
- ❑ The length of the vehicle (*VehicleLength*).
- ❑ The maximum mass of the vehicle (*MaxMass*).
- ❑ The mass of an empty vehicle (*UnladenMass*).
- ❑ Registration date of responsibility for a vehicle (*RegDateResponsibility*).
- ❑ Registration time of responsibility for a vehicle (*RegTimeResponsibility*).
- ❑ Fuel description of the vehicle (*FuelDesc*).
- ❑ Emission class of the vehicle (*EmissionClass*)

The check results in a *CheckAnswer*, which is returned in the response message. The following *CheckAnswer*s are possible:
'Y'(es), meaning that either a PSRight was found that is valid in the specified area at *CheckTime*, or that at *CheckTime* no PSRight is required for the specified area.
'N'(o), meaning that no PSRight was found that is valid in the specified area at *CheckTime*, while at *CheckTime* the presence of a valid PSRight is required.
Together with CheckAnswer, the list of areas that have been considered, is returned. This is not done when the area was specified in the request message.

If one or more areas are returned in the response message, the price for one hour of parking is determined and also returned for each of those areas.

If the ExtraInfoIndicator was set to "Y" in the request, NPR will provide extra information, which is:
In case of CheckAnswer = "Y".

- Information about the PSRight that was found, or a message that a PSRight is not required.
- Information about the vehicle that has been checked.

In case of CheckAnswer = "N".

- Information about PSRights found in other areas of the same area manager code and the same UsageId (Note: a checking organisation receives only information about areas where the organisation is authorised to check).
- Information about PSRights found in the area specified, before and after check time, within a time frame of 24 hours.
- Information about the vehicle that has been checked.

Every check for PSRights is logged in NPR. The logging consists of the data provided in the request message ***PSRightCheckRequest***, and the *CheckAnswer* (Y or N) that NPR has given.

6.1.2 Example request message

```
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope" xmlns:ns="http://rdw.nl/rpv/3.0">
  <soap:Header>
    <ns:MessageID>?</ns:MessageID>
  </soap:Header>
  <soap:Body>
    <ns:PSRightCheckRequest>
      <ns:PSRightCheckRequestData>
        <!--Optional:-->
```

```
        <ns:AreaManagerId>?</ns:AreaManagerId>
        <!--Optional:-->
        <ns:AreaId>?</ns:AreaId>
        <!--Optional:-->
        <ns:CheckVehicleStatusIndicator>?</ns:CheckVehicleStatusIndicator>
        <!--Optional:-->
        <ns:CheckLocation>
          <ns:Latitude>?</ns:Latitude>
          <ns:Longitude>?</ns:Longitude>
        </ns:CheckLocation>
        <!--Optional:-->
        <ns:CheckAddress>
          <!--Optional:-->
          <ns:StreetCode>?</ns:StreetCode>
          <!--Optional:-->
          <ns:StreetName>?</ns:StreetName>
          <ns:HouseNumber>?</ns:HouseNumber>
          <!--Optional:-->
          <ns:HouseNumberAdditions>?</ns:HouseNumberAdditions>
          <ns:PlaceOfResidence>?</ns:PlaceOfResidence>
        </ns:CheckAddress>
        <ns:UsageId>?</ns:UsageId>
        <ns:VehicleId>?</ns:VehicleId>
        <!--Optional:-->
        <ns:VehicleIdType>?</ns:VehicleIdType>
        <!--Optional:-->
        <ns:CountryCodeVehicle>?</ns:CountryCodeVehicle>
        <ns:CheckTime>?</ns:CheckTime>
        <!--Optional:-->
        <ns:ReferenceCheckOrg>?</ns:ReferenceCheckOrg>
        <ns:ExtraInfoIndicator>?</ns:ExtraInfoIndicator>
        <!--Optional:-->
        <ns:VehicleIDConfidenceLevel>?</ns:VehicleIDConfidenceLevel>
        <!--Optional:-->
        <ns:AreaManagerTable>
          <!--Zero or more repetitions:-->
          <ns:AreaManagerData>
            <ns:AreaManagerId>?</ns:AreaManagerId>
            <!--Optional:-->
            <ns:AreaIdTable>
              <!--Zero or more repetitions:-->
              <ns:AreaIdData>
                <ns:AreaId>?</ns:AreaId>
              </ns:AreaIdData>
            </ns:AreaIdTable>
          </ns:AreaManagerData>
        </ns:AreaManagerTable>
      </ns:PSRightCheckRequestData>
    </ns:PSRightCheckRequest>
  </soap:Body>
</soap:Envelope>
```

7 Messages to be used by area managers

7.1 RetrieveRightInfo

7.1.1 Message dialogue RetrieveRightInfo

This message can be used to retrieve the rights that were present for a certain vehicle around a specified date and time. Example of usage: in cases of parking tax additional assessments, or objections to additional assessments.
The area manager sends a request message ***RetrieveRightInfo***. NPR responds with a message ***RetrieveRightInfoResponse***.

The area manager for which information is retrieved, is identified by the OIN or PIN in its certificate. Each request message contains either the OIN or the PIN from the certificate.

The request message contains the following information:
- ❑ UUID (*MessageId*) which is the identification of a request.
- ❑ Identification of a vehicle (*VehicleId*) or a certain right (PSRightId).
- ❑ Date and time (*IndicatorTime*) around which the right information should be retrieved.

Optional information:
- ❑ Usage of the PSRight (*UsageId*).

For the area manager, the information of all rights registered in NPR for the specified vehicle that were started or stopped within 24 hours around the IndicatorTime, are returned. All information concerning a specified right is returned, in case a PSRightID was used in the request. If no rights were found, the response consists of an empty message.

If no error occurs, the response message sent by NPR contains:
- ❑ Identification of a vehicle (*VehicleId).*
- ❑ Identification of a right (*PSRightId*).
- ❑ Description or reference of a right (*ReferencePSRight*).
- ❑ Country code of a vehicle (*CountryCodeVehicle*).
- ❑ Type of vehicleID used (*VehicleIdType).*
- ❑ Identification of a selling point (*SellingPointId*).
- ❑ Start time and date when a PSRight has started (*StartTimePSRight*).
- ❑ Adjusted start time and date when a PSRight has started (*StartTimePSRightAdjusted*).
- ❑ End time and date when a PSRight has ended (*EndTimePSRight*).
- ❑ Adjusted end time and date when a PSRight has ended (*EndTimePSRightAdjusted*).
- ❑ List of validity windows of a PSRight (*PSRightWindowList*).
- ❑ Identification of an acquirer (*PSRightAcquirerCode*).
- ❑ Description of an acquirer (*PSRightAcquirerDesc*).
- ❑ Identification of an area manager (*AreaManagerId*).
- ❑ Description of an area manager (*AreaManagerDesc*).
- ❑ Identification of an area (*AreaId*).
- ❑ Description of an area (*AreaDesc*).
- ❑ Identification of a usage (*UsageId*).
- ❑ Description of a usage (*UsageDesc*).
- ❑ Time and date of registration when a right has been registered in NPR (*Registration-TimePSRight*).
- ❑ Time and date of registration when a right has been stopped in NPR (*RegistrationEnd-TimePSRight*).

- Geographical position which was provided with the registration of a right (*LocationPSRight*) consisting of a *Latitude* and *Longitude* in WGS84 format.
- The price for a parking right as determined by the provider (*AmountPSRight*).
- The value added tax (V.A.T.) of the price for a parking right as determined by the provider (*VATPSRight*).
- The price for a parking right as determined on basis of the data in NPR or the Operator (*AmountPSRightCalculated*).
- The value added tax (V.A.T.) of the price for a parking right as determined on basis of the data in NPR or the Operator (*VATPSRightCalculated*).
- Minutes of the PSRight which fall within a timeframe (*RegulatedMinutesPSRightCalculated*).
- The maximum amount for a parking right as determined by the authorising provider (*MaxAmountPSRight*).
- The value added tax (V.A.T.) of the maximum amount for a parking right as by the authorizing provider (*VATMaxAmountPSRight*).
- The price for a parking right as recalculated on basis of the data in NPR (*AmountPSRightRecalculated*).
- The value added tax (V.A.T.) of the price for a parking right as recalculated on basis of the data in NPR (*VATPSRightRecalculated*).
- Time and date when the price and V.A.T. of a parking right were recalculated for the last time (*TimeRecalculation*).
- List of one or more Child Rights associated with the PSRightId. A Child Right consist of a *PSRightId* and the *LastTwoDigits* of the license plate used.
- List of one or more secondary IDs which are registered with the PSRight (*Token* and *TokenType*).

7.1.2 Example request message

```
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope" xmlns:ns="http://rdw.nl/rpv/3.0">
  <soap:Header>
    <ns:MessageID>?</ns:MessageID>
  </soap:Header>
  <soap:Body>
    <ns:RetrieveRightInfoRequest>
      <ns:RightInfoRequestData>
        <!--Optional:-->
        <ns:VehicleId>?</ns:VehicleId>
        <!--Optional:-->
        <ns:VehicleIdType>?</ns:VehicleIdType>
        <!--Optional:-->
        <ns:CountryCodeVehicle>?</ns:CountryCodeVehicle>
        <!--Optional:-->
        <ns:PSRightId>?</ns:PSRightId>
        <!--Optional:-->
        <ns:IndicatorTime>?</ns:IndicatorTime>
        <!--Optional:-->
        <ns:UsageId>?</ns:UsageId>
      </ns:RightInfoRequestData>
    </ns:RetrieveRightInfoRequest>
  </soap:Body>
</soap:Envelope>
```

7.2 RetrieveCheckInfo

7.2.1 Message dialogue RetrieveCheckInfo

This message can be used to determine if a certain vehicle was checked, and what check result was given by NPR.
Example of usage: in cases of parking tax additional assessments, or objections to additional assessments.

The area manager employee sends a request message ***RetrieveCheckInfo***. NPR responds with a message ***RetrieveCheckInfoResponse***.
The area manager for which information is retrieved, is identified by the OIN or PIN in its certificate. Each request message contains either the OIN or the PIN from the certificate.

The request message contains the following information:
- ❑ UUID (*MessageId*) which is the identification of a request.
- ❑ Identification of a vehicle.

Optional information:
- ❑ Country code of a vehicle (*CountryCodeVehicle*).
- ❑ Date and time (*IndicatorTime*) around which the check information should be retrieved.

For the specified area manager, information of all logged check answers registered in NPR for the vehicle, with a reference date-time within 24 hrs. of IndicatorTime, are returned. If no IndicatorTime is provided, information of all logged check answers registered in NPR for the vehicle are returned. If no check answers were found, the response consists of an empty message.

