



Interface description LAB system - TRIX

TRIX LAB connection

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1 Goal

Connection between TRIX and the LAB system to exchange information about availability of a matching patient record in TRIX.

2 Process

When opening a patient record in the LAB system, a query to the TRIX system should be triggered to find patient related information regarding transfusion reactions.

This query should be done in the background when the patient record is being viewed by personnel.

When this query results in found patient records (single or multiple), a button should be enabled to view these search results. (Somehow the user should be alerted to the fact that a record has been found in TRIX, through blinking or any other means)

When TRIX is opened from the Lab system a list of patients will be displayed. The patient records can be viewed separately. There will be a number of buttons for actions.

The TRIX system is equipped with its own username/password security.

To access TRIX you must have a valid username/password combination. You can request one at trix@sanquin.nl.

3 Message definition

For the communication between the LAB system and the TRIX server a web service has been developed. The WSDL descriptions have been added in Appendices B and C.

3.1 TRIX web service version 2/3 (session based authentication)

This service requires session based authentication. You should supply username and password when calling the web service. The connection needs the credentials to proceed, otherwise a login screen will be returned.

3.1.1 URL

The URL's to access the TRIX Web services directly with session based authentication are:

<https://<trixserver>/trix/trix.nsf/WebServiceZoekV2?wsdl>

<https://<trixserver>/trix/trix.nsf/WebServiceZoekV3?wsdl>

3.1.2 Query/Response "FindPatient"

The query has five parameter values:

- Version (currently, specify "2.0" for WebServiceZoekV2 and 3.0" for WebServiceZoekV3);
- Patient name of birth;
- Date of birth;
- BSN (if unknown or empty, specify "*");
- Patient id (for laboratory)

The response from TRIX will be a standard Web Service response. The response will contain the amount of TRIX patients who match the given search query in version 2 and in version 3 the response will also contain an url to find the patient via the browser.

For an examples see Appendices B and C.

3.1.3 Query/Response "FindPatientByBSN"

This operation is used by TRIX itself and should not be used by outside agencies.

3.1.4 Query/Response "FindPatientByPID"

This operation is used by TRIX itself and should not be used by outside agencies.

3.2 TRIX web service version 2/3 (authentication handled via service)

It is also possible to access a open web service without authentication and supply username and password via the request data. The WSDL description file for this service is supplied in Appendices D and E.

3.2.1 URL

The URL's to access the public TRIX Web services are:

<https://<trixserver>/trix/trix-soapproxy.nsf/ProxyWebserviceV2?wsdl>

<https://<trixserver>/trix/trix-soapproxy.nsf/ProxyWebserviceV3?wsdl>

3.2.2 Query/Response "ProxyFindPatient"

The query contains two parts

A credentials part which has two values

- Username
- Password

A patient request part which takes five parameter values:

- Version (currently, specify "2.0" for ProxyWebServiceV2 and 3.0" for ProxyWebServiceV3);
- Patient name of birth;
- Date of birth;
- BSN (if unknown or empty, specify "*");
- Patient id (for laboratory)

The response will contain the amount of TRIX patients who match the given search query in version 2 and in version 3 the response will also contain an url to find the patient via the browser.

Example:

In the response you see the number "1". TRIX processes the information sent in the request in three stages.

First on the national BSN-number, if no hit next on the patientnumber (pid) and (if no hit either) last on the combination of patientNaam (patient birthname) and gebDat (birthdate). When no patient is found, TRIX will sent the number 0 as response. The receiving labsystem should do nothing.

When 1 patient is found TRIX will sent the number 1 as response, when two patients are found (possible on birthname and birthdate) the number 2 and so on.

When the response though is 1 or more the labsystem should present an alert (popup screen) indicating that TRIX found one ore more patients.

After the alert, there should be a TRIX-button present where the user can click on. *The url behind that button is specified in appendix A. Currently this has become obsolete. The url can now be found in the response to te soaprequest using WebServiceZoekV3 or ProxyWebserviceV3.*

4 Browser

TRIX currently requires Internet Explorer 11 or later.

5 Security

For security the TRIX server (Domino) provides basic authentication (username and password).

The current legislation and security protocol requires this connection to be encrypted between the TRIX server and the LAB system or browser window. The TRIX server and the user's workstation will both be on the internal network of the Hospital. The TRIX server provides TLS/SSL encryption using the local certificates provided by the Hospital.

