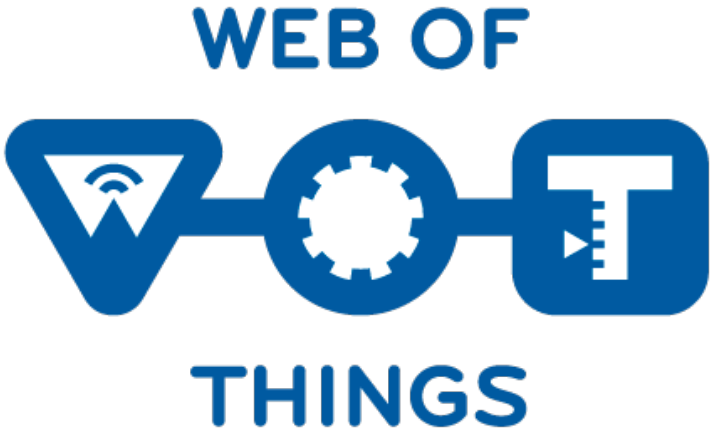
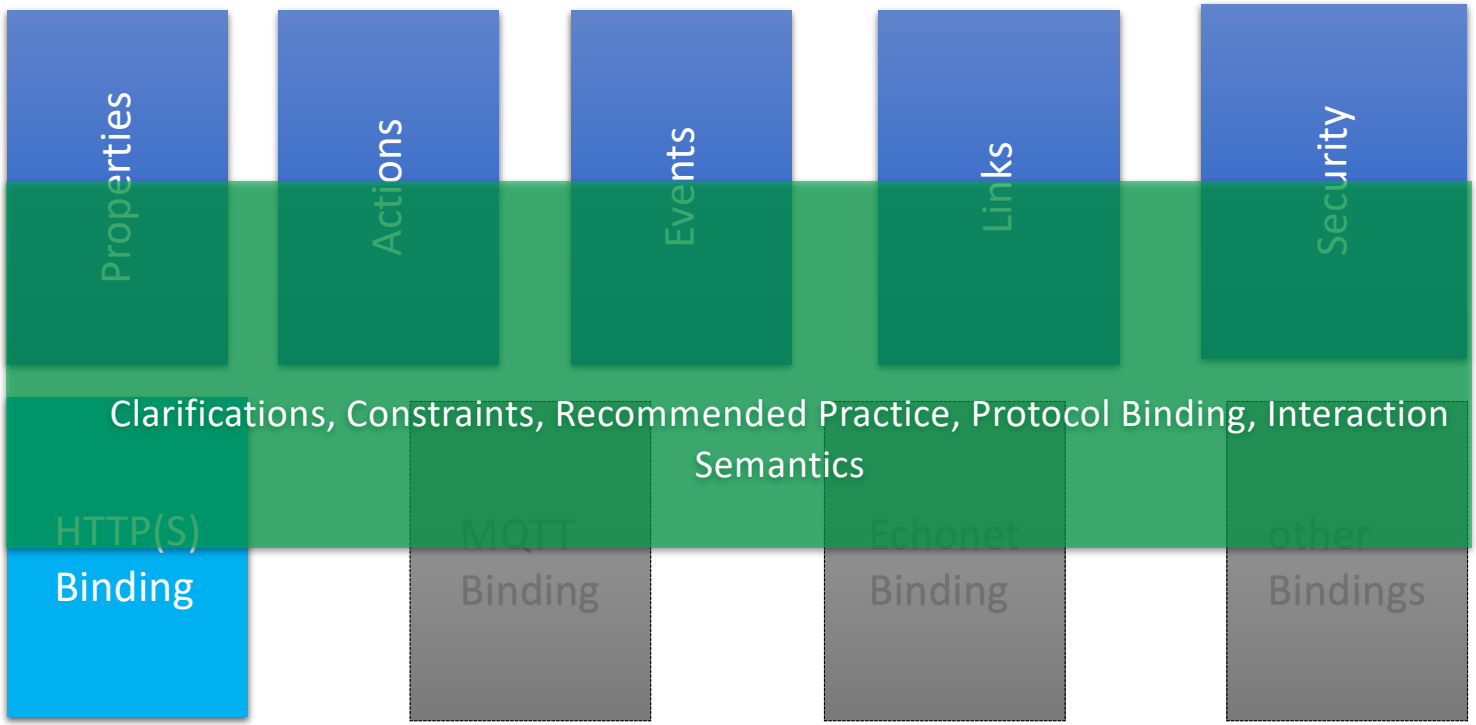