The response message contains the following information:
- ❑ Identification of a vehicle or EU parking card for people with disabilities (*VehicleId).*
- ❑ Identification of an area manager (*AreaManagerId*).
- ❑ Description of an area manager (*AreaManagerDesc*).
- ❑ The country of origin of the vehicle license plate, as provided by the enforcer in a check for PSRights (*CountryCodeCheck*).
- ❑ Date and time of the check of the PSRight (*CheckTime*).
- ❑ Indicator denoting if the checking organisation received extra information, while checking for PSRights (*ExtraInfoIndicator*).
- ❑ Identification or description that a checking organisation can register with the logging in NPR of a check (*ReferenceCheckOrg*).
- ❑ Answer given by NPR at a request to check for a PSRight for a certain vehicle in a specified area at a specified time (*Checkanswer*).
- ❑ Code of a PSRight checking organisation (*CheckOrgCode*).
- ❑ Description of a PSRight checking organisation (*CheckOrgDesc*).
- ❑ Identification of a usage (*UsageId*).
- ❑ Identification of an area (*AreaId*).
- ❑ Description of an area (*AreaDesc*).
- ❑ Specification of the area that is checked for the presence of PSRights (*Checklocation*).

7.2.2 Example request message

```
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope" xmlns:ns="http://rdw.nl/rpv/3.0">
  <soap:Header>
    <ns:MessageID>?</ns:MessageID>
  </soap:Header>
  <soap:Body>
```

```
    <ns:RetrieveCheckInfoRequest>
      <ns:CheckInfoRequestData>
        <ns:VehicleId>?</ns:VehicleId>
        <!--Optional:-->
        <ns:CountryCodeVehicle>?</ns:CountryCodeVehicle>
        <!--Optional:-->
        <ns:IndicatorTime>?</ns:IndicatorTime>
      </ns:CheckInfoRequestData>
    </ns:RetrieveCheckInfoRequest>
  </soap:Body>
</soap:Envelope>
```

7.3 RetrieveLinkInfo

7.3.1 Message dialogue RetrieveLinkInfo

This message can be used to retrieve the link between a rights acquirer and a vehicle that is registered within the domain of the area manager.

A area manager sends a request message ***RetrieveLinkInfoRequest*** to NPR, containing the identification of a vehicle or link, and optional a search period or type of vehicle. NPR sends a response message ***RetrieveLinkInfoResponse***, containing the message part ***RetrieveLinkInfoData*** if registration was successful. If not, the message contains the element ***RetrieveLinkInfoResponseError***.

The rights acquirer is identified by the OIN or PIN in its certificate.

The request message contains at least the following information:
- ❑ UUID (*MessageId*) which is the identification of a request.
- ❑ Identification of a link (*LinkId)* or identification of a vehicle (*VehicleId*).

Optional information:
- ❑ Type of vehicleId (*VehicleIdType*).
- ❑ Search period (*StartTimeLink* and/or *EndTimeLink*).

If no error occurs, the response message sent by NPR contains:
- ❑ Type of vehicleID used (*VehicleIdType).*
- ❑ Country code of a vehicle (*CountryCodeVehicle*).
- ❑ Country name of a vehicle *(CountryName).*
- ❑ Identification of an area manager (*AreaManagerId*).
- ❑ Description of an area manager (*AreaManagerDesc*).
- ❑ Identification of an area (*AreaId*).
- ❑ Description of an area (*AreaDesc*).
- ❑ Identification of a link (*LinkId*).
- ❑ Identification of a usage (*UsageId*).
- ❑ Description of a usage (*UsageDesc*).
- ❑ Start time and date when a link has started (*StartTimeLink*).
- ❑ End time and date when a link has ended (*EndTimeLink*).

7.3.2 Example request message

```
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope" xmlns:ns="http://rdw.nl/rpv/3.0">
  <soap:Header>
    <ns:MessageID>?</ns:MessageID>
  </soap:Header>
  <soap:Body>
    <ns:RetrieveLinkInfoRequest>
      <ns:RetrieveLinkInfoRequestData>
        <!--Optional:-->
        <ns:VehicleId>?</ns:VehicleId>
        <!--Optional:-->
        <ns:VehicleIdType>?</ns:VehicleIdType>
        <!--Optional:-->
        <ns:LinkId>?</ns:LinkId>
        <!--Optional:-->
        <ns:StartTimeLink>?</ns:StartTimeLink>
        <!--Optional:-->
        <ns:EndTimeLink>?</ns:EndTimeLink>
      </ns:RetrieveLinkInfoRequestData>
    </ns:RetrieveLinkInfoRequest>
```

```
  </soap:Body>
</soap:Envelope>
```

7.4 EnrollDisabledParkingCard

7.4.1 Message dialogue EnrollDisabledParkingCard

This message can be used to register a disabled parking card.

Area managers can register disabled parking cards in NPR. With this registration fraud and misuse of these type of parking cards can be reduced.
Also a Citizen service number can be registered for the card holder to obtain parking rights in combination with the disabled parking card. The registration of citizen service numbers can only be done when specific agreements have been made with SHPV.

An area manager sends a request message ***EnrollDisableParkingCardRequest***. NPR responds with a message ***EnrollDisableParkingCardResponse***.

The area manager is identified by the OIN or PIN in its certificate. Each request message contains either the OIN or the PIN from the certificate.

The request message contains at least the following information:
- ❑ UUID (*MessageId*) which is the identification of a request.
- ❑ Identification of a EU parking card for people with disabilities (*DisabledParkingCardNumber*).
- ❑ Type of the disabled parking card (*CardType*). The card type has to be GPKB, GPKP, GPKI or GPKBP.
- ❑ Date and time when the validity of the disabled Parking card starts (*StartTimeCard*).
- ❑ Date and time when the validity of the disabled Parking card ends (*EndTimeCard*). A validity period of a disabled parking card can only be registered for the duration of five years.

Optional information:
- ❑ The citizen service number (*CitizenServiceNumber*).

If no error occurs, the response message sent by NPR contains:
- ❑ The registered disabled parking card (*DisabledParkingCardNumber*).

7.4.2 Example request message

```
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope" xmlns:ns="http://rdw.nl/rpv/3.0">
  <soap:Header>
    <ns:MessageID>?</ns:MessageID>
  </soap:Header>
  <soap:Body>
    <ns:EnrollDisabledParkingCardRequest>
      <ns:EnrollDisabledParkingCardRequestData>
        <ns:DisabledParkingCardNumber>?</ns:DisabledParkingCardNumber>
        <!--Optional:-->
        <ns:CitizenServiceNumber>?</ns:CitizenServiceNumber>
        <ns:CardType>?</ns:CardType>
        <ns:StartTimeCard>?</ns:StartTimeCard>
        <ns:EndTimeCard>?</ns:EndTimeCard>
      </ns:EnrollDisabledParkingCardRequestData>
    </ns:EnrollDisabledParkingCardRequest>
  </soap:Body>
</soap:Envelope>
```

7.5 RevokeDisabledParkingCard

7.5.1 Message dialogue RevokeDisabledParkingCard

This message can be used to end a registered disabled parking card.

When ending a disabled parking card, all active parking rights registered with the disabled parking card will also be ended. Only the municipality that recorded the disabled parking card is authorised to end the card.

An area manager sends a request message ***RevokeDisableParkingCardRequest***. NPR responds with a message ***RevokeDisableParkingCardResponse***.

The area manager is identified by the OIN or PIN in its certificate. Each request message contains either the OIN or the PIN from the certificate.

The request message contains at least the following information:

- ❑ UUID (*MessageId*) which is the identification of a request.
- ❑ Identification of a EU parking card for people with disabilities (*DisabledParkingCardNumber*).
- ❑ Date and time when the validity of the disabled Parking card ends (*EndTimeCard*). A validity period of a disabled parking card can only be registered for the duration of five years.

If no error occurs, the response message sent by NPR contains:

- ❑ The registered disabled parking card (*DisabledParkingCardNumber*).

7.5.2 Example request message

```
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope" xmlns:ns="http://rdw.nl/rpv/3.0">
  <soap:Header>
    <ns:MessageID>?</ns:MessageID>
  </soap:Header>
  <soap:Body>
    <ns:RevokeDisabledParkingCardRequest>
      <ns:RevokeDisabledParkingCardRequestData>
        <ns:DisabledParkingCardNumber>?</ns:DisabledParkingCardNumber>
        <ns:EndTimeCard>?</ns:EndTimeCard>
      </ns:RevokeDisabledParkingCardRequestData>
    </ns:RevokeDisabledParkingCardRequest>
  </soap:Body>
</soap:Envelope>
```

7.6 RetrieveDisabledParkingCardInfo

7.6.1 Message dialogue RetrieveDisabledParkingCardInfo

This message can be used to retrieve information about a registered disabled parking card.

An area manager or the holder of a disabled parking card sends a request message ***RerieveDisableParkingCardInfoRequest***. NPR responds with a message ***RetrieveDisableParkingCardInfoResponse***.

The area manager is identified by the OIN or PIN in its certificate. Each request message contains either the OIN or the PIN from the certificate.

The request message contains at least the following information:
- ❑ UUID (*MessageId*) which is the identification of a request.

Optional information:
- ❑ Identification of a EU parking card for people with disabilities (*DisabledParkingCardNumber*).
- ❑ The citizen service number (*CitizenServiceNumber*).
- ❑ The date and time on which the disabled parking card should be active (*CheckTime*).

If no error occurs, the response message sent by NPR contains:
- ❑ List of information about the registered disabled parking card (*DisabledParkingCardTable*) consisting of *DisabledParkingCardNumber*, *IssuingMunicipalityId*, *IssuingMunicipalityDesc*, *CardType*, *CardTypeDesc*, *CitizenServiceNumber* if applicable, *StartTimeCard* and *EndTimeCard*.
- ❑ List of information about registered license plates with the disabled parking card (*PreferredVehicleList*) consisting of *PreferredVehicleTechnicalId*, *LastTwoDigits, TypeOfPreferredVehicle, VehicleDescription*, *StartTimePreferredVehicle* and *EndTimePreferredVehicle* and *AddressCheckIndication* if applicable.
- ❑ List of parking rights registered with the disabled parking card (*PSRightInfoList*) consisting of one or more *PSRightId*.

7.6.2 Example request message

```
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope" xmlns:ns="http://rdw.nl/rpv/3.0">
  <soap:Header>
    <ns:MessageID>?</ns:MessageID>
  </soap:Header>
  <soap:Body>
    <ns:RetrieveDisabledParkingCardInfoRequest>
      <ns:RetrieveDisabledParkingCardInfoRequestData>
        <!--Optional:-->
        <ns:DisabledParkingCardNumber>?</ns:DisabledParkingCardNumber>
        <!--Optional:-->
        <ns:CitizenServiceNumber>?</ns:CitizenServiceNumber>
        <!--Optional:-->
        <ns:CheckTime>?</ns:CheckTime>
        <!--Optional:-->
        <ns:CitizenServiceNumberRepresentative>?</ns:CitizenServiceNumberRepresentative>
      </ns:RetrieveDisabledParkingCardInfoRequestData>
    </ns:RetrieveDisabledParkingCardInfoRequest>
  </soap:Body>
</soap:Envelope>
```

7.7 EnrollPreferredVehicle

7.7.1 Message dialogue EnrollPreferredVehicle

This message can be used to register a vehicle with a disabled parking card. For GPKB, the type of vehicle which can be registered is 'Driver' ('B'). For GPKP, the type of vehicle which can be registered is 'Passenger' ('P'). For GPKBP, both types can be registered.