6 Exception Handling

The LAB system cannot access the TRIX server to send query.

The LAB system should inform the user that the TRIX server cannot be accessed and that an administrator should be contacted as soon as possible. If possible the LAB system should also send an email message to a definable administrator (or administrator group).

The LAB system can send the query to the TRIX server, but there is no response, or the response is unreadable.

The LAB system should retry at least 3 times regarding a definable wait time. After the TRIX server cannot respond in a normal way a message should be presented to the user to inform him of the problem. The administrator should be contacted and mailed like the previous exception.

The TRIX server does not respond on the provided URL from response

There should be a user instruction to ask for administrator assistance when this occurs. If possible, the LAB system should monitor the browser window for timeouts.

The TRIX server responds with an error on the provided URL from response.

There should be a user instruction to ask for administrator assistance when this occurs. If possible, the LAB system should monitor the browser window for HTTP Error 400 and 500 messages.

The TRIX-server responds with a fault string due to an internal error on the query.

For an example see appendices B and C.

Appendix A – Communication Scheme - obsolete

In the next version of this document this appendix will be deleted. It is no longer allowed to use the login url as described below. To obtain this (partly encrypted) url without login credentials one must use WebserviceZoekV3 or ProxyWebserviceV3 where you can find it in the response to the soaprequest (examples in appendix C and E). For now this will only be <https://www.trix-online.nl/> but in a later version BSN, name and date of birth will be added encrypted to this url so that the reported patient will be found directly after a manual login.

The url to login to TRIX from the LAB system to view the patient record is:

`http://trix/names.nsf?login&username = %username%&password = %password%&redirectTo = /trix/trix.nsf/wf-zoek?readform%26naam = %patientname%%26gebdat = %dateofbirth%%26bsn = %BSN%%26pid=%PID%`

The **red and underlined** items in the url have to be programmed flexible. The user must be able to specify and change these parameters.

%username% should be replaced by the Lab system with the TRIX username of the person logged in in the Lab system

%password% should be replaced by the Lab systems with corresponding TRIX password for the same user.

%patientname% should be replaced with the patient last name.

%dateofbirth% should be replaced with the patient date of birth in the format yyyy-mm-dd.

%BSN% should be replaced with the patient BSN (when available).

%PID% should be replaced with the patient hospital id.

