

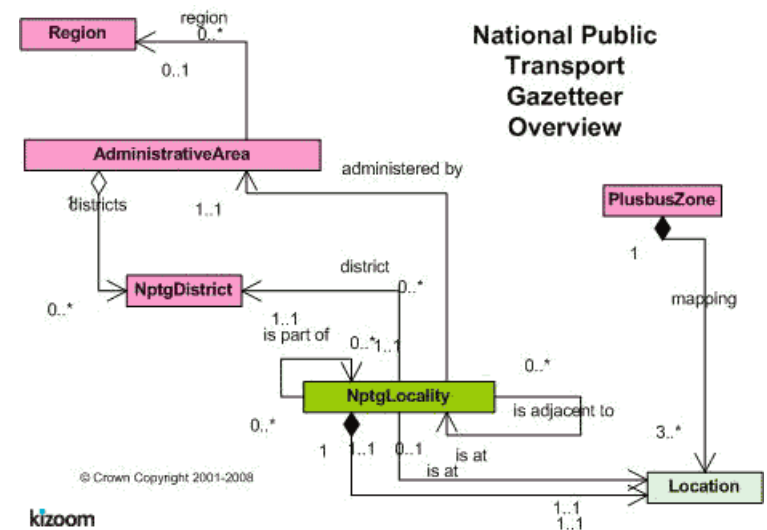
Linked Data
National Public Transport Gazetteer
NTPG
Nation Public Transport Access Network
NaPTAN

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- NTPG and NaPTAN – what are they?
- Linked data conversion (by Jeni Tennison)
- Interacting with Linked Data
 - ‘Browsing’ – a ‘walking tour’...
 - Query
 - API
 - Application
- Tour and Demo!!

NPTG and NaPTAN

- **NPTG Locality Identifiers**
 - NPTG locality identifiers are a systematic way of identifying of all UK localities where there is access to public transport.
 - Every UK **village, town, settlement** and **metropolitan area** is allocated a unique NPTG locality Identifier.
 - Localities can be organised into a hierarchy of geographical containment
 - Localities can be assigned a [classification](#).
- XML/XML Schema based
 - [Downloadable and live access](#) from DfT
- Dept for Transport
 - Nick Illsley



... Linked Data Transformation

(work by Jeni Tennison)

- [Linked Data Principles:](#)
 - Name Things with URI
 - Use HTTP URI so they can be looked up on the Web
 - Provide some useful information in open standard formats
 - **Link to other things...**
- Transformation
 - Conceptual Model/Schema to Vocabulary
 - Class, Concept, Categories and relationships and constraints
 - Reference Data
 - Places/Names/ Administrative Relations - **Locations**
 - Stop Points/Areas/Classifications - **Locations**
 - Data
 - Hmmm... This data is mostly reference data (and provenance).
 - XSLT magic by Jeni Tennison.

Accessing Linked Data

- Linked Data Browsing
 - Link Following...

- Query (SPARQL)

```
- SELECT ?stop WHERE {  
  ?stop a naptan:StopPoint;  
        sr:easting    ?e;  
        sr:northing   ?n .  
  FILTER ((435560<?e) && (?e<439760) && (144160<?n) && (?n<115360) &&)  
}
```

- API ([linked-data API](#))

- </transport/doc/stop-point/gridbox/437760,114160/439760,115360.json>
- RESTFul URI based developer friendly API

- [Application UI](#)

Walking Tour

Linked Data for May...
transport.data.gov.uk/doc/stop-point/1980SN121045

For quick access, place your bookmarks here on the bookmarks bar. [Import bookmarks now...](#) Other bookmarks

HM Government data.gov.uk

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About

Maybush Corner

A description of the resource identified by <http://transport.data.gov.uk/id/stop-point/1980SN121045>