# WoT Profiles

Michael Lagally

23 March 2022

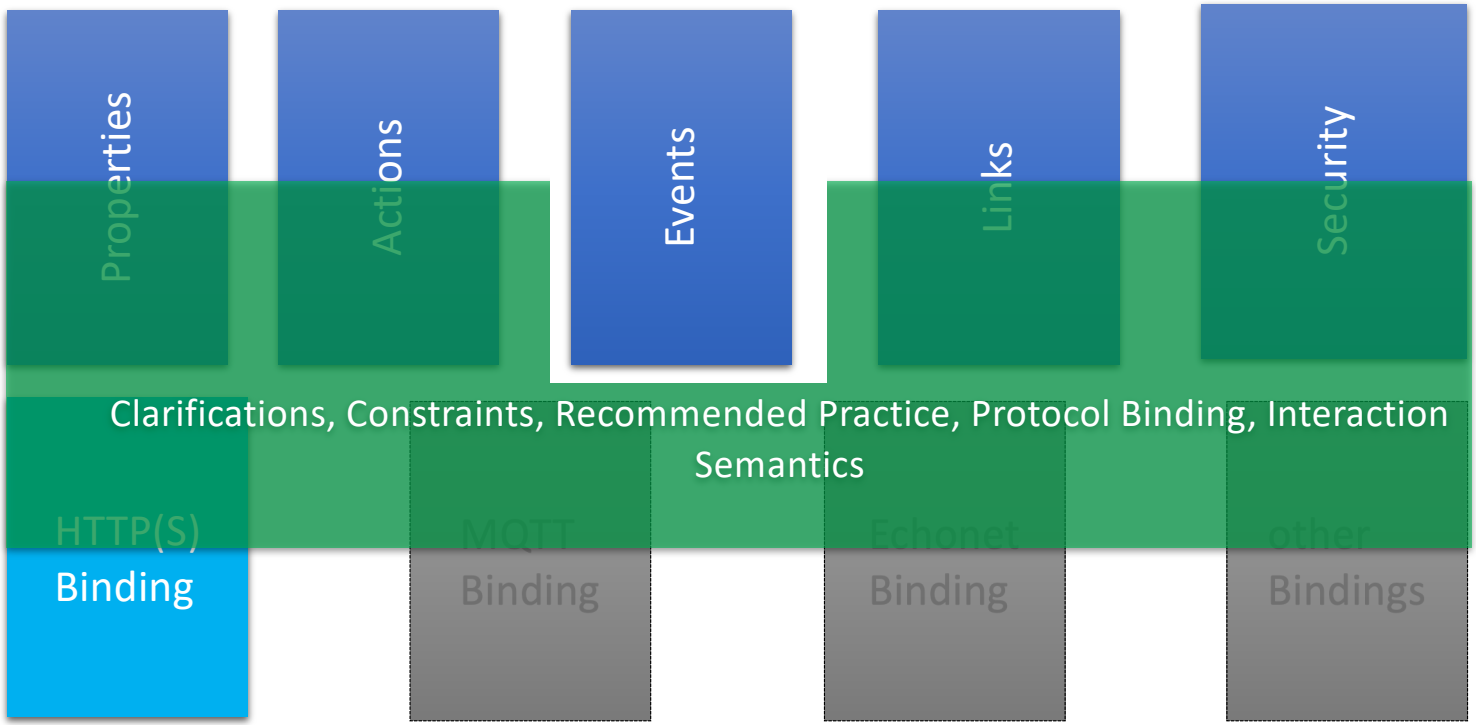
# Profile Concept



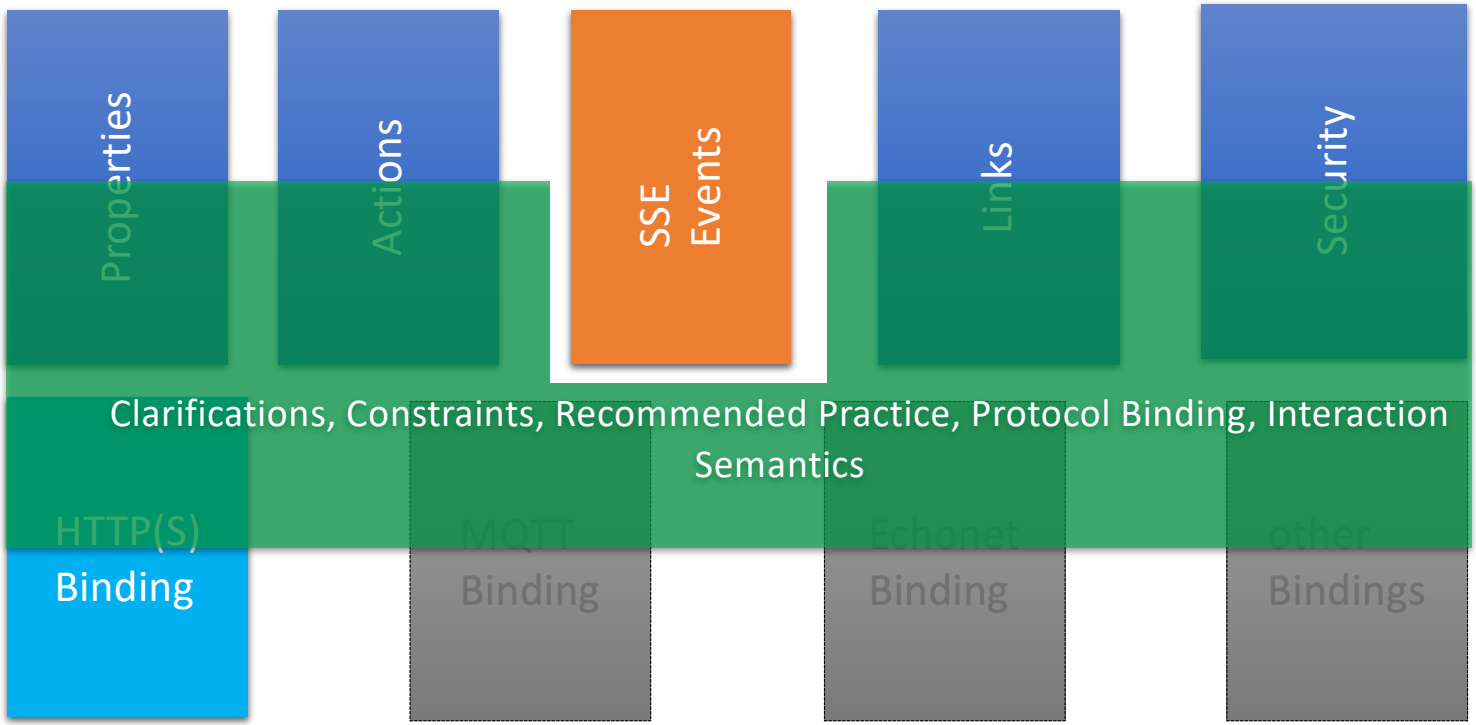
# General Principles (Ben’s proposal)

- We agree that in general a Thing or Consumer *could* be an HTTP client, an HTTP server, or both
- The Core Profile shouldn't *require* that any Thing or Consumer be both an HTTP client and an HTTP server because that is complicated (and in some cases impossible) to implement
- Each profile should ideally use only define a single protocol binding for each operation, to simplify implementation and guarantee interoperability