A disabled parking card can contain a maximum of three registered vehicles.

An area manager or the holder of a disabled parking card can register vehicles with a disabled parking card in NPR. With this registration of preferred vehicles a parking right can be enrolled with the disabled parking card.

An area manager or the holder of the disabled parking card sends a request message ***EnrollPreferredVehicleRequest***. NPR responds with a message ***EnrollPreferredVehicleResponse***.

The area manager or holder of the disabled parking card is identified by the OIN or PIN in its certificate. Each request message contains either the OIN or the PIN from the certificate.

The request message contains at least the following information:

- ❑ UUID (*MessageId*) which is the identification of a request.
- ❑ Identification of a EU parking card for people with disabilities (*DisabledParkingCardNumber*).
- ❑ License plate of a vehicle (*PreferredVehicleId*).
- ❑ Type of preferred vehicle ('B' = driver or 'P' = passenger) (*TypeOfPreferredVehicle*).
- ❑ Description of a vehicle (*VehicleDescription*).
- ❑ Indication whether the address check has to be performed for driver preferred vehicle (Y/N) (*AddressCheckIndication*). In most cases this should be 'Y'. Only specific entities may skip the address check after manual verifications.
- ❑ Date and time when the registration of the preferred vehicle starts (*StartTimePreferredVerhicle*).
- ❑ Date and time when the registration of the preferred vehicle ends (*EndTimePreferredVerhicle*).

If no error occurs, the response message sent by NPR contains:

- ❑ Identification of the enrolled Preferred vehicle (*PreferredVehicleTechnicalId*).
- ❑ Date and time when the registration of the preferred vehicle starts (*StartTimePreferredVerhicle*).
- ❑ Date and time when the registration of the preferred vehicle ends (*EndTimePreferredVerhicle*).

7.7.2 Example request message

```
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope" xmlns:ns="http://rdw.nl/rpv/3.0">
  <soap:Header>
    <ns:MessageID>?</ns:MessageID>
  </soap:Header>
  <soap:Body>
    <ns:EnrollPreferredVehicleRequest>
      <ns:EnrollPreferredVehicleRequestData>
        <ns:DisabledParkingCardNumber>?</ns:DisabledParkingCardNumber>
        <ns:PreferredVehicleId>?</ns:PreferredVehicleId>
        <ns:TypeOfPreferredVehicle>?</ns:TypeOfPreferredVehicle>
        <!--Optional:-->
        <ns:VehicleDescription>?</ns:VehicleDescription>
        <!--Optional:-->
        <ns:AddressCheckIndication>?</ns:AddressCheckIndication>
        <ns:StartTimePreferredVehicle>?</ns:StartTimePreferredVehicle>
        <!--Optional:-->
        <ns:EndTimePreferredVehicle>?</ns:EndTimePreferredVehicle>
```

```
        </ns:EnrollPreferredVehicleRequestData>
    </ns:EnrollPreferredVehicleRequest>
  </soap:Body>
</soap:Envelope>
```

7.8 RevokePreferredVehicle

7.8.1 Message dialogue RevokePreferredVehicle

This message can be used to end a registration of a vehicle with a disabled parking card.

An area manager or the holder of a disabled parking card can register vehicles with a disabled parking card in NPR. With this registration of preferred vehicles a parking right can be enrolled with the disabled parking card.

An area manager or the holder of the disabled parking card sends a request message ***RevokePreferredVehicleRequest***. NPR responds with a message ***RevokePreferredVehicleResponse***.

The area manager or holder of the disabled parking card is identified by the OIN or PIN in its certificate. Each request message contains either the OIN or the PIN from the certificate.

The request message contains at least the following information:
- ❑ UUID (*MessageId*) which is the identification of a request.
- ❑ Identification of the enrolled Preferred vehicle (*PreferredVehicleTechnicalId*).
- ❑ Date and time when the registration of the preferred vehicle ends (*EndTimePreferredVerhicle*).

If no error occurs, the response message sent by NPR contains:
- ❑ Identification of the enrolled Preferred vehicle (*PreferredVehicleTechnicalId*).

7.8.2 Example request message

```
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope" xmlns:ns="http://rdw.nl/rpv/3.0">
  <soap:Header>
    <ns:MessageID>?</ns:MessageID>
  </soap:Header>
  <soap:Body>
    <ns:RevokePreferredVehicleRequest>
      <ns:RevokePreferredVehicleRequestData>
        <ns:PreferredVehicleTechnicalId>?</ns:PreferredVehicleTechnicalId>
        <ns:EndTimePreferredVehicle>?</ns:EndTimePreferredVehicle>
      </ns:RevokePreferredVehicleRequestData>
    </ns:RevokePreferredVehicleRequest>
  </soap:Body>
</soap:Envelope>
```

8 Messages to be used by all entities

8.1 CalculatePrice

8.1.1 Message dialogue CalculatePrice

An entity sends a request message ***CalculatePriceRequest*** to NPR, containing the data of a fictional PSRight, to calculate its price. NPR sends a response message ***CalculatePriceResponse***, containing the message part ***CalculatePriceResponseData*** if price calculation was successful. If not successful, the message contains the element ***CalculatePriceResponseError***.

The request message contains the information necessary to calculate the price of a PSRight, which could be an actual PSRight (calculate before recording), a potential PSRight (price inquiry) or a hypothetical PSRight (e.g testing, what if?).

The entity is identified by the OIN or PIN in its certificate. Each request message contains either the OIN or the PIN from the certificate.

When the request message is used to calculate price before recording an actual PSRight, it is possible to include a VehicleId. When a VehicleId is provided in the request message, NPR checks whether the recording of an PSRight is allowed in combination with a possible minimum parking interruption as instated by the area manager. Rights acquirer can only use a message with a VehicleId when they are authorized to aquire rights for the specific area and area managers can only use this message for their own AreaIds. When a rights acquirer has no authorisation or a area manager tries to use this messages for other AreaIds than it's own, an error message will be given.
When a VehicleId is not provided in the request message, NPR calculates the price based on the provided information and does not perform extra checks for minimum parking interruption and/or authorisations. This request can be used by all entities to acquire information about any parking area known in the NPR, therefore including areas in which no PsRightIds can be acquired.

The request message contains the following information:

- ❑ UUID (*MessageId*) which is the identification of a request.
- ❑ Identification of a vehicle (*VehicleId).* A rights acquirer should be authorised to do a calculate price for the specified area with a VehicleID. If not, an error message is sent by NPR.
- ❑ Type of vehicleId used (*VehicleIdType).* Type has to be LICENSE_PLATE, GPK or RFID. When no type is provided, NPR assumes that the type of VehicleID is a license plate.
- ❑ Country code of a vehicle (*CountryCodeVehicle*).
- ❑ Identification of an area. The way to specify an area should be one of the following:
  1. *AreaManagerId* and *AreaId*.
  2. A location (*PSRightLocation*), consisting of a *Latitude* and *Longitude* in WGS84 format.
  3. *SellingPointId*.
  4. An address (*PSRightAddress*), consisting of *StreetCode* or *StreetName*, *HouseNumber*, *HouseNumberAdditions* and *PlaceOfResidence*.
     If more than one identification is provided, NPR will use the list above to determine priority, e.g. if *AreaManagerId/AreaId* and *LocationPSRight* are provided, the combination *AreaManager/AreaId* will be used to specify the area, and the location will be omitted. If *StreetCode* and *StreetName* are both provided, NPR will use *StreetCode* and omit *StreetName*.
     If the identification provided does not match any of the supported methods, the PSRight will not be calculated and the rights acquirer will receive an error message.
- ❑ Usage of the PSRight (*UsageId*).
- ❑ Date and time when the PSRight starts *(StartTimePSRight).*
- ❑ Date and time when the PSRight ends (*EndTimePSRight*).

- ❑ Validity restriction window. A time window in which a validity restriction period for the PSRight can be defined (*StartTimePSrightDayWindow* and *EndTimePSrightDayWindow*). The validity restriction window has to be defined in a local time format.
- ❑ With *AmountPSright* and *VATPSright* an amount can be registered with the enrollment of a PSRight.

To be able to calculate the price of a PSRight properly, NPR needs to know the area and the area manager to which the area belongs.
When an area is specified through *AreaManagerId/AreaId*, these data are known immediately.
When an area is specified through a location, sellingpointId or address, NPR collects all areas containing the specified identification, and the area corresponding with the specified usage will be selected as the area to calculate a price for.
If the area determination results in "no area found" or "more than one area found", the rights acquirer will receive an error message.

If no error occurs, the response message sent by NPR contains
- ❑ The area and area manager for which a calculation was done, unless this was already specified in the input (*AreaId /AreaManagerId*).
- ❑ The selling point which is closest to the location for which a PSRight is recorded (*SellingPointId*). The selling point is not specified when the area manager and area for which the PSRight is recorded already were specified in the request message.
- ❑ Calculated price (*AmountPSRightCalculated, VATPSRightCalculated*), based on the regulation imposed on the area by the area manager. A price calculation is done only when *EndTimePSRight* was provided in the request message. A specification of the calculated price is added if the calculation involved another regulation than the standard regulation, or when more than one regulation was involved in the calculation. In these cases, the price is lower than the usual price according to the standard regulation, because a rebate applies. Examples of rebate regulations are day tickets, evening tickets, etc.
  NOTE 1: if NPR was not able to do a calculation, *AmountPSRightCalculated* and *VATPSRightCalculated* will be absent.
  NOTE 2: A PSrightWindow is not taken in account in the calculation of AmountPSRightCalculated.
- ❑ Minutes of the fictional PSRight which fall within a timeframe (*RegulatedMinutesPSRightCalculated*).
- ❑ Remarks (*PSRightRemarkList)*, if applicable. For more information on remarks, see Annex B.
- ❑ Adjusted end time (*EndTimePSRightAdjusted*).
  NPR will provide an adjusted end time in these cases:
  - When a right can only be acquired for a limited duration (e.g. maximum parking time one hour). In this case an adjusted end time will be given when no EndTimePSRight was provided, and also when an EndTimePSRight was provided that extends the maximum allowed duration.
  - When the EndTimePSRight was provided in the request, and it is possible to extend duration for the same PSRight price.
  - When in an area with parking interruption a right is registered when a future right is already present. In these cases the end time of the newly registered right will be adjusted, because the parking interruption needs to be maintained (see also PSRightRemark Type 3, Annex B).

  An adjusted end time overrules the end time provided by the rights acquirer.
- ❑ A list that further specifies AmountPSRightCalculated (*SpecifCalcAmountList*). The list is only present when the calculated amount is based on additional regulation(s), besides the standard regulation of the area.

