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Card Issuing & Networking Committee

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TACHOnet XML Messaging Reference Guide

Version 1.41



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# **TACHOnet**

## XML Messaging Reference Guide

Version 1.41  
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## Document Approval

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## Changes from version 1.4 to version 1.41

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### Introduction

This document version 1.41 does not change the XML specifications version 1.4 as approved last year (the official *Header/Version* attribute value of the XML Schema is still '1.4') but only provides some more explanations and corrections to some bugs detected in the XML schema and in this document describing the specifications.

These corrections consist of solving some typo errors in this document and some missing values in the XML schema.

Changes (insertions and deletions) to the document from previous version 1.4 to this version 1.41 are outlined in the following table. Changes are marked with a red outside border and are in red color.

Changes to the XML schema (XSD) are also described below.

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### Summary of changes

The following table sums up the changes brought to the document:

Page	Map / Block text	Description of the changes
[XMRG Version 1.41 – XSD 1.4]		
11	TACHOnet Global Architecture	Updated illustration and explanations (including web services and reporting).
48	GetPhonexSearchKeys	Updated example.
50	TransliterateToUSAscii	Updated example.
57	<i>From</i> and <i>To</i> attributes	Updated explanations.
66	Status codes and Status Messages	Updated explanations.
81	MS2TCN_CheckIssuedCards_Res	Add explanations about how to compute <i>StatusCode</i> value.
82	TCN2MS_CheckIssuedCards_Res	Invert <i>From</i> and <i>To</i> attributes length.
83	TCN2MS_CheckIssuedCards_Res	Add <i>NotAvailable</i> and <i>NotYetConnected</i> to <i>SearchStatusCode</i> .
84	TCN2MS_CheckIssuedCards_Res	Add <i>NotYetConnected</i> to <i>MSStatusCode</i> .
87	TCN2MS_CheckIssuedCards_Res	Add explanations how to compute <i>SearchStatusCode</i> and <i>StatusCode</i> values.
89	MS2TCN_IssuedCardDL_Req	Set <i>Body</i> element occurrence to 1 (mandatory) instead of 0-1.
95	MS2TCN_IssuedCardDL_Res	Add explanations about how to compute <i>StatusCode</i> value.
96	TCN2MS_IssuedCardDL_Res	Invert <i>From</i> and <i>To</i> attributes length.
98	TCN2MS_IssuedCardDL_Res	Add explanations about how to compute <i>StatusCode</i> value.
106	MS2TCN_ModCardStatus_Res	Add explanations about how to compute <i>StatusCode</i> value.
107	TCN2MS_ModCardStatus_Res	Invert <i>From</i> and <i>To</i> attributes length.
108	TCN2MS_ModCardStatus_Res	Add <i>NotYetConnected</i> to <i>ModStatusCode</i> .
109	TCN2MS_ModCardStatus_Res	Add explanations about how to compute <i>StatusCode</i> value.
115	MS2TCN_CheckCardStatus_Res	Invert <i>From</i> and <i>To</i> attributes length.
118	MS2TCN_CheckCardStatus_Res	Add explanations about how to compute <i>StatusCode</i> value.
119	TCN2MS_CheckCardStatus_Res	<ul style="list-style-type: none"><li>▪ Invert <i>From</i> and <i>To</i> attributes length.</li><li>▪ Add <i>NotYetConnected</i> to <i>SearchStatusCode</i>.</li></ul>
122	TCN2MS_CheckCardStatus_Res	Add explanations about how to compute <i>StatusCode</i> value.

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*Continued on next page*

## Changes from version 1.4 to version 1.41, Continued

### Summary of changes in XSD

The following table sums up the changes brought to the **tcn.xsd** XML schema:

Lines	Changes
111	<p><u>Old content:</u>  <code>&lt;xsd:simpleType name="SearchStatusCodeEnumType"&gt;</code></p> <p><u>New content:</u>  <code>&lt;xsd:simpleType name="<b>CIC_MS2TCN_SearchStatusCodeEnumType</b>"&gt;</code></p>
132-144	<p><u>Updated content (in bold):</u>  <code>&lt;xsd:simpleType name="MSStatusCodeEnumType"&gt;</code>  <code>&lt;xsd:annotation</code>  <code>&lt;xsd:documentation xml:lang="en"/&gt;</code>  <code>&lt;/xsd:annotation</code>  <code>&lt;xsd:restriction base="xsd:NMTOKEN"&gt;</code>  <code>&lt;xsd:enumeration value="Found"/&gt;</code>  <code>&lt;xsd:enumeration value="NotFound"/&gt;</code>  <code>&lt;xsd:enumeration value="Timeout"/&gt;</code>  <code>&lt;xsd:enumeration value="ServerError"/&gt;</code>  <code>&lt;xsd:enumeration value="NotAvailable"/&gt;</code>  <code><b>&lt;xsd:enumeration value="NotYetConnected"/&gt;</b></code>  <code>&lt;/xsd:restriction</code>  <code>&lt;/xsd:simpleType&gt;</code></p>
157-170	<p><u>Updated content (in bold):</u>  <code>&lt;xsd:simpleType name="CCS_TCN2MS_SearchStatusCodeEnumType"&gt;</code>  <code>&lt;xsd:annotation</code>  <code>&lt;xsd:documentation xml:lang="en"/&gt;</code>  <code>&lt;/xsd:annotation</code>  <code>&lt;xsd:restriction base="xsd:NMTOKEN"&gt;</code>  <code>&lt;xsd:enumeration value="Found"/&gt;</code>  <code>&lt;xsd:enumeration value="NotFound"/&gt;</code>  <code>&lt;xsd:enumeration value="Timeout"/&gt;</code>  <code>&lt;xsd:enumeration value="ServerError"/&gt;</code>  <code>&lt;xsd:enumeration value="WorkshopCardStatusNotAvailable"/&gt;</code>  <code>&lt;xsd:enumeration value="NotAvailable"/&gt;</code>  <code><b>&lt;xsd:enumeration value="NotYetConnected"/&gt;</b></code>  <code>&lt;/xsd:restriction</code>  <code>&lt;/xsd:simpleType&gt;</code></p>
184-198	<p><u>Updated content (in bold):</u>  <code>&lt;xsd:simpleType name="ICDL_TCN2MS_StatusCodeEnumType"&gt;</code>  <code>&lt;xsd:annotation</code>  <code>&lt;xsd:documentation xml:lang="en"/&gt;</code>  <code>&lt;/xsd:annotation</code>  <code>&lt;xsd:restriction base="xsd:NMTOKEN"&gt;</code>  <code>&lt;xsd:enumeration value="OK"/&gt;</code>  <code>&lt;xsd:enumeration value="DrivingLicenseNumberNotFound"/&gt;</code>  <code>&lt;xsd:enumeration value="Timeout"/&gt;</code>  <code>&lt;xsd:enumeration value="ServerError"/&gt;</code>  <code>&lt;xsd:enumeration value="NotProcessed"/&gt;</code>  <code>&lt;xsd:enumeration value="NotAvailable"/&gt;</code>  <code>&lt;xsd:enumeration value="NotYetConnected"/&gt;</code>  <code><b>&lt;xsd:enumeration value="DrivingLicenseNumberInvalid"/&gt;</b></code>  <code>&lt;/xsd:restriction</code>  <code>&lt;/xsd:simpleType&gt;</code></p>

*Continued on next page*



## Changes from version 1.4 to version 1.41, Continued

### Summary of changes in XSD (continued)

Lines	Changes
227-240	<p><u>Updated content (in bold):</u></p> <pre> &lt;xsd:simpleType name="MCS_TCN2MS_StatusCodeEnumType"&gt;   &lt;xsd:annotation&gt;     &lt;xsd:documentation xml:lang="en"/&gt;   &lt;/xsd:annotation&gt;   &lt;xsd:restriction base="xsd:NMTOKEN"&gt;     &lt;xsd:enumeration value="OK"/&gt;     &lt;xsd:enumeration value="CardNumberNotFound"/&gt;     &lt;xsd:enumeration value="CardStatusInvalid"/&gt;     &lt;xsd:enumeration value="Timeout"/&gt;     &lt;xsd:enumeration value="ServerError"/&gt;     &lt;xsd:enumeration value="NotAvailable"/&gt;     <b>&lt;xsd:enumeration value="NotYetConnected"/&gt;</b>   &lt;/xsd:restriction&gt; &lt;/xsd:simpleType&gt; </pre>
249-261	<p><u>New content:</u></p> <pre> &lt;xsd:simpleType name="CIC_TCN2MS_SearchStatusCodeEnumType"&gt;   &lt;xsd:annotation&gt;     &lt;xsd:documentation xml:lang="en"/&gt;   &lt;/xsd:annotation&gt;   &lt;xsd:restriction base="xsd:NMTOKEN"&gt;     &lt;xsd:enumeration value="Found"/&gt;     &lt;xsd:enumeration value="NotFound"/&gt;     &lt;xsd:enumeration value="Timeout"/&gt;     &lt;xsd:enumeration value="ServerError"/&gt;     &lt;xsd:enumeration value="NotAvailable"/&gt;     &lt;xsd:enumeration value="NotYetConnected"/&gt;   &lt;/xsd:restriction&gt; &lt;/xsd:simpleType&gt; </pre>
319	<p><u>Old content:</u>  &lt;xsd:attribute name="SearchStatusCode" type="tcn:SearchStatusCodeEnumType" use="required"/&gt;</p> <p><u>New content:</u>  &lt;xsd:attribute name="SearchStatusCode" type="tcn:<b>CIC_TCN2MS_SearchStatusCodeEnumType</b>" use="required"/&gt;</p>
345	<p><u>Old content:</u>  &lt;xsd:attribute name="SearchStatusCode" type="tcn:SearchStatusCodeEnumType" use="required"/&gt;</p> <p><u>New content:</u>  &lt;xsd:attribute name="SearchStatusCode" type="tcn:<b>CIC_MS2TCN_SearchStatusCodeEnumType</b>" use="required"/&gt;</p>

# Foreword

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## **Objectives of the TACHOnet project**

The TACHOnet project final objective is to create a telematics network aiming at facilitating the data exchange between national administrations in charge of the issuing of the tachographs cards, as stated in Council Regulation (EEC) n° 3821/85 amended by Council Regulation (EC) n° 2135/98.

The TACHOnet network will:

- Ensure a reliable and secure exchange of the necessary and sufficient data between the Member States issuing tachograph cards to help them fulfilling the requirements of the Council Regulation (EC) n° 2135/98.
- Make sure that the exchange is done in the legal framework envisaged and that it does not allow other uses of the same data.
- Impose only a set of limited constraints on the local systems managing the driver cards in the Member States.

Use at most the infrastructure and software tools of the market as regards structuring of the data and of the messages, of security (authentication, non-repudiation in particular), and of workflow management.

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## **Legal Framework**

Council Regulation (EEC) no 3821/85 provides for the installation and use of the tachograph for the enforcement of driving time and rest periods of professional drivers in the field of road transport.

The Regulation has been amended by Council Regulation (EC) No 2135/98 which introduced the new digital recording equipment and personal smart cards for drivers.

The driver card allows for the identification of drivers when they start their journey and for the recording of their activities. A key element of Regulation (EC) No 2135/98 is to guarantee that that a driver holds only one card.

The individual Member States where drivers have their normal residence are competent to issue the cards. The competent national authority must be able to check that only one card is issued per driver. To avoid a driver holding cards from other Member States such a check should not only be carried out by the own Member States' authority, but also by the competent authorities of other Member States.

In order to guarantee a reliable system of checking the issuing of unique driver cards between Member States, it was felt necessary to have an appropriate telematics network.

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# Document Overview

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## Introduction

This document will help you to understand the Tachonet system implemented to enable the exchange of information between the member states.

The first chapter makes a global presentation of the system while chapter 2, 3 and chapter 4 describe the processes (flow) of the system, the web services and the messages conveying information between the member states and Tachonet.

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## Contents

The document contains the following chapters:

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# Chapter 1 - TACHOnet System Overview

## Overview

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**Introduction** This chapter gives an overview of the elements TACHOnet system is based on.

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**Contents** This chapter contains the following topics:

<b>Topic</b>	<b>See Page</b>
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# TACHOnet global Architecture

## Description

The heart of the TACHOnet architecture consists of the **TACHOnet XML Messaging System** acting as secure and reliable “hub & spoke” system (including authentication, validation, data transformation, logging, auditing,...), for sending XML requests to and receiving XML responses from the different Member States (and corresponding Card Issuing Authorities).

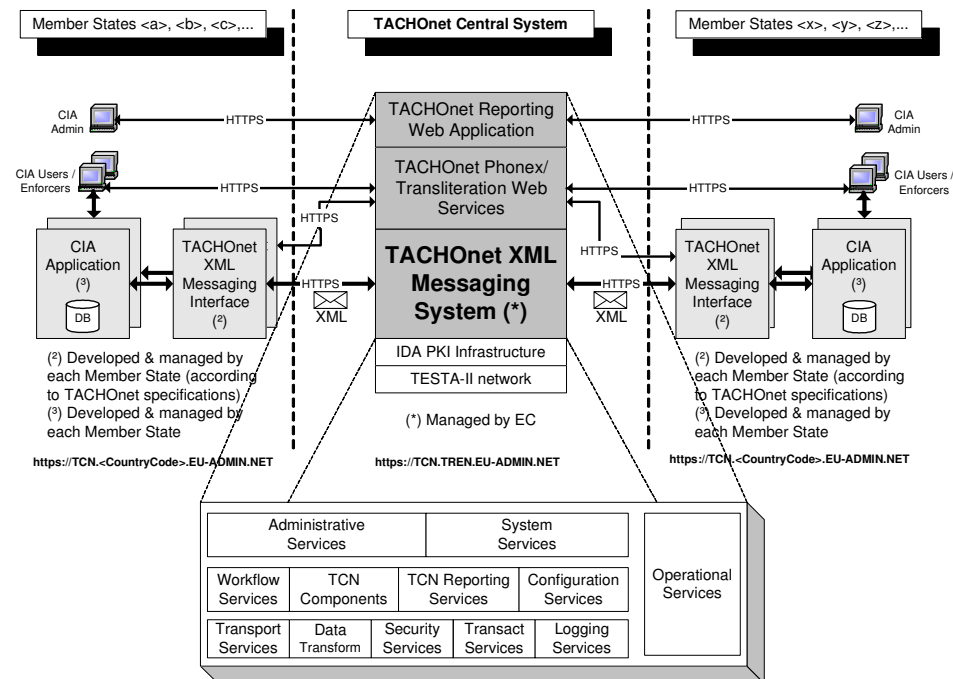
Beside this **TCN XML Messaging System**, TACHOnet does also provide central **TCN Phonex and Transliteration Services** (available to CIA users or enforcers as web services) and the **TCN Reporting Web Application** enabling the CIA Administrators to browse usage statistics reports.

The system is using

- standard Internet protocols (XML, HTTP, XML Web services),
- IDA PKI infrastructure
- TESTA-II network.

The **TCN Reporting Web Application**, the **TCN Phonex/Transliteration Web Services** and the **TACHOnet XML Messaging System** are the expected result of the TACHOnet project and will be developed and managed by the European Commission (in DI's Data Center premises).

## Illustration



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## TACHOnet global Architecture, Continued

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### Centralized architecture

The **TACHOnet XML Messaging system** offering the **TACHOnet services** will be hosted by the European Commission (in DI's Data Center premises). Each **local card issuing application** (CIA application developed by each Member State) will use, via standard protocols (i.e. XML over HTTP and XML Web services), the TACHOnet services of the central TACHOnet application which, in turn, will act as "hub & spoke" for sending requests to and receive responses from the CIA applications of the other Member States, all this using the TESTA-II network.

The central TACHOnet application will receive a request from a Member State (via XML over HTTP). It will validate the request, store it, process it by broadcasting it to the right Member State(s) (via XML over HTTP) wait for their answers (via XML over HTTP), consolidate all answers and reply the consolidated response to the original requester (via XML over HTTP).

As such solution is based on standard protocols (XML, HTTP,...) and is centrally-deployed, there is no need for any special TACHOnet software/hardware deployment in each Member State except a Web server (for handling HTTP request/response) and local database management system for storing the drivers and issued cards details.

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### XML Messaging Framework

TACHOnet will be built as an XML messaging framework providing services to Member States by means of XML messages/documents exchange in a reliable, secure and in a choreographed (workflow) way. Microsoft BizTalk Server 2002 answers best to the architecture requirements by offering, among others:

- Set of services and tools for sending, receiving, parsing, and tracking interchanges and documents (via Messaging services) over standard protocols (HTTP, XML,...)
  - Set of services and tools to create and manage robust, long-running, loosely coupled business processes that span organizations, platforms, applications (via Orchestration services)
  - Set of services and tools to administer servers, databases, queues, transport services, tracking services, security services,... .
  - High availability and scalability through clustering and load balancing
  - Open and extensible environment (via custom components,...)
-

# Scope of TACHOnet

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## Limits

The TACHOnet project consists essentially in conveying information between the Member States. The information will be exchanged through XML messages sent and received by CIA applications implemented by the Member States.

TACHOnet will never automatically store or update information in the Member States local databases. It's up to the local CIA application to process the information.

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## Implementation Constraints

The following rules must be strictly observed when implementing the central TACHOnet system and the CIA applications:

- For obvious scalability reasons, the exchange of XML messages (see page 51) between a CIA application and the central TACHOnet system must be implemented in an **asynchronous** way. Technically speaking, when a CIA application sends, via HTTP, an XML message (request or response) to the central TACHOnet system, the latter one will merely answer with the HTTP '202 Accepted' status code. The same applies in the opposite way (from the central TACHOnet system to the CIA applications). The CIA application must take into account the asynchronous nature of the XML messages exchanged when implementing the CIA or enforcers user interface (e.g. using 'sync on async' technique,...).
- Every CIA application (as well as the central TACHOnet system) must be designed to cope with potential communication and server problems (e.g. 'HTTP 500' returned by the TACHOnet server, final response not received from TACHOnet within time, timeout,...). As a general rule, as long as an XML message (request or response) has not been acknowledged with the HTTP '202 Accepted' status code, it's up to the sender to retry sending it (with a maximum number of retries). For instance, the central TACHOnet system is designed to retry sending a message a max. of 5 times every 2 seconds (in *online* mode) or every 30 minutes (in *batch* mode). Consequently, an XML message might never be sent (max. number of unsuccessful retries reached) at all. In that case (network or server congestion), manual intervention procedure must be triggered (e.g. via monitoring) to solve the problem. In the meantime, every CIA application must be designed to cope with these rare situations (e.g. not receiving a response to a previously sent request). Please refer to the description of the XML messages for more details.
- For security reasons, HTTPS must be implemented when sending XML messages and upon receiving XML messages. Please refer to the "TACHOnet Network & Security Reference Guide" for more details.
- Every CIA application and the central TACHOnet system must provide a **single** address (url) for sending **and** receiving XML messages. The single TACHOnet address (e.g. <http://<TACHOnet domain>/receive.aspx>) must be used by the CIA applications to send XML messages (requests and responses) to the central TACHOnet system. The single address provided by every CIA application will be used by the central TACHOnet system to send XML messages (requests and responses) to the CIA applications.

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*Continued on next page*

## Scope of TACHOnet, Continued

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### **Member States' responsibilities**

Every Member State (through their Card Issuing Authorities) is in charge of developing its own CIA application for

- managing the issuance of its tachograph smart cards
- interfacing with the central TACHOnet XML Messaging System through the TACHOnet XML Messaging Manager, based on the provided sets of specifications.

Every Member State (through their Card Issuing Authorities) is in charge of guaranteeing 24x7 high-availability (%uptime to be defined later on) and fast response time (less than 4 seconds per TACHOnet request to support estimated load) to every request/response coming as XML message from the central TACHOnet system.

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### **TACHOnet messages specifications**

The TACHOnet project consists in providing a reliable and secure system and infrastructure for exchanging messages between the Member States.

But, it also provides sets of specifications helping them to develop the necessary interfaces for exchanging messages between their local CIA Application (Card Issuing Application) and the central TACHOnet XML Messaging System.

<b>For specifications about</b>	<b>See</b>
<ul style="list-style-type: none"><li>▪ The flow of messages (requests and responses),</li><li>▪ The structures of each of these XML messages and</li><li>▪ The XML Web services</li></ul>	This guide
<ul style="list-style-type: none"><li>▪ The Networking aspects</li><li>▪ The Security aspects</li></ul>	TACHOnet Network and Security Reference Guide

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# Stakeholders

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## Introduction

TACHOnet considers two types of stakeholders:

- The Card Issuing Authority (CIA)
  - The Enforcement Authority (EA)
- 

## Card Issuing Authority (CIA)

A Card Issuing Authority (CIA) is an official organism competent for issuing and managing tachograph cards.

A Card Issuing Authority may issue and manage tachograph cards for the Member State it depends on but also for other Member States not willing to set up such organisation in their own country but willing to have it “outsourced” by another Member State.

---

## Enforcement Authority (EA)

During road-side checks, the enforcers want to use TACHOnet to check either the status of a card (driver or workshop card) or whether a driver does hold a valid card (when the driver is unable to show his card because it has been presumably lost or stolen). In both cases, the enforcers want to get the same level of information, i.e. some card details (card number, status, address where it has been issued, issuing date, expiry date, last modification date), some driver/workshop details (surname, first name(s), birth date, place of birth, driving licence number).

Beside these functional requirements, high-availability (24x7) is also required from the central TACHOnet system and the Member States systems (e.g. to process a TACHOnet request asking for checking against their local database the validity and status of a card) to ensure acceptable response time (less than 1 minute) to enforcement authorities requests.

---

## Single Point of Contact (SPOC)

It has been agreed that the Member States will have a Single Point Of Contact (SPOC) for TACHOnet.

This means that:

- TACHOnet will consider the Member State as having a SPOC CIA (Single Point Of Contact Card Issuing Authority), even though the Member State is organized through multiple CIAs managing their tachograph cards data in a common central data store  
It is up to the Member State to manage the one-to-many relationship.
  - The enforcers might have access to TACHOnet through their local Card Issuing Authority (CIA).  
Therefore, it's the Member State responsibility to grant enforcers' access to TACHOnet.
-

## Data encoding

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**Data Encoding** Every XML message (including XML Web services) exchanged between TACHOnet and the different Member States (and their corresponding CIA applications) must be **UTF-8** encoded.

The table below gives two examples of XML messages using such encoding mechanism:

<b>Example</b>	<b>Encoding mechanism</b>
An XML message sent from Germany to TACHOnet.  The XML message is UTF-8 encoded and includes a Latin-encoded value for the 'Surname' attribute.	<?xml version="1.0"?> .... <SearchedDriver Surname="Müller" ... /> ....
An XML message sent from Greece to TACHOnet  The XML message is UTF-8 encoded and includes a Greek-encoded value for the 'Surname' attribute.	<?xml version="1.0"?> .... <SearchedDriver Surname="Αναστοπουλος" ... /> ....

---

# Name encoding rules - Overview

## Introduction

The Member States should be ready to handle names encoded in different languages (Latin and Greek up to now, more in the future).

The verification of the issuance of a card to a driver is based on the driver's surname, first name and date of birth.

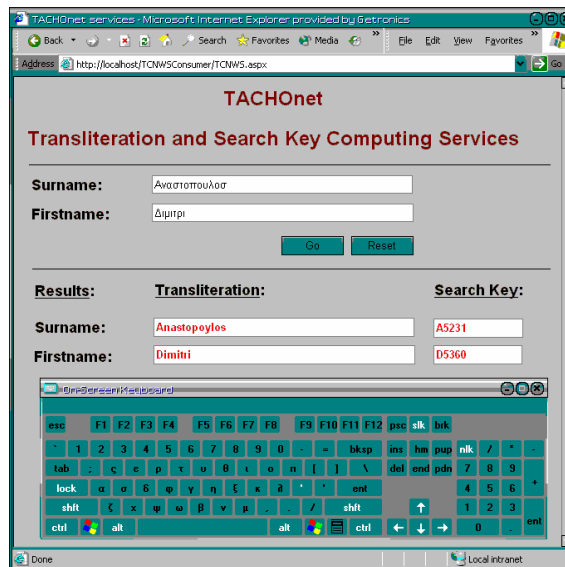
To avoid from missing hits due to spelling errors, a search key will be computed for the driver's surname and another one for the driver's first name using a dedicated algorithm.

The whole solution encompassing Name Encoding Rules is a combined application of the following principles:

- Manual Name Spelling Rules
- Transliteration of the driver's surname, first name(s), place of birth and driving license number (Greek to US/Ascii or Latin to US/Ascii)
- Computing Phonex search keys for a driver's surname and first name(s)

## Interface illustration

The following information presents an example of what the web interface on top of the Transliteration and Phonex Web services interfaces could be.



## Detailed information

The principles for Name encoding are described in the following topics:

Topic	See Page
Name encoding rules - Name Spelling Rules	18
Name encoding rules - Transliteration	19
Name encoding rules - Phonex search keys	20

## Name encoding rules - Name Spelling Rules

---

### Context

The manual Name Spelling principle should be applied in the following circumstances:

- the CIA clerk, at first issue, keys in driver's full surname and first name(s) read in their original encoding (Greek or Latin) from the driver's driving license
  - the enforcer, during road check, keys in driver's full surname and first name(s) either read in their original encoding (Greek or Latin) from the driver's driving license or told by the driver if he pretends having lost his paper
- 

### Rules

The following rules should be strictly observed when manually typing in drivers' surname/first name(s) at card issuing, and when typing in drivers' surname/first name(s) when checking for drivers' issued card(s):

Rule	Description
Spelling	The driver's surname/first name(s) should be spelled the same way as it is spelled on the driver's driving license, even though it is encoded in a different language (e.g. Greek driver's names are encoded in Greek not in Latin). The usage of software "virtual" keyboards (like the On-Screen Keyboard available as standard feature on Windows) installed with additional foreign languages might help keying in information.
Prefixes	Name prefixes such as <i>d', de, de La, Mac, O', Van, Von,...</i> should be typed in as such first, i.e. at the beginning of the name (unless otherwise specified on the driver's driving license)
Suffixes	Name suffixes such as <i>Jr, II,...</i> should be typed in as such last, i.e. at the end of the name (unless otherwise specified on the driver's driving license)
Multiple names	Multiple names such as <i>Jean-Jacques, José Luis, Philips-Martin</i> should be fully keyed in as such (unless otherwise specified on the driver's driving license)
Blanks, accents and signs	Blank characters, accents, signs should also be fully keyed in as such (unless otherwise specified on the driver's driving license).

---

### Example

If the driver's driving license displays a. o. the following information:

Surname: *De La Peña Diaz*

First names: *Jean-Jacques Michel Henri.*

Then, the clerk or the enforcer should type in the exact same names, i.e *De La Peña Diaz* as surname and *Jean-Jacques Michel Henri* as first names.

---

# Name encoding rules - Transliteration

---

## Context

The transliteration should be applied in the following circumstances:

- The CIA clerk or the enforcer wants to have the driver's details transliterated into a more readable US/Ascii version (using the web interface that will be provided by TACHOnet for the transliteration services)
  - The CIA application wants to store (in its local data store) the driver's details in a US/Ascii version more understandable by its local data store and users (using the XML web services that will be provided by TACHOnet for the transliteration services)
- 

## Description

The purpose is to help these Member States that do not want to handle (and store) Greek characters (and even Latin characters like é, è, à, ä, ö, ü, ñ,...) on their local system and to avoid having different implementations of transliterations

TACHOnet will provide a transliteration service for transliterating Greek- or Latin-encoded driver's surname, first name, place of birth and driving license number into their US/Ascii (ISO 646) equivalent.

The Greek to US/Ascii transliteration will first go through transliterating Greek-encoded values into their Latin equivalent using the transliteration scheme of the International standard ISO 843 ("ISO 843:1997") and then from Latin to US/Ascii.

---

## Examples

- A given Greek-encoded surname like **Παπαδοπουλος** will be transliterated into **Papadopoulos**.
  - A given Latin-encoded surname like **Obenlüneschloß** will be transliterated into **Obenluneschloss**.
- 

## Use of the service

The transliteration services will be made available centrally by TACHOnet as:

- XML Web services so to be accessed "programmatically" by any CIA application
  - A Web interface (on top of the XML Web services) so to be accessed by the CIA clerks via their browser.
- 

## More Info

Information and documentation - Conversion of Greek characters into Latin characters" can be ordered from ISO.

---

# Name encoding rules - Phonex search keys

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## Context

The Phonex search keys should be computed on a driver's surname and first of the first name(s) in the following circumstances:

- At first issue or when exchanging a driver's card, the CIA application must store the driver's details (along with the search keys) in its local data store. The CIA application may compute these search keys using its own algorithm.
  - TACHOnet receives a request (XML message) from a CIA application for checking a driver's issued cards. TACHOnet should then compute the search keys for the given driver's surname and first of the first name(s), and insert them in the XML message it's gonna broadcast to the other Member States (CIA applications).
- 

## Description

Considering its increased overall performance, the *Phonex* algorithm seems to be the ideal candidate for computing the name matching codes (search keys) for the driver's surname and first of the first name(s).

Prior to computing the search keys, TACHOnet will internally transliterate the given names into US/Ascii (ISO 646), convert them in uppercase and then remove any non-letter character (anything that differs from 'A..Z'). TACHOnet will also extract the first of the given first name(s) prior to computing the search key on the first name.

---

## Use of the service

In order to help the Member States and to avoid having different implementations of this algorithm, the service will be made available centrally by TACHOnet as:

- XML Web service so to be accessed "programmatically" by any CIA application
  - A Web interface (on top of the XML Web service) so to be accessed by the CIA clerks via their browser.
- 

## Example

If the driver's driving license displays a. o. the following information:

Surname: *De La Peña Diaz*

First names: *Jean-Jacques Michel Henri*

and if the clerk or the enforcer has typed in the exact same names (as required), i.e *De La Peña Diaz* as surname and *Jean-Jacques M.H.* as first names, the Phonex search keys will be computed as follows:

<b>Surname</b>	The given surname <i>De La Peña Díaz</i> will end up internally as <b>DELAPENADIAZ</b> prior to computing its Phonex search key.
<b>First names</b>	The given first names <i>Jean-Jacques Michel Henri</i> will end up internally as <b>JEANJACQUES</b> prior to computing its Phonex search key. Only the first of the first names (all characters till first blank character) is used to compute the search key.