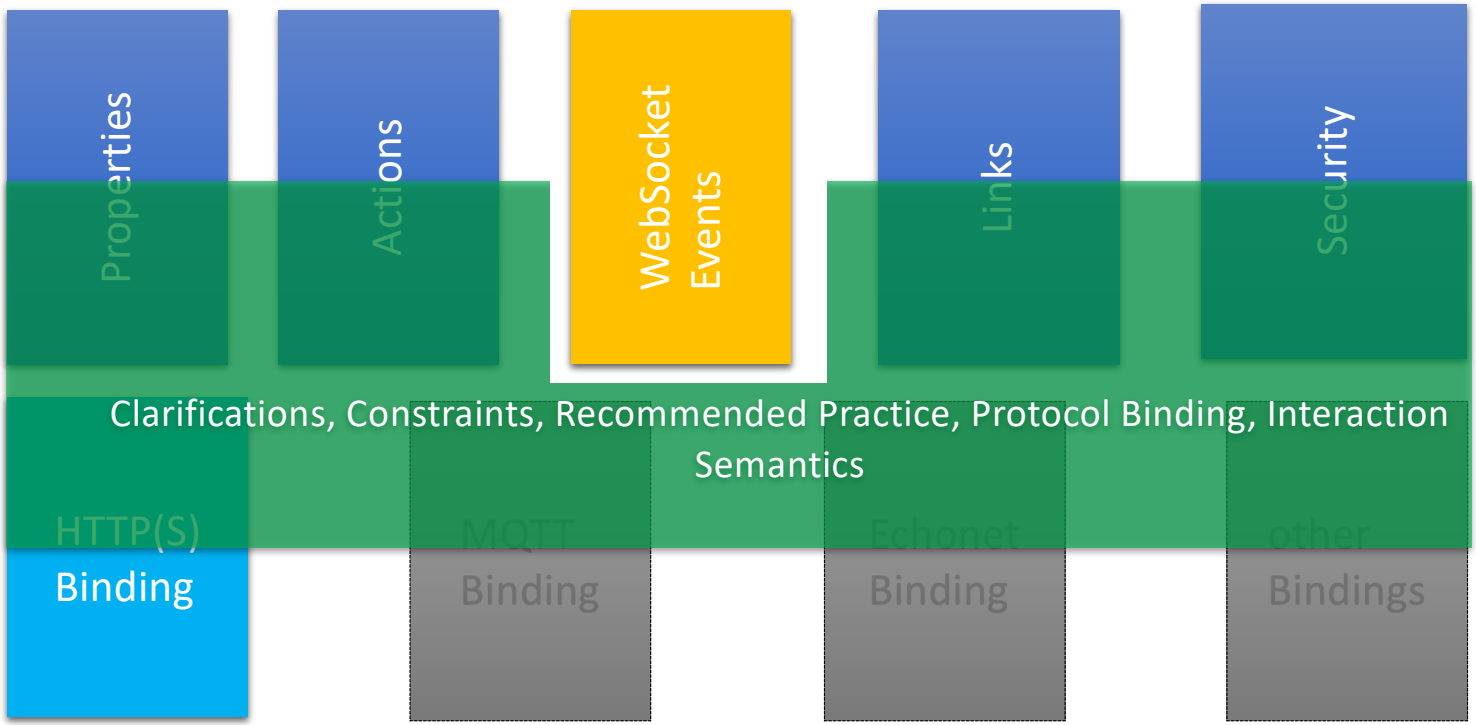
# Baseline HTTP profile



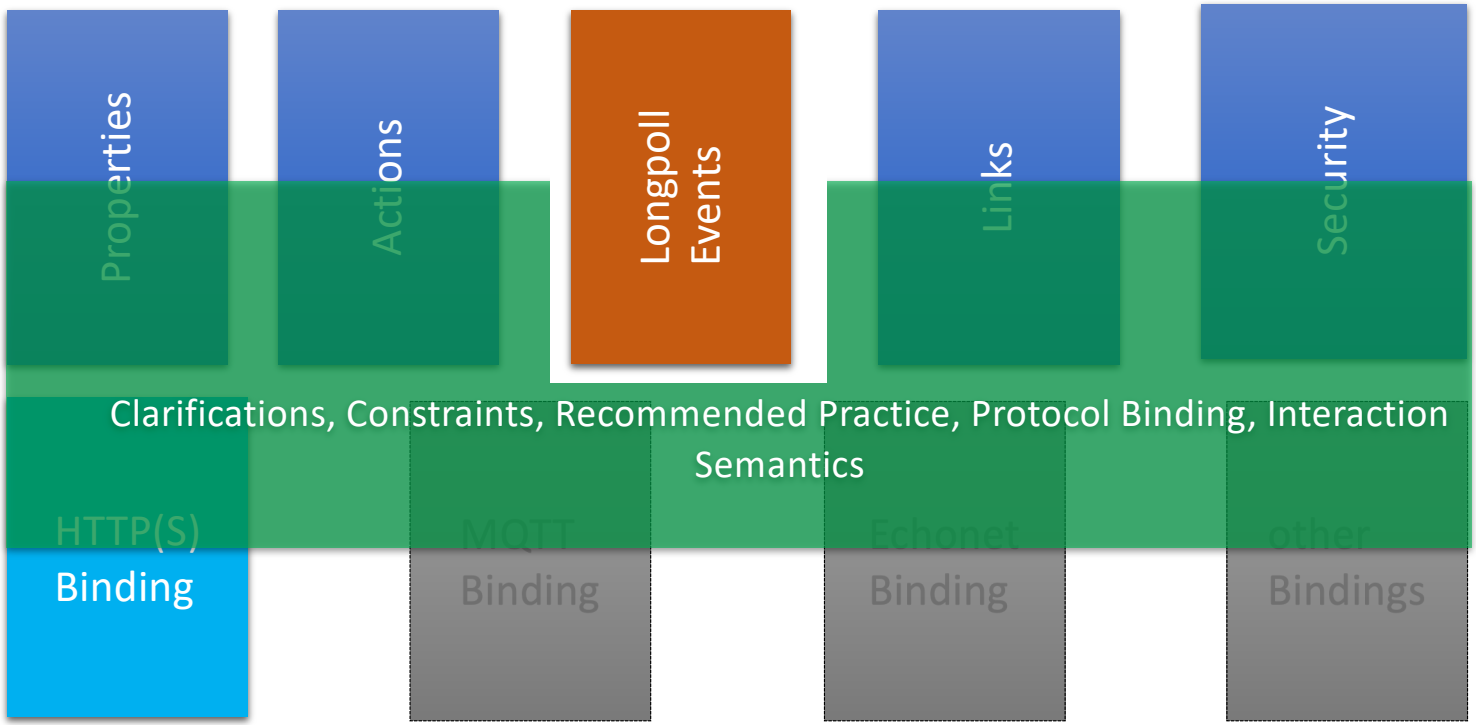
# SSE binding for observable properties and events