Appendix B – Webservice definition (WSDL) direct

```
<?xml version="1.0" encoding="UTF-8" standalone="no"?>
<wsdl:definitions xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
xmlns:tns="urn:valueobjects.trix.sanquin.nl" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/"
xmlns:xsd="http://www.w3.org/2001/XMLSchema" name="WebServiceZoekV2"
targetNamespace="urn:valueobjects.trix.sanquin.nl">
  <wsdl:types>
    <xsd:schema targetNamespace="urn:valueobjects.trix.sanquin.nl"
xmlns:tns="urn:valueobjects.trix.sanquin.nl" xmlns:xsi="http://www.w3.org/2001/XMLSchema-
instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:trixvo="urn:valueobjects.trix.sanquin.nl">
      <xsd:element name="FindPatient" type="tns:FindPatientRequest"></xsd:element>
      <xsd:element name="FindPatientResponse" type="xsd:int"></xsd:element>

      <xsd:complexType name="FindPatientRequest">
        <xsd:sequence>
          <xsd:element name="version" type="xsd:string" maxOccurs="1"
minOccurs="1"></xsd:element>
          <xsd:element name="name" type="xsd:string" maxOccurs="1"
minOccurs="1"></xsd:element>
          <xsd:element name="birthDate" type="xsd:date" maxOccurs="1"
minOccurs="1"></xsd:element>
          <xsd:element name="bsn" type="xsd:string" maxOccurs="1"
minOccurs="0"></xsd:element>
          <xsd:element name="pid" type="xsd:string" maxOccurs="1"
minOccurs="0"></xsd:element>
        </xsd:sequence>
      </xsd:complexType>

      <xsd:complexType name="FindPatientByPIDRequest">
        <xsd:sequence>
          <xsd:element name="version" type="xsd:string" maxOccurs="1"
minOccurs="1"></xsd:element>
          <xsd:element name="pid" type="xsd:string" maxOccurs="1"
minOccurs="1"></xsd:element>
        </xsd:sequence>
      </xsd:complexType>

      <xsd:complexType name="FindPatientByBSNRequest" >
        <xsd:sequence>
          <xsd:element name="version" type="xsd:string" maxOccurs="1"
minOccurs="1"></xsd:element>
          <xsd:element name="bsn" type="xsd:string" maxOccurs="1"
minOccurs="1"></xsd:element>
        </xsd:sequence>
      </xsd:complexType>

      <xsd:element name="FindPatientByBSN" type="tns:FindPatientByBSNRequest" >
      </xsd:element>
      <xsd:element name="FindPatientByPID" type="tns:FindPatientByPIDRequest" >
      </xsd:element>

      <xsd:complexType name="PatientResponse">
        <xsd:sequence>
          <xsd:element name="found" type="xsd:boolean" maxOccurs="1"
minOccurs="1"></xsd:element>
          <xsd:element name="patient" type="tns:Patient" maxOccurs="1"
minOccurs="0"></xsd:element>
        </xsd:sequence>
      </xsd:complexType>

      <xsd:complexType name="Patient">
        <xsd:sequence>
          <xsd:element name="bsn" type="xsd:string" minOccurs="0"
maxOccurs="1"></xsd:element>
          <xsd:element name="trixID" type="xsd:string" minOccurs="1"
maxOccurs="1"></xsd:element>
          <xsd:element name="pid" type="xsd:string" minOccurs="0"
maxOccurs="1"></xsd:element>
          <xsd:element name="lastName" type="xsd:string" minOccurs="1"
maxOccurs="1"></xsd:element>
        </xsd:sequence>
      </xsd:complexType>
    </xsd:schema>
  </wsdl:types>
</wsdl:definitions>
```

```

        <xsd:element name="lastNamePrefix" type="xsd:string"
minOccurs="0" maxOccurs="1"></xsd:element>
        <xsd:element name="initials" type="xsd:string" minOccurs="0"
maxOccurs="1"></xsd:element>
        <xsd:element name="birthDate" type="xsd:date" minOccurs="1"
maxOccurs="1"></xsd:element>
        <xsd:element name="gender" type="xsd:string" minOccurs="0"
maxOccurs="1"></xsd:element>
        <xsd:element name="partnerLastName" type="xsd:string"
minOccurs="0" maxOccurs="1"></xsd:element>
        <xsd:element name="partnerLastNamePrefix" type="xsd:string"
minOccurs="0" maxOccurs="1"></xsd:element>
        <xsd:element name="address" type="tns:Address" minOccurs="0"
maxOccurs="1"></xsd:element>
        <xsd:element name="ownerID" type="xsd:string" maxOccurs="1"
minOccurs="1"></xsd:element>
    </xsd:sequence>
</xsd:complexType>

    <xsd:complexType name="Address">
        <xsd:sequence>
            <xsd:element name="country" type="xsd:string" minOccurs="0"
maxOccurs="1"></xsd:element>
            <xsd:element name="city" type="xsd:string" maxOccurs="1"
minOccurs="1"></xsd:element>
            <xsd:element name="zipCode" type="xsd:string" maxOccurs="1"
minOccurs="1"></xsd:element>
            <xsd:element name="street" type="xsd:string" maxOccurs="1"
minOccurs="1"></xsd:element>
            <xsd:element name="number" type="xsd:string" maxOccurs="1"
minOccurs="1"></xsd:element>
            <xsd:element name="numberSuffix" type="xsd:string"
maxOccurs="1" minOccurs="0"></xsd:element>
        </xsd:sequence>
    </xsd:complexType>
    <xsd:element name="FindPatientByBSNResponse"
type="tns:PatientResponse"></xsd:element>
    <xsd:element name="FindPatientByPIDResponse"
type="tns:PatientResponse"></xsd:element>
</xsd:schema>
</wsdl:types>
<wsdl:message name="FindPatientRequest">
    <wsdl:part element="tns:FindPatient" name="request" />
</wsdl:message>
<wsdl:message name="FindPatientResponse">
    <wsdl:part name="response" element="tns:FindPatientResponse"/>
</wsdl:message>
<wsdl:message name="FindPatientByBSNRequest">
    <wsdl:part name="request" element="tns:FindPatientByBSN"></wsdl:part>
</wsdl:message>
<wsdl:message name="FindPatientByBSNResponse">
    <wsdl:part name="response" element="tns:FindPatientByBSNResponse"></wsdl:part>
</wsdl:message>
<wsdl:message name="FindPatientByPIDRequest">
    <wsdl:part name="request" element="tns:FindPatientByPID"></wsdl:part>
</wsdl:message>
<wsdl:message name="FindPatientByPIDResponse">
    <wsdl:part name="response" element="tns:FindPatientByPIDResponse"></wsdl:part>
</wsdl:message>
<wsdl:portType name="WebServiceZoekV2">
    <wsdl:operation name="FindPatient">
        <wsdl:input message="tns:FindPatientRequest" />
        <wsdl:output message="tns:FindPatientResponse" />
    </wsdl:operation>
    <wsdl:operation name="FindPatientByBSN">
        <wsdl:input message="tns:FindPatientByBSNRequest"></wsdl:input>
        <wsdl:output message="tns:FindPatientByBSNResponse"></wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="FindPatientByPID">
        <wsdl:input message="tns:FindPatientByPIDRequest"></wsdl:input>
        <wsdl:output message="tns:FindPatientByPIDResponse"></wsdl:output>
    </wsdl:operation>
</wsdl:portType>
<wsdl:binding name="WebServiceZoekV2SOAP" type="tns:WebServiceZoekV2">
    <soap:binding style="document" transport="http://schemas.xmlsoap.org/soap/http" />
    <wsdl:operation name="FindPatient">
        <soap:operation soapAction="urn:valueobjects.trix.sanquin.nl/FindPatient" />
        <wsdl:input>
            <soap:body use="literal" />
        </wsdl:input>
        <wsdl:output>

