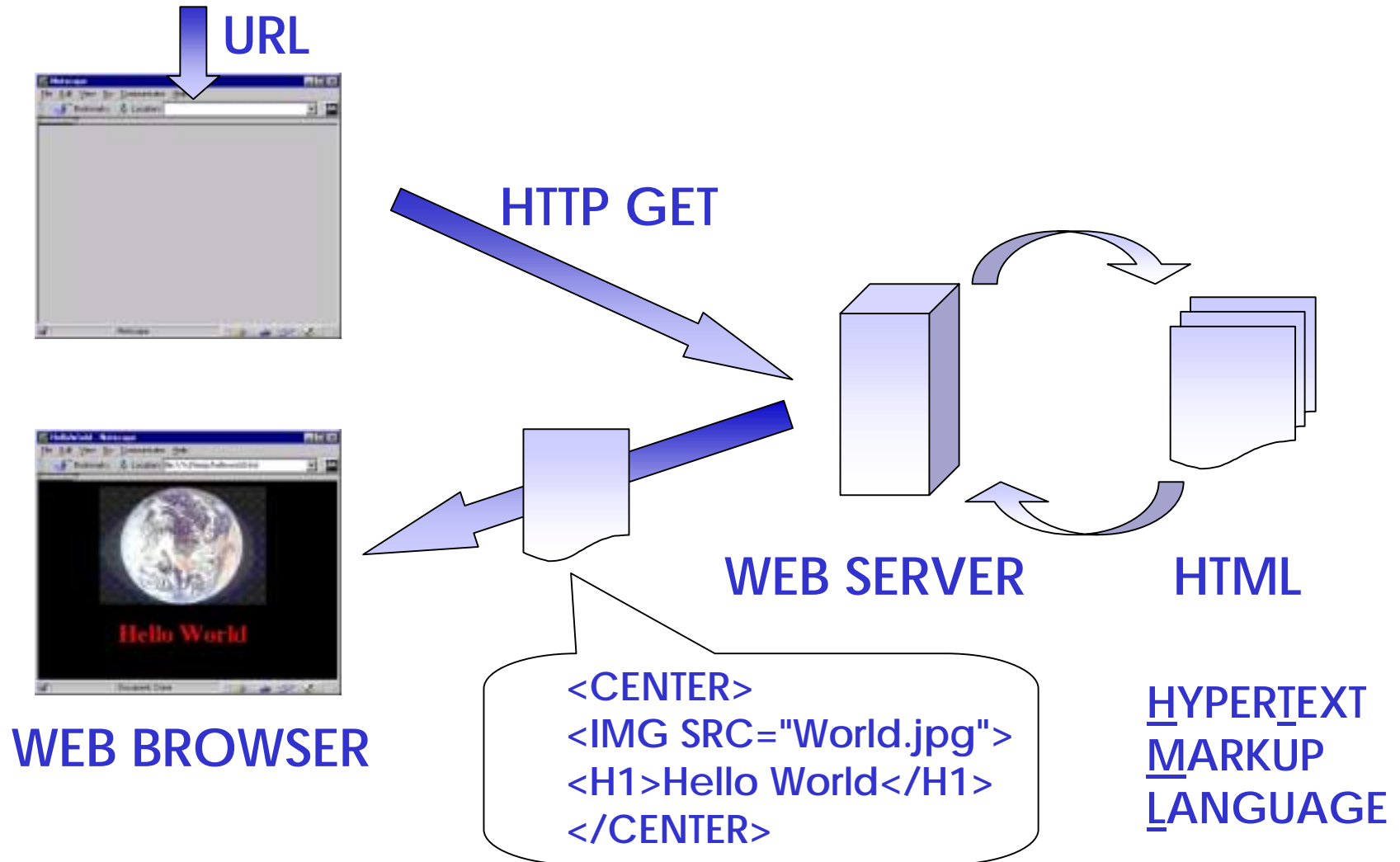


Web Applikationen

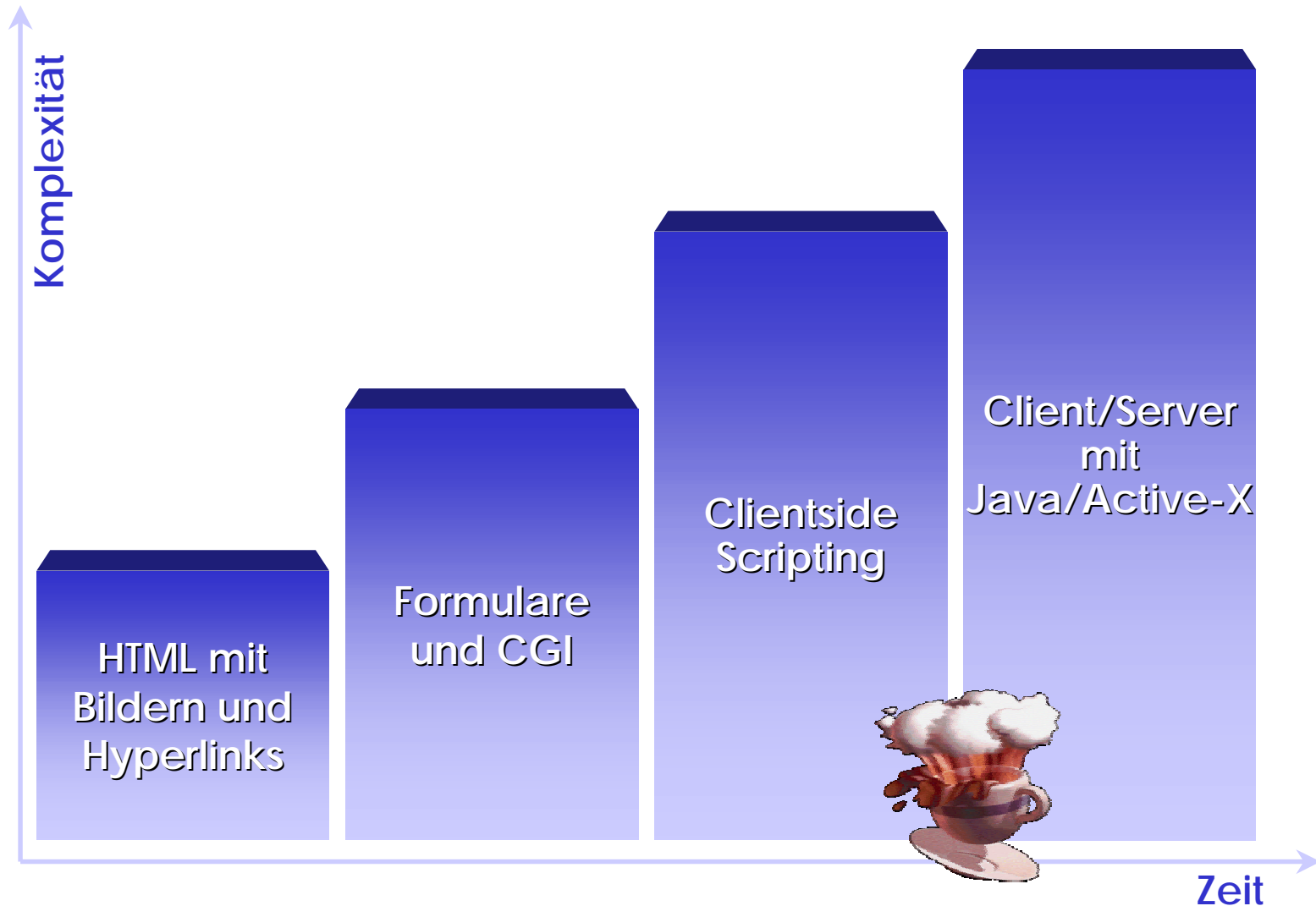
Entwicklung von Anwendungssoftware mit
Hilfe der WWW Technologie
Chancen und Risiken

Dipl. Inf. Constantin Szallies

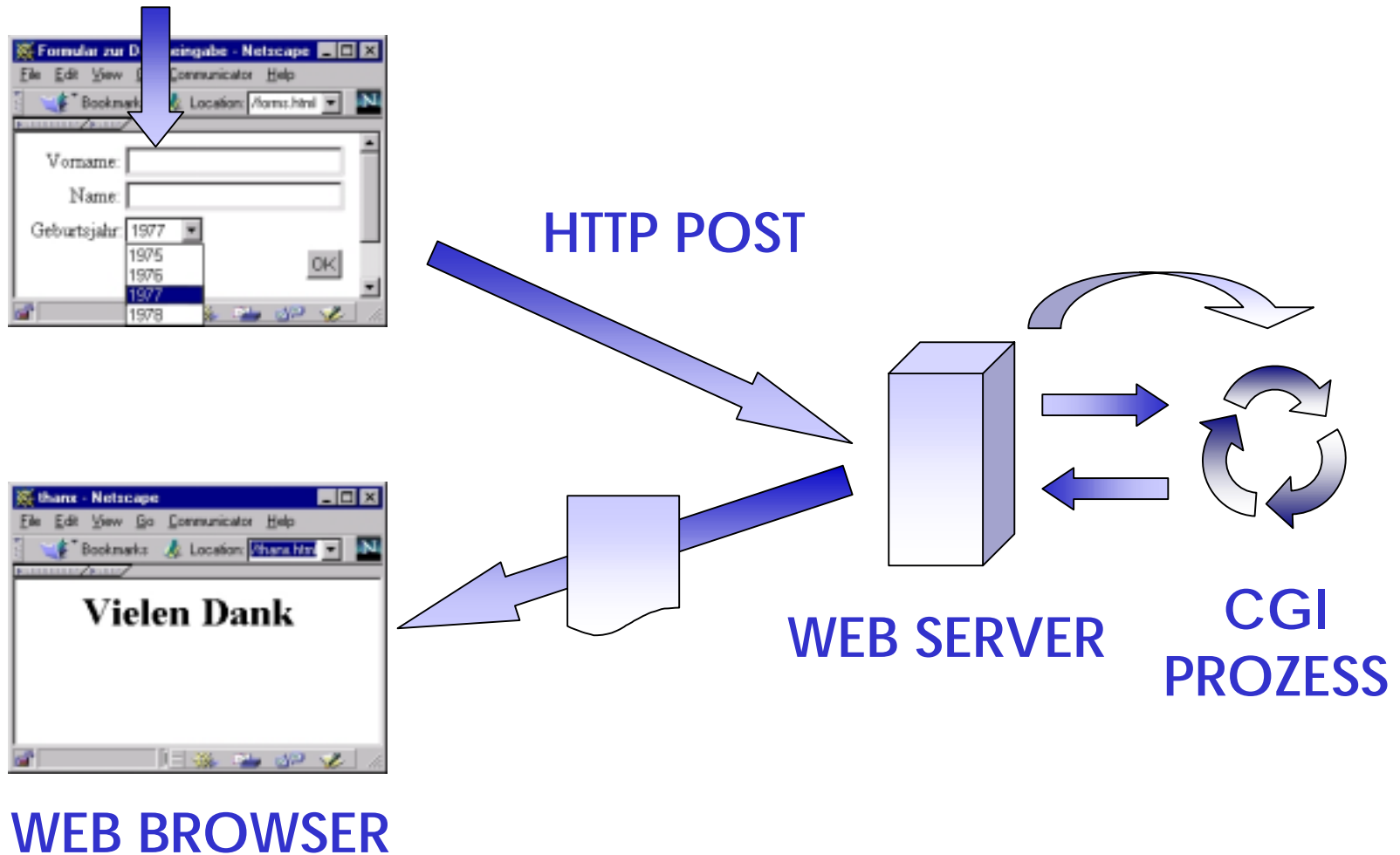
Die Technologie des World Wide Webs



Die Weiterentwicklung des HTML Standards



Formulare und CGI



Aktive HTML Dokumente

- JAVA Applets
- Active-X Controls
- JScript/Javascript

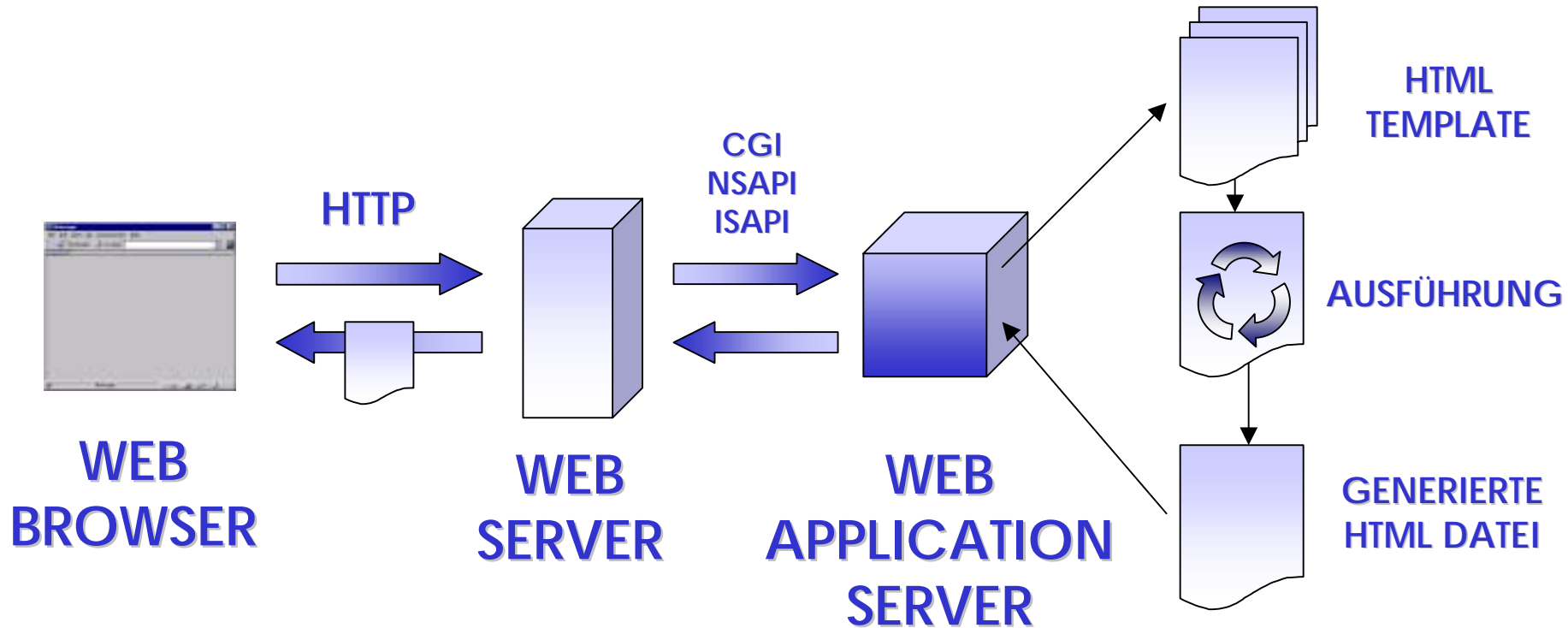


Wie entwickelt man damit Client/Server Systeme?

- Man unterscheidet zwei unterschiedliche Typen:
 - HTML Clients: Der Web Browser als grafisches Terminal
 - Aktive Clients: Aktive Komponenten im Browser kommunizieren mit einem unabhängigen Server
- SW Entwicklungsumgebungen
 - Tools zur Programmierung der Anwendung
 - Laufzeitumgebung

HTML Clients

Die Standardarchitektur



HTML Clients-SEU

Beispiel WebObjects



The screenshot displays the Xcode IDE interface. The main window is titled "AppDetailStats.wo" and shows the "App Engine Instance Inspector" for "Application Statistics". The inspector displays various statistics for an app instance, including mean, standard deviation, variance, minimum, and maximum response times, along with the coefficient of variation. The "Name" field is set to "summary" and the "Class" is "Object".

The "Script" window shows the following code:

```
instanceForLiteInstance:([[self session] detailInstance]);
:(@"number");
objectForKey:@"userDict"] objectForKey:@"VOAppName"];
) won] statsForInstance:instance];

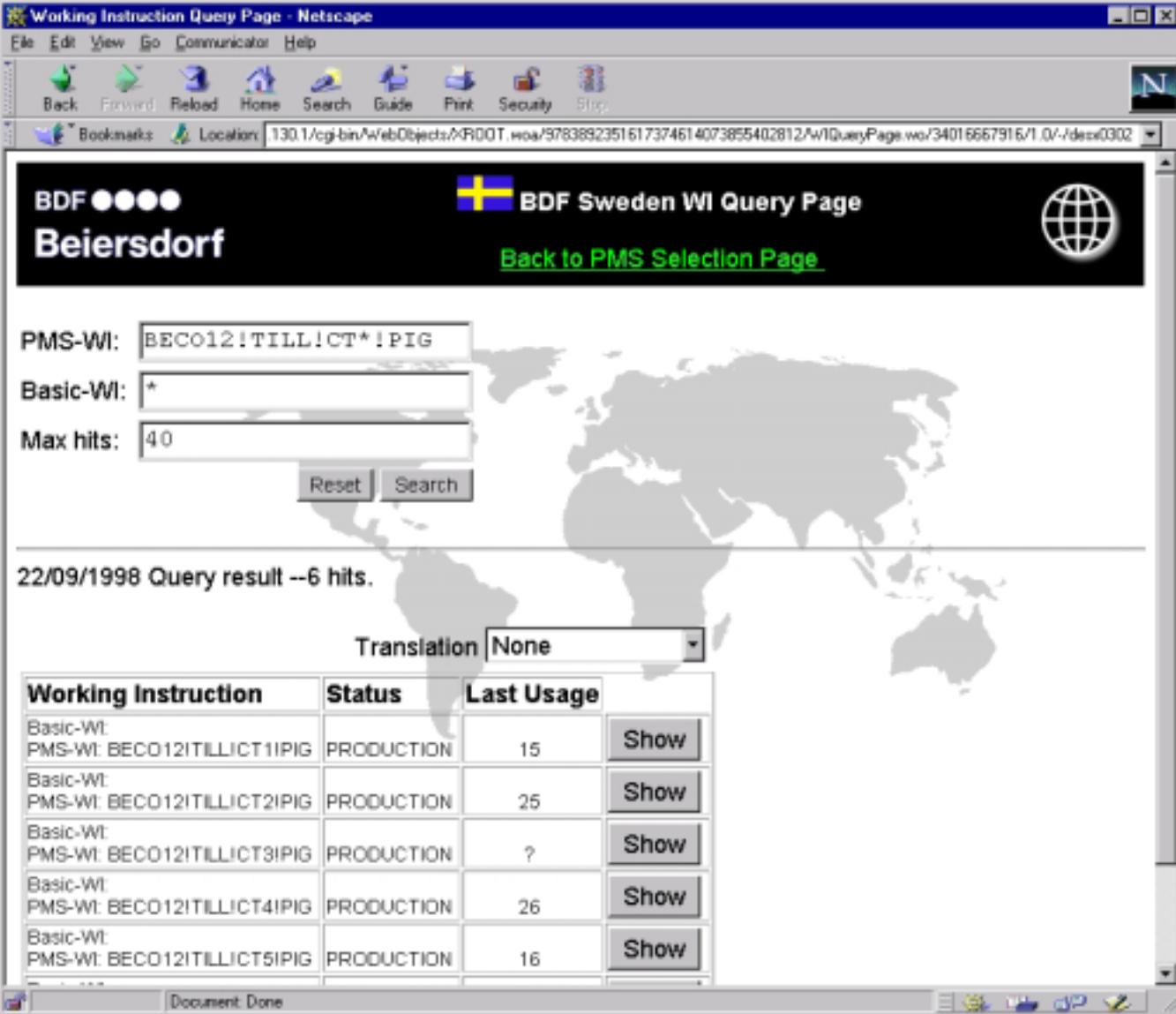
instanceNumberWithString:
forKey:@"sigmaResponseTime"] stringValue]];
instanceNumberWithString:
key:@"sigmaResponseTime"] stringValue]];

instanceNumber decimalNumberWithString:
objectForKey:@"maxResponseTime"] stringValue]];
instanceNumberWithString:
objectForKey:

instanceNumberWithString:
```

The "Form Elements" palette is visible in the bottom right corner, showing various UI components like text fields, buttons, and lists.

Anwendung TOPAS-X Web





Working Instruction Query Page - Netscape

File Edit View Go Communicator Help

Back Forward Reload Home Search Guide Print Security Stop

Bookmarks Location: 130.1/cgi-bin/~/WebObjects/~/ROOT._woa/9783892351617374614073855402812/~/wIQueryPage.wo/34016667916/1.0/-/desc0302

BDF ●●●●●  **BDF Sweden WI Query Page** 

Beiersdorf [Back to PMS Selection Page](#)

PMS-WI:

Basic-WI:

Max hits:

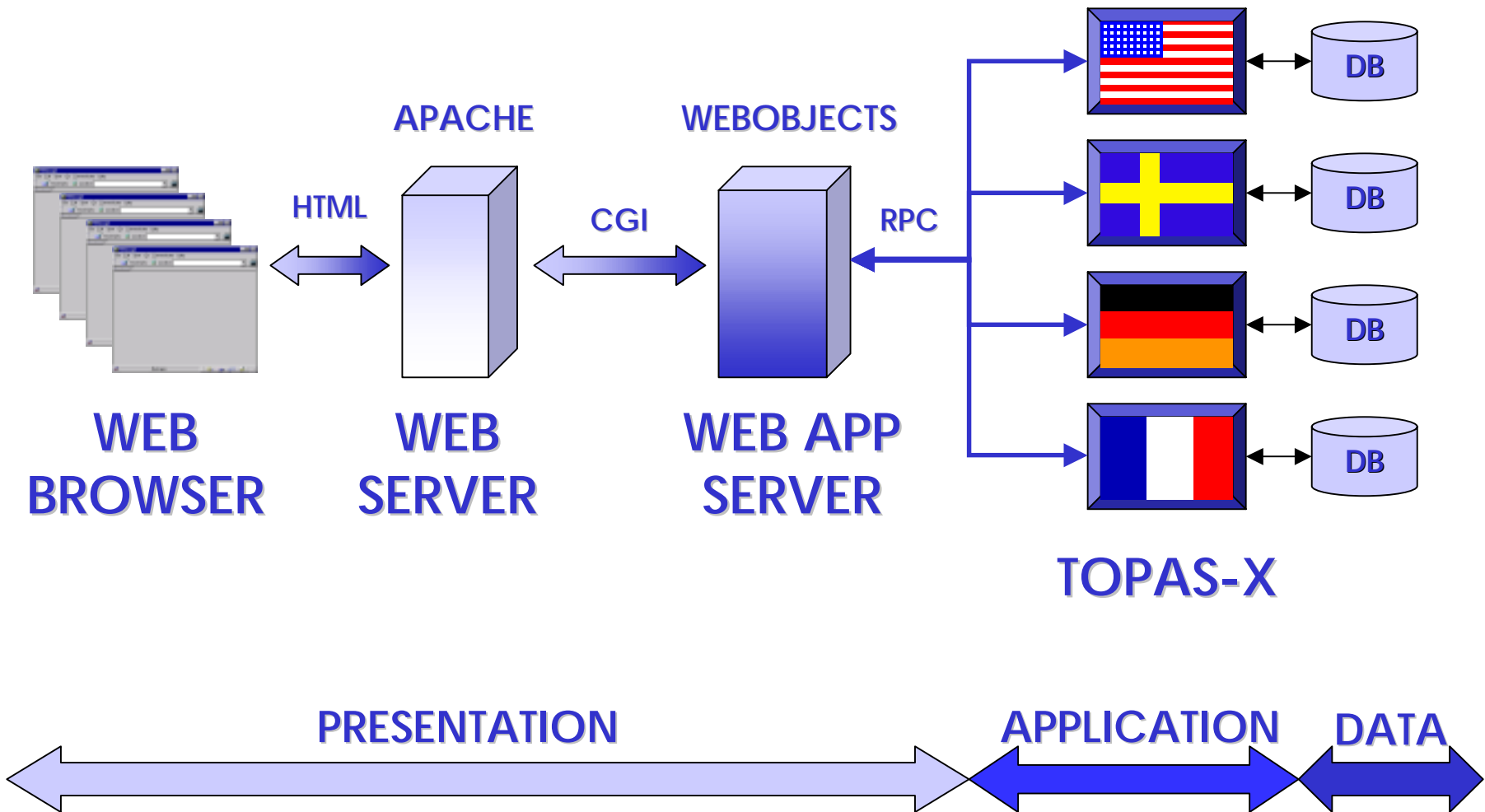
22/09/1998 Query result --6 hits.

Translation

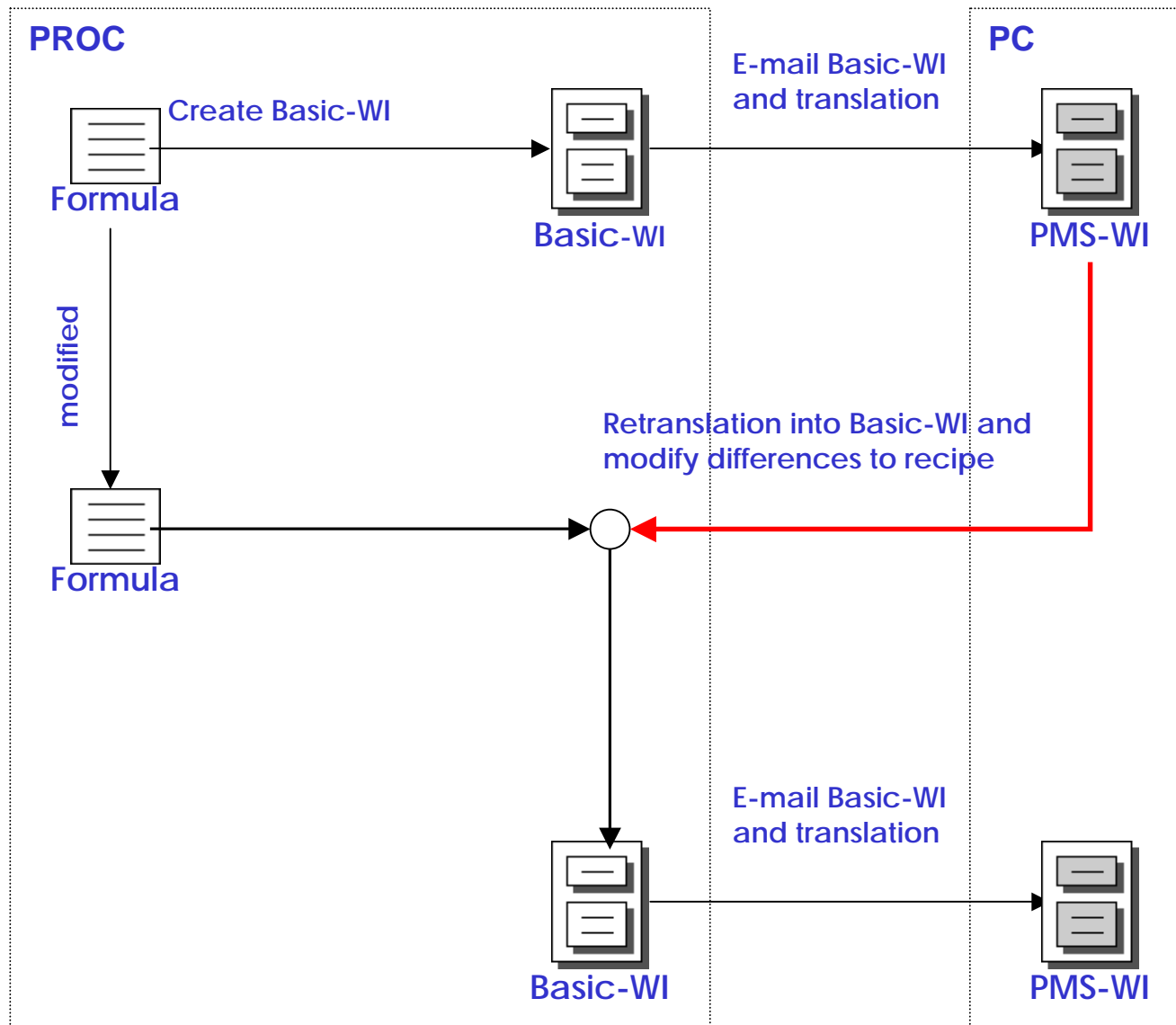
Working Instruction	Status	Last Usage	
Basic-WI: PMS-WI: BECO12ITILLICT1PIG	PRODUCTION	15	<input type="button" value="Show"/>
Basic-WI: PMS-WI: BECO12ITILLICT2PIG	PRODUCTION	25	<input type="button" value="Show"/>
Basic-WI: PMS-WI: BECO12ITILLICT3PIG	PRODUCTION	?	<input type="button" value="Show"/>
Basic-WI: PMS-WI: BECO12ITILLICT4PIG	PRODUCTION	26	<input type="button" value="Show"/>
Basic-WI: PMS-WI: BECO12ITILLICT5PIG	PRODUCTION	16	<input type="button" value="Show"/>

Document Done

Anwendung TOPAS-X Web



TOPAS-X Dokumentenfluß

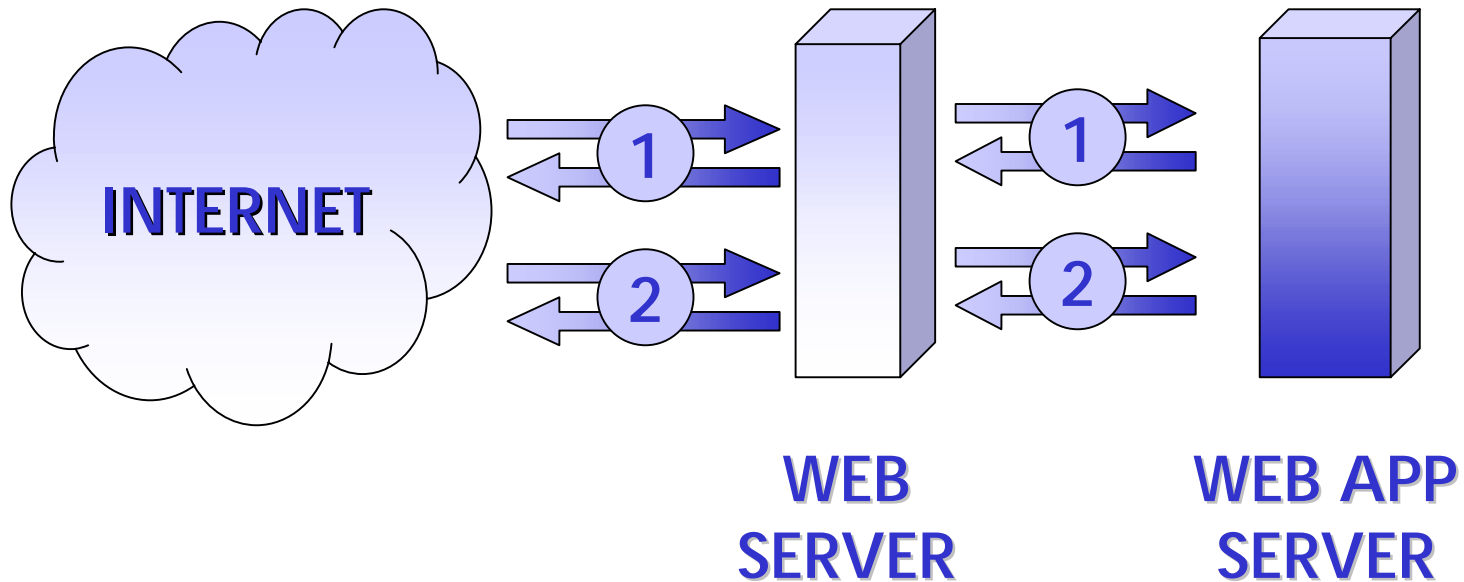


HTML Clients

Technologische Probleme

- HTTP kennt keine Sitzungen
- Backtracking im Web Browser
- HTML ist seiten-orientiert

HTTP kennt keine Sitzungen



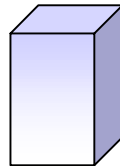
$$\textcircled{1} = \textcircled{2} \quad ?$$

Verwaltung von Sitzungen

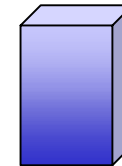
WEB BROWSER



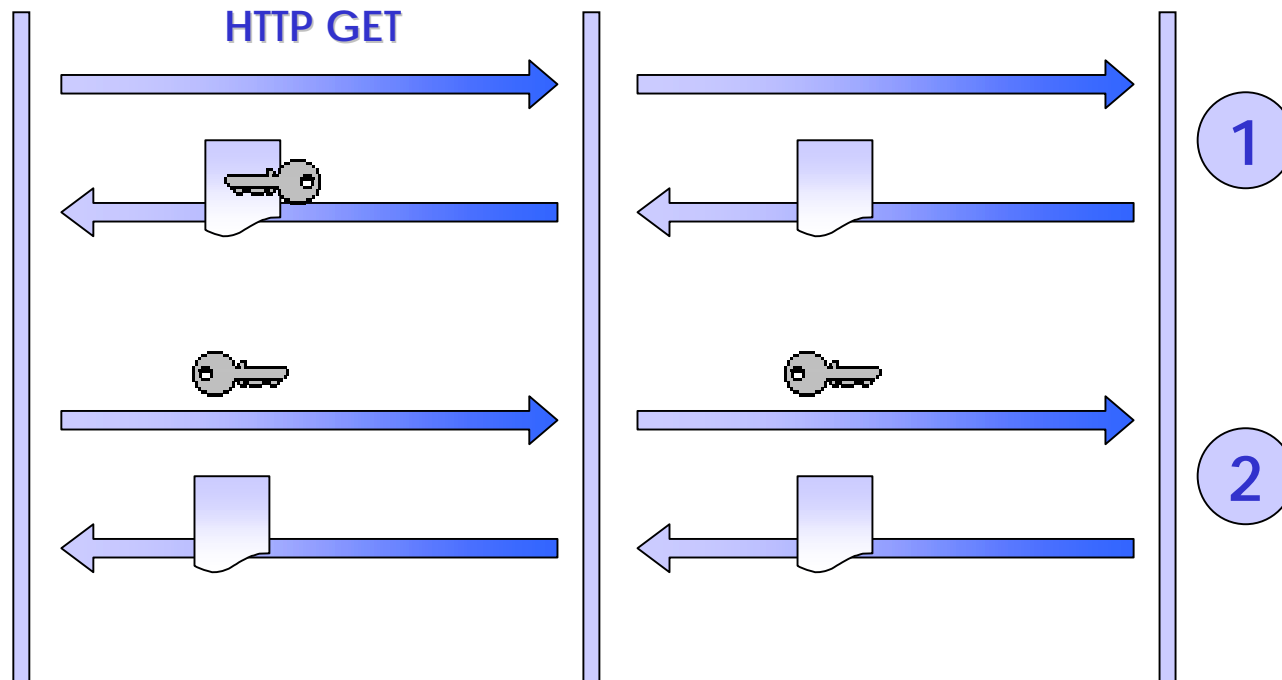
WEB SERVER



WEB APP SERVER



Schlüssel/
Zustand



Backtracking im Web Browser



Was passiert nach Ereignis 5 ?

HTML ist seiten-orientiert

Main - Netscape

File Edit View Go Communicator Help

Bookmarks Location: 08/Main.wa/68061403009/1.6.1.0.6.1.0/-/gehimbrei What's Related

TimeOff

Select the start and end date for your vacation, fill in your name and password, and press the Submit button.

Start Date:

◀	1998	▶	◀	November	▶	
S	M	T	W	Th	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

Thursday, November 05, 1998

End Date:

◀	1998	▶	◀	December	▶	
S	M	T	W	Th	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

Saturday, December 12, 1998

Login: Password:

Document: Done

Aktive Komponenten

TimeOff - Netscape

File Edit View Go Communicator Help

Location: 1678670708051/Main wo/564143380241/0/-/gehlin

TimeOff

Select the start and end date for your vacation, fill in your name and password, and press the Submit button.

November							December						
1998							1998						
1	2	3	4	5	6	7			1	2	3	4	5
8	9	10	11	12	13	14	6	7	8	9	10	11	12
15	16	17	18	19	20	21	13	14	15	16	17	18	19
22	23	24	25	26	27	28	20	21	22	23	24	25	26
29	30						27	28	29	30	31		

From: To:

Name:

Password:

HTML Clients

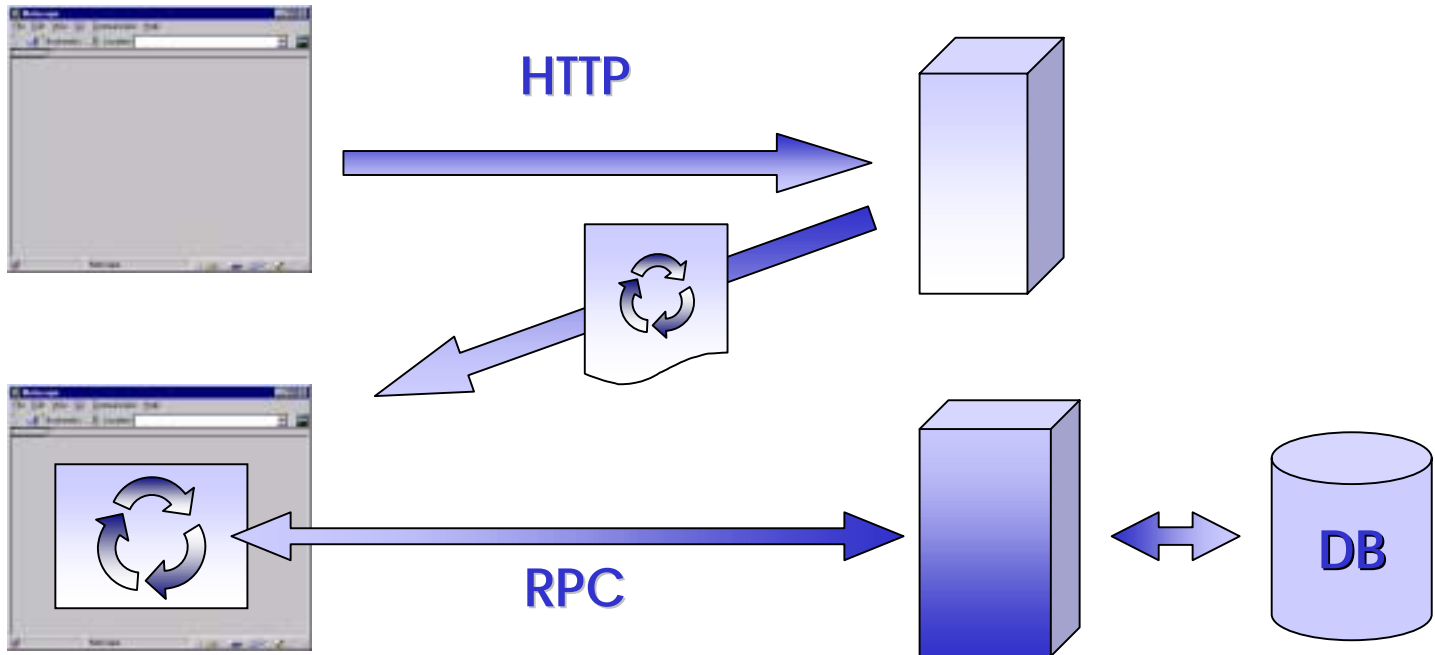
- **Entwicklungsumgebungen**
 - WebObjects (Apple)
 - Active Server Pages (Microsoft)
 - Object Forms (Object Design)
 - NetDynamics (Sun Microsystems)
 - Web Application Server (Oracle)
 - Domino (Notus)
 - Cold Fusion (Allaire)
 - VisualWave (ObjectShare)
 - Intershop (Intershop Communications)

Aktive Clients

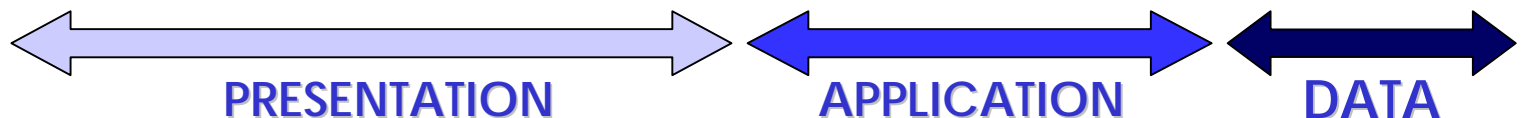
3-Ebenen Standardarchitektur

WEB BROWSER

WEB SERVER



APPLICATION
SERVER



Aktive Clients

- Technologische Probleme
 - Reduzierte Portabilität
 - Erhöhte Ladezeiten
 - Schlechte Performance
 - Sicherheitsprobleme

Aktive Clients

- **Entwicklungsumgebungen**
 - **Java Entwicklungsumgebungen**
 - Visual Café (Symantec)
 - Jbuilