

JSON-LD for Application Profiles

(A case study, applied to the multi-vocabulary description of datasets.)

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Introduction

In the context of metadata vocabularies, structured data and RDF schemas, the concept of an "application profile" refers to a packaging of descriptive terms and conventions for their use, particularly in cases where multiple independently managed vocabularies are combined to address a task that draws upon overlapping domains of expertise.

This document presents aspects of the W3C JSON-LD 1.0 technology, specifically its "context" and term mapping mechanisms, as a possible syntactic mechanism relevant to application profiles. It uses a simple example derived from the DCAT-AP work to show how a profile of three independent vocabularies can be packaged with a JSON-LD surface syntax that hides multi-namespace complexity.

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JSON-LD Contexts

W3C's JSON-LD format provides a concrete syntax for publishing RDF graph data. To achieve this, it has a fairly sophisticated mechanism for mapping JSON content (keys and values) into RDF properties. This "context" mechanism can be expressed inline, or via remote URLs.

Three examples.

- First we show inline mappings, e.g.
 - **"description": "dcterms:description"**
 - **"distribution": "dcat:distribution"**
- then we show the same thing but expressed in remote URLs, i.e. DCAT-AP terms into the underlying Dublin Core, DCAT and FOAF namespaces.
- Finally we show the exact same *surface syntax* with a different context file, which maps into different URLs drawn from Schema.org.

Possible additional work:

- Syntactic profiling - can we write a JSON Schema for the format shared
- Graph shape profiling - using ShEx/SHACL techniques to capture descriptive patterns
- DCAT <-> Schema.org mappings
 - Expressivity limits of JSON-LD contexts
 - Q: does SPARQL CONSTRUCT capture more?
 - Basic term mappings, RDFS/OWL, sameClass, sub/super class and property, etc.

Example 1: Simple DCAT-AP-inspired, with inline context term mappings

```
{
"@context":
{
"foaf": "http://xmlns.com/foaf/0.1/",
"dcterms": "http://purl.org/dc/terms/",
"dcat": "http://www.w3.org/ns/dcat#",

"title": "dcterms:title",
"description": "dcterms:description",
"distribution": "dcat:distribution",
"Dataset": "dcat:Dataset",
"Distribution": "dcat:Distribution",
"accessURL": "dcat:accessURL",
"format": "dcterms:format",
```

```

"license": "dcterms:licence",
"publisher": "dcterms:publisher",
"byteSize": "dcat:byteSize",
"downloadURL": "dcat:downloadURL",
"issued": "dcterms:issued",
"rights": "dcterms:rights",
"mediaType": "dcat:mediaType",
"status": "dcterms:status",
"Person": "foaf:Person",
"name": "foaf:name"
},

"@vocab": "http://dcat-ap-profile.example.org/v0#",
"@type": "Dataset",
"@id": "http://catalogue.datalocale.fr/dataset/liste-equipements_sportifs-cg33",
"title": "Liste des équipements sportifs du Département de la Gironde",
"description": "Ce jeu de données contient une liste d'équipement sportifs décrit par leur
nom, etc etc.",
"publisher": {
  "@type": "Person",
  "name": "M. Namegohere"
},
"distribution": {
  "@type": "Distribution",
  "accessURL":
"http://catalogue.datalocale.fr/dataset/liste-equipements_sportifs-cg33/resource/1234WGS84"
,
  "format": "text/csv",
  "licence": "http://data.lacub.fr/pdf/ODbL_fr.pdf",
  "byteSize": "3MB",
  "downloadURL": "https://data.some.org/the/actual/catalog/datasets/1/resources/fichier.csv",
  "title": "exportencsv",
  "issued": "2001-01-15",
  "rights": "...rightsinfohere",
  "mediaType": "text/csv",
  "status": "basededonnéesencoursd'enrichissement"
}
}

```

Triples

- <http://catalogue.datalocale.fr/dataset/liste-equipements_sportifs-cg33>
<http://purl.org/dc/terms/description> "Ce jeu de données contient une liste d'équipement sportifs décrit par leur nom, etc etc."
- <http://catalogue.datalocale.fr/dataset/liste-equipements_sportifs-cg33>
<http://purl.org/dc/terms/publisher> _:b0 .
- <http://catalogue.datalocale.fr/dataset/liste-equipements_sportifs-cg33> <http://purl.org/dc/terms/title>
"Liste des équipements sportifs du Département de la Gironde" .
- <http://catalogue.datalocale.fr/dataset/liste-equipements_sportifs-cg33>
<http://www.w3.org/1999/02/22-rdf-syntax-ns#type> <http://www.w3.org/ns/dcat#Dataset> .
- <http://catalogue.datalocale.fr/dataset/liste-equipements_sportifs-cg33>
<http://www.w3.org/ns/dcat#distribution> _:b1 .
- _:b0 <http://www.w3.org/1999/02/22-rdf-syntax-ns#type> <http://xmlns.com/foaf/0.1/Person> .
- _:b0 <http://xmlns.com/foaf/0.1/name> "M. Namegohere" .
- _:b1 <http://purl.org/dc/terms/format> "text/csv" .
- _:b1 <http://purl.org/dc/terms/issued> "2001-01-15" .
- _:b1 <http://purl.org/dc/terms/rights> "...rightsinfohere" .
- _:b1 <http://purl.org/dc/terms/status> "basededonnéesencoursd'enrichissement" .
- _:b1 <http://purl.org/dc/terms/title> "exportencsv" .
- _:b1 <http://www.w3.org/1999/02/22-rdf-syntax-ns#type> <http://www.w3.org/ns/dcat#Distribution> .
- _:b1 <http://www.w3.org/ns/dcat#accessURL>
"http://catalogue.datalocale.fr/dataset/liste-equipements_sportifs-cg33/resource/1234WGS84" .
- _:b1 <http://www.w3.org/ns/dcat#byteSize> "3MB" .
- _:b1 <http://www.w3.org/ns/dcat#downloadURL>
"https://data.some.org/the/actual/catalog/datasets/1/resources/fichier.csv" .
- _:b1 <http://www.w3.org/ns/dcat#mediaType> "text/csv" ..

Example 2: Simple DCAT-AP-inspired, with *remote* context term mappings

```
{
  "@context":
  "https://gist.githubusercontent.com/danbri/7d0452ec06d2b569449138cbf8372d49/raw/c0148ebce06e988faa1410cffd45f62fdb0dd584/gistfile1.txt",
  "@type": "Dataset",
  "@id": "http://catalogue.datalocale.fr/dataset/liste-equipements_sportifs-cg33",
  "title": "Liste des équipements sportifs du Département de la Gironde",
  "description": "Ce jeu de données contient une liste d'équipement sportifs décrit par leur nom, etc etc.",
  "publisher": {
    "@type": "Person",
    "name": "M. Namegohere"
  }
}
```

```

},
"distribution": {
"@type": "Distribution",
"accessURL":
"http://catalogue.datalocale.fr/dataset/liste-equipements_sportifs-cg33/resource/1234WGS84"
,
"format": "text/csv",
"licence": "http://data.lacub.fr/pdf/ODbL_fr.pdf",
"byteSize": "3MB",
"downloadURL": "https://data.some.org/the/actual/catalog/datasets/1/resources/fichier.csv",
"title": "exportencsv",
"issued": "2001-01-15",
"rights": "...rightsinfohere",
"mediaType": "text/csv",
"status": "basededonneesencoursd'enrichissement"
}
}

```

Remote context content:

- "title": "dcterms:title"
- "description": "dcterms:description"
- "distribution": "dcat:distribution"
- "Dataset": "dcat:Dataset"
- "Distribution": "dcat:Distribution"
- "accessURL": "dcat:accessURL"
- "format": "dcterms:format"
- "publisher": "dcterms:publisher",
- "license": "dcterms:licence"
- "byteSize": "dcat:byteSize"
- "downloadURL": "dcat:downloadURL"
- "issued": "dcterms:issued"
- "rights": "dcterms:rights",
- "mediaType": "dcat:mediaType"
- "status": "dcterms:status"
- "Person": "foaf:Person"
- "name": "foaf:name"

Triples

- <http://catalogue.datalocale.fr/dataset/liste-equipements_sportifs-cg33>
<http://purl.org/dc/terms/description> "Ce jeu de données contient une liste d'équipement sportifs décrit par leur nom, etc etc." .
- <http://catalogue.datalocale.fr/dataset/liste-equipements_sportifs-cg33>
<http://purl.org/dc/terms/publisher> _:b0 .
- <http://catalogue.datalocale.fr/dataset/liste-equipements_sportifs-cg33> <http://purl.org/dc/terms/title> "Liste des équipements sportifs du Département de la Gironde" .
- <http://catalogue.datalocale.fr/dataset/liste-equipements_sportifs-cg33>
<http://www.w3.org/1999/02/22-rdf-syntax-ns#type> <http://www.w3.org/ns/dcat#Dataset> .
- <http://catalogue.datalocale.fr/dataset/liste-equipements_sportifs-cg33>
<http://www.w3.org/ns/dcat#distribution> _:b1 .
- _:b0 <http://www.w3.org/1999/02/22-rdf-syntax-ns#type> <http://xmlns.com/foaf/0.1/Person> .
- _:b0 <http://xmlns.com/foaf/0.1/name> "M. Namegohere" .
- _:b1 <http://purl.org/dc/terms/format> "text/csv" .
- _:b1 <http://purl.org/dc/terms/issued> "2001-01-15" .
- _:b1 <http://purl.org/dc/terms/rights> "...rightsinfohere" .
- _:b1 <http://purl.org/dc/terms/status> "basededonnéesencoursd'enrichissement" .
- _:b1 <http://purl.org/dc/terms/title> "exportencsv" .
- _:b1 <http://www.w3.org/1999/02/22-rdf-syntax-ns#type> <http://www.w3.org/ns/dcat#Distribution> .
- _:b1 <http://www.w3.org/ns/dcat#accessURL>
"http://catalogue.datalocale.fr/dataset/liste-equipements_sportifs-cg33/resource/1234WGS84" .
- _:b1 <http://www.w3.org/ns/dcat#byteSize> "3MB" .
- _:b1 <http://www.w3.org/ns/dcat#downloadURL>
"https://data.some.org/the/actual/catalog/datasets/1/resources/fichier.csv" .
- _:b1 <http://www.w3.org/ns/dcat#mediaType> "text/csv" .

Example 3: Simple DCAT-AP-inspired, with *alternate remote* context term mappings

```
{
  "@context":
  "https://gist.githubusercontent.com/danbri/2b272c54b0bd83d80779156269d8e349/raw/34154
cd3f73652dd97d5132450aefb040f9ed56/gistfile1.txt",
  "@type": "Dataset",
  "@id": "http://catalogue.datalocale.fr/dataset/liste-equipements_sportifs-cg33",
  "title": "Liste des équipements sportifs du Département de la Gironde",
  "description": "Ce jeu de données contient une liste d'équipement sportifs décrit par leur
nom, etc etc.",
  "publisher": {
```

```

    "@type": "Person",
    "name": "M. Namegohere"
  },
  "distribution": {
    "@type": "Distribution",
    "accessURL":
"http://catalogue.datalocale.fr/dataset/liste-equipements_sportifs-cg33/resource/1234WGS84"
  ,
    "format": "text/csv",
    "licence": "http://data.lacub.fr/pdf/ODbL_fr.pdf",
    "byteSize": "3MB",
    "downloadURL": "https://data.some.org/the/actual/catalog/datasets/1/resources/fichier.csv",
    "title": "exportencsv",
    "issued": "2001-01-15",
    "rights": "...rightsinfohere",
    "mediaType": "text/csv",
    "status": "basededonnéesencoursd'enrichissement"
  }
}

```

Remote context content:

As above, but with different mappings,

- "title": "schema:name"
- "description": "schema:description"
- "distribution": "schema:distribution"
- "Distribution": "schema:DataDownload"
- "accessURL": "schema:url"
- "format": "dcterms:format"
- "publisher" : "dcterms:publisher"
- "license": "schema:licence"
- "byteSize": "schema:contentSize"
- "downloadURL": "schema:contentUrl"

- "issued": "schema:datePublished"
- "rights": "dcterms:rights"
- "mediaType": "schema:encodingFormat"
- "status": "dcterms:notarealproperty-status"
- "Person": "schema:Person"
- "name": "schema:name"

Triples

- <http://catalogue.datalocale.fr/dataset/liste-equipements_sportifs-cg33>
<http://schema.org/description> "Ce jeu de données contient une liste d'équipement sportifs décrit par leur nom, etc etc." .
- <http://catalogue.datalocale.fr/dataset/liste-equipements_sportifs-cg33>
<http://schema.org/distribution> _:b0 .
- <http://catalogue.datalocale.fr/dataset/liste-equipements_sportifs-cg33>
<http://schema.org/name> "Liste des équipements sportifs du Département de la Gironde" .
- <http://catalogue.datalocale.fr/dataset/liste-equipements_sportifs-cg33>
<http://www.w3.org/1999/02/22-rdf-syntax-ns#type>
<https://json-ld.org/playground/Dataset> .
- _:b0 <dc:format> "text/csv" .
- _:b0 <http://purl.org/dc/terms/notarealproperty-status>
"basededonnéesencoursdenrichissement" .
- _:b0 <http://purl.org/dc/terms/rights> "...rightsinfohere" .
- _:b0 <http://schema.org/contentSize> "3MB" .
- _:b0 <http://schema.org/contentUrl>
"https://data.some.org/the/actual/catalog/datasets/1/resources/fichier.csv" .
- _:b0 <http://schema.org/datePublished> "2001-01-15" .
- _:b0 <http://schema.org/encodingFormat> "text/csv" .
- _:b0 <http://schema.org/name> "exportencsv" .
- _:b0 <http://schema.org/url>
"http://catalogue.datalocale.fr/dataset/liste-equipements_sportifs-cg33/resource/1234
WGS84" .
- _:b0 <http://www.w3.org/1999/02/22-rdf-syntax-ns#type>
<http://schema.org/DataDownload> .

Example 4: Schema.org-inspired surface syntax, with DCAT-AP RDF triples

Here we reverse the approach of example 3. Instead of a DCAT-AP surface syntax, with Schema.org triples, we do the opposite. It gives us a minor problem (supposedly to be addressed in JSON-LD 1.1 future work), in that "name" of a Dataset means dcterms:title, but of a Person, means foaf:name. Here we simply pick one (title). Another option would be to map to the common vaguer superproperty, rdfs:label.


```

{
"@context":
  {
"foaf": "http://xmlns.com/foaf/0.1/",
"dcterms": "http://purl.org/dc/terms/",
"dcat": "http://www.w3.org/ns/dcat#",
"description": "dcterms:description",
"distribution": "dcat:distribution",
"DataDownload": "dcat:Distribution",
"url": "dcat:accessURL",
"format": "dcterms:format",
"publisher": "dcterms:publisher",
"licence": "dcterms:license",
"contentSize": "dcat:byteSize",
"contentUrl": "dcat:downloadURL",
"datePublished": "dcterms:issued",
"rights": "dcterms:rights",
"encodingFormat": "dcat:mediaType",
"status": "foaf:status",
"Person": "foaf:Person",
"name": "dcterms:name"},
  "@type": "Dataset",
  "@id": "http://catalogue.datalocale.fr/dataset/liste-equipements_sportifs-cg33",
  "name": "Liste des équipements sportifs du Département de la Gironde",
  "description": "Ce jeu de données contient une liste d'équipement sportifs décrit par leur
nom, etc etc.",
  "publisher": {
    "@type": "Person",
    "name": "M. Namegohere"
  },
  "distribution": {
    "@type": "DataDownload",
    "url":
"http://catalogue.datalocale.fr/dataset/liste-equipements_sportifs-cg33/resource/1234WGS84"
  },
  "dcterms:format": "text/csv",
  "licence": "http://data.lacub.fr/pdf/ODbL_fr.pdf",
  "contentSize": "3MB",
  "contentUrl": "https://data.some.org/the/actual/catalog/datasets/1/resources/fichier.csv",
  "name": "exportencsv",

```

```
"datePublished": "2001-01-15",
"dcterms:rights": "...rightsinfohere",
"encodingFormat": "text/csv",
"foaf:status": "basededonnéesencoursd'enrichissement"
}
}
```

Triples

```
<http://catalogue.datalocale.fr/dataset/liste-equipements_sportifs-cg33>
<http://purl.org/dc/terms/description> "Ce jeu de données contient une liste d'équipement
sportifs décrit par leur nom, etc etc." .
<http://catalogue.datalocale.fr/dataset/liste-equipements_sportifs-cg33>
<http://purl.org/dc/terms/name> "Liste des équipements sportifs du Département de la
Gironde" .
<http://catalogue.datalocale.fr/dataset/liste-equipements_sportifs-cg33>
<http://purl.org/dc/terms/publisher> _:b0 .
<http://catalogue.datalocale.fr/dataset/liste-equipements_sportifs-cg33>
<http://www.w3.org/1999/02/22-rdf-syntax-ns#type> <https://json-ld.org/playground/Dataset> .
<http://catalogue.datalocale.fr/dataset/liste-equipements_sportifs-cg33>
<http://www.w3.org/ns/dcat#distribution> _:b1 .
_:b0 <http://purl.org/dc/terms/name> "M. Namegohere" .
_:b0 <http://www.w3.org/1999/02/22-rdf-syntax-ns#type> <http://xmlns.com/foaf/0.1/Person> .
_:b1 <http://purl.org/dc/terms/format> "text/csv" .
_:b1 <http://purl.org/dc/terms/issued> "2001-01-15" .
_:b1 <http://purl.org/dc/terms/license> "http://data.lacub.fr/pdf/ODbL_fr.pdf" .
_:b1 <http://purl.org/dc/terms/name> "exportencsv" .
_:b1 <http://purl.org/dc/terms/rights> "...rightsinfohere" .
_:b1 <http://www.w3.org/1999/02/22-rdf-syntax-ns#type>
<http://www.w3.org/ns/dcat#Distribution> .
_:b1 <http://www.w3.org/ns/dcat#accessURL>
"http://catalogue.datalocale.fr/dataset/liste-equipements_sportifs-cg33/resource/1234WGS84"
.
_:b1 <http://www.w3.org/ns/dcat#byteSize> "3MB" .
_:b1 <http://www.w3.org/ns/dcat#downloadURL>
"https://data.some.org/the/actual/catalog/datasets/1/resources/fichier.csv" .
_:b1 <http://www.w3.org/ns/dcat#mediaType> "text/csv" .
_:b1 <http://xmlns.com/foaf/0.1/status> "basededonnéesencoursd'enrichissement" .
```

Example 5: As 4, with remote URL context file

<https://gist.githubusercontent.com/danbri/65c2be9a89054b1cee09e10054ed3c2f/raw/5b32e6595cf68ed88a07b0d34d52dacd9cd1e07a/gistfile1.txt>

Also consider a design (not standard) like this:

```
{
"@context": "http://schema.org",
"@mapping-context":
"https://gist.githubusercontent.com/danbri/65c2be9a89054b1cee09e10054ed3c2f/raw/5b32e6595cf68ed88a07b0d34d52dacd9cd1e07a/gistfile1.txt",
}
```

```
{
"@context":
"https://gist.githubusercontent.com/danbri/65c2be9a89054b1cee09e10054ed3c2f/raw/5b32e6595cf68ed88a07b0d34d52dacd9cd1e07a/gistfile1.txt",

"@type": "Dataset",
"@id": "http://catalogue.datalocale.fr/dataset/liste-equipements_sportifs-cg33",
"name": "Liste des équipements sportifs du Département de la Gironde",
"description": "Ce jeu de données contient une liste d'équipement sportifs décrit par leur nom, etc etc.",
"publisher": {
"@type": "Person",
"name": "M. Namegohere"
},
"distribution": {
"@type": "DataDownload",
"url":
"http://catalogue.datalocale.fr/dataset/liste-equipements_sportifs-cg33/resource/1234WGS84"
,
"dcterms:format": "text/csv",
"licence": "http://data.lacub.fr/pdf/ODbL_fr.pdf",
"contentSize": "3MB",
"contentUrl": "https://data.some.org/the/actual/catalog/datasets/1/resources/fichier.csv",
"name": "exportencsv",
"datePublished": "2001-01-15",
```

```
"dcterms:rights": "...rightsinfohere",
"encodingFormat": "text/csv",
"foaf:status": "basededonnéesencoursd'enrichissement"
}
}
```

Triples:

```
<http://catalogue.datalocale.fr/dataset/liste-equipements_sportifs-cg33>
<http://purl.org/dc/terms/description> "Ce jeu de données contient une liste d'équipement
sportifs décrit par leur nom, etc etc." .
<http://catalogue.datalocale.fr/dataset/liste-equipements_sportifs-cg33>
<http://purl.org/dc/terms/name> "Liste des équipements sportifs du Département de la
Gironde" .
<http://catalogue.datalocale.fr/dataset/liste-equipements_sportifs-cg33>
<http://purl.org/dc/terms/publisher> _:b0 .
<http://catalogue.datalocale.fr/dataset/liste-equipements_sportifs-cg33>
<http://www.w3.org/1999/02/22-rdf-syntax-ns#type> <https://json-ld.org/playground/Dataset> .
<http://catalogue.datalocale.fr/dataset/liste-equipements_sportifs-cg33>
<http://www.w3.org/ns/dcat#distribution> _:b1 .
_:b0 <http://purl.org/dc/terms/name> "M. Namegohere" .
_:b0 <http://www.w3.org/1999/02/22-rdf-syntax-ns#type> <http://xmlns.com/foaf/0.1/Person> .
_:b1 <http://purl.org/dc/terms/format> "text/csv" .
_:b1 <http://purl.org/dc/terms/issued> "2001-01-15" .
_:b1 <http://purl.org/dc/terms/license> "http://data.lacub.fr/pdf/ODbL_fr.pdf" .
_:b1 <http://purl.org/dc/terms/name> "exportencsv" .
_:b1 <http://purl.org/dc/terms/rights> "...rightsinfohere" .
_:b1 <http://www.w3.org/1999/02/22-rdf-syntax-ns#type>
<http://www.w3.org/ns/dcat#Distribution> .
_:b1 <http://www.w3.org/ns/dcat#accessURL>
"http://catalogue.datalocale.fr/dataset/liste-equipements_sportifs-cg33/resource/1234WGS84"
.
_:b1 <http://www.w3.org/ns/dcat#byteSize> "3MB" .
_:b1 <http://www.w3.org/ns/dcat#downloadURL>
"https://data.some.org/the/actual/catalog/datasets/1/resources/fichier.csv" .
_:b1 <http://www.w3.org/ns/dcat#mediaType> "text/csv" .
_:b1 <http://xmlns.com/foaf/0.1/status> "basededonnéesencoursd'enrichissement" .
```

Example 6: exactly as above but with @context set to <http://schema.org/>

See also:

- [Example as published in gist.](#)
- Google SDTT [partial understanding of this example.](#)

```
{
"@context": "http://schema.org/",

"@type": "Dataset",
"@id": "http://catalogue.datalocale.fr/dataset/liste-equipements_sportifs-cg33",
"name": "Liste des équipements sportifs du Département de la Gironde",
"description": "Ce jeu de données contient une liste d'équipement sportifs décrit par leur
nom, etc etc.",
"publisher": {
"@type": "Person",
"name": "M. Namegohere"
},
"distribution": {
"@type": "DataDownload",
"url":
"http://catalogue.datalocale.fr/dataset/liste-equipements_sportifs-cg33/resource/1234WGS84"
,
"dcterms:format": "text/csv",
"licence": "http://data.lacub.fr/pdf/ODbL_fr.pdf",
"contentSize": "3MB",
"contentUrl": "https://data.some.org/the/actual/catalog/datasets/1/resources/fichier.csv",
"name": "exportencsv",
"datePublished": "2001-01-15",
"dcterms:rights": "...rightsinfohere",
"encodingFormat": "text/csv",
"foaf:status": "basededonnéesencoursd'enrichissement"
}
}
```

Schema.org triples:

- <http://catalogue.datalocale.fr/dataset/liste-equipements_sportifs-cg33>
<http://schema.org/description> "Ce jeu de données contient une liste d'équipement sportifs décrit par leur nom, etc etc." .
- <http://catalogue.datalocale.fr/dataset/liste-equipements_sportifs-cg33>
<http://schema.org/distribution> _:b0 .
- <http://catalogue.datalocale.fr/dataset/liste-equipements_sportifs-cg33>
<http://schema.org/name> "Liste des équipements sportifs du Département de la Gironde" .
- <http://catalogue.datalocale.fr/dataset/liste-equipements_sportifs-cg33>
<http://schema.org/publisher> _:b1 .
- <http://catalogue.datalocale.fr/dataset/liste-equipements_sportifs-cg33>
<http://www.w3.org/1999/02/22-rdf-syntax-ns#type> <http://schema.org/Dataset> .
- _:b0 <http://purl.org/dc/terms/format> "text/csv" .
- _:b0 <http://purl.org/dc/terms/rights> "...rightsinfohere" .
- _:b0 <http://schema.org/contentSize> "3MB" .
- _:b0 <http://schema.org/contentUrl>
<https://data.some.org/the/actual/catalog/datasets/1/resources/fichier.csv> .
- _:b0 <http://schema.org/datePublished> "2001-01-15"^^<http://schema.org/Date> .
- _:b0 <http://schema.org/encodingFormat> "text/csv" .
- _:b0 <http://schema.org/licence> "http://data.lacub.fr/pdf/ODbL_fr.pdf" .
- _:b0 <http://schema.org/name> "exportencsv" .
- _:b0 <http://schema.org/url>
<http://catalogue.datalocale.fr/dataset/liste-equipements_sportifs-cg33/resource/1234 WGS84> .
- _:b0 <http://www.w3.org/1999/02/22-rdf-syntax-ns#type>
<http://schema.org/DataDownload> .
- _:b0 <http://xmlns.com/foaf/0.1/status> "basededonnéesencoursd'enrichissement" .
- _:b1 <http://schema.org/name> "M. Namegohere" .
- _:b1 <http://www.w3.org/1999/02/22-rdf-syntax-ns#type> <http://schema.org/Person> .

Part 2: Mappings in the graph

The above examples all show how simple mappings can be achieved within surface syntax of JSON-LD. It is important to understand the tradeoffs of attempting mappings at this level vs at other abstractions based on the underlying triples/graph.

TODO: SPARQL between (2) and (3) idioms; ShEx/SHACL patterns to define these shapes, RDFS/OWL mappings.

SHACL and ShEx

- ShEx for DCAT, DCAT-AP and Schema.org Datasets ([experimentation](#))
- [SHACL work from DCAT-AP community](#)

Misc links

- 2011 notes ("namespace zoo", https://github.com/danbri/Zoo/blob/master/zoo.foaf.tv/zoo/raw_manifest.txt) looked at superimposing various common RDF vocabularies, identifying term conflicts etc.
- [Schema.org-related issues in DXWG](#),
 -

Misc notes

Historically this has been associated with usability difficulties, relating i) to problems of discovery (vocabularies are scattered, disconnected, and embody different design principles ii) markup complexity, e.g. need to remember which terms are from which ns.