Discussion Points with WebAgents CG

Note: This is not a real presentation :)

List of Topics

1. Consumer Descriptions (long term)
2. Long running Actions / Manageable Actions (short**er** term)
3. Historical Data / Transparency (short**er** term)
4. Relation to External Entities (relating mapping virtual space to real space)
5. Interaction between different affordances (how to improve our interaction model)

Consumer Descriptions

Two facets

1. A description of what the Thing should do for a given Consumer is missing
   a. We do not have a “system” view. What if 16 controllers want to control a room temperature?
2. Mashups are only done as code

A description of what the Thing should do for a given Consumer is missing

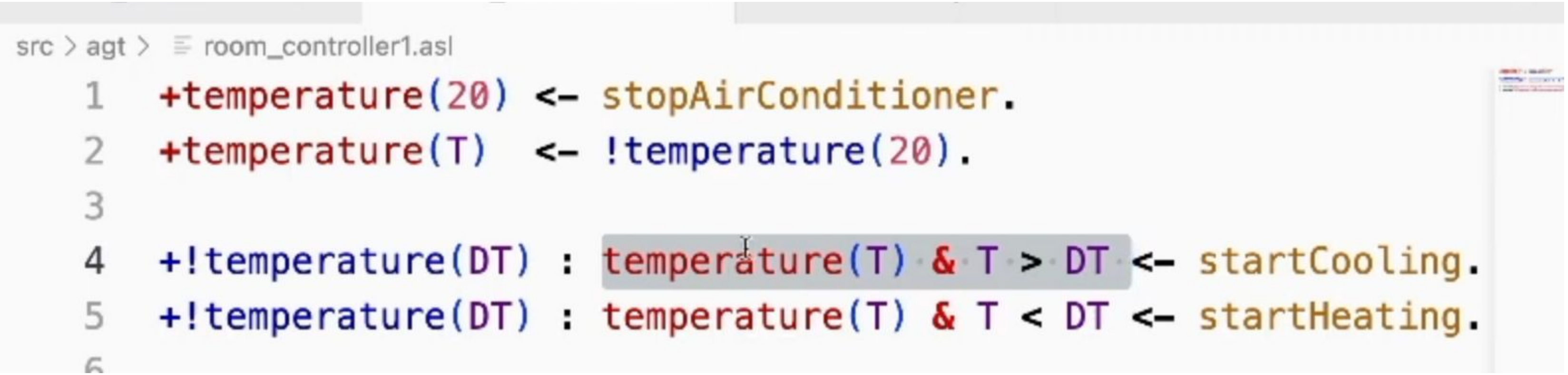
https://github.com/w3c/wot-charter-drafts/pull/89

“a description of what the Thing should do for a given Consumer is missing”

Another example: an IoT device pushing data to cloud is sort of invisible in WoT. Should we describe that Thing or the cloud service/REST endpoint?

