Infotripla D2Light City service

User documentation

Document version 1.1

Content

1. Introduction

Datex II (or Datex 2) has been developed in attempt to standardize the traffic information exchange between various actors e.g. traffic management centres, traffic information centres and service providers. In many countries the need for a detailed information model is recognised and properly reflected by Datex II. More information about Datex II: **www.datex2.eu**

However, the level of detail of the DatexII original is perceived as complex and heavy for relative simple information services that are supported by app developers. Therefore the new Datex II Light (D2Light) has been introduced. Also the development of D2Light is coordinated by Datex II project, and more information can be found on the web site mentioned above.

1.1. Overview

Infotripla provides traffic information feeds that are combined from various information sources, most notably Finnish Transport Agency and Finnish Meteorological Institute. Also a number of vehicle fleets from third parties are collecting sensory data for Infotripla which is then used to enrich the content – especially real time traffic flow information. For D2Light City an important source are the traffic announcements published by professional users in e.g. cities. This information is collected and published as a dedicated D2Light service which provides D2Light -messages at 1-minute intervals.

Infotripla D2Light City is based on the Infotripla Datex II original full model.

1.2. Purpose

This document aims to describe the Infotripla D2Light City in such detail that third parties are able to develop an interface and start using the data. Help and Assistance -section provides contact details in case of further assistance is required.

1.3. Abbreviations

DATEX II	Data Exchange 2 – European specifications for language independent exchange of traffic information
D2Light	DATEX II Light – New lighter JSON based DATEXII specification
HTTP	Hyper Text Transfer Protocol
JSON	JavaScript Object Notation
REST	Representional State Transfer
URL	Uniform Resource Locator

2. Information Products

This section provides a high level technical view to Infotripla's DATEX II service for cities, introducing the available data product and instructs how to access it.

2.1. Available information product

Infotripla structures the traffic information for cities as a one combined set of traffic situations, such as unplanned events or current and future roadworks. Infotripla is using Datex II Pull Exchange mechanism meaning that data delivery is initiated by the data utilizer and is a snapshot of cities's traffic situation at the time of request is delivered. Available Information product, its update frequence and estimated payload sizes is described below.

Information Product	Product Type	Update frequency	Estimated Payload Size
Cities	Event	Manually	100 K bytes
One city	Event	Manually	50K bytes

The estimated payload sizes at the moment are more like good guesses and they will be more accurate in the future.

2.2. CitiesTrafficEvents -product

The CitiesTrafficEvents -information product consist of information that is typically warnings, roadworks or other potentially valuable information what is happening in the roadway in cities. The messages are using D2Light schema and the D2Light payload type used is *SituationPublicationLight*. Contents for the CitiesTrafficEvents -payload is defined more detailed in Swagger.

2.3. Access

Information product is published as Web Service interfaces using HTTP transport protocol and REST/JSON as described in the D2 Light Report available from the official DATEX II website (http://d2docs.ndwcloud.nu/downloads/d2light.html).

There are two types of interfaces:

1. interface containing data from several cities,
2. dedicated interface containing data from a single city

The interface of type 1 (several cities) **is secured** with HTTP Basic Access Authentication and only users with explicit permission are allowed to download payload data. Credentials are delivered as an offline process according to a separate contract between Infotripla and the data utilizer. After receiving the credentials, Swagger page describing the interface is accessible from the following URL:

http://feed.datex2.fi:8380/CitiesTrafficEvents/swagger/cities

The interfaces of type 2 (single city) require **no authentication**. Swagger page describing the interface is accessible from the following URL (replace <*CITY*> with city name)

http://feed.datex2.fi:8380/CitiesTrafficEvents/swagger/<*CITY*>

Also following URL works in Tampere:
https://traffic-incidents.tampere.fi

2.3.1. Requesting the data

In order to receive and utilize the data a D2Light web service should be built with the model

seen in Swagger page (see above). To just check the contents of the feeds a web service testing tool comes in handy e.g. open source solution SoapUI (http://www.soapui.org/).

3. Event products

Fundamentally, the payload of the event product messages comply to Datex II Light schema (available at http://d2docs.ndwcloud.nu/downloads/d2light.html). Message template and descriptions of message fields can be found from Swagger.

4. Help and Assistance

Infotripla will provide help and technical support to anyone wishing to use the data services. Should there be any special needs like customizing the feeds to match your requirements, we encourage to discuss with us before rushing the development on top of the standard feeds. Also, any feedback for improving this documentation is welcome.

Infotripla customer service contact information can be found from: www.infotripla.fi/helpdesk