

Grundlegende Begriffe des Web

Grundlegende Begriffe des Web - Ziele

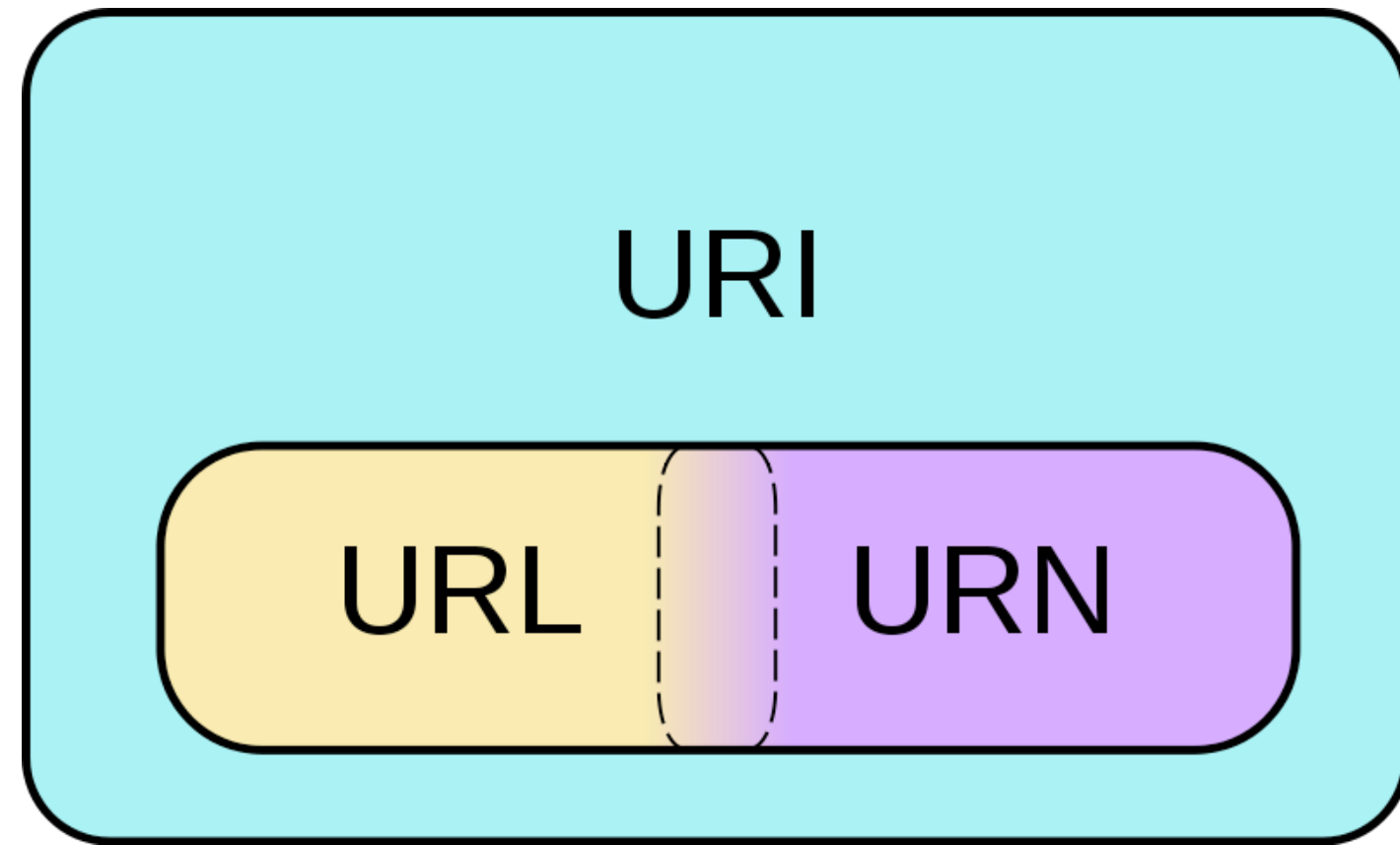
- die zentralen Begriffe wie Ressource, URI und http erklären können
- die Unterscheidung von Ressource und deren Repräsentation erklären können
- das Konzept Hypermedia erklären können

The **World Wide Web** (WWW, or simply Web) is an **information space** in which the items of interest, referred to as **resources**, are identified by global identifiers called **Uniform Resource Identifiers (URI)**

- A resource can be **anything that has identity**.
- Familiar examples include an electronic document, an image, a service (e.g., "today's weather report for Los Angeles"), and a collection of other resources.
- **Not all resources are network "retrievable"**; e.g., human beings, corporations, and bound books in a library can also be considered resources.
- Thus, a resource can **remain constant even when its content changes** over time, provided that the conceptual mapping is not changed in the process.