```



```

                <soap:body use="literal" />
            </wsdl:output>
        </wsdl:operation>
        <wsdl:operation name="FindPatientByBSN">
            <soap:operation
soapAction="urn:valueobjects.trix.sanquin.nl/FindPatientByBSN" />
            <wsdl:input>
                <soap:body use="literal" />
            </wsdl:input>
            <wsdl:output>
                <soap:body use="literal" />
            </wsdl:output>
        </wsdl:operation>
        <wsdl:operation name="FindPatientByPID">
            <soap:operation
soapAction="urn:valueobjects.trix.sanquin.nl/FindPatientByPID" />
            <wsdl:input>
                <soap:body use="literal" />
            </wsdl:input>
            <wsdl:output>
                <soap:body use="literal" />
            </wsdl:output>
        </wsdl:operation>
    </wsdl:binding>
    <wsdl:service name="WebServiceZoekV2">
        <wsdl:port binding="tns:WebServiceZoekV2SOAP" name="WebServiceZoekV2SOAP">
            <soap:address location="https://trix-server/trix/trix.nsf/WebServiceZoekV2/"
/>
        </wsdl:port>
    </wsdl:service>
</wsdl:definitions>

```

Example request from labssystem to TRIX

```

<?xml version="1.0" encoding="UTF-8" ?>
<SOAPENV:Envelope xmlns:SOAPENV="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-
instance">
<SOAPENV:Body>
<ns0:zoekPatient xmlns:ns0="urn:DefaultNamespace" SOAP-
ENV:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/">
<versie xsi:type="xsd:string">1.0</versie>
<patientNaam xsi:type="xsd:string">Test patient</patientNaam>
<gebDat xsi:type="xsd:date">1999-01-01</gebDat>
<BSN xsi:type="xsd:string">999999999</BSN>
<pid xsi:type="xsd:string">1234567</pid>
</ns0:zoekPatient>
</SOAPENV:Body>
</SOAPENV:Envelope>

```

Example response from TRIX to labssystem

```

<?xml version="1.0"?>
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-
instance">
<soapenv:Body>
<ns1:zoekPatientResponse soapenv:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:ns1="urn:DefaultNamespace">
<zoekPatientReturn xsi:type="xsd:int">
1
</zoekPatientReturn>
</ns1:zoekPatientResponse>

```

```
</soapenv:Body>
</soapenv:Envelope>
```

Explanation response from TRIX to labsystem

In the response you see the number "1". TRIX processes the information sent in the request in three stages.

