

UNIVERSITY OF
Southampton

Representation

COMP3220 Web Infrastructure

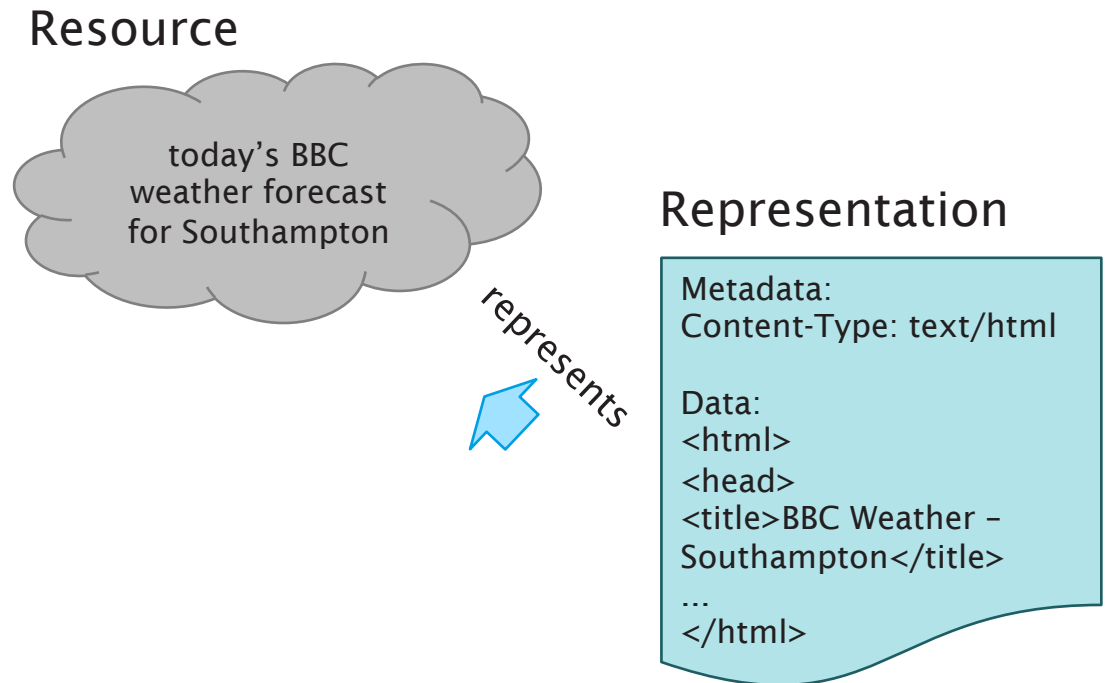
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Representation

A representation is data that encodes information about resource state.

Representations have metadata

- When were they last modified?
- What format are they in?



Internet Media Types

Hierarchical descriptions of data types (used originally in email - MIME)

Top-level types: text, image, audio, video, application
(also multipart and message)

Refinements of these top-level types:

- text/plain, text/html, text/xml, text/csv, ...
- image/jpeg, image/gif, image/png, image/tiff, ...
- audio/mpeg, audio/ogg, ...
- video/mp4, video/quicktime, ...
- application/ecmascript, application/pdf, application/rdf+xml, ...