8.1.2 Example request message

```
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope" xmlns:ns="http://rdw.nl/rpv/3.0">
  <soap:Header>
    <ns:MessageID>?</ns:MessageID>
  </soap:Header>
  <soap:Body>
    <ns:CalculatePriceRequest>
      <ns:CalculatePriceRequestData>
        <!--Optional:-->
        <ns:VehicleId>?</ns:VehicleId>
        <!--Optional:-->
        <ns:VehicleIdType>?</ns:VehicleIdType>
        <!--Optional:-->
        <ns:CountryCodeVehicle>?</ns:CountryCodeVehicle>
        <!--Optional:-->
        <ns:AreaManagerId>?</ns:AreaManagerId>
        <!--Optional:-->
        <ns:AreaId>?</ns:AreaId>
        <!--Optional:-->
        <ns:LocationPSRight>
          <ns:Latitude>?</ns:Latitude>
          <ns:Longitude>?</ns:Longitude>
        </ns:LocationPSRight>
        <!--Optional:-->
        <ns:PSRightAddress>
          <!--Optional:-->
          <ns:StreetCode>?</ns:StreetCode>
          <!--Optional:-->
          <ns:StreetName>?</ns:StreetName>
          <ns:HouseNumber>?</ns:HouseNumber>
          <!--Optional:-->
          <ns:HouseNumberAdditions>?</ns:HouseNumberAdditions>
          <ns:PlaceOfResidence>?</ns:PlaceOfResidence>
        </ns:PSRightAddress>
        <!--Optional:-->
        <ns:SellingPointId>?</ns:SellingPointId>
        <ns:UsageId>?</ns:UsageId>
        <ns:StartTimePSright>?</ns:StartTimePSright>
        <!--Optional:-->
        <ns:EndTimePSright>?</ns:EndTimePSright>
        <!--Optional:-->
        <ns:PSRightWindowList>
          <!--Zero or more repetitions:-->
          <ns:PSRightWindowData>
            <!--Optional:-->
            <ns:StartTimePSrightDayWindow>?</ns:StartTimePSrightDayWindow>
            <!--Optional:-->
            <ns:EndTimePSrightDayWindow>?</ns:EndTimePSrightDayWindow>
            <!--Optional:-->
            <ns:StartTimePSrightWindow>?</ns:StartTimePSrightWindow>
            <!--Optional:-->
            <ns:EndTimePSrightWindow>?</ns:EndTimePSrightWindow>
          </ns:PSRightWindowData>
        </ns:PSRightWindowList>
        <!--Optional:-->
        <ns:AmountPSright>?</ns:AmountPSright>
        <!--Optional:-->
        <ns:VATPSright>?</ns:VATPSright>
      </ns:CalculatePriceRequestData>
    </ns:CalculatePriceRequest>
  </soap:Body>
</soap:Envelope>
```

8.2 RetrieveAreasByLocation

8.2.1 Message dialogue RetrieveAreasByLocation

An entity sends a request message ***RetrieveAreasByLocationRequest***, containing a location. NPR sends a response message ***RetrieveAreasByLocationResponse***, containing a list of areas matching the specified location, together with their usage, as well as the address that is closest to the specified location (if available).

The entity is identified by the OIN or PIN in its certificate. Each request message contains either the OIN or the PIN from the certificate.

The request message contains the following information:

- ❑ UUID (*MessageId*) which is the identification of a request.
- ❑ Identification of an area. The way to specify an area should be one of the following:
    1. *AreaManagerId* and *AreaId*.
    2. A location (*LocationPSRight*), consisting of a *Latitude* and *Longitude* in WGS84 format.
    3. An address (*AddressData*) consisting of *StreetCode* or *StreetName*, *HouseNumber*, *HouseNumberAdditions* and *PlaceOfResidence*.
    4. *SellingPointId*.

    If more than one identification is provided, NPR will use the list above to determine priority, e.g. if *AreaManagerId/AreaId + PSRightLocation* are provided, the combination *AreaManager/AreaId* will be used to specify the area, and the location will be omitted.

Optional information:

- ❑ Date and time for matching areas at an certain moment (*ReferenceTime*).
- ❑ Usage of the areas to retrieve (*UsageId*).

If no reference date-time is provided, all current and future areas matching the specified location, are retrieved. Otherwise all areas valid at reference date-time, matching the specified location, are retrieved.
If a *UsageId* is provided,all areas with a usage either matching the specified usage, or with a usage that is more specific than the specified usage are returned, otherwise all areas are returned. The hierarchy in the UsageIds is taken in account.
Besides the area or areas that were found, the address with a location, consisting of a *Latitude* and *Longitude*, that is closest to the specified location, is returned. Note that an address will only be returned if there were areas found (if available).

If no error occurs, the response message sent by NPR consists of the following

- ❑ Identification of an area manager (*AreaManagerId*).
- ❑ List of areas matching the specified location (*AreaTable*) consisting of *AreaId, AreaDesc, StartDateArea, EndDateArea, UsageId , GracePeriodBefore, GracePeriodAfter PriceOneHourParking* and *Geometry*, if applicable.
- ❑ Within the AreaData a table containing 1 or more regulations (*AreaRegulationTable*)for the area consisting of *RegulationIdArea*, *UsageId*, and *StartDateAreaRegulation*.
- ❑ Address closest to the specified location (*LocationAddress*) consisting of *StreetCode, StreetName*, *HouseNumber*, *HouseNumberAdditions*, *PlaceOfResidence* and *Location (consisting of a Latitude and Longitude).*

8.2.2 Example request message

```
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope" xmlns:ns="http://rdw.nl/rpv/3.0">
  <soap:Header>
    <ns:MessageID>?</ns:MessageID>
  </soap:Header>
  <soap:Body>
    <ns:RetrieveAreasByLocationRequest>
      <ns:RetrieveAreasByLocationRequestData>
        <!--Optional:-->
        <ns:AreaLocation>
          <ns:Latitude>?</ns:Latitude>
          <ns:Longitude>?</ns:Longitude>
        </ns:AreaLocation>
        <!--Optional:-->
        <ns:RequestAddress>
          <!--Optional:-->
          <ns:StreetCode>?</ns:StreetCode>
          <!--Optional:-->
          <ns:StreetName>?</ns:StreetName>
          <ns:HouseNumber>?</ns:HouseNumber>
          <!--Optional:-->
          <ns:HouseNumberAdditions>?</ns:HouseNumberAdditions>
          <ns:PlaceOfResidence>?</ns:PlaceOfResidence>
        </ns:RequestAddress>
        <!--Optional:-->
        <ns:SellingPointId>?</ns:SellingPointId>
        <!--Optional:-->
        <ns:AreaManagerId>?</ns:AreaManagerId>
        <!--Optional:-->
        <ns:AreaId>?</ns:AreaId>
        <!--Optional:-->
        <ns:ReferenceTime>?</ns:ReferenceTime>
        <!--Optional:-->
        <ns:UsageId>?</ns:UsageId>
      </ns:RetrieveAreasByLocationRequestData>
    </ns:RetrieveAreasByLocationRequest>
  </soap:Body>
</soap:Envelope>
```

8.3 RetrieveAreaRegulationFareInfo

8.3.1 Message dialogue RetrieveAreaRegulationFareInfo

An entity can ask for information about the areas, regulations and fares that are recorded in NPR. It is possible to ask information about one specific area, as well as information about all recorded areas.

The entity for which information is retrieved, is identified by the OIN or PIN in its certificate. Each request message contains either the OIN or the PIN from the certificate.

The request message contains the following information:

- ❑ UUID (*MessageId*) which is the identification of a request.
- ❑ Identification of an area manager (*AreaManagerId*).
- ❑ Identification of an area (*AreaId).*
- ❑ Reference date-time *(CheckTime)*.

If no reference date-time is provided, the current and future data will be retrieved, otherwise the data that are valid on reference date-time will be retrieved.
If no AreaId is provided, all recorded areas will be retrieved, as well as all recorded regulations and all recorded fares.
If an AreaId is provided with an reference date-time, the specified area is retrieved, together with the associated regulation(s) and the associated fare(s). The area data also contains the price for one hour of parking, if applicable (*PriceOneHourParking*).
If no areas were found, the response consists of an empty message.

If no error occurs, the response message sent by NPR consists of the following

- ❑ List of areas matching the specified request (*AreaTable*) consisting of *AreaId, AreaDesc, StartDateArea, EndDateArea, UsageId , GracePeriodBefore, GracePeriodAfter* and *PriceOneHourParking*, if applicable.
- ❑ Within the *AreaData* a table containing 1 or more regulations (*AreaRegulationTable*)for the area consisting of *RegulationIdArea*, *UsageId*, *UsageDesc, PriceOneHourParking* and *StartDateAreaRegulation*.
- ❑ Within the *AreaData* a table containing information about emission requirements (*AreaEmissionRequirementsTable*) for the area. This table contains a category (*VehicleEmisCategory*) and description (*VehicleEmisCategoryDesc*) of the vehicles for which the emission minimum emission requirement (*MinEmissionReq*) is applicable. The table also shows the period (*StartDateEmisReq* and *EndDateEmisReq*) for which the emission requirement is active.
- ❑ List of regulations for the retrieved areas (*RegulationTable*) consisting of *RegulationId, RegulationDesc, RegulationType, StartDateRegulation* and *EndDateRegulation*.
- ❑ List of Time frames data for the retrieved regulations (*TimeFrameTable*) consisting of *DayTimeFrame, StartDateTimeFrame , StartTimeTimeFrame*, *EndDateTimeFrame, EndTimeTimeFrame*, *ClaimRightPossible*, *MaxDurationRight, MinParkingInterruption, FareTimeFrame* and *ResetDurationTimeFrame*.
- ❑ List of Fare data for the retrieved regulations (*FareTable*) constisting of *StartDateFarePart*, *EndDateFarePart*, *StartDurationFarePart*, *EndDurationFarePart*, *TotalAmountParts*, and *StepSizeFarePart*.
- ❑ List of Special days data for the area manager (*SpecialDaysTable*) consisting of *SpecialDayName* and *SpecialDayDate.*

8.3.2 Example request message

```
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope" xmlns:ns="http://rdw.nl/rpv/3.0">
  <soap:Header>
    <ns:MessageID>?</ns:MessageID>
  </soap:Header>
  <soap:Body>
    <ns:RetrieveAreaRegulationFareInfoRequest>
      <ns:AreaArrangeAccountInfoRequestData>
        <ns:AreaManagerId>?</ns:AreaManagerId>
        <!--Optional:-->
        <ns:AreaId>?</ns:AreaId>
        <!--Optional:-->
        <ns:CheckTime>?</ns:CheckTime>
      </ns:AreaArrangeAccountInfoRequestData>
    </ns:RetrieveAreaRegulationFareInfoRequest>
  </soap:Body>
</soap:Envelope>
```

8.4 RetrieveAreaManagers

8.4.1 Message dialogue RetrieveAreaManagers

This message can be used to retrieve a list of all active area managers, with a start date.
An entity sends a request message ***RetrieveAreaManagersRequest***. NPR responds with a message ***RetrieveAreaManagersResponse***.

