

Joint F2F of  
W3C IG on Web of Things  
and  
IRTF Thing-toThing pRG

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# The joint F2F

- ~35 participants from IRTF and W3C
- 2 day meeting
- Co-located with IETF 93 in Prague, Czech Rep.
- Organized in plenary sessions and two breakouts:
  - A: „REST as we use it“ -> „beyond REST“
  - B: Security and privacy
- Minutes/Results on Github:  
<https://github.com/t2trg/2015-ietf93>

# **OUTCOMES OF TRACK A – BEYOND REST**

Collected outcomes and ongoing discussions

# Outcomes in track A

- REST Cookbook
  - Best practices of RESTful APIs for Things
  - “Interface” between W3C and IRTF
- Plugfest of Hypermedia-driven applications
  - Of different implementations for a WoT scenario
  - “RESTfest”
- Subscription resource
  - Protocol-agnostic RESTful representation of subscriptions

# REST COOKBOOK

A collection of patterns and best practises  
for constrained RESTful applications

# REST cookbook

- Give a guidance on how to design RESTful APIs for WoT-applications
- „executive summaries“ on best practices and common patterns/anti-patterns
- Pragmatic „dos and don‘ts“
- Explanation of trade-offs
- To be bootstrapped on T2T github and result in an internet draft

# **CORE-APPLICATION PLUGTEST**

An exploratory approach for hypermedia-driven constrained applications

# Hypermedia-driven CoRE Applications

- Exploratory Plugtest
- 3-4 different implementations
- using hypermedia-driven interfaces
- single entry point url
- Simple lighting-automation scenario with 5 user stories
- Evolution-proofing by actual evolution

