

gofore

Digitraffic web services

Version 1.06

4.5.2011

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## 1 Version history

1.0	20.10.2008	Janne Mattila	Added nobobs and laststaticdataupdate
1.01	25.9.2009	Janne Mattila	Updated fluency class naming
1.02	21.10.2009	Janne Mattila	Fixed a typo in chapter 7.1, talked about link static data, should be LAM static data
1.03	8.2.2010	Janne Mattila	Added description of "one client per one user account" –principle to Introduction-chapter
1.04	28.7.2010	Sampsa Ojala	Added current road weather station data
1.05	9.8.2010	Perttu Taskinen	Added description of road station status web service
1.06	4.5.2011	Juho Kaistinen	Added description of camera presets web service

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## 2 Introduction

Digitraffic offers various web services for data retrieval. The following chapters describe each web service in detail.

Web services have been implemented using document / literal style. They conform to WS-I Basic Profile 1.0 and use the "wrapped" naming convention.

A user account in Digitraffic is a prerequisite for using the web services. Web service interfaces are protected with http basic authentication.

The web service interfaces are intended to be used for system to system integration. One user account is meant to be used for the needs of one system. If the user organization needs the data in multiple systems, it needs to request the data only once, and then distribute it to all recipient systems internally.

Some parts of the example messages in this document are not representative of the data the real messages contain. For example, travel times are unnaturally long in some messages.

### 3 Current journey times

WSDL: <http://stp.gofore.com/sujuvuus/ws/journeyTime?wsdl>

The message contains a median travel time (seconds) calculated from a 5 minute period. For each link there is a median number, and a timestamp of the latest update of the median.

The message is updated each time we receive new median data from MTP. Normally this is once per minute. If MTP does not send us new data, the message is not updated.

**Table 1 WSDL defining the web service (soap:address has a temporary value)**

```
<wsdl:definitions targetNamespace="http://www.gofore.com/sujuvuus/schemas"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/" xmlns:schema="http://www.gofore.com/sujuvuus/schemas"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/">
  <wsdl:types>
    <xsd:schema elementFormDefault="qualified"
targetNamespace="http://www.gofore.com/sujuvuus/schemas"
xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:suj="http://www.gofore.com/sujuvuus/schemas">
      <xsd:element name="JourneyTime">
        <xsd:complexType/>
      </xsd:element>
      <xsd:element name="JourneyTimeResponse">
        <xsd:complexType>
          <xsd:sequence>
            <xsd:element name="timestamp" type="suj:ObstimeType"/>
            <xsd:element name="laststaticdataupdate" type="xsd:dateTime" />
            <xsd:element name="linkdynamicdata">
              <xsd:complexType>
                <xsd:sequence>
                  <xsd:element maxOccurs="unbounded" name="linkstat"
type="suj:LinkStatType"/>
                </xsd:sequence>
              </xsd:complexType>
            </xsd:element>
          </xsd:sequence>
        </xsd:complexType>
      </xsd:element>
      <xsd:complexType name="LinkStatType">
        <xsd:sequence>
          <xsd:element name="linkno" type="suj:LinkNumberType"/>
          <xsd:element name="measurementtime" type="suj:ObstimeType"/>
          <xsd:element name="medianjourneytime" type="xsd:nonNegativeInteger"/>
          <xsd:element name="nobs" type="xsd:integer"/>
        </xsd:sequence>
      </xsd:complexType>
      <xsd:complexType name="ObstimeType">
        <xsd:sequence minOccurs="0">
          <xsd:element minOccurs="0" name="utc" type="xsd:dateTime"/>
          <xsd:element minOccurs="0" name="localtime" type="xsd:dateTime"/>
        </xsd:sequence>
      </xsd:complexType>
      <xsd:simpleType name="LinkNumberType">
        <xsd:restriction base="xsd:nonNegativeInteger"/>
      </xsd:simpleType>
    </xsd:schema>
  </wsdl:types>
  <wsdl:message name="JourneyTimeResponse">
    <wsdl:part element="schema:JourneyTimeResponse" name="JourneyTimeResponse"/>
  </wsdl:message>
  <wsdl:message name="JourneyTime">
    <wsdl:part element="schema:JourneyTime" name="JourneyTime"/>
  </wsdl:message>
```

```

<wsdl:portType name="JourneyTimePort">
  <wsdl:operation name="JourneyTime">
    <wsdl:input message="schema:JourneyTime" name="JourneyTime"/>
    <wsdl:output message="schema:JourneyTimeResponse" name="JourneyTimeResponse"/>
  </wsdl:operation>
</wsdl:portType>
<wsdl:binding name="JourneyTimeBinding" type="schema:JourneyTimePort">
  <soap:binding style="document" transport="http://schemas.xmlsoap.org/soap/http"/>
  <wsdl:operation name="JourneyTime">
    <soap:operation soapAction=""/>
    <wsdl:input name="JourneyTime">
      <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output name="JourneyTimeResponse">
      <soap:body use="literal"/>
    </wsdl:output>
  </wsdl:operation>
</wsdl:binding>
<wsdl:service name="JourneyTimeService">
  <wsdl:port binding="schema:JourneyTimeBinding" name="JourneyTimePort">
    <soap:address location="http://localhost:8180/sujuvuus-webapp-1.0-SNAPSHOT/ws"/>
  </wsdl:port>
</wsdl:service>
</wsdl:definitions>

```

## Table 2 Example request

```

<soapenv:Envelope
  xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:sch="http://www.gofore.com/sujuvuus/schemas">
  <soapenv:Header />
  <soapenv:Body>
    <sch:JourneyTime />
  </soapenv:Body>
</soapenv:Envelope>

```

## Table 3 Example response

```

<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <SOAP-ENV:Body>
    <ns1:JourneyTimeResponse xmlns="http://www.gofore.com/sujuvuus/schemas"
      xmlns:ns1="http://www.gofore.com/sujuvuus/schemas">
      <ns1:timestamp>
        <ns1:utc>2008-10-09T10:14:49Z</ns1:utc>
        <ns1:localtime>2008-10-09T13:14:49+03:00</ns1:localtime>
      </ns1:timestamp>
      <ns1:laststaticdataupdate>2008-09-30T21:00:00Z</ns1:laststaticdataupdate>
      <ns1:linkdynamicdata>
        <ns1:linkstat>
          <ns1:linkno>0</ns1:linkno>
          <ns1:measurementtime>
            <ns1:utc>2008-10-09T10:14:00Z</ns1:utc>
            <ns1:localtime>2008-10-09T13:14:00+03:00</ns1:localtime>
          </ns1:measurementtime>
          <ns1:medianjourneytime>417</ns1:medianjourneytime>
          <ns1:nobs>-1</ns1:nobs>
        </ns1:linkstat>
        <ns1:linkstat>
          <ns1:linkno>1</ns1:linkno>
          <ns1:measurementtime>
            <ns1:utc>2008-10-09T10:14:00Z</ns1:utc>
            <ns1:localtime>2008-10-09T13:14:00+03:00</ns1:localtime>
          </ns1:measurementtime>
          <ns1:medianjourneytime>412</ns1:medianjourneytime>
          <ns1:nobs>-1</ns1:nobs>
        </ns1:linkstat>
      </ns1:linkdynamicdata>
    </ns1:JourneyTimeResponse>
  </SOAP-ENV:Body>

```

---

</SOAP-ENV:Envelope>

---

### 3.1 Elements

- **timestamp** timestamp of the latest update of the message, both in UTC time zone and local (Finnish) time zone
- **laststaticdataupdate** timestamp of the latest update of the link static data in UTC time zone
- **linkstat** data for a single link
- **linkno** link identifier
- **measurementtime** timestamp of median calculation for this link, in UTC and Finnish time zones
- **medianjourneytime** median of travel times for this link, based on 5 minutes, in seconds
- **nobs** number of observations that were used to calculate the median journey time. -1 unknown.

## 4 Current fluency data

WSDL: <http://stp.gofore.com/sujuvuus/ws/trafficFluency?wsdl>

The message contains for each link the latest 5 minute median, corresponding average speed, fluency class, and timestamp of the latest update.

The message is updates each time we receive new median data from MTP. Normally this is once per minute. If MTP does not send us new data, the message is not updated.

**Table 4 WSDL defining the web service**

```
<wsdl:definitions targetNamespace="http://www.gofore.com/sujuvuus/schemas"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/" xmlns:schema="http://www.gofore.com/sujuvuus/schemas"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/">
  <wsdl:types>
    <xsd:schema elementFormDefault="qualified"
targetNamespace="http://www.gofore.com/sujuvuus/schemas"
xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:suj="http://www.gofore.com/sujuvuus/schemas">
      <xsd:element name="TrafficFluency">
        <xsd:complexType/>
      </xsd:element>
      <xsd:element name="TrafficFluencyResponse">
        <xsd:complexType>
          <xsd:sequence>
            <xsd:element name="timestamp" type="suj:ObstimeType"/>
            <xsd:element name="laststaticdataupdate" type="xsd:dateTime" />
            <xsd:element name="linkdynamicdata">
              <xsd:complexType>
                <xsd:sequence>
                  <xsd:element maxOccurs="unbounded" name="linkstat"
type="suj:LinkStatType"/>
                </xsd:sequence>
              </xsd:complexType>
            </xsd:element>
          </xsd:sequence>
        </xsd:complexType>
      </xsd:element>
      <xsd:complexType name="LinkStatType">
        <xsd:sequence>
          <xsd:element name="linkno" type="suj:LinkNumberType"/>
          <xsd:element name="measurementtime" type="suj:ObstimeType"/>
          <!--this be a string for now-->
          <xsd:element name="journeytimenow" type="xsd:string"/>
          <xsd:element name="midspeednow">
            <xsd:simpleType>
              <xsd:restriction base="xsd:float">
                <xsd:minInclusive value="0.0"/>
              </xsd:restriction>
            </xsd:simpleType>
          </xsd:element>
          <xsd:element name="fluencyclassnow" type="xsd:nonNegativeInteger"/>
          <xsd:element name="nobs" type="xsd:integer"/>
        </xsd:sequence>
      </xsd:complexType>
      <xsd:simpleType name="LinkNumberType">
        <xsd:restriction base="xsd:nonNegativeInteger"/>
      </xsd:simpleType>
      <xsd:complexType name="ObstimeType">
        <xsd:sequence>
          <xsd:element name="utc" type="xsd:dateTime"/>
          <xsd:element name="localtime" type="xsd:dateTime"/>
        </xsd:sequence>
      </xsd:complexType>
    </xsd:schema>
  </wsdl:types>

