

The client-server model involves requests and replies.

## Client Server Kommunikation

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Sudenburg

Wolfenbüttel

Wolfsburg

Kontakt, Suche, Anreise

Englisch

Schriftgröße

Ostfalia

Hochschule für angewandte Wissenschaften

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Bewerbungsschluss ist der 15. Juli.

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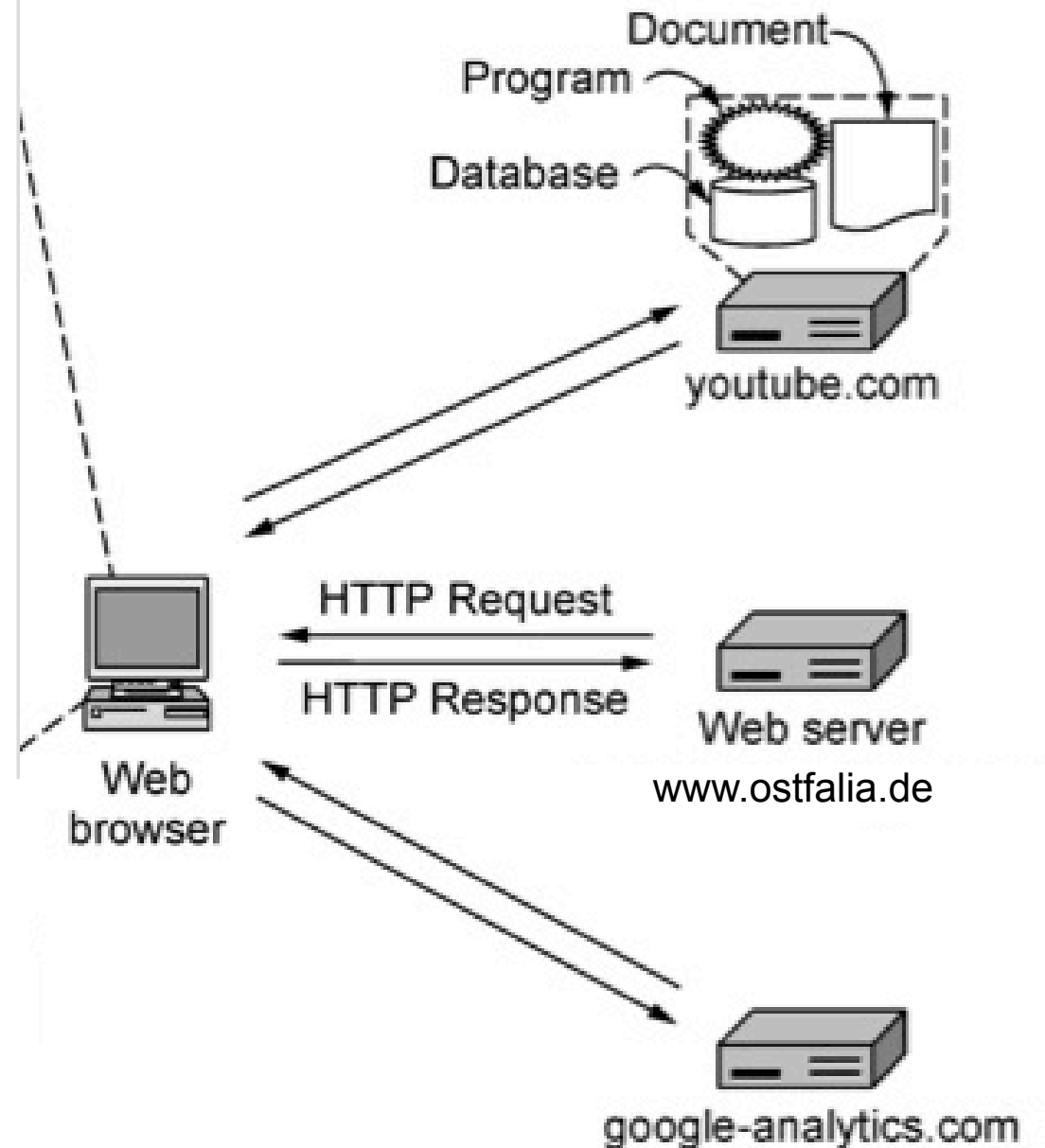
Hochschulgremien

Hochschulentwicklung und Kommunikation

Innenrevision

Das Präsidium der Ostfalia

Von links: Prof. Dr. Gert Bikker, Prof. Dr. Rosemarie Karger, Prof. Dr. Susanne Stobbe, Dipl.-Ing. Volker Küch M.A.