First on the national BSN-number, if no hit next on the patientnumber (pid) and (if no hit either) last on the combination of patientNaam (patient birthname) and gebDat (birthdate). When no patient is found, TRIX will sent the number 0 as response. The receiving labsystem should do nothing.

When 1 patient is found TRIX will sent the number 1 as response, when two patients are found (possible on birthname and birthdate) the number 2 and so on.

When the response though is 1 or more the labsystem should present an alert (popup screen) indicating that TRIX found one ore more patients.

After the alert, there should be a TRIX-button present where the user can click on. *The url behind that button is specified in appendix A.*

Example fault response from TRIX to labsystem

```
<?xml version="1.0"?>
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-
instance">
<soapenv:Body>
<soapenv:Fault>
<faultcode>soapenv:Server.generalException</faultcode>
<faultstring>NotesException: De TR!X index is corrupt geraakt, neem direct contact op met de
TR!X helpdesk</faultstring>
<detail/>
</soapenv:Fault>
</soapenv:Body>
</soapenv:Envelope>
```

Appendix C – Webservice definition (WSDL) direct with url response

```
<?xml version="1.0" encoding="UTF-8" standalone="no"?>
<wsdl:definitions name="WebServiceZoekV3"
  targetNamespace="urn:webservicezoekv3.trix_online.nl"
  xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
  xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  xmlns:tns="urn:webservicezoekv3.trix_online.nl"
  xmlns:res="urn:response.webservicezoekv3.trix_online.nl"
  xmlns:req="urn:request.webservicezoekv3.trix_online.nl">
  <wsdl:types>
    <xsd:schema targetNamespace="urn:response.webservicezoekv3.trix_online.nl"
      xmlns:res="urn:response.webservicezoekv3.trix_online.nl">
      <xsd:element name="FindPatientResponse"
        type="res:FindPatientResponse"></xsd:element>
      <xsd:complexType name="FindPatientResponse">
        <xsd:choice>
          <xsd:element name="found" type="xsd:int" maxOccurs="1"
            minOccurs="1"></xsd:element>
          <xsd:element name="url" type="xsd:string" maxOccurs="1"
            minOccurs="0"></xsd:element>
        </xsd:choice>
      </xsd:complexType>
    </xsd:schema>
    <xsd:schema targetNamespace="urn:request.webservicezoekv3.trix_online.nl"
      xmlns:req="urn:request.webservicezoekv3.trix_online.nl">
      <xsd:element name="FindPatientRequest" type="req:FindPatientRequest"></xsd:element>
      <xsd:complexType name="FindPatientRequest">
        <xsd:choice>
          <xsd:element name="version" type="xsd:string" maxOccurs="1" minOccurs="1">
            </xsd:element>
          <xsd:element name="name" type="xsd:string" maxOccurs="1" minOccurs="1">
            </xsd:element>
          <xsd:element name="birthDate" type="xsd:date" maxOccurs="1" minOccurs="1">
            </xsd:element>
          <xsd:element name="bsn" type="xsd:string" maxOccurs="1" minOccurs="0">
            </xsd:element>
          <xsd:element name="pid" type="xsd:string" maxOccurs="1" minOccurs="0">
            </xsd:element>
        </xsd:choice>
      </xsd:complexType>
    </xsd:schema>
  </wsdl:types>
  <wsdl:message name="FindPatientRequest">
    <wsdl:part name="request" element="req:FindPatientRequest" />
  </wsdl:message>
  <wsdl:message name="FindPatientResponse">
    <wsdl:part name="response" element="res:FindPatientResponse" />
  </wsdl:message>
</wsdl:definitions>
```

```

</wsdl:message>
<wsdl:portType name="WebServiceZoekV3">
  <wsdl:operation name="FindPatient">
    <wsdl:input message="tns:FindPatientRequest" />
    <wsdl:output message="tns:FindPatientResponse" />
  </wsdl:operation>
</wsdl:portType>
<wsdl:binding name="WebServiceZoekV3SOAP" type="tns:WebServiceZoekV3">
  <soap:binding style="document" transport="http://schemas.xmlsoap.org/soap/http" />
  <wsdl:operation name="FindPatient">
    <soap:operation soapAction="urn:webservicezoekv3.trix_online.nl/FindPatient" />
    <wsdl:input>
      <soap:body use="literal" />
    </wsdl:input>
    <wsdl:output>
      <soap:body use="literal" />
    </wsdl:output>
  </wsdl:operation>
</wsdl:binding>
<wsdl:service name="WebServiceZoekV3">
  <wsdl:port binding="tns:WebServiceZoekV3SOAP" name="WebServiceZoekV3SOAP">
    <soap:address location="https://www.trix-online.nl/trix/trix.nsf/WebServiceZoekV3/" />
  </wsdl:port>
</wsdl:service>
</wsdl:definitions>