Mashup Descriptions

An ASL instance

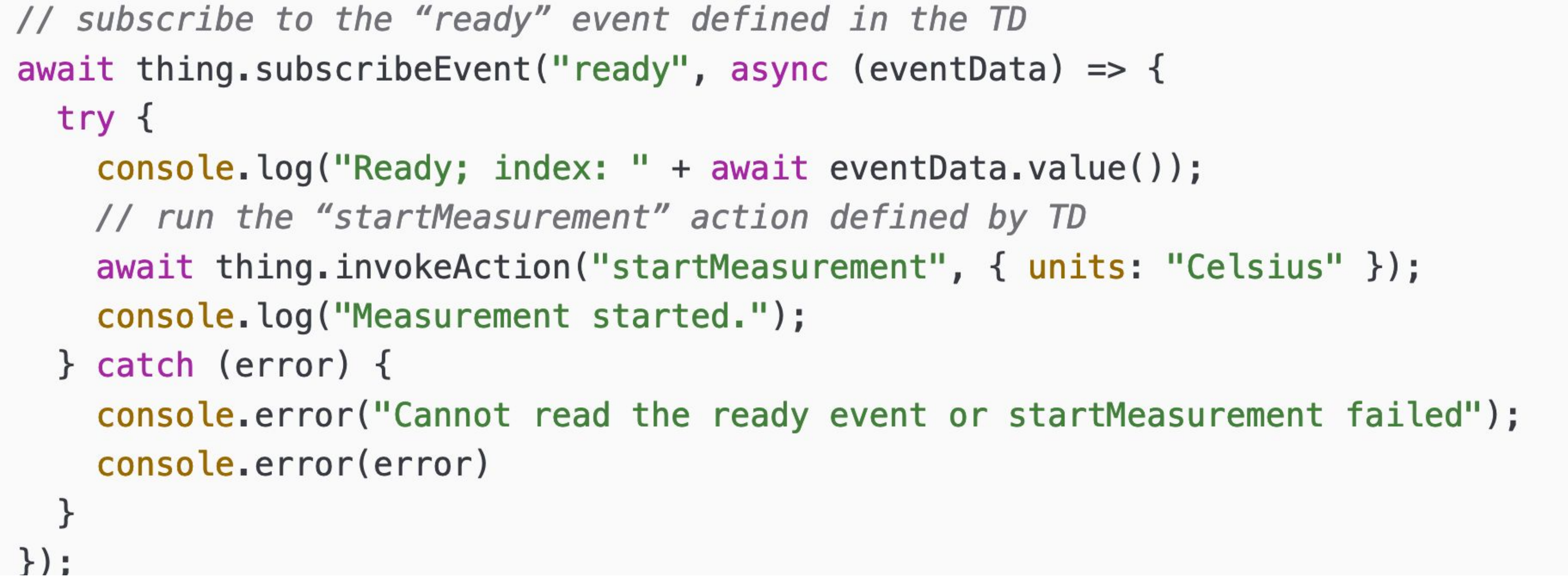


```
+temperature(20) <- stopAirConditioner.
+temperature(T)  <- !temperature(20).

+!temperature(DT) : temperature(T) & T > DT <- startCooling.
+!temperature(DT) : temperature(T) & T < DT <- startHeating.
```

Mashup Descriptions

A Scripting API Consumer Code



```
// subscribe to the “ready” event defined in the TD
await thing.subscribeEvent("ready", async (eventData) => {
  try {
    console.log("Ready; index: " + await eventData.value());
    // run the “startMeasurement” action defined by TD
    await thing.invokeAction("startMeasurement", { units: "Celsius" });
    console.log("Measurement started.");
  } catch (error) {
    console.error("Cannot read the ready event or startMeasurement failed");
    console.error(error)
  }
});
```

Long Running Actions

Aka Manageable Actions, Hypermedia Control

https://github.com/w3c/wot-thing-description/tree/main/proposals 3 of them here

This is not limited to actions, managing events is also important

There are existing approaches out there such as JSON-HAL, CoRAL

Historical Data / Timeseries and Transparency

Transparency and logging intentions of agents at a given time. Jomi’s tutorial mentions it. WoT WG has historical data/timeseries work item for the next charter

https://w3c.github.io/wot-charter-drafts/wot-wg-2023-details.html#timeseries-workitem

https://w3c.github.io/wot-charter-drafts/wot-wg-2023-draft.html

AKA Traces, Observability and linked to norms

Relation to External Entities

Relating mapping virtual space to real space

1. Twins (service) shadowing real device
2. Safety of real world (hazards)
3. Organizations and Norms
4. Accessibility: Does an action result in a “sensible” effect in the real world
    a. Beep action has an audible result

Notes

- Agent Descriptions and Profiles from FIPA
    - FIPA Abstract Architecture: http://fipa.org/specs/fipa00001/SC00001L.html
    - FIPA Agent Management Specification (incl. the FIPA Agent Identifier Description): http://fipa.org/specs/fipa00023/SC00023K.html
- Signifiers as a superclass of Interaction Affordances? (also being careful with the words)
- Autonomy can be the collaboration topic
- A new ontology from the WebAgents CG? How to link and be coherent