The request message contains no information, the response message contains the following information:

- ❑ UUID (*MessageId*) which is the identification of a request.
- ❑ Identification of an area manager (*AreaManagerId).*
- ❑ Start date of an area manager (*StartDateAreaManager*).
- ❑ Description of the area manager (*AreaManagerDesc*).
- ❑ VAT number of the area manager (*VATNumber*).
- ❑ End date of an area manager (*EndDateAreaManager*).
- ❑ Address of an area manager (*StreetName*, *HouseNumber*, *PostalCode*, *PlaceOfBusiness*).

8.4.2 Example request message

```
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope" xmlns:ns="http://rdw.nl/rpv/3.0">
  <soap:Header>
    <ns:MessageID>?</ns:MessageID>
  </soap:Header>
  <soap:Body>
    <ns:RetrieveAreaManagersRequest>
      <ns:RetrieveAreaManagersRequestData/>
    </ns:RetrieveAreaManagersRequest>
  </soap:Body>
</soap:Envelope>
```

8.5 RetrieveSellingPoints

8.5.1 Message dialoge RetrieveSellingPoints

This message can be used to retrieve a list of all active selling points with a reference date. Optional a list of active selling points can be obtained for a specific area manager, with a reference date.

An entity sends a request message ***RetrieveSellingPointsRequest***. NPR responds with a message ***RetrieveSellingPointsResponse***.

The request message contains the following optional information:

- ❑ UUID (*MessageId*) which is the identification of a request.
- ❑ Date and time for collecting the list of selling points (*ReferenceDate*).
- ❑ Identification of an area manager (*AreaManagerId*).

The response message contains the following information:
A list of selling points with for each point:

- ❑ Identification of a selling point (*SellingPointId*).
- ❑ Description of a selling point (*SellingPointDesc*).
- ❑ Start date and time of a selling point (*StartDateSellingPoint).*
- ❑ A location (*LocationPSRight*), consisting of a *Latitude* and *Longitude* in WGS84 format.
- ❑ Identification of an area manager (*AreaManagerId*).
- ❑ Identification of an area (*AreaId*).
- ❑ Description of an area (*AreaDesc*).
- ❑ Start date of an area (*StartDateArea*).
- ❑ List of payment methods available at the selling point, consisting of a *Paymentmethod* and a *StartDateTime* and a *EndDateTime*.

8.5.2 Example request message

```
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope" xmlns:ns="http://rdw.nl/rpv/3.0">
  <soap:Header>
    <ns:MessageID>?</ns:MessageID>
  </soap:Header>
  <soap:Body>
    <ns:RetrieveSellingPointsRequest>
      <ns:RetrieveSellingPointsRequestData>
        <!--Optional:-->
        <ns:AreaManagerId>?</ns:AreaManagerId>
        <!--Optional:-->
        <ns:ReferenceDate>?</ns:ReferenceDate>
      </ns:RetrieveSellingPointsRequestData>
    </ns:RetrieveSellingPointsRequest>
  </soap:Body>
</soap:Envelope>
```

8.6 StatusRequest

A Connected system is always allowed to send a Status Request in order to check the availability of NPR and the connection. The Response by NPR (if possible) contains OK or NOK and the error.

8.6.1 Message dialogue StatusRequest

An entity sends a request message ***StatusRequestRequest***. NPR sends a response message ***StatusRequestResponse***, containing the status OK/NOK and if applicable an error or information message.

The entity is identified by the OIN or PIN in its certificate. Each request message contains either the OIN or the PIN from the certificate.

The following information is provided in the request message:

- ❑ UUID (*MessageId*) which is the identification of a request.
- ❑ Date and time at which the request is sent (*StatusTime*).

Optional information:

- ❑ A reference that the sender of the status request can provide with the status request (*StatusReference*).

If no error occurs, the response message sent by NPR consists of the following

- ❑ Time at which a StatusRequest was processed (*StatusTime*).
- ❑ The status of NPR, which is OK or NOK *(StatusRPV*).
- ❑ The reference defined in the request (*StatusReference*).

8.6.2 Example request message

```
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope" xmlns:ns="http://rdw.nl/rpv/3.0">
  <soap:Header>
    <ns:MessageID>?</ns:MessageID>
  </soap:Header>
  <soap:Body>
    <ns:StatusRequestRequest>
      <ns:StatusRequestRequestData>
        <ns:StatusTime>?</ns:StatusTime>
        <!--Optional:-->
        <ns:StatusReference>?</ns:StatusReference>
      </ns:StatusRequestRequestData>
    </ns:StatusRequestRequest>
  </soap:Body>
</soap:Envelope>
```

8.7 RetrieveAreaParkingOneLiner

8.7.1 Message dialogue RetrieveAreaParkingOneLiner

This message can be used to retrieve information in one sentence, about the regulation for paid parking (fixed usage 'BETAALDP'), for the upcoming hour (starting from the provided *CheckTime*).

The request message contains the following information:

- ❑ UUID (*MessageId*) which is the identification of a request.
- ❑ Identification of an area manager (*AreaManagerId*).
- ❑ Identification of an area (*AreaId).*
- ❑ Reference date-time *(CheckTime)*.

If no error occurs, the response message sent by NPR consists of the following:

- ❑ Description of 'BETAALDP' area regulation in one sentence (*OneLiner*).

This sentence is presentable to an end user.

8.7.2 Example request message

```
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope" xmlns:ns="http://rdw.nl/rpv/3.0">
  <soap:Header>
    <ns:MessageID>?</ns:MessageID>
  </soap:Header>
  <soap:Body>
    <ns:RetrieveAreaParkingOneLinerRequest>
      <ns:RetrieveAreaParkingOneLinerRequestData>
        <ns:AreaManagerId>?</ns:AreaManagerId>
        <ns:AreaId>?</ns:AreaId>
        <!--Optional:-->
        <ns:CheckTime>?</ns:CheckTime>
      </ns:RetrieveAreaParkingOneLinerRequestData>
    </ns:RetrieveAreaParkingOneLinerRequest>
  </soap:Body>
</soap:Envelope>
```

8.8 RetrieveAreaParkingInfo

8.8.1 Message dialogue RetrieveAreaParkingInfo

This message can be used to retrieve information about the regulation and fares of a specific area, about the regulation for paid parking (fixed usage 'BETAALDP').

The request message contains the following information:
- ❑ UUID (*MessageId*) which is the identification of a request.
- ❑ Identification of an area manager (*AreaManagerId*).
- ❑ Identification of an area (*AreaId).*
- ❑ Reference date-time *(CheckTime)*.

If no error occurs, the response message sent by NPR consists of the following:
Three data tables:
- ❑ Information about the regulation (*RegulationData).*
- ❑ Information about the additional regulation (*AdditionalRegulationData).*
- ❑ Information about the regulation on special days (*SpecialDaysRegulationData).*

Each table contains:
- ❑ Identification of an area (*AreaId).*
- ❑ Description of an area (*AreaDesc).*
- ❑ Information on which day or days the time and rate applies (*Days*).
- ❑ Information on which time of the given days the rate applies (*Time*).
- ❑ Information about the rate that applies during the given time (*Rate*).
- ❑ Information whether a maximum duration applies during the given time (*MaximumDuration*).

These texts are presentable to an end user.

8.8.2 Example request message

```
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope" xmlns:ns="http://rdw.nl/rpv/3.0">
  <soap:Header>
    <ns:MessageID>?</ns:MessageID>
  </soap:Header>
  <soap:Body>
    <ns:RetrieveAreaParkingInfoRequest>
      <ns:RetrieveAreaParkingInfoRequestData>
        <ns:AreaManagerId>?</ns:AreaManagerId>
        <ns:AreaId>?</ns:AreaId>
        <!--Optional:-->
        <ns:CheckTime>?</ns:CheckTime>
      </ns:RetrieveAreaParkingInfoRequestData>
    </ns:RetrieveAreaParkingInfoRequest>
  </soap:Body>
</soap:Envelope>
```

9 Error handling

9.1 Error procedure

In this chapter the procedure for connected systems is described in case of an error situation. From the point of view of the connected system two types of errors can occur after sending a request to NPR:

1. *Error:* Reply from NPR with an error message 1-635.
2. *Communication lost and error messages 302 and 999:* no Reply from NPR is received within a time-out period, set by the Connected system (e.g. 10s) or a Reply with error code 302 and 999.

Ad 1 Reply with an error messsage 1 – 635:
All error messages except 302 and 999 are errors in the content of the Request. A resend of the Request is not allowed because it will result in the same error: repair of the content of the Request is required. Contact the help desk if analysis of the Request shows that a parameter in NPR seems incorrect.

Ad 2 State "Communication lost":
This state is started when the Connected system does not get a Reply on a Request within a certain period (e.g. a time-out after 10 seconds). Or when the Reply indicates error code 302 or 999. The following procedure starts:

1. The Connected system should decide after a certain number of retries (e.g. 3 times) to stop sending Requests to NPR and buffer them.(In case of error code 302 or 999, the NPR system will, after a certain period, automatically stop sending error code 302 or 999 and produce a time-out).
2. Start sending StatusRequests, for example every 60 seconds.
3. After 5 minutes of communication loss, contact Helpdesk.
4. After communication is re-established (according to Help desk or when StatusResponse OK is received), start sending buffered messages *with the original UUID.*

9.2 Resending a Request

A connected system can always resend a Request with the original UUID. If NPR already replied with a response, the original Response based on the UUID is replied, if the message type of the resend Request is the same as the original Request. In this situation changes in the content of the resend Request in comparison to the original Request are neglected and the original Reply is sent, even if it contains error messages.
If the original Response contained an error code 302 or 999, the resend Request is processed as a regular Request.

Annex A – Description of XML elements

This Annex describes in detail the elements used in the messages, in alphabetical order. The following information is provided:

- Item

The name of the XML element. Some elements have values, others do not, e.g. nesting elements to support multiple occurrences.

- Type

The data type, only applicable to those elements that have a value.

Type	Description
Text	A sequence of characters.
DT	Date and Time in UTC format (Co-ordinated Universal Time) as *'CCYY-MM-DDThh:mm:ss*Z' or Date and Time in local time ± offset to UTC '*CCYY-MM-DDThh:mm:ss±hh:mm*'.
Date	Date in format CCYYMMDD, area manager local time.
Int	Numeric, integer values only.
Dec	Numeric, fractional numbers possible.
Enum	Enumeration; the element has a specified set of values. The possible values will be listed.

- Len

This column indicates the length of the element.

  - 'n' indicates a fixed length where 'n' is the number of characters.
  - 'm-n' indicates a variable length where "m" is the minimum and "n" is the maximum.