```

Example request from TRIX to labssystem

```

<x:Envelope xmlns:x="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:urn="urn:request.webservicezoekv3.trix_online.nl">
  <x:Header/>
  <x:Body>
    <urn1:FindPatientRequest>
      <urn1:version>3.0</urn1:version>
      <urn1:name>test</urn1:name>
      <urn1:birthDate>2010-06-21</urn1:birthDate>
      <urn1:bsn></urn1:bsn>
      <urn1:pid></urn1:pid>
    </urn1:FindPatientRequest>
  </x:Body>
</x:Envelope>

```

Example response from TRIX to labssystem

```

<?xml version="1.0" encoding="UTF-8"?>
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-
instance">
  <soapenv:Body>
    <FindPatientResponse xmlns="urn:response.webservicezoekv3.trix_online.nl">
      <found xmlns="">1</found>
      <url xmlns="">https://www.trix-online.nl/</url>
    </FindPatientResponse>
  </soapenv:Body>
</soapenv:Envelope>

```

Appendix D – Webservice definition (WSDL) proxy

```
<?xml version="1.0" encoding="UTF-8"?>
<wsdl:definitions xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/" xmlns:tns="urn:valueobjects.trix.sanquin.nl"
xmlns:xsd="http://www.w3.org/2001/XMLSchema" name="ProxyWebServiceZoekV2"
targetNamespace="urn:valueobjects.trix.sanquin.nl">
  <wsdl:types>
    <xsd:schema xmlns:trixvo="urn:valueobjects.trix.sanquin.nl"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
targetNamespace="urn:valueobjects.trix.sanquin.nl">
      <xsd:element name="ProxyFindPatient" type="tns:ProxyFindPatientRequest" />
      <xsd:element name="ProxyFindPatientResponse" type="xsd:int" />
      <xsd:complexType name="FindPatientRequest">
        <xsd:sequence>
          <xsd:element maxOccurs="1" minOccurs="1" name="version" type="xsd:string" />
          <xsd:element maxOccurs="1" minOccurs="1" name="name" type="xsd:string" />
          <xsd:element maxOccurs="1" minOccurs="1" name="birthDate" type="xsd:date" />
          <xsd:element maxOccurs="1" minOccurs="0" name="bsn" type="xsd:string" />
          <xsd:element maxOccurs="1" minOccurs="0" name="pid" type="xsd:string" />
        </xsd:sequence>
      </xsd:complexType>
      <xsd:complexType name="Credentials">
        <xsd:sequence>
          <xsd:element maxOccurs="1" minOccurs="1" name="username" type="xsd:string" />
          <xsd:element maxOccurs="1" minOccurs="1" name="password" type="xsd:string" />
        </xsd:sequence>
      </xsd:complexType>
      <xsd:complexType name="ProxyFindPatientRequest">
        <xsd:sequence>
          <xsd:element maxOccurs="1" minOccurs="1" name="credentials"
type="tns:Credentials" />
          <xsd:element maxOccurs="1" minOccurs="1" name="findPatientRequest"
type="tns:FindPatientRequest" />
        </xsd:sequence>
      </xsd:complexType>
    </xsd:schema>
  </wsdl:types>
  <wsdl:message name="ProxyFindPatientRequest">
    <wsdl:part element="tns:ProxyFindPatient" name="request" />
  </wsdl:message>
  <wsdl:message name="ProxyFindPatientResponse">
    <wsdl:part element="tns:ProxyFindPatientResponse" name="response" />
  </wsdl:message>
  <wsdl:portType name="ProxyWebServiceZoekV2">
    <wsdl:operation name="ProxyFindPatient">
      <wsdl:input message="tns:ProxyFindPatientRequest" />
      <wsdl:output message="tns:ProxyFindPatientResponse" />
    </wsdl:operation>
  </wsdl:portType>
  <wsdl:binding name="ProxyWebServiceZoekV2SOAP" type="tns:ProxyWebServiceZoekV2">
    <soap:binding style="document" transport="http://schemas.xmlsoap.org/soap/http" />
    <wsdl:operation name="ProxyFindPatient">
      <soap:operation soapAction="urn:valueobjects.trix.sanquin.nl/FindPatient" />
      <wsdl:input>
        <soap:body use="literal" />
      </wsdl:input>
      <wsdl:output>
        <soap:body use="literal" />
      </wsdl:output>
    </wsdl:operation>
  </wsdl:binding>
  <wsdl:service name="ProxyWebServiceZoekV2">
    <wsdl:port binding="tns:ProxyWebServiceZoekV2SOAP" name="ProxyWebServiceZoekV2SOAP">
      <soap:address location="https://trix-server/trix/trix-soapproxy.nsf/ProxyWebServiceV2?OpenWebService" />
    </wsdl:port>
  </wsdl:service>
</wsdl:definitions>
```