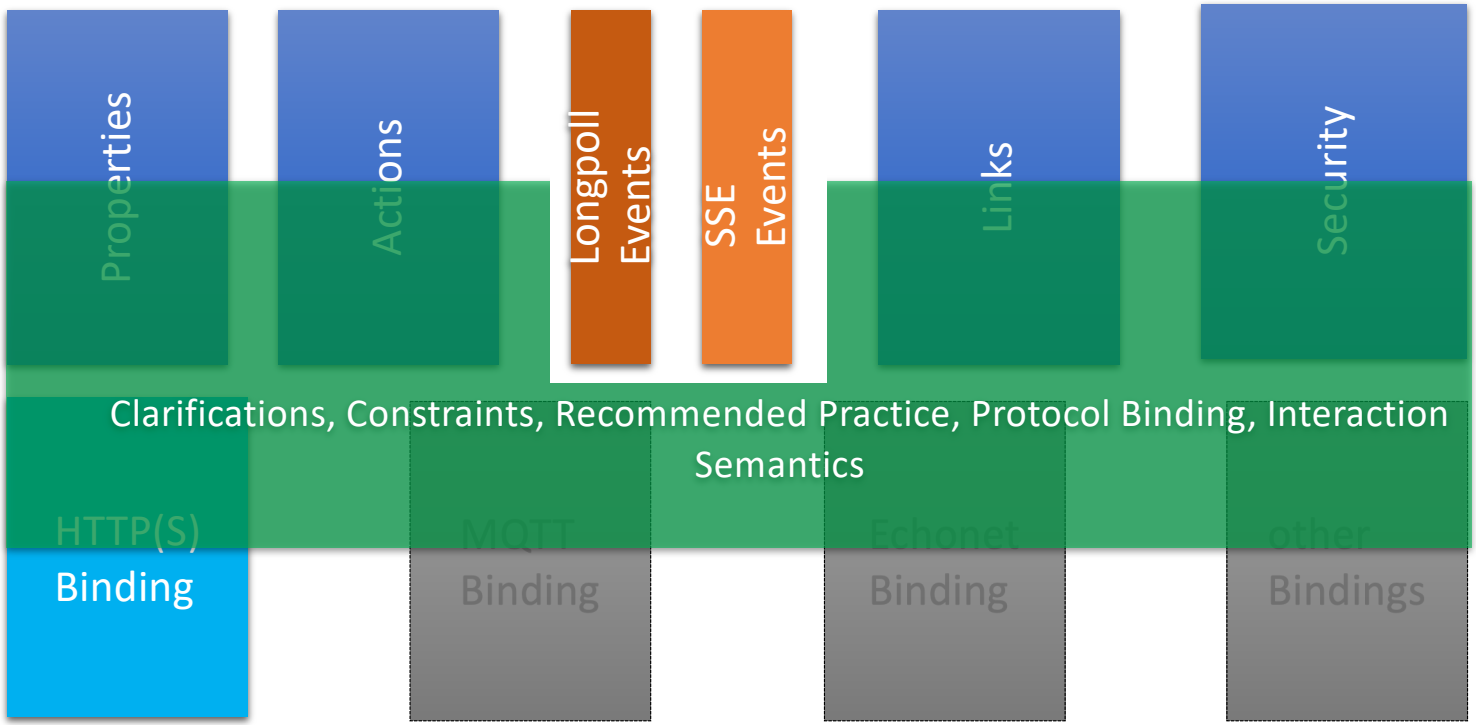
# WebSocket binding for observable properties and events



