

TD Restructuring

sebastian.kaebisch@siemens.com

Logistics

- Web Meeting each Wednesday 9-10:30 am (CEST)
- IRC: #wot-td
- this Web meeting is scheduled until 1. November
 - enough time for next plugfest
 - setup current practice document
- Add your proposals as pull request in <https://github.com/w3c/wot/tree/master/proposals/td-restructuring>
- Use github for issue and proposal discussion <https://github.com/w3c/wot/issues>

Motivation for this TF

- Many feedbacks from
 - plugfests
 - OCF
 - EU BIG IoT
 - mailing lists
 - github issues
 - ...

Problem Statements I / II

1. Property vs. Actions (and vs. Events)

- <https://github.com/w3c/wot/blob/master/proposals/td-restructuring/README.md>
- <https://github.com/w3c/wot/issues/247>

à Is there a clear definition vs open to the developer?
Not only a TD topic!

2. Properties/Actions/Events are not self-contained

- <https://github.com/w3c/wot/blob/master/proposals/td-restructuring/README.md>
- <https://github.com/w3c/wot/issues/251>

à Global vs. local based information

Problem Statements II / II

3. Explicit vs. Implicit protocol knowledge

- <https://github.com/w3c/wot/tree/master/proposals/explicit-bindings>
- is an abstraction possible for all communication protocols (HTTP, MQTT, BACnet,...) and its usage in application?

4. Specify encodings

- <https://github.com/w3c/wot/issues/251>
- à Use standardized mimetypes vs „JSON“, „XML“, ...

Classification

	Restructuring necessary	Renaming (vocabulary / states) necessary	New vocabulary required?
1) Property vs Action vs Event	maybe	No	no
2) Self-contained	yes	No	yes
3) Explicit vs Implicit	no	No	yes
4) Specify encodings	no	yes	no

Today's Basic TD Structure

- name (e.g., name of the Thing)
- url
- encoding
- properties/actions/events
 - @type
 - name
 - hrefs
 - valueType/inputType/outputType
 - writable (only for properties)

Proposed Basic TD Structure (similar to TD Version 1)

- name (e.g., name of the Thing)
- interaction (or name it offering?)
 - @type (interaction model property and action is characterized here)
 - name
 - endpoint
 - url
 - encoding
 - valueType/inputType/outputType
 - writable

TD Sample (without external semantics)

```
{
  "@context": "http://w3c.github.io/wot/w3c-wot-td-context.jsonld",
  "name" : "MyLED",
  "interactions": [
    {
      "@type": ["Property", "Event"],
      "name": "status",
      "outputData": {"valueType": { "type": "string" }},
      "endpoint" : {
        "urls" : ["coap://192.163.0.2/status"],
        "encoding" : ["application/json"]
      }
    }
  ],
  {
    "@type": ["Action"],
    "name": "ledOnOff",
    "inputData": {"valueType": { "type": "boolean" }},
    "endpoint" : {
      "urls" : ["coap://192.163.0.2/onOff", "http://192.163.0.2/onOff"],
      "encoding" : ["application/text"]
    }
  }
]
```