

# Hypermedia Hacking Workshop

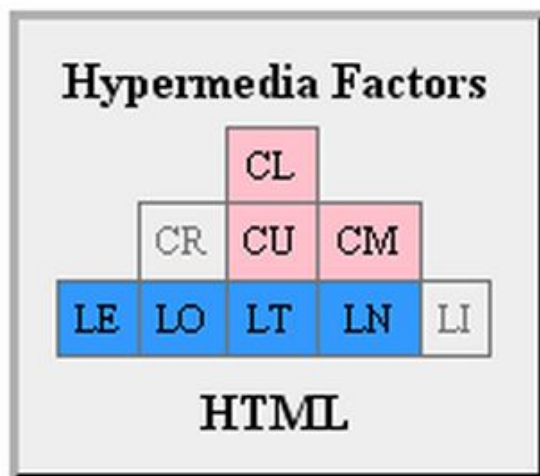
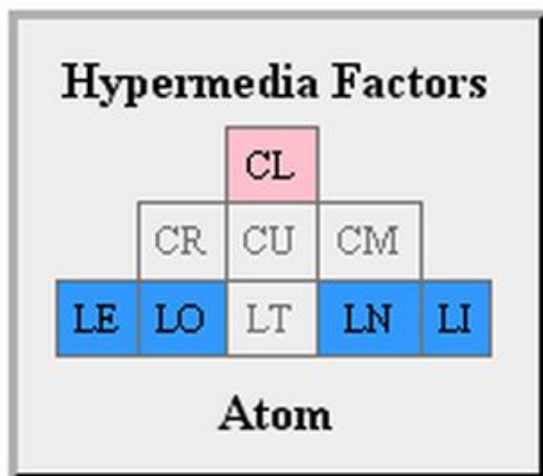
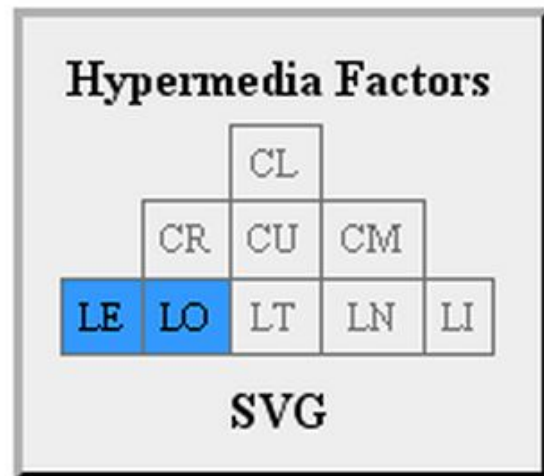
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# Summary

# The OAA Challenge

- All clients deal with three key elements:
  - Objects (POD)
  - Addresses (Links)
  - Actions (Forms)
- This is usually done in code
- But SHOULD be done in messages

# H-Factors



# CRUD Client

- No metadata
- OAA all in code

# Link Client

- Link metadata in the message
- OxA still in Code
- HAL Media Type

```
{
  "_links": {
    "self": {"href": "/orders"},
    "next": {"href": "/orders?page=2"},
    "find": {"href": "/orders/{id}", "templated": true},
    "admin": [
      {"href": "/admins/2", "title": "Fred"},
      {"href": "/admins/5", "title": "Kate"}
    ]
  },
  "currentlyProcessing": 14,
  "shippedToday": 20,
  "_embedded": {
    "order": [
      {
        "_links": {
          "self": {"href": "/orders/123"},
          "basket": {"href": "/baskets/98712"},
          "customer": {"href": "/customers/7809"}
        },
        "total": 30.00,
        "currency": "USD",
        "status": "shipped"
      },
      {
        "_links": {
          "self": {"href": "/orders/124"},
          "basket": {"href": "/baskets/97213"},
          "customer": {"href": "/customers/12369"}
        },
        "total": 20.00,
        "currency": "USD",
        "status": "processing"
      }
    ]
  }
}
```

# Template Clients

- Links and templates in the messages
- Oxx still in code
- Siren Media Type



```
{
  "class": ["order"],
  "properties": {
    "orderNumber": 42,
    "itemCount": 3,
    "status": "pending"
  },
  "entities": [
    {
      "class": ["items", "collection"],
      "rel": ["http://x.io/rels/order-items"],
      "href": "http://api.x.io/orders/42/items"
    },
    {
      "class": ["info", "customer"],
      "rel": ["http://x.io/rels/customer"],
      "properties": {
        "customerId": "pj123",
        "name": "Peter Joseph"
      },
      "links": [
        { "rel": ["self"], "href": "http://api.x.io/customers/pj123" }
      ]
    }
  ],
  "actions": [
    {
      "name": "add-item",
      "title": "Add Item",
      "method": "POST",
      "href": "http://api.x.io/orders/42/items",
      "type": "application/x-www-form-urlencoded",
      "fields": [
        { "name": "orderNumber", "type": "hidden", "value": "42" },
        { "name": "productCode", "type": "text" },
        { "name": "quantity", "type": "number" }
      ]
    }
  ],
  "links": [
    { "rel": ["self"], "href": "http://api.x.io/orders/42" },
    { "rel": ["previous"], "href": "http://api.x.io/orders/41" },
    { "rel": ["next"], "href": "http://api.x.io/orders/43" }
  ]
}
```

# Profile Clients

- All three (OAA) are in the message
- Collection+JSON media type

```

{
  "collection": {
    "version": "1.0",
    "href": "http://rwcbook12.herokuapp.com",
    "title": "TPS - Task Processing System",
    "links": [
      {
        "href": "http://rwcbook12.herokuapp.com/",
        "rel": "collection",
        "prompt": "All task"
      }
    ],
    "items": [
      {
        "rel": "item",
        "href": "http://rwcbook12.herokuapp.com/1sv697h2yij",
        "data": [
          { "name": "id", "value": "1sv697h2yij", "prompt": "id" },
          { "name": "title", "value": "Marina", "prompt": "title" },
          { "name": "completed", "value": "false", "prompt": "completed" }
        ]
      },
      {
        "rel": "item",
        "href": "http://rwcbook12.herokuapp.com/25ogsjhqtk7",
        "data": [
          { "name": "id", "value": "25ogsjhqtk7", "prompt": "id" },
          { "name": "title", "value": "new stuff", "prompt": "title" },
          { "name": "completed", "value": "true", "prompt": "completed" }
        ]
      }
    ],
    "queries": [
      {
        "rel": "search",
        "href": "http://rwcbook12.herokuapp.com/",
        "prompt": "Search tasks",
        "data": [
          { "name": "title", "value": "", "prompt": "Title" }
        ]
      }
    ],
    "template": {
      "prompt": "Add task",
      "rel": "create-form",
      "data": [
        { "name": "title", "value": "", "prompt": "Title" },
        { "name": "completed", "value": "false", "prompt": "Complete" }
      ]
    }
  }
}

```

# Open Discussion

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