Example request from labssystem to TRIX

```
<x:Envelope xmlns:x="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:urn="urn:valueobjects.trix.sanquin.nl">
  <x:Header/>
  <x:Body>
    <urn:ProxyFindPatient>
      <urn:credentials>
        <urn:username>username1</urn:username>
      </urn:credentials>
    </urn:ProxyFindPatient>
  </x:Body>
</x:Envelope>
```

```

        <urn:password>password1</urn:password>
    </urn:credentials>
    <urn:findPatientRequest>
        <urn:version>2.0</urn:version>
        <urn:name>patientname</urn:name>
        <urn:birthDate>2000-01-01</urn:birthDate>
        <urn:bsn>111222333</urn:bsn>
        <urn:pid>123456789</urn:pid>
    </urn:findPatientRequest>
</urn:ProxyFindPatient>
</x:Body>
</x:Envelope>

```

Example response from TRIX to labssystem

```

<?xml version="1.0" encoding="UTF-8"?>
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
    <soapenv:Body>
        <ProxyFindPatientResponse xmlns="urn:valueobjects.trix.sanquin.nl">
            <ProxyFindPatientResponse
xsi:type="xsd:int">1</ProxyFindPatientResponse>
        </ProxyFindPatientResponse>
    </soapenv:Body>
</soapenv:Envelope>

```

Example fault response from TRIX to labssystem

```

<?xml version="1.0"?>
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
    <soapenv:Body>
        <soapenv:Fault>
            <faultcode>soapenv:Server.generalException</faultcode>
            <faultstring>NotesException: De TR!X index is corrupt geraakt, neem direct contact
op met de TR!X helpdesk</faultstring>
            <detail/>
        </soapenv:Fault>
    </soapenv:Body>
</soapenv:Envelope>