Registry of types maintained by IANA

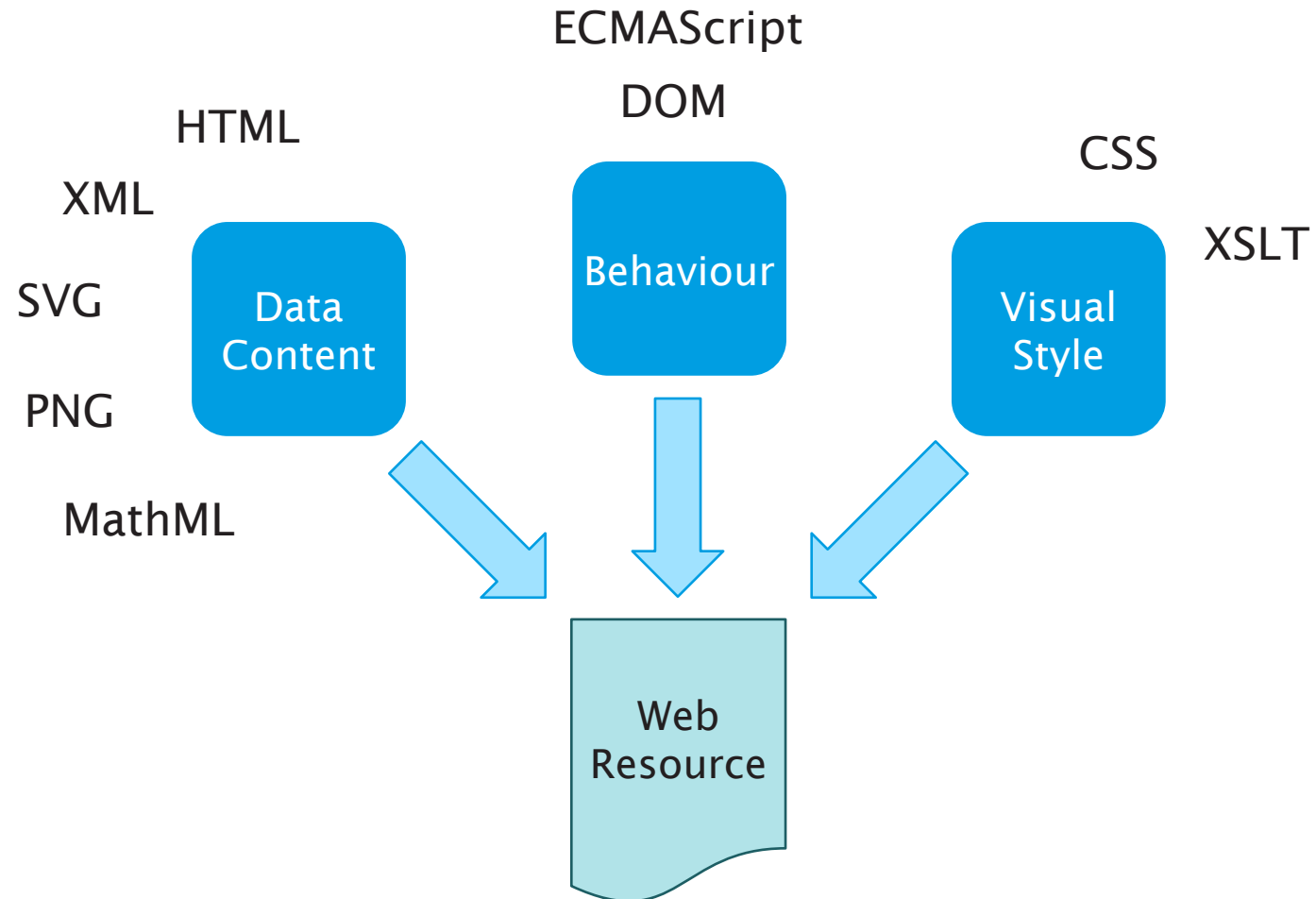
Representation Principles

1. Separate content, presentation and interaction

A representation format should allow authors to separate content from both presentation and interaction concerns.

How a resource is presented to a user (e.g. mobile versus desktop), and how the user interacts with that resource, are independent of the informational content of the resource.

Content, Behaviour, Presentation



Representation Principles

1. Separate content, presentation and interaction
2. Identify links

A representation format should provide ways to identify links to other resources, including to secondary resources (via fragment identifiers).

Representation Principles

1. Separate content, presentation and interaction
2. Identify links
3. Links should be web-wide

A representation format should allow Web-wide linking, not just internal document linking.

(a corollary of global identifiers)

Representation Principles

1. Separate content, presentation and interaction
2. Identify links
3. Links should be web-wide
4. Links should use generic identifiers

A representation format should allow content authors to use URIs without constraining them to a limited set of URI schemes.

Formats should be future-proof; we don't know what identifier types or protocols we'll be using in the future.

Representation Principles

1. Separate content, presentation and interaction
2. Identify links
3. Links should be web-wide
4. Links should use generic identifiers
5. Links should be navigable

A representation format should incorporate hypertext links if hypertext is the expected user interface paradigm.

We would like links between resources to be able to behave like any other hypertext links.

Further Reading

Jacobs, I. and Walsh, N. (2004) *Architecture of the World Wide Web, Volume One*. W3C Recommendation.

<http://www.w3.org/TR/webarch/>

Next: Interaction