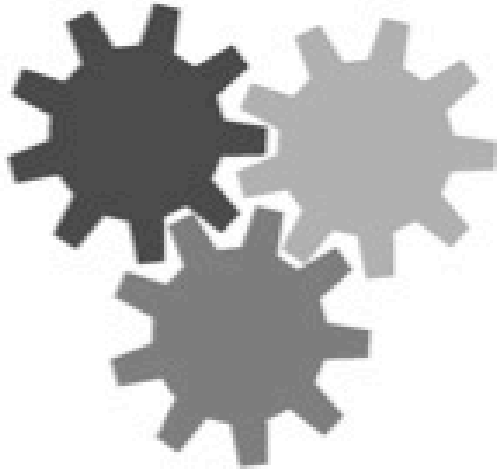


## Architektur des www (World-Wide-Web)

```
<html>
<head> <title> AMALGAMATED WIDGET, INC. </title> </head>
<body> <h1> Welcome to AWI's Home Page </h1>
 <br>
We are so happy that you have chosen to visit <b> Amalgamated Widget's</b>
home page. We hope <i> you </i> will find all the information you need here.
<p>Below we have links to information about our many fine products.
You can order electronically (by WWW), by telephone, or by email. </p>
<hr>
<h2> Product information </h2>
<ul>
  <li> <a href="http://widget.com/products/big"> Big widgets </a> </li>
  <li> <a href="http://widget.com/products/little"> Little widgets </a> </li>
</ul>
<h2> Contact information </h2>
<ul>
  <li> By telephone: 1-800-WIDGETS </li>
  <li> By email: info@amalgamated-widget.com </li>
</ul>
</body>
</html>
```

## HTML-Code einer einfachen Webseite

# Welcome to AWI's Home Page



We are so happy that you have chosen to visit **Amalgamated Widget's** home page. We hope you will find all the information you need here.

Below we have links to information about our many fine products. You can order electronically (by WWW), by telephone, or by email.

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## Product Information

- [Big widgets](#)
- [Little widgets](#)

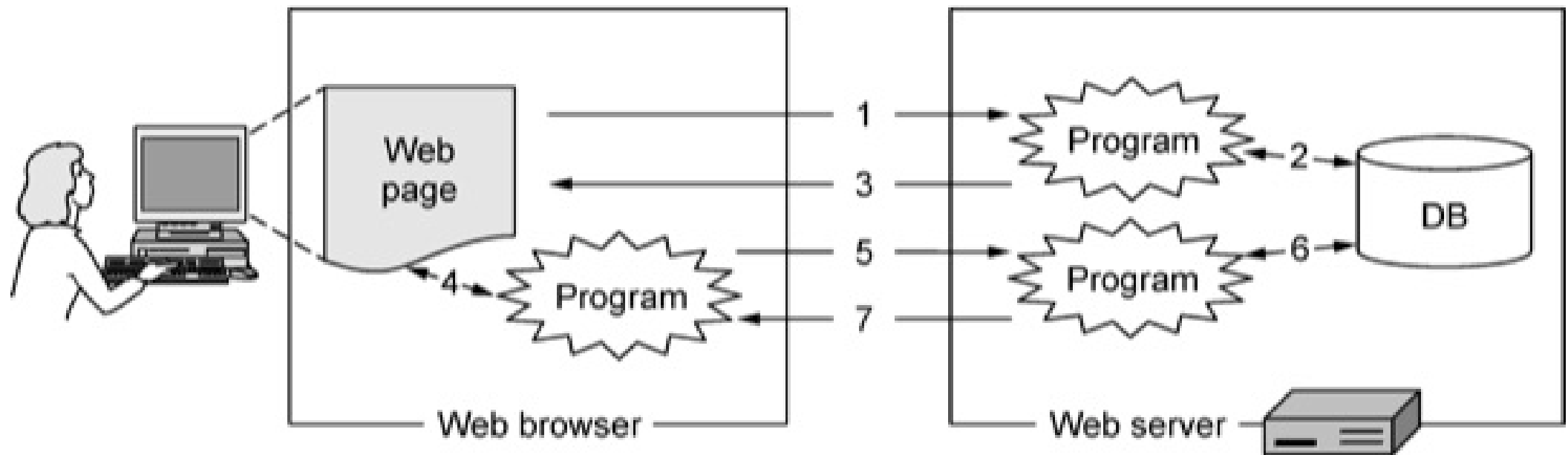
## Contact information

- By telephone: 1-800-WIDGETS
- By email: [info@amalgamated-widget.com](mailto:info@amalgamated-widget.com)

