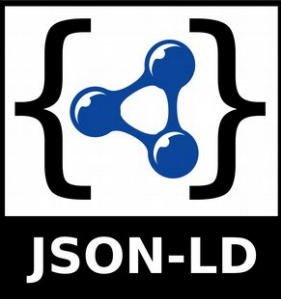


**JSON-LD**

**Aurelijus Banelis**



# is W3C standard



## JSON-LD 1.0

A JSON-based Serialization for Linked Data

W3C Recommendation 16 January 2014

**This version:**

<http://www.w3.org/TR/2014/REC-json-ld-20140116/>

**Latest published version:**

<http://www.w3.org/TR/json-ld/>

**Previous version:**

<http://www.w3.org/TR/2013/PR-json-ld-20131105/>

**Editors:**

[Manu Sporny](#), [Digital Bazaar](#)  
[Gregg Kellogg](#), [Kellogg Associates](#)  
[Markus Lanthaler](#), [Graz University of Technology](#)

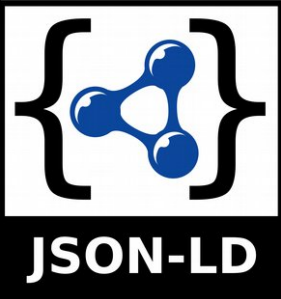
**Authors:**

[Manu Sporny](#), [Digital Bazaar](#)  
[Dave Longley](#), [Digital Bazaar](#)  
[Gregg Kellogg](#), [Kellogg Associates](#)  
[Markus Lanthaler](#), [Graz University of Technology](#)  
[Niklas Lindström](#)

# Examples

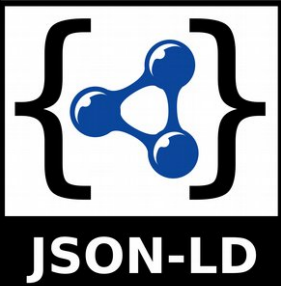
# Specification



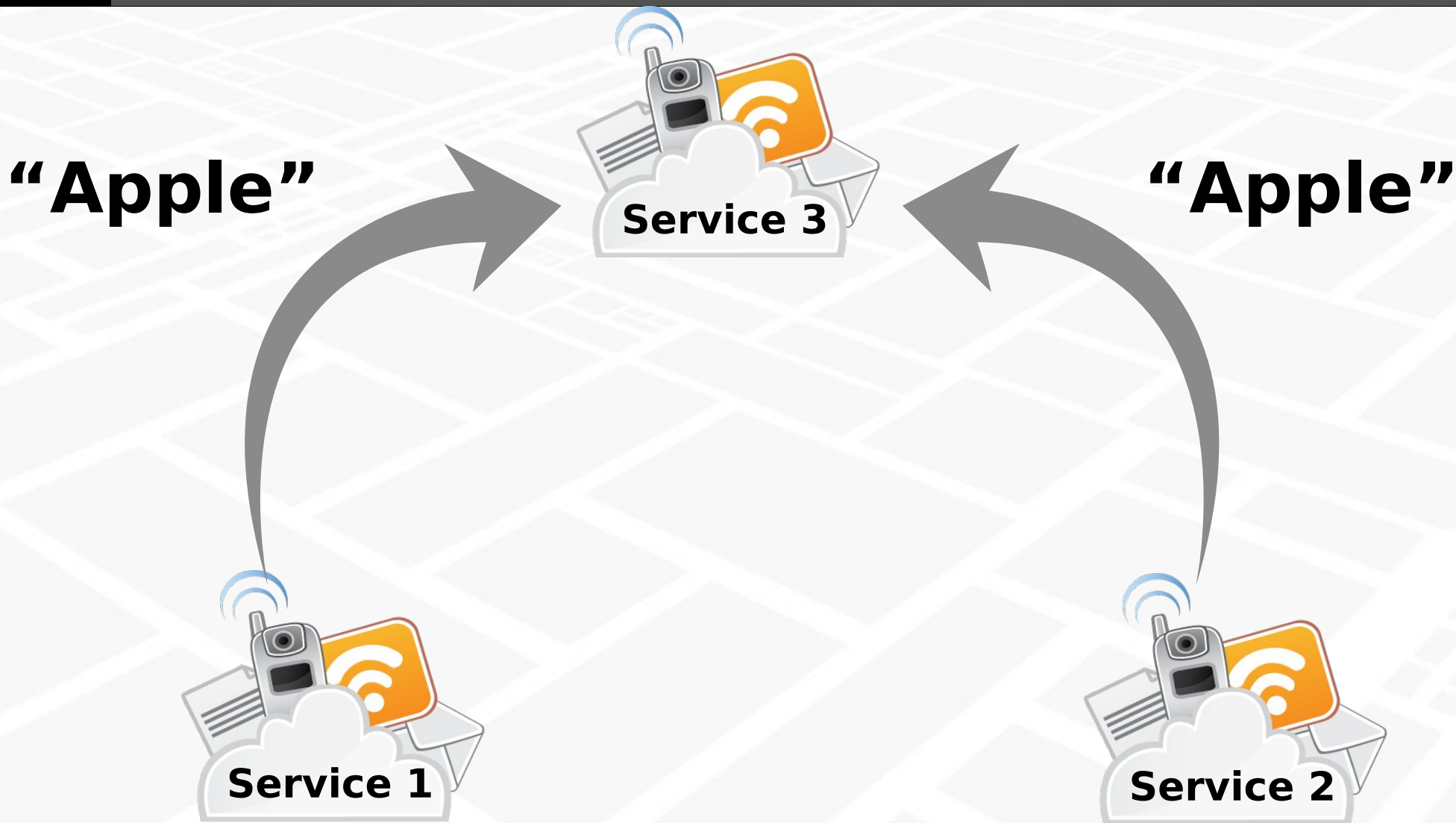


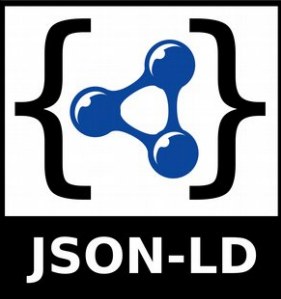
# solves naming problem



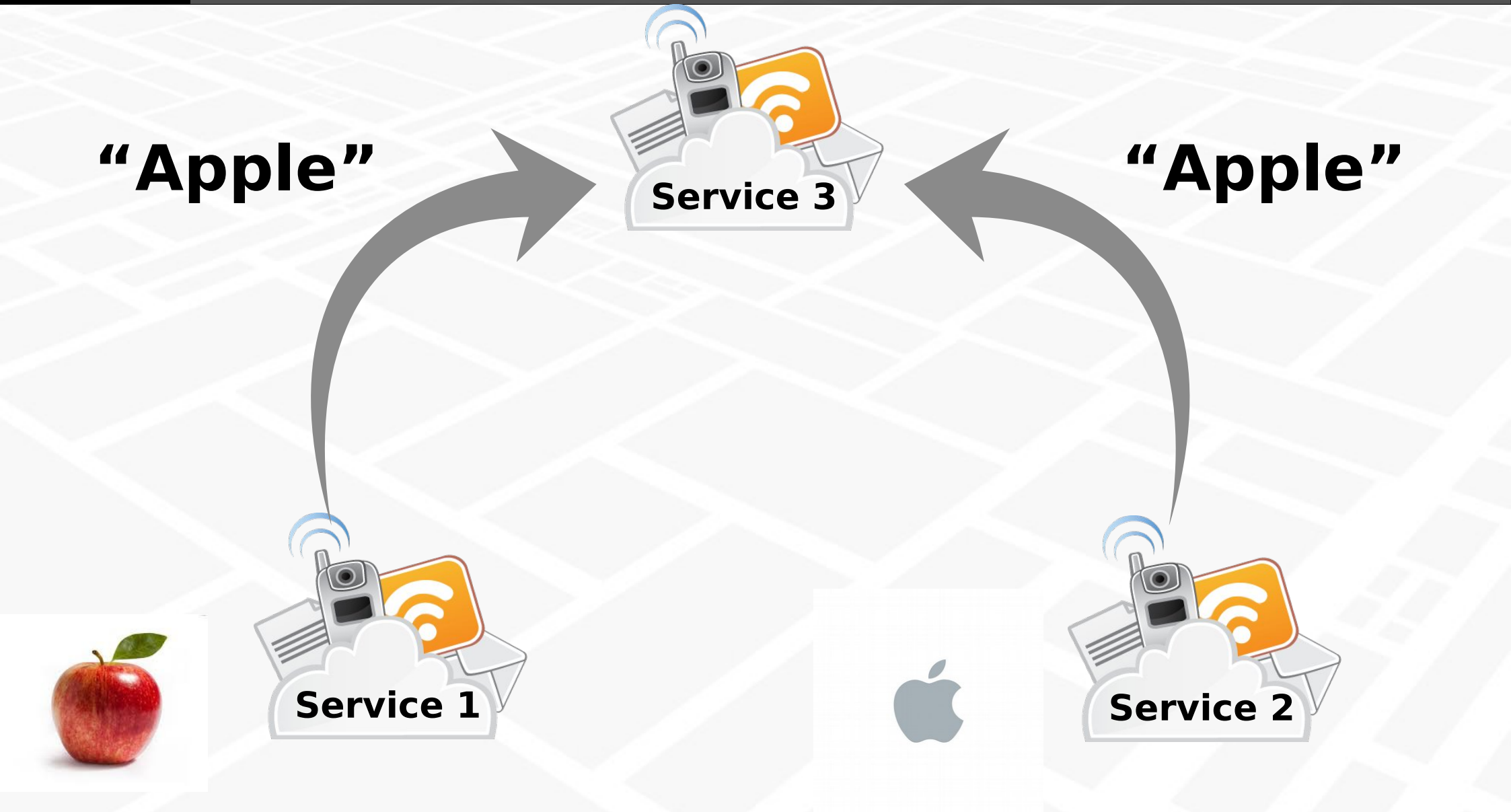


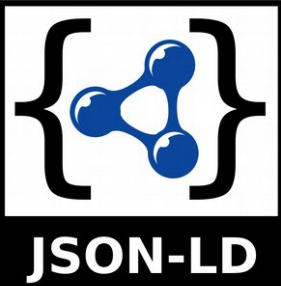
# solves naming problem





# solves naming problem

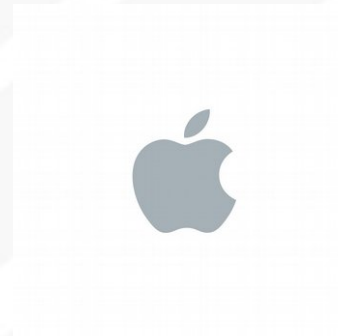


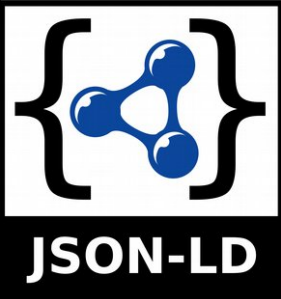


# solves naming problem

**“http://  
dreamatico.com/  
data\_images/  
Apple/  
apple-7.jpg”**

**“https://  
www.apple.com/  
v/home/  
bq/images/  
og.jpg”**





# solves naming problem

“dc:apple-7.jpg”

“ac:og.jpg”

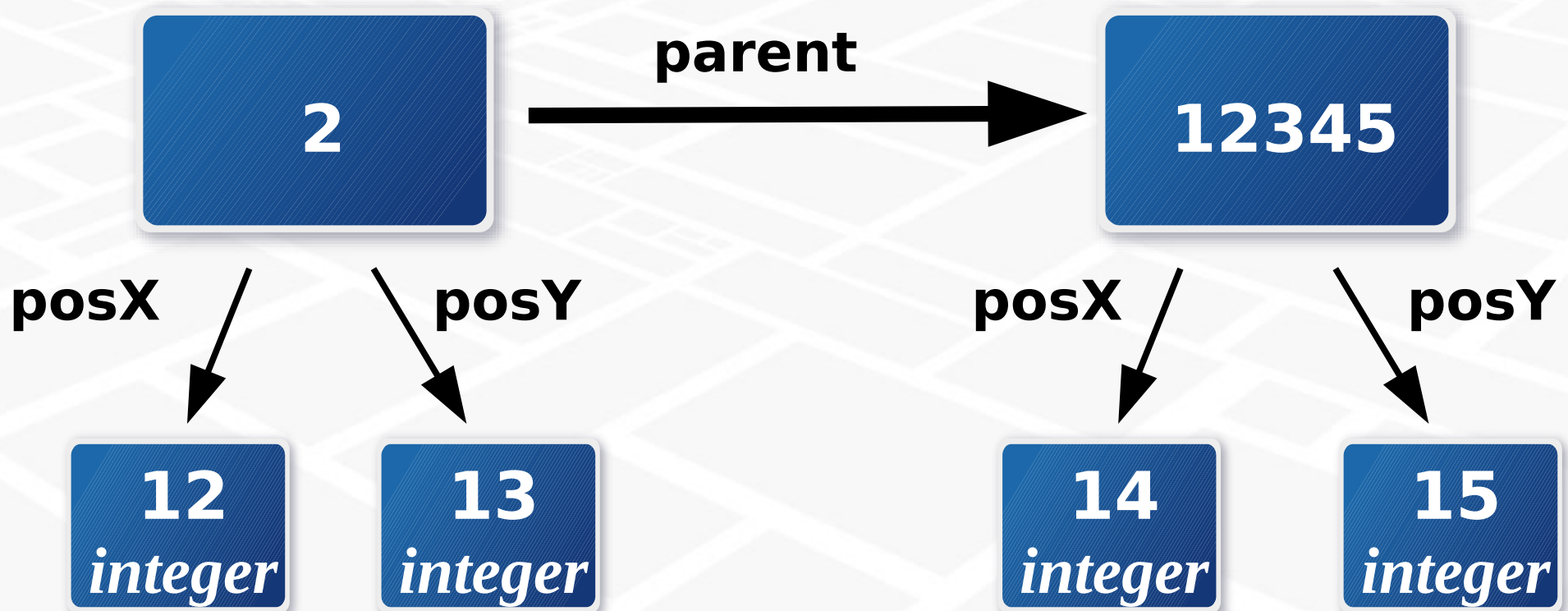
Service 3

Service 1

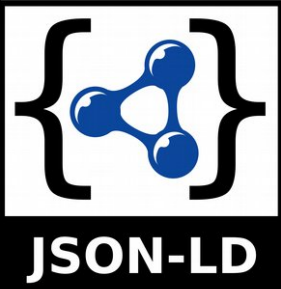
Service 2



# Linked data example

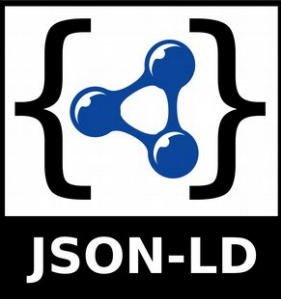






# From simple JSON

```
{  
  "nodes": [  
    {  
      "id": "12345",  
      "posX": 12,  
      "posY": 14,  
      "parent": null  
    },  
    {  
      "id": "2",  
      "posX": 15,  
      "posY": 16,  
      "parent": "12345"  
    }  
  ]  
}
```



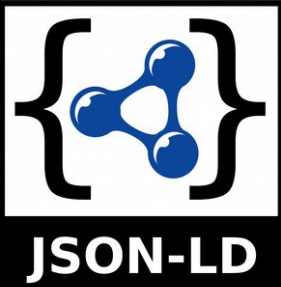
# To JSON-LD

```
{
  "@context": "http://auginte.com/ns/s.jsonld",
  "nodes": [
    {
      "@id": "gn:12345",
      "posX": 12,
      "posY": 14,
      "parent": null
    },
    {
      "@id": "gn:2",
      "posX": 15,
      "posY": 16,
      "parent": "gn:12345"
    }
  ]
}
```

gn:

@id

@context



# For computer

```
[{"http://auginte.com/ns/v0.6/node/list": [
  {"@id": "auginte://localhost/zooming/nodes/12345",
    "http://auginte.com/ns/v0.6/node/x": [
      {"@type": "http://www.w3.org/2001/XMLSchema#integer",
        "@value": 12}],
    "http://auginte.com/ns/v0.6/node/y": [
      {"@type": "http://www.w3.org/2001/XMLSchema#integer",
        "@value": 14
      }
    ]
  },
  {"@id": "auginte://localhost/zooming/nodes/2",
    "http://auginte.com/ns/v0.6/reference/node/parent": [
      {"@id": "auginte://localhost/zooming/nodes/12345"}
    ],
    "http://auginte.com/ns/v0.6/node/x": [
      {"@type": "http://www.w3.org/2001/XMLSchema#integer",
        "@value": 15}],
    "http://auginte.com/ns/v0.6/node/y": [
      {"@type": "http://www.w3.org/2001/XMLSchema#integer",
        "@value": 16
      }
    ]
  }
]}
```

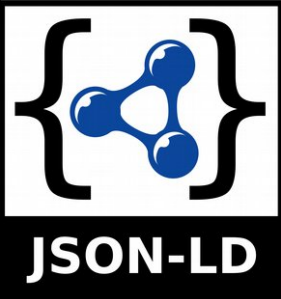
key

value

type

<http://json-ld.org/playground/index.html>

<https://github.com/aurelijusb/example-jsonld-php/>



# Why and where (not) to use

\*Personal opinion



**Learn**

JSON-LD  
Playground



**PHP**

Libraries



**Semantic**

**WEB**

RDF  
compatible



**SEO**

As microdata  
(not all)

2<sup>nd</sup> fetch  
for context

**REST**



OrientDB  
export JSON

**Storage**



Scala.js  
Prickle

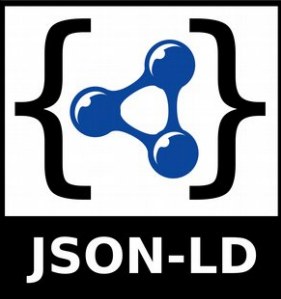
**Frontend  
Backend**



Protobuf  
Thrift

**Cross  
language**





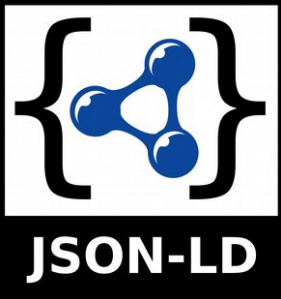
# Conclusion

**Do not reinvent the wheel**

**Use standards**

**For right job**

**There is no one-fits-all solution**



# Questions?

Do not reinvent the wheel

**Use standards**

**For right job**

There is no one-fits-all solution

**Slides already at: [aurelijus.banelis.lt](http://aurelijus.banelis.lt)**

# References and useful links

- <http://json-ld.org/>
- <https://github.com/aurelijusb/example-jsonld-php/>
- <https://github.com/lanthaler/JsonLD>
- <http://www.w3.org/TR/json-ld/>
- <https://developers.google.com/webmasters/business-location-pages/schema.org-examples>
- <https://schema.org>
- <https://developers.google.com/structured-data/testing-tool/>
- <https://github.com/json-ld/json-ld.org/wiki/Users-of-JSON-LD>
- <http://www.markus-lanthaler.com/hydra/>
-