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# Network requirements

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## **Introduction**

Please refer to the “TACHOnet Network & Security Reference Guide”.

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# Security requirements

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## **Introduction**

Please refer to the “TACHOnet Network & Security Reference Guide”.

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# Chapter 2 - TACHOnet Functional Services Overview

## Overview

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### Introduction

The functional services provided by TACHOnet help the Member States in delivering and controlling cards to the drivers.

The **Cards Issuing Authorities (CIA)** are concerned by the following processes:

- CIA - First issue
- CIA - Exchange of a card
- CIA - Declare card status modification

**The Enforcement Authorities (EA)** are concerned by the following processes:

- EA - Declare card status modification
- EA - Check card status
- EA - Check driver's issued card

Two sub-processes are used by CIA and EA processes:

- CIA - Check card status
  - CIA - Modify card status
- 

### Note about the services description

These processes have been defined for the sole purpose of illustrating, at a higher and more comprehensive business level, the functional services provided by TACHOnet (consisting of exchanging, in an orderly fashion, XML messages dealing with the issuance and the verification of tachograph cards).

Therefore, these processes do not dictate how the Member States should handle tachograph card issuing or how the enforcers should verify tachograph cards. The actual definition of these processes is under the work of the CIWG TF1 and the SNRA WG1 TF1 groups and is out of the scope of this document.

---

### Note about the CIA responsibilities

The Member States are responsible for developing their CIA application in a way that it provides implementation for the sending, receiving and processing of the messages as described in the processes flow diagrams (See current chapter) and in the detailed description of the XML messages (See Chapter 4 - TACHOnet XML Messages on page 51).

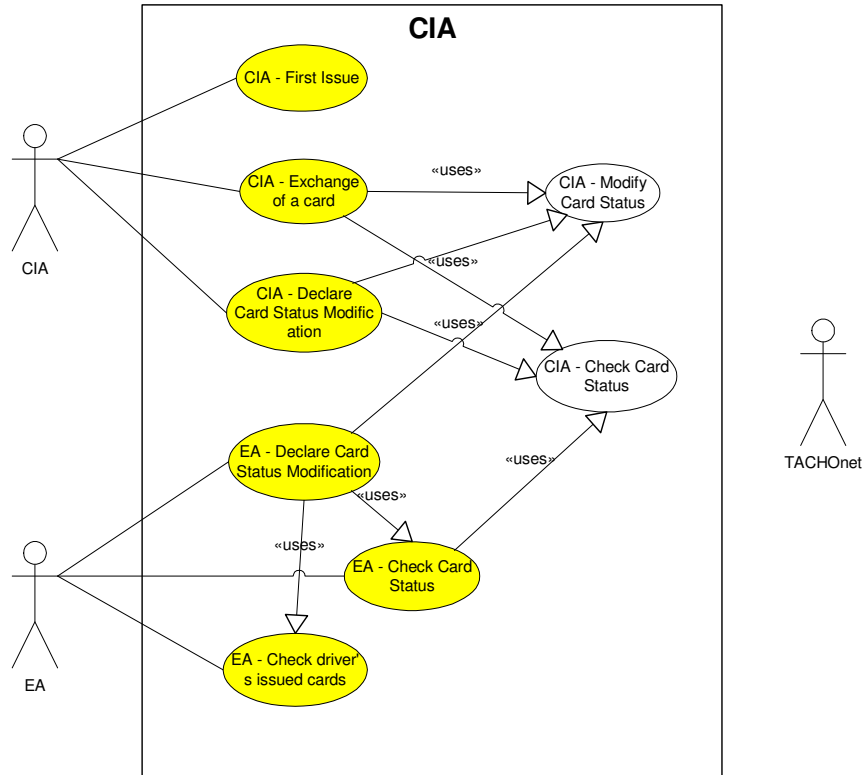
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*Continued on next page*

## Overview, Continued

### Use case diagram

All the CIA (Card Issuing Authority) and EA (Enforcement Authority) business transactions (drawn as use cases) interact with the central TACHOnet system. The diagram does not show the lines to avoid overloading the drawing.



### Contents

This chapter contains the following sections describing the processes:

Topic	See Page
Description of the "CIA - First issue" process	25
Description of the "CIA - Exchange of a card" process	30
Description of the "CIA - Declare card status modification" process	32
Description of the "EA - Check driver's issued card" process	34
Description of the "EA - Check card status" process	38
Description of the "EA - Declare card status modification" process	40
Description of the "CIA - Check card status" process	42
Description of the "CIA - Modify card status" process	44

## Section 2.1 - Description of the "CIA - First issue" process

### Overview

---

**Introduction** This process outlines the flow of activities performed when a driver applies for a driver's card.

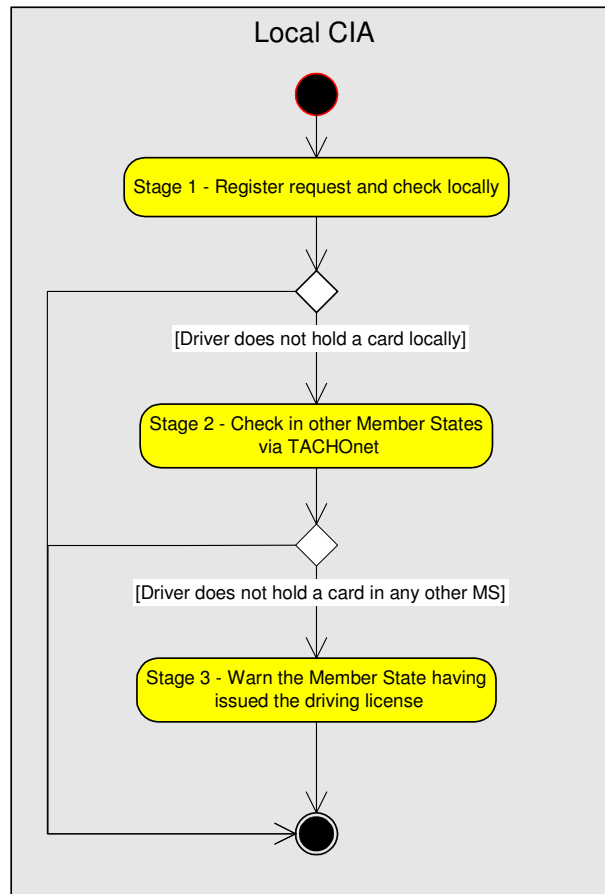
---

**Stages** In order to improve the understanding of the process, it is divided in three stages:

See Topic	On Page
CIA - First Issue – Stage 1	27
CIA - First Issue – Stage 2	28
CIA - First Issue – Stage 3	29

---

**Flow** The global flow can be illustrated as following



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*Continued on next page*

## Overview, Continued

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### Example

A driver with an Italian driving license asks for a driving smart card in United-Kingdom.

He can get this card only if it is proved that he did not receive any other card in United Kingdom and in all other countries connected to TACHOnet.

Stage	Description
1	The British CIA verifies if the driver did not get a card in United Kingdom.
2	The British CIA verifies it in all Member States connected to TACHOnet.  If it is proved that the driver does not possess any other card, the CIA registers the issuing and delivers the card to the driver.
3	The British CIA informs the Italian CIA that a card is to be delivered for the driving license.

---

# CIA - First Issue – Stage 1

**Purpose**

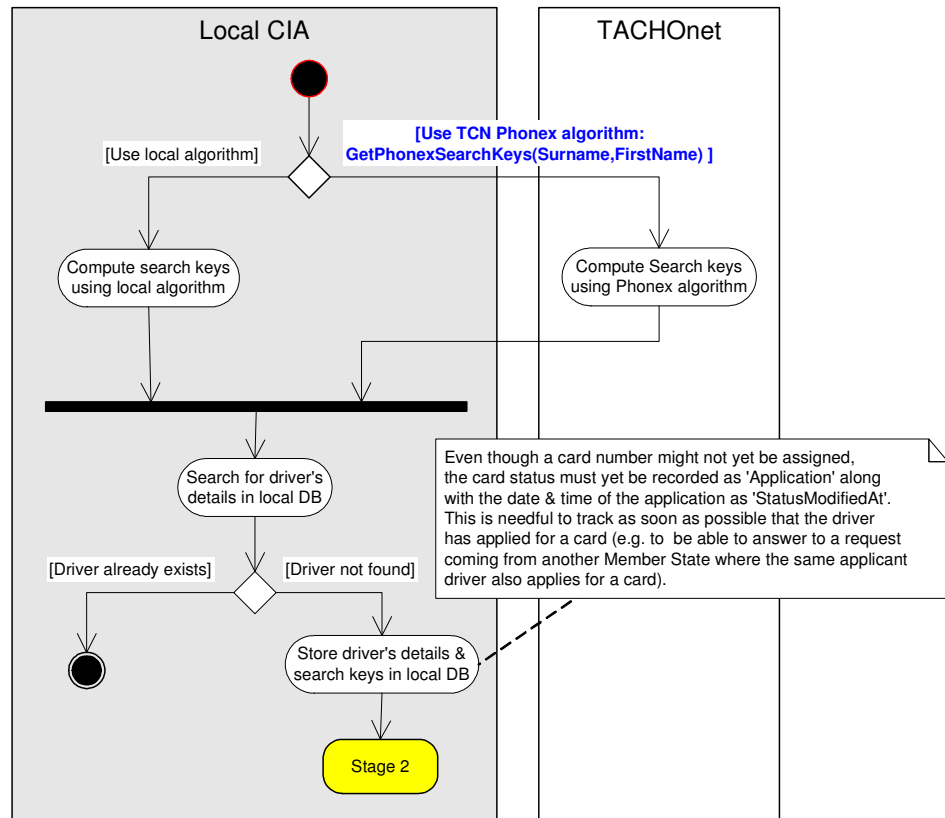
The purpose of this stage is to check locally, in the Card Issuing Authority database, if the driver did not already get or apply for a smart card in the Member State.

**Used service**

This stage uses the following Web service:

Service	Description	See Page
GetPhonexSearchKeys	Ask Tachonet to compute the search keys for the driver's surname and first name(s)	47

**Flow**



# CIA - First Issue – Stage 2

## Purpose

The purpose of this stage is to check if the driver did not already get or apply for a card in another country connected to TACHOnet.

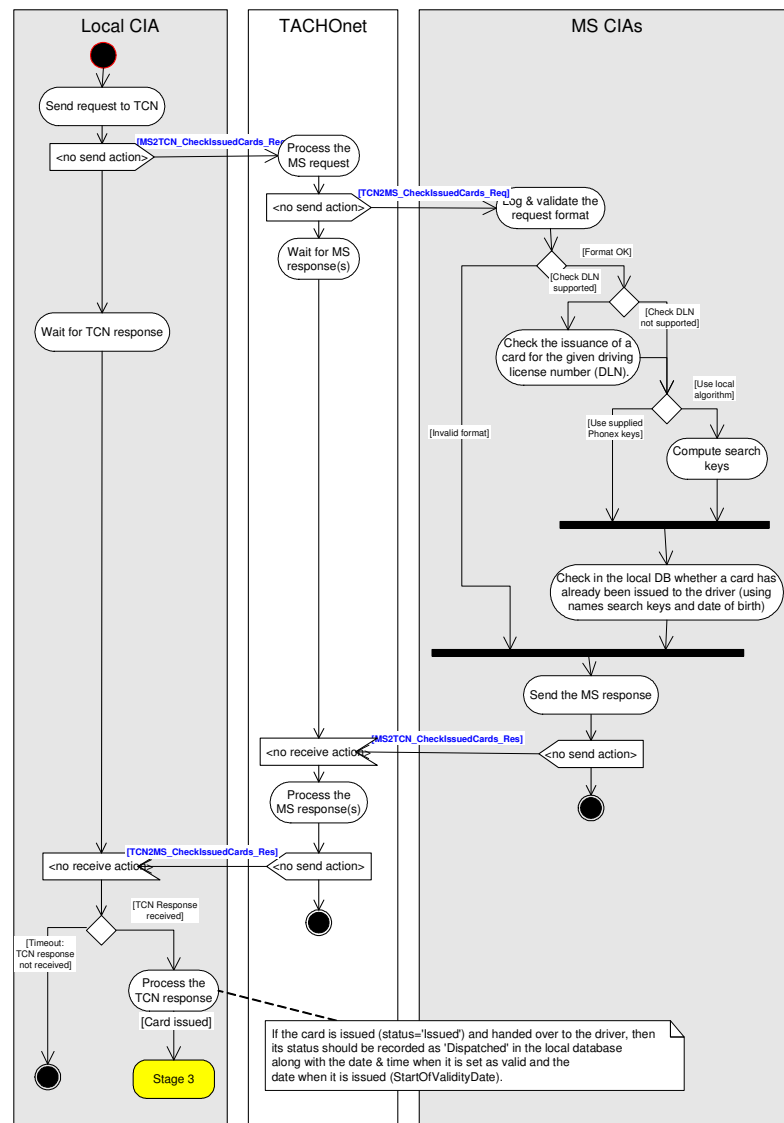
Depending on the response, the card will be issued or not.

In case of issuance, the CIA system should carry out the 3rd stage.

## XML messages

For more details about the messages used by this process, see “TACHOnet XML Messages - Check Issued card” at page 71.

## Flow



# CIA - First Issue – Stage 3

## Purpose

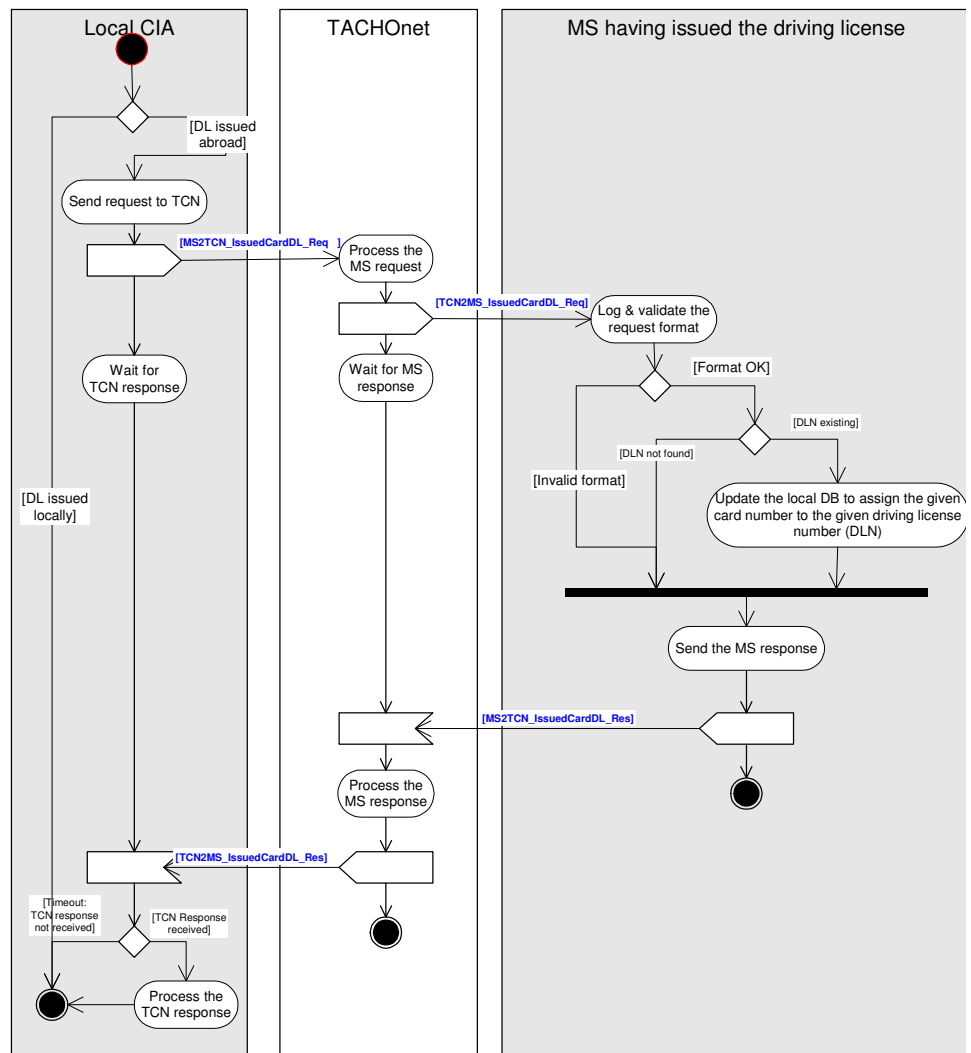
The purpose of this stage is to inform the Member State that issued the driving license that a smart card has been or is to be delivered for that driving license number.

If the card has been issued to the applicant driver, the CIA system must warn the Member State having issued the driving license that a driver's card has been issued using the corresponding driving license number.

## XML messages

For more details about the messages used by this process, see “TACHOnet XML Messages” – “Send issued Card information for a driving license” at page 88.

## Flow



## Section 2.2 - Description of the "CIA - Exchange of a card" process

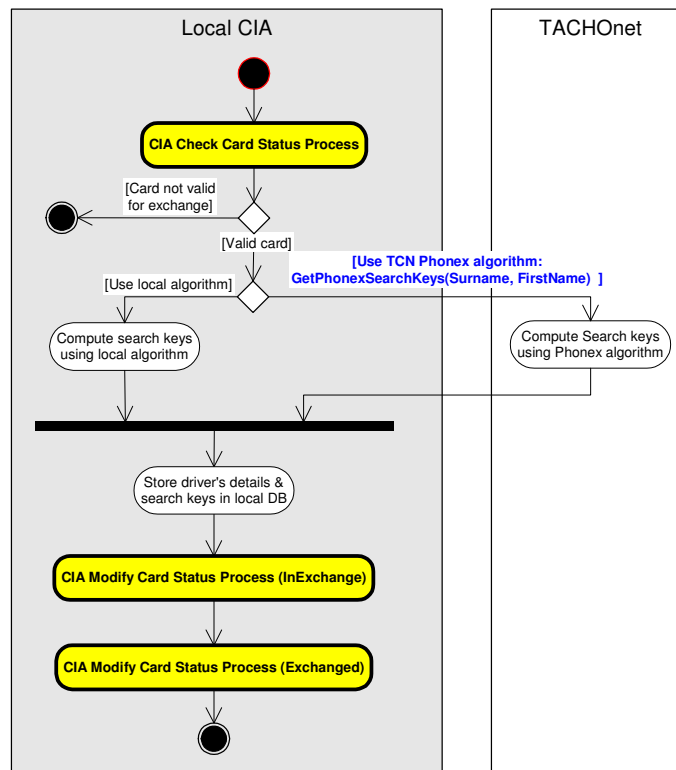
### Overview

**Purpose** This process outlines the flow of activities performed when a Card Issuing Authority (CIA) wants to proceed to the exchange of a card.

**Used service & processes** This process uses the following Web services and processes:

Service / Process	Is used to	See Page
GetPhonexSearchKeys	Ask Tachonet to compute the search keys for the driver's surname and first name(s)	47
Description of the "CIA - Check card status" process	Check the validity of the card to be exchanged	42
Description of the "CIA - Modify card status" process	Inform the Member States having issued the card to be that the card status has changed	44

### Flow



*Continued on next page*



## Overview, Continued

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### Example

A German driver, having a driver's card from Germany, applies to the French CIA for exchanging his driver's card since he's living in France for more than 185 days.

Stage	Description
1	The French CIA application verifies the validity (status and ownership) of the German driver's current card.
2	If the driver is the actual owner of the card and the card status is "valid", the French CIA can record the driver's information in the local database and warn the German CIA application, via TACHOnet, that the exchange process has started.
3	The German CIA application should record the new status "InExchange" for the corresponding card.
4	When the new card is handed over to the driver, the French CIA must warn the German CIA, via TACHOnet, that the exchange process has been successfully completed.  The German CIA application should record the status "Exchanged" for the corresponding German driver's card.

At the end of the process,

- the German driver's "old" card (issued by Germany) should now have the status "Exchanged" in the German database.
  - the German driver's "new" card (issued by France) should now have the status "Dispatched" in the French database.
-

## Section 2.3 - Description of the "CIA - Declare card status modification" process

### Overview

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**Description** This process outlines the flow of activities performed when a Card Issuing Authority (CIA) wants to declare that a card has been reported lost, stolen, broken or defective... (see Possible card status in the XML description).

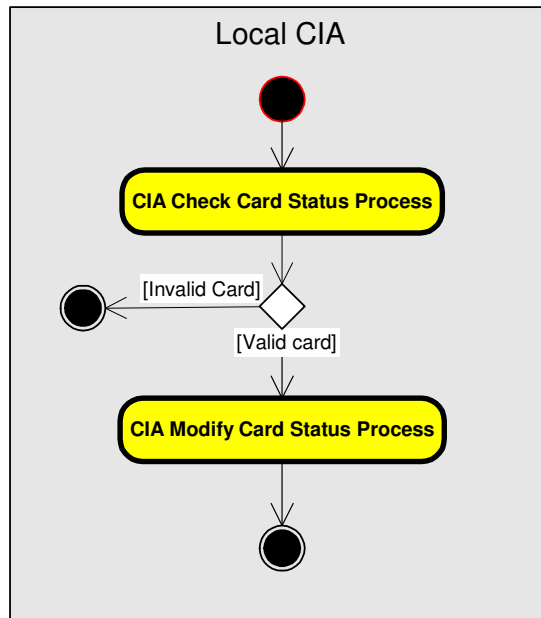
---

**Used processes** This process uses the following processes:

Process	Is used to	See Page
Description of the "CIA - Check card status" process	Check the validity of the card to be exchanged	42
Description of the "CIA - Modify card status" process	Inform the Member States having issued the card to be that the card status has changed	44

---

### Flow



*Continued on next page*

## Overview, Continued

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### Example

A Spanish CIA receives a formal declaration that a foreign Dutch driver has lost his driver's card.

The loss might be declared by the driver himself or by any competent authority like the Enforcement Authorities.

This formal declaration should at least indicate the foreign driver's surname, first name(s), date of birth, and the code of the Member State having issued the lost card.

It could also indicate the number of the lost card and the driving license number.

---

<b>Stage</b>	<b>Description</b>
1	The Spanish CIA application verifies the validity (status and ownership) of the lost card.
2	If valid, the Spanish CIA application should then warn, via TACHOnet, the Dutch CIA application that the card should be recorded as 'lost'.

---

## Section 2.4 - Description of the "EA - Check driver's issued card" process

### Overview

#### Introduction

This process outlines the flow of activities performed when an enforcer is controlling, during road check, a driver who pretends having lost his driver's card and papers.

The enforcer will fill in a web form (provided by a web application developed under the Member State's responsibility) with the driver's details (at least the driver's surname, first name(s) and date of birth) and the code of the Member State from which the driver claims having got his card.

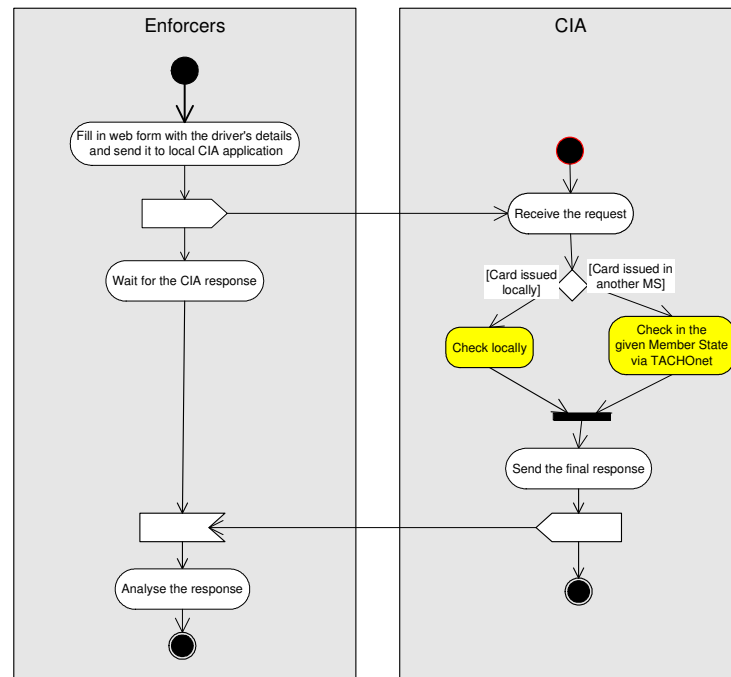
The web form will be submitted to the CIA application for checking whether the driver does actually hold a valid card.

#### Stages

In order to improve the understanding of the process, we divided it into two stages. Nevertheless, only one of these two stages must be carried out depending on whether the card has been issued locally or in another Member State.

Stage	See page
EA - Check driver's issued card – Check Locally	36
EA - Check driver's issued card – Check via TACHOnet	37

#### Flow



*Continued on next page*

## Overview, Continued

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### Example

Let's assume that, during a road check in Austria, an Italian driver is unable to show his driver's card pretending it has been stolen.

The enforcer will ask the Italian driver for his surname, first name(s), date of birth and the name of the Member State where he got his stolen driver's card from. Let's assume the card was issued by Italy.

Stage	Description
1	The enforcer will more likely key in such information on a web form (provided by a web application developed by the Member State) which, in turn, will be submitted to the local Austrian CIA application.
2	The Austrian CIA application should then check, via TACHOnet, whether the Italian driver does actually hold a valid card in Italy – see EA - Check driver's issued card – Check via TACHOnet at page 37 for more details.
3	The final response received from TACHOnet will be sent back by the Austrian CIA application to the local Enforcer web application and displayed to the enforcer

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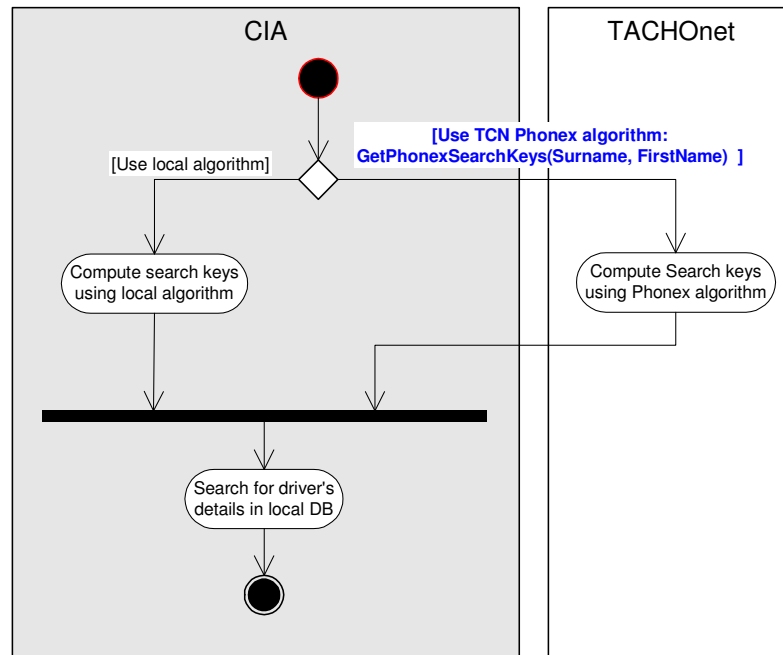
## EA - Check driver's issued card – Check Locally

**Description** As the driver claimed that he got his lost/stolen card in the local Member State, the CIA application will check against its local database.

**Used service** This process uses the following Web service:

Service / Process	Is used to	See Page
GetPhonexSearchKeys	Ask Tachonet to compute the search keys for the driver's surname and first name(s)	47

**Flow**

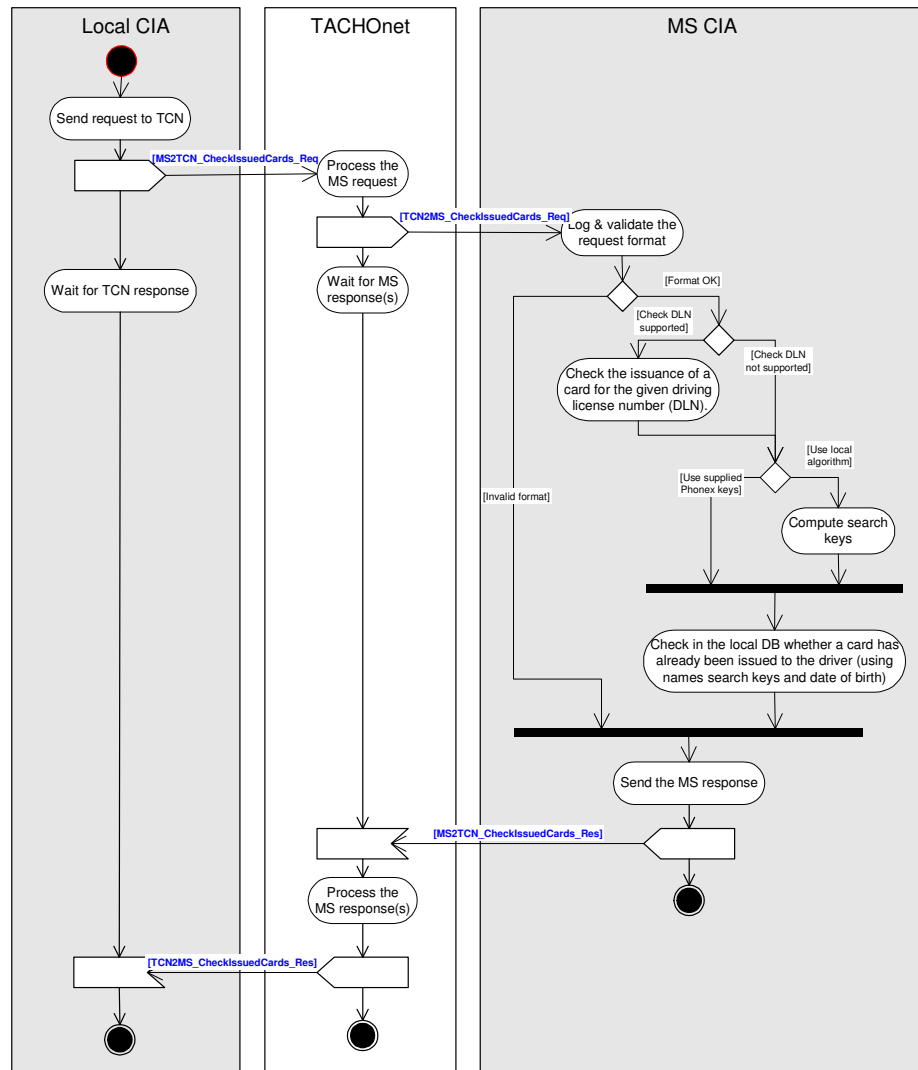


# EA - Check driver's issued card – Check via TACHonet

**Description** The purpose of this stage is to check whether the driver does actually hold a valid card in the Member State where he pretends having got his card from.