```

```

    </xsd:complexType>
  </xsd:schema>
</wsdl:types>
<wsdl:message name="TrafficFluencyResponse">
  <wsdl:part element="schema:TrafficFluencyResponse" name="TrafficFluencyResponse"/>
</wsdl:message>
<wsdl:message name="TrafficFluency">
  <wsdl:part element="schema:TrafficFluency" name="TrafficFluency"/>
</wsdl:message>
<wsdl:portType name="TrafficFluencyPort">
  <wsdl:operation name="TrafficFluency">
    <wsdl:input message="schema:TrafficFluency" name="TrafficFluency"/>
    <wsdl:output message="schema:TrafficFluencyResponse" name="TrafficFluencyResponse"/>
  </wsdl:operation>
</wsdl:portType>
<wsdl:binding name="TrafficFluencyBinding" type="schema:TrafficFluencyPort">
  <soap:binding style="document" transport="http://schemas.xmlsoap.org/soap/http"/>
  <wsdl:operation name="TrafficFluency">
    <soap:operation soapAction=""/>
    <wsdl:input name="TrafficFluency">
      <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output name="TrafficFluencyResponse">
      <soap:body use="literal"/>
    </wsdl:output>
  </wsdl:operation>
</wsdl:binding>
<wsdl:service name="TrafficFluencyService">
  <wsdl:port binding="schema:TrafficFluencyBinding" name="TrafficFluencyPort">
    <soap:address location="http://localhost:8180/sujuvuus-webapp-1.0-SNAPSHOT/ws"/>
  </wsdl:port>
</wsdl:service>
</wsdl:definitions>

```

**Table 5 Example request**

```

<soapenv:Envelope
  xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:sch="http://www.gofore.com/sujuvuus/schemas">
  <soapenv:Header />
  <soapenv:Body>
    <sch:TrafficFluency />
  </soapenv:Body>
</soapenv:Envelope>

```

**Table 6 Example response**

```

<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <SOAP-ENV:Body>
    <ns1:TrafficFluencyResponse xmlns="http://www.gofore.com/sujuvuus/schemas"
  xmlns:ns1="http://www.gofore.com/sujuvuus/schemas">
      <ns1:timestamp>
        <ns1:utc>2008-10-09T10:06:49Z</ns1:utc>
        <ns1:localtime>2008-10-09T13:06:49+03:00</ns1:localtime>
      </ns1:timestamp>
      <ns1:laststaticdataupdate>2008-09-30T21:00:00Z</ns1:laststaticdataupdate>
      <ns1:linkdynamicdata>
        <ns1:linkstat>
          <ns1:linkno>0</ns1:linkno>
          <ns1:measurementtime>
            <ns1:utc>2008-10-09T10:06:00Z</ns1:utc>
            <ns1:localtime>2008-10-09T13:06:00+03:00</ns1:localtime>
          </ns1:measurementtime>
          <ns1:journeytimenow>466</ns1:journeytimenow>
          <ns1:midspeednow>54.108</ns1:midspeednow>
          <ns1:fluencyclassnow>5</ns1:fluencyclassnow>
          <ns1:nobs>-1</ns1:nobs>
        </ns1:linkstat>
      </ns1:linkdynamicdata>
    </ns1:TrafficFluencyResponse>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>

```

```
<ns1:linkno>1</ns1:linkno>
<ns1:measurementtime>
  <ns1:utc>2008-10-09T10:06:00Z</ns1:utc>
  <ns1:localtime>2008-10-09T13:06:00+03:00</ns1:localtime>
</ns1:measurementtime>
<ns1:journeytimenow>412</ns1:journeytimenow>
<ns1:midspeednow>63.166</ns1:midspeednow>
<ns1:fluencyclassnow>5</ns1:fluencyclassnow>
<ns1:nobs>-1</ns1:nobs>
</ns1:linkstat>
</ns1:linkdynamicdata>
</ns1:TrafficFluencyResponse>
</SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```

## 4.1 Elements

- **timestamp** timestamp of the latest update of the message, both in UTC time zone and local (Finnish) time zone
- **laststaticdataupdate** timestamp of the latest update of the link static data in UTC time zone
- **linkstat** data for a single link
- **linkno** link identifier
- **measurementtime** timestamp of median calculation for this link, in UTC and Finnish time zones
- **journeytimenow** median of travel times for this link, based on 5 minutes, in seconds
- **midspeednow** a decimal number for average speed in km/h, calculated based on the median travel time
- **fluencyclassnow** index of the fluency class
  - **1** = stationary traffic
  - **2** = queuing traffic
  - **3** = slow traffic
  - **4** = heavy traffic
  - **5** = traffic flowing freely
- **nobs** number of observations that were used to calculate the median journey time. -1 unknown.

## 5 History data for previous day

WSDL: <http://stp.gofore.com/sujuvuus/ws/dayData?wsdl>

The message contains for each link all the median data from the previous day: median travel time, average speed and fluency class. The message contains all the available medians for each link, so there are (at most) 1440 medians per each link.

A batch process updates the messages once each day. The updated message is available at 02:30 Finnish time each night.

Due to the large size of the message, it must not be retrieved more than once per each day.

**Table 7 WSDL**

```
<wsdl:definitions targetNamespace="http://www.gofore.com/sujuvuus/schemas"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/" xmlns:schema="http://www.gofore.com/sujuvuus/schemas"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/">
  <wsdl:types>
    <xsd:schema elementFormDefault="qualified"
targetNamespace="http://www.gofore.com/sujuvuus/schemas"
xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:suj="http://www.gofore.com/sujuvuus/schemas">
      <xsd:element name="DayData">
        <xsd:complexType/>
      </xsd:element>
      <xsd:element name="DayDataResponse">
        <xsd:complexType>
          <xsd:sequence>
            <xsd:element name="timestamp" type="suj:ObstimeType"/>
            <xsd:element name="laststaticdataupdate" type="xsd:dateTime" />
            <xsd:element name="linkdynamicdata">
              <xsd:complexType>
                <xsd:sequence>
                  <xsd:element maxOccurs="unbounded" name="linkstat"
type="suj:LinkStatType"/>
                </xsd:sequence>
              </xsd:complexType>
            </xsd:element>
          </xsd:sequence>
        </xsd:complexType>
      </xsd:element>
      <xsd:complexType name="LinkStatType">
        <xsd:sequence>
          <xsd:element maxOccurs="unbounded" name="d">
            <xsd:complexType>
              <xsd:attribute name="m" type="xsd:nonNegativeInteger"/>
              <xsd:attribute name="tt" type="xsd:float"/>
              <xsd:attribute name="sp" type="xsd:float"/>
              <xsd:attribute name="fc" type="xsd:nonNegativeInteger"/>
              <xsd:attribute name="nobs" type="xsd:integer"/>
            </xsd:complexType>
          </xsd:element>
        </xsd:sequence>
        <xsd:attribute name="linkno" type="xsd:nonNegativeInteger"/>
      </xsd:complexType>
      <xsd:complexType name="ObstimeType">
        <xsd:sequence>
          <xsd:element name="utc" type="xsd:dateTime"/>
          <xsd:element name="localtime" type="xsd:dateTime"/>
        </xsd:sequence>
      </xsd:complexType>
    </xsd:schema>
  </wsdl:types>

```

```

        <xsd:simpleType name="LinkNumberType">
            <xsd:restriction base="xsd:nonNegativeInteger"/>
        </xsd:simpleType>
    </xsd:schema>
</wsdl:types>
<wsdl:message name="DayData">
    <wsdl:part element="schema:DayData" name="DayData"/>
</wsdl:message>
<wsdl:message name="DayDataResponse">
    <wsdl:part element="schema:DayDataResponse" name="DayDataResponse"/>
</wsdl:message>
<wsdl:portType name="DayDataPort">
    <wsdl:operation name="DayData">
        <wsdl:input message="schema:DayData" name="DayData"/>
        <wsdl:output message="schema:DayDataResponse" name="DayDataResponse"/>
    </wsdl:operation>
</wsdl:portType>
<wsdl:binding name="DayDataBinding" type="schema:DayDataPort">
    <soap:binding style="document" transport="http://schemas.xmlsoap.org/soap/http"/>
    <wsdl:operation name="DayData">
        <soap:operation soapAction=""/>
        <wsdl:input name="DayData">
            <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output name="DayDataResponse">
            <soap:body use="literal"/>
        </wsdl:output>
    </wsdl:operation>
</wsdl:binding>
<wsdl:service name="DayDataService">
    <wsdl:port binding="schema:DayDataBinding" name="DayDataPort">
        <soap:address location="http://localhost:8180/sujuvuus-webapp-1.0-SNAPSHOT/ws"/>
    </wsdl:port>
</wsdl:service>
</wsdl:definitions>

```

**Table 8 Example request**

```

<soapenv:Envelope
  xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:sch="http://www.gofore.com/sujuvuus/schemas">
  <soapenv:Header />
  <soapenv:Body>
    <sch:DayData />
  </soapenv:Body>
</soapenv:Envelope>

```

**Table 9 Example response**

```

<SOAP-ENV:Envelope
  xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <SOAP-ENV:Header />
  <SOAP-ENV:Body>
    <DayDataResponse
      xmlns="http://www.gofore.com/sujuvuus/schemas">
      <timestamp>
        <utc>2008-02-06T11:43:00Z</utc>
        <localtime>2008-02-06T13:43:00+02:00</localtime>
      </timestamp>
      <laststaticdataupdate>2008-09-30T21:00:00Z</laststaticdataupdate>
      <linkdynamicdata>
        <linkstat linkno="0">
          <d m="0" tt="577234" sp="5.0" fc="1" nobs="-1" />
          <d m="1" tt="577235" sp="5.1" fc="1" nobs="-1" />
          <d m="2" tt="577236" sp="5.2" fc="1" nobs="-1" />
          <d m="3" tt="577237" sp="5.3" fc="1" nobs="-1" />
          <d m="4" tt="577238" sp="5.4" fc="1" nobs="-1" />
          <d m="5" tt="577239" sp="5.5" fc="1" nobs="-1" />
        </linkstat>
      </linkdynamicdata>
    </DayDataResponse>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>

```

```

<d m="6" tt="577240" sp="5.6" fc="1" nobs="-1" />
<d m="7" tt="577241" sp="5.7" fc="1" nobs="-1" />
<d m="8" tt="577242" sp="5.8" fc="1" nobs="-1" />
<d m="9" tt="577243" sp="5.9" fc="1" nobs="-1" />
. . . . .
<d m="1432" tt="578666" sp="48.2" fc="3" nobs="-1" />
<d m="1433" tt="578667" sp="48.3" fc="3" nobs="-1" />
<d m="1434" tt="578668" sp="48.4" fc="3" nobs="-1" />
<d m="1435" tt="578669" sp="48.5" fc="3" nobs="-1" />
<d m="1436" tt="578670" sp="48.6" fc="3" nobs="-1" />
<d m="1437" tt="578671" sp="48.7" fc="3" nobs="-1" />
<d m="1438" tt="578672" sp="48.8" fc="3" nobs="-1" />
<d m="1439" tt="578673" sp="48.9" fc="3" nobs="-1" />
</linkstat>
<linkstat linkno="1">
  <d m="0" tt="577234" sp="5.0" fc="1" nobs="-1" />
  <d m="1" tt="577235" sp="5.1" fc="1" nobs="-1" />
  <d m="2" tt="577236" sp="5.2" fc="1" nobs="-1" />
  <d m="3" tt="577237" sp="5.3" fc="1" nobs="-1" />
  <d m="4" tt="577238" sp="5.4" fc="1" nobs="-1" />
  <d m="5" tt="577239" sp="5.5" fc="1" nobs="-1" />
  <d m="6" tt="577240" sp="5.6" fc="1" nobs="-1" />
  <d m="7" tt="577241" sp="5.7" fc="1" nobs="-1" />
. . . . .
<d m="1434" tt="578668" sp="48.4" fc="3" nobs="-1" />
<d m="1435" tt="578669" sp="48.5" fc="3" nobs="-1" />
<d m="1436" tt="578670" sp="48.6" fc="3" nobs="-1" />
<d m="1437" tt="578671" sp="48.7" fc="3" nobs="-1" />
<d m="1438" tt="578672" sp="48.8" fc="3" nobs="-1" />
<d m="1439" tt="578673" sp="48.9" fc="3" nobs="-1" />
</linkstat>
</linkdynamicdata>
</DayDataResponse>
</SOAP-ENV:Body>
</SOAP-ENV:Envelope>

```

## 5.1 Elements

- **timestamp** timestamp of the latest update of the message, both in UTC time zone and local (Finnish) time zone
- **laststaticdataupdate** timestamp of the latest update of the link static data in UTC time zone
- **linkstat** data for a single link. Attribute linkno = link identifier
- **d** data for one minute, attributes:
  - **m** index of the minute. 0 = 00:00, 60 = 01:00, 1439 = 23:59
  - **tt** median travel time, in seconds
  - **sp** average speed, km/h
  - **fc** = fluency class, see Virhe: Viitteen lähde ei löydy
- **nobs** number of observations that were used to calculate the median journey time. -1 unknown.

## 6 Average medians for previous day

WSDL: <http://stp.gofore.com/sujuvuus/ws/averageDayData?wsdl>

The message contains average median data calculated for the previous day. Averages are calculated from the data for the last 12 weeks. The message contains averages to the previous weekday. When requested on Wednesday, the message contains averages for the 12 previous Tuesdays.

The message contains average medians for each link, for each minute of the previous weekday. As in "history data for previous day" –message, each link has 1440 rows of data (at most).

A batch process updates the messages once each day. The updated message is available at 03:00 Finnish time each night.

Due to the large size of the message, it must not be retrieved more than once per each day.

**Table 10 WSDL**

```
<wsdl:definitions targetNamespace="http://www.gofore.com/sujuvuus/schemas"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/" xmlns:schema="http://www.gofore.com/sujuvuus/schemas"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/">
  <wsdl:types>
    <xsd:schema elementFormDefault="qualified"
targetNamespace="http://www.gofore.com/sujuvuus/schemas"
xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:suj="http://www.gofore.com/sujuvuus/schemas">
      <xsd:element name="AverageDayData">
        <xsd:complexType/>
      </xsd:element>
      <xsd:element name="AverageDayDataResponse">
        <xsd:complexType>
          <xsd:sequence>
            <xsd:element name="timestamp" type="suj:ObstimeType"/>
            <xsd:element name="laststaticdataupdate" type="xsd:dateTime" />
            <xsd:element name="weekday" type="xsd:string"/>
            <xsd:element name="linkdynamicdata">
              <xsd:complexType>
                <xsd:sequence>
                  <xsd:element maxOccurs="unbounded" name="linkstat"
type="suj:LinkStatType"/>
                </xsd:sequence>
              </xsd:complexType>
            </xsd:element>
          </xsd:sequence>
        </xsd:complexType>
      </xsd:element>
      <xsd:complexType name="ObstimeType">
        <xsd:sequence minOccurs="0">
          <xsd:element minOccurs="0" name="utc" type="xsd:dateTime"/>
          <xsd:element minOccurs="0" name="localtime" type="xsd:dateTime"/>
        </xsd:sequence>
      </xsd:complexType>
      <xsd:complexType name="LinkStatType">
        <xsd:sequence>
          <xsd:element maxOccurs="unbounded" name="d">
            <xsd:complexType>
```

```

        <xsd:attribute name="m" type="xsd:nonNegativeInteger"/>
        <xsd:attribute name="tt" type="xsd:float"/>
        <xsd:attribute name="sp" type="xsd:float"/>
    </xsd:complexType>
</xsd:element>
</xsd:sequence>
<xsd:attribute name="linkno" type="xsd:nonNegativeInteger"/>
</xsd:complexType>
<xsd:simpleType name="LinkNumberType">
    <xsd:restriction base="xsd:nonNegativeInteger"/>
</xsd:simpleType>
</xsd:schema>
</wsdl:types>
<wsdl:message name="AverageDayDataResponse">
    <wsdl:part element="schema:AverageDayDataResponse" name="AverageDayDataResponse"/>
</wsdl:message>
<wsdl:message name="AverageDayData">
    <wsdl:part element="schema:AverageDayData" name="AverageDayData"/>
</wsdl:message>
<wsdl:portType name="AverageDayDataPort">
    <wsdl:operation name="AverageDayData">
        <wsdl:input message="schema:AverageDayData" name="AverageDayData"/>
        <wsdl:output message="schema:AverageDayDataResponse" name="AverageDayDataResponse"/>
    </wsdl:operation>
</wsdl:portType>
<wsdl:binding name="AverageDayDataBinding" type="schema:AverageDayDataPort">
    <soap:binding style="document" transport="http://schemas.xmlsoap.org/soap/http"/>
    <wsdl:operation name="AverageDayData">
        <soap:operation soapAction=""/>
        <wsdl:input name="AverageDayData">
            <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output name="AverageDayDataResponse">
            <soap:body use="literal"/>
        </wsdl:output>
    </wsdl:operation>
</wsdl:binding>
<wsdl:service name="AverageDayDataService">
    <wsdl:port binding="schema:AverageDayDataBinding" name="AverageDayDataPort">
        <soap:address location="http://localhost:8180/sujuvuus-webapp-1.0-SNAPSHOT/ws"/>
    </wsdl:port>
</wsdl:service>
</wsdl:definitions>

```

**Table 11 Example request**

```

<soapenv:Envelope
  xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:sch="http://www.gofore.com/sujuvuus/schemas">
  <soapenv:Header />
  <soapenv:Body>
    <sch:AverageDayData />
  </soapenv:Body>
</soapenv:Envelope>

```

**Table 12 Example response**

```

<SOAP-ENV:Envelope
  xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <SOAP-ENV:Header />
  <SOAP-ENV:Body>
    <AverageDayDataResponse
      xmlns="http://www.gofore.com/sujuvuus/schemas">
      <timestamp>
        <utc>2008-02-06T11:32:12Z</utc>
        <localtime>2008-02-06T13:32:12+02:00</localtime>
      </timestamp>
      <laststaticdataupdate>2008-09-30T21:00:00Z</laststaticdataupdate>
    </AverageDayDataResponse>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>

```

```

<weekday>Tuesday</weekday>
<linkdynamicdata>
  <linkstat linkno="0">
    <d m="0" tt="522182" sp="0.0" />
    <d m="1" tt="521795" sp="0.0" />
    <d m="2" tt="521796" sp="0.0" />
    <d m="3" tt="521797" sp="0.0" />
    <d m="4" tt="521798" sp="0.0" />
    <d m="5" tt="521799" sp="0.0" />
    <d m="6" tt="521800" sp="0.0" />
    <d m="7" tt="521801" sp="0.0" />
    <d m="8" tt="521802" sp="0.0" />
    <d m="9" tt="521803" sp="0.0" />
    <d m="10" tt="521804" sp="0.0" />
    <d m="11" tt="521805" sp="0.0" />
    . . .
    <d m="1431" tt="523225" sp="0.0" />
    <d m="1432" tt="523226" sp="0.0" />
    <d m="1433" tt="523227" sp="0.0" />
    <d m="1434" tt="523228" sp="0.0" />
    <d m="1435" tt="523229" sp="0.0" />
    <d m="1436" tt="523230" sp="0.0" />
    <d m="1437" tt="523231" sp="0.0" />
    <d m="1438" tt="523232" sp="0.0" />
    <d m="1439" tt="523233" sp="0.0" />
  </linkstat>
</linkdynamicdata>
</AverageDayDataResponse>
</SOAP-ENV:Body>
</SOAP-ENV:Envelope>

```

## 6.1 Elements

- **timestamp** timestamp of the latest update of the message, both in UTC time zone and local (Finnish) time zone
- **laststaticdataupdate** timestamp of the latest update of the link static data in UTC time zone
- **weekday** name of the weekday the data is for (in English)
- **linkstat** data for a single link. Attribute linkno = link identifier
- **d** data for one minute, attributes:
  - **m** index of the minute. 0 = 00:00, 60 = 01:00, 1439 = 23:59
  - **tt** average median travel time, in seconds
  - **sp** average speed, km/h

## 7 Current data from LAM stations

WSDL: <http://stp.gofore.com/sujuvuus/ws/lamData?wsdl>

The message contains the latest measurement data from LAM stations.

The message contains, for each LAM station, traffic volume in both directions and average speed in both directions.

The message is updated when we receive new LAM station data from FTA's server. Typically this is once per 5 minutes.

**Table 13 WSDL**

```
<wsdl:definitions targetNamespace="http://www.gofore.com/sujuvuus/schemas"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/" xmlns:schema="http://www.gofore.com/sujuvuus/schemas"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/">
  <wsdl:types>
    <xsd:schema elementFormDefault="qualified"
targetNamespace="http://www.gofore.com/sujuvuus/schemas"
xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:suj="http://www.gofore.com/sujuvuus/schemas">
      <xsd:element name="LamData">
        <xsd:complexType/>
      </xsd:element>
      <xsd:element name="LamDataResponse">
        <xsd:complexType>
          <xsd:sequence>
            <xsd:element name="timestamp" type="suj:ObstimeType"/>
            <xsd:element name="laststaticdataupdate" type="xsd:dateTime" />
            <xsd:element name="lamdynamicdata">
              <xsd:complexType>
                <xsd:sequence>
                  <xsd:element maxOccurs="unbounded" name="lamdata"
type="suj:LamDataType"/>
                </xsd:sequence>
              </xsd:complexType>
            </xsd:element>
          </xsd:sequence>
        </xsd:complexType>
      </xsd:element>
      <xsd:complexType name="LamDataType">
        <xsd:sequence>
          <xsd:element name="lamid" type="suj:LamIdType"/>
          <xsd:element name="measurementtime" type="suj:ObstimeType"/>
          <xsd:element name="trafficvolume1" type="xsd:nonNegativeInteger"/>
          <xsd:element name="trafficvolume2" type="xsd:nonNegativeInteger"/>
          <xsd:element name="averagespeed1">
            <xsd:simpleType>
              <xsd:restriction base="xsd:float">
                <xsd:minExclusive value="0.0"/>
              </xsd:restriction>
            </xsd:simpleType>
          </xsd:element>
          <xsd:element name="averagespeed2">
            <xsd:simpleType>
              <xsd:restriction base="xsd:float">
                <xsd:minInclusive value="0.0"/>
              </xsd:restriction>
            </xsd:simpleType>
          </xsd:element>
        </xsd:sequence>
      </xsd:complexType>
      <xsd:complexType name="ObstimeType">
        <xsd:sequence>
```

```

        <xsd:element name="utc" type="xsd:dateTime"/>
        <xsd:element name="localtime" type="xsd:dateTime"/>
    </xsd:sequence>
</xsd:complexType>
<xsd:simpleType name="LamIdType">
    <xsd:restriction base="xsd:nonNegativeInteger"/>
</xsd:simpleType>
</xsd:schema>
</wsdl:types>
<wsdl:message name="LamData">
    <wsdl:part element="schema:LamData" name="LamData"/>
</wsdl:message>
<wsdl:message name="LamDataResponse">
    <wsdl:part element="schema:LamDataResponse" name="LamDataResponse"/>
</wsdl:message>
<wsdl:portType name="LamDataPort">
    <wsdl:operation name="LamData">
        <wsdl:input message="schema:LamData" name="LamData"/>
        <wsdl:output message="schema:LamDataResponse" name="LamDataResponse"/>
    </wsdl:operation>
</wsdl:portType>
<wsdl:binding name="LamDataBinding" type="schema:LamDataPort">
    <soap:binding style="document" transport="http://schemas.xmlsoap.org/soap/http"/>
    <wsdl:operation name="LamData">
        <soap:operation soapAction=""/>
        <wsdl:input name="LamData">
            <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output name="LamDataResponse">
            <soap:body use="literal"/>
        </wsdl:output>
    </wsdl:operation>
</wsdl:binding>
<wsdl:service name="LamDataService">
    <wsdl:port binding="schema:LamDataBinding" name="LamDataPort">
        <soap:address location="http://localhost:8180/sujuvuus-webapp-1.0-SNAPSHOT/ws"/>
    </wsdl:port>
</wsdl:service>
</wsdl:definitions>

```

**Table 14 Example request**

```

<soapenv:Envelope
  xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:sch="http://www.gofore.com/sujuvuus/schemas">
  <soapenv:Header />
  <soapenv:Body>
    <sch:LamData />
  </soapenv:Body>
</soapenv:Envelope>

```

**Table 15 Example response**

```

<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <SOAP-ENV:Body>
    <ns1:LamDataResponse xmlns="http://www.gofore.com/sujuvuus/schemas"
      xmlns:ns1="http://www.gofore.com/sujuvuus/schemas">
      <ns1:timestamp>
        <ns1:utc>2008-10-09T10:26:01Z</ns1:utc>
        <ns1:localtime>2008-10-09T13:26:01+03:00</ns1:localtime>
      </ns1:timestamp>
      <ns1:laststaticdataupdate>2008-09-30T21:00:00Z</ns1:laststaticdataupdate>
      <ns1:lamdynamicdata>
        <ns1:lamdata>
          <ns1:lamid>460</ns1:lamid>
          <ns1:measurementtime>
            <ns1:utc>2008-10-09T10:21:00Z</ns1:utc>
            <ns1:localtime>2008-10-09T13:21:00+03:00</ns1:localtime>
          </ns1:measurementtime>
        </ns1:lamdata>
      </ns1:lamdynamicdata>
    </ns1:LamDataResponse>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>

```

```
<ns1:trafficvolume1>63</ns1:trafficvolume1>
<ns1:trafficvolume2>0</ns1:trafficvolume2>
<ns1:averagespeed1>63</ns1:averagespeed1>
<ns1:averagespeed2>12</ns1:averagespeed2>
</ns1:lamdata>
<ns1:lamdata>
  <ns1:lamid>521</ns1:lamid>
  <ns1:measurementtime>
    <ns1:utc>2008-10-09T10:13:00Z</ns1:utc>
    <ns1:localtime>2008-10-09T13:13:00+03:00</ns1:localtime>
  </ns1:measurementtime>
  <ns1:trafficvolume1>17</ns1:trafficvolume1>
  <ns1:trafficvolume2>19</ns1:trafficvolume2>
  <ns1:averagespeed1>95</ns1:averagespeed1>
  <ns1:averagespeed2>95</ns1:averagespeed2>
</ns1:lamdata>
</ns1:lamdynamicdata>
</ns1:LamDataResponse>
</SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```

## 7.1 Elements

- **timestamp** timestamp of the latest update of the message, both in UTC time zone and local (Finnish) time zone
- **laststaticdataupdate** timestamp of the latest update of the LAM static data in UTC time zone
- **lamdata** data for one LAM station
- **lamid** LAM station identifier
- **measurementtime** timestamp of median calculation for this link, in UTC and Finnish time zones
- **trafficvolume1** traffic volume, in 5 minutes, to direction 1
- **trafficvolume2** traffic volume, in 5 minutes, to direction 2
- **averagespeed1** average speed to direction 1
- **averagespeed2** average speed to direction 2

## 8 Current free flow speeds

WSDL: <http://stp.gofore.com/sujuvuus/ws/freeFlowSpeeds?wsdl>

The message contains the current free flow speed values for links and LAM stations.

When a link or a LAM station changes from winter speed limits to summer speed limits, or vice versa, the contents of this message change.

A batch process updates the messages once each day. The updated message is available at 03:30 Finnish time each night.

**Table 16 WSDL**

```
<wsdl:definitions targetNamespace="http://www.gofore.com/sujuvuus/schemas"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/" xmlns:schema="http://www.gofore.com/sujuvuus/schemas"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
  <wsdl:types>
    <xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema"
      elementFormDefault="qualified"
      targetNamespace="http://www.gofore.com/sujuvuus/schemas"
      xmlns:suj="http://www.gofore.com/sujuvuus/schemas">
      <xsd:element name="FreeFlowSpeeds">
        <xsd:complexType />
      </xsd:element>
      <xsd:element name="FreeFlowSpeedsResponse">
        <xsd:complexType>
          <xsd:sequence>
            <xsd:element name="timestamp"
              type="suj:ObstimeType" />
            <xsd:element name="lastlamstaticdataupdate" type="xsd:dateTime" />
            <xsd:element name="lastlinkstaticdataupdate" type="xsd:dateTime" />
            <xsd:element name="linkdynamicdata">
              <xsd:complexType>
                <xsd:sequence>
                  <xsd:element name="linkstat" type="suj:LinkStatType"
maxOccurs="unbounded"/>
                </xsd:sequence>
              </xsd:complexType>
            </xsd:element>
            <xsd:element name="lamdynamicdata">
              <xsd:complexType>
                <xsd:sequence>
                  <xsd:element name="lamstat" type="suj:LamStatType"
maxOccurs="unbounded"/>
                </xsd:sequence>
              </xsd:complexType>
            </xsd:element>
          </xsd:sequence>
        </xsd:complexType>
      </xsd:element>
      <xsd:complexType name="LinkStatType">
        <xsd:sequence>
          <xsd:element name="linkno" type="suj:LinkNumberType"/>
          <xsd:element name="freeflowspeed">
            <xsd:simpleType>
              <xsd:restriction base="xsd:float">
                <xsd:minInclusive value="0.0"/>
              </xsd:restriction>
            </xsd:simpleType>
          </xsd:element>
        </xsd:sequence>
      </xsd:complexType>
      <xsd:complexType name="LamStatType">
```

```

        <xsd:sequence>
            <xsd:element name="lamid" type="suj:LamIdType"/>
            <xsd:element name="freeflowspeed1">
                <xsd:simpleType>
                    <xsd:restriction base="xsd:float">
                        <xsd:minInclusive value="0.0"/>
                    </xsd:restriction>
                </xsd:simpleType>
            </xsd:element>
            <xsd:element name="freeflowspeed2">
                <xsd:simpleType>
                    <xsd:restriction base="xsd:float">
                        <xsd:minInclusive value="0.0"/>
                    </xsd:restriction>
                </xsd:simpleType>
            </xsd:element>
        </xsd:sequence>
    </xsd:complexType>
    <xsd:simpleType name="LinkNumberType">
        <xsd:restriction base="xsd:nonNegativeInteger"/>
    </xsd:simpleType>
    <xsd:simpleType name="LamIdType">
        <xsd:restriction base="xsd:nonNegativeInteger"/>
    </xsd:simpleType>
    <xsd:complexType name="ObstimeType">
        <xsd:sequence>
            <xsd:element name="utc" type="xsd:dateTime" />
            <xsd:element name="localtime" type="xsd:dateTime" />
        </xsd:sequence>
    </xsd:complexType>
</xsd:schema>
</wsdl:types>
<wsdl:message name="FreeFlowSpeeds">
    <wsdl:part element="schema:FreeFlowSpeeds" name="FreeFlowSpeeds"/>
</wsdl:message>
<wsdl:message name="FreeFlowSpeedsResponse">
    <wsdl:part element="schema:FreeFlowSpeedsResponse" name="FreeFlowSpeedsResponse"/>
</wsdl:message>
<wsdl:portType name="FreeFlowSpeedsPort">
    <wsdl:operation name="FreeFlowSpeeds">
        <wsdl:input message="schema:FreeFlowSpeeds" name="FreeFlowSpeeds"/>
        <wsdl:output message="schema:FreeFlowSpeedsResponse" name="FreeFlowSpeedsResponse"/>
    </wsdl:operation>
</wsdl:portType>
<wsdl:binding name="FreeFlowSpeedsBinding" type="schema:FreeFlowSpeedsPort">
    <soap:binding style="document" transport="http://schemas.xmlsoap.org/soap/http"/>
    <wsdl:operation name="FreeFlowSpeeds">
        <soap:operation soapAction=""/>
        <wsdl:input name="FreeFlowSpeeds">
            <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output name="FreeFlowSpeedsResponse">
            <soap:body use="literal"/>
        </wsdl:output>
    </wsdl:operation>
</wsdl:binding>
<wsdl:service name="FreeFlowSpeedsService">
    <wsdl:port binding="schema:FreeFlowSpeedsBinding" name="FreeFlowSpeedsPort">
        <soap:address location="http://localhost:8180/sujuvuus-webapp-1.0-
SNAPSHOT/ws/freeFlowSpeeds"/>
    </wsdl:port>
</wsdl:service>
</wsdl:definitions>

```

**Table 17 Example request**

```

<soapenv:Envelope
  xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:sch="http://www.gofore.com/sujuvuus/schemas">
  <soapenv:Header />
  <soapenv:Body>
    <sch:FreeFlowSpeeds />
  </soapenv:Body>
</soapenv:Envelope>

```

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

**Table 18 Example response**

```
<SOAP-ENV:Envelope
  xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <SOAP-ENV:Body>
    <ns1:FreeFlowSpeedsResponse
      xmlns="http://www.gofore.com/sujuvuus/schemas"
      xmlns:ns1="http://www.gofore.com/sujuvuus/schemas">
      <ns1:timestamp>
        <ns1:utc>2008-02-19T14:45:41Z</ns1:utc>
        <ns1:localtime>2008-02-19T16:45:41+02:00</ns1:localtime>
      </ns1:timestamp>
      <ns1:lastlamstaticdataupdate>2008-09-30T21:00:00Z</ns1:lastlamstaticdataupdate>
      <ns1:lastlinkstaticdataupdate>2008-09-30T21:00:00Z</ns1:lastlinkstaticdataupdate>
      <ns1:linkdynamicdata>
        <ns1:linkstat>
          <ns1:linkno>418302</ns1:linkno>
          <ns1:freeflowspeed>110</ns1:freeflowspeed>
        </ns1:linkstat>
        <ns1:linkstat>
          <ns1:linkno>418402</ns1:linkno>
          <ns1:freeflowspeed>110</ns1:freeflowspeed>
        </ns1:linkstat>
      </ns1:linkdynamicdata>
      <ns1:lamdynamicdata>
        <ns1:lamstat>
          <ns1:lamid>161</ns1:lamid>
          <ns1:freeflowspeed1>88</ns1:freeflowspeed1>
          <ns1:freeflowspeed2>100</ns1:freeflowspeed2>
        </ns1:lamstat>
        <ns1:lamstat>
          <ns1:lamid>162</ns1:lamid>
          <ns1:freeflowspeed1>77.125</ns1:freeflowspeed1>
          <ns1:freeflowspeed2>100</ns1:freeflowspeed2>
        </ns1:lamstat>
        <ns1:lamstat>
          <ns1:lamid>163</ns1:lamid>
          <ns1:freeflowspeed1>110</ns1:freeflowspeed1>
          <ns1:freeflowspeed2>100</ns1:freeflowspeed2>
        </ns1:lamstat>
      </ns1:lamdynamicdata>
    </ns1:FreeFlowSpeedsResponse>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```

## 8.1 Elements

- **timestamp** timestamp of the latest update of the message, both in UTC time zone and local (Finnish) time zone
- **lastlamstaticdataupdate** timestamp of the latest update of the LAM static data in UTC time zone
- **lastlinkstaticdataupdate** timestamp of the latest update of the link static data in UTC time zone
- **linkdynamicdata** free flow speeds for links
- **linkstat** data for one link
- **linkno** link identifier
- **freeflowspeed** free flow speed for the link

- 
- **lamdynamicdata** free flow speeds for LAM stations
  - **lamstat** data for one LAM station
  - **lamid** LAM station identifier
  - **freeflowspeed1** free flow speed to direction 1
  - **freeflowspeed2** free flow speed to direction 2

## 9 Current road weather station data

WSDL: <http://stp.gofore.com/sujuvuus/ws/roadWeather?wsdl>

The message contains the latest measurement data from road weather stations.

The message contains, for each road weather station, the sensor values provided by the station.

The message is updated when we receive new road weather station data from FTA's server. Typically this is once per 5 minutes.

**Table 19 WSDL**

```
<?xml version="1.0" encoding="UTF-8" standalone="no"?>
<wsdl:definitions xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
  xmlns:suj="http://www.gofore.com/sujuvuus/schemas"
  xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema" name="roadweather"
  targetNamespace="http://www.gofore.com/sujuvuus/schemas">
  <wsdl:types>
    <xsd:schema
      elementFormDefault="qualified"
      targetNamespace="http://www.gofore.com/sujuvuus/schemas">
      <xsd:element name="RoadWeather">
        <xsd:complexType/>
      </xsd:element>
      <xsd:element name="RoadWeatherResponse">
        <xsd:complexType>
          <xsd:sequence>
            <xsd:element name="timestamp" type="suj:ObstimeType" />
            <xsd:element name="laststaticdataupdate"
              type="xsd:dateTime" />
            <xsd:element name="roadweatherdata">
              <xsd:complexType>
                <xsd:sequence>
                  <xsd:element minOccurs="0" maxOccurs="unbounded" name="roadweather"
                    type="suj:RoadWeatherType" />
                </xsd:sequence>
              </xsd:complexType>
            </xsd:element>
          </xsd:sequence>
        </xsd:complexType>
      </xsd:element>
      <xsd:complexType name="RoadWeatherType">
        <xsd:sequence>
          <xsd:element name="stationid" type="suj:StationIdType" />
          <xsd:element name="measurementtime" type="suj:ObstimeType" />
          <xsd:element name="airtemperature1" type="suj:SensorValueType" minOccurs="0" />
          <xsd:element name="airtemperature1change" type="suj:SensorValueType" minOccurs="0" />
          <xsd:element name="roadsurfacetemperature1" type="suj:SensorValueType" minOccurs="0" />
          <xsd:element name="roadsurfacetemperature1change" type="suj:SensorValueType" minOccurs="0" />
          <xsd:element name="roadsurfacetemperature2" type="suj:SensorValueType" minOccurs="0" />
          <xsd:element name="roadsurfacetemperature2change" type="suj:SensorValueType" minOccurs="0" />
          <xsd:element name="groundtemperature1" type="suj:SensorValueType" minOccurs="0" />
          <xsd:element name="groundtemperature2" type="suj:SensorValueType" minOccurs="0" />
          <xsd:element name="dewpoint" type="suj:SensorValueType" minOccurs="0" />
          <xsd:element name="freezingpoint1" type="suj:SensorValueType" minOccurs="0" />
          <xsd:element name="freezingpoint2" type="suj:SensorValueType" minOccurs="0" />
          <xsd:element name="averagewindspeed" type="suj:SensorValueType" minOccurs="0" />
          <xsd:element name="maxwindspeed" type="suj:SensorValueType" minOccurs="0" />
          <xsd:element name="winddirection" type="suj:SensorValueType" minOccurs="0" />
        </xsd:sequence>
      </xsd:complexType>
    </xsd:schema>
  </wsdl:types>
</wsdl:definitions>
```