URI, IRI, URL, URN

- Uniform Resource Locator (URL RFC 1738)
- Uniform Resource Name (URN RFC 2141)
- Uniform Resource Identifier (URI RFC 3986) ist der allgemeinere Begriff



Quelle: Wikipedia URI Venn Diagramm (Abruf 7.2.2011)

ftp://ftp.is.co.za/rfc/rfc1808.txt

http://www.ietf.org/rfc/rfc2396.txt

ldap://[2001:db8::7]/c=GB?objectClass?one

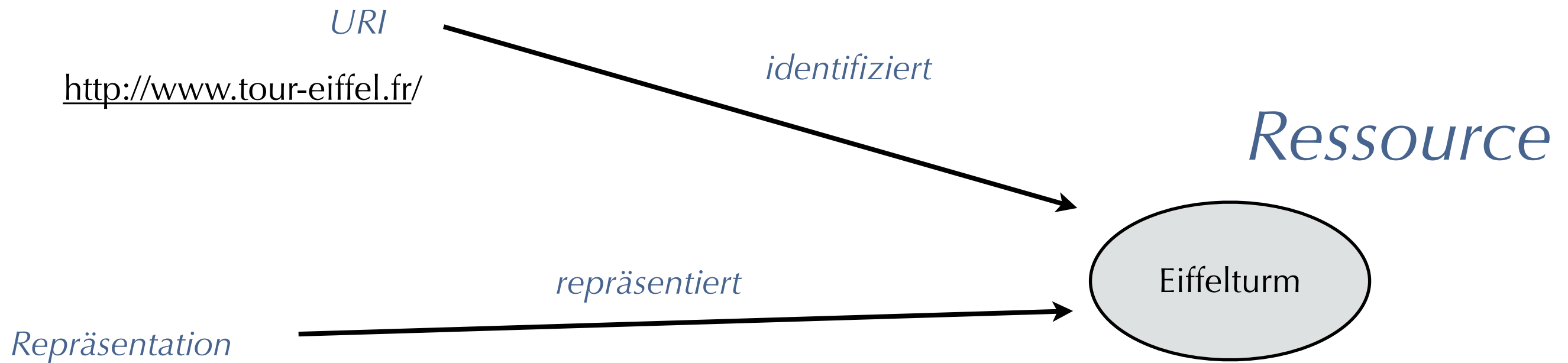
mailto:John.Doe@example.com

tel:+1-816-555-1212

telnet://192.0.2.16:80/

urn:oasis:names:specification:docbook:dtd:xml:4.1.2

URI - Ressource - Repräsentation



```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-Transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml" xml:lang="fr-fr"
lang="fr-fr"
xmlns:fb="http://www.facebook.com/2008/fbml">
  <head>
    <title>Site officiel de la tour Eiffel - monument de
```

[Messages typically convey a] **representation of the state of the resource**. A representation is an octet sequence that consists logically of two parts:

- 1 **Representation data**, electronic data about resource state, expressed **in one or more formats** [e.g. html, jpeg, pdf,....] used separately or in combination, and
- 2 **Representation metadata**. One important piece of metadata is the Internet Media Type,

Repräsentation und Präsentation

Repräsentation

- `<!DOCTYPE html
PUBLIC "-//W3C//DTD
XHTML 1.0
Transitional//EN"
"http://www.w3.org/
TR/xhtml1/DTD/
xhtml1-
Transitional.dtd">`
- `<html
xmlns="http://
www.w3.org/1999/
xhtml"
xml:lang="fr-fr"
lang="fr-fr"
xmlns:fb="http://
www.facebook.com/
2008/fbml">`
- `<head>`
- `<title>Site
officiel de la tour
Eiffel - monument
de Paris</title>`
- `<base href="/" />`

legt fest



Präsentation



Presentation Layer

non-text media

H. T M. L.

non-html
text

(including charset)