**XML messages** For more details about the messages used by this process, see “TACHonet XML Messages” –“Check Issued card” at page 71.

**Flow**



## Section 2.5 - Description of the "EA - Check card status" process

### Overview

**Purpose**

This process outlines the flow of activities performed when an enforcer is controlling, during road check, a driver who is able to show his driver's card.

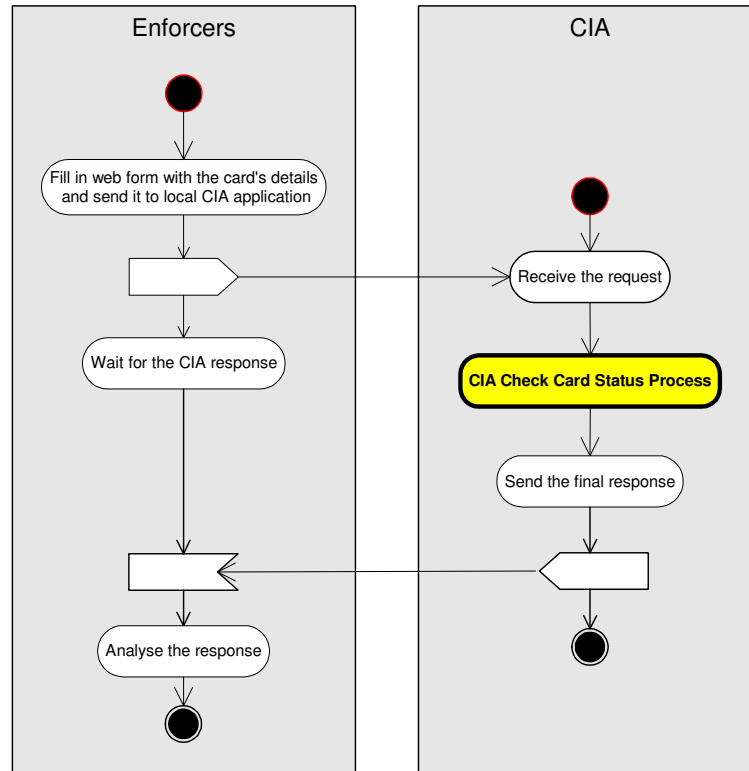
The enforcers may also use this process to check the validity of the workshop card used by the manufacturer to test and calibrate the recording equipment.

**Used process**

This process uses the following process:

Service / Process	Is used to	See Page
Description of the "CIA - Check card status" process	Check the validity of the card to be exchanged	42

**Flow**



*Continued on next page*



## Overview, Continued

---

### Example

Let's assume that, during a road check in Sweden, a Danish driver is able to show his driver's card.

Stage	Description
1	In order to check the validity of the Danish driver's card, The enforcer will key in the card number and the code of the Member State having issued the card (let's assume Denmark) on a web form (provided by a web application developed by the Member State) which, in turn, will be submitted to the local Swedish CIA application.
2	As the driver's card has been issued by Denmark, the Swedish CIA application should then ask, via TACHOnet, the Danish CIA application to check whether the Danish driver's card does actually exist and, if so, to get some information from it (owner, status...).
3	The Danish CIA application will then send back the result of its query (if successful, it should send back the card details) the Swedish CIA via TACHOnet
4	The final response (XML message) received from TACHOnet should then be sent back by the Swedish CIA application to the local Enforcer web application and displayed to the enforcer.

---

## Section 2.6 - Description of the "EA - Declare card status modification" process

**Purpose**

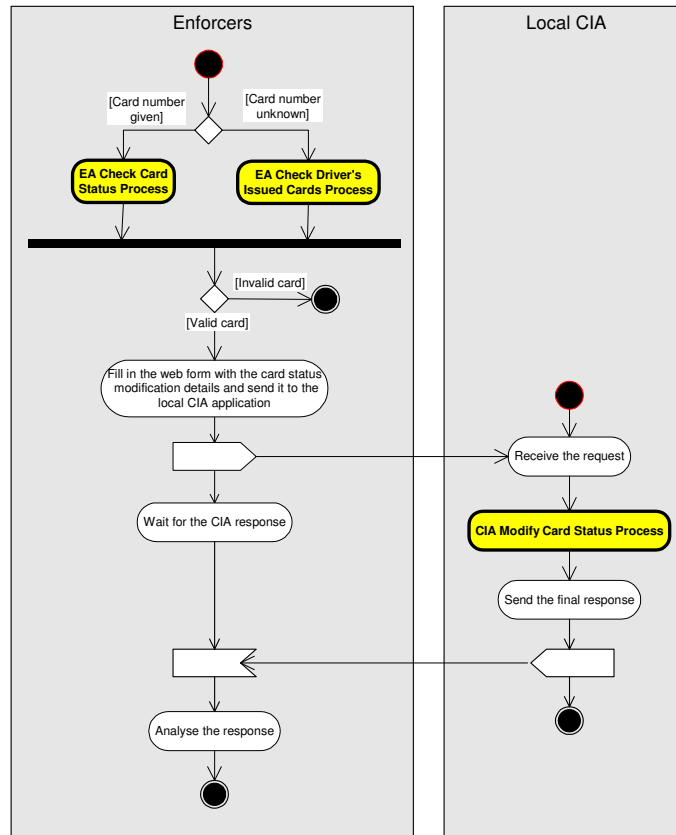
This process outlines the flow of activities performed when an enforcer is controlling, during road check, a driver who is not able to show his driver's card and is claiming he lost it or it has been stolen.

**Used process**

This process uses the following process:

Service / Process	Is used to	See Page
Description of the "EA - Check driver's issued card" process	Check the existence of a card and its owner	34
Description of the "EA - Check card status" process	Check the validity of a card	38
Description of the "CIA - Modify card status" process	Modify the status of the card	44

**Flow**



*Continued on next page*

## Overview, Continued

---

### Example

Let's assume that, during a road check in Austria, an Italian driver is unable to show his driver's card pretending it has been stolen.

Stage	Description
1	The enforcer will ask the Italian driver for his surname, first name(s), date of birth and the name of the Member State where he got his stolen driver's card from (let's assume Italy).
2	The enforcer will more likely key in such information on a web form (provided by a web application developed by the Member State) which, in turn, will be submitted to the local Austrian CIA application.
3	As the driver pretends having got his card in Italy, the Austrian CIA application should then check, via TACHOnet, whether the Italian driver does actually hold a valid card in Italy. See EA - Check driver's issued card – Check via TACHOnet at page 37 for more details.
4	The final response (XML message) received from TACHOnet should then be sent back by the Austrian CIA application to the local Enforcer web application and displayed to the enforcer.
5	If the card does actually exist and it appears that the Italian driver is actually the owner of this card, the enforcer should fill in second web form (provided by a web application developed by the Member State) to declare to the Member State having issued the card (Italy) that this card has been stolen.
6	This web form will be submitted to the local Austrian CIA application, which, in turn, will warn, via TACHOnet, the Italian CIA application that the corresponding Italian driver card should be recorded as 'Stolen'. See Description of the "CIA - Modify card status" process at page 44 for more details.

## Section 2.7 - Description of the "CIA - Check card status" process

**Introduction**

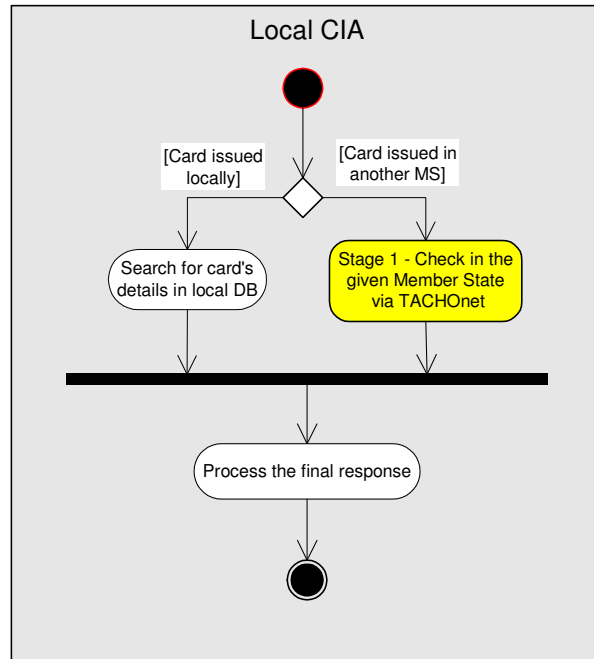
This process outlines the flow of activities performed when a Card Issuing Authority (CIA) wants to check the validity of a given card (e.g. prior to proceed to its exchange or to its declaration of loss).

If the given card has been issued locally, the check should remain local.

If the card has been issued by another Member State, the CIA application will use TACHOnet to send a validity check request to the Member State having issued it.

The enforcers also use this process when they check a card status during road control (see Description of the "EA - Check card status" process on page 38).

**Flow**



**Stages**

In order to improve the understanding of the process, the "check in the given Member State" process is separately described as stage 1.

Stage	See page
CIA – Check card status – Stage 1	43

*Continued on next page*

# CIA – Check card status – Stage 1

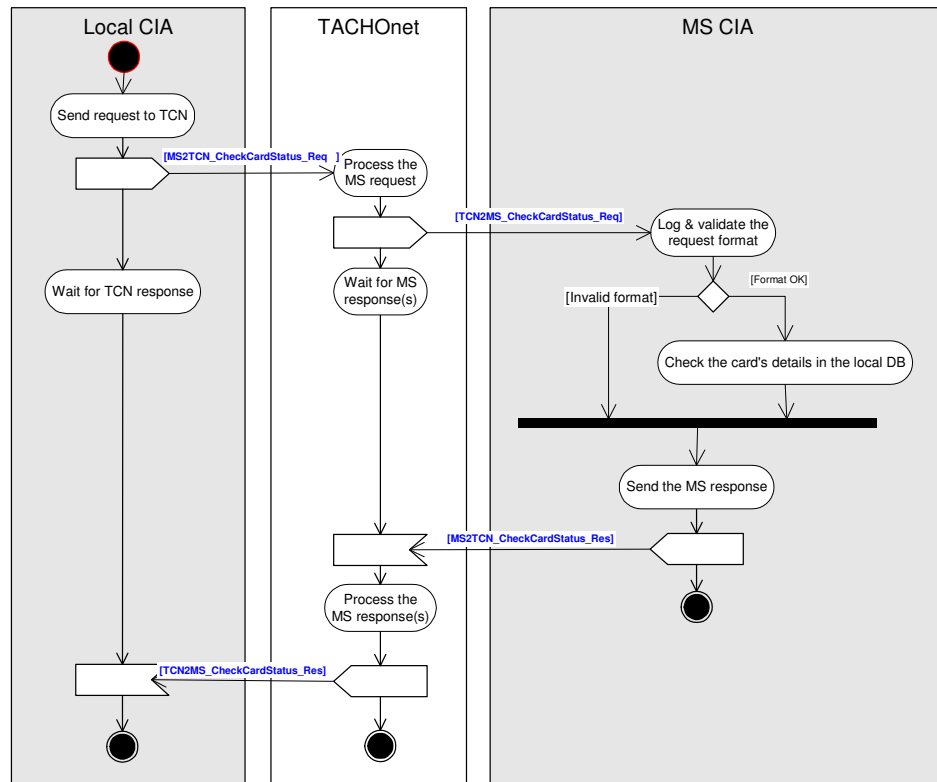
## Purpose

The stage outlines the flow of activities performed to check the status of a card issued by another Member State than the current CIA.

## XML messages

For more details about the messages used by this process, see “TACHOnet XML Messages” –“Check card status” at page 110.

## Flow



## Section 2.8 - Description of the "CIA - Modify card status" process

### Overview

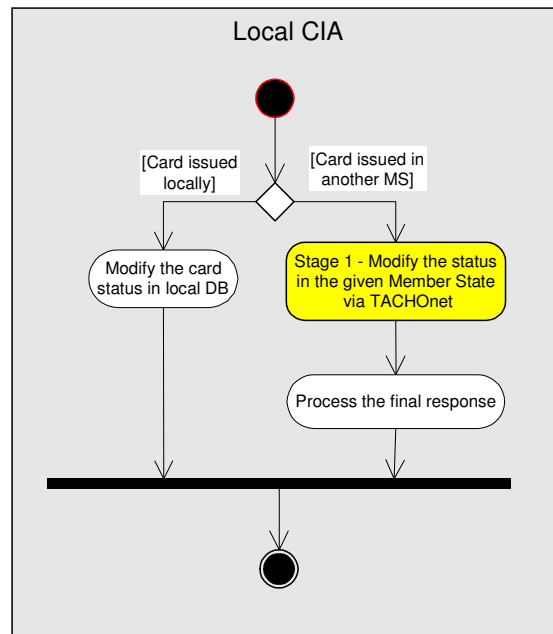
#### Introduction

This process outlines the flow of activities performed when a Card Issuing Authority (CIA) wants to modify the status of a valid card.

The enforcers also use this process when they need to declare a card status modification during road control (See Description of the "EA - Declare card status modification" process on page 40).

The validity of the card which status is to be modified must have been checked first (see Description of the "CIA - Check card status" process on page 42).

#### Flow



#### Stages

In order to improve the understanding of the process, the "Modify status in the given Member State" process is separately described as stage 1.

Stage	See page
CIA – Modify card status – Stage 1	45

*Continued on next page*

# CIA – Modify card status – Stage 1

## Description

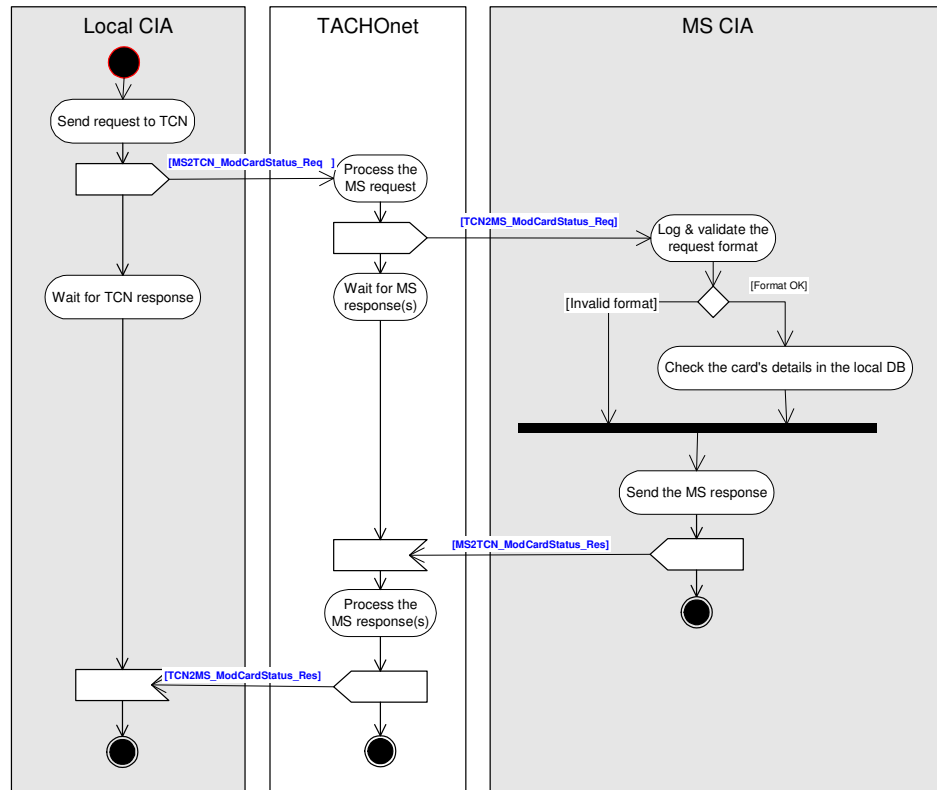
This stage outlines the activities performed when modifying the status of a card issued by another Member State than the current CIA.

The CIA application will send the request to TACHOnet that, in turn, will send an equivalent request to the MS having issued the card, wait for receiving the response and send back a final response to the calling CIA application.

## XML messages

For more details about the messages used by this process, see “TACHOnet XML Messages” – “Declare card status modification” at page 99.

## Flow



# Chapter 3 - TACHOnet Web Services

## Overview

---

### Introduction

TACHOnet aims at exchanging, between Member States, data related to the tachograph cards. Such exchange of information will be ensured through the use of XML Web services (synchronous services) and XML messages.

The XML Web services will assist the Members States to deal with the following problems :

- TACHOnet will have to deal with names encoded in different languages (Latin and Greek up to now, more in the future). Therefore, the Member States should be ready to handle these different languages (e.g. when a Greek driver applies for a card in Belgium with his Greek-encoded driving license).  
Even though some Member States do agree on supporting these languages, some others do not want to store driver's information in their original encoding (e.g. Greek or Latin). They will store it in an US/Ascii encoding (e.g. Greek or Latin name are transliterated in US/Ascii).
  - The verification of the unique issuance of a card to a driver is based on the driver's surname, first name and date of birth.  
To avoid from missing hits due to spelling errors, a search key will be computed for the driver's surname and another one for the driver's first name using a dedicated algorithm. These two search keys should be stored locally with the driver's details and used along with the driver's date of birth to check uniqueness of the card issuance to a driver.  
TACHOnet will use the Phonex algorithm but the Member States are free to use their own system.
- 

### Use of the services

The Web services will be either locally installed from a downloadable application or accessed from the web (to be confirmed during the next project phase).

These web services could be accessed "programmatically" from the CIA applications but TACHOnet will also provide a web interface on top of these web services so that the CIA clerks can use them directly via their browser.

---

### SOAP Version

The SOAP version used by the TACHOnet Web Services is 1.1.

---

### Contents

This chapter contains the following topics describing the web services:

Topic	See Page
GetPhonexSearchKeys	47
TransliterateToUSAscii	49

---



# GetPhonexSearchKeys

---

## Description

This web service can be used to get the Phonex search keys of the given driver's surname and first name(s).

The description of this web service (WSDL format) will be made available during the next phase of the TACHOnet project.

---

## Input parameters

This web service requires two input parameters:

Parameter	Description
Surname	Driver's surname using either Greek or Latin UTF-8 characters (mixing Greek with Latin or conversely is not allowed)
FirstName	Driver's first name(s) using Greek or Latin UTF-8 characters (mixing Greek with Latin or conversely is not allowed)

---

## Output parameters

This web service returns an array of 2 strings:

Parameter	Description
1 <sup>st</sup> string	Phonex search key corresponding to the given driver's surname
2 <sup>nd</sup> string	Phonex search key corresponding to the first of the given driver's first name(s)

---

## Exceptions

The following SOAP Fault Code(s) might be returned by the web service:

SOAP Fault Code	Description
Client.IllegalCharacter	At least one non Greek or non Latin UTF-8 characters has been detected in one of the input parameters.
Client.IllegalMixedCharacters	An illegal mix of Greek and Latin characters has been detected.

---

*Continued on next page*

## GetPhonexSearchKeys, Continued

### Example

The following is a sample SOAP request and response. The **placeholders** shown need to be replaced with actual values.

```
POST /tcnws/tcnws.asmx HTTP/1.1
Host: localhost
Content-Type: text/xml; charset=utf-8
Content-Length: length
SOAPAction: "urn:EU.Cec.Tren.Tcn.WebServices/GetPhonexSearchKeys"

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <GetPhonexSearchKeys xmlns="urn:EU.Cec.Tren.Tcn.WebServices">
      <Surname>string</Surname>
      <FirstName>string</FirstName>
    </GetPhonexSearchKeys>
  </soap:Body>
</soap:Envelope>
```

```
HTTP/1.1 200 OK
Content-Type: text/xml; charset=utf-8
Content-Length: length

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <GetPhonexSearchKeysResponse xmlns="urn:EU.Cec.Tren.Tcn.WebServices">
      <GetPhonexSearchKeysResult>
        <string>string</string>
        <string>string</string>
      </GetPhonexSearchKeysResult>
    </GetPhonexSearchKeysResponse>
  </soap:Body>
</soap:Envelope>
```

# TransliterateToUSAscii

---

## Description

This web service can be used to get the US/Ascii (ISO 646 IRV) transliteration of the given:

- driver's surname
- driver's first name(s)
- driver's place of birth (optional)
- driver's driving license number (optional)

Up to now, this web service only provides the transliteration from Greek (according to the ISO 843:1997 standard) or Latin to US/Ascii. Other transliterations (e.g. Cyrillic to US/Ascii according to ISO 9:1995) will be provided when needed.

The description of this web service (WSDL format) will be made available during the next phase of the TACHOnet project.

---

## Input parameters

This web service requires 4 input parameters:

Parameter	Description of the string
Surname	Driver's surname using either Greek or Latin UTF-8 characters (other languages will be supported when needed in the future)
FirstName	Driver's first name(s) using either Greek or Latin UTF-8 characters (other languages will be supported when needed in the future)
PlaceOfBirth	Driver's place of birth using either Greek or Latin UTF-8 characters (other languages will be supported when needed in the future). Please provide an empty string if optional.
DrivingLicenseNumber	Driving license number using either Greek or Latin UTF-8 characters (other languages will be supported when needed in the future). Please provide an empty string if optional.

---

## Output parameters

This web service returns an **array of 4 strings**:

Parameter	Description of the string
1 <sup>st</sup> string	US/Ascii transliteration of the given driver's surname
2 <sup>nd</sup> string	US/Ascii transliteration of the given driver's first name(s)
3 <sup>rd</sup> string	US/Ascii transliteration of the given driver's place of birth
4 <sup>th</sup> string	US/Ascii transliteration of the given driver's driving license number

---

*Continued on next page*

## TransliterateToUSAscii, Continued

### Exceptions

The following SOAP Fault Code(s) might be returned by the web service:

SOAP Fault Code	Description
Client.IllegalCharacter	At least one non Greek or non Latin UTF-8 characters has been detected in one of the input parameters.
Client.IllegalMixedCharacters	An illegal mix of Greek and Latin characters has been detected.

### Example

The following is a sample SOAP request and response. The **placeholders** shown need to be replaced with actual values.

```
POST /tcnws/tcnws.asmx HTTP/1.1
Host: localhost
Content-Type: text/xml; charset=utf-8
Content-Length: length
SOAPAction: "urn:EU.Cec.Tren.Tcn.WebServices/TransliterateToUSAscii"

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <TransliterateToUSAscii xmlns="urn:EU.Cec.Tren.Tcn.WebServices">
      <Surname>string</Surname>
      <FirstName>string</FirstName>
      <PlaceOfBirth>string</PlaceOfBirth>
      <DrivingLicenseNumber>string</DrivingLicenseNumber>
    </TransliterateToUSAscii>
  </soap:Body>
</soap:Envelope>
```

```
HTTP/1.1 200 OK
Content-Type: text/xml; charset=utf-8
Content-Length: length

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <TransliterateToUSAsciiResponse xmlns="urn:EU.Cec.Tren.Tcn.WebServices">
      <TransliterateToUSAsciiResult>
        <string>string</string>
        <string>string</string>
        <string>string</string>
        <string>string</string>
      </TransliterateToUSAsciiResult>
    </TransliterateToUSAsciiResponse>
  </soap:Body>
</soap:Envelope>
```

# Chapter 4 - TACHOnet XML Messages

## Overview

---

### Introduction

TACHOnet aims at exchanging, between Member States, data related to the tachograph cards. Such exchange of information will be ensured through the use of XML Web services (synchronous services) and XML messages.

Beside the XML Web services, the exchange of data required by the different processes will be performed using XML messages. (See the services described in chapter “TACHOnet Functional Services Overview” on page 23). These different XML messages are gathered into the following so-called TACHOnet XML transactions:

- Check Issued Card
- Send issued card information for a driving license
- Declare card status modification
- Check card status

This chapter describes the XML messages exchanged between TACHOnet and the Member States during the processes progress.

---

### Contents

This chapter contains the following sections:

Topic	See Page
Conventions	52
Check Issued card	71
Send issued Card information for a driving license	88
Declare card status modification	99
Check card status	110
TCN_Receipt	123

---

## Section 4.1 - Conventions

### Overview

---

**Introduction** The section presents the conventions used for improving the understanding the description of the XML messages.

---

**Contents** This section contains the following topics:

<b>Topic</b>	<b>See Page</b>
Conventions used in this chapter	53
Conventions for naming the XML messages	55
XML Structure and Schema Definition (XSD)	56
Online and Batch Modes	58
Validation of the XML messages	62
ID Correlation between the XML messages in a transaction	63
Status Codes and Status Messages	65
UNECE's distinguishing signs of vehicles in international traffic	68
Description of card status values	69

---

# Conventions used in this chapter

---

**Introduction** The tables used to describe the XML messages provide the following information:

- Item
- Occ (Occurrence)
- Type
- Len
- Description

This information is described in the next information blocks of this topic.

---

**Item** It indicates the item name.

- An *XML element* is indicated in bold & italic.
  - An attribute is indicated by a normal appearance.
- 

**Occ** The column Indicates the occurrence of the element or attribute

The value	indicates
1	a mandatory item
0-1	an optional item but if present, the item must be unique
0-n	an optional item. When present, it may appear more than once
1-n	a mandatory item. The item may also appear more than once

---

**Type** This column indicates the data type of the attribute.

The type	indicates
Text	A sequence of characters (as defined in the XML specification). Pay attention that the chosen encoding scheme for the XML messages is UTF-8.
DT	Date and Time in UTC format (Coordinated Universal Time) as 'YYYY-MM-DDThh:mm:ss'.
Date	Date as 'YYYY-MM-DD'
Enum	Enumeration giving the list of possible values. The possible values will be listed in <b>bold</b> .
Int	Integer value between -2147483648 and 2147483647.
Choice	Allows one and only one of the elements contained in the selected group to be present within the containing element (exclusive choice).

---

**Len** This column indicates the length of the attribute.

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

*Continued on next page*

## Conventions used in this chapter, Continued

---

<b>Description</b>	This column describes the items and the possible values of the attribute.
--------------------	---

---



## Conventions for naming the XML messages

---

**Root element** The root element of each XML message gives the name of the message and must then be used to identify whether the message is a request, a response or a receipt, and the type of the message (CheckIssuedCards,...)..

---

**Naming convention** The name of the XML message is always built as follows (except for the special *TCN\_Receipt* XML message):

`<Direction>_<TCN_Tx_Type>_<MsgType>`

Name part	Possible values	Description
<code>&lt;Direction&gt;</code>	MS2TCN	Message sent by a CIA application to the central TACHOnet system.
	TCN2MS	Message sent by the central TACHOnet system to a CIA application.
<code>&lt;TCN_Tx_Type&gt;</code>	CheckIssuedCards	TACHOnet transaction used for checking whether a driver does hold a card in another Member State.
	IssuedCardDL	TACHOnet transaction used for warning the Member State having issued the driving license that a card has been issued using that driving license number.
	CheckCardStatus	TACHOnet transaction used for checking the status of a given card number.
	ModCardStatus	TACHOnet transaction used to declare card status modification.
<code>&lt;MsgType&gt;</code>	Req	The message consists of a request
	Res	The message consists of a response

---

# XML Structure and Schema Definition (XSD)

---

## General structure of the XML Messages

The structure of every XML message is the following:

```
<root element xmlns="urn:eu.cec.tren.tcn">  
  <Header .../>  
  <Body>...</Body>  
</root element>
```

Element or node	Description
<i>Root element</i>	Gives the name of the XML message (see Naming convention below for more details)
Header	There is always a <i>Header</i> node giving “non business” information about the current TACHOnet transaction (such as reference id for correlation, sending and expiration timestamp, global status code and status message...).
Body	There is always a <i>Body</i> node (except when a XML response must be sent corresponding to a request which format was invalid) giving the “business” information of the current TACHOnet transaction. Such “business” information consists of one or more node element(s) containing different attributes.

## XSD of the XML messages

The XML Schema Definition (XSD) of all the XML messages is supplied separately in an electronic format. The official namespace of the TACHOnet XSD specifications is “*urn:eu.cec.tren.tcn*” and must be specified as *xmlns* attribute value of the root element of every XML message.

XSD (XML Schema Definition), a Recommendation of the World Wide Web Consortium ([W3C](http://www.w3.org)), specifies how to formally describe the elements in an Extensible Markup Language (XML) document.

## TestId attribute

The *TestId* attribute of the *Header* element is only useful for testing purposes in order to identify a particular test case (see Test Plan for more details). It must be ignored otherwise.

## Versioning

The official version of the XML specifications will be specified through the *Version* attribute of the *Header* element of any XML message. The version number (‘n.m’) will be defined as fixed value in every release of the XML Schema Definition file (.xsd). The current version number is ‘1.4’.

TACHOnet (and the Member States) will only support the latest version of the XML specifications. That means that, prior to using a new version of the XML specifications, all Member States must agree upon a date when everyone will switch from the previous version to the new version of the XML specifications.