- Description

Information about the purpose of the element, rules for usage and examples of usage. For elements of type "Enum", i.e. elements with a fixed set of values, in the description the possible values will be listed.

General message rules

- ❑ The order in which to put tags, is specified in the XSD. Putting tags in the wrong order, will result in an error while processing the request. The XSD is leading for defining the tag order.
- ❑ In request messages, optional elements that are not applicable, can be delivered in two ways:
  - Leave out the tag.
  - Include the tag, but state explicitly that it has no value, i.e. value xsi:nil="**true**".

  Note: If an empty tag is sent with no explicit "nil" value, this will result in an XSD validation error.
- ❑ In response messages, NPR delivers optional elements that have no value, by including the tag in the message, stating explicitly that it has no value, i.e. value xsi:nil="**true**".
- ❑ Dates and times of PSRights and reference date-times are either delivered as UTC , i.e. format *CCYY-MM-DDThh:mm:ss*Z, or delivered in local time with an offset to UTC, i.e. format *CCYY-MM-DDThh:mm:ss±hh:mm*. If no Z or offset is provided, UTC is assumed.
- ❑ Dates and times used for managing areas, regulations and fares, as well as dates and times concerning price calculation, are area manager local dates and times.
- ❑ The format of tags with price values is €.cc.

Item	Type	Len	Description
AddressLocation			Node containing the data of an address related to (closest to) a specified location.
AmountFarePart	Dec	1.8-7.8	Amount per step size that has to be paid in a fare.
AmountFraction	Dec	1.2-8.2	Amount, being a fraction of AmountPSRightCalculated. Is used within a SpecifCalcAmountList.
AmountInterimCalculated	Dec	1.2-8.2	Temporarily amount for parking in a parking facility that is given by an area operator or NPR.
AmountPSRight	Dec	1.2-8.2	The price to pay for the PSRight. VAT included. Format €.cc. The price for the PSRight, calculated by the rights acquirer or the selling point (e.g. parking meter) that was used for acquiring the PSRight.
AmountPSRightCalculated	Dec	1.2-8.2	Price to pay for the PSRight, VAT included. Format €.cc. A price calculated by NPR, set by the area manager. The calculation is based on the regulation applicable to the area where the PSRight was acquired, and depends on the day or days the right was acquired, the duration of the right, and the fare per hour. A price is calculated anytime a request message is sent that contains *EndTimePSRight* (new or changed).
AmountRatePart	Dec	1.2-8.2	The minimum amount that has to be paid for acquiring a PSRight. Format €.cc. This amount is the minimum timeframe to pay, multiplied by the fare at time = *CheckTime.*
AreaData			Data of 1 specific area.
AreaDesc	Text	1-80	Description of the Area in the NPR, as set by the area manager.
AreaEmissionRequirements-Data			Data of 1 specific emission requirement for an area.
AreaEmissionRequirements-Table			Table containing the data of 1 or more emission requirements for an area.
AreaId	Text	1-10	Identification of the Area in the NPR. The area IDs in NPR are set by the area manager, they are unique for the area manager but not necessarily unique within NPR.
AreaLocation			This node contains the location of an area
AreaManagerId	Int	1-4	Identification of the area manager in the NPR. Area manager identifications are unique in NPR, and are issued by SHPV.
AreaManagerDesc	Text	1-80	Description of the Area Manager in NPR.
AreaOperator			Area Operators are operating off street parking facilities on behalf of the Area Manager. Acquired parking rights can be settled using the NPR.
AreaRegulationData			Data of 1 specific regulation applying to an area.
AreaRegulationTable			Table containing the regulations that apply to a certain area.

Item	Type	Len	Description
AreaTable			Table containing the data of 1 or more areas.
CancelDateTime			Date and time of the end of a parking right stated by the parking operator of a parking facility.
CardType	Text	1-10	Type of a parking card for people with disabilities. Types. The card type values that can be used are GPKB, GPKP, GPKI or GPKBP.
CategoryDesc	Text	1-40	Description of the vehicle category.
CheckAddress			Node in which an address is given, specifying the area that should be checked for the presence of PSRights.
CheckAnswer	Text	1	Answer given by NPR at a request to check for a PSRight for a certain vehicle in a specified area at a specified time. Value list: Y = Yes, a PSRight was found. N = No, a PSRight was not found.
CheckDateTime	DT		Date and time at which must be checked whether or not a vehicle can enter the parking facility.
CheckInfoData			Information on one specific logged check.
CheckInfoList			A list of information on logged checks.
CheckLocation			Node in which a location is given, specifying the area that should be checked for the presence of PSRights.
CheckOrgCode	Int	5	Code of a PSRight checking organisation. CheckOrgCodes are unique in NPR, and are issued by SHPV.
CheckOrgDesc	Text	1-80	Description of a PSRight checking organisation.
CheckTime	DT		Time used for checking data at the preferred time (e.g. PSRights or RegulationInfo), in UTC.
CheckVehicleStatusIndicator	Text		Indicator whether or not a vehicle needs a status check to stay on public roads. Y = Yes, check the status of the vehicle. N = No, do not check the status of the vehicle.
ChildPSRight			Information about a ChildRight of a specific Parent Right.
CitizenServiceNumber	Int	9	The citizen service number (BSN) for Dutch citizens is a unique personal number allocated to everyone registered in the Personal Records Database (BRP). Everyone who registers with the Personal Records Database is automatically given a citizen service number.
ClaimRightPossible	Int	1	Indicator whether or not PSRights are valid in a timeframe. Y = Yes, claimed PSRights are valid. N = No, claimed PSRights are not valid.
ColourDesc		1-17	The registered color of the vehicle.
CountryCodeCheck	Text	1-3	Denotes the country of origin of the vehicle license plate, as provided by the enforcer in a check for PSRights. The coding scheme used is UN agreed. For the list of possible codes

Item	Type	Len	Description
			https://unece.org/trade/cefact/unlocode-code-list-country-and-territory.
CountryCodeVehicle	Text	1-3	Denotes the country of origin of the vehicle license plate. The coding scheme used is UN agreed. For the list of possible codes https://unece.org/trade/cefact/unlocode-code-list-country-and-territory. Advise: to avoid problems in enforcement, omit the CountryCode if unknown: don't use NL as default.
DateTimePSPhoto	DT		Date and time when a photo was taken.
Days	Text		Presentable text which is part of the area regulation info for 'BETAALDP'. It contains the day or days for which the *Rate* applies. The text is displayed in dutch.
DayTimeframe	Text	1-20	Name of a regular day of the week, in the language of the area manager (i.e. zondag, maandag etc.), or name of a special day where special fares apply (e.g. marktdag or christelijke feestdag).
DisabledParkingCardNumber	Int	10	Identification number of a EU parking card for people with disabilities.
DisabledParkingCardTable			Table containing the information from a disabled parking card.
EmissionClass	Text	1	Emission class of the vehicle.
EndDateArea	Date	8	End date of an area (exclusive).
EndDateAreaRegulation	DT		End date-time of a regulation of an area (exclusive, time included).
EndDateEmisReq	DT		End date-time of an emission requirement for an area.
EndDateFare	Date	8	End date of a fare (exclusive).
EndDateFarePart	Date	8	End date of a fare part (exclusive).
EndDateRegulation	Date	8	End date of a regulation (exclusive).
EndDateTime	DT		Date and time of the end of a parking right stated by the parking operator of a parking facility.
EndDateTimeAdjusted	DT		Adjusted end time by rights acquirer.
EndDurationFarePart	Int	6	Indicates the duration of the PSRight when the fare part ends to be applicable (minutes).
EndTimeApplied	DT		Date and time when a certain regulation ends to be applicable (time exclusive). Is used within a SpecifCalcAmountList.
EndTimeCard	DT		Date and time when the validity of the disabled Parking card ends (exclusive).
EndTimeLink	DT		Date and time when the Link between a VehicleId and a provider ends (time exclusive).
EndTimePreferredVehicle	DT		Date and time when a registration of the preferred vehicle ends (exclusive).
EndTimeTimeFrame	Int	4	End time of a timeframe, format uumm (time exclusive). This is the area manager local time when a certain fare ends to be applicable.

Item	Type	Len	Description
EndTimePSRight	DT		Date and time when the PSRight ends (time exclusive). In price calculations, maximum significance is minutes, i.e. the seconds are ignored. However, if seconds are delivered, they will be recorded.
EndTimePSRightAdjusted	DT		System calculated date and time (time exclusive) when a PSRight ends, overrules the *EndTimePSRight* provided by the rights acquirer.
EndTimePSRightDayWindow	Text	1-20	If this element is present, *StartTimePSRightDayWindow* is also present. The day provided is inclusive.For further information see *StartTimePSRightDayWindow*.
EndTimePSRightWindow	Int	4	If this element is present, *StartTimePSRightWindow* is also present. Consists of a time value in format hhmm (time exclusive). For further information see *StartTimePSRightWindow*.
EndTimeRemark	DT		Time associated with a PSRightRemark. Date and time at which the remark ends to be applicable (time exclusive).
ErrorCode	Int	1-3	Code explaining an error situation.
ErrorDesc	Text	1-80	Description explaining an error situation.
ErrorVariable	Text	1-200	In this element, when an error situation occurs, extra information that might be useful for the recipient can be given.
ExternalReferenceParentRight	Text	1-25	Identification or description that a rights acquirer can register with a ParentRight. If, how and when to use this element, is to be decided by the rights acquirer.
ExtraInfo	Tekst	1-200	Informational message from the area operator.
ExtraInfoCode	Int	1	Code of the informational message from the area operator.
ExtraInfoIndicator	Text	1	Indicator denoting if the checking organisation wants to receive extra information, on checking for PSRights. Value list: Y = Yes, I want extra information. N = No, I don't want extra information.
FareCalculationCode	Text	1-10	Code of a certain fare. The fare calculation IDs in NPR are set by the area manager, they are unique for the area manager but not necessarily unique for NPR.
FareCalculationDesc	Text	1-80	Description of a certain fare, as set by the area manager.
FareData			Data of one specific fare.
FarePartData			Data of one specific fare part.
FarePartTable			Table containing the data of 1 or more fare parts.
FareTable			Table containing the data of 1 or more fares.
FareTimeFrame	Text	10	Code of the fare that is applied within this timeframe.
FuelData			Data of one specific fuel registration.