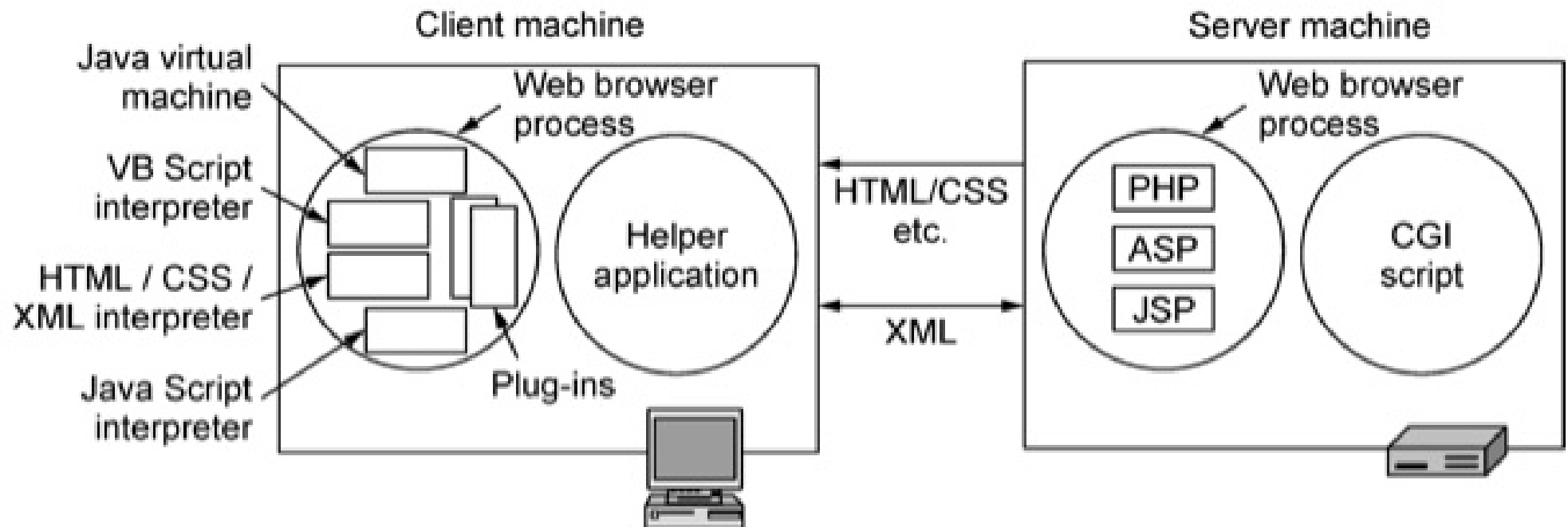
**Webseite zum HTML-Code auf vorherigem Blatt**

Item	HTML 1.0	HTML 2.0	HTML 3.0	HTML 4.0	HTML 5.0
Hyperlinks	X	X	X	X	X
Images	X	X	X	X	X
Lists	X	X	X	X	X
Active maps & images		X	X	X	X
Forms		X	X	X	X
Equations			X	X	X
Toolbars			X	X	X
Tables			X	X	X
Accessibility features				X	X
Object embedding				X	X
Style sheets				X	X
Scripting				X	X
Video and audio					X
Inline vector graphics					X
XML representation					X
Background threads					X
Browser storage					X
Drawing canvas					X

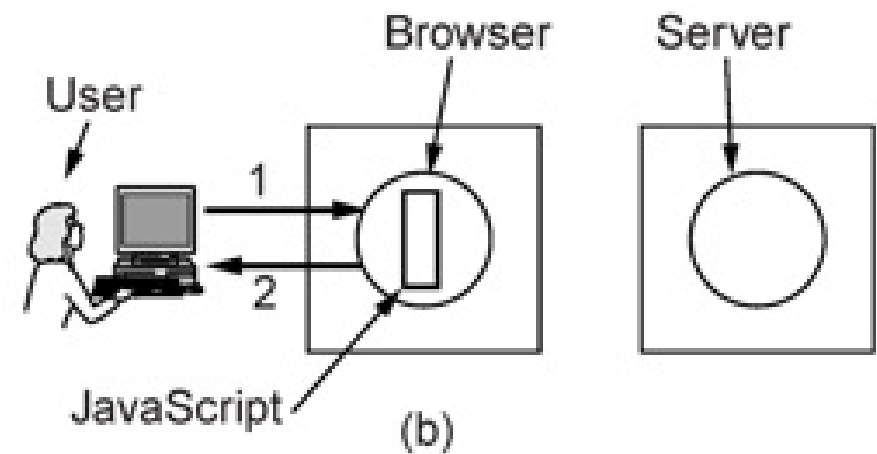
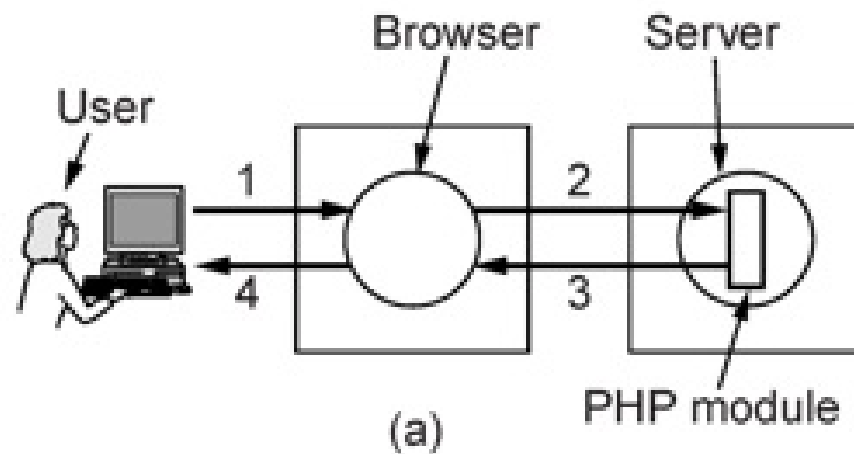
## Leistungsmerkmale der verschiedenen HTML-Versionen



## Prinzip-Architektur für dynamische Webseiten

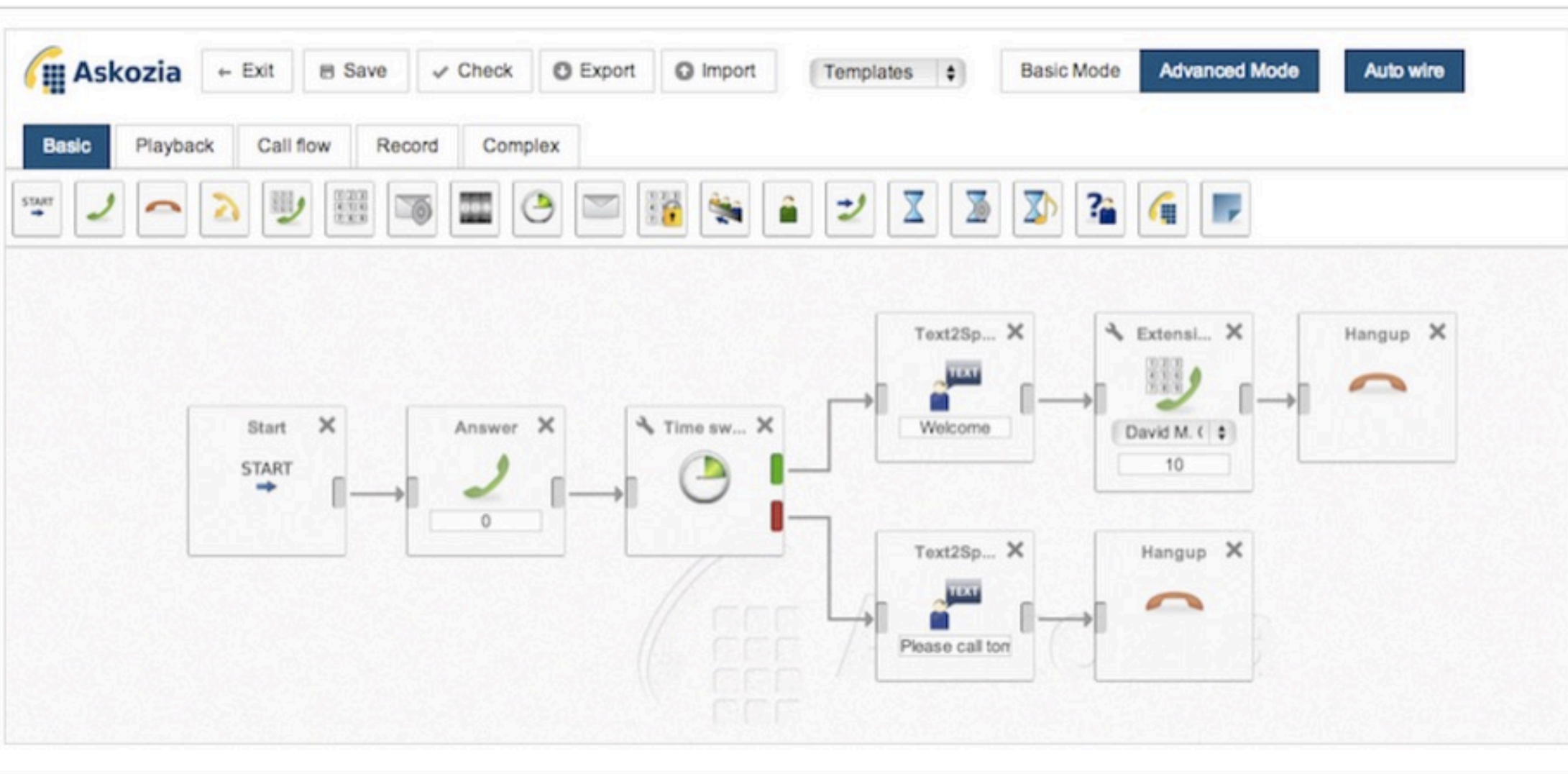


## Typische Technologien für dynamische Webseiten

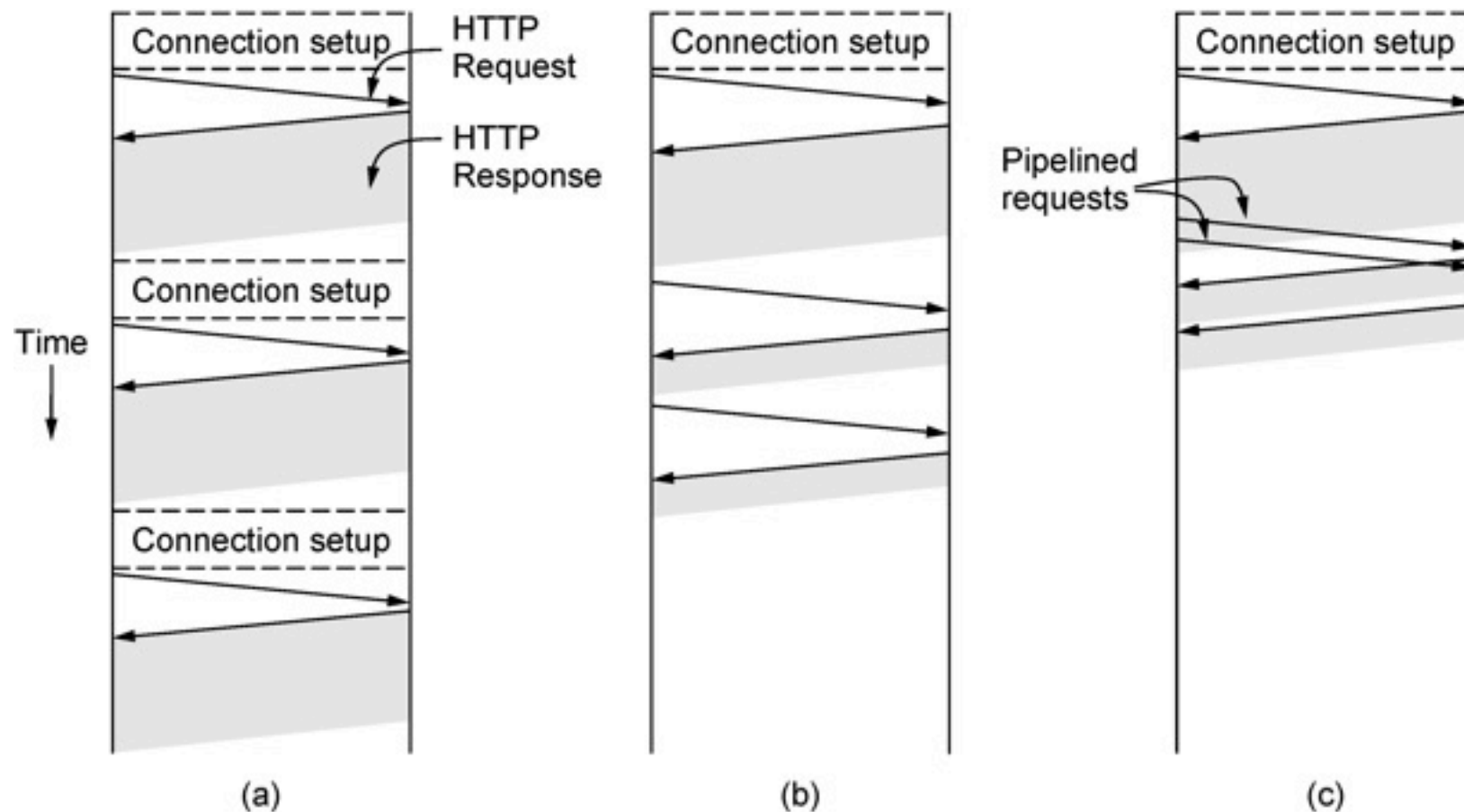


**Nutzung einer Script-Sprache auf dem Server (links) oder im Browser (rechts)**





**Illustration: Konfiguration komplexer technischer Systeme mit dynamischen Webseiten**



- HTTP with (a) multiple connections and sequential requests.  
 (b) A persistent connection and sequential requests.  
 (c) A persistent connection and pipelined requests.

## Zur Handhabung von TCP Verbindungen unter einer HTTP-Kommunikation

<b>Name</b>	<b>Used for</b>	<b>Example</b>
http	Hypertext (HTML)	http://www.ee.uwa.edu/rob/
https	Hypertext with security	https://www.bank.com/accounts/
ftp	FTP	ftp://ftp.cs.vu.nl/pub/minix/README
file	Local file	file:///usr/suzanne/prog.c
mailto	Sending email	mailto:JohnUser@acm.org
rtsp	Streaming media	rtsp://youtube.com/montypython.mpg
sip	Multimedia calls	sip:eve@adversary.com
about	Browser information	about:plugins

## Einige übliche URL (Uniform Ressource Locator) Schemata

<b>Method</b>	<b>Description</b>
GET	Read a Web page
HEAD	Read a Web page's header
POST	Append to a Web page
PUT	Store a Web page
DELETE	Remove the Web page
TRACE	Echo the incoming request
CONNECT	Connect through a proxy
OPTIONS	Query options for a page

### **Built-In HTTP Request Methods**

<b>Code</b>	<b>Meaning</b>	<b>Examples</b>
1xx	Information	100 = server agrees to handle client's request
2xx	Success	200 = request succeeded; 204 = no content present
3xx	Redirection	301 = page moved; 304 = cached page still valid
4xx	Client error	403 = forbidden page; 404 = page not found