---

*Continued on next page*

## XML Structure and Schema Definition (XSD), Continued

---

### *From and To* attributes

The *From* and *To* attributes of the *Header* element node of every XML message is used to identify the sender and the recipient of the message. TACHOnet will use the following convention as internal identification of the TACHOnet stakeholders:

- The central TACHOnet system will be identified under the name 'TACHOnet'. Therefore, this 'TACHOnet' value must be specified as *Header/From* attribute value of all *TCN2MS\_...* messages and as *Header/To* attribute value of all *MS2TCN\_...* messages.
  - Every MS CIA will be identified under the name 'TCN\_<CountryCode>' where <CountryCode> stands for the country alphabetic code (according to UNECE's distinguishing signs of vehicles in international traffic – see page 68) of the Member State. Therefore, this 'TCN\_<CountryCode>' value must be specified as *Header/From* attribute value of all *MS2TCN\_...* messages and as *Header/To* attribute value of all *TCN2MS\_...* messages (with the broadcasting exception below).
  - When TACHOnet needs to broadcast a *TCN2MS\_CheckIssuedCards\_Req* message to all the Member States except the one having sent the original *MS2TCN\_CheckIssuedCards\_Req* message, it will specify as *Header/To* attribute value of the *TCN2MS\_CheckIssuedCards\_Req* message a distribution list name 'All-<CountryCode>' where <CountryCode> stands for the country alphabetic code (according to UNECE's distinguishing signs of vehicles in international traffic – see page 68) of the Member State having sent the original *MS2TCN\_CheckIssuedCards\_Req* message.
-

# Online and Batch Modes

---

## Introduction

The different TACHOnet XML transactions can be processed in two modes:

- An “*online*” mode, aiming at completing the XML transaction (containing a single request) in less than one minute.
  - A “*batch*” mode, aiming at processing the XML transaction (containing multiple requests) typically over night.
- 

## Online mode

Most of the Member States intend to use the TACHOnet transactions in an “*online*” mode, meaning a CIA clerk (or enforcer) will process a TACHOnet transaction for a **single** driver at a time (e.g. checking whether an applicant driver does already hold a card in another Member State) and then, waiting for the final answer. Reasonable fast response time for the transaction completion (ideally timeout will be less than one minute) is therefore of utmost importance.

Due to the asynchronous nature of the exchange of XML messages of a TACHOnet transaction (e.g. Check Issued Card), the CIA application must be designed using technique like “sync on async” (to display back the final result on the screen of the CIA clerk or enforcer).

---

## Batch mode

Another mode that will be supported by TACHOnet is the “*batch*” mode. In that case, fast response time is not actually an issue (e.g. timeout will be set to several hours) but several requests (e.g. checking whether several applicant drivers do already hold a card in another Member State) must be processed within an XML message.

*Batch* mode objectives are twofold:

- It can be used to re-process some “*online*” requests that failed during CIA working hours (e.g. one or more Member States CIA applications didn’t succeed in providing an answer within time).
- It can also be used as “bulk check” when a Member State is joining the TACHOnet system after having already issued cards. In that case, that Member State should perform the *CheckIssuedCards* transaction for all the drivers it has issued a card to.

For sizing & performance purposes, the initial request (*MS2TCN\_<TCN\_Tx\_Type>\_Req*) of a *batch* transaction may not contain more than 100 requests.

---

*Continued on next page*

## Online and Batch Modes, Continued

### Timeout Detection

A TACHOnet XML transaction must always have a timeout value attached to it.

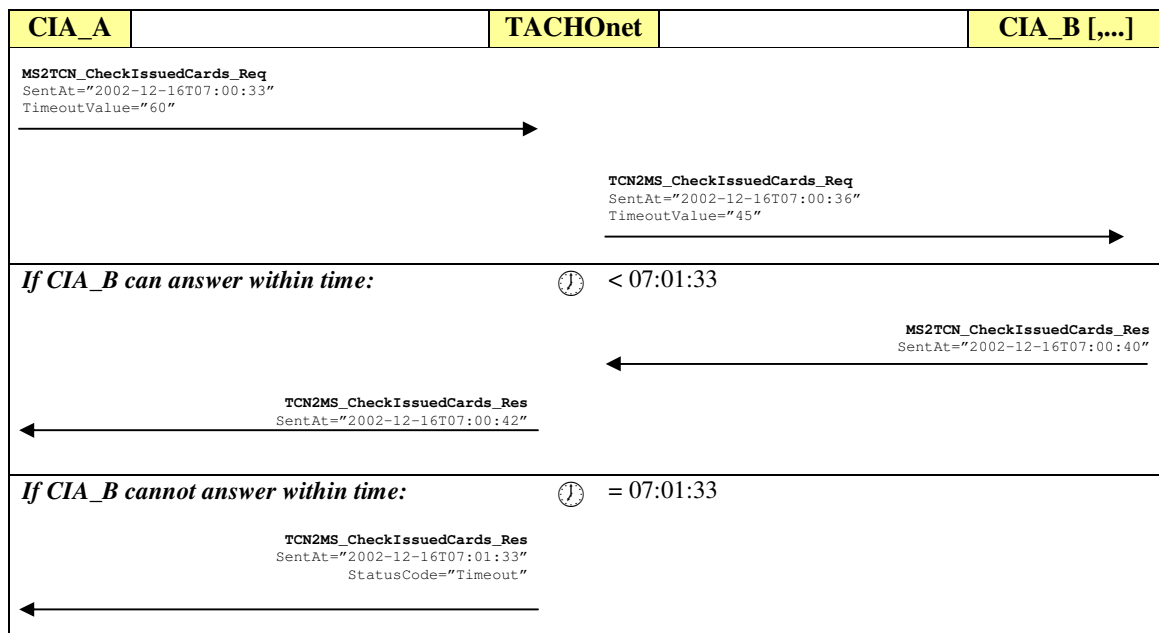
This timeout value is defined by the CIA application in the *TimeoutValue* attribute of the *Header* element of the initial *MS2TCN\_<TCN\_Tx\_Type>\_Req* XML message. The *TimeoutValue* attribute value is given in seconds and indicates when the XML transaction should be considered as expired.

The central TACHOnet system will use the given value as the maximum timeout value for completing the transaction (i.e. sending back the final *TCN2MS\_<TCN\_Tx\_Type>\_Res* XML message). Therefore, it should be set to a reasonable value giving at least sufficient time to process the request (by the central TACHOnet server and the target CIA application(s)). The recommended values are 60 seconds for “online” request and 172800 seconds (48 hours) for “batch” requests. Nevertheless, a CIA application is free to set its timeout value (could be 45 or 120 or 86400 or ... seconds) prior to sending its request to TACHOnet.

The central TACHOnet system will also insert in the *TimeoutValue* attribute of the *Header* element of the *TCN2MS\_<TCN\_Tx\_Type>\_Req* XML message (it sends out to one or more CIA applications) a similar timeout value indicating when the request will expire. This timeout value is obviously a bit less than the initial one (to give TACHOnet some time to process the XML response(s)).

The CIA application will use the given value as the maximum timeout value for processing the TACHOnet request (i.e. sending back the *MS2TCN\_<TCN\_Tx\_Type>\_Res* XML message).

The following example illustrates the timeout mechanism:



Continued on next page

## Online and Batch Modes, Continued

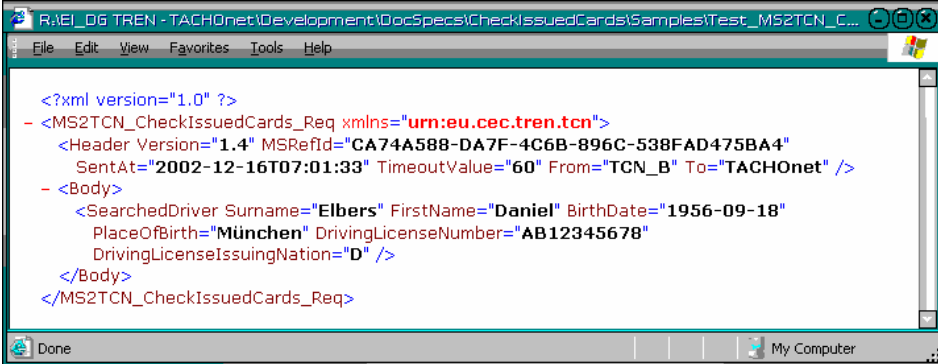
### How to determine *online* & *batch* requests?

The only difference between an *online* and a *batch* transaction lies in the number of requests included in the initial *MS2TCN\_<TCN\_Tx\_Type>\_Req* XML message (as shown in the illustrations below). This number of requests can be determined by counting the occurrence of the first element under the *Body* element of any XML message of a TACHOnet XML transaction. For instance, in the *CheckIssuedCards* transaction, the number of requests can be determined by counting the occurrence of the *SearchedDriver* element in any of the XML messages of this TACHOnet transaction.

If the number of requests is...	Then...
Equal to 1	It's an <i>online</i> transaction
Greater than 1	It's a <i>batch</i> transaction

### Single request in one XML message

The following example illustrates the XML message corresponding to the initial request (*MS2TCN\_CheckIssuedCards\_Req*) of an “*online*” transaction:



```
<?xml version="1.0" ?>
- <MS2TCN_CheckIssuedCards_Req xmlns="urn:eu.cec.tren.tcn">
  <Header Version="1.4" MSRefId="CA74A588-DA7F-4C6B-896C-538FAD475BA4"
    SentAt="2002-12-16T07:01:33" TimeoutValue="60" From="TCN_B" To="TACHOnet" />
  - <Body>
    <SearchedDriver Surname="Elbers" FirstName="Daniel" BirthDate="1956-09-18"
      PlaceOfBirth="München" DrivingLicenseNumber="AB12345678"
      DrivingLicenseIssuingNation="D" />
  </Body>
</MS2TCN_CheckIssuedCards_Req>
```

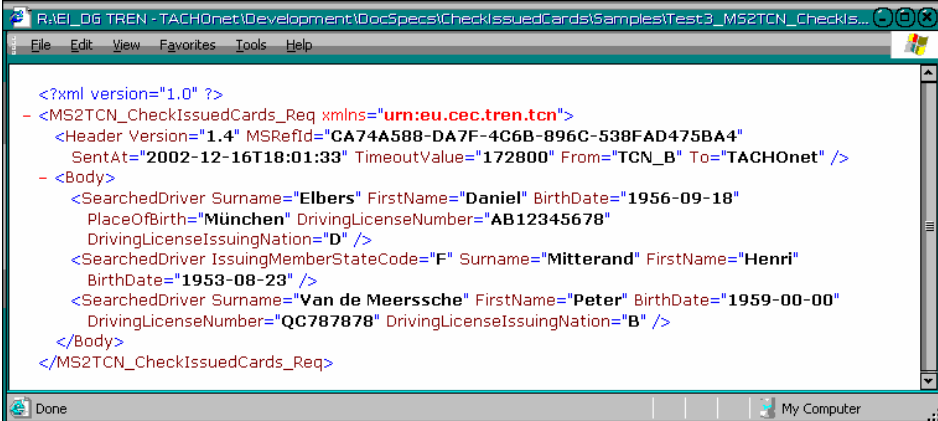
As there's a single *SearchedDriver* element (the first element under the *Body* element), it is considered as an *online* transaction.

*Continued on next page*

## Online and Batch Modes, Continued

### Multiple requests in one XML message

The example below illustrates the XML message corresponding to the initial request (*MS2TCN\_CheckIssuedCards\_Req*) containing 3 requests (3 times the *SearchedDriver* element) to be processed in batch:



```
<?xml version="1.0" ?>
- <MS2TCN_CheckIssuedCards_Req xmlns="urn:eu.cec.tren.tcn">
  <Header Version="1.4" MSRefId="CA74A588-DA7F-4C6B-896C-538FAD475BA4"
    SentAt="2002-12-16T18:01:33" TimeoutValue="172800" From="TCN_B" To="TACHOnet" />
  - <Body>
    <SearchedDriver Surname="Elbers" FirstName="Daniel" BirthDate="1956-09-18"
      PlaceOfBirth="München" DrivingLicenseNumber="AB12345678"
      DrivingLicenseIssuingNation="D" />
    <SearchedDriver IssuingMemberStateCode="F" Surname="Mitterand" FirstName="Henri"
      BirthDate="1953-08-23" />
    <SearchedDriver Surname="Van de Meerssche" FirstName="Peter" BirthDate="1959-00-00"
      DrivingLicenseNumber="QC787878" DrivingLicenseIssuingNation="B" />
  </Body>
</MS2TCN_CheckIssuedCards_Req>
```

Obviously, all the other messages of this transaction will also contain the 3 requests (and corresponding responses). Therefore, every CIA application and the central TACHOnet system must be designed to support multiple requests.

### Recommendations for batch mode

As most of the TACHOnet transactions in “*online*” mode will be performed during CIAs working hours (from 7:00 AM till 5:00 PM UTC), it is recommended to avoid sending and processing *batch* requests during this time frame (to prevent network & server congestion and to guarantee fast response time for *online* requests).

Therefore, the following recommendations should be followed by the different CIA applications:

- Set the *TimeoutValue* attribute (timeout value) of the *Header* element of the initial *MS2TCN\_<TCN\_Tx\_Type>\_Req* XML message to a reasonable value (172800 seconds (48 hours) recommended) allowing the CIA applications to complete the *batch* transaction within the delay (otherwise, the central TACHOnet server will send back timeout error in the final response).
- Send the *batch* requests to TACHOnet from 6:00 PM till 4:00 AM.
- Process the *batch* requests you received from TACHOnet from 6:00 PM till 4:00 AM.
- Send the *batch* responses to TACHOnet from 6:00 PM till 5:00 AM.
- Process the *batch* responses you received from TACHOnet from 6:00 PM till 6:00 AM

# Validation of the XML messages

## Validation principle

When receiving an XML message, the TACHOnet central system and the CIA applications must check whether it is a "Well Formed" XML document (i.e. a document that conforms to the XML syntax rules) and must validate it against its XML Schema definition (XSD).

If an error is detected, an 'InvalidFormat' status code (in the *StatusCode* attribute of the *Header* element node) must be returned within the XML message that should normally follow in the flow of the transaction.

The *StatusMessage* attribute of the *Header* element node can also be used to communicate more information about the error (see example below).

## Invalid Request

Whenever an XML request (<Direction>\_<TCN\_Tx\_Type>\_Req) validation failed, its corresponding XML response (<ReverseDirection>\_<TCN\_Tx\_Type>\_Res) must be sent back to the caller:

```
<?xml version="1.0" ?>
- <TCN2MS_CheckCardStatus_Res xmlns="urn:eu.cec.tren.tcn">
  <Header Version="1.4" MSRefId="CA74A588-DA7F-4C6B-896C-538FAD475BA4"
    TCNRefId="2CBAF18E-1631-4AEB-9280-00692C745B8E" SentAt="2002-12-16T07:02:09"
    From="TACHOnet" To="TCN_B" StatusCode="InvalidFormat" StatusMessage="End tag
'MS2TCN_CheckCardStatus_Req' does not match the start tag 'Body'. Error processing
resource 'Test_MS2TCN_CheckCardStatus_Req.xml'. Line 1, Position 294" />
</TCN2MS_CheckCardStatus_Res>
```

## Invalid response

No message is expected after an XML response.

Therefore, when an XML response (<Direction>\_<TCN\_Tx\_Type>\_Res) validation failed, a *TCN\_Receipt* XML message must be sent back to the caller:

```
- <TCN_Receipt xmlns="urn:eu.cec.tren.tcn">
  <Header Version="1.4" MSRefId="FD1C8879-B103-4113-A100-574CEC984563"
    TCNRefId="AAF24EB1-B9ED-450B-A400-B420039789FC" SentAt="2002-12-
16T07:24:12" From="TACHOnet" To="TCN_D" StatusCode="InvalidFormat"
    StatusMessage="End tag 'MS2TCN_CheckIssuedCards_Res' does not match
the start tag 'Header'. Line 1, Position 435" />
</TCN_Receipt>
```



## ID Correlation between the XML messages in a transaction

---

### Header Attributes

Knowing that the exchange of the XML messages between the CIA applications and TACHOnet is asynchronous, two special attributes has been defined in the *Header* element node of the XML messages to allow the correlation between Request and Response.

- *TCNRefId* given by the TACHOnet central system
- *MSRefId* given by the Member States CIA Applications

Both attributes are not always present in every message

---

### TCNRefId

It consist of a Universal Unique Identifier (uuid) generated by the central TACHOnet system for identifying a transaction initiated by an incoming *MS2TCN\_<TCN\_Tx\_Type>\_Req* XML message).

**It is internally used by the central TACHOnet system** for correlating to the transaction when XML responses are received later on from the CIA applications.

This uuid is specified by TACHOnet in the *TCNRefId* attribute of every XML message dealing with the current transaction it sent to the CIA applications.

**The CIA applications must sent back this uuid** in the *TCNRefId* attribute of every XML message dealing with the current transaction they sent to the central TACHOnet system

---

### MSRefId

It consists of a unique identifier (which format is free to choose provided it's XML compliant) generated by a CIA application for identifying a transaction.

It is inserted in the *MSRefId* attribute of the *Header* element node of the initial *MS2TCN\_<TCN\_Tx\_Type>\_Req* XML message.

**It is used internally by the CIA application** for correlating to the transaction when the final XML response is received later on from the central TACHOnet system. Therefore, it should only be unique in the Member State generating it (and not among all Member States) and should ideally not be reused.

This transaction identifier is specified by a CIA application in the *MSRefId* attribute of every XML message dealing with the current transaction it sent to the central TACHOnet application.

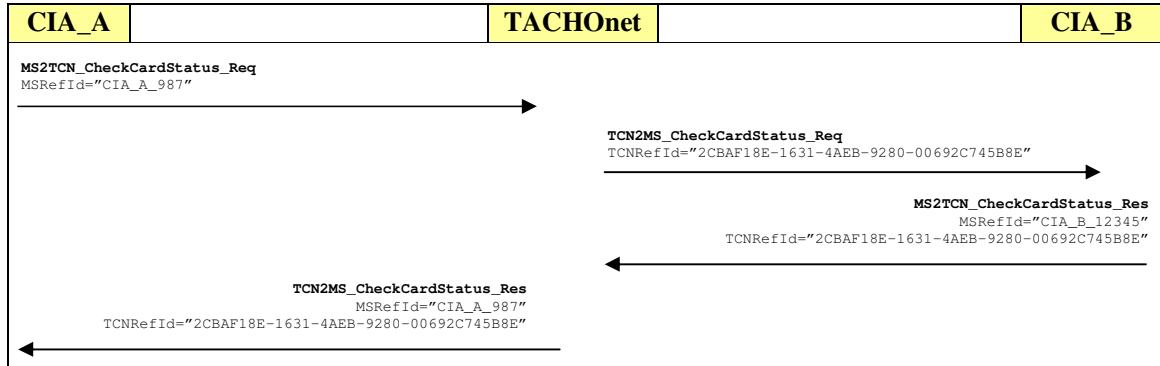
**The central TACHOnet system must sent back this CIA application's transaction identifier** in the *MSRefId* attribute of every XML message dealing with the current transaction they sent to the CIA applications.

---

*Continued on next page*

# ID Correlation between the XML messages in a transaction, Continued

**Example** The following example aims at explaining how the *TCNRefId* and *MSRefId* attributes should be used within a TACHOnet transaction (e.g. CheckCardStatus):



# Status Codes and Status Messages

---

## Introduction

Every TACHOnet XML response message (*MS2TCN\_<TCN\_Tx\_Type>\_Res* and *TCN2MS\_<TCN\_Tx\_Type>\_Res* XML messages) includes different attributes for setting status codes and status messages. These are outlined below.

---

## Status Codes

There are different types of status codes:

- A global status code per XML response message (*StatusCode* attribute of the *Header* element) giving the result of the processing of the corresponding XML request message (all requests included – if *batch* mode).
- A status code for every request included in the corresponding XML request message (a *batch* XML request message may contain several requests – see p.58 for more details), giving the result of the processing of every request (within the XML request message). The name of this status code attribute is different for every TACHOnet XML transaction (*SearchStatusCode*, *ModStatusCode*,...). Please refer to the description of the XML messages for more details.
- A third type of status code exists for the particular *CheckIssuedCards* transaction. Indeed, the final XML response message of this transaction (*TCN2MS\_CheckIssuedCards\_Res.xml*) defines the *MSSStatusCode* attribute for every request and broadcasted Member State, giving, for every broadcasted Member State, the result of the processing of every request. Please refer to the description of the XML messages for more details.

Whatever its type, a status code is always defined in the XML response message as an attribute with an enumerated set of values. Please refer to the description of the XML response messages for the list of these values.

---

## Status Messages

Attached to every status code attribute, there's always a corresponding status message attribute that might be used to specify an optional message giving more detailed information about the status code value.

As that status message (free text) could be useful for debugging purpose, it is recommended to insert message in English.

Please refer to the description of the XML messages for more details.

---

*Continued on next page*

## Status Codes and Status Messages, Continued

### Global *StatusCode* attribute

The global *StatusCode* attribute of the *Header* element of every XML response message may have one of the following values (case sensitive):

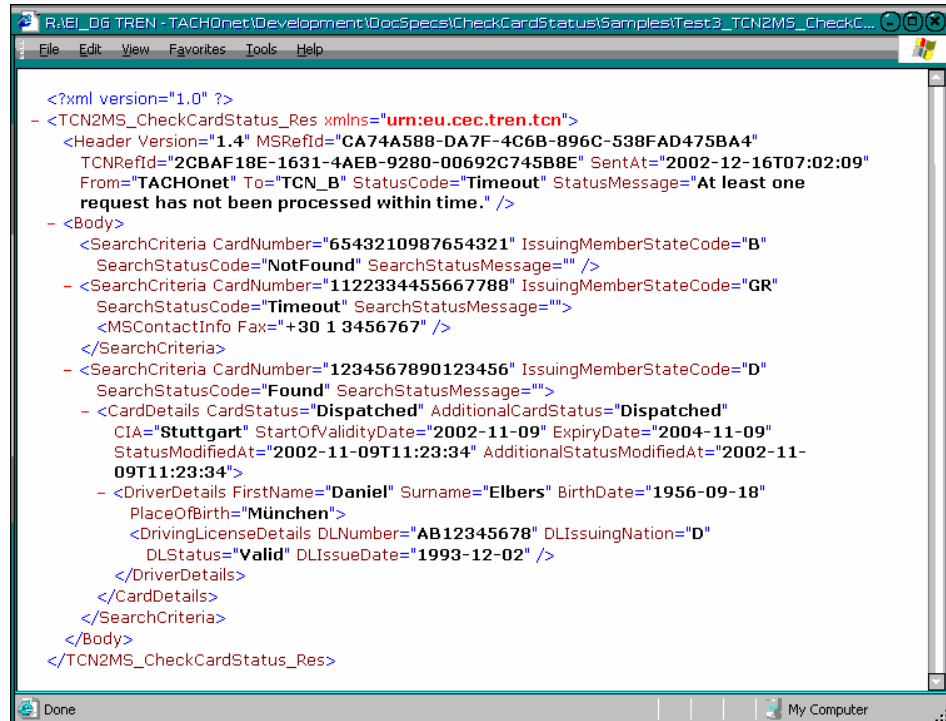
Attribute value	Description
InvalidFormat	The corresponding XML request message was not valid (see p.62 for more details)
Timeout	At least one of the request(s) of the corresponding XML request message has not been processed within time (according to the <i>ExpiresAt</i> attribute).
ServerError	At least one of the request(s) of the corresponding XML request message has not been successfully processed due to a server problem (e.g. connection problem, database problem, application problem,...).
TooManyRequests	The number of requests contained in the corresponding XML request message exceeds the allowed maximum number (see p.58 for more details).
OK	None of the preceding value applies.
NotAvailable	Means that the system of a Member State required in the request (e.g. in the <i>IssuingMemberStateCode</i> attribute) is temporarily unavailable (due to planned and announced maintenance). <i>Such value should only be specified by TACHOnet in TCN2MS_&lt;TxName&gt;_Res message.</i>
NotYetConnected	Means that the Member State required in the request (e.g. in the <i>IssuingMemberStateCode</i> attribute) is not yet connected to the TACHOnet. <i>Such value should only be specified by TACHOnet in TCN2MS_&lt;TxName&gt;_Res message.</i>

The following example shows the final XML response message of a *batch CheckCardStatus* transaction where one request (the 2<sup>nd</sup> *SearchCriteria* element) has not been successfully processed within time. The global *StatusCode* attribute reflects then this problem through the *Timeout* value.

*Continued on next page*

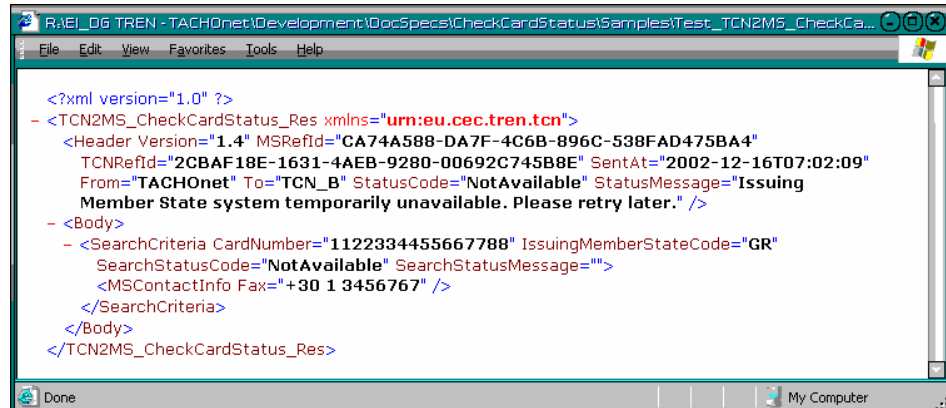
## Status Codes and Status Messages, Continued

Global  
StatusCode  
attribute  
(continued)



```
<?xml version="1.0" ?>
- <TCN2MS_CheckCardStatus_Res xmlns="urn:eu.cec.tren.tcn">
  <Header Version="1.4" MSRefId="CA74A588-DA7F-4C6B-896C-538FAD475BA4"
    TCNRefId="2CBAF18E-1631-4AEB-9280-00692C745B8E" SentAt="2002-12-16T07:02:09"
    From="TACHOnet" To="TCN_B" StatusCode="Timeout" StatusMessage="At least one
    request has not been processed within time." />
  - <Body>
    <SearchCriteria CardNumber="6543210987654321" IssuingMemberStateCode="B"
      SearchStatusCode="NotFound" SearchStatusMessage="" />
    - <SearchCriteria CardNumber="1122334455667788" IssuingMemberStateCode="GR"
      SearchStatusCode="Timeout" SearchStatusMessage=""
      <MSContactInfo Fax="+30 1 3456767" />
    </SearchCriteria>
    - <SearchCriteria CardNumber="1234567890123456" IssuingMemberStateCode="D"
      SearchStatusCode="Found" SearchStatusMessage=""
    - <CardDetails CardStatus="Dispatched" AdditionalCardStatus="Dispatched"
      CIA="Stuttgart" StartOfValidityDate="2002-11-09" ExpiryDate="2004-11-09"
      StatusModifiedAt="2002-11-09T11:23:34" AdditionalStatusModifiedAt="2002-11-
      09T11:23:34">
      - <DriverDetails FirstName="Daniel" Surname="Elbers" BirthDate="1956-09-18"
        PlaceOfBirth="München">
        <DrivingLicenseDetails DLNumber="AB12345678" DLIssuingNation="D"
          DLStatus="Valid" DLIssueDate="1993-12-02" />
        </DriverDetails>
      </CardDetails>
    </SearchCriteria>
  </Body>
</TCN2MS_CheckCardStatus_Res>
```

The following example shows the final XML response message of an “online” *CheckCardStatus* transaction when the system of the Member State having issued the card is temporarily not available (e.g. due to planned maintenance reasons):



```
<?xml version="1.0" ?>
- <TCN2MS_CheckCardStatus_Res xmlns="urn:eu.cec.tren.tcn">
  <Header Version="1.4" MSRefId="CA74A588-DA7F-4C6B-896C-538FAD475BA4"
    TCNRefId="2CBAF18E-1631-4AEB-9280-00692C745B8E" SentAt="2002-12-16T07:02:09"
    From="TACHOnet" To="TCN_B" StatusCode="NotAvailable" StatusMessage="Issuing
    Member State system temporarily unavailable. Please retry later." />
  - <Body>
    - <SearchCriteria CardNumber="1122334455667788" IssuingMemberStateCode="GR"
      SearchStatusCode="NotAvailable" SearchStatusMessage=""
      <MSContactInfo Fax="+30 1 3456767" />
    </SearchCriteria>
  </Body>
</TCN2MS_CheckCardStatus_Res>
```

# UNECE's distinguishing signs of vehicles in international traffic

---

## Introduction

In most of the XML messages, reference is made to this convention for attributes values dealing with country codes. This convention has been chosen (instead of others like ISO 3166) because it is the one used for the tachograph card.

---

## List of country codes

The following table lists the country codes of the Member States involved in TACHOnet. The complete list is available at

<http://www.unece.org/trans/conventn/disting-signs-5-2001.pdf> .