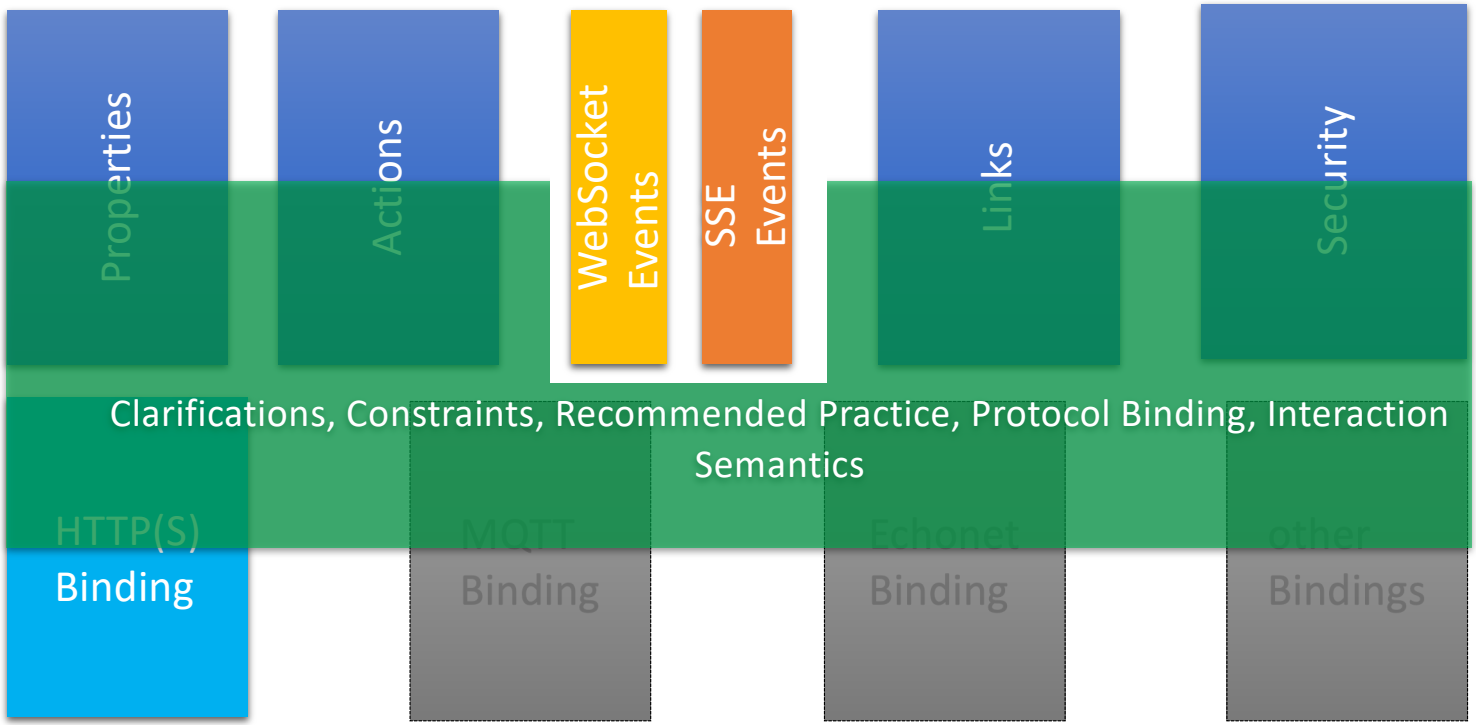
# Longpoll binding for observable properties and events



