



Suomen Tilaajavastuu Oy

# Veronumero.fi

Card Storehouse: interface for verifying authorised personal identity cards.

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## Record of amendments

Date	Amended by	Amendment
26 June 2013	Suomen Tilaajavastuu Oy	First version
20 Mar 2015	Lari Iso-Anttila	Added country code support to Valtti-cards URI changes ...o.fi/1.0/cards to ...o.fi/1.1/cards

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# General description of interface

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The 'veronumero.fi' tax number service ([www.veronumero.fi](http://www.veronumero.fi)) assembles employer data and **personal data** in connection with the practical application of the Finnish **Act Governing the Use of Individual Tax Numbers and the Public Register of Tax Numbers within the Construction Industry**. Using the service, the tax numbers of individuals are notified to the public tax number register for the construction industry maintained by the Finnish Tax Administration. The service can be used to order personal identity cards that incorporate individual tax numbers and photographs.

Employers can also use the service to order such cards. The card data is stored in the Card Storehouse from where it can subsequently be retrieved for the purposes of checks performed by a partner. Typically, the tax number and the validity of the personal identity card are verified at the time the employee is introduced to the construction work.

The Card Storehouse service and interface maintain the data in the cards which are in use. The card and tax number data can be checked by machine using the interface described in this document.

## Card Storehouse in brief

The data in the cards supplied by Suomen Tilaajavastuu is stored in the Card Storehouse service. At a future date, partners and the printing houses authorized by them will also be able to create cards. The data in these cards too will also be held in the Card Storehouse. The interface with the card producer is described in a separate document.

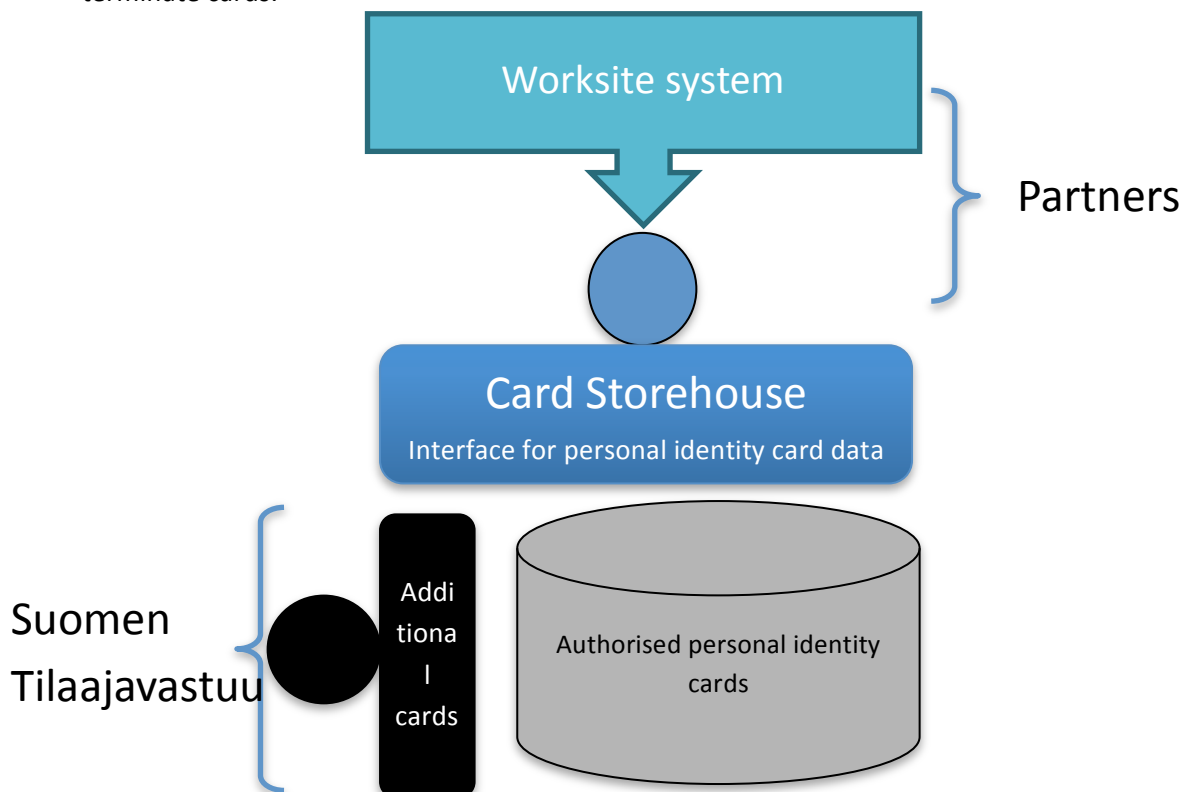
The Card Storehouse data is used for verifying an employee's individual tax number at the worksite, specifically at the time the employee is introduced to the construction work. Typically, the check of the personal identity card will be made by machine reading the card's barcode. The worksite system will then send a request to the Card Storehouse for retrieving the tax number and other card data.

Card data can be retrieved from the Card Storehouse using the following keys:

- Barcode ID (BID): sequence of numbers on the card (the numeric value of the barcode)
- ID generated by producer (UID): card identifier
- Tax number and business identity code (TaxNumber and BusinessId)

Immediately after the card is checked, the customer application can verify the card's authenticity.

The customer application can also retrieve from the Card Storehouse a list of closed cards and can itself terminate cards.



## Form of interface

The interface consists of HTTP requests and it adheres to REST principles.

The presentation is mainly XML (UTF-8). The request's "Content-Type" for XML messages is application/xml, the response "application/xml; charset=utf-8". The PDF copy of the card and the personal photograph are embedded in the data types (Base64 encoded).

The interface returns 200 OK to HTTP requests, or an appropriate error code:

- 400 Bad request ("*InvalidRequest*", "*SchemaFailure*", "*IllegalCard*", "*InvalidStatusChange*")
- 401 Unauthorized
- 404 Not found ("*NotFound*")
- 409 Conflict ("*AlreadyExists*")
- 415 Unsupported media type ("*InvalidMediaType*")
- 503 Service unavailable ("*Error*")

The interface's domain names are of the form korttivarasto.veronumero.fi.

### Example:

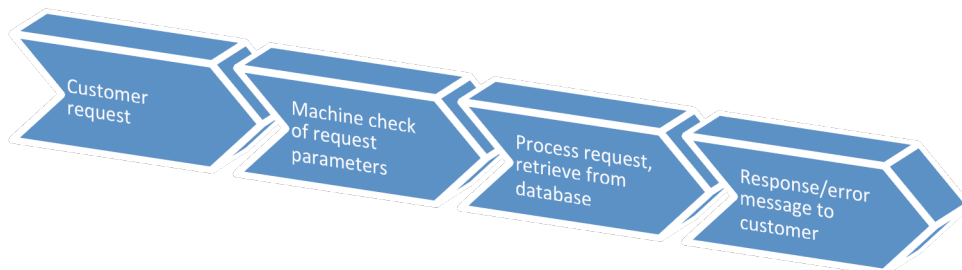
[https://korttivarasto.veronumero.fi/1.1/resource\[?params=xxx;...\]](https://korttivarasto.veronumero.fi/1.1/resource[?params=xxx;...]), in which 1.1 is the interface version.

## Information security

Traffic is managed via the HTTPS protocol and **users are identified** using the HTTP Basic authentication method. The user data needed in the identification is retrieved from the common LDAP server of the tilaajavastuu.fi service.

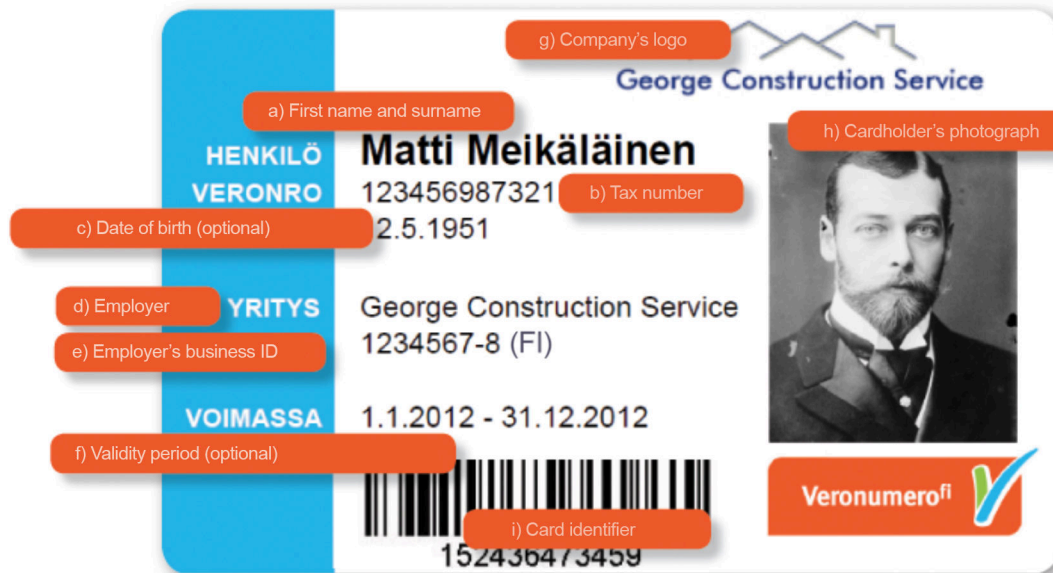
## Processing a request

The **validity of parameters** checked by machine is always **verified** before processing the request.



## Data content

The Card Storehouse incorporates two types of data: data visible on the card and data not visible on the card. The card below shows all the data that is visible on the card (the company logo is not stored in the Card Storehouse).



The visible and invisible card data stored in the Card Storehouse are:

- Card identifier (BarCodeld - BID)
- Person's first name (Firstname)
- Person's surname (Surname)
- Person's tax number (TaxNumber)
- Person's date of birth (Birthday) – *not obligatory*
- Employer's name (Employer name)
- Employer's business identity code (Employer BusinessId)
- Card's validity period (Valid Until) – *not obligatory*
- Personal identity card holder's photograph in PNG form (Photo)
- Card in PDF form (PDFCopy)
- ID generated by card producer (UID)

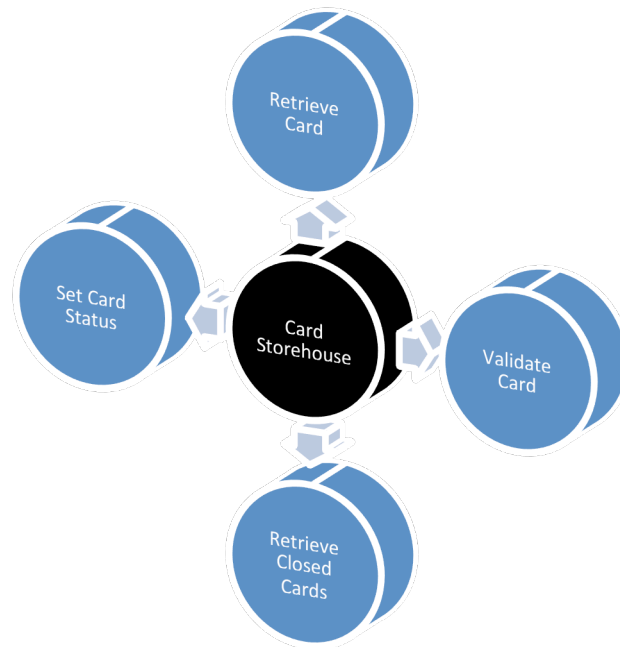
In addition to the above data, the card has status information. The status information may include:

- Enumerated status (status):
  - Unconfirmed (*"NotConfirmed"*)
  - Active (*"Active"*)
  - Closed (*"Closed"*)
  - Expired (*"Expired"*)
- User ID of person making modification (ModifiedBy)
- Date of modification (ModifiedDate)
- Reason for modification (Reason):
  - Card closed (*"CardClosed"*)
  - Card lost (*"CardLost"*)
  - Other error (*"CardError"*)
- Additional information (Description)

Both the card's UID and BID are unique data items in the databank.

# Interface functionalities

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## ***Retrieve Card***

The employee's tax number and other card data are retrieved from the centralised Card Storehouse via the interface.

The interface is intended for partner companies of Suomen Tilajavastuu Oy who verify personal identity cards (at the worksite) at the time the employees are introduced to the construction work.

## **Request**

Card data can be retrieved from the Card Storehouse using the following keys:

- Barcode ID (BID): sequence of numbers on the card (the numeric value of the barcode)
- ID generated by producer (UID): card identifier
- Tax number and business identity code (TaxNumber and BusinessId)

The following can be retrieved from the card:

- Data content (URL ends .xml)
- Card template in PDF form (URL ends .pdf)
- Person's photograph for the card (URL ends .jpg)



### Example requests:

- GET /korttivarasto.veronumero.fi/1.1/cards/10101010101.xml
- GET /korttivarasto.veronumero.fi/1.1/cards/10101010101.png
- GET /korttivarasto.veronumero.fi/1.1/cards/uid/1234567890ABCD.pdf
- GET /...mero.fi/1.1/cards/businessId/1234567-8/taxNumber/02938492384.xml
- GET /...ro.fi/1.1/cards/businessId/1234567-8/countryCode/EE/taxNumber/1234567890.xml

## Response

The response will be data in the requested form, i.e. data in XML form, a PDF document or a photograph.

### XML response:

- Data content (as in the section headed *Data content*, excluding binary data).
- Card identifier (Card.barCodeId)
- Person's first name (Person.firstName)
- Person's surname (Person.surname)
- Person's tax number (Person.taxNumber)
- Person's date of birth (Person.birthDay) - *not obligatory*
- Employer's name (Employer.name)
- Employer's business identity code (Employer.businessId)
- Employer's business identity code (Employer.countryCode)
- Card's validity period (Card.validUntil) – *not obligatory*
- ID generated by producer (UID)
- Status data (CardStatus)
- Status (status, as in the section headed '*Data content*')
  - User ID of person making modification (modifiedBy)
  - Date of modification (modifiedDate)
  - Reason for modification (reason, as in the section headed '*Data content*')
  - Additional information (description)

### PDF response:

- PDF document (card print template)

### PNG response:

- Person's PNG photograph

### Example (XML):

```
<?xml version="1.0" encoding="UTF-8"?>
<GetCardResponse result="OK">
  <Card barCodeId="152436473459" validUntil="2014-05-30T09:30:10Z" uid="0123456789ABCD">
    <Status status="Closed" modifiedBy="Keijo" date="2013-05-30T11:22:43.000+02:00"
      reason="CardError" desription="Lirum larum" />
    <Person firstName="Matti" surname="Meikäläinen" taxNumber="12345678901"
      birthDay="21.7.1964"/>
    <Employer name="George Construction Service" businessId="1234567-8"
      countryCode="FI"/>
  </Card>
</GetCardResponse>
```

### Error situations

- If an error preventing operation is found in other parameters
- Fields of incorrect type ("InvalidRequest" – 400)
- Card not found with the key (or key pair) in question ("NotFound" - 404)

### Validate Card

Card is validated (security level T1) to prevent copying, and the key in the card is checked in the server. This operation normally follows the Retrieve Card operation.

The interface is intended for partner companies of Suomen Tilaaajavastuu Oy who verify personal identity cards (at the worksite) at the time the employees are introduced to the construction work.

### Request

#### Parameters:

- UID (Card.uid)
- Card's encrypted content, Base64 encoded (Card.SecurityData)

#### Example:

PUT / korttivarasto.veronumero.fi/1.1/cards/validate

```
<?xml version="1.0" encoding="UTF-8"?>
<ValidateCardRequest>
  <Card uid="0123456789ABCD">
    <SecurityData>RW5jcnlwdGVkRGF0YQ==</SecurityData>
  </Card>
</ValidateCardRequest>
```

## Response

The response is an acknowledgement of 'ok' if the stamping succeeds, or otherwise an error message.

## Error situations

- If the device is not registered against the company's business identity code
- If the device is not registered
- If an error preventing operation is found in other parameters

## Retrieve Closed Cards

List closed cards. The system returns up to the last 500 closed cards from the Card Storehouse. The default is to return the cards closed in the last month.

The interface is intended for partner companies of Suomen Tilaaajavastuu Oy who verify personal identity cards (at the worksite) at the time the employees are introduced to the construction work.

## Request

### Example:

```
GET /korttivarasto.veronumero.fi/1.1/cards?status=Closed
```

The retrievable status designations are "Closed" and/or "Expired". The combination of these is expressed as "status=Closed,Expired".

The default is to return the cards expired in the last month. With the URL parameters "&start=..." and "&end=..." you can retrieve any time window (format yyyy-MM-dd).

## Response

The response is a list of cards on which the following information is retrieved:

- Card identifier
- Status data (structured XML type, as in the operation *Set Card Status*)

### Example:

```
<?xml version="1.0" encoding="UTF-8"?>
<FindCardResponse amount="2" result="OK">
  <Cards amount="2">
    <Card uid="0123456789ABCD">
      <Status modifiedDate="2013-04-01T00:00:00.000+03:00"
        modifiedBy="SuperUser" status="Closed"/>
    </Card>
    <Card uid="AAAAAAAAAAAAAAAA">
      <Status modifiedDate="2013-05-05T00:12:34.567+03:00"
        modifiedBy="Aspa" status="Expired"/>
    </Card>
  </Cards>
</FindCardResponse>
```

## Error situations

- Incorrect type of request parameters (*"InvalidRequest"* – 400)

## Set Card Status

The personal identity card is marked as closed in the Card Storehouse on account of the card being misused, lost or faulty, or due to the termination of the person's employment. The key is the personal identity card number.

The interface is intended for trusted partner companies of Suomen Tilaaajavastuu Oy for whom authorisation to close cards has been separately issued.

## Request

### Parameters:

- Personal identity card number (Card.barCodeId)
- Personal identity card UID (Card.uid)
- Structured XML type (as in the section headed *Data content*).
- Card status (CardStatus)
  - Change in status (status, as in the section headed *Data content*)
  - Reason for modification (reason, as in the section headed *Data content*)
  - User ID of person making modification (modifiedBy)
  - Additional information (description)
- Date of modification, only in response (Card.modifiedDate)

### Example:

```
PUT / korttivarasto.veronumero.fi/1.1/cards/status
```

```
<?xml version="1.0" encoding="UTF-8"?>
<CardStatusRequest>
  <Card barCodeId="152436473459" uid="0123456789ABCD">
    <CardStatus status="Closed" modifiedBy="Keijo" reason="CardError"
      description="Lirum larum" />
  </Card>
</CardStatusRequest>
```

## Response

The response is an acknowledgement giving the status of the card.

### Example:

```
<?xml version="1.0" encoding="UTF-8"?>
<CardStatusResponse result="OK">
  <Card barCodeId="152436473459" uid="0123456789ABCD">
    <CardStatus status="Closed" modifiedBy="Keijo" reason="CardError"
      modifiedDate="2013-05-30T00:00:00Z" />
  </Card>
</CardStatusResponse>
```

## **Error situations**

- No card for the BID in question (*“NotFound”* - 404)
- Fields of incorrect type (*“InvalidRequest”* – 400)
- Incorrect status change (*“InvalidStatusChange”* – 400)
- Schema error if schema check is required (*“SchemaFailure”* – 400)
- Incorrect *“Content-Type”* (*“InvalidMediaType”* – 415)

# Other

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## **Additional cards and their production**

The card production process will be opened up to other parties in addition to Suomen Tilaajavastuu. These parties may add cards to the Card Storehouse, subject to certain conditions. The interface in question will be described in its own documentation.