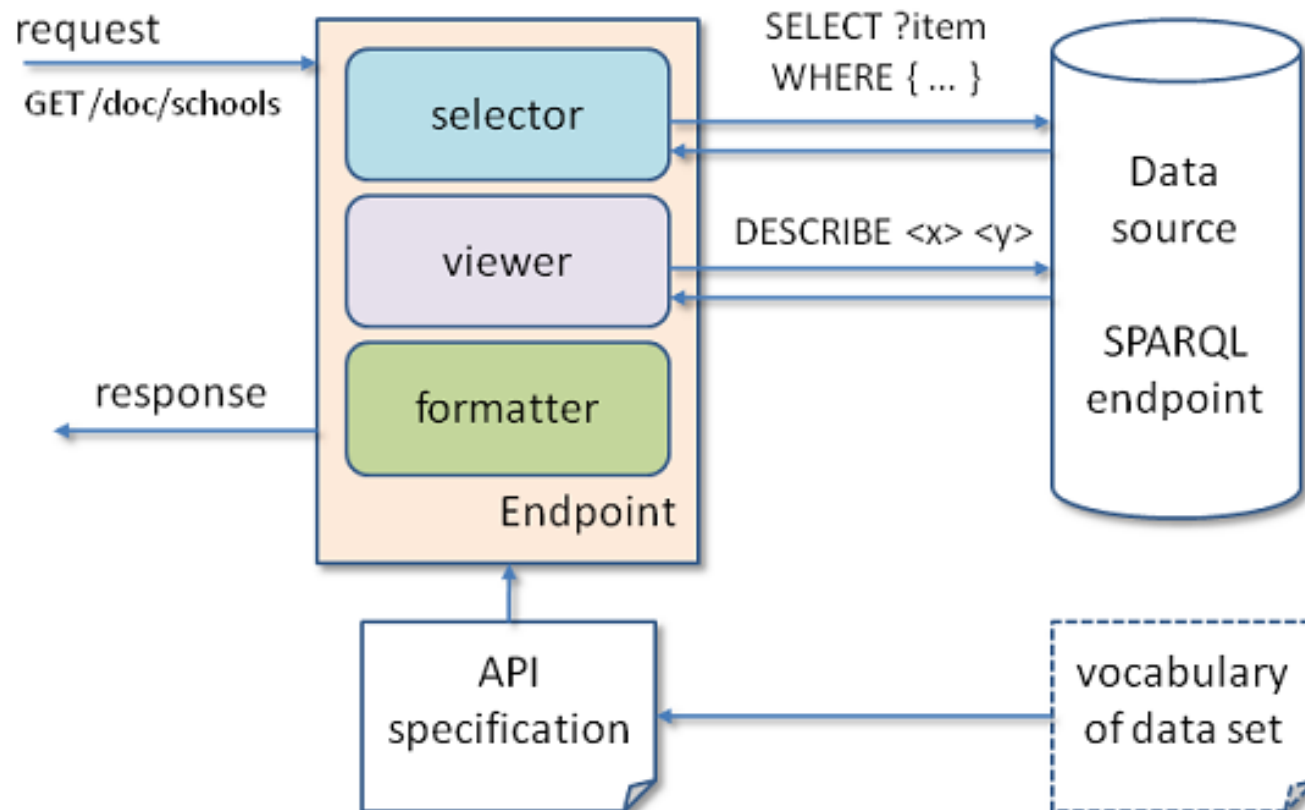
Preferred label	Maybush Corner
Label	Maybush Corner
Latitude	50.9315210547
Longitude	-1.4486621811
Type	Stop Point Bus stop point Marked (pole, shelter etc) On Street Stop Point On street Bus / Coach / Tram Stop Other Bus Stop
Is the primary topic of	Dataset about http://transport.data.gov.uk/id/stop-point/1980SN121045 Dataset about http://transport.data.gov.uk/id/stop-point/1980SN121045
Easting	438842
Northing	114820
Uri set	Stop Points
Administrative area	Southampton
Atco code	1980SN121045
Bearing	North West
Compass point bearing	North West
Crossing	Wimpoor Lane
Landmark	Ordnance Survey Office
Locality centre	false
Naptan code	sohagmp
Nptg locality	Maybush
Plusbus zone	Southampton
Stop validity	B40915195ca36fdb039b0831b67633d
Street	Romsey Road
Notation	sohagmp 1980SN121045

http://localhost:8080/idaShell/shell/api/transport/doc/stop-point/1980SN121045.json - Mozilla Firefox

