

Exercises 10 & 11: The Constrained Web of Things and Hypermedia APIs

Group 1

Group Reflections

For Task 2 and Task 3, what is the information you had to hard-code into your executors?

- Search Engine URI
- Search Query
- Log-in data for the robot
- The desired action affordances of the TD for the robot and the Miro card (move the elbow, humidity)

What are the advantages and disadvantages you see for using Hypermedia APIs?

- Advantages
 - Decouples the user from the API and allows for discoverability
 - Extendibility: capabilities can easily be added or removed
 - Stability: Hypermedia APIs stay resilient, even as the number of users/endpoints increase
 - Interoperability: If everyone would use Hypermedia APIs, virtually anything would somehow be interoperable
- Disadvantages
 - Hypermedia APIs mean a looser contract → makes it less powerful and more complex
 - Writing an exhaustive list of link relations for everything seems unrealistic

How do Interface Description Languages (IDLs) and Hypermedia APIs relate to one another?

- Hypermedia APIs depend on IDLs like RESTful Service Description Language (RSDL) to be standardised
- IDLs define the interface between a client and server → IDLs make sure that Hypermedia APIs use an uniform interface
- IDLs exists for machines to generate code and make Hypermedia APIs machine-readable and human-readable at the same time
- Example: The TD returned by querying the search engine with the SPARQL query is human-readable and machine-readable and can be further used to interact with the Miro card or the robot