```

<xsd:element name="humidity" type="subj:SensorValueType" minOccurs="0" />
<xsd:element name="precipitation" type="subj:SensorValueType" minOccurs="0" />
<xsd:element name="precipitationintensity" type="subj:SensorValueType" minOccurs="0" />
<xsd:element name="precipitationsum" type="subj:SensorValueType" minOccurs="0" />
<xsd:element name="precipitationontype" type="subj:SensorValueType" minOccurs="0" />
<xsd:element name="visibility" type="subj:SensorValueType" minOccurs="0" />
<xsd:element name="roadsurfaceconditions1" type="subj:SensorValueType" minOccurs="0" />
<xsd:element name="roadsurfaceconditions2" type="subj:SensorValueType" minOccurs="0" />
<xsd:element name="warning1" type="subj:SensorValueType" minOccurs="0" />
<xsd:element name="warning2" type="subj:SensorValueType" minOccurs="0" />
<xsd:element name="conductivity1" type="subj:SensorValueType" minOccurs="0" />
<xsd:element name="conductivity2" type="subj:SensorValueType" minOccurs="0" />
<xsd:element name="surfacesignal1" type="subj:SensorValueType" minOccurs="0" />
<xsd:element name="surfacesignal2" type="subj:SensorValueType" minOccurs="0" />
<xsd:element name="icefrequency1" type="subj:SensorValueType" minOccurs="0" />
<xsd:element name="icefrequency2" type="subj:SensorValueType" minOccurs="0" />
<xsd:element name="roaddepointdifference" type="subj:SensorValueType" minOccurs="0" />
<xsd:element name="surfacemoisture1" type="subj:SensorValueType" minOccurs="0" />
<xsd:element name="surfacemoisture2" type="subj:SensorValueType" minOccurs="0" />
<xsd:element name="saltamount1" type="subj:SensorValueType" minOccurs="0" />
<xsd:element name="saltamount2" type="subj:SensorValueType" minOccurs="0" />
<xsd:element name="saltconcentration1" type="subj:SensorValueType" minOccurs="0" />
<xsd:element name="saltconcentration2" type="subj:SensorValueType" minOccurs="0" />
<xsd:element name="safetytemperature1" type="subj:SensorValueType" minOccurs="0" />
<xsd:element name="safetytemperature2" type="subj:SensorValueType" minOccurs="0" />
<xsd:element name="visibilitymeters" type="subj:SensorValueType" minOccurs="0" />
<xsd:element name="sunup" type="subj:SensorValueType" minOccurs="0" />
<xsd:element name="bright" type="subj:SensorValueType" minOccurs="0" />
<xsd:element name="fiberresponsesmall1" type="subj:SensorValueType" minOccurs="0" />
<xsd:element name="fiberresponsesmall2" type="subj:SensorValueType" minOccurs="0" />
<xsd:element name="fiberresponsebig1" type="subj:SensorValueType" minOccurs="0" />
<xsd:element name="fiberresponsebig2" type="subj:SensorValueType" minOccurs="0" />
<xsd:element name="airtemperature3" type="subj:SensorValueType" minOccurs="0" />
<xsd:element name="roadsurfacetemperature3" type="subj:SensorValueType" minOccurs="0" />
<xsd:element name="humidity3" type="subj:SensorValueType" minOccurs="0" />
<xsd:element name="roadsurfacestate3" type="subj:SensorValueType" minOccurs="0" />
<xsd:element name="warning3" type="subj:SensorValueType" minOccurs="0" />
<xsd:element name="friction3" type="subj:SensorValueType" minOccurs="0" />
<xsd:element name="wateramount3" type="subj:SensorValueType" minOccurs="0" />
<xsd:element name="snowamount3" type="subj:SensorValueType" minOccurs="0" />
<xsd:element name="iceamount3" type="subj:SensorValueType" minOccurs="0" />
<xsd:element name="friction3number" type="subj:SensorValueType" minOccurs="0" />
</xsd:sequence>
</xsd:complexType>
<xsd:simpleType name="StationIdType">
  <xsd:restriction base="xsd:nonNegativeInteger" />
</xsd:simpleType>
<xsd:simpleType name="SensorValueType">
  <xsd:restriction base="xsd:decimal" />
</xsd:simpleType>
<xsd:complexType name="ObstimeType">
  <xsd:sequence>
    <xsd:element name="utc" type="xsd:dateTime" />
    <xsd:element name="localtime" type="xsd:dateTime" />
  </xsd:sequence>
</xsd:complexType>
</xsd:schema>
</wsdl:types>
<wsdl:message name="RoadWeatherRequest">
  <wsdl:part element="subj:RoadWeather" name="RoadWeather" />
</wsdl:message>
<wsdl:message name="RoadWeatherResponse">
  <wsdl:part element="subj:RoadWeatherResponse"
    name="RoadWeatherReponse" />
</wsdl:message>
<wsdl:portType name="RoadWeatherPort">
  <wsdl:operation name="RoadWeather">
    <wsdl:input message="subj:RoadWeatherRequest" />
    <wsdl:output message="subj:RoadWeatherResponse" />
  </wsdl:operation>
</wsdl:portType>
<wsdl:binding name="RoadWeatherBinding" type="subj:RoadWeatherPort">
  <soap:binding style="document"

```

```

transport="http://schemas.xmlsoap.org/soap/http" />
<wsdl:operation name="RoadWeather">
  <soap:operation
    soapAction="http://www.gofore.com/sujuvuus/schemas/NewOperation" />
  <wsdl:input>
    <soap:body use="literal" />
  </wsdl:input>
  <wsdl:output>
    <soap:body use="literal" />
  </wsdl:output>
</wsdl:operation>
</wsdl:binding>
<wsdl:service name="RoadWeatherService">
  <wsdl:port binding="suj:RoadWeatherBinding"
    name="RoadWeatherPort">
    <soap:address location="http://stp.gofore.com/sujuvuus/ws/" />
  </wsdl:port>
</wsdl:service>
</wsdl:definitions>

```

**Table 20 Example request**

```

<soapenv:Envelope
  xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:sch="http://www.gofore.com/sujuvuus/schemas">
  <soapenv:Header />
  <soapenv:Body>
    <sch:RoadWeather />
  </soapenv:Body>
</soapenv:Envelope>

```

**Table 21 Example response**

```

<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <SOAP-ENV:Header/>
  <SOAP-ENV:Body>
    <RoadWeatherResponse xmlns="http://www.gofore.com/sujuvuus/schemas">
      <timestamp>
        <utc>2010-07-28T11:42:22Z</utc>
        <localtime>2010-07-28T14:42:22+03:00</localtime>
      </timestamp>
      <laststaticdataupdate>2010-06-18T11:16:15Z</laststaticdataupdate>
      <roadweatherdata>
        <roadweather>
          <stationid>1014</stationid>
          <measurementtime>
            <utc>2010-07-28T11:03:00Z</utc>
            <localtime>2010-07-28T14:03:00+03:00</localtime>
          </measurementtime>
          <airtemperature1>28.3</airtemperature1>
          <airtemperature1change>2.1</airtemperature1change>
          <roadsurfacetemperature1>47.0</roadsurfacetemperature1>
          <roadsurfacetemperature1change>2.3</roadsurfacetemperature1change>
          <roadsurfacetemperature2>45.5</roadsurfacetemperature2>
          <roadsurfacetemperature2change>2.1</roadsurfacetemperature2change>
          <groundtemperature1>36.2</groundtemperature1>
          <groundtemperature2>35.2</groundtemperature2>
          <dewpoint>20.0</dewpoint>
          <freezingpoint1>0.0</freezingpoint1>
          <freezingpoint2>0.0</freezingpoint2>
          <averagewindspeed>1.2</averagewindspeed>
          <maxwindspeed>3.3</maxwindspeed>
          <winddirection>328.0</winddirection>
          <humidity>60.0</humidity>
          <precipitation>0.0</precipitation>
          <precipitationintensity>0.0</precipitationintensity>
          <precipitationsum>0.4</precipitationsum>
          <precipitationtype>7.0</precipitationtype>
          <visibility>2.0</visibility>
        </roadweather>
      </roadweatherdata>
    </RoadWeatherResponse>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>

```