Country Name	Country Code
AUSTRIA	A
BELGIUM	B
DENMARK	DK
FINLAND	FIN
FRANCE	F
GERMANY (Deutschland)	D
GREECE	GR
ICELAND	IS
IRELAND	IRL
ITALY	I
LIECHTENSTEIN (Fürstentum Liechtenstein)	FL
LUXEMBOURG	L
NETHERLANDS	NL
NORWAY	N
PORTUGAL	P
SPAIN (España)	E
SWEDEN	S
UNITED KINGDOM (Great Britain)	GB
SWITZERLAND (Confederation of Helvetia)	CH
CYPRUS (*)	CY
CZECH REPUBLIC (*)	CZ
ESTONIA (*)	EST
HUNGARY (*)	H
LATVIA (*)	LV
LITHUANIA (*)	LT
MALTA (*)	M
POLAND (*)	PL
SLOVAK REPUBLIK (*)	SK
SLOVENIA (*)	SLO

(\*) Candidate country set to join EC on 1st May 2004

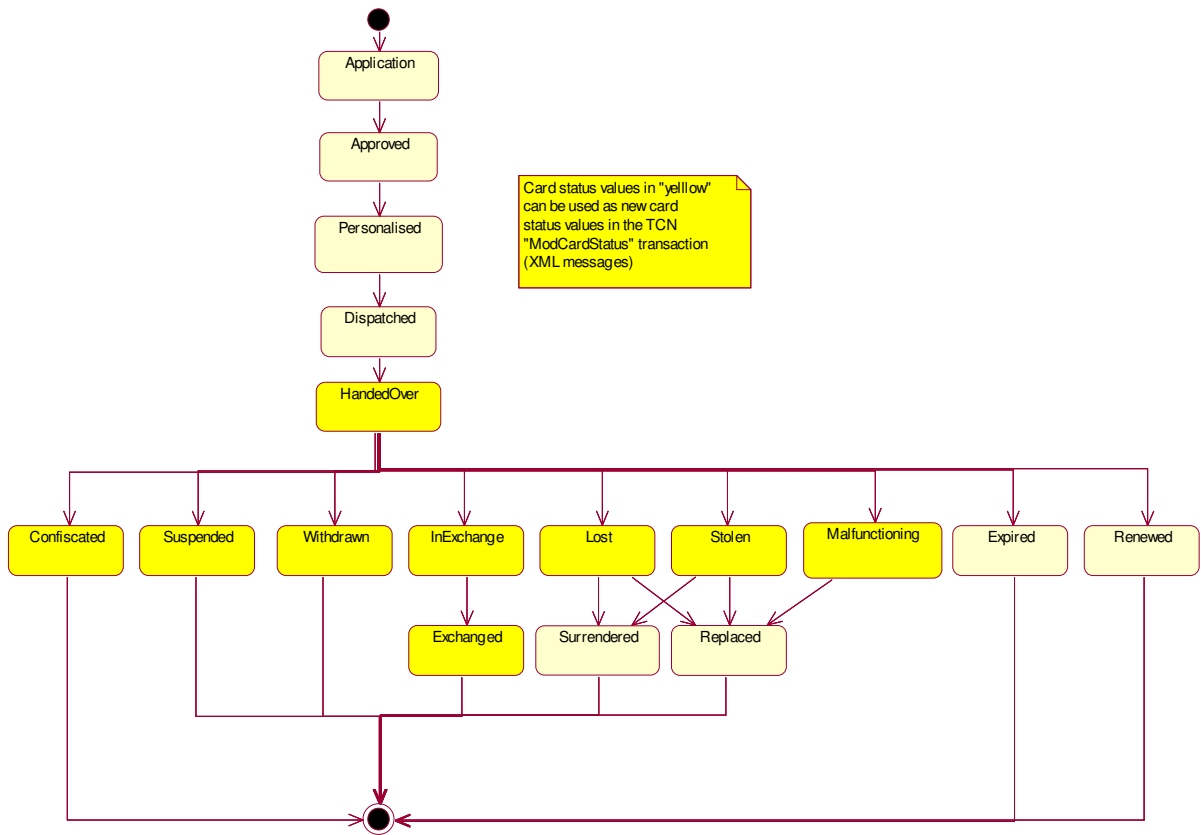
---

# Description of card status values

## Introduction

The following state diagram illustrates the possible values of a tachograph card status and the possible transitions between these status values.

## Card Status diagram



## Card status values

The following table gives the definition of the possible card status values:

Card Status	Description
Application	Card Issuing Authority (CIA) has received an application to issue a driver card. This information has been registered and stored in the database with the generated search keys.
Approved	CIA has decided to issue the tachograph card.
Personalised	The tachograph card has been personalised.

*Continued on next page*

## Description of card status values, Continued

### Card status values (continued)

Card Status	Description
Dispatched	Member State authority has dispatched the driver card to the relevant driver or issuing agency.
HandedOver	Member State authority has handed over the driver card to the relevant driver.
Confiscated	The driver card has been taken from the driver by the competent authority.
Suspended	The driver card has been taken temporarily from the driver.
Withdrawn	CIA has decided to withdraw the driver card. The card has been permanently invalidated.
Surrendered	The tachograph card has been returned to the CIA, and declared no longer needed.
Lost	The tachograph card has been declared lost to the CIA.
Stolen	The tachograph card has been reported stolen to the CIA. A stolen card is considered lost.
Malfunctioning	The tachograph card has been reported malfunctioned to the CIA.
Expired	The period of validity of the tachograph card has expired.
Replaced	The tachograph card, which has been reported lost, stolen or malfunctioned, has been replaced by a new card. The data on the new card is the same, with the exception of the card number replacement index, which has been increased by one.
Renewed	The tachograph card has been renewed because of change of administrative data or the validity period coming to an end. The card number of the new card is the same, with the exception of the card number renewal index, which has been increased by one.
InExchange	CIA has received an application to exchange, renew or replace a driver card, issued by another MS. A report has been sent to the CIA in the MS that issued the card. This CIA has registered that a procedure to exchange the card has started.
Exchanged	CIA has issued a driver card in exchange of a driver card issued by another MS. A report has been sent to the CIA in the MS that issued the exchanged card. This CIA has registered that the card has been exchanged.



## Section 4.1 - Check Issued card

### Overview

#### Introduction

Checking the existence in an issued card in any country connected to TACHOnet is executed via the exchange of different XML messages between TACHOnet and the Member States.

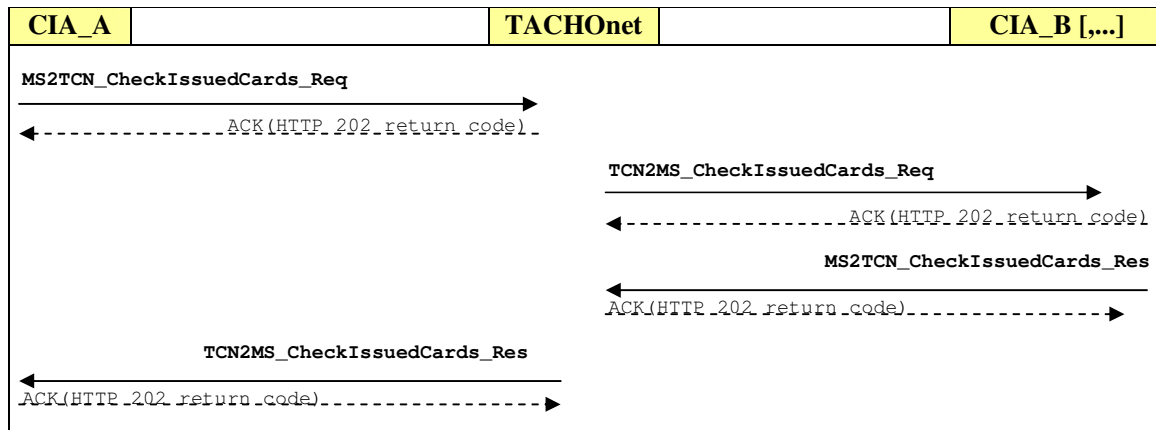
The messages are used by the following processes:

- CIA - First Issue – Stage 2 (see page 28)
- EA - Check driver's issued card – Check via TACHOnet (see page 37)

This section describes the different messages.

#### General flow of the XML messages

The following figure outlines the expected asynchronous flow of XML messages related to this TACHOnet XML transaction:



#### Contents

This section contains the following topics:

Topic	See Page
MS2TCN_CheckIssuedCards_Req.xml message	72
TCN2MS_CheckIssuedCards_Req.xml message	74
MS2TCN_CheckIssuedCards_Res.xml message	76
TCN2MS_CheckIssuedCards_Res.xml message	82

# MS2TCN\_CheckIssuedCards\_Req.xml message

**Introduction** The MS2TCN\_CheckIssuedCards\_Req.xml message is sent by a Member State to TACHOnet in order to request information from the other Member States regarding the existence of a card attributed to a driver.

**Message description** The following table describes the XML message used for the transaction.

Item	Occ	Type	Len	Description
<b>Header</b>	<b>1</b>			<b>Header Node</b>
Version	1	Text	3	TACHOnet request current version ('1.4')
TestId	0-1	Text	1-8	Test Case identification. Only useful for testing.
MSRefId	1	Text	1-36	Reference number given by the original caller. It will be inserted back by TACHOnet in the <i>MSRefId</i> attribute of the <i>TCN2MS_CheckIssuedCards_Res.xml</i> response.
SentAt	1	DT	19	Request creation date and time (ISO 8601 UTC format)
TimeoutValue	1	Int		Timeout value (in seconds) indicating when the request should be considered as expired.
From	1	Text	5-7	The name of the originator of the message ('TCN_<CountryCode>').
To	1	Text	8	The name of the recipient of the message ('TACHOnet').
<b>Body</b>	<b>1</b>			<b>Body Node</b>
<i>SearchedDriver</i>	<b>1-n</b>			<b>SearchedDriver element node(s). More than 1 element node might be given (batch process)</b>
IssuingMemberStateCode	0-1	Text	1-3	Country alphabetic code (according to UNECE's distinguishing signs of vehicles in international traffic) of the MS where the driver swears he got his card from (mandatory when enforcers check). It should be used when the request comes from the enforcers and should be left empty when the request is sent from the CIA to all MS (in that latter case, TACHOnet will then broadcast a <i>TCN2MS_CheckIssuedCards_Req.xml</i> message to all the other MS CIA applications).
Surname	1	Text	1-50	Driver's surname as indicated on the driving license
FirstName	1	Text	1-50	Driver's first of the first name(s) as indicated on the driving license

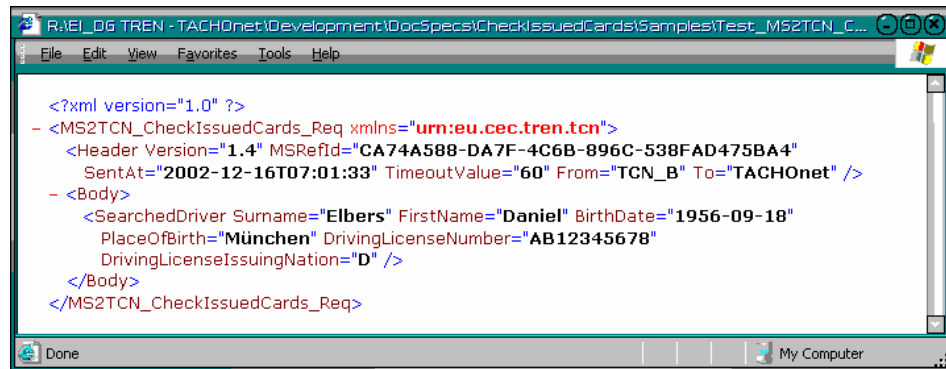
*Continued on next page*

## MS2TCN\_CheckIssuedCards\_Req.xml message, Continued

### Message description (continued)

Item	Occ	Type	Len	Description
BirthDate	1	Text	10	Driver's birth date in ISO 8601 format (YYYY-MM-DD). This date might be equal to 1952-00-00.
PlaceOfBirth	0-1	Text	0-50	Driver's place of birth (optional)
DrivingLicenseNumber	0-1	Text	0-50	Driver's driving license number (optional). It could be used to check the existence and validity of the driving license (provided the Member State has access to that information).
DrivingLicenseIssuingNation	0-1	Text	0-3	Country alphabetic code (according to UNECE's distinguishing signs of vehicles in international traffic) of the Nation having issued the driving license (optional). Combined with <i>DrivingLicenseNumber</i> , it uniquely identifies the driving license.

### Example



```
<?xml version="1.0" ?>
- <MS2TCN_CheckIssuedCards_Req xmlns="urn:eu.cec.tren.tcn">
  <Header Version="1.4" MSRefId="CA74A588-DA7F-4C6B-896C-538FAD475BA4"
    SentAt="2002-12-16T07:01:33" TimeoutValue="60" From="TCN_B" To="TACHonet" />
  - <Body>
    <SearchedDriver Surname="Elbers" FirstName="Daniel" BirthDate="1956-09-18"
      PlaceOfBirth="München" DrivingLicenseNumber="AB12345678"
      DrivingLicenseIssuingNation="D" />
  </Body>
</MS2TCN_CheckIssuedCards_Req>
```

## TCN2MS\_CheckIssuedCards\_Req.xml message

**Introduction** The TCN2MS\_CheckIssuedCards\_Req.xml message is sent by TACHOnet to the Member States when a Member State is looking for the existence of a card attributed to a driver in another country.

**Message description** The following table describes the XML message used for the transaction.

Item	Occ	Type	Len	Description
<b>Header</b>	<b>1</b>			<b>Header node</b>
Version	1	Text	3	TACHOnet request current version ('1.4')
TestId	0-1	Text	1-8	Test Case identification. Only useful for testing.
TCNRefId	1	Uuid	36	Reference number given by the TACHOnet. It must inserted later by the CIA applications in the <i>TCNRefId</i> attribute of the <i>MS2TCN_CheckIssuedCards_Res.xml</i> responses and will be used for correlation when TACHOnet will receive these responses from the CIA applications.
SentAt	1	DT	19	Request creation date and time (ISO 8601 UTC format)
TimeoutValue	1	Int		Timeout value (in seconds) indicating when the request should be considered as expired.
From	1	Text	8	The name of the originator of the message ('TACHOnet').
To	1	Text	5-7	The name of the recipient of the message: <ul style="list-style-type: none"> <li>▪ 'TCN_&lt;CountryCode&gt;' if enforcer's request targeting the CIA having issued to the card to the driver.</li> <li>▪ 'All-&lt;CountryCode&gt;' if CIA's request targeting all other CIAs.</li> </ul>
<b>Body</b>	<b>1</b>			<b>Body node</b>
<b>SearchedDriver</b>	<b>1-n</b>			<b>SearchedDriver element node(s). More than 1 element node might be given (batch process)</b>
Surname	1	Text	1-50	From incoming <i>MS2TCN_CheckIssuedCards_Req.xml</i> request. It is only useful for the Member States not using the common Phonex algorithm.
SurnameSearchKey	1	Text	5	The search key computed by TACHOnet based on the surname and on the defined encoding rules. TACHOnet uses the Phonex algorithm.

*Continued on next page*

## TCN2MS\_CheckIssuedCards\_Req.xml message, Continued

### Message description (continued)

Item	Occ	Type	Len	Description
FirstName	1	Text	1-50	From incoming <i>MS2TCN_CheckIssuedCards_Req.xml</i> request. It is only useful for the Member States not using the common Phonex algorithm.
FirstNameSearchKey	1	Text	5	The search key computed by TACHOnet from the first of the first name(s) and from the defined encoding rules. TACHOnet uses the Phonex algorithm.
BirthDate	1	Text	10	From incoming <i>MS2TCN_CheckIssuedCards_Req.xml</i> request.
PlaceOfBirth	0-1	Text	0-50	From incoming <i>MS2TCN_CheckIssuedCards_Req.xml</i> request.
DrivingLicenseNumber	0-1	Text	0-50	From incoming <i>MS2TCN_CheckIssuedCards_Req.xml</i> request.
DrivingLicenseIssuingNation	0-1	Text	0-3	From incoming <i>MS2TCN_CheckIssuedCards_Req.xml</i> request.

### Example

```
<?xml version="1.0" ?>
- <TCN2MS_CheckIssuedCards_Req xmlns="urn:eu.cec.tren.tcn">
  <Header Version="1.4" TCNRefId="2CBAF18E-1631-4AEB-9280-00692C745B8E"
    SentAt="2002-12-16T07:01:35" TimeoutValue="45" From="TACHOnet" To="TCN_D" />
  - <Body>
    <SearchedDriver Surname="Elbers" SurnameSearchKey="A1600" FirstName="Daniel"
      FirstNameSearchKey="D5400" BirthDate="1956-09-18" PlaceOfBirth="München"
      DrivingLicenseNumber="AB12345678" DrivingLicenseIssuingNation="D" />
    </Body>
  </TCN2MS_CheckIssuedCards_Req>
```

## MS2TCN\_CheckIssuedCards\_Res.xml message

---

**Introduction** The MS2TCN\_CheckIssuedCards\_Res.xml message is sent by the Member States to TACHOnet in answer to a request. It contains the response of the sender when a Member State is looking for the existence of a card attributed to a driver in another country.

---

**Message description** The following table describes the XML message used for the transaction.

Item	Occ	Type	Len	Description
<b>Header</b>	<b>1</b>			<b>Header node</b>
Version	1	Text	3	TACHOnet request current version ('1.4')
TestId	0-1	Text	1-8	Test Case identification. Only useful for testing.
MSRefId	1	Text	1-36	Reference number given by the caller in the request. It will be inserted back by TACHOnet in the <i>MSRefId</i> attribute of the <i>TCN_Receipt.xml</i> response if this message is not well-formed.
TCNRefId	1	Uuid	36	Reference number given by TACHOnet in the <i>TCN2MS_CheckIssuedCards_Req.xml</i> request.
SentAt	1	DT	19	Response creation date and time (ISO 8601 UTC format)
From	1	Text	5-7	The name of the originator of the message ('TCN_<CountryCode>').
To	1	Text	8	The name of the recipient of the message ('TACHOnet')
StatusCode	1	Enum		Global status code. See p.66 for possible values.
StatusMessage	0-1	Text	0-255	Global status message string

---

*Continued on next page*

## MS2TCN\_CheckIssuedCards\_Res.xml message, Continued

### Message description (continued)

Item	Occ	Type	Len	Description
<i>Body</i>	0-1			Body node (optional if the request format was invalid)
<i>SearchedDriver</i>	1-n			SearchedDriver element node(s). More than 1 element node might be given (batch process)
Surname	1	Text	1-50	From incoming TCN2MS_CheckIssuedCards_Req.xml request
SurnameSearchKey	1	Text	5	From incoming TCN2MS_CheckIssuedCards_Req.xml request
FirstName	1	Text	1-50	From incoming TCN2MS_CheckIssuedCards_Req.xml request
FirstNameSearchKey	1	Text	5	From incoming TCN2MS_CheckIssuedCards_Req.xml request
BirthDate	1	Text	10	From incoming TCN2MS_CheckIssuedCards_Req.xml request
PlaceOfBirth	0-1	Text	0-50	From incoming TCN2MS_CheckIssuedCards_Req.xml request
DrivingLicenseNumber	0-1	Text	0-50	From incoming TCN2MS_CheckIssuedCards_Req.xml request
DrivingLicenseIssuingNation	0-1	Text	0-3	From incoming TCN2MS_CheckIssuedCards_Req.xml request
SearchStatusCode	1	Enum		Status code as the result of the search for the given driver of the corresponding received request. Possible values are: <ul style="list-style-type: none"> <li>▪ <b>Found</b> (at least a driver matches)</li> <li>▪ <b>NotFound</b> (no driver matches)</li> <li>▪ <b>Timeout</b></li> <li>▪ <b>ServerError</b></li> </ul>
SearchStatusMessage	0-1	Text	0-255	Search Status Message for the searched driver

Continued on next page

## MS2TCN\_CheckIssuedCards\_Res.xml message, Continued

### Message description (continued)

Item	Occ	Type	Len	Description
<i>DriverDetails</i>	<b>0-n</b>			<b>DriverDetails element node(s).</b> <b>It describes a driver matching the search criteria.</b>
Surname	1	Text	1-50	Driver's surname.
FirstName	1	Text	1-50	Driver's first name(s)
BirthDate	1	Text	10	Driver's birth date in ISO 8601 format (YYYY-MM-DD). This date might be equal to 1952-00-00.
PlaceOfBirth	0-1	Text	0-50	Driver's place of birth (optional)
<i>DrivingLicenseDetails</i>	<b>0-1</b>			<b>DrivingLicenseDetails element node.</b> It shows the details of the driver's driving license used to issue the card. Status and issue date are optional (depending on MS ability to get these information). This element is now optional since some Member States might not be able to provide this information.
DLNumber	1	Text	1-50	Driver's driving license number used for issuing the card.
DLIssuingNation	1	Text	1-3	Country alphabetic code (according to UNECE's distinguishing signs of vehicles in international traffic) of the Nation having issued the driving license. It uniquely identifies the driving license.
DLStatus	0-1	Enum		Status of the driver's driving license used for issuing the card. Possible values are: <ul style="list-style-type: none"> <li>▪ <b>Valid</b> (existing and valid)</li> <li>▪ <b>Invalid</b> (existing but no longer valid)</li> <li>▪ <b>NotFound</b> (not existing)</li> </ul> If the Member State is not able to check the DL, then it should not send this attribute.
DLIssueDate	0-1	Date	10	The issue date (ISO 8601 format: YYYY-MM-DD) of the driving license used to issue the card. If the Member State is not able to check the DL, then it should not send this attribute.
<i>CardDetails</i>	<b>1</b>			<b>CardDetails element node.</b> This element is mandatory and used to describe the driver's issued card details, meaning the driver has at least applied for a card (if not yet received it). If the driver has applied for a card but not yet received it, the CIA application should at least return "Application" as <i>CardStatus</i> attribute value along with the <i>CIA</i> and <i>StatusModifiedAt</i> attributes values.
CardNumber	0-1	Text	16	The card number. It is empty when the driver has applied for a card but did not receive it yet.

Continued on next page



## MS2TCN\_CheckIssuedCards\_Res.xml message, Continued

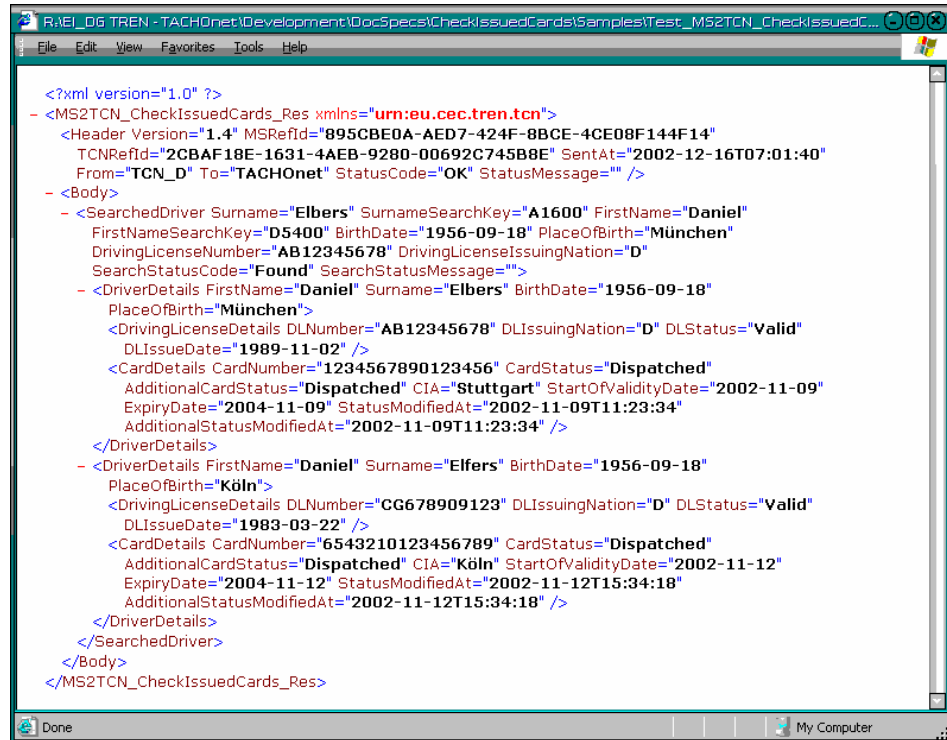
### Message description (continued)

Item	Occ	Type	Len	Description
CardStatus	1	Enum		Status of the card. Possible values are: <ul style="list-style-type: none"> <li>▪ <b>Application</b> (no card number yet issued)</li> <li>▪ <b>Approved</b></li> <li>▪ <b>Personalised</b></li> <li>▪ <b>Dispatched</b></li> <li>▪ <b>HandedOver</b></li> <li>▪ <b>Lost</b></li> <li>▪ <b>Stolen</b></li> <li>▪ <b>Malfunctioning</b></li> <li>▪ <b>Confiscated</b></li> <li>▪ <b>Suspended</b></li> <li>▪ <b>Withdrawn</b></li> <li>▪ <b>Surrendered</b></li> <li>▪ <b>Expired</b></li> <li>▪ <b>Replaced</b></li> <li>▪ <b>Renewed</b></li> <li>▪ <b>InExchange</b></li> <li>▪ <b>Exchanged</b></li> </ul>
AdditionalCardStatus	0-1	Enum		Additional status of the card. Possible values are the same values as specified for <i>CardStatus</i> .
CIA	1	Text	1-50	Name of the Card Issuing Authority that issued the card.
StartOfValidityDate	0-1	Date	10	Date of the 1 <sup>st</sup> validity of the card (ISO 8601 format: YYYY-MM-DD). It is empty when the driver applied for a card but did not receive it yet.
ExpiryDate	0-1	Date	10	Date in ISO 8601 format (YYYY-MM-DD) when the card will expire. It is empty when the driver asked for a card but did not receive it yet.
StatusModifiedAt	1	DT	19	Date and time in ISO 8601 UTC format (YYYY-MM-DDThh:mm:ss) of the last card status modification.
AdditionalStatusModifiedAt	0-1	DT	19	Date and time in ISO 8601 UTC format (YYYY-MM-DDThh:mm:ss) of the last additional card status modification.

*Continued on next page*

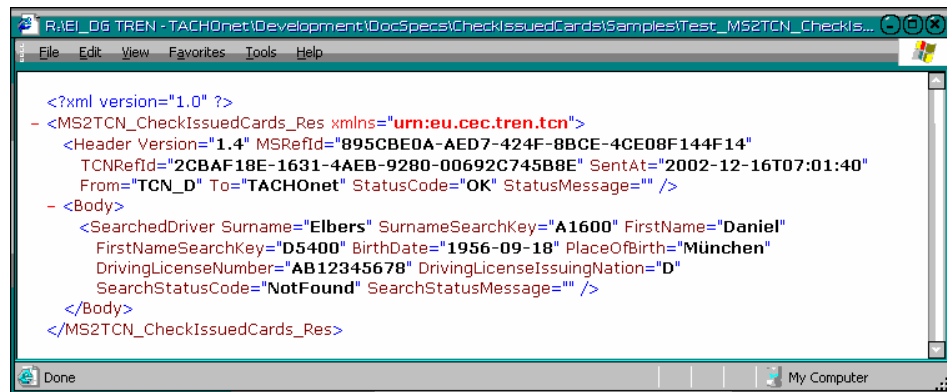
## MS2TCN\_CheckIssuedCards\_Res.xml message, Continued

### Example when found (2 hits)



```
<?xml version="1.0" ?>
- <MS2TCN_CheckIssuedCards_Res xmlns="urn:eu.cec.tren.tcn">
  <Header Version="1.4" MSRefId="895CBED0-AED7-424F-8BCE-4CE08F144F14"
    TCNRefId="2CBAF18E-1631-4AEB-9280-00692C745B8E" SentAt="2002-12-16T07:01:40"
    From="TCN_D" To="TACHOnet" StatusCode="OK" StatusMessage="" />
  <Body>
    <SearchedDriver Surname="Elbers" SurnameSearchKey="A1600" FirstName="Daniel"
      FirstNameSearchKey="D5400" BirthDate="1956-09-18" PlaceOfBirth="München"
      DrivingLicenseNumber="AB12345678" DrivingLicenseIssuingNation="D"
      SearchStatusCode="Found" SearchStatusMessage="">
      <DriverDetails FirstName="Daniel" Surname="Elbers" BirthDate="1956-09-18"
        PlaceOfBirth="München">
        <DrivingLicenseDetails DLNumber="AB12345678" DLIssuingNation="D" DLStatus="Valid"
          DLIssueDate="1989-11-02" />
        <CardDetails CardNumber="1234567890123456" CardStatus="Dispatched"
          AdditionalCardStatus="Dispatched" CIA="Stuttgart" StartOfValidityDate="2002-11-09"
          ExpiryDate="2004-11-09" StatusModifiedAt="2002-11-09T11:23:34"
          AdditionalStatusModifiedAt="2002-11-09T11:23:34" />
        </DriverDetails>
      <DriverDetails FirstName="Daniel" Surname="Elfers" BirthDate="1956-09-18"
        PlaceOfBirth="Köln">
        <DrivingLicenseDetails DLNumber="CG678909123" DLIssuingNation="D" DLStatus="Valid"
          DLIssueDate="1983-03-22" />
        <CardDetails CardNumber="6543210123456789" CardStatus="Dispatched"
          AdditionalCardStatus="Dispatched" CIA="Köln" StartOfValidityDate="2002-11-12"
          ExpiryDate="2004-11-12" StatusModifiedAt="2002-11-12T15:34:18"
          AdditionalStatusModifiedAt="2002-11-12T15:34:18" />
        </DriverDetails>
      </SearchedDriver>
    </Body>
  </MS2TCN_CheckIssuedCards_Res>
```

### Example when not found



```
<?xml version="1.0" ?>
- <MS2TCN_CheckIssuedCards_Res xmlns="urn:eu.cec.tren.tcn">
  <Header Version="1.4" MSRefId="895CBED0-AED7-424F-8BCE-4CE08F144F14"
    TCNRefId="2CBAF18E-1631-4AEB-9280-00692C745B8E" SentAt="2002-12-16T07:01:40"
    From="TCN_D" To="TACHOnet" StatusCode="OK" StatusMessage="" />
  <Body>
    <SearchedDriver Surname="Elbers" SurnameSearchKey="A1600" FirstName="Daniel"
      FirstNameSearchKey="D5400" BirthDate="1956-09-18" PlaceOfBirth="München"
      DrivingLicenseNumber="AB12345678" DrivingLicenseIssuingNation="D"
      SearchStatusCode="NotFound" SearchStatusMessage="" />
    </Body>
  </MS2TCN_CheckIssuedCards_Res>
```

Continued on next page

## MS2TCN\_CheckIssuedCards\_Res.xml message, Continued

---

**Rules for  
computing  
StatusCode  
value**

The *StatusCode* attribute value of the *Header* element stands for the global status code for the message and is based on the *SearchStatusCode* attribute value of all *SearchedDriver* elements according to the following rules in priority order:

<b>If among all <i>SearchStatusCode</i> value</b>		<b>Then <i>StatusCode</i> value is...</b>
<i>If at least one</i>	Timeout	Timeout
<i>If at least one</i>	ServerError	ServerError
<i>Otherwise</i>	Found or NotFound	OK

---

## TCN2MS\_CheckIssuedCards\_Res.xml message

---

**Introduction** The MS2TCN\_CheckIssuedCards\_Res.xml message is the response sent by TACHOnet to a Member State looking for the existence of card attributed to a driver in another country.

