HSML Media Types

Hypermedia for Machine Interaction

What is HSML?

- Hypermedia Format for Machine Interactions
  - Analogous to HTML on the WWW
- Data Model
  - Hyperlinks and Collections
- Interaction Model
  - CRUD+N and Common Design Patterns
- Vocabulary
  - Reserved Keywords and Link Values
- Semantic Annotation
  - External Application Semantics

Optimized for Machine Interactions

- Based on IETF Constrained RESTful Environments (CoRE) Specifications
- Machine readable resource descriptions and representations
- Application can retrieve and update links, data items, or an embedded representation of both
- Canonical JSON format can be binary encoded as CBOR or EXI

Based on IETF CoRE Drafts and RFCs

- Constrained RESTful Environments
  - SenML (draft-ietf-core-senml)
  - CoRE Link-Format (RFC6690)
  - CoRE Interfaces (draft-ietf-core-interfaces)
  - Dynamic Linking (draft-groves-core-dynlink)
  - Resource Directory (draft-ietf-core-resource-directory)
- Systems using these standards can use HSML

Enhanced REST Architecture

- REST + asynchronous notification
- Machine comprehensible hyperlinks
- Discovery using application semantics
- Action forms describe actuation and control
- RESTful actuation and command life cycle
- Hypermedia controls for notification and event life cycle