Item	Type	Len	Description
FuelDesc	Tekst	1-40	Fuel description of the vehicle.
Geometry			Geometry of a parking area. World Geodetic System WGS84 - EPSG:4326.
GracePeriodAfter	Int	2	Grace period to apply beyond end date-time PSRight, e.g. after expiration of a parking right, the time in minutes a customer is still allowed to stay on the parking spot.
GracePeriodBefore	Int	2	Grace period to apply before start date-time PSRight, e.g. after actual parking, time in minutes a customer is granted to acquire a parking right.
IndicatorTime	DT		Date and time around which something should be retrieved, e.g. rights or check answers.
InfoMessageCode	Int	3	Code denoting an informational message.
InfoMessageDesc	Text	1-80	Description of an informational message.
Latitude	Dec	3.10	Latitude of a location for which a PSRight is acquired. Coordinate frame WGS84, decimal format. If no sign is provided, a positive sign is assumed. Maximum significance: 10 digits behind the decimal point.
LastTwoDigits	Text	1-2	The last two digits of the license plate of the displayed vehicle.
LinkId	Int	1-10	Unique, system issued, identification of a Link between a VehicleId and a provider in NPR.
LocationPSPhoto			Node in which a location is given, specifying the (closest) address where a photo was taken.
LocationPSRight			Node in which a location is given, specifying the area for which a PSRight should be recorded.
Longitude	Dec	4-10	Longitude of a location for which a PSRight is acquired Coordinate frame WGS84, decimal format. If no sign is provided, a positive sign is assumed. Maximum significance: 10 digits behind the decimal point.
ManufacturerDesc	Text	1-25	Description of the manufacturer of the vehicle.
MaxDurationRight	Int	4	Maximum possible duration of a PSRight (in minutes) within this timeframe.
MaximumDuration	Int	4	Presentable text which is part of the area regulation info for 'BETAALDP'. It contains the maximum duration of a PS Right. The text is displayed in dutch.
MaxMass	Int	5	The maximum mass of the vehicle.
MessageID	Byte	16	Universally Unique identifier which uniquely identifies a message (UUID (GUID)). A description of the UUID/GUID is found at: http://en.wikipedia.org/wiki/Universally_unique_identifier#Version_4_.28random.29 In NPR a version is used with 36 digits in the form: xxxxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxxxx where hexadecimal digit 'x' is one of 0,1,2,3,4,5,6,7,8,9,a,b,c,d,e,f.

Item	Type	Len	Description
MinEmissionReq	Text	1	Minimum emission class of a vehicle for being in an area.
MinParkingInterruption	Int	4	Minimum time between registering PsRights of the same VehicleId in the same AreaId.
Oneliner	Text		Presentable text of the area regulation for 'BETAALDP' for one hour, starting from *CheckTime*. The text is displayed in dutch.
ParentRightId	Int	1-10	Unique, system issued, identification of a ParentRight in NPR.
ParkingAuthorizationData			Informational data from an area operator.
PaymentAuthorisationId	Int	1-10	Unique, system issued, identification of a PSRight in NPR.
PlaceOfResidence	Text	1-24	The place of residence of an address.
PriceOneHourParking	Dec	1.2-8.2	The price to pay for one hour of parking, using the fare applicable at a certain reference time.
PSPhoto	base64 bin		A photo of the vehicle identification.
PSRightAcquirerCode	Int	5	The code of the rights acquirer as known in NPR. Rights acquirer codes are unique in NPR, and are issued by SHPV.
PSRightAcquirerDesc	Text	1-80	The description of the rights acquirer as recorded in NPR.
PSRightCheckPSRightData			Element containing the data of a single PSRight, associated with a check for PSRights.
PSRightCheckPSRightList			Element containing a list of 1 or more PSRights, associated with a check for PSRights, for which information is given.
PSRightId	Int	1-10	Unique, system issued, identification of a PSRight in NPR.
PSRightInfoData			Information of one specific PSRight.
PSRightInfoList			A list of information on PSRights.
PSRightParentData			Information of a specific Parent Right.
PSRightRemarkData			Element containing the data of a single PSRightRemark. On registering a right, NPR gives remarks if applicable.
PSRightRemarkList			Element containing a list of 1 or more remarks given by NPR.
PSRightRemarkType	Int		Denotes the kind of remark. For more information on remark types, see Annex B.
PSRightWindowData			Element containing the data of one validity window.
PSRightWindowList			List of validity windows of a PSRight, PSRights with 1 or more validity windows are only valid during window days/times and not outside the windows days/times.
Rate	Text		Presentable text which is part of the area regulation info for 'BETAALDP'. It contains a description of the rate/tariff. The text is displayed in dutch.

Item	Type	Len	Description
ReferenceCheckOrg	Text	1-40	Identification or description that a checking organisation can register with the logging in NPR of a check. If, how and when to use this element, is to be decided by the checking organisation.
ReferencePSPhoto	Text	1-40	Identification or description that a checking organisation can register with a photo information exchange.
ReferencePSRight	Text	1-40	Identification or description that a rights acquirer can register with a PSRight. If, how and when to use this element, is to be decided by the rights acquirer.
ReferenceTime	DT		Reference time used for selection of data, in UTC.
ReferenceTimeRegulation	DT		Reference time used to select the valid regulation(s) to apply.
PreferredVehicleList			A list of preferred vehicles to register parking rights in combination with a disabled parking card.
PreferredVehicleTechnicalId	Int	10	Unique, system issued, identification of a preferred vehicle.
RegDateResponsibility	DT		Registration date of responsibility for a vehicle.
RegTimeResponsibility	Int	4	Registration time of responsibility for a vehicle.
RegulatedMinutesPSRightCalculated	Int	6	Duration of the PSRight in minutes which fall within a timeframe.
RegulationData			Data of 1 specific regulation.
RegulationDesc	Text	1-80	Description of a regulation imposed by the area manager.
RegulationId	Text	1-10	Identification of a regulation imposed by the area manager. The regulation IDs in NPR are set by the area manager, they are unique for the area manager but not necessarily unique for NPR.
RegulationIdArea	Text	1-10	RegulationId that is applicable to the associated area.
RegulationTable			Table containing the data of 1 or more regulations
RegulationType	Enum		Denotes the kind of regulation. Possible values: B = base regulation, i.e. the regulation applying for paid parking. A = additional regulation, e.g. discount regulations like evening tickets or day tickets.
ResetDurationTimeFrame	Text	10	Period of time for a stepped tariff to reset and start counting from the first fare part.
SellingPointId	Int	1-10	Identification of the selling point where the right was acquired. Selling point IDs are unique within NPR, and are issued by SHPV.
SellingPointDesc	Text	1-80	Description of a selling point.
SpecialDayDate	Date	8	Date on which a special day is active.
SpecialDayName	Text	1-20	Name of a special day, for example 'KOOPZONDAG' or 'FEESTDAG'. On these days a different regulation can be instated.
SpecialDaysTable			Table containing the data of 1 or more special days.

Item	Type	Len	Description
SpecifCalcAmountData			This node contains one specific entry in a SpecifCalcAmountList.
SpecifCalcAmountList			List that further specifies AmountPSRightCalculated The list is only present when the calculated amount is based on additional regulation(s), besides the standard regulation, of the area.
StartDateArea	Date	8	Start date of an area (inclusive).
StartDateAreaRegulation	DT		Start date-time of a regulation of an area (inclusive).
StartDateEmisReq	DT		Start date-time of an emission requirement for an area.
StartDateFare	Date	8	Start date of a fare (inclusive).
StartDateFarePart	Date	8	Start date of a fare part (inclusive).
StartDateRegulation	Date	8	Start date of a regulation (inclusive).
StartDateSellingPoint	DT		Start date-time of a SellingPointselling point.
StartDateTime	DT		Date and time of the start of a parking right stated by the parking operator of a parking facility.
StartDateTimeAdjusted	DT		When a parking operator states a different start time, being usually the time a vehicle entered the area.
StartDurationFarePart	Int	6	Duration of a PSRight when this fare part starts to be applicable.
StartTimeApplied	DT		Date and time (inclusive) when a certain regulation starts to be applicable. Is used within a SpecifCalcAmountList.
StartTimeCard	DT		Date and time when the validity of a disabled Parking card starts (inclusive).
StartTimeLink	DT		Date and time when the Link between a VehicleId and a provider starts (inclusive).
StartTimePreferredVehicle	DT		Date and time when the registration of a preferred vehicle starts (inclusive).
StartTimeTimeFrame	Int	4	Start time of a time frame, format *uumm* (inclusive). This is the area manager local time when a certain fare starts to be applicable.
StartTimePSRight	DT		Date and time when the PSRight starts (inclusive). In price calculations, maximum significance is minutes, i.e. the seconds are ignored. However, if seconds are delivered, they will be recorded.
StartTimePSRightAdjusted	DT		Date and time when the PSRight starts (inclusive). StartTimePSRight is overruled by this value, provided by an area operator. In price calculations, maximum significance is minutes, i.e. the seconds are ignored. However, if seconds are delivered, they will be recorded.
StartTimePSRightDayWindow	Text	1-20	If this element is present, *EndTimePSRightDayWindow* is also present. Consists of a day name value. The day name values that can be used are ZONDAG, MAANDAG, DINSDAG, WOENSDAG, DONDERDAG, VRIJDAG, ZATERDAG. The day provided is inclusive.

Item	Type	Len	Description
StartTimePSRightWindow	Int	4	If this element is present, *EndTimePSRightWindow* is also present. Consists of a time value in format *uumm* (inclusive). Used when a PSRight is only valid during a certain time window per day. The right itself is valid for a period of 1 day or more, but each day the validity is only a few hours. Examples monthly parking ticket for mornings: 08.00-12.00 or evenings. 19.00-23.00.
StartTimeRemark	DT		Time associated with a PSRightRemark (inclusive). Date and time at which the remark starts to be applicable.
StatusReference	Text	1-10	A reference that the initiator of a status request can provide with the status request. It will be returned in the status request response.
StatusTime	DT		Time at which a StatusRequest was sent (in the request) or processed (in the response).
StatusRPV	Text	1-10	OK or NOK: NPR available or not
StepSizeFarePart	Int	6	Step size (in minutes) of the fare. The amount to pay for a PSRight is always equal to N times the step size of the fare, i.e. the minimum amount to pay is one step.
StreetCode	Text	1-16	The code of a street. Using a street code instead of a street name in the geographic determination of NPR areas, eliminates the influence of spelling errors, mismatch in diacritic characters etc. Street codes shorter than 5 digits should be preceded by leading zeroes.
StreetName	Text	1-80	The street name of an address.
HouseNumber	Int	5	The house number of an address, without additions, i.e. without "huisnummertoevoeging" or "huisletter" or "aanduiding bij huisnummer".
HouseNumberAdditions	Text	10	Additions to the house number, like “huisnummertoevoeging” and/or “huisletter” and/or “aanduiding bij huisnummer”.
TableofChildRightsList			List of Child Rights associated with the selected VerhicleId/PSRightId/ParentRightId.
Time	Text		Presentable text which is part of the area regulation info for ‘BETAALDP’. It contains the times in which the *Rate* applies. The text is displayed in dutch.
TimeFrameTable			A table containing timeframes when a certain fare applies.
TimeFrameTableData			The data of one individual timeframe.
Token	Text		A secondary id, not used for matching but optional to give access to pedestrian entrances of parking facilities.
TokenType	Text		A (or more) secondary ID which will be registered with the PSRight (*Token* and *TokenType*). Possible