It consists of the consolidation of all answers sent by the different Member States to TACHOnet.

---

### Message description

The following table describes the XML message used for the transaction.

Item	Occ	Type	Len	Description
<b>Header</b>	<b>1</b>			<b>Header node</b>
Version	1	Text	3	TACHOnet request current version ('1.4')
TestId	0-1	Text	1-8	Test Case identification. Only useful for testing.
MSRefId	1	Text	1-36	Reference number given by the caller in the original <i>MS2TCN_CheckIssuedCards_Req.xml</i> request.
TCNRefId	1	Uuid	36	Reference number given by the TACHOnet in the request. It will be inserted back by the CIA application in the <i>MSRefId</i> attribute of the <i>TCN_Receipt.xml</i> response if this message is not well-formed.
SentAt	1	DT	19	Response creation date and time (ISO 8601 UTC format)
From	1	Text	8	The name of the originator of the message ('TACHOnet')
To	1	Text	5-7	The name of the recipient of the message ('TCN_<CountryCode>').
StatusCode	1	Enum		Global status code. See p.66 for possible values.
StatusMessage	0-1	Text	0-255	Global status message string

---

*Continued on next page*

## TCN2MS\_CheckIssuedCards\_Res.xml message, Continued

### Message description (continued)

Item	Occ	Type	Len	Description
<i>Body</i>	0-1			Body node (optional if the request format was invalid)
<i>SearchedDriver</i>	1-n			SearchedDriver element node(s). More than 1 element node might be given (batch process)
IssuingMemberStateCode	0-1	Text	1-3	From original MS2TCN_CheckIssuedCards_Req.xml request.
Surname	1	Text	1-50	From original MS2TCN_CheckIssuedCards_Req.xml request.
FirstName	1	Text	1-50	From original MS2TCN_CheckIssuedCards_Req.xml request.
BirthDate	1	Text	10	From original MS2TCN_CheckIssuedCards_Req.xml request.
PlaceOfBirth	0-1	Text	0-50	From original MS2TCN_CheckIssuedCards_Req.xml request.
DrivingLicenseNumber	0-1	Text	0-50	From original MS2TCN_CheckIssuedCards_Req.xml request.
DrivingLicenseIssuingNation	0-1	Text	0-3	From original MS2TCN_CheckIssuedCards_Req.xml request.
SearchStatusCode	1	Enum		Status code as the result of the search for the given driver of the corresponding received request. Possible values are: <ul style="list-style-type: none"> <li>▪ <b>Found</b> (at least one MS found a match)</li> <li>▪ <b>NotFound</b> (all MS answered "NotFound")</li> <li>▪ <b>Timeout</b> (no "Found" answer and at least one MS answer is missing)</li> <li>▪ <b>ServerError</b> (no "Found" answer and at least one MS answer is in error)</li> <li>▪ <b>NotAvailable</b> (the MS system is temporarily unavailable)</li> <li>▪ <b>NotYetConnected</b> (the MS system is not yet connected to TACHOnet)</li> </ul>
SearchStatusMessage	0-1	Text	0-255	Search Status Message for the searched driver
<i>MemberState</i>	1-n			Member State node(s)
MemberStateCode	1	Text	1-3	Member State country alphabetic code (according to UNECE's distinguishing signs of vehicles in international traffic)

Continued on next page

## TCN2MS\_CheckIssuedCards\_Res.xml message, Continued

### Message description (continued)

Item	Occ	Type	Len	Description
MSStatusCode	1	Enum		Status code as the result of the MS search for the given driver of the corresponding received request. Possible values are: <ul style="list-style-type: none"> <li>▪ <b>Found</b> (at least a driver matches)</li> <li>▪ <b>NotFound</b> (no driver matches)</li> <li>▪ <b>Timeout</b></li> <li>▪ <b>ServerError</b></li> <li>▪ <b>NotAvailable</b> (the MS system is temporarily unavailable)</li> <li>▪ <b>NotYetConnected</b> (the MS system is not yet connected to TACHOnet)</li> </ul> From corresponding <i>MS2TCN_CheckIssuedCards_Res.xml</i> response (except when <i>NotAvailable</i> and <i>NotYetConnected</i> ).
MSStatusMessage	0-1	Text	0-255	Status message corresponding to the result of the request sent by TACHOnet to the Member State From corresponding <i>MS2TCN_CheckIssuedCards_Res.xml</i> response.
<i>MSContactInfo</i>	<b>0-1</b>			<b>Member State Contact Info element node</b> (mandatory when <i>MSStatusCode</i> attribute = Timeout or ServerError or NotAvailable or <b>NotYetConnected</b> )
Fax	0-1	Text	0-20	Fax number of the failing MS CIA
Phone	0-1	Text	0-20	Phone number of the failing MS CIA
EMail	0-1	Text	0-50	Email address of the failing MS CIA
<i>DriverDetails</i>	<b>0-n</b>			<b>DriverDetails element node(s). It describes a driver matching the search criteria.</b>
Surname	1	Text	1-50	From corresponding <i>MS2TCN_CheckIssuedCards_Res.xml</i> response.
FirstName	1	Text	1-50	From corresponding <i>MS2TCN_CheckIssuedCards_Res.xml</i> response.
BirthDate	1	Text	10	From corresponding <i>MS2TCN_CheckIssuedCards_Res.xml</i> response.
PlaceOfBirth	0-1	Text	0-50	From corresponding <i>MS2TCN_CheckIssuedCards_Res.xml</i> response.
<i>DrivingLicenseDetails</i>	<b>0-1</b>			From corresponding <i>MS2TCN_CheckIssuedCards_Res.xml</i> response.

Continued on next page

## TCN2MS\_CheckIssuedCards\_Res.xml message, Continued

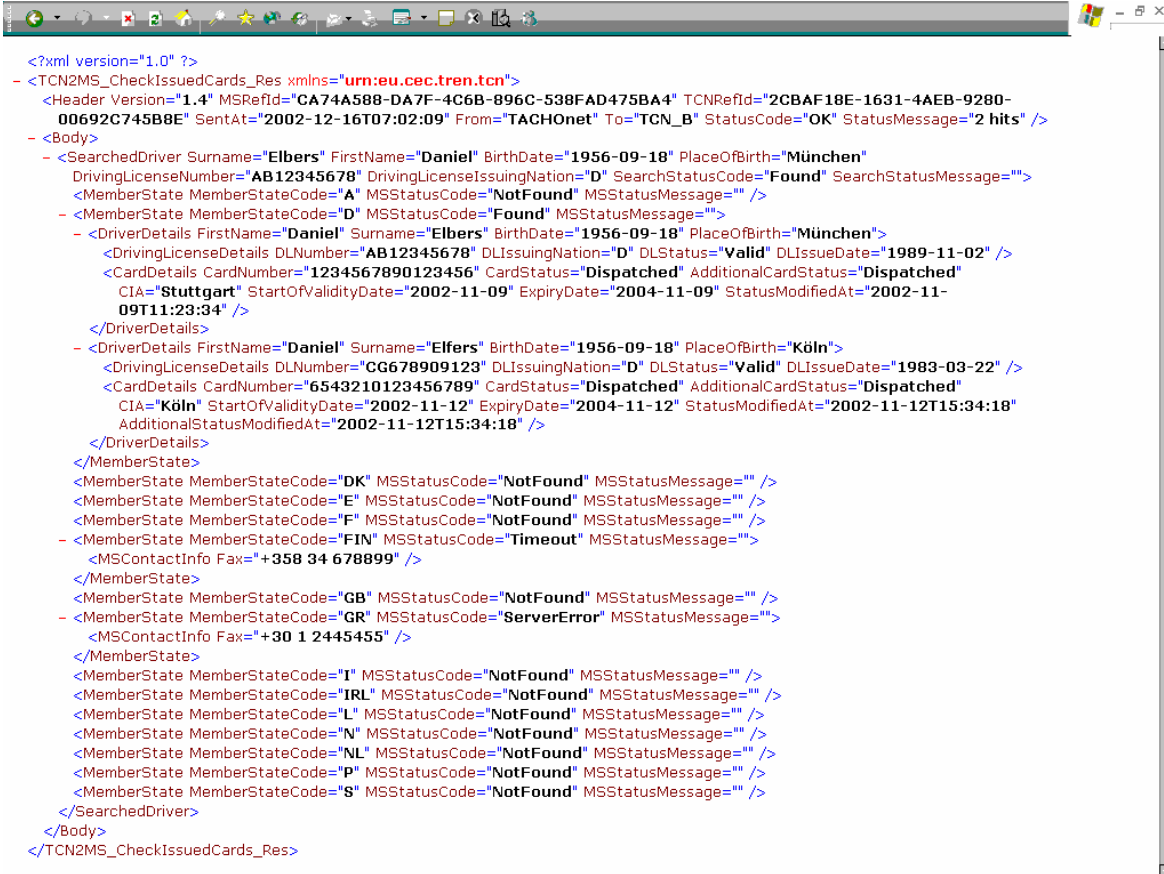
### Message description (continued)

Item	Occ	Type	Len	Description
DLNumber	1	Text	1-50	From corresponding <i>MS2TCN_CheckIssuedCards_Res.xml</i> response.
DLIssuingNation	1	Text	1-3	From corresponding <i>MS2TCN_CheckIssuedCards_Res.xml</i> response.
DLStatus	0-1	Enum		From corresponding <i>MS2TCN_CheckIssuedCards_Res.xml</i> response.
DLIssueDate	0-1	Date	10	From corresponding <i>MS2TCN_CheckIssuedCards_Res.xml</i> response.
<b>CardDetails</b>	<b>1</b>			From corresponding <i>MS2TCN_CheckIssuedCards_Res.xml</i> response.
CardNumber	0-1	Text	16	From corresponding <i>MS2TCN_CheckIssuedCards_Res.xml</i> response.
CardStatus	1	Enum		From corresponding <i>MS2TCN_CheckIssuedCards_Res.xml</i> response.
AdditionalCardStatus	0-1	Enum		From corresponding <i>MS2TCN_CheckIssuedCards_Res.xml</i> response.
CIA	1	Text	1-50	From corresponding <i>MS2TCN_CheckIssuedCards_Res.xml</i> response.
StartOfValidityDate	0-1	Date	10	From corresponding <i>MS2TCN_CheckIssuedCards_Res.xml</i> response.
ExpiryDate	0-1	Date	10	From corresponding <i>MS2TCN_CheckIssuedCards_Res.xml</i> response.
StatusModifiedAt	1	DT	19	From corresponding <i>MS2TCN_CheckIssuedCards_Res.xml</i> response.
AdditionalStatusModifiedAt	0-1	DT	19	From corresponding <i>MS2TCN_CheckIssuedCards_Res.xml</i> response.

Continued on next page

# TCN2MS\_CheckIssuedCards\_Res.xml message, Continued

Example when  
found (2hits),  
timeout and  
server error



```
<?xml version="1.0" ?>
- <TCN2MS_CheckIssuedCards_Res xmlns="urn:eu.cec.tren.tcn">
  <Header Version="1.4" MSRefId="CA74A588-DA7F-4C6B-896C-538FAD475BA4" TCNRefId="2CBAF18E-1631-4AEB-9280-00692C745B8E" SentAt="2002-12-16T07:02:09" From="TACHOnet" To="TCN_B" StatusCode="OK" StatusMessage="2 hits" />
  <Body>
    - <SearchedDriver Surname="Elbers" FirstName="Daniel" BirthDate="1956-09-18" PlaceOfBirth="München"
      DrivingLicenseNumber="AB12345678" DrivingLicenseIssuingNation="D" SearchStatusCode="Found" SearchStatusMessage="">
      <MemberState MemberStateCode="A" MSStatusCode="NotFound" MSStatusMessage="" />
      <MemberState MemberStateCode="D" MSStatusCode="Found" MSStatusMessage="">
        - <DriverDetails FirstName="Daniel" Surname="Elbers" BirthDate="1956-09-18" PlaceOfBirth="München">
          <DrivingLicenseDetails DLNumber="AB12345678" DLIssuingNation="D" DLStatus="Valid" DLIssueDate="1989-11-02" />
          <CardDetails CardNumber="1234567890123456" CardStatus="Dispatched" AdditionalCardStatus="Dispatched"
            CIA="Stuttgart" StartOfValidityDate="2002-11-09" ExpiryDate="2004-11-09" StatusModifiedAt="2002-11-09T11:23:34" />
          </DriverDetails>
        - <DriverDetails FirstName="Daniel" Surname="Elfers" BirthDate="1956-09-18" PlaceOfBirth="Köln">
          <DrivingLicenseDetails DLNumber="CG678909123" DLIssuingNation="D" DLStatus="Valid" DLIssueDate="1983-03-22" />
          <CardDetails CardNumber="6543210123456789" CardStatus="Dispatched" AdditionalCardStatus="Dispatched"
            CIA="Köln" StartOfValidityDate="2002-11-12" ExpiryDate="2004-11-12" StatusModifiedAt="2002-11-12T15:34:18"
            AdditionalStatusModifiedAt="2002-11-12T15:34:18" />
          </DriverDetails>
        </MemberState>
        <MemberState MemberStateCode="DK" MSStatusCode="NotFound" MSStatusMessage="" />
        <MemberState MemberStateCode="E" MSStatusCode="NotFound" MSStatusMessage="" />
        <MemberState MemberStateCode="F" MSStatusCode="NotFound" MSStatusMessage="" />
        - <MemberState MemberStateCode="FIN" MSStatusCode="Timeout" MSStatusMessage="">
          <MSContactInfo Fax="+358 34 678899" />
        </MemberState>
        <MemberState MemberStateCode="GB" MSStatusCode="NotFound" MSStatusMessage="" />
        - <MemberState MemberStateCode="GR" MSStatusCode="ServerError" MSStatusMessage="">
          <MSContactInfo Fax="+30 1 2445455" />
        </MemberState>
        <MemberState MemberStateCode="I" MSStatusCode="NotFound" MSStatusMessage="" />
        <MemberState MemberStateCode="IRL" MSStatusCode="NotFound" MSStatusMessage="" />
        <MemberState MemberStateCode="L" MSStatusCode="NotFound" MSStatusMessage="" />
        <MemberState MemberStateCode="N" MSStatusCode="NotFound" MSStatusMessage="" />
        <MemberState MemberStateCode="NL" MSStatusCode="NotFound" MSStatusMessage="" />
        <MemberState MemberStateCode="P" MSStatusCode="NotFound" MSStatusMessage="" />
        <MemberState MemberStateCode="S" MSStatusCode="NotFound" MSStatusMessage="" />
      </SearchedDriver>
    </Body>
  </TCN2MS_CheckIssuedCards_Res>
```

Continued on next page



## TCN2MS\_CheckIssuedCards\_Res.xml message, Continued

### Rules for computing *SearchStatusCode* value

The *SearchStatusCode* attribute value of each *SearchedDriver* element stands for the status code for the given *SearchedDriver* request and is based on the *MSSStatusCode* attribute value of all *MemberState* elements (each corresponding to the Member State's response) according to the following rules in priority order:

If among all <i>MSSStatusCode</i> value		Then <i>SearchStatusCode</i> value is...
<i>If at least one</i>	Found	Found
<i>If all</i>	NotFound	NotFound
<i>If at least one</i>	Timeout	Timeout
<i>If at least one</i>	ServerError	ServerError
<i>If at least one</i>	NotAvailable	NotAvailable
<i>If at least one</i>	NotYetConnected	NotYetConnected

### Rules for computing *StatusCode* value

The *StatusCode* attribute value of the *Header* element stands for the global status code for the message and is based on the *SearchStatusCode* attribute value of all *SearchedDriver* elements according to the following rules in priority order:

If among all <i>SearchStatusCode</i> value		Then <i>StatusCode</i> value is...
<i>If at least one</i>	Timeout	Timeout
<i>If at least one</i>	ServerError	ServerError
<i>If at least one</i>	NotAvailable	NotAvailable
<i>If at least one</i>	NotYetConnected	NotYetConnected
<i>Otherwise</i>	Found or NotFound	OK

## Section 4.2 - Send issued Card information for a driving license

### Overview

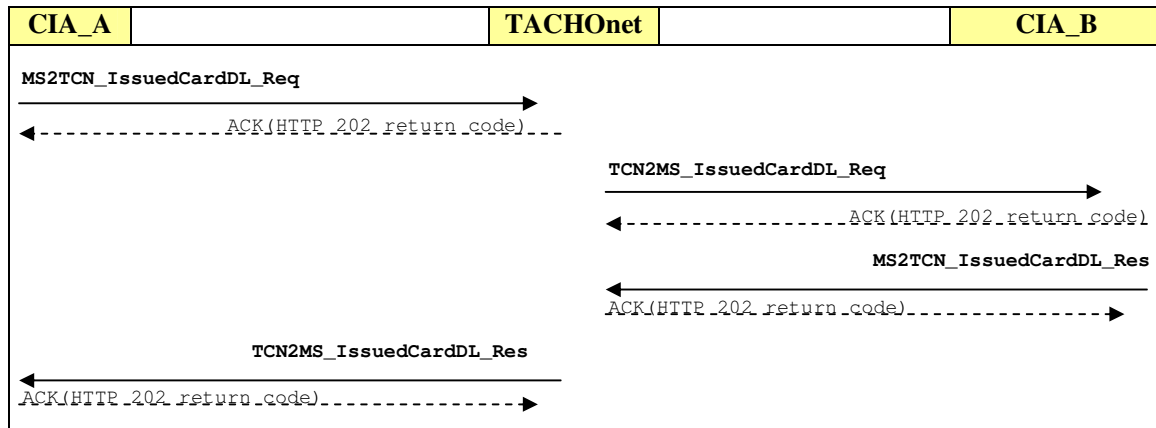
**Introduction** After having issued a card to a driver, any Member State must inform the country having issued the driving license that a card has been issued using the corresponding driving license number.

The messages are used by the following process:

- CIA - First Issue – Stage 3 (see page 29)

This section describes the different messages.

**General flow of the XML messages** The following figure outlines the expected asynchronous flow of XML messages related to this TACHOnet XML transaction:



**Contents** This section contains the following topics:

Topic	See Page
MS2TCN_IssuedCardDL_Req	89
TCN2MS_IssuedCardDL_Req	91
MS2TCN_IssuedCardDL_Res	93
TCN2MS_IssuedCardDL_Res	96

# MS2TCN\_IssuedCardDL\_Req

## Introduction

The MS2TCN\_IssuedCardsDL\_Req.xml message is sent by the Member State to inform another one that a card has been delivered or is to be delivered for a driving license delivered by that Member State.

## Message description

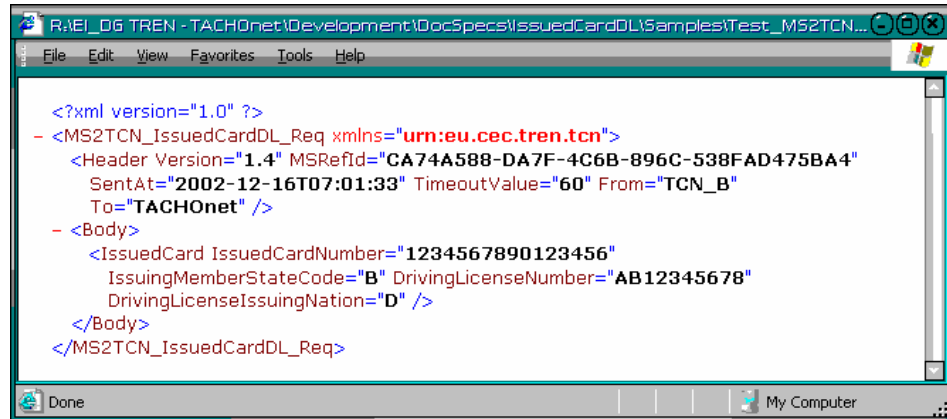
The following table describes the XML message used for the transaction.

Item	Occ	Type	Len	Description
<b>Header</b>	<b>1</b>			<b>Header node</b>
Version	1	Text	3	TACHOnet request current version ('1.4')
TestId	0-1	Text	1-8	Test Case identification. Only useful for testing.
MSRefId	1	Text	1-36	Reference number given by the original caller. It will be inserted back by TACHOnet in the <i>MSRefId</i> attribute of the <i>TCN2MS_IssuedCardDL_Res.xml</i> response.
SentAt	1	DT	19	Request creation date and time (ISO 8601 UTC format)
TimeoutValue	1	Int		Timeout value (in seconds) indicating when the request should be considered as expired.
From	1	Text	5-7	The name of the originator of the message ('TCN_<CountryCode>').
To	1	Text	8	The name of the recipient of the message ('TACHOnet')
<b>Body</b>	<b>1</b>			<b>Body node</b>
<b>IssuedCard</b>	<b>1-n</b>			<b>IssuedCard element node(s). More than 1 element node might be given (batch process).</b>
IssuedCardNumber	1	Text	16	Number of the issued card.
IssuingMemberStateCode	1	Text	1-3	Country alphabetic code (according to UNECE's distinguishing signs of vehicles in international traffic) of the MS having issued the card
DrivingLicenseNumber	1	Text	1-50	Driver's driving license number used to issue the tachograph card (and printed on the tachograph card).
DrivingLicenseIssuingNation	1	Text	1-3	Country alphabetic code (according to UNECE's distinguishing signs of vehicles in international traffic) of the Nation having issued the driver's driving license.

Continued on next page

## MS2TCN\_IssuedCardDL\_Req, Continued

### Example



```
<?xml version="1.0" ?>
- <MS2TCN_IssuedCardDL_Req xmlns="urn:eu.cec.tren.tcn">
  <Header Version="1.4" MSRefId="CA74A588-DA7F-4C6B-896C-538FAD475BA4"
    SentAt="2002-12-16T07:01:33" TimeoutValue="60" From="TCN_B"
    To="TACHOnet" />
- <Body>
  <IssuedCard IssuedCardNumber="1234567890123456"
    IssuingMemberStateCode="B" DrivingLicenseNumber="AB12345678"
    DrivingLicenseIssuingNation="D" />
</Body>
</MS2TCN_IssuedCardDL_Req>
```

# TCN2MS\_IssuedCardDL\_Req

**Introduction** The MS2TCN\_IssuedCardDL\_Res.xml message is sent by is sent by TACHOnet to the Member State having issued the driving license.

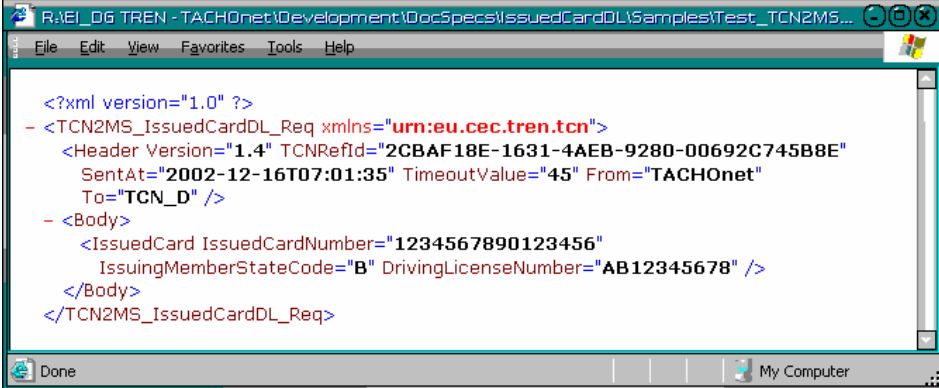
**Message description** The following table describes the XML message used for the transaction.

Item	Occ	Type	Len	Description
<b>Header</b>	<b>1</b>			<b>Header node</b>
Version	1	Text	3	TACHOnet request current version ('1.4')
TestId	0-1	Text	1-8	Test Case identification. Only useful for testing.
TCNRefId	1	Uuid	36	Reference number given by the TACHOnet. It must inserted later by the CIA application in the <i>TCNRefId</i> attribute of the <i>MS2TCN_IssuedCardDL_Res.xml</i> response;and will be used for correlation when TACHOnet will receive the response from the CIA application.
SentAt	1	Text	19	Request creation date and time (ISO 8601 UTC format)
TimeoutValue	1	Int		Timeout value (in seconds) indicating when the request should be considered as expired.
From	1	Text	8	The name of the originator of the message ('TACHOnet').
To	1	Text	5-7	The name of the recipient of the message ('TCN_<CountryCode>').
<b>Body</b>	<b>1</b>			<b>Body node</b>
<b>IssuedCard</b>	<b>1-n</b>			<b>IssuedCard element node(s). More than 1 element node might be given (batch process).</b>
IssuedCardNumber	1	Text	16	From incoming <i>MS2TCN_IssuedCardDL_Req.xml</i> request.
IssuingMemberStateCode	1	Text	1-3	From incoming <i>MS2TCN_IssuedCardDL_Req.xml</i> request.
DrivingLicenseNumber	1	Text	1-50	From incoming <i>MS2TCN_IssuedCardDL_Req.xml</i> request.

*Continued on next page*

## TCN2MS\_IssuedCardDL\_Req, Continued

### Example



```
<?xml version="1.0" ?>
- <TCN2MS_IssuedCardDL_Req xmlns="urn:eu.cec.tren.tcn">
  <Header Version="1.4" TCNRefId="2CBAF18E-1631-4AEB-9280-00692C745B8E"
    SentAt="2002-12-16T07:01:35" TimeoutValue="45" From="TACHOnet"
    To="TCN_D" />
  - <Body>
    <IssuedCard IssuedCardNumber="1234567890123456"
      IssuingMemberStateCode="B" DrivingLicenseNumber="AB12345678" />
  </Body>
</TCN2MS_IssuedCardDL_Req>
```

# MS2TCN\_IssuedCardDL\_Res

---

**Introduction** The MS2TCN\_IssuedCardsDL\_Res.xml message is the answer sent by the Member State to Tachonet to the message informing that a card has been delivered or is to be delivered for one of their driving licenses.

---

**Message description** The following table describes the XML message used for the transaction.

Item	Occ	Type	Len	Description
<b>Header</b>	<b>1</b>			<b>Header node</b>
Version	1	Text	3	TACHOnet request current version ('1.4')
TestId	0-1	Text	1-8	Test Case identification. Only useful for testing.
MSRefId	1	Text	1-36	Reference number given by the caller in the request. It will be inserted back by TACHOnet in the <i>MSRefId</i> attribute of the <i>TCN_Receipt.xml</i> response if this message is not well-formed.
TCNRefId	1	Uuid	36	Reference number given by TACHOnet in the <i>TCN2MS_IssuedCardDL_Req.xml</i> request.
SentAt	1	DT	19	Response creation date and time (ISO 8601 UTC format)
From	1	Text	5-7	The name of the originator of the message ('TCN_<CountryCode>').
To	1	Text	8	The name of the recipient of the message ('TACHOnet')
StatusCode	1	Enum		Global status code. See p.66 for possible values.
StatusMessage	0-1	Text	0-255	Global status message string

---

*Continued on next page*

## MS2TCN\_IssuedCardDL\_Res, Continued

### Message description (continued)

Item	Occ	Type	Len	Description
<i>Body</i>	0-1			Body node (optional if the request was invalid)
<i>IssuedCard</i>	1-n			IssuedCard element node(s). More than 1 element node might be given (batch process).
IssuedCardNumber	1	Text	16	From incoming <i>TCN2MS_IssuedCardDL_Req.xml</i> request
IssuingMemberStateCode	1	Text	1-3	From incoming <i>TCN2MS_IssuedCardDL_Req.xml</i> request
DrivingLicenseNumber	1	Text	1-50	From incoming <i>TCN2MS_IssuedCardDL_Req.xml</i> request
IssuedCardDLStatusCode	1	Enum		Status Message code as the result of the processing of the corresponding received request. Possible values are: <ul style="list-style-type: none"> <li>▪ <b>OK</b> (valid driving licence)</li> <li>▪ <b>DrivingLicenceNumberNotFound</b></li> <li>▪ <b>DrivingLicenceNumberInvalid</b> (existing but no longer valid)</li> <li>▪ <b>Timeout</b></li> <li>▪ <b>ServerError</b></li> <li>▪ <b>NotProcessed</b> (request not processed for legal reasons)</li> </ul>
IssuedCardDLStatusMessage	0-1	Text	0-1	Status Message string

### Example

```

<?xml version="1.0" ?>
- <MS2TCN_IssuedCardDL_Res xmlns="urn:eu.cec.tren.tcn">
  <Header Version="1.4" MSRefId="895CBE0A-AED7-424F-8BCE-4CE08F144F14"
    TCNRefId="2CBAF18E-1631-4AEB-9280-00692C745B8E" SentAt="2002-12-
    16T07:01:40" From="TCN_D" To="TACHOnet" StatusCode="OK"
    StatusMessage="" />
  - <Body>
    <IssuedCard IssuedCardNumber="1234567890123456"
      IssuingMemberStateCode="B" DrivingLicenseNumber="AB12345678"
      IssuedCardDLStatusCode="DrivingLicenseNumberNotFound"
      IssuedCardDLStatusMessage="" />
    </Body>
  </MS2TCN_IssuedCardDL_Res>
  
```

Continued on next page



## MS2TCN\_IssuedCardDL\_Res, Continued

---

**Rules for  
computing  
StatusCode  
value**

The *StatusCode* attribute value of the *Header* element stands for the global status code for the message and is based on the *IssuedCardDLStatusCode* attribute value of all *IssuedCard* elements according to the following rules in priority order:

<b>If among all <i>IssuedCardDLStatusCode</i> value</b>		<b>Then <i>StatusCode</i> value is...</b>
<i>If at least one</i>	Timeout	Timeout
<i>If at least one</i>	ServerError	ServerError
<i>Otherwise</i>	OK or NotProcessed or DrivingLicenseNumberNotFound or DrivingLicenseNumberInvalid	OK

---

# TCN2MS\_IssuedCardDL\_Res

**Introduction** The TCN2MS\_IssuedCardsDL\_Res.xml message is sent by TACHOnet to the Member State having informed another Member State that a card has been delivered or is to be delivered for one of their driving licenses.