```

<roadsurfaceconditions1>1.0</roadsurfaceconditions1>
<roadsurfaceconditions2>1.0</roadsurfaceconditions2>
<warning1>0.0</warning1>
<warning2>0.0</warning2>
<conductivity1>0.0</conductivity1>
<conductivity2>0.0</conductivity2>
<surfacesignal1>0.0</surfacesignal1>
<surfacesignal2>0.0</surfacesignal2>
<icefrequency1>368.0</icefrequency1>
<icefrequency2>375.0</icefrequency2>
<roaddewpointdifference>27.0</roaddewpointdifference>
<surfacemoisture1>0.0</surfacemoisture1>
<surfacemoisture2>0.0</surfacemoisture2>
<saltamount1>0.0</saltamount1>
<saltamount2>0.0</saltamount2>
<saltconcentration1>0.0</saltconcentration1>
<saltconcentration2>0.0</saltconcentration2>
<safetytemperature1>0.0</safetytemperature1>
<safetytemperature2>0.0</safetytemperature2>
<visibilitymeters>2000.0</visibilitymeters>
<sunup>1.0</sunup>
<bright>1.0</bright>
<fiberresponsesmall1>0.0</fiberresponsesmall1>
<fiberresponsesmall2>0.0</fiberresponsesmall2>
<fiberresponsebig1>0.0</fiberresponsebig1>
<fiberresponsebig2>0.0</fiberresponsebig2>
</roadweather>
<roadweather>
  <stationid>1049</stationid>
  <measurementtime>
    <utc>2010-07-28T11:11:00Z</utc>
    <localtime>2010-07-28T14:11:00+03:00</localtime>
  </measurementtime>
  <airtemperature1>31.4</airtemperature1>
  <airtemperature1change>-0.2</airtemperature1change>
  <roadsurfacetemperature1>48.2</roadsurfacetemperature1>
  <roadsurfacetemperature1change>-0.9</roadsurfacetemperature1change>
  <groundtemperature1>41.8</groundtemperature1>
  <dewpoint>16.4</dewpoint>
  <freezingpoint1>0.0</freezingpoint1>
  <humidity>40.0</humidity>
  <precipitation>0.0</precipitation>
  <precipitationintensity>0.0</precipitationintensity>
  <precipitationsum>0.0</precipitationsum>
  <precipitationtype>7.0</precipitationtype>
  <visibility>2.0</visibility>
  <roadsurfaceconditions1>1.0</roadsurfaceconditions1>
  <warning1>0.0</warning1>
  <conductivity1>0.0</conductivity1>
  <surfacesignal1>0.0</surfacesignal1>
  <icefrequency1>423.0</icefrequency1>
  <roaddewpointdifference>31.8</roaddewpointdifference>
  <surfacemoisture1>0.0</surfacemoisture1>
  <saltamount1>0.0</saltamount1>
  <saltconcentration1>0.0</saltconcentration1>
  <safetytemperature1>0.0</safetytemperature1>
  <visibilitymeters>2000.0</visibilitymeters>
  <sunup>1.0</sunup>
  <bright>1.0</bright>
  <fiberresponsesmall1>0.0</fiberresponsesmall1>
  <fiberresponsebig1>0.0</fiberresponsebig1>
</roadweather>
</roadweatherdata>
</RoadWeatherResponse>
</SOAP-ENV:Body>
</SOAP-ENV:Envelope>

```

## 9.1 Elements

- **timestamp** timestamp of the latest update of the message, both in UTC time zone and local (Finnish) time zone
- **laststaticdataupdate** timestamp of the latest update of the road weather station static data in UTC time zone
- **roadweather** data for one road weather station
- **stationid** station identifier
- **measurementtime** timestamp of median calculation for this link, in UTC and Finnish time zones
- **airtemperature1** sensor 1 (ILMA)
- **airtemperature1change** sensor 2 (ILMA\_DERIVAATTA)
- **roadsurfacetemperature1** sensor 3 (TIE\_1)
- **roadsurfacetemperature1change** sensor 4 (TIE\_1\_DERIVAATTA)
- **roadsurfacetemperature2** sensor 5 (TIE\_2)
- **roadsurfacetemperature2change** sensor 6 (TIE\_2\_DERIVAATTA)
- **groundtemperature1** sensor 7 (MAA\_1)
- **groundtemperature2** sensor 8 (MAA\_2)
- **dewpoint** sensor 9 (KASTEPISTE)
- **freezingpoint1** sensor 10 (JAATYMISSPISSTE\_1)
- **freezingpoint2** sensor 11 (JAATYMISSPISSTE\_2)
- **averagewindspeed** sensor 16 (KESKITUULI)
- **maxwindspeed** sensor 17 (MAKSIMITUULI)
- **winddirection** sensor 18 (TUULENSUUNTA)
- **humidity** sensor 21 (ILMAN\_KOSTEUS)
- **precipitation** sensor 22 (SADE)
- **precipitationintensity** sensor 23 (SADE\_INTENSITEETTI)
- **precipitationsum** sensor 24 (SADESUMMA)
- **precipitationtype** sensor 25 (SATEEN\_OLOMUOTO\_FD12P\_PWD11)
- **visibility** sensor 26 (NAKYVYYS)
- **roadsurfaceconditions1** sensor 27 (KELI\_1)
- **roadsurfaceconditions2** sensor 28 (KELI\_2)
- **warning1** sensor 29 (VAROITUS\_1)
- **warning2** sensor 30 (VAROITUS\_2)
- **conductivity1** sensor 31 (JOHTAVUUS\_1)
- **conductivity2** sensor 32 (JOHTAVUUS\_2)
- **surfacesignal1** sensor 33 (PINTASIGNAALI\_1)
- **surfacesignal2** sensor 34 (PINTASIGNAALI\_2)
- **icefrequency1** sensor 35 (JAATAAJUUS\_1)
- **icefrequency2** sensor 36 (JAATAAJUUS\_2)
- **roaddewpointdifference** sensor 49 (KASTEPISTE\_ERO\_TIE)
- **surfacemoisture1** sensor 50 (KOSTEUDEN\_MAARA\_1)
- **surfacemoisture2** sensor 51 (KOSTEUDEN\_MAARA\_2)
- **saltamount1** sensor 52 (SUOLAN\_MAARA\_1)
- **saltamount2** sensor 53 (SUOLAN\_MAARA\_2)

- **saltconcentration1** sensor 54 (SUOLAN\_VAKEVYYS\_1)
- **saltconcentration2** sensor 55 (SUOLAN\_VAKEVYYS\_2)
- **safetytemperature1** sensor 56 (TURVALLISUUSLAMPO\_1)
- **safetytemperature2** sensor 57 (TURVALLISUUSLAMPO\_2)
- **visibilitymeters** sensor 58 (NAKYVYYS\_METRIA)
- **sunup** sensor 98 (AURINKOUP)
- **bright** sensor 99 (VALOISAA)
- **fiberresponsesmall1** sensor 130 (KUITUVASTE\_PIENI\_1)
- **fiberresponsesmall2** sensor 131 (KUITUVASTE\_PIENI\_2)
- **fiberresponsebig1** sensor 132 (KUITUVASTE\_SUURI\_1)
- **fiberresponsebig2** sensor 133 (KUITUVASTE\_SUURI\_2)
- **airtemperature3** sensor 171 (ILMA3)
- **roadsurfacetemperature3** sensor 172 (TIE3)
- **humidity3** sensor 173 (ILMAN\_KOSTEUS3)
- **roadsurfacestate3** sensor 174 (TIENPINNAN\_TILA3)
- **warning3** sensor 175 (VAROITUS3)
- **friction3** sensor 176 (KITKA3)
- **wateramount3** sensor 177 (VEDEN\_MAARA3)
- **snowamount3** sensor 178 (LUMEN\_MAARA3)
- **iceamount3** sensor 179 (JAAN\_MAARA3)
- **friction3number** sensor 181 (KITKA3\_LUKU)

## 10 Status of road stations

WSDL: <http://stp.gofore.com/sujuvuus/ws/roadStationStatuses?wsdl>

The message contains station data collection and sensor calculation status information for all road station types. In addition, the message contains road station state status for all station types except the LAM type.

The message is updated when new data arrives from FTA's servers. Typically this occurs once per five minutes.

**Table 22 WSDL**

```
<?xml version="1.0" encoding="UTF-8" standalone="no"?>
<wsdl:definitions xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
  xmlns:suj="http://www.gofore.com/sujuvuus/schemas"
  xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema" name="RoadStationStatuses"
  targetNamespace="http://www.gofore.com/sujuvuus/schemas">
  <wsdl:types>
    <xsd:schema
      elementFormDefault="qualified"
      targetNamespace="http://www.gofore.com/sujuvuus/schemas">
      <xsd:element name="RoadStationStatuses">
        <xsd:complexType>
          </xsd:complexType>
        </xsd:element>
        <xsd:element name="RoadStationStatusesResponse">
          <xsd:complexType>
            <xsd:sequence>
              <xsd:element name="timestamp" type="suj:ObstimeType" />
              <xsd:element name="roadstationstatusdata">
                <xsd:complexType>
                  <xsd:sequence>
                    <xsd:element minOccurs="0" maxOccurs="unbounded"
                      name="roadstation"
                      type="suj:RoadStationStatusesType" />
                  </xsd:sequence>
                </xsd:complexType>
              </xsd:element>
            </xsd:sequence>
          </xsd:complexType>
        </xsd:element>
        <xsd:complexType name="RoadStationStatusesType">
          <xsd:sequence>
            <xsd:element name="stationid" type="suj:RoadStationIdType" />
            <xsd:element name="roadstationstatus"
              type="suj:RoadStationStatusType" minOccurs="0" maxOccurs="1" />
            <xsd:element name="stationdatacollectionstatus"
              type="suj:StationDataCollectionStatusType" minOccurs="1" maxOccurs="1"/>
          </xsd:sequence>
        </xsd:complexType>
        <xsd:complexType name="RoadStationStatusType">
          <xsd:sequence>
            <xsd:element name="updated" type="suj:ObstimeType" />
            <xsd:element name="conditioncode"
              type="suj:RoadStationStatusCodeType" />
          </xsd:sequence>
        </xsd:complexType>
        <xsd:complexType name="StationDataCollectionStatusType">
          <xsd:sequence>
            <xsd:element name="updated" type="suj:ObstimeType" />
            <xsd:element name="statuscode"
              type="suj:DataCollectionStatusType" />
          </xsd:sequence>
        </xsd:complexType>
      </xsd:schema>
    </wsdl:types>
  </wsdl:definitions>
```

```

    </xsd:sequence>
  </xsd:complexType>
  <xsd:simpleType name="RoadStationStatusCodeType">
    <xsd:restriction base="xsd:nonNegativeInteger" />
  </xsd:simpleType>
  <xsd:simpleType name="DataCollectionStatusType">
    <xsd:restriction base="xsd:integer" />
  </xsd:simpleType>
  <xsd:simpleType name="RoadStationIdType">
    <xsd:restriction base="xsd:nonNegativeInteger" />
  </xsd:simpleType>
  <xsd:complexType name="ObstimeType">
    <xsd:sequence>
      <xsd:element name="utc" type="xsd:dateTime" />
      <xsd:element name="localtime" type="xsd:dateTime" />
    </xsd:sequence>
  </xsd:complexType>
</xsd:schema>
</wsdl:types>
<wsdl:message name="RoadStationStatusesRequest">
  <wsdl:part element="sujuvuus:RoadStationStatuses" name="RoadStationStatuses" />
</wsdl:message>
<wsdl:message name="RoadStationStatusesResponse">
  <wsdl:part element="sujuvuus:RoadStationStatusesResponse"
    name="RoadStationStatusesResponse" />
</wsdl:message>
<wsdl:portType name="RoadStationStatusesPort">
  <wsdl:operation name="RoadStationStatuses">
    <wsdl:input message="sujuvuus:RoadStationStatusesRequest" />
    <wsdl:output message="sujuvuus:RoadStationStatusesResponse" />
  </wsdl:operation>
</wsdl:portType>
<wsdl:binding name="RoadStationStatusesBinding"
  type="sujuvuus:RoadStationStatusesPort">
  <soap:binding style="document"
    transport="http://schemas.xmlsoap.org/soap/http" />
  <wsdl:operation name="RoadStationStatuses">
    <soap:operation
      soapAction="http://www.gofore.com/sujuvuus/schemas/NewOperation" />
    <wsdl:input>
      <soap:body use="literal" />
    </wsdl:input>
    <wsdl:output>
      <soap:body use="literal" />
    </wsdl:output>
  </wsdl:operation>
</wsdl:binding>
<wsdl:service name="RoadStationStatusesService">
  <wsdl:port binding="sujuvuus:RoadStationStatusesBinding"
    name="RoadStationStatusesPort">
    <soap:address location="http://www.example.org/" />
  </wsdl:port>
</wsdl:service>
</wsdl:definitions>

```

**Table 23 Example request**

