Freeway Travel Time – GIS

Technical Documentation

Contents

Document Control

Revision History

Version	Date	Author	Description
1	March, 2023	Liam Zylberberg	Creating initial version of document
1.1	April, 2023	Liam Zylberberg	Updated some data field descriptions and information to be clearer and easy to read.

References

Document Name	Location

1   Overview

Freeway Travel Time contains near real-time information pulled from roadside sensors about travel times for freeways throughout Metropolitan Melbourne.

The Department of Transport and Planning (DTP) wishes to improve customer experience and use of the transport network by establishing a sustainable organisation wide approach to sharing DTP data with third party data consumers (journey planning and wayfinding producers, developers, researchers, innovators, etc.).

An Application Programming Interface (API) is a way for two or more computer programs or applications to communicate with each other. APIs enable data to be transmitted between different IT systems and applications within and between organisations.

Freeway Travel Time consists of two APIs called 'Freeway Travel Time – GIS' and 'Freeway Travel Time – Traffic'.

This document provides information about the Department of Transport and Planning 'Freeway Travel Time – GIS' API.

'Freeway Travel Time – GIS' contains the names and coordinates of freeways and freeway segments throughout Metropolitan Melbourne. The data includes freeway and freeway segment names, owners and origin and destination coordinates.

2   API Meta Data

This dataset contains the names and coordinates of freeways and freeway segments throughout Metropolitan Melbourne. The data includes freeway and freeway segment names, owners and origin and destination coordinates.

This dataset uses the GeoJSON format. For more information about the GeoJSON format, visit **geojson.org.**

NOTE: This API has a rate limit of 5 calls per minute.

2.1   Brief

Resource Name: Freeway Travel Time – GIS

URL: https://data-exchange-api.vicroads.vic.gov.au/opendata/variable/freewaytraveltime/v1/gis

Domain: Roads

Update Frequency: Every 12 hours

Data Format: GeoJSON

Data Type: Geospatial Data (Line)

Geographic Extent: Metropolitan Melbourne (Freeways)

2.2   Dataset Attributes

We have produced a table below outlining each of the data Fields and Values contained within this dataset.

Table 1 Dataset Attributes

Name	Type	Definition
type	String	Fixed Value: FeatureCollection
features	Array [Feature]	Array of Feature objects. *Refer to **Feature** object details.*
Feature	**Object**	**A single freeway or freeway segment is represented as a single feature in GeoJSON.**
Feature.type	String	Fixed Value: Feature
Feature.geometry	Object [GeometryCollection]	A collection of geometries that represent the location of the freeway or freeway segment. May be blank or null. *Refer to **GeometryCollection** object details.*

Name	Type	Definition
Feature.properties	Object [Property]	The properties of the freeway or freeway segment. *Refer to Property object details.*
GeometryCollection	**Object**	**A collection of geometries that represent the location of the freeway or freeway segment.**
GeometryCollection.type	String	Fixed Value: GeometryCollection
GeometryCollection.geometries	Array [Geometry]	An array of Geometry objects. *Refer to Geometry object details.*
Geometry	**Object**	**A geographic representation of the freeway or freeway segment as specified by the GeoJSON specification.**
Geometry.type	String	One of the following: **LineString** *A linestring represents two or more geographic points that share a relationship as specified in the GeoJSON specification.* **Point** *A point represents a single geographic position as specified in the GeoJson specification.*

Geometry.coordinates	Array [Double]	Coordinates are in x, y order (longitude, and latitude for geographic coordinates) precisely in that order and using double values. Altitude or elevation MAY be included as an optional third parameter while creating this object.
		
		Ex: when the geometry type is point
		
		`1 {`
		
		`2   "type": "Point",`
		
		`3   "coordinates": [100.0, 0.0]`
		
		`4 }`
		
		Ex: when the geometry type is LineString
		
		`1 {`
		
		`2   "type": "LineString",`
		
		`3   "coordinates": [`
		
		`4     [100.0, 0.0],`
		
		`5     [101.0, 1.0]`

Name	Type	Definition
		6] 7 }
Properties	**Object**	**Properties of the freeway or freeway segment.**
Properties.id	String	[SourceName]:[SourceId] Is a unique identifier for the freeway or freeway segment.
Properties.source	Object [Source]	An object that the describes information source. *Refer to* ***Source*** *object details.*
Properties.freewayName	String	The name of the freeway or the name of the freeway the freeway segment is related to.
Properties.direction	String	The direction of the freeway or freeway segment. Possible values include: Inbound, Outbound, Northbound, Eastbound, Southbound, Westbound
Properties.segmentName	String	The name of the freeway segment. If the feature is a freeway instead of a freeway segment, this will be a description of the start and end point of the freeway.
Properties.owner	String	The name of the organisation responsible for the freeway or freeway segment. May be blank or null. Possible values include: VicRoads
Properties.enabled	Boolean	Indicates whether the freeway or freeway segment is enabled or not.
Properties.description	String	A short description for the freeway or freeway segment. May be blank or null.
Properties.type	String	The classification of data this feature falls under in the source system (STREAMS Intelligent Transport System). All open data is classified as 'Media / Public'.
Properties.parentPathID	String	The id of the parent of the freeway segment. For freeways, this field will be blank or null.
Properties.orderOnParent	String	The order of the freeway segment on the parent freeway. For freeways, this field will be blank or null.
Properties.origin	String	The name of the origin of the freeway or freeway segment. May be blank or null.
Properties.originID	String	The id of the origin of the freeway or freeway segment. May be blank or null.
Properties.originType	String	The type (class name) of the origin of the freeway or freeway segment. May be blank or null.
Properties.destination	String	The name of the destination of the freeway or freeway segment. May be blank or null.
Properties.desinationId	String	The id of the destination of the freeway or freeway segment. May be blank or null.
Properties.destinationType	String	The type (class name) of the freeway or freeway segment. May be blank or null.

Name	Type	Definition
Properties.pathValid	Boolean	Indicates whether the freeway or freeway segment is valid.
Source	**Object**	**An object that describes the information source.**
Source.sourceName	String Enumeration	Fixed Value: Streams
Source.sourceId	String	Source system ID of the freeway or freeway segment.