**Message description** The following table describes the XML message used for the transaction.

Item	Occ	Type	Len	Description
<b>Header</b>	<b>1</b>			<b>Header node</b>
Version	1	Text	3	TACHOnet request current version ('1.4')
TestId	0-1	Text	1-8	Test Case identification. Only useful for testing.
MSRefId	1	Text	1-36	Reference number given by the caller in the original <i>MS2TCN_IssuedCardDL_Req.xml</i> request.
TCNRefId	1	Uuid	36	Reference number given by the TACHOnet in the request. It will be inserted back by the CIA application in the <i>MSRefId</i> attribute of the <i>TCN_Receipt.xml</i> response if this message is not well-formed.
SentAt	1	DT	19	Response creation date and time (ISO 8601 UTC format)
From	1	Text	8	The name of the originator of the message ('TACHOnet').
To	1	Text	5-7	The name of the recipient of the message ('TCN_<CountryCode>')
StatusCode	1	Enum		Global status code. See p.66 for possible values.
StatusMessage	0-1	Text	0-255	Global status message string
<b>Body</b>	<b>0-1</b>			<b>Body node (optional if the request was invalid)</b>
<b>IssuedCard</b>	<b>1-n</b>			<b>IssuedCard element node(s). More than 1 element node might be given (batch process).</b>
IssuedCardNumber	1	Text	16	From original <i>MS2TCN_IssuedCardDL_Req.xml</i> request.
IssuingMemberStateCode	1	Text	1-3	From original <i>MS2TCN_IssuedCardDL_Req.xml</i> request.
DrivingLicenseNumber	1	Text	1-50	From original <i>MS2TCN_IssuedCardDL_Req.xml</i> request.

Continued on next page

## TCN2MS\_IssuedCardDL\_Res, Continued

### Message description (continued)

Item	Occ	Type	Len	Description
DrivingLicenseIssuingNation	1	Text	1-3	From original <i>MS2TCN_IssuedCardDL_Req.xml</i> request.
IssuedCardDLStatusCode	1	Enum		From <i>MS2TCN_IssuedCardDL_Res.xml</i> response + <ul style="list-style-type: none"> <li><b>NotAvailable</b> (if the issuing MS system is temporarily unavailable)</li> <li><b>NotYetConnected</b> (if the issuing MS system is not yet connected)</li> </ul>
IssuedCardDLStatusMessage	0-1	Text	0-255	From <i>MS2TCN_IssuedCardDL_Res.xml</i> response.
<i>MSContactInfo</i>	<b>0-1</b>			<b>Member State Contact Info element node</b> (only returned when <i>IssuedCardDLStatusCode</i> attribute = Timeout or ServerError or NotAvailable or NotYetConnected)
Fax	0-1	Text	0-20	Fax number of the failing MS CIA
Phone	0-1	Text	0-20	Phone number of the failing MS CIA
EMail	0-1	Text	0-50	Email address of the failing MS CIA

### Example of a successful response to an "online" request

```

<?xml version="1.0" ?>
- <TCN2MS_IssuedCardDL_Res xmlns="urn:eu.cec.tren.tcn">
  <Header Version="1.4" MSRefId="CA74A588-DA7F-4C6B-896C-538FAD475BA4"
    TCNRefId="2CBAF18E-1631-4AEB-9280-00692C745B8E" SentAt="2002-12-
    16T07:02:09" From="TACHOnet" To="TCN_B" StatusCode="OK"
    StatusMessage="" />
  - <Body>
    <IssuedCard IssuedCardNumber="1234567890123456"
      IssuingMemberStateCode="B" DrivingLicenseNumber="AB12345678"
      DrivingLicenseIssuingNation="D"
      IssuedCardDLStatusCode="DrivingLicenseNumberNotFound"
      IssuedCardDLStatusMessage="" />
    </Body>
  </TCN2MS_IssuedCardDL_Res>
  
```

Continued on next page

## TCN2MS\_IssuedCardDL\_Res, Continued

### Rules for computing StatusCode value

The *StatusCode* attribute value of the *Header* element stands for the global status code for the message and is based on the *IssuedCardDLStatusCode* attribute value of all *IssuedCard* elements according to the following rules in priority order:

<b>If among all <i>IssuedCardDLStatusCode</i> value</b>		<b>Then <i>StatusCode</i> value is...</b>
<i>If at least one</i>	Timeout	Timeout
<i>If at least one</i>	ServerError	ServerError
<i>If at least one</i>	NotAvailable	NotAvailable
<i>If at least one</i>	NotYetConnected	NotYetConnected
<i>Otherwise</i>	OK or NotProcessed or DrivingLicenseNumberNotFound or DrivingLicenseNumberInvalid	OK

## Section 4.3 - Declare card status modification

### Overview

#### Introduction

Any modification of the status of a card like a stolen, lost, defective, suspended or exchange card must be transmitted the the member state having issued the card.

The process for informing the member state involves the exchange of different XML messages between the member states where the modification is requested by the driver and TACHOnet and between TACHOnet and the member state having issued the card.

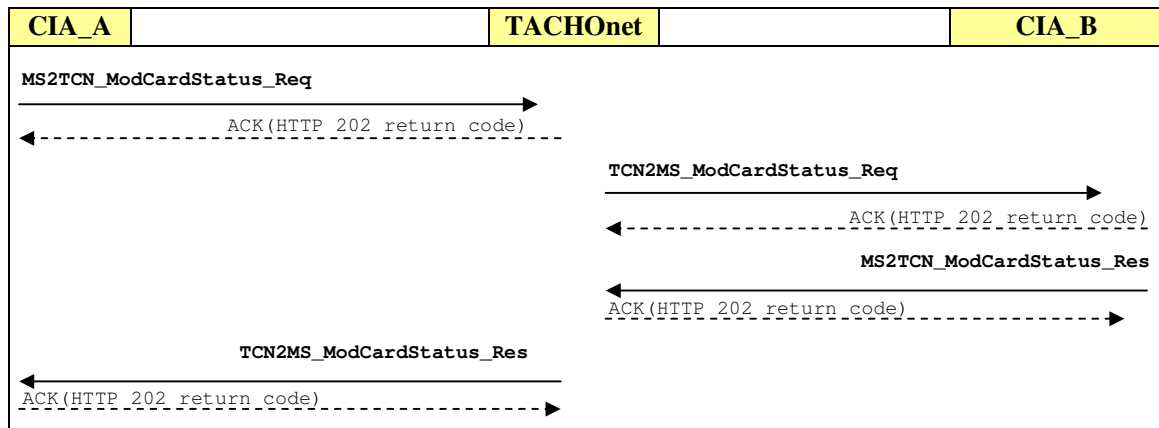
The messages are used by the following processes:

- CIA – Modify card status – Stage 145)

This section describes the different messages.

#### General flow of the XML messages

The following figure outlines the expected asynchronous flow of XML messages related to this TACHOnet XML transaction:



#### Contents

This section contains the following topics:

Topic	See Page
MS2TCN_ModCardStatus_Req	100
TCN2MS_ModCardStatus_Req	102
MS2TCN_ModCardStatus_Res	104
TCN2MS_ModCardStatus_Res	107

# MS2TCN\_ModCardStatus\_Req

**Introduction** The MS2TCN\_ModCardStatus\_Req.xml -message sent by a CIA to TACHOnet for declaring a card status modification.

**Message description** The following table describes the XML message used for the transaction.

Item	Occ	Type	Len	Description
<b>Header</b>	<b>1</b>			<b>Header Node</b>
Version	1	Text	3	TACHOnet request current version ('1.4')
TestId	0-1	Text	1-8	Test Case identification. Only useful for testing.
MSRefId	1	Text	1-36	Reference number given by the original caller. It will be inserted back by TACHOnet in the <i>MSRefId</i> attribute of the <i>TCN2MS_ModCardStatus_Res.xml</i> response.
SentAt	1	DT	19	Request creation date and time (ISO 8601 UTC format)
TimeoutValue	1	Int		Timeout value (in seconds) indicating when the request should be considered as expired.
From	1	Text	5-7	The name of the originator of the message ('TCN_<CountryCode>')
To	1	Text	8	The name of the recipient of the message ('TACHOnet')
<b>Body</b>	<b>1</b>			<b>Body Node</b>
<b>CardDetails</b>	<b>1-n</b>			<b>Card details element node(s). More than 1 element node might be given (batch process).</b>
CardNumber	1	Text	16	Card number which status is to be modified
IssuingMemberStateCode	1	Text	1-3	Country alphabetic code (according to UNECE's distinguishing signs of vehicles in international traffic) of the MS having issued the card. This information is indicated on the card.
NewCardStatus	1	Enum		The required new status of the card. Possible values are: <ul style="list-style-type: none"> <li>▪ <b>HandedOver</b>: valid again (after wrong declaration)</li> <li>▪ <b>Lost</b>: lost card declaration</li> <li>▪ <b>Stolen</b>: stolen card declaration</li> <li>▪ <b>Malfunctioning</b>: defective card declaration</li> <li>▪ <b>Confiscated</b>: confiscation card declaration</li> <li>▪ <b>Suspended</b>: suspended card declaration</li> <li>▪ <b>InExchange</b>: exchange of a card (start)</li> <li>▪ <b>Exchanged</b>: exchange of a card (delivery of new card)</li> <li>▪ <b>Withdrawn</b>: withdrawn card declaration</li> </ul>
Reason	0-1	Text	0-255	Free text to account for the card status modification.

*Continued on next page*

## MS2TCN\_ModCardStatus\_Req, Continued

### Message description (continued)

Item	Occ	Type	Len	Description
ReasonCode	0-1	Enum		Code defining the reason (for future use). Current possible values (to be extended in the future): <ul style="list-style-type: none"> <li>None</li> </ul>
StatusModifiedAt	1	DT	19	Date and time in ISO 8601 UTC format (YYYY-MM-DDThh:mm:ss) of the declaration of the card status modification.
<b>DeclaredBy</b>	<b>1</b>			<b>DeclaredBy element node.</b>
Surname	0-1	Text	1-50	Surname of the contact person (CIA or enforcer)
FirstName	0-1	Text	1-50	First name of the contact person (CIA or enforcer)
Origin	1	Text	1-50	Name of the Authority (CIA or Enforcement) sending the declaration.
Phone	0-1	Text	1-20	Phone number of the contact person (CIA or enforcer). Optional if at least Fax or EMail attribute specified.
Fax	0-1	Text	1-20	Fax number of the contact person (CIA or enforcer). Optional if at least Phone or EMail attribute specified.
EMail	0-1	Text	1-50	Email address of the contact person (CIA or enforcer). Optional if at least Fax or Phone attribute specified.

### Example

```

R:\E1_D6 TREN - TACHOnet\Development\DocSpecs\ModCardStatus\Samples\Test_MS2TC...
File Edit View Favorites Tools Help

<?xml version="1.0" ?>
- <MS2TCN_ModCardStatus_Req xmlns="urn:eu.cec.tren.tcn">
  <Header Version="1.4" MSRefId="CA74A588-DA7F-4C6B-896C-538FAD475BA4"
    SentAt="2002-12-16T07:01:33" TimeoutValue="60" From="TCN_B"
    To="TACHOnet" />
  - <Body>
    - <CardDetails CardNumber="1234567890123456" IssuingMemberStateCode="D"
      NewCardStatus="Stolen" Reason="Declared stolen on 2002-12-15"
      ReasonCode="None" StatusModifiedAt="2002-12-15T23:04:00">
        <DeclaredBy Surname="Dupond" FirstName="Marcel" Origin="CIA Belgium"
          Phone="+32 2 2299971" Fax="+32 2 2299866"
          EMail="alert@ciatacho.be" />
      </CardDetails>
    </Body>
  </MS2TCN_ModCardStatus_Req>
  
```

# TCN2MS\_ModCardStatus\_Req

**Introduction** The TCN2MS\_ModCardStatus\_Req.xml -message sent by TACHOnet to a CIA for declaring a card status modification.

**Message description** The following table describes the XML message used for the transaction.

Item	Occ	Type	Len	Description
<b>Header</b>	<b>1</b>			<b>Header Node</b>
Version	1	Text	3	TACHOnet request current version ('1.4')
TestId	0-1	Text	1-8	Test Case identification. Only useful for testing.
TCNRefId	1	Uuid	36	Reference number given by the TACHOnet. It must inserted later by the CIA application in the <i>TCNRefId</i> attribute of the <i>MS2TCN_ModCardStatus_Res.xml</i> response and will be used for correlation when TACHOnet will receive the response from the CIA application.
SentAt	1	DT	19	Request creation date and time (ISO 8601 UTC format)
TimeoutValue	1	Int		Timeout value (in seconds) indicating when the request should be considered as expired.
From	1	Text	8	The name of the originator of the message ('TACHOnet').
To	1	Text	5-7	The name of the recipient of the message ('TCN_<CountryCode>')
<b>Body</b>	<b>1</b>			<b>Body Node</b>
<b>CardDetails</b>	<b>1-n</b>			<b>Card details element node(s). More than 1 element node might be given (batch process).</b>
CardNumber	1	Text	16	From incoming <i>MS2TCN_ModCardStatus_Req.xml</i> request.
NewCardStatus	1	Enum		From incoming <i>MS2TCN_ModCardStatus_Req.xml</i> request.
Reason	0-1	Text	0-255	From incoming <i>MS2TCN_ModCardStatus_Req.xml</i> request.
ReasonCode	0-1	Enum		From incoming <i>MS2TCN_ModCardStatus_Req.xml</i> request.
StatusModifiedAt	1	DT	19	From incoming <i>MS2TCN_ModCardStatus_Req.xml</i> request.
<b>DeclaredBy</b>	<b>1</b>			From incoming <i>MS2TCN_ModCardStatus_Req.xml</i> request.
Surname	0-1	Text	1-50	From incoming <i>MS2TCN_ModCardStatus_Req.xml</i> request.

*Continued on next page*



## TCN2MS\_ModCardStatus\_Req, Continued

### Message description (continued)

Item	Occ	Type	Len	Description
FirstName	0-1	Text	1-50	From incoming <i>MS2TCN_ModCardStatus_Req.xml</i> request.
Origin	1	Text	1-50	From incoming <i>MS2TCN_ModCardStatus_Req.xml</i> request.
MemberStateCode	1	Text	1-3	Country alphabetic code (according to UNECE's distinguishing signs of vehicles in international traffic) of the MS having sent the <i>MS2TCN_ModCardStatus_Req.xml</i> request.
Phone	0-1	Text	1-20	From incoming <i>MS2TCN_ModCardStatus_Req.xml</i> request.
Fax	0-1	Text	1-20	From incoming <i>MS2TCN_ModCardStatus_Req.xml</i> request.
EEmail	0-1	Text	1-50	From incoming <i>MS2TCN_ModCardStatus_Req.xml</i> request.

### Example

```

R:\E1_D6 TREN - TACHOnet\Development\DocSpecs\ModCardStatus\Samples\Test_TCN2M...
File Edit View Favorites Tools Help

<?xml version="1.0" ?>
- <TCN2MS_ModCardStatus_Req xmlns="urn:eu.cec.tren.tcn">
  <Header Version="1.4" TCNRefId="2CBAF18E-1631-4AEB-9280-00692C745B8E"
    SentAt="2002-12-16T07:01:35" TimeoutValue="45" From="TACHOnet"
    To="TCN_D" />
  - <Body>
    - <CardDetails CardNumber="1234567890123456" NewCardStatus="Stolen"
      Reason="Declared stolen on 2002-12-15" ReasonCode="None"
      StatusModifiedAt="2002-12-15T23:04:00">
      <DeclaredBy Surname="Dupond" FirstName="Marcel" Origin="CIA Belgium"
        MemberStateCode="B" Phone="+32 2 2299971" Fax="+32 2 2299866"
        EMail="alert@ciatacho.be" />
      </CardDetails>
    </Body>
  </TCN2MS_ModCardStatus_Req>

Done My Computer
  
```

# MS2TCN\_ModCardStatus\_Res

---

**Introduction** The MS2TCN\_ModCardStatus\_Res.xml message is sent by a CIA to TACHOnet's request for declaring a card status modification.

---

**Message description** The following table describes the XML message used for the transaction.

Item	Occ	Type	Len	Description
<b>Header</b>	<b>1</b>			<b>Header Node</b>
Version	1	Text	3	TACHOnet request current version ('1.4')
TestId	0-1	Text	1-8	Test Case identification. Only useful for testing.
MSRefId	1	Text	1-36	Reference number given by the caller in the request. It will be inserted back by TACHOnet in the <i>MSRefId</i> attribute of the <i>TCN_Receipt.xml</i> response if this message is not well-formed.
TCNRefId	1	Uuid	36	Reference number given by TACHOnet in the <i>TCN2MS_ModCardStatus_Req.xml</i> request.
SentAt	1	DT	19	Response creation date and time (ISO 8601 UTC format)
From	1	Text	5-7	The name of the originator of the message ('TCN_<CountryCode>')
To	1	Text	8	The name of the recipient of the message ('TACHOnet')
StatusCode	1	Enum		Global status code. See p.66 for possible values.
StatusMessage	0-1	Text	0-255	Global status message string

---

*Continued on next page*

## MS2TCN\_ModCardStatus\_Res, Continued

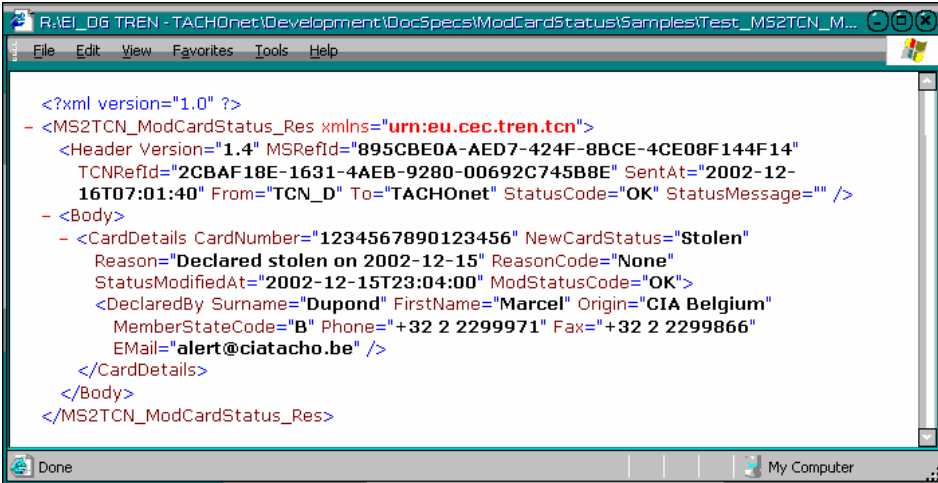
### Message description (continued)

Item	Occ	Type	Len	Description
<i>Body</i>	0-1			<b>Body Node (optional if the request was invalid)</b>
<i>CardDetails</i>	1-n			<b>Card details element node(s). More than 1 element node might be given (batch process).</b>
CardNumber	1	Text	16	From incoming <i>TCN2MS_ModCardStatus_Req.xml</i> request
NewCardStatus	1	Enum		From incoming <i>TCN2MS_ModCardStatus_Req.xml</i> request
Reason	0-1	Text	0-255	From incoming <i>TCN2MS_ModCardStatus_Req.xml</i> request
ReasonCode	0-1	Enum		From incoming <i>TCN2MS_ModCardStatus_Req.xml</i> request
StatusModifiedAt	1	DT	19	From incoming <i>TCN2MS_ModCardStatus_Req.xml</i> request
<b>DeclaredBy</b>	<b>1</b>			From incoming <i>TCN2MS_ModCardStatus_Req.xml</i> request
Surname	0-1	Text	1-50	From incoming <i>TCN2MS_ModCardStatus_Req.xml</i> request
FirstName	0-1	Text	1-50	From incoming <i>TCN2MS_ModCardStatus_Req.xml</i> request
Origin	1	Text	1-50	From incoming <i>TCN2MS_ModCardStatus_Req.xml</i> request
MemberStateCode	1	Text	1-3	Country alphabetic code (according to UNECE's distinguishing signs of vehicles in international traffic) of the MS having sent the <i>MS2TCN_ModCardStatus_Req.xml</i> request.
Phone	0-1	Text	1-20	From incoming <i>TCN2MS_ModCardStatus_Req.xml</i> request
Fax	0-1	Text	1-20	From incoming <i>TCN2MS_ModCardStatus_Req.xml</i> request
EMail	0-1	Text	1-50	From incoming <i>TCN2MS_ModCardStatus_Req.xml</i> request
ModStatusCode	1	Enum		Status code as the result of the processing of the corresponding received request for the given card. Possible values are: <ul style="list-style-type: none"> <li>▪ <b>OK</b></li> <li>▪ <b>CardNumberNotFound</b> (request is not processed because the card number is not found)</li> <li>▪ <b>CardStatusInvalid</b> (request is not processed because the requested card status is incompatible with the current one)</li> <li>▪ <b>Timeout</b></li> <li>▪ <b>ServerError</b></li> </ul>
ModStatusMessage	0-1	Text	0-255	Response status message string

Continued on next page

## MS2TCN\_ModCardStatus\_Res, Continued

### Example



```
<?xml version="1.0" ?>
- <MS2TCN_ModCardStatus_Res xmlns="urn:eu.cec.tren.tcn">
  <Header Version="1.4" MSRefId="895CBE0A-AED7-424F-8BCE-4CE08F144F14"
    TCNRefId="2CBAF18E-1631-4AEB-9280-00692C745B8E" SentAt="2002-12-
    16T07:01:40" From="TCN_D" To="TACHOnet" StatusCode="OK" StatusMessage="" />
  - <Body>
    - <CardDetails CardNumber="1234567890123456" NewCardStatus="Stolen"
      Reason="Declared stolen on 2002-12-15" ReasonCode="None"
      StatusModifiedAt="2002-12-15T23:04:00" ModStatusCode="OK">
      <DeclaredBy Surname="Dupond" FirstName="Marcel" Origin="CIA Belgium"
        MemberStateCode="B" Phone="+32 2 2299971" Fax="+32 2 2299866"
        Email="alert@ciatacho.be" />
    </CardDetails>
  </Body>
</MS2TCN_ModCardStatus_Res>
```

### Rules for computing *StatusCode* value

The *StatusCode* attribute value of the *Header* element stands for the global status code for the message and is based on the *ModStatusCode* attribute value of all *CardDetails* elements according to the following rules in priority order:

If among all <i>ModStatusCode</i> value		Then <i>StatusCode</i> value is...
<i>If at least one</i>	Timeout	Timeout
<i>If at least one</i>	ServerError	ServerError
<i>Otherwise</i>	OK or CardNumberNotFound or CardStatusInvalid	OK

# TCN2MS\_ModCardStatus\_Res

---

**Introduction** The TCN2MS\_ModCardStatus\_Res.xml message is sent by Tachonet to the CIA (original requester) having declared a card status modification.

---

**Message description** The following table describes the XML message used for the transaction.

Item	Occ	Type	Len	Description
<b>Header</b>	<b>1</b>			<b>Header Node</b>
Version	1	Text	3	TACHOnet request current version ('1.4')
TestId	0-1	Text	1-8	Test Case identification. Only useful for testing.
MSRefId	1	Text	1-36	Reference number given by the caller in the original <i>MS2TCN_ModCardStatus_Req.xml</i> request.
TCNRefId	1	Uuid	36	Reference number given by the TACHOnet in the request. It will be inserted back by the CIA application in the <i>MSRefId</i> attribute of the <i>TCN_Receipt.xml</i> response if this message is not well-formed.
SentAt	1	DT	19	Response creation date and time (ISO 8601 UTC format)
From	1	Text	8	The name of the originator of the message ('TACHOnet')
To	1	Text	5-7	The name of the recipient of the message ('TCN_<CountryCode>')
StatusCode	1	Enum		Global status code. See p.66 for possible values.
StatusMessage	0-1	Text	0-255	Global status message string

---

*Continued on next page*

## TCN2MS\_ModCardStatus\_Res, Continued

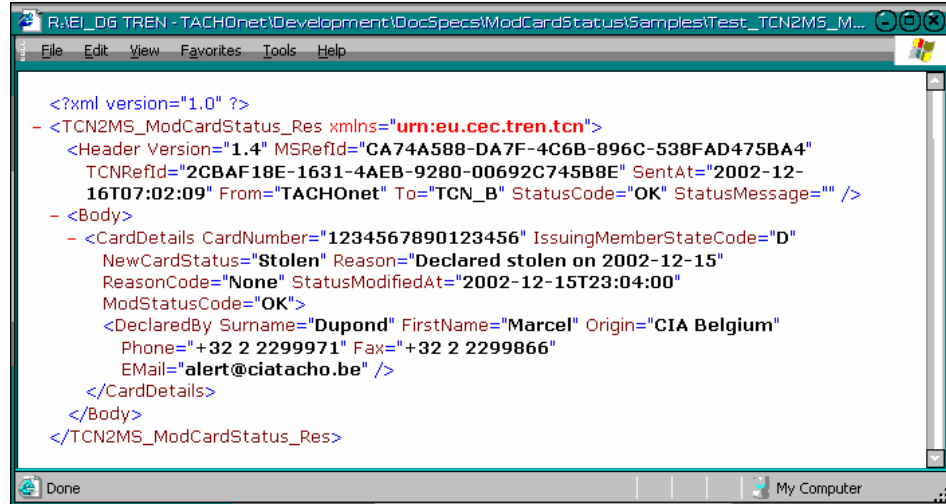
### Message description (continued)

Item	Occ	Type	Len	Description
<i>Body</i>	0-1			<b>Body Node (optional if the request was invalid)</b>
<i>CardDetails</i>	1-n			<b>Card details element node(s). More than 1 element node might be given (batch process).</b>
CardNumber	1	Text	16	From original <i>MS2TCN_ModCardStatus_Req.xml</i> request.
IssuingMemberStateCode	1	Text	1-3	From original <i>MS2TCN_ModCardStatus_Req.xml</i> request.
NewCardStatus	1	Enum		From original <i>MS2TCN_ModCardStatus_Req.xml</i> request.
Reason	0-1	Text	0-255	From original <i>MS2TCN_ModCardStatus_Req.xml</i> request.
ReasonCode	0-1	Enum		From original <i>MS2TCN_ModCardStatus_Req.xml</i> request.
StatusModifiedAt	1	DT	19	From original <i>MS2TCN_ModCardStatus_Req.xml</i> request.
<b>DeclaredBy</b>	<b>1</b>			From original <i>MS2TCN_ModCardStatus_Req.xml</i> request.
Surname	0-1	Text	1-50	From original <i>MS2TCN_ModCardStatus_Req.xml</i> request.
FirstName	0-1	Text	1-50	From original <i>MS2TCN_ModCardStatus_Req.xml</i> request.
Origin	1	Text	1-50	From original <i>MS2TCN_ModCardStatus_Req.xml</i> request.
Phone	0-1	Text	1-20	From original <i>MS2TCN_ModCardStatus_Req.xml</i> request.
Fax	0-1	Text	1-20	From original <i>MS2TCN_ModCardStatus_Req.xml</i> request.
EMail	0-1	Text	1-50	From original <i>MS2TCN_ModCardStatus_Req.xml</i> request.
ModStatusCode	1	Enum		From <i>MS2TCN_ModCardStatus_Res.xml</i> response + <ul style="list-style-type: none"> <li>▪ <b>NotAvailable</b> (if the issuing MS system is temporarily unavailable)</li> <li>▪ <b>NotYetConnected</b> (if the issuing MS system is not yet connected)</li> </ul>
ModStatusMessage	0-1	Text	0-255	From <i>MS2TCN_ModCardStatus_Res.xml</i> response.
<i>MSContactInfo</i>	<b>0-1</b>			<b>Member State Contact Info element node</b> (only returned when <i>ModStatusCode</i> attribute = Timeout or ServerError or NotAvailable or <b>NotYetConnected</b> )
Fax	0-1	Text	0-20	Fax number of the failing MS CIA
Phone	0-1	Text	0-20	Phone number of the failing MS CIA
EMail	0-1	Text	0-50	Email address of the failing MS CIA

Continued on next page

## TCN2MS\_ModCardStatus\_Res, Continued

### Example



```

<?xml version="1.0" ?>
- <TCN2MS_ModCardStatus_Res xmlns="urn:eu.cec.tren.tcn">
  <Header Version="1.4" MSRefId="CA74A588-DA7F-4C6B-896C-538FAD475BA4"
    TCNRefId="2CBAF18E-1631-4AEB-9280-00692C745B8E" SentAt="2002-12-
    16T07:02:09" From="TACHonet" To="TCN_B" StatusCode="OK" StatusMessage="" />
  - <Body>
    - <CardDetails CardNumber="1234567890123456" IssuingMemberStateCode="D"
      NewCardStatus="Stolen" Reason="Declared stolen on 2002-12-15"
      ReasonCode="None" StatusModifiedAt="2002-12-15T23:04:00"
      ModStatusCode="OK">
      <DeclaredBy Surname="Dupond" FirstName="Marcel" Origin="CIA Belgium"
        Phone="+32 2 2299971" Fax="+32 2 2299866"
        Email="alert@ciatacho.be" />
    </CardDetails>
  </Body>
</TCN2MS_ModCardStatus_Res>
  
```

### Rules for computing Status Code value

The *StatusCode* attribute value of the *Header* element stands for the global status code for the message and is based on the *ModStatusCode* attribute value of all *CardDetails* elements according to the following rules in priority order:

If among all <i>ModStatusCode</i> value		Then <i>StatusCode</i> value is...
<i>If at least one</i>	Timeout	Timeout
<i>If at least one</i>	ServerError	ServerError
<i>If at least one</i>	NotAvailable	NotAvailable
<i>If at least one</i>	NotYetConnected	NotYetConnected
<i>Otherwise</i>	OK or CardNumberNotFound or CardStatusInvalid	OK

## Section 4.4 - Check card status

### Overview

#### Introduction

The process for getting information about a card status (CIA or enforcers' processes) involves the exchange of different XML messages between the member states making the request and TACHOnet and between TACHOnet and the member state having issued the card. Driver cards and workshop cards can be checked (both types should be made available, as far as possible, to CIA applications).