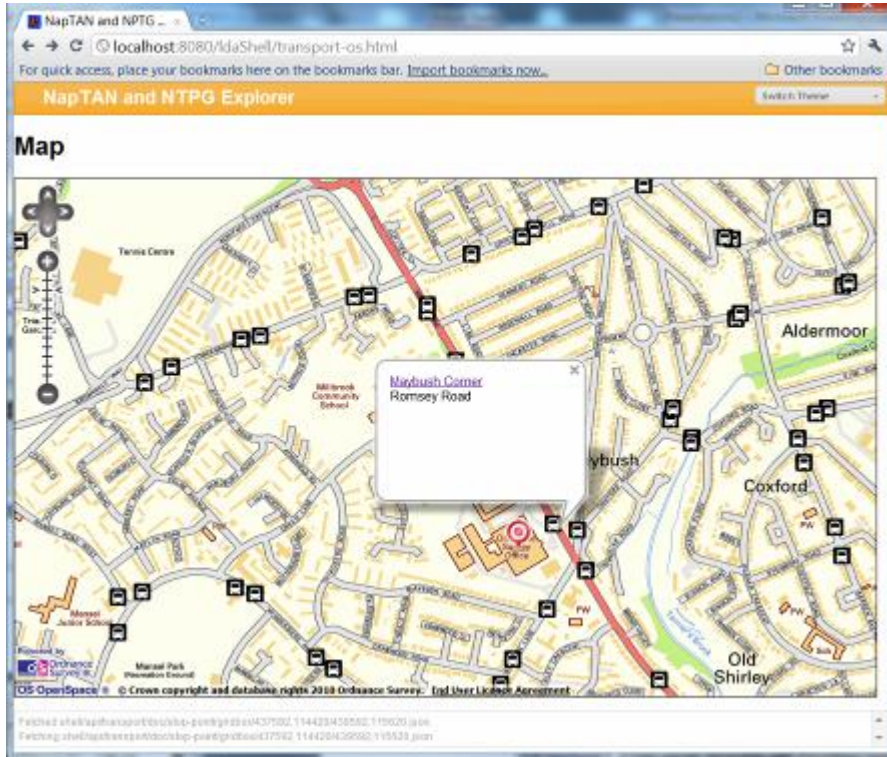
```
File Edit View History Bookmarks Tools Help
http://localhost:8080/idaShell/shell/api/transport/doc/stop-point/1980SN121045
Most Visited Getting Started Latest Headlines
http://localhost:8080/idaShe...

{
  format: "linked-data-api",
  version: "0.1",
  - results: [
    - {
      - _about: http://localhost:8080/idaShell/shell/api/transport/doc/stop-point/1980SN121045?_page=0,
        first: http://localhost:8080/idaShell/shell/api/transport/doc/stop-point/1980SN121045?_page=0,
        isPartOf: http://localhost:8080/idaShell/shell/api/transport/doc/stop-point/1980SN121045,
        - items: [
          - {
            - _about: http://transport.data.gov.uk/id/stop-point/1980SN121045,
              administrativeArea: http://transport.data.gov.uk/id/administrative-area/052,
              atcoCode: "1980SN121045"~http://transport.data.gov.uk/def/naptan/AtcoCode,
              compassPointBearing: http://reference.data.gov.uk/def/compass/NN,
              easting: 438842,
              landmark: "Ordnance Survey Office",
              lat: "50.9315210547",
              localityCentre: false,
              long: "-1.4486621811",
              name: "Maybush Corner@en",
              naptanCode: "sohagmp"~http://transport.data.gov.uk/def/naptan/NaptanCode,
              northing: 114820,
              nptgLocality: http://transport.data.gov.uk/id/nptg-locality/E0042000,
              plusbusZone: http://transport.data.gov.uk/id/plusbus-zone/B0TON,
              street: "Romsey Road",
            - type: [
              - {
                - _about: http://transport.data.gov.uk/def/naptan/BusCoachTramOnStreetPoint,
                  label: "On street Bus / Coach / Tram Stop@en"
                },
                "BusStopPoint",
              - {
                - _about: http://transport.data.gov.uk/def/naptan/MarkedBusStop,
                  label: "Marked (pole, shelter etc)@en"
                },
              - {
                - _about: http://transport.data.gov.uk/def/naptan/OnStreetStopPoint,
                  label: "On Street Stop Point@en"
                },
              - {
                - _about: http://transport.data.gov.uk/def/naptan/OtherPoint,
                  label: "Other Bus Stop@en"
                },
              - {
                - _about: http://transport.data.gov.uk/def/naptan/StopPoint,
                  label: "Stop Point@en"
                }
              ]
            }
          ]
        },
        itemsPerPage: 10,
        page: 0,
        startIndex: 1,
        type: http://purl.org/linked-data/api/vocab#Page
      }
    ]
  },
  + context: { ... }
}
```

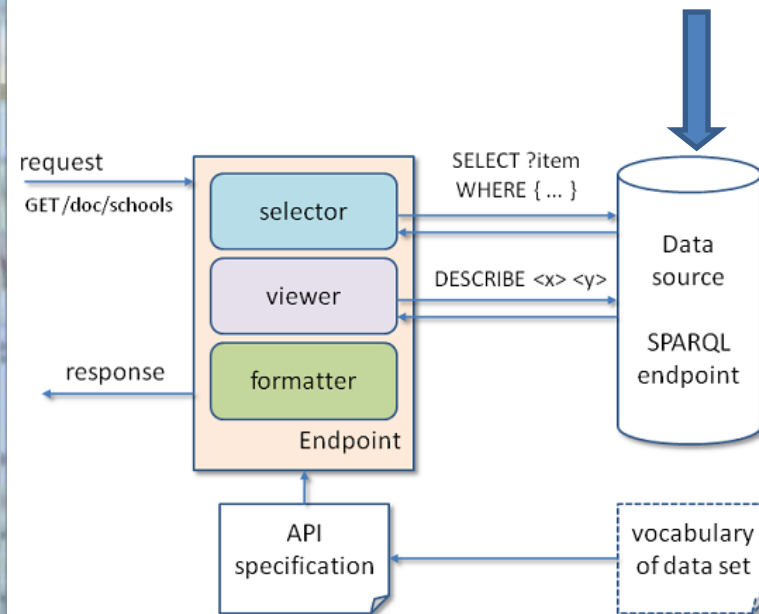
Linked API



Web Application/UI



NTPG NaTAN
Data



Live Endpoints:

SPARQL: <http://services.data.gov.uk/transport/sparql>

<http://services.data.gov.uk/transport/api/api-config>

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- Nick Illsley (DfT)

NaPTAN