```

Appendix E – Webservice definition (WSDL) proxy with url response

```
<?xml version="1.0" encoding="UTF-8" standalone="no"?>
<wsdl:definitions name="ProxyWebServiceZoekV3"
  targetNamespace="urn:webservicezoekv3.proxy.trix_online.nl"
  xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
  xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  xmlns:tns="urn:webservicezoekv3.proxy.trix_online.nl"
  xmlns:res="urn:response.webservicezoekv3.proxy.trix_online.nl"
  xmlns:req="urn:request.webservicezoekv3.proxy.trix_online.nl">
  <wsdl:types>
    <xsd:schema targetNamespace="urn:response.webservicezoekv3.proxy.trix_online.nl"
      xmlns:res="urn:response.webservicezoekv3.proxy.trix_online.nl">
      <xsd:element name="ProxyFindPatientResponse" type="res:ProxyFindPatientResponse" />

      <xsd:complexType name="ProxyFindPatientResponse">
        <xsd:choice>
          <xsd:element name="found" type="xsd:int" maxOccurs="1" minOccurs="1" />
          <xsd:element name="url" type="xsd:string" maxOccurs="1" minOccurs="0" />
        </xsd:choice>
      </xsd:complexType>

    </xsd:schema>

    <xsd:schema targetNamespace="urn:request.webservicezoekv3.proxy.trix_online.nl"
      xmlns:req="urn:request.webservicezoekv3.proxy.trix_online.nl">
      <xsd:element name="ProxyFindPatientRequest" type="req:ProxyFindPatientRequest" />

      <xsd:complexType name="ProxyFindPatientRequest">
        <xsd:sequence>
          <xsd:element name="credentials" type="req:Credentials" minOccurs="1"
maxOccurs="1" />
          <xsd:element name="findPatientRequest" type="req:FindPatientRequest"
minOccurs="1" maxOccurs="1" />
        </xsd:sequence>
      </xsd:complexType>

      <xsd:complexType name="Credentials">
        <xsd:sequence>
          <xsd:element name="username" type="xsd:string" minOccurs="1" maxOccurs="1"
/>
          <xsd:element name="password" type="xsd:string" minOccurs="1" maxOccurs="1"
/>
        </xsd:sequence>
      </xsd:complexType>

      <xsd:complexType name="FindPatientRequest">
        <xsd:choice>
          <xsd:element name="version" type="xsd:string" maxOccurs="1" minOccurs="1"/>
          <xsd:element name="name" type="xsd:string" maxOccurs="1" minOccurs="1" />
          <xsd:element name="birthDate" type="xsd:date" maxOccurs="1" minOccurs="1" />
          <xsd:element name="bsn" type="xsd:string" maxOccurs="1" minOccurs="0" />
          <xsd:element name="pid" type="xsd:string" maxOccurs="1" minOccurs="0" />
        </xsd:choice>
      </xsd:complexType>

    </xsd:schema>
  </wsdl:types>
  <wsdl:message name="ProxyFindPatientRequest">
    <wsdl:part name="request" element="req:ProxyFindPatientRequest" />
  </wsdl:message>
  <wsdl:message name="ProxyFindPatientResponse">
    <wsdl:part name="response" element="res:ProxyFindPatientResponse" />
  </wsdl:message>
  <wsdl:portType name="ProxyWebServiceZoekV3">
    <wsdl:operation name="ProxyFindPatient">
      <wsdl:input message="tns:ProxyFindPatientRequest" />
      <wsdl:output message="tns:ProxyFindPatientResponse" />
    </wsdl:operation>
  </wsdl:portType>
  <wsdl:binding name="ProxyWebServiceZoekV3SOAP" type="tns:ProxyWebServiceZoekV3">
    <soap:binding style="document" transport="http://schemas.xmlsoap.org/soap/http" />
    <wsdl:operation name="ProxyFindPatient">
      <soap:operation soapAction="urn:webservicezoekv3.proxy.trix_online.nl/FindPatient"
/>

      <wsdl:input>
        <soap:body use="literal" />
      </wsdl:input>
      <wsdl:output>
```

```

        <soap:body use="literal" />
    </wsdl:output>
</wsdl:operation>
</wsdl:binding>
<wsdl:service name="ProxyWebServiceZoekV3">
    <wsdl:port binding="tns:ProxyWebServiceZoekV3SOAP" name="ProxyWebServiceZoekV3SOAP">
        <soap:address location="https://www.trix-
online.nl/trix/proxy.nsf/ProxyWebServiceZoekV3/" />
    </wsdl:port>
</wsdl:service>
</wsdl:definitions>

```

Example request from TRIX to labsystem

```

<x:Envelope xmlns:x="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:urn="urn:request.webservicezoekv3.trix_online.nl">
    <x:Header/>
    <x:Body>
        <urnl:FindPatientRequest>
            <urnl:version>3.0</urnl:version>
            <urnl:name>test</urnl:name>
            <urnl:birthDate>2010-06-21</urnl:birthDate>
            <urnl:bsn></urnl:bsn>
            <urnl:pid></urnl:pid>
        </urnl:FindPatientRequest>
    </x:Body>
</x:Envelope>

```

Example response from TRIX to labsystem

```

<?xml version="1.0" encoding="UTF-8"?>
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-
instance">
    <soapenv:Body>
        <FindPatientResponse xmlns="urn:response.webservicezoekv3.trix_online.nl">
            <found xmlns="">1</found>
            <url xmlns="">https://www.trix-online.nl/</url>
        </FindPatientResponse>
    </soapenv:Body>
</soapenv:Envelope>

```