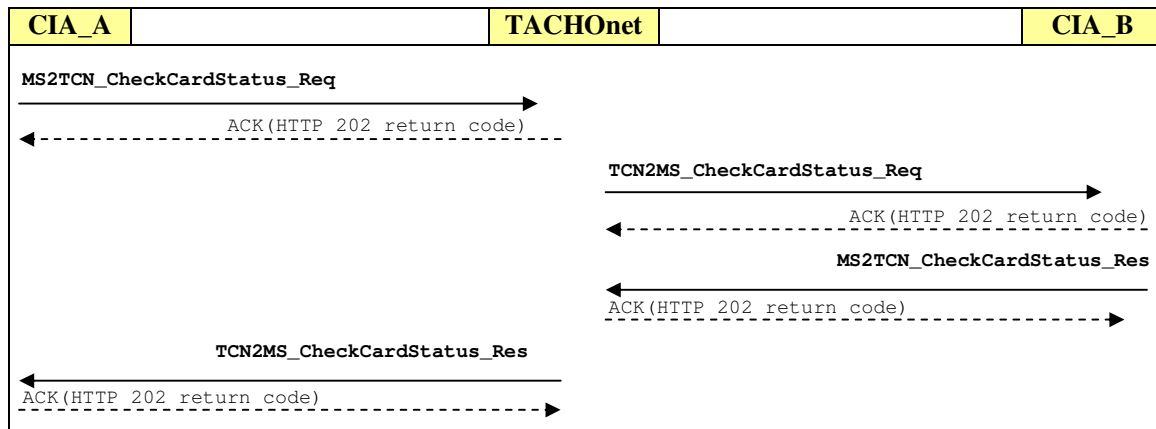
The messages are used by the following processes:

- CIA – Check card status – Stage 1 (see page 43)

This section describes the different messages.

#### General flow of the XML messages

The following figure outlines the expected asynchronous flow of XML messages related to this TACHOnet XML transaction:



#### Contents

This section contains the following topics:

Topic	See Page
MS2TCN_CheckCardStatus_Req	111
TCN2MS_CheckCardStatus_Req	113
MS2TCN_CheckCardStatus_Res	115
TCN2MS_CheckCardStatus_Res	119



## MS2TCN\_CheckCardStatus\_Req

**Introduction** The MS2TCN\_CheckCardStatus\_Req message is sent by a Member State to TACHOnet in order to request TACHOnet to ask the Member State having issued a card what is the current card status.

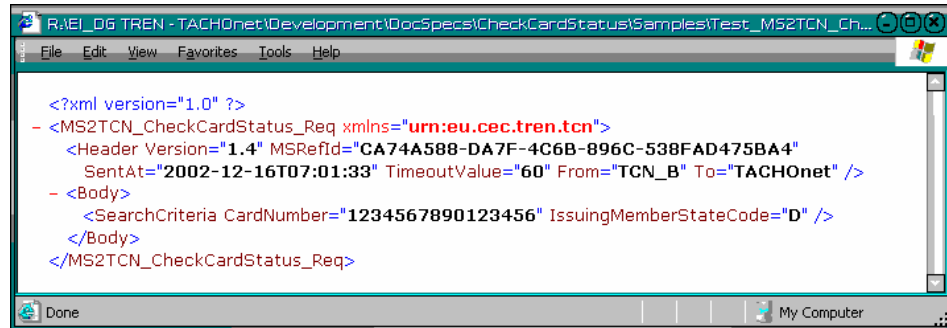
**Message description** The following table describes the XML message used for the transaction.

Item	Occ	Type	Len	Description
<b>Header</b>	<b>1</b>			<b>Header Node</b>
Version	1	Text	3	TACHOnet request current version ('1.4')
TestId	0-1	Text	1-8	Test Case identification. Only useful for testing.
MSRefId	1	Text	1-36	Reference number given by the original caller. It will be inserted back by TACHOnet in the <i>MSRefId</i> attribute of the <i>TCN2MS_CheckCardStatus_Res.xml</i> response.
SentAt	1	DT	19	Request creation date and time (ISO 8601 UTC format)
TimeoutValue	1	Int		Timeout value (in seconds) indicating when the request should be considered as expired.
From	1	Text	5-7	The name of the originator of the message ('TCN_<country_code>').
To	1	Text	8	The name of the recipient of the message ('TACHOnet')
<b>Body</b>	<b>1</b>			<b>Body Node</b>
<b>SearchCriteria</b>	<b>1-n</b>			<b>Card details element node(s)</b>
CardNumber	1	Text	16	Card number to check
IssuingMemberStateCode	1	Text	1-3	Country alphabetic code (according to UNECE's distinguishing signs of vehicles in international traffic) of the MS where the driver swears he got his card from (mandatory when enforcers check). This information is indicated on the card.

*Continued on next page*

## MS2TCN\_CheckCardStatus\_Req, Continued

### Example



```
<?xml version="1.0" ?>
- <MS2TCN_CheckCardStatus_Req xmlns="urn:eu.cec.tren.tcn">
  <Header Version="1.4" MSRefId="CA74A588-DA7F-4C6B-896C-538FAD475BA4"
    SentAt="2002-12-16T07:01:33" TimeoutValue="60" From="TCN_B" To="TACHonet" />
  - <Body>
    <SearchCriteria CardNumber="1234567890123456" IssuingMemberStateCode="D" />
  </Body>
</MS2TCN_CheckCardStatus_Req>
```

# TCN2MS\_CheckCardStatus\_Req

---

**Introduction** TACHOnet sends the TCN2MS\_CheckCardStatus\_Req message to the member state having issued a card in order to get information about its current status.

---

**Message description** The following table describes the XML message used for the transaction.

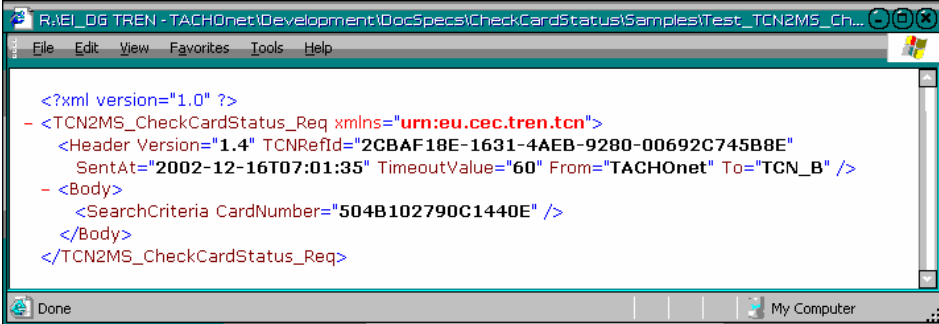
Item	Occ	Type	Len	Description
<b>Header</b>	<b>1</b>			<b>Header Node</b>
Version	1	Text	3	TACHOnet request current version ('1.4')
TestId	0-1	Text	1-8	Test Case identification. Only useful for testing.
TCNRefId	1	Uuid	36	Reference number given by the TACHOnet. It must inserted later by the CIA applications in the <i>TCNRefId</i> attribute of the <i>MS2TCN_CheckCardStatus_Res.xml</i> responses and will be used for correlation when TACHOnet will receive these responses from the CIA applications.
SentAt	1	DT	19	Request creation date and time (ISO 8601 UTC format)
TimeoutValue	1	Int		Timeout value (in seconds) indicating when the request should be considered as expired.
From	1	Text	8	The name of the originator of the message ('TACHOnet').
To	1	Text	5-7	The name of the recipient of the message ('TCN_<country_code>').
<b>Body</b>	<b>1</b>			<b>Body Node</b>
<b>SearchCriteria</b>	<b>1-n</b>			<b>Card details element node(s)</b>
CardNumber	1	Text	16	Card number to check. From the incoming <i>MS2TCN_CheckCardStatus_Req.xml</i> request.

---

*Continued on next page*

## TCN2MS\_CheckCardStatus\_Req, Continued

### Example



```
<?xml version="1.0" ?>
- <TCN2MS_CheckCardStatus_Req xmlns="urn:eu.cec.tren.tcn">
  <Header Version="1.4" TCNRefId="2CBAF18E-1631-4AEB-9280-00692C745B8E"
    SentAt="2002-12-16T07:01:35" TimeoutValue="60" From="TACHonet" To="TCN_B" />
  - <Body>
    <SearchCriteria CardNumber="504B102790C1440E" />
  </Body>
</TCN2MS_CheckCardStatus_Req>
```

# MS2TCN\_CheckCardStatus\_Res

**Introduction** TACHOnet receives the MS2TCN\_CheckCardStatus\_Res message from the member state having issued a card as answer to information request about a card status

**Message description** The following table describes the XML message used for the transaction.

Item	Occ	Type	Len	Description
<b>Header</b>	<b>1</b>			<b>Header Node</b>
Version	1	Text	3	TACHOnet request current version ('1.4')
TestId	0-1	Text	1-8	Test Case identification. Only useful for testing.
MSRefId	1	Text	1-36	Reference number given by the caller in the request. It will be inserted back by TACHOnet in the <i>MSRefId</i> attribute of the <i>TCN_Receipt.xml</i> response if this message is not well-formed.
TCNRefId	1	Uuid	36	Reference number given by the TACHOnet in the <i>TCN2MS_CheckCardStatus_Req.xml</i> request.
SentAt	1	DT	19	Response creation date and time (ISO 8601 UTC format)
From	1	Text	5-7	The name of the originator of the message ('TCN_<country_code>').
To	1	Text	8	The name of the recipient of the message ('TACHOnet')
StatusCode	1	Enum		Global status code. See p.66 for possible values.
StatusMessage	0-1	Text	0-255	Global status message string
<b>Body</b>	<b>0-1</b>			<b>Body Node (optional if the request format was invalid)</b>
<b>SearchCriteria</b>	<b>1-n</b>			<b>Search criteria element node(s)</b>
CardNumber	1	Text	16	From the incoming <i>MS2TCN_CheckCardStatus_Req.xml</i> request.
SearchStatusCode	1	Enum		Status code as the result of the search for the given card of the corresponding received request. Possible values are: <ul style="list-style-type: none"> <li>▪ <b>Found</b></li> <li>▪ <b>NotFound</b></li> <li>▪ <b>Timeout</b></li> <li>▪ <b>ServerError</b></li> <li>▪ <b>WorkshopCardStatusNotAvailable</b> (when a CIA application does not support workshop card status and the requested card was a workshop card)</li> </ul>

*Continued on next page*

## MS2TCN\_CheckCardStatus\_Res, Continued

### Message description (continued)

Item	Occ	Type	Len	Description
SearchStatusMessage	0-1	Text	0-255	Search status message string for the given card number.
<b>CardDetails</b>	<b>0-1</b>			<b>CardDetails element node</b> (only returned when <i>SearchStatusCode</i> attribute = Found)
CardStatus	1	Enum		Status of the card. Possible values are: <ul style="list-style-type: none"> <li>▪ <b>Application</b></li> <li>▪ <b>Approved</b></li> <li>▪ <b>Personalised</b></li> <li>▪ <b>Dispatched</b></li> <li>▪ <b>HandedOver</b></li> <li>▪ <b>Lost</b></li> <li>▪ <b>Stolen</b></li> <li>▪ <b>Malfunctioning</b></li> <li>▪ <b>Confiscated</b></li> <li>▪ <b>Suspended</b></li> <li>▪ <b>Withdrawn</b></li> <li>▪ <b>Surrendered</b></li> <li>▪ <b>Expired</b></li> <li>▪ <b>Replaced</b></li> <li>▪ <b>Renewed</b></li> <li>▪ <b>InExchange</b></li> <li>▪ <b>Exchanged</b></li> </ul>
AdditionalCardStatus	0-1	Enum		Additional status of the card. Possible values are the same values as specified for <i>CardStatus</i>
CIA	1	Text	1-50	Name of the CIA having issued the card
StartOfValidityDate	1	Date	10	Date of the 1 <sup>st</sup> validity of the card (ISO 8601 format: YYYY-MM-DD)
ExpiryDate	1	Date	10	The card expiration date (ISO 8601 format: YYYY-MM-DD)
StatusModifiedAt	1	DT	19	Date and time of the last card status modification (ISO 8601 UTCformat: YYYY-MM-DD hh:mm:ss)
AdditionalStatusModified At	0-1	DT	19	Date and time of the last additional card status modification (ISO 8601 UTCformat: YYYY-MM-DD hh:mm:ss)
<b>WorkshopDetails</b>	<b>0-1</b>	<b>Choice</b>		<b>WorkshopDetails element node</b> (only returned when the card is a workshop card).
WorkshopName	1	Text	1-50	Workshop name
WorkshopAddress	1	Text	1-100	Workshop address
Surname	0-1	Text	1-50	Surname of the individual to who the card was issued
FirstName	0-1	Text	1-50	First name(s) of the individual to who the card was issued
BirthDate	0-1	Text	10	Date of birth in ISO 8601 format (YYYY-MM-DD) of the individual to who the card was issued. This date might be equal to 1952-00-00.

Continued on next page

## MS2TCN\_CheckCardStatus\_Res, Continued

### Message description (continued)

Item	Occ	Type	Len	Description
<i>DriverDetails</i>	<b>0-1</b>	<b>Choice</b>		<b>DriverDetails element node</b> (only returned when the card is a driver card)
Surname	1	Text	1-50	Driver's surname
FirstName	1	Text	1-50	Driver's first name(s)
BirthDate	1	Text	10	Driver's birth date in ISO 8601 format (YYYY-MM-DD). This date might be equal to 1952-00-00.
PlaceOfBirth	0-1	Text	0-50	Driver's place of birth
<i>DrivingLicenseDetails</i>	<b>1</b>			<b>Driver's driving license element node</b> (DL number used to issue the driver's card).
DLNumber	1	Text	1-50	Driver's license number used to issue the driver's card.
DLIssuingNation	1	Text	1-3	Country alphabetic code (according to UNECE's distinguishing signs of vehicles in international traffic) of the Nation having issued the driver's driving license. It uniquely identifies the driving license.
DLStatus	0-1	Enum		Status of the DL (optional). Possible values are: <ul style="list-style-type: none"> <li>▪ <b>Valid</b> (existing and valid)</li> <li>▪ <b>Invalid</b> (existing but no longer valid)</li> <li>▪ <b>NotFound</b> (not existing)</li> </ul> If the Member State is not able to check the DL, then it should not send this attribute.
DLIssueDate	0-1	Date	10	The DL issue date (ISO 8601 format: YYYY-MM-DD). If the Member State is not able to check the DL, then it should not send this attribute.

*Continued on next page*

# MS2TCN\_CheckCardStatus\_Res, Continued

## Example when found

```

<?xml version="1.0" ?>
- <MS2TCN_CheckCardStatus_Res xmlns="urn:eu.cec.tren.tcn">
  <Header Version="1.4" MSRefId="895CBE0A-AED7-424F-8BCE-4CE08F144F14"
    TCNRefId="2CBAF18E-1631-4AEB-9280-00692C745B8E" SentAt="2002-12-16T07:01:40" From="TCN_D" To="TACHOnet" StatusCode="OK" StatusMessage="" />
  - <Body>
    - <SearchCriteria CardNumber="1234567890123456" SearchStatusCode="Found"
      SearchStatusMessage="">
      - <CardDetails CardStatus="Dispatched" AdditionalCardStatus="Dispatched"
        CIA="Stuttgart" StartOfValidityDate="2002-11-09" ExpiryDate="2004-11-09"
        StatusModifiedAt="2002-11-09T11:23:34" AdditionalStatusModifiedAt="2002-11-09T11:23:34">
        - <DriverDetails FirstName="Daniel" Surname="Elbers" BirthDate="1956-09-18"
          PlaceOfBirth="München">
          <DrivingLicenseDetails DLNumber="AB12345678" DLIssuingNation="D"
            DLStatus="Valid" DLIssueDate="1986-12-06" />
          </DriverDetails>
        </CardDetails>
      </SearchCriteria>
    </Body>
  </MS2TCN_CheckCardStatus_Res>
  
```

## Example when not found

```

<?xml version="1.0" ?>
- <TCN2MS_CheckCardStatus_Res xmlns="urn:eu.cec.tren.tcn">
  <Header Version="1.4" MSRefId="CA74A588-DA7F-4C6B-896C-538FAD475BA4"
    TCNRefId="2CBAF18E-1631-4AEB-9280-00692C745B8E" SentAt="2002-12-16T07:02:09"
    From="TACHOnet" To="TCN_D" StatusCode="OK" StatusMessage="" />
  - <Body>
    <SearchCriteria CardNumber="1234567890123456" IssuingMemberStateCode="D"
      SearchStatusCode="NotFound" SearchStatusMessage="" />
  </Body>
</TCN2MS_CheckCardStatus_Res>
  
```

### Rules for computing Status Code value

The *StatusCode* attribute value of the *Header* element stands for the global status code for the message and is based on the *SearchStatusCode* attribute value of all *SearchCriteria* elements according to the following rules in priority order:

If among all <i>SearchStatusCode</i> value		Then <i>StatusCode</i> value is...
<i>If at least one</i>	Timeout	Timeout
<i>If at least one</i>	ServerError	ServerError
<i>Otherwise</i>	Found or NotFound or WorkshopCardStatusNotAvailable	OK



## TCN2MS\_CheckCardStatus\_Res

### Introduction

The TCN2MS\_CheckCardStatus\_Res message is the answer sent by TACHOnet to the member state requesting information about the status of a card.

See Description of the "EA - Check card status" process on page 38.

### Message description

The following table describes the XML message used for the transaction.

Item	Occ	Type	Len	Description
<b>Header</b>	<b>1</b>			<b>Header Node</b>
Version	1	Text	3	TACHOnet request current version ('1.4')
TestId	0-1	Text	1-8	Test Case identification. Only useful for testing.
MSRefId	1	Text	1-36	Reference number given by the caller in the original <i>MS2TCN_CheckCardStatus_Req.xml</i> request.
TCNRefId	1	Uuid	36	Reference number given by the TACHOnet in the request. It will be inserted back by the CIA application in the <i>MSRefId</i> attribute of the <i>TCN_Receipt.xml</i> response if this message is not well-formed.
SentAt	1	DT	19	Response creation date and time (ISO 8601 UTC format)
From	1	Text	8	The name of the originator of the message ('TACHOnet')
To	1	Text	5-7	The name of the recipient of the message ('TCN_<CountryCode>')
StatusCode	1	Enum		Global status code. See p.66 for possible values.
StatusMessage	0-1	Text	0-255	Global status message string
<b>Body</b>	<b>0-1</b>			<b>Body Node (optional if the request was invalid)</b>
<b>SearchCriteria</b>	<b>1-n</b>			<b>Search criteria element node(s)</b>
CardNumber	1	Text	16	From the original <i>MS2TCN_CheckCardStatus_Req.xml</i> request.
IssuingMemberStateCode	1	Text	1-3	From the original <i>MS2TCN_CheckCardStatus_Req.xml</i> request.
SearchStatusCode	1	Enum		From <i>MS2TCN_CheckCardStatus_Res.xml</i> response + <ul style="list-style-type: none"> <li>▪ <b>NotAvailable</b> (if the issuing MS system is temporarily unavailable)</li> <li>▪ <b>NotYetConnected</b> (if the issuing MS system is not yet connected)</li> </ul>
SearchStatusMessage	0-1	Text	0-255	From <i>MS2TCN_CheckCardStatus_Res.xml</i> response.

Continued on next page

## TCN2MS\_CheckCardStatus\_Res, Continued

### Message description (continued)

Item	Occ	Type	Len	Description
<b>MSContactInfo</b>	<b>0-1</b>			<b>Member State Contact Info element node</b> (only returned when <i>SearchStatusCode</i> attribute = Timeout or ServerError or NotAvailable or <b>NotYetConnected</b> )
Fax	0-1	Text	0-20	Fax number of the failing MS CIA
Phone	0-1	Text	0-20	Phone number of the failingMS CIA
EMail	0-1	Text	0-50	Email address of the failingMS CIA
<b>CardDetails</b>	<b>0-1</b>			<b>CardDetails element node</b> (only returned when <i>SearchStatusCode</i> attribute = Found)
CardStatus	1	Enum		From <i>MS2TCN_CheckCardStatus_Res.xml</i> response.
AdditionalCardStatus	0-1	Enum		From <i>MS2TCN_CheckCardStatus_Res.xml</i> response.
CIA	1	Text	1-50	From <i>MS2TCN_CheckCardStatus_Res.xml</i> response.
StartOfValidityDate	1	Date	10	From <i>MS2TCN_CheckCardStatus_Res.xml</i> response.
ExpiryDate	1	Date	10	From <i>MS2TCN_CheckCardStatus_Res.xml</i> response.
StatusModifiedAt	1	DT	19	From <i>MS2TCN_CheckCardStatus_Res.xml</i> response.
AdditionalStatusModified At	0-1	DT	19	From <i>MS2TCN_CheckCardStatus_Res.xml</i> response.
<b>WorkshopDetails</b>	<b>0-1</b>	<b>Choice</b>		<b>WorkshopDetails element node</b> (only returned when the card is a workshop card).
WorkshopName	1	Text	1-50	From <i>MS2TCN_CheckCardStatus_Res.xml</i> response.
WorkshopAddress	1	Text	1-100	From <i>MS2TCN_CheckCardStatus_Res.xml</i> response.
Surname	0-1	Text	1-50	From <i>MS2TCN_CheckCardStatus_Res.xml</i> response.
FirstName	0-1	Text	1-50	From <i>MS2TCN_CheckCardStatus_Res.xml</i> response.
BirthDate	0-1	Text	10	From <i>MS2TCN_CheckCardStatus_Res.xml</i> response.
<b>DriverDetails</b>	<b>0-1</b>	<b>Choice</b>		<b>DriverDetails element node</b> (only returned when the card is a driver card)
Surname	1	Text	1-50	From <i>MS2TCN_CheckCardStatus_Res.xml</i> response.
FirstName	1	Text	1-50	From <i>MS2TCN_CheckCardStatus_Res.xml</i> response.
BirthDate	1	Text	10	From <i>MS2TCN_CheckCardStatus_Res.xml</i> response.

Continued on next page

## TCN2MS\_CheckCardStatus\_Res, Continued

### Message description (continued)

Item	Occ	Type	Len	Description
PlaceOfBirth	0-1	Text	0-50	From <i>MS2TCN_CheckCardStatus_Res.xml</i> response.
<b><i>DrivingLicenseDetails</i></b>	<b>1</b>			<b>Driver's driving license element node</b> (DL number used to issue the driver's card).
DLNumber	1	Text	1-50	From <i>MS2TCN_CheckCardStatus_Res.xml</i> response.
DLIssuingNation	1	Text	1-3	From <i>MS2TCN_CheckCardStatus_Res.xml</i> response.
DLStatus	0-1	Enum		From <i>MS2TCN_CheckCardStatus_Res.xml</i> response.
DLIssueDate	0-1	Date	10	From <i>MS2TCN_CheckCardStatus_Res.xml</i> response.

### Example

```

<?xml version="1.0" ?>
- <TCN2MS_CheckCardStatus_Res xmlns="urn:eu.cec.tren.tcn">
  <Header Version="1.4" MSRefId="CA74A588-DA7F-4C6B-896C-538FAD475BA4"
    TCNRefId="2CBAF18E-1631-4AEB-9280-00692C745B8E" SentAt="2002-12-16T07:02:09"
    From="TACHOnet" To="TCN_B" StatusCode="OK" StatusMessage="" />
  - <Body>
    - <SearchCriteria CardNumber="1234567890123456" IssuingMemberStateCode="D"
      SearchStatusCode="Found" SearchStatusMessage="">
      - <CardDetails CardStatus="Dispatched" AdditionalCardStatus="Dispatched"
        CIA="Stuttgart" StartOfValidityDate="2002-11-09" ExpiryDate="2004-11-09"
        StatusModifiedAt="2002-11-09T11:23:34" AdditionalStatusModifiedAt="2002-11-
          09T11:23:34">
        - <DriverDetails FirstName="Daniel" Surname="Elbers" BirthDate="1956-09-18"
          PlaceOfBirth="München">
          <DrivingLicenseDetails DLNumber="AB12345678" DLIssuingNation="D"
            DLStatus="Valid" DLIssueDate="1986-12-06" />
          </DriverDetails>
        </CardDetails>
      </SearchCriteria>
    </Body>
  </TCN2MS_CheckCardStatus_Res>
  
```

Continued on next page

## TCN2MS\_CheckCardStatus\_Res, Continued

---

**Rules for  
computing  
StatusCode  
value**

The *StatusCode* attribute value of the *Header* element stands for the global status code for the message and is based on the *SearchStatusCode* attribute value of all *SearchCriteria* elements according to the following rules in priority order:

<b>If among all <i>SearchStatusCode</i> value</b>		<b>Then <i>StatusCode</i> value is...</b>
<i>If at least one</i>	Timeout	Timeout
<i>If at least one</i>	ServerError	ServerError
<i>If at least one</i>	NotAvailable	NotAvailable
<i>If at least one</i>	NotYetConnected	NotYetConnected
<i>Otherwise</i>	Found or NotFound or WorkshopCardStatusNotAvailable	OK

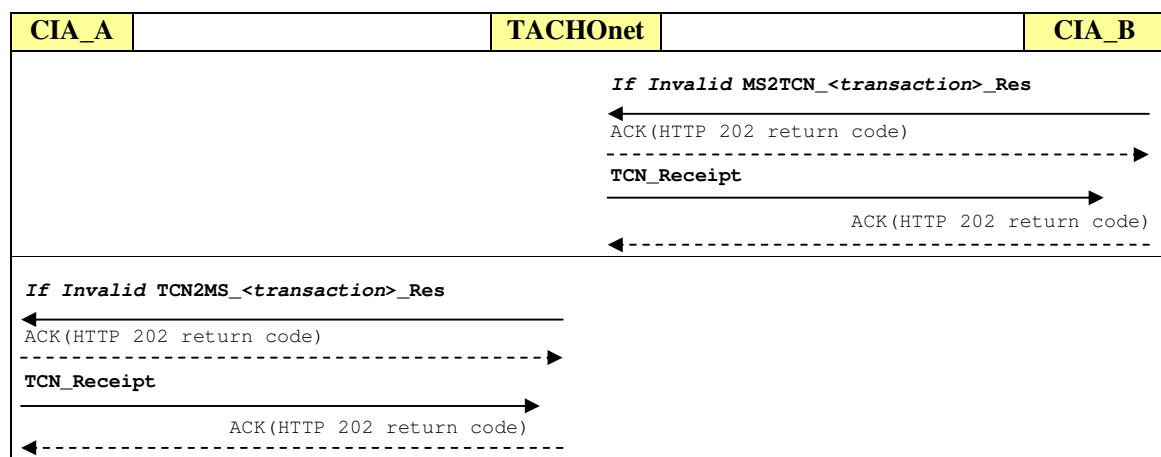
---

## Section 4.5 - TCN\_Receipt XML message

### Overview

**Introduction** When a received response is not well-formatted (not XML compliant) or not valid (not compliant to corresponding XSD), this message receipt must be sent to the response's sender to indicate an *InvalidFormat* error.

**When to send this message?** The following figure illustrates the two cases when this message must be sent:



**Message description** The following table describes the XML message used for the transaction.

Item	Occ	Type	Len	Description
<b>Header</b>	<b>1</b>			<b>Header Node</b>
Version	1	Text	3	TACHOnet request current version ('1.4')
TestId	0-1	Text	1-8	Test Case identification. Only useful for testing.
MSRefId	1	Text	1-36	Reference number given by the caller in the <i>MS2TCN_xxx_Res.xml</i> response.
TCNRefId	1	Uuid	36	Reference number given by the TACHOnet in the <i>TCN2MS_xxx_Res.xml</i> response..
SentAt	1	DT	19	Message creation date and time (ISO 8601 UTC format)
From	1	Text	5-8	The name of the originator of the message (as defined in TACHOnet).
To	1	Text	5-8	The name of the recipient of the message (as defined in TACHOnet)

*Continued on next page*

## Overview, Continued

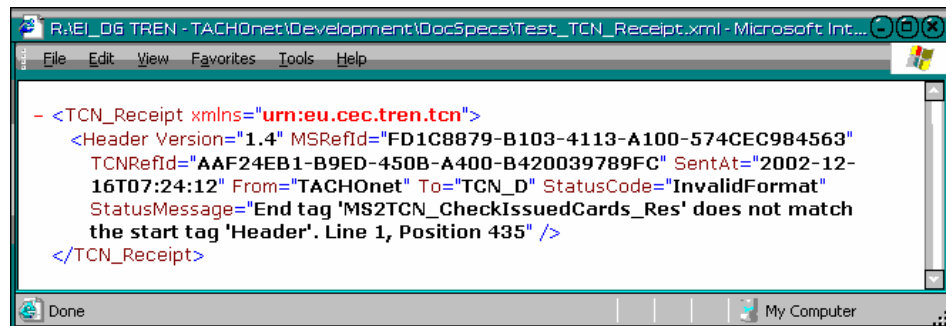
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### Message description (continued)

Item	Occ	Type	Len	Description
StatusCode	1	Enum		Status Message code. Possible values are : <ul style="list-style-type: none"><li>▪ <b>InvalidFormat</b></li></ul>
StatusMessage	0-1	Text	0-255	Global status message string

---

### Example



```
- <TCN_Receipt xmlns="urn:eu.cec.tren.tcn">
  <Header Version="1.4" MSRefId="FD1C8879-B103-4113-A100-574CEC984563"
    TCNRefId="AAF24EB1-B9ED-450B-A400-B420039789FC" SentAt="2002-12-
    16T07:24:12" From="TACHOnet" To="TCN_D" StatusCode="InvalidFormat"
    StatusMessage="End tag 'MS2TCN_CheckIssuedCards_Res' does not match
    the start tag 'Header'. Line 1, Position 435" />
</TCN_Receipt>
```

---

<End of the document/>