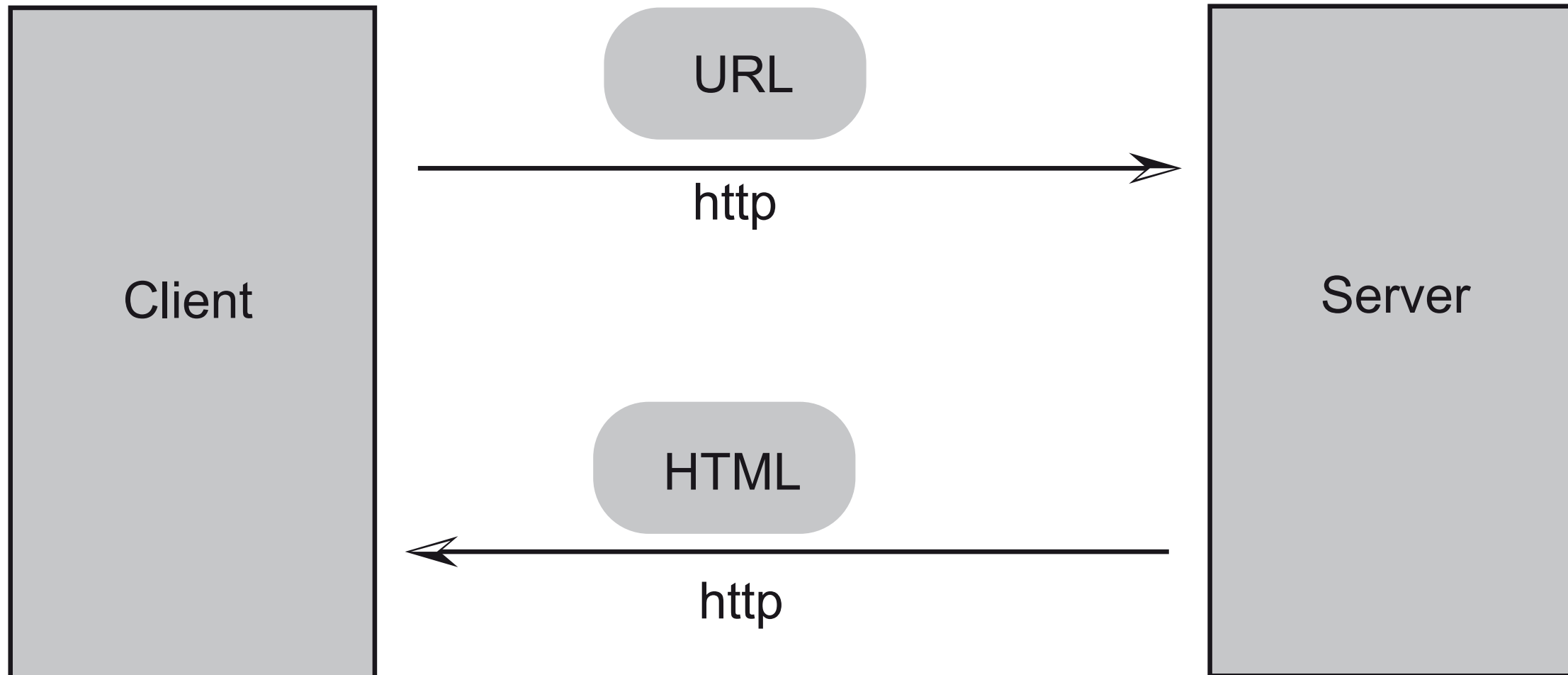
content negotiation

H. T T P

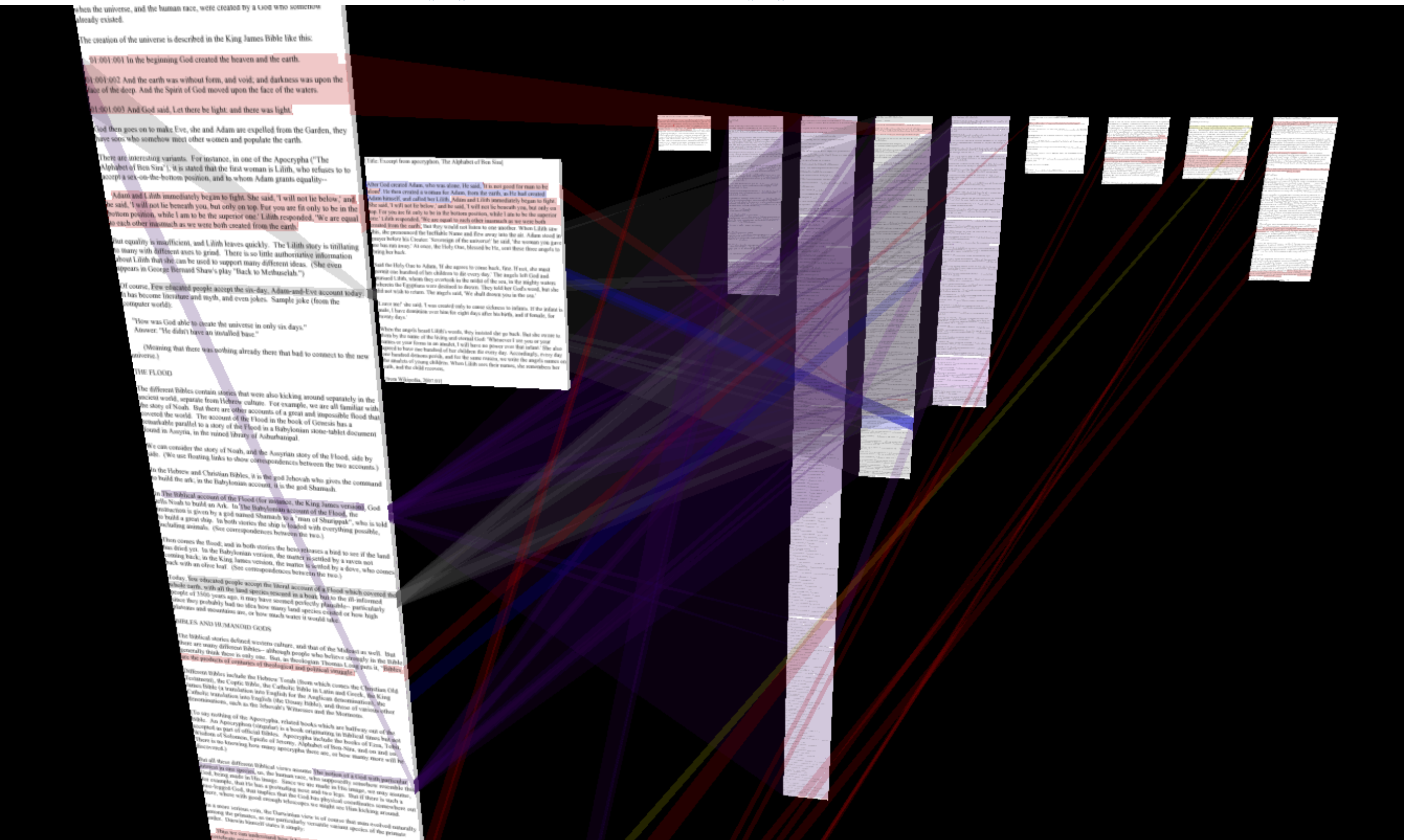
Transport

Quelle: https://commons.wikimedia.org/wiki/File:Classical_HTTP_model.svg?uselang=de, Abruf 22.3.2017

Client/Server Interaktion basierend auf HTTP



Hypertext / Hypermedia



Quelle: <http://xanadu.com/xUniverse-D6>, Abruf 17.3.2017

When a representation of one resource contains a **reference to another resource**, expressed with a URI identifying that other resource, this constitutes a **link between the two resources**.

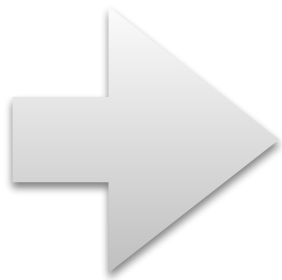
<https://www.w3.org/TR/webarch/#hypertext>, Abruf 17.2.2017

HyperText is a way to link and access information of various kinds as a **web of nodes in which the user can browse at will**. Potentially, HyperText provides a **single user-interface** to many large classes of stored information such as reports, notes, databases, computer documentation and online systems help

<https://www.w3.org/Proposal.html>, Abruf 17.2.2017

Grundlegende Begriffe des Web - Zusammenfassung

- Ressource
- URI
- (Mehrere) Repräsentation(en) einer Ressource
- Hypermedia



Diskussion von
Web-basierten
Anwendungen