5xx	Server error	500 = internal server error; 503 = try again later

## HTTP Status Code Response Groups



Header	Type	Contents
User-Agent	Request	Information about the browser and its platform
Accept	Request	The type of pages the client can handle
Accept-Charset	Request	The character sets that are acceptable to the client
Accept-Encoding	Request	The page encodings the client can handle
Accept-Language	Request	The natural languages the client can handle
If-Modified-Since	Request	Time and date to check freshness
If-None-Match	Request	Previously sent tags to check freshness
Host	Request	The server's DNS name
Authorization	Request	A list of the client's credentials
Referer	Request	The previous URL from which the request came
Cookie	Request	Previously set cookie sent back to the server
Set-Cookie	Response	Cookie for the client to store
Server	Response	Information about the server
Content-Encoding	Response	How the content is encoded (e.g., gzip)
Content-Language	Response	The natural language used in the page
Content-Length	Response	The page's length in bytes
Content-Type	Response	The page's MIME type
Content-Range	Response	Identifies a portion of the page's content
Last-Modified	Response	Time and date the page was last changed
Expires	Response	Time and date when the page stops being valid
Location	Response	Tells the client where to send its request
Accept-Ranges	Response	Indicates the server will accept byte range requests
Date	Both	Date and time the message was sent
Range	Both	Identifies a portion of a page
Cache-Control	Both	Directives for how to treat caches
ETag	Both	Tag for the contents of the page
Upgrade	Both	The protocol the sender wants to switch to

## Einige HTTP Message Header