```

<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:sch="http://www.gofore.com/sujuvuus/schemas">
  <soapenv:Header/>
  <soapenv:Body>
    <sch:RoadStationStatuses/>
  </soapenv:Body>
</soapenv:Envelope>

```

**Table 24 Example response**

```

<SOAP-ENV:Envelope
  xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <SOAP-ENV:Header/>
  <SOAP-ENV:Body>
    <RoadStationStatusesResponse xmlns="http://www.gofore.com/sujuvuus/schemas">
      <timestamp>
        <utc>2010-07-22T06:40:18Z</utc>
        <localtime>2010-07-22T09:40:18+03:00</localtime>
      </timestamp>
      <roadstationstatusedata>
        <roadstation>
          <stationid>23202</stationid>
          <roadstationstatus/>
          <stationdatacollectionstatus>
            <updated>
              <utc>2010-07-22T05:57:00Z</utc>
              <localtime>2010-07-22T08:57:00+03:00</localtime>
            </updated>
            <statuscode>-1</statuscode>
          </stationdatacollectionstatus>
        </roadstation>
        <roadstation>
          <stationid>1001</stationid>
          <roadstationstatus>
            <updated>
              <utc>2010-06-21T04:16:00Z</utc>
              <localtime>2010-06-21T07:16:00+03:00</localtime>
            </updated>
            <conditioncode>0</conditioncode>
          </roadstationstatus>
          <stationdatacollectionstatus>
            <updated>
              <utc>2010-07-22T05:51:00Z</utc>
              <localtime>2010-07-22T08:51:00+03:00</localtime>
            </updated>
            <statuscode>1</statuscode>
          </stationdatacollectionstatus>
        </roadstation>
      </roadstationstatusedata>
    </RoadStationStatusesResponse>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>

```

## 10.1 Elements

- **timestamp** timestamp of the latest update of the message, both in UTC time zone and local (Finnish) time zone
- **roadstationstatusedata** status of road stations
- **roadstation** collection of status information of a single road station
- **stationid** identifier of a road station
- **roadstationstatus** state status of a road station
- **conditioncode** condition code of a road station
  - **0** = OK
  - **1** = Problems or suspected malfunction
  - **2** = confirmed malfunction
  - **3** = confirmed malfunction, repair not planned in near future
  - **4** = repair request sent
  - **5** = repair work done
  - **6** = repair work interrupted
- **stationdatacollectionstatus** station data collection and sensor calculation status
- **statuscode** status code of station data collection and sensor calculation
  - **-1** = station data is not collected
  - **0** = station data collection and sensor calculation successful
  - **1** = problems in sensor calculation (sensor value not received)
  - **2** = data collection failed due to missing communication device
  - **3** = no connection to station
  - **4** = line busy
  - **5** = connection successful, but not data available
- **updated** timestamp of the latest update of this station state

## 11 Camera presets

WSDL: <http://stp.gofore.com/sujuvuus/ws/cameraPresets?wsdl>

The message contains all public camera presets and the baseurl where you can find the camera pictures. Camera picture URL is constructed from baseurl, presetid and .jpg file extension.

For example: <http://stp2.gofore.com/weathercam/C0150101.jpg>

The camera presets are updated from FTA's server every two minutes. The message itself doesn't change very often. The camera pictures are usually updated every 10-20 minutes.

**Table 25 WSDL**

```
<wsdl:definitions name="CameraPresets" targetNamespace="http://www.gofore.com/sujuvuus/schemas"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
xmlns:suj="http://www.gofore.com/sujuvuus/schemas" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <wsdl:types>
    <xsd:schema elementFormDefault="qualified"
targetNamespace="http://www.gofore.com/sujuvuus/schemas">
      <xsd:element name="CameraPresets">
        <xsd:complexType/>
      </xsd:element>
      <xsd:element name="CameraPresetsResponse">
        <xsd:complexType>
          <xsd:sequence>
            <xsd:element name="timestamp" type="suj:ObstimeType"/>
            <xsd:element name="camerapresetsdata">
              <xsd:complexType>
                <xsd:sequence>
                  <xsd:element maxOccurs="unbounded" name="camerapreset"
type="suj:CameraPresetsType"/>
                </xsd:sequence>
              </xsd:complexType>
            </xsd:element>
          </xsd:sequence>
        </xsd:complexType>
      </xsd:element>
      <xsd:complexType name="CameraPresetsType">
        <xsd:sequence>
          <xsd:element name="cameraid" type="suj:CameraIdType"/>
          <xsd:element name="presetid" type="suj:PresetIdType"/>
          <xsd:element name="roadstationid" type="suj:RoadStationIdType"/>
          <xsd:element name="public" type="xsd:boolean"/>
          <xsd:element name="internallypublic" type="xsd:boolean"/>
          <xsd:element name="presetname1" type="xsd:string"/>
          <xsd:element name="presetname2" type="xsd:string"/>
          <xsd:element name="nearestroadstationid" type="suj:RoadStationIdType"
minOccurs="0"/>
          <xsd:element name="piclastmodified" type="suj:ObstimeType" minOccurs="0"/>
        </xsd:sequence>
      </xsd:complexType>
      <xsd:simpleType name="CameraIdType">
        <xsd:restriction base="xsd:string"/>
      </xsd:simpleType>
      <xsd:simpleType name="PresetIdType">
        <xsd:restriction base="xsd:string"/>
      </xsd:simpleType>
      <xsd:simpleType name="RoadStationIdType">
        <xsd:restriction base="xsd:nonNegativeInteger"/>
      </xsd:simpleType>
      <xsd:complexType name="ObstimeType">
```

```

        <xsd:sequence>
            <xsd:element name="utc" type="xsd:dateTime"/>
            <xsd:element name="localtime" type="xsd:dateTime"/>
        </xsd:sequence>
    </xsd:complexType>
</xsd:schema>
</wsdl:types>
<wsdl:message name="CameraPresetsRequest">
    <wsdl:part element="subj:CameraPresets" name="CameraPresets"/>
</wsdl:message>
<wsdl:message name="CameraPresetsResponse">
    <wsdl:part element="subj:CameraPresetsResponse" name="CameraPresetsReponse"/>
</wsdl:message>
<wsdl:portType name="CameraPresetsPort">
    <wsdl:operation name="CameraPresets">
        <wsdl:input message="subj:CameraPresetsRequest"/>
        <wsdl:output message="subj:CameraPresetsResponse"/>
    </wsdl:operation>
</wsdl:portType>
<wsdl:binding name="CameraPresetsBinding" type="subj:CameraPresetsPort">
    <soap:binding style="document" transport="http://schemas.xmlsoap.org/soap/http"/>
    <wsdl:operation name="CameraPresets">
        <soap:operation soapAction="http://www.gofore.com/sujuvuus/schemas/NewOperation"/>
        <wsdl:input>
            <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal"/>
        </wsdl:output>
    </wsdl:operation>
</wsdl:binding>
<wsdl:service name="CameraPresetsService">
    <wsdl:port binding="subj:CameraPresetsBinding" name="CameraPresetsPort">
        <soap:address location="http://www.example.org/">
    </wsdl:port>
</wsdl:service>
</wsdl:definitions>

```

**Table 26 Example request**

```

<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:sch="http://www.gofore.com/sujuvuus/schemas">
    <soapenv:Header/>
    <soapenv:Body>
        <sch:CameraPresets/>
    </soapenv:Body>
</soapenv:Envelope>

```

**Table 27 Example response**

```
<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <SOAP-ENV:Header/>
  <SOAP-ENV:Body>
    <CameraPresetsResponse xmlns="http://www.gofore.com/sujuvuus/schemas">
      <timestamp>
        <utc>2011-05-03T13:36:00Z</utc>
        <localtime>2011-05-03T16:36:00+03:00</localtime>
      </timestamp>
      <baseurl>http://dt-front/weathercam/</baseurl>
      <camerapresetsdata>
        <camerapreset>
          <cameraid>C01501</cameraid>
          <presetid>C0150101</presetid>
          <roadstationid>1501</roadstationid>
          <public>true</public>
          <presetname1>Tie 6 Lapinjärvi</presetname1>
          <presetname2>Kouvolaan</presetname2>
          <nearestroadstationid>1037</nearestroadstationid>
        </camerapreset>
      </camerapresetsdata>
    </CameraPresetsResponse>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```

---

## 11.1 Elements

- **timestamp** timestamp of the latest update of the message, both in UTC time zone and local (Finnish) time zone
- **baseurl** url, where the camera pictures are found
- **camerapresetsdata** every public camera preset
- **camerapreset** single camera preset
- **cameraid** camera id
- **presetid** preset id. camera id + number 00...99
- **roadstationid** roadstaion id
- **public** flag that tells if the camera is public or not. false = not public, true = public
- **presetname1** preset name 1
- **presetname2** preset name 2
- **nearestroadstationid** id of the nearest road station
- **piclastmodified** last modified date of camera picture, both in UTC time zone and local (Finnish) time zone