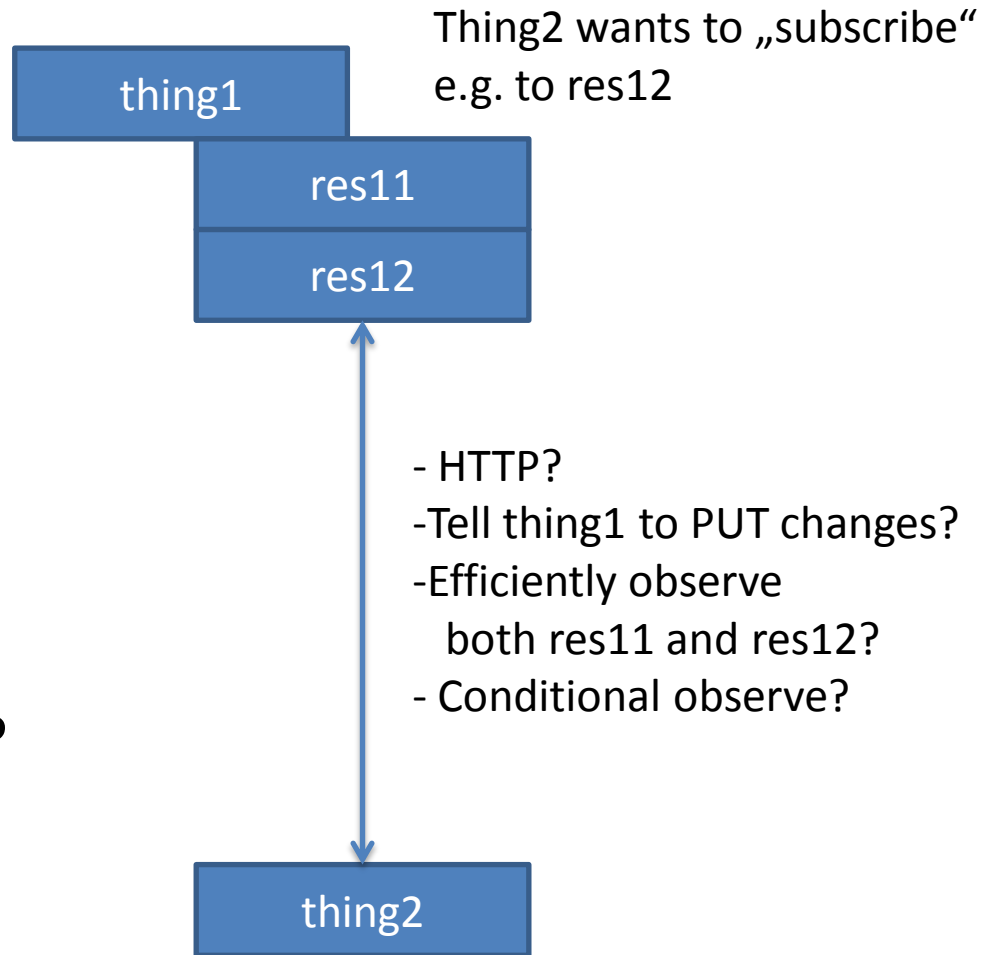


# SUBSCRIPTION RESOURCE

A proposal for protocol-agnostic RESTful subscriptions

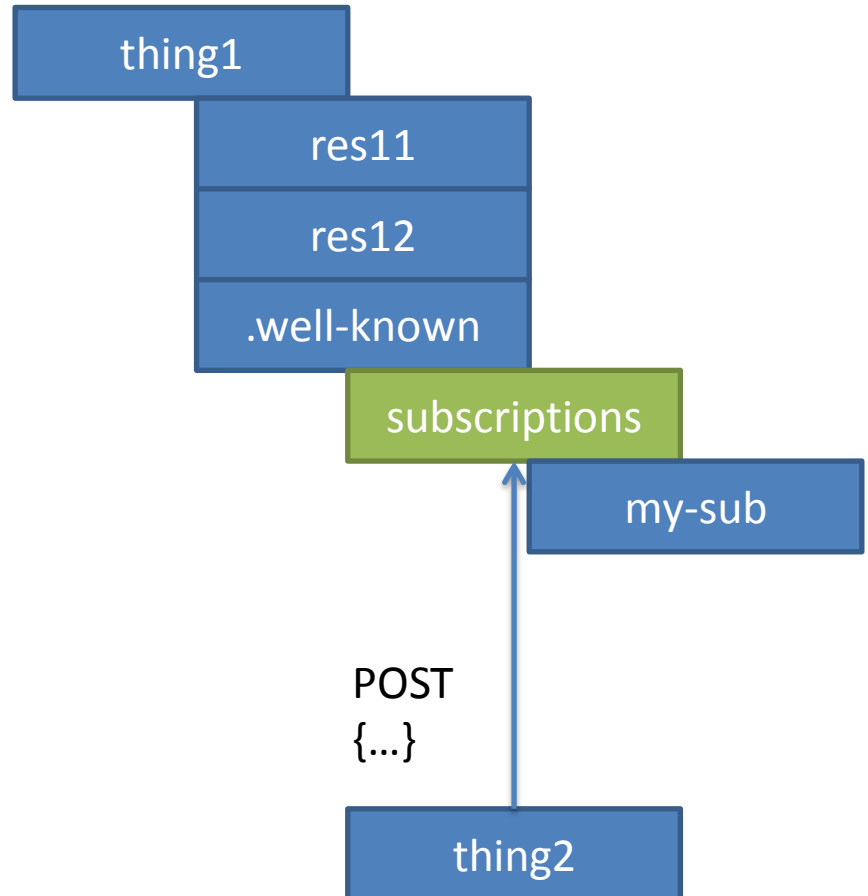
# Problem: RESTful but protocol-agnostic subscription

- Observe works for single-resource in coap
- How to:
  - Observe if threshold is exceeded
  - Observe multiple resources
  - Set max frequency
  - Be compatible with HTTP
  - Use reversed approach (à la PubSubHubbub)



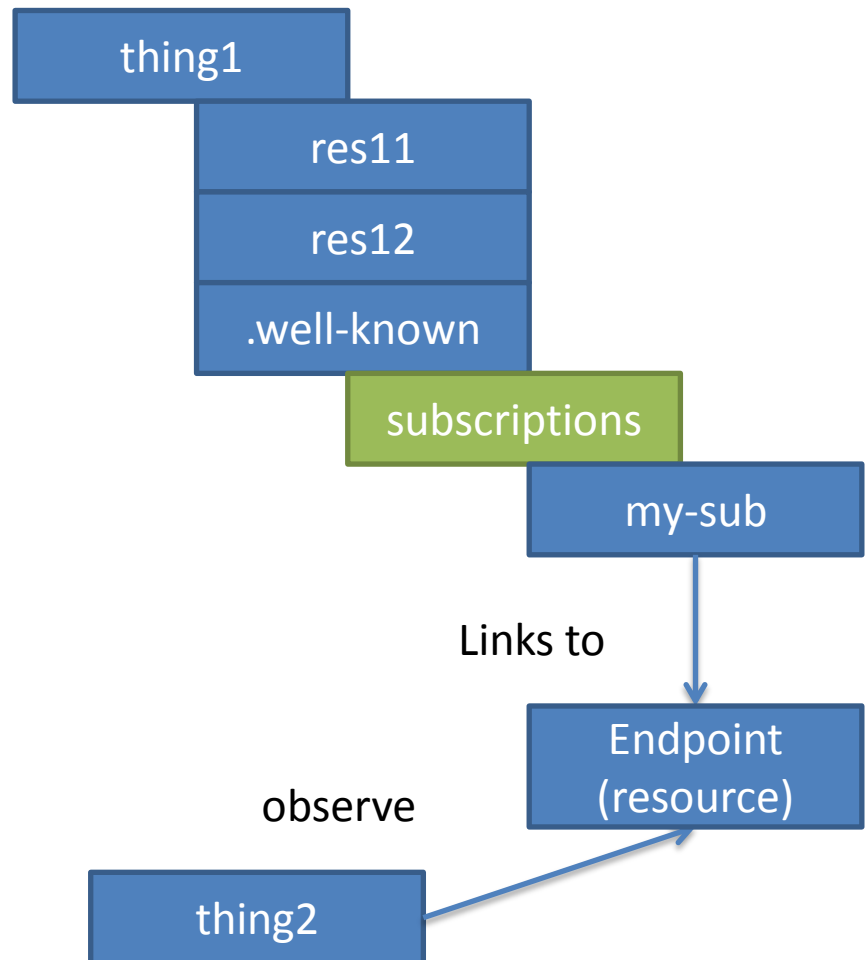
# Solution sketch

- Define a media type and/or resource interface for managing subscriptions
- Comprises:
  - Links to observed resource(s)
  - Subscription constraints (threshold, frequency, sync of events, higher semantics)
  - Endpoints for subscription



# Dataflow

- Subscription resource links to endpoint
- Subscription resource is protocol-agnostic
- Endpoint is protocol-specific



# Next Steps





- Cookbook
  - Adopt best practices for mapping and impl.
- Plugfest-implementations
  - Evaluate RESTful Protocol mappings
  - Join explorative implementation efforts
- Subscription resource
  - Incorporate in mapping
- Joint meeting in Japan is in discussion
  - Weekend after TPAC in Yokohama

**QUESTIONS?**

# Use case document - contributing

Document: <http://w3c.github.io/wot/wot-ucr.html>

Sources: <https://github.com/w3c/wot>

1. Go to repo  w3c / wot
2.  the repo to create your local copy
3. Add & commit your changes to your fork of wot / ucr-doc / wot-ucr.xml
4.  Discuss and review the changes in this comparison with others.
5. The pull request is 
6. The document is automagically updated