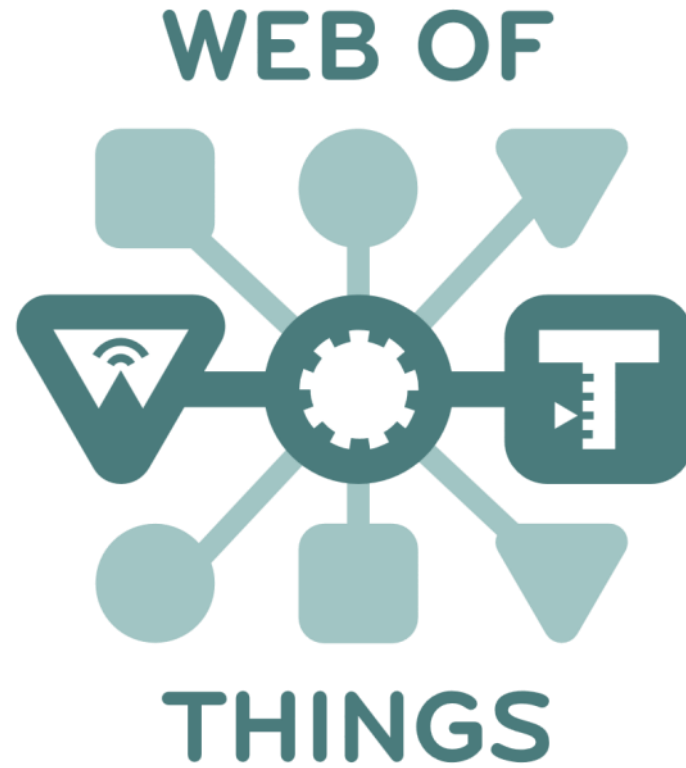




JSON-LD Joint Session

Lyon, France, October 2018

DEFINING @ID OF THING

Defining @id of Thing without @context in TD

- "id" field in TD should define the unique identifier of the Thing
- Goal: It should set the @id of the top-level Thing node
- This would actually require

```
{  
  "@context": { "@base": "urn:dev:org:32473-0815" },  
  "name": "MyThing",  
  ...  
}
```

- We want to enable TDs to work without explicit @context field
- Remote context is applied based on the application/td+json media type

```
{  
  "id": "urn:dev:org:32473-0815",  
  "name": "MyThing",  
  ...  
}
```

Proposal

- Use the following declaration in the remote TD context

`"@base": "@id"`

- (and an alias "id" for the JSON-LD keyword)

`"id": "@id"`

- The "@base": "@id" declaration would also help with the next issue...

@ID COLLISION

@id Collision of Nested Object Keys

TD context uses "@container": "@id" declaration to use objects instead of arrays

TD	JSON-LD*	RDF Triples
<pre>{ "id": "urn:dev:org:32473-0815", ... "properties": { "PumpStatus": { "writable": false, "type": "object", "properties": { "PumpStatus": { "type": "boolean" } } } } ... }</pre>	<pre>{ "id": "urn:dev:...", ... "properties": [{ "@id": "PumpStatus", "writable": false, "type": "object", "properties": [{ "@id": "PumpStatus", "type": "boolean" }] }] ... }</pre>	<pre><urn:dev:org:32473-0815> <http://www.w3.org/ns/td#properties> <urn:dev:org:32473-0815/PumpStatus> . <urn:dev:org:32473-0815/PumpStatus> <http://www.w3.org/ns/td#writable> "false" . <urn:dev:org:32473-0815/PumpStatus> <http://www.w3.org/ns/json-schema#type> "object" . <urn:dev:org:32473-0815/PumpStatus> <http://www.w3.org/ns/td#properties> <urn:dev:org:32473-0815/PumpStatus> . <urn:dev:org:32473-0815/PumpStatus> <http://www.w3.org/ns/json-schema#type> "boolean" .</pre>

Interaction Property **PumpStatus** URI is overridden by Data sub-property **PumpStatus**

* TD object keys resolved to @id predicates (from "@container": "@id" declaration)

Issue

- "@base": "@id" does not really help because of URI resolution algorithm
 - urn:dev:org:32473-0815 + PumpStatus
→ urn:dev:org:32473-0815/PumpStatus
 - urn:dev:org:32473-0815/PumpStatus + PumpStatus
→ urn:dev:org:32473-0815/PumpStatus
- Relative @id require slashes
 - urn:dev:org:32473-0815/PumpStatus/ + PumpStatus
→ urn:dev:org:32473-0815/PumpStatus/PumpStatus
 - urn:dev:org:32473-0815/PumpStatus + ./PumpStatus
→ urn:dev:org:32473-0815/PumpStatus/PumpStatus
- That would mean non-idiomatic keys: ... "properties": { "PumpStatus/": { ...

Proposal

- Use a declaration like

"@container": "@path"

- Maps tree structure of JSON to a URI path structure by inserting slashes
- Compacting would require prefix matching and reduction to relative URIs
- Allows for idiomatic JSON! 😊

INTERNATIONALIZATION

Issue: Direction (ltr vs rtl)

- TD would prefer "@container": "@language" for the following syntax

```
"title": {  
  "en": "Brightness",  
  "de": "Helligkeit"  
}
```

- Does not allow HTML markup, as "@type": "rdf:html" cannot be set
- Unicode encodes directions, but can fail
 - i18n list of what renders correctly
- Can provide text on limitations

REMOTE CONTEXT PRIVACY LEAK

Warning

- Loading remote contexts leaks information about what data is currently being processed or with what Things is being communicated
- XML makes use of resolvers that control what is actually fetched
- JSON-LD document loader with white-/blacklisting
- Provide information in security considerations

TD DELIVERABLE AND TIMELINE

Tight Schedule

- End of current charter: 31 Dec 2018 → Extension until 30 June 2018
- Candidate REC in Jan 2018
- Proposed REC about April 2018
- REC latest in June 2018
- JSON-LD WG end of charter: June 2020
- TD must reference JSON-LD 1.0 REC and define algorithm
 - Justifies use of concrete media type instead of JSON-LD with profile parameter
 - Update can provide revised reference and algorithm for JSON-LD 1.1 once REC

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