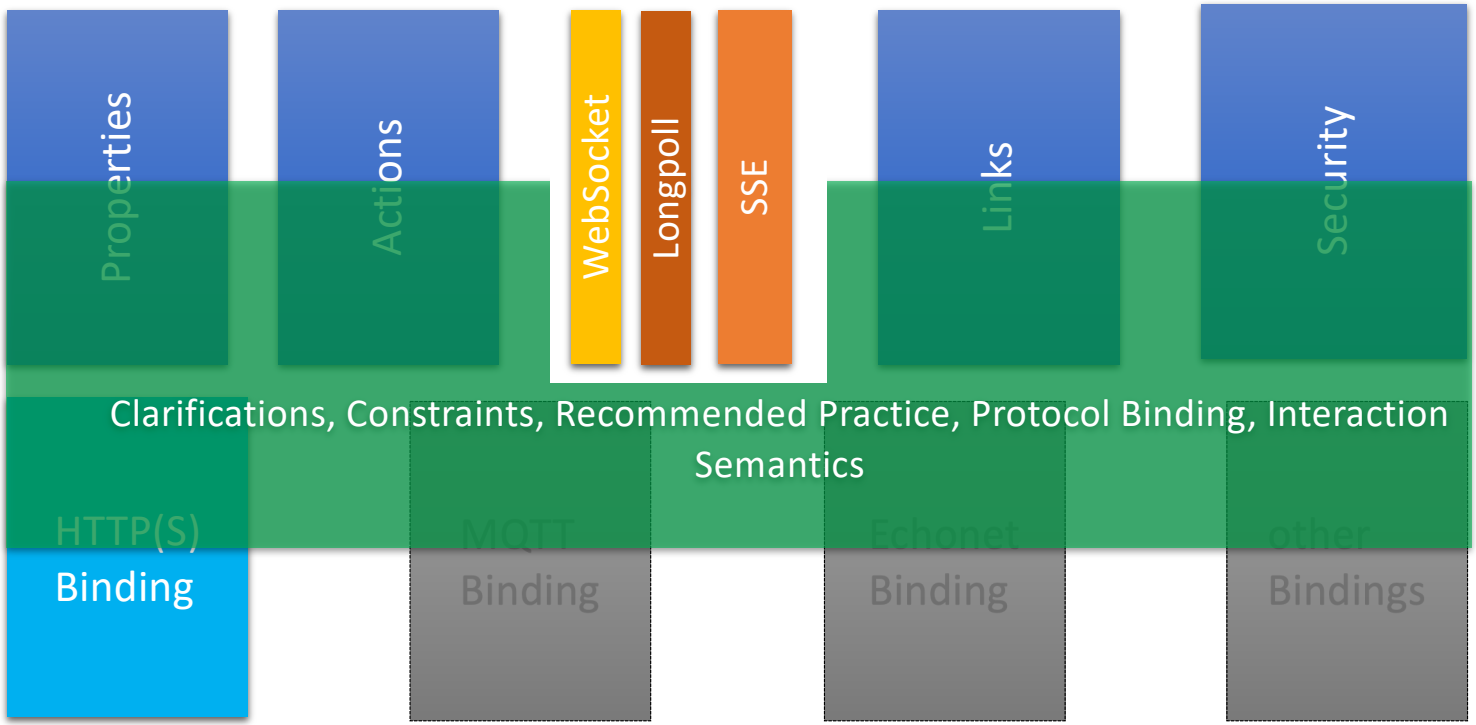
# Things can provide multiple event bindings



# Things can provide multiple event bindings



# Things can provide multiple event bindings



# Example Consumer Scenario

A worldwide climate monitoring system obtains data from sensors and gateways around the world to indicate the current weather conditions and be able to predict critical conditions.

The system displays a world map with all sensors, where the user can zoom in to individual regions.

Temperature, humidity and other sensor readings etc. are provided to a common server, which aggregates the data and uses configurable rules to trigger alerts based on sensor data.

This example motivates to consider the following aspects:

- All sensors and gateways must use unit schemes that are known and can be interpreted by the consumer.
- All sensors and gateways must use an unambiguous time and date format.
- All sensors and gateways must provide a human readable name that can be displayed on a map.
- All sensors and gateways must provide their location in a format that is known to the consumer.
- If a sensor and gateways provides interactions, these must be displayed in a UI in a human readable form.

Sensor readings will be displayed in a UI, the names must be displayed in a UI in a human readable form.

# Some Implications

- Consumer must handle sensors and gateways
- Some gateways are aggregating/indirectly providing sensors data
- From a consumer's perspective the implementation (sensor or gateway) should not make a difference.