Item	Type	Len	Description
			entries for Token Type are: QR-CODE, BARCODE, RFID, MAGNET, VOUCHER or PINCODE. For QR-CODE, model 2 needs to be used as the standard. For display the QR-code has a size of 25x25 pixels and must have an ASCII value of 15-26 digits. An example of an application in off street parking is the storage of a door key as a QR code. This code is generated by the operator and can be displayed by providers.
TotalAmountParts	Dec	1.2-8.2	Total amount in €.cc of the previous fare parts before this fare part.
TypeDesc	Text	1-50	Description of the vehicle type.
UnladenMass	Int	5	The mass of an empty vehicle.
UsageDesc	Text	1-80	Description of the usage of a certain area (or set of areas) in NPR.
UsageId	Text	1-10	Identification of the usage of an area, regulation or PSRight in the NPR. A general set of usage identifications are issued by SHPV, to be used by all area managers. Each area manager can extend the general usages, subdividing the general usages into more specific usages. To correctly determine the validity of rights, it is necessary that the subdivision of usages matches the ruling set in parking legislation. E.g. when the validity rules of a parking permit for residents and the validity rules of a parking permit for companies are not the same, it is required that a PSRight "parking permit resident" has a different UsageId than a PSRight "parking permit company", therefore, the area manager will distinguish these usages. However, when the validity rules for these two permits are the same any time, any place, then it is not necessary to distinguish, and the PSRights of these two permits can have the same UsageId.
UsageIDParent	Text	1-10	Identification of the usage of a ParentRight in the NPR. A general set of usage identifications are issued by SHPV, to be used by all area managers. Each area manager can extend the general usages, subdividing the general usages into more specific usages.
VATAmountFraction	Dec	1.2-8.2	Amount, being a fraction of VATPSRightCalculated. Is used within a SpecifCalcAmountList.
VATInterimCalculated	Dec	1.2-8.2	Format €cc.VAT portion of *AmountInterimCalculated*, only present if applicable.
VATPercentage	Dec	3.1	Percentage VAT of a certain fare.
VATPSRight	Dec	1.2-8.2	Format €cc.VAT portion of *AmountPSRight*, only present if applicable.
VATPSRightCalculated	Dec	1.2-8.2	Format €.cc.VAT portion of *AmountPSRightCalculated*, only present if applicable.

Item	Type	Len	Description
VehicleIdConfidenceLevel	Int	0-100	Degree of reliability of the VehicleID (0=low; 100=high).
VehicleDescription	Tekst	1-80	Description of a vehicle provided by the user of the vehicle.
VehicleEmisCategory	Text	1-3	Category of a vehicle for which a emission requirement is active.
VehicleEmisCategoryDesc	Text	1-12	Description of the vehicle category for which a emission requirement is active.
VehicleFuelList			Table containing fuel information of a.vehicle.
VehicleId	Text	1-25	Usually the license plate number of a vehicle, in some cases another identification, e.g. the number of a EU parking card for people with disabilities. Before storage in NPR, or before retrieval, the vehicle ID provided in a request message is stripped of non-alphabetical characters (-, spaces) and converted to uppercase.
VehicleLength	Int	4	The length of the vehicle.
VehicleIdType	Text		The type of VehicleId that is used. Possible entries: LICENSE_PLATE or RFID.
VehicleInformation			Table containing data of a vehicle.

Annex B – Remarks

Some response messages contain an optional table (PSRightRemarkList), containing one or more remarks. A remark might be accompanied by a StartTimeRemark and/or an EndTimeRemark, both in UTC.

The following table lists the remarks that can be given and the meaning of the remark.

PSRightRemark-Type	StartTi-meRemark	End-TimeRemark	Meaning of the remark
1	Present	Present	Period in which an acquired PSRight is not valid. The remark is given when a PSRight is acquired without an end time, or when a PSRight is acquired or revoked with an end time that lies in or beyond the period in which the remark applies. The remark is only given when the period starts within 24 hours of StartTimePSRight.
2	Not present	Present	This remark is given when a PSRight is acquired without an end time, and a maximum parking duration applies. NPR now returns the last time at which the PSRight is valid. Beyond EndTimeRemark, NPR will consider the PSRight to be invalid.
3	Present	Present	The start and end time of this remark show the period where parking rights cannot be acquired due to a parking interruption that is included in the source data of a municipality. The start time of this exception is equal to the start time of the interruption period and the end time is equal to the start time of the PSRight that causes the changed end time. To summarize: a right will be ended earlier because there is a future right and the parking interruption says there has to be x time between two rights.
4	Present	Present	This remark is given for starting tariffs that are larger than 10 EUR.
5	Present	Present	This remark is given when the tariff is progressive, i.e. when the rate goes up during timeframe

The handling of the remark is up to the rights acquirer. The acquirer can present them as warnings to its customers (but leave the responsibility to terminate a PSRight in time to the customer). He can also actively ensure that an acquired PSRight cannot lose its validity before its end of use e.g. by sending a Revoke.

Annex C – List of error messages and informational messages

ErrorCode	ErrorDesc
1	No current regulation for areamanager id <AreamanagerId>, area id <AreaId>
5	No PSRight required
7	No information available for price calculation
8	Usage Id does not exist or is not valid *Occurs also when an " Area does not exist or is not valid" or when a " Area manager does not exist or is not valid"*
9	Area could not be determined uniquely
10	Area does not exist or is not valid
11	Area manager does not exist or is not valid *This error code does not occur at the moment when an area manager does not exist or is not valid, error code 8 will occur.*
13	Sellingpoint is not valid
100	Area is not provided *Can also occur if there is no Area found in the GEO data according to the coordinates in the request.*
102	No authorisation
103	Invalid parking duration
104	Checking organisation has no authorisation to check
105	No area found to check PSRight for this usage
110	PSRight not found *If there are no rights found after "RetreiveRightInfo" there will not occur an error code 110. Not finding rights is not an error situation.*
111	Erroneous validity restricting window
116	PSRight was recorded more than once with different data
119	Parent Right not Found
120	External Reference not unique *The external reference used in PsParentRightData is not unique in NPR*
121	Invalid value for VehicleIdType
123	No information found for provided selection criteria *If there is no Check Information found after "RetreiveCheckInfo" there will not occur a error code 123. Not finding info is not a error situation.*
127	PSRight is already frozen for settling *Every night, all PSRights with an EndTime older than 6 hours are frozen for settling, and cannot be altered anymore.*
129	Substitution is not possible: REGULATION IS NOT SUITABLE FOR LONG TERM PARKING
130	Unable to relate to parent right
131	No authorisation granted by parking facility
132	No authorisation granted by provider

ErrorCode	ErrorDesc
133	Parent right cannot be changed: child right present
134	Parking facility does not respond
135	Functionality not supported by this parking facility
140	Vehicle does not meet emission requirement
141	The maximum capacity of the areamanager is reached
142	The maximum capacity of the areagroup is reached
143	The maximum provider capacity for the areamanager is reached
144	The maximum provider capacity for the areagroup is reached
145	Attention! Vehicle could not be checked for applicable emission requirement
147	Vehicle change not allowed due to absence of convenant *Occurs when a municipality does not participate in an agreement for vehicle registration and parking rights in combination with disabled parking cards.*
148	Vehicle not registered on cardholder's address *In some cases the address of the disabled parking card holder is checked in combination with the vehicle that is going to be registered. Both need to be present on the same address.*
149	There already is a vehicle active for this GPK
150	Previously registered vehicle for GPK ended on [date]
151	Present registered vehicle for GPK canceled
152	Cardholder unknown, vehicle registration not possible
153	Disabled parking permit not found
154	Vehicle not found with disabled parking card
155	Preferred vehicle not valid
156	Available capacity for this usage reached
202	Tag is not filled properly
204	It is not possible tot grant PSRightId until uumm (UTC)
206	Required data not filled
302	Technical failure, please contact Service House Parking
303	Technical failure at external party, please contact Service House Parking
601	End date has to be after the start date
602	The maximum duration of a GPK is 5 years
603	Invalid GPK type
604	Area manager is not valid
605	GPK number already exists in the GPK registry
606	Citizen service number not allowed for this type of GPK
607	Citizen service number not allowed due to the absence of the SHPV processing agreement
608	Invalid citizen service number
609	No person found with the provided citizen service number
610	Validity of GPK overlaps with an existing GPK for the individual
611	Insufficient search data provided
612	Excessive search data provided
613	GPK not found
614	Modifying GPK from other municipalities is not allowed
615	No changes required due to previous termination of GPK
616	Correction not allowed due to a vehicle registration with the GPK

ErrorCode	ErrorDesc
617	At least one detail of the GPK has to be changed
618	End date and time cannot be in the past
619	End date has to be before the registered end date
620	The end date cannot be before <variabele datum>
622	Start date changed due to a mandatory waiting period
623	Validity of the preferred license plate must fall within the validity of the GPK
624	Start date for the preferred license plate cannot be in the past or the future
625	A maximum of three preferred license plates can be active at once
626	Preferred license plates can only be registered with GPK(B)P cards
627	Invalid license plate
628	No citizen service number linked to GPK
629	Preferred license plate not found
630	The provided end date conflicts with ongoing parking rights
631	License plate not allowed due to the absence of the GPK agreement
634	Preferred license plate already active in the specified period
635	Effective start date would be after the end date
639	This field can not be empty
640	Indication authorized is not available for this card type.
641	Invalid mutated table (the specified table does not exist).
642	Invalid type preferred license plate.
643	Invalid combination type preferred license plate and GPK type.
644	Vehicle not registered on cardholder's address.
645	Address check indication not allowed.
999	Technical failure, please contact ICT Servicedesk

Annex D – Inbound messages from RDW

For inbound messages from RDW to a receiver (provider or parking operator), the receiver needs to authenticate these messages on the transport layer with the valid PKI certificate of the RDW. This PKI certificate has been issued by a trusted certificate issuing supplier. The complete list can be found on https://cert.pkioverheid.nl. The OIN of the RDW needs to be on the client certificate. A list of this can be found on http://portaal.digikoppeling.nl/registers/. Search for RDW.

Also, RDW has to trust the certificate of the receiver on both test- and production environment. All common certificate authorities are already trusted. The hostname has to align with the name of the server certificate of the receiver (Server Name Indication is not supported). If the hostname is not the same as the name on the certificate, it is recommended to add the hostname using Subject Alternate Names.

Finally, if the receiver wants to validate from which environment the message was sent (test or production), the IP-address of the request should be retrieved. To determine the IP-address of the client, OperationContext can be used:

```
var remoteEndpointMessageProperty =
        OperationContext.Current.IncomingMessageProperties
        [RemoteEndpointMessageProperty.Name] as RemoteEndpointMessageProperty;
```

The variable “Address” gives the remote IP-address on which the connection is established.

IP-addresses are available on request via shpv@rdw.nl.