o Protocol Mapping   5

WOT server

?

WOT server

GW

WOT device   IOT device

o REST API model as starting model
thing
o description language

Proposal?
· minimum requirements?
· interaction bc
o Architecture Starting Point
o Protocol Mapping
o APIs as Rest + X
o Security (Access Control)
o Resource Management (resolve conflict)
o Nicer name for WOT server
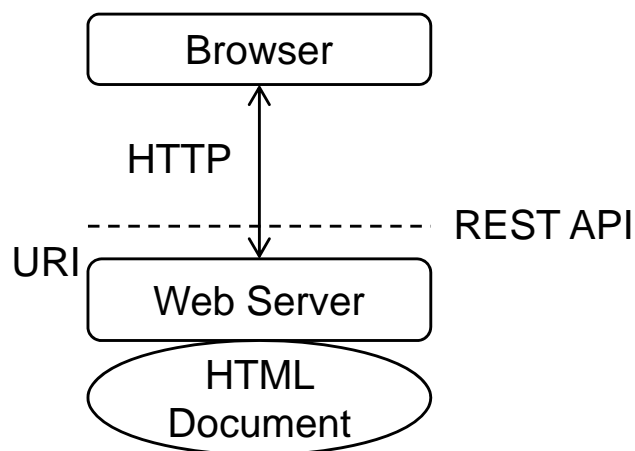
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What is Protocol Mapping?

- WoT framework assumes "Web browsers" access and control "Things".
- Each industry field already has wide variety of concrete IoT protocols.
- It might be impossible that web browsers directly handle all of IoT protocols.

- It should be better to introduce "abstract protocol" handled by web browsers.
- The framework, that a module in WoT architecture maps and translates "abstract protocol" to things accessible concrete IoT protocol, also should be introduced.

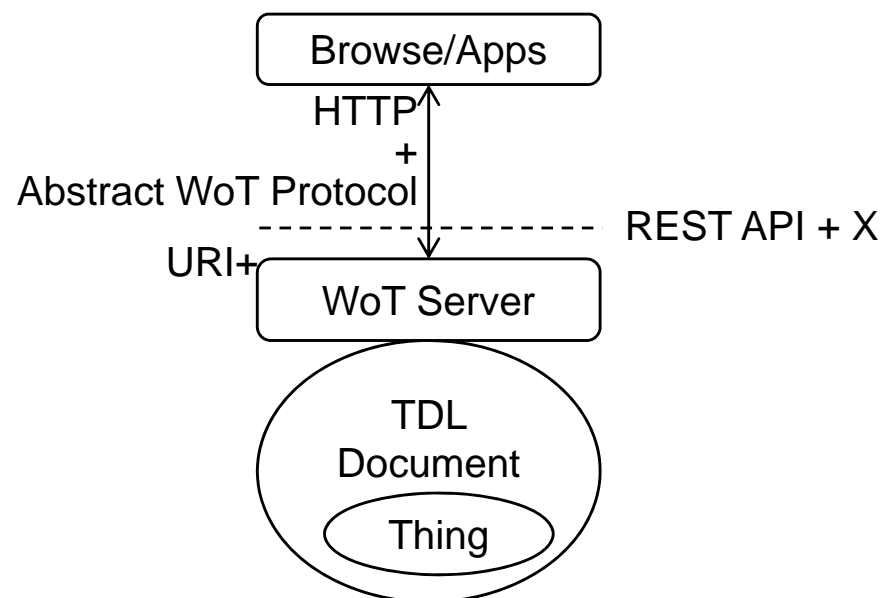## The model for Protocol Mapping

- WoT high level architectures and/or requirements for architecture **s** are proposed or implied through use case discussion at Munich F2F meeting.

- As starting point to discuss the model for protocol mapping, we should share common concept and image for WoT architectures (high level).
- And we should define "terminologies" properly to express common WoT architectures.

Comparison between Web and WoT skeleton architecture
(as starting point for high level architecture image sharing)

Web skeleton architecture.

Browser

HTTP

- - - - - - - - - - - - - - - - REST API

URI

Web Server

HTML Document

WoT skeleton architecture.

Browse/Apps

HTTP
+
Abstract WoT Protocol

- - - - - - - - - - - - - - - - REST API + X
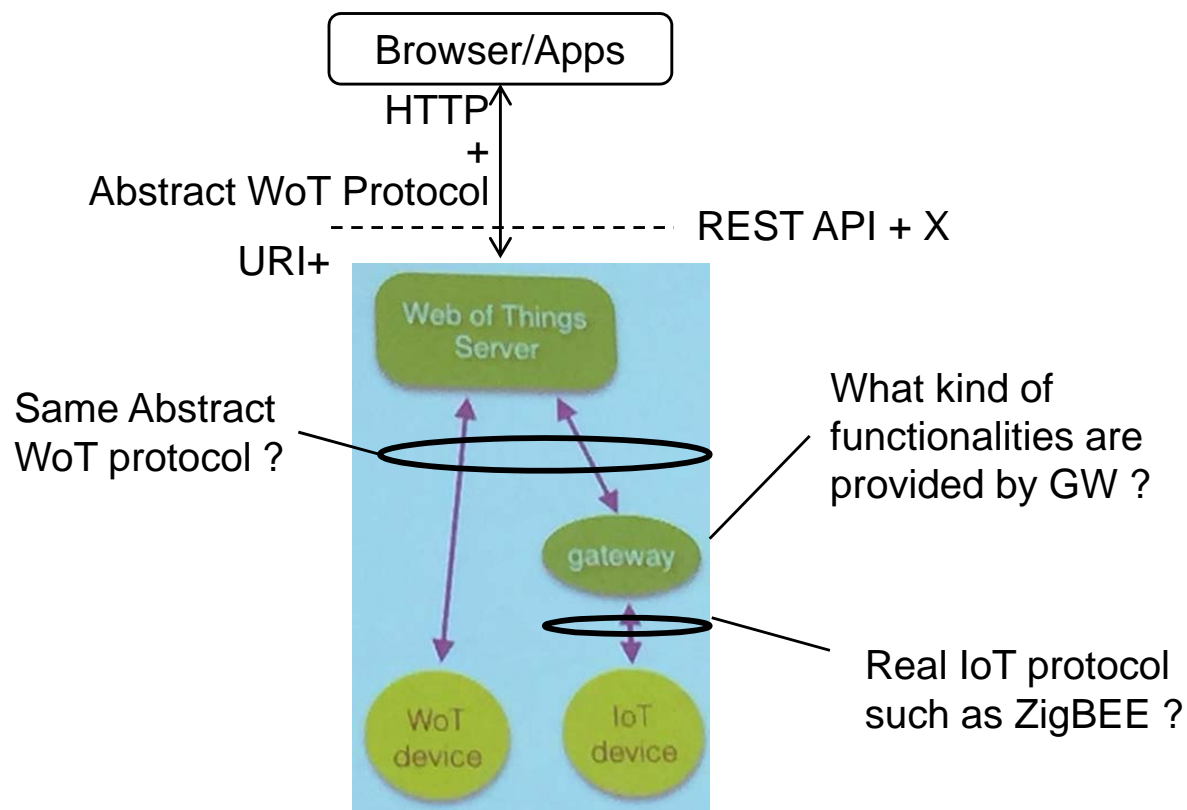
URI+

WoT Server

TDL Document

Thing

- What is the minimum requirement for (high level) WoT Server ?
- And we should share the terminologies definition.
- WoT Server is App or not ?

WoT finer architecture

- (high level) WoT Server could be defined by combined finer components to make it easier to map skeleton architecture to real world. (One better start point candidate is Dave's proposal at Apr.20th.)

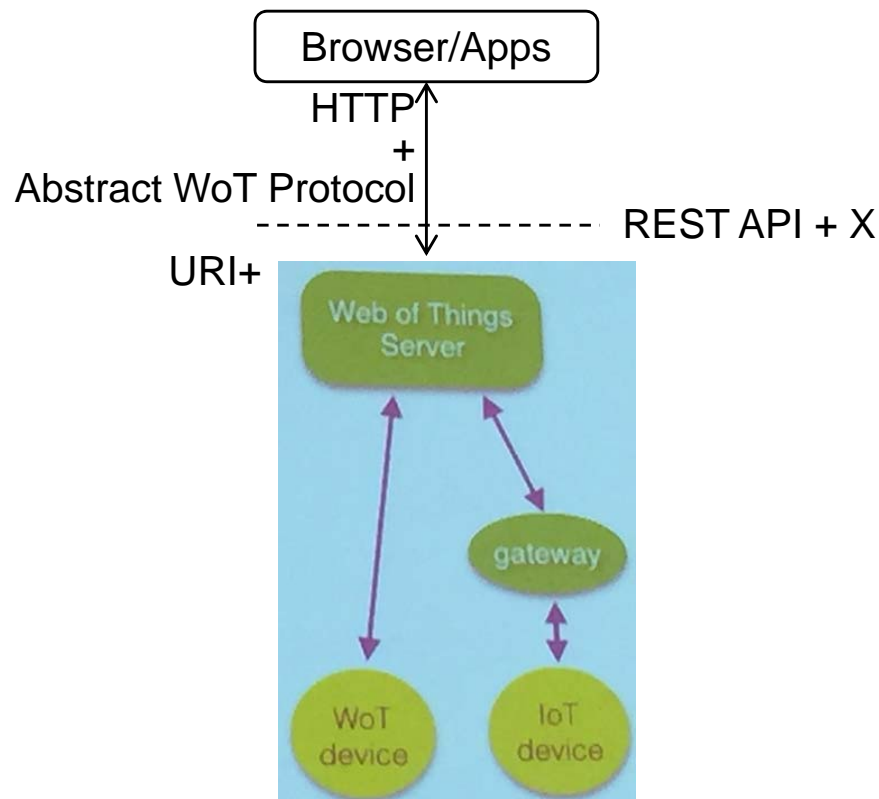WoT finer architecture.

Browser/Apps

HTTP
+
Abstract WoT Protocol

REST API + X

URI+

Web of Things Server

Same Abstract WoT protocol ?

What kind of functionalities are provided by GW ?

gateway

Real IoT protocol such as ZigBEE ?

WoT device

IoT device

Take care issues

- In finer architecture, which module should do
  - (a) Protocol Mapping between abstract WoT protocol and IoT protocol
  - (b) Access Control that who and/or what object can access things
  - (c) Resource Management of finite real resources
  - (d) Constraint device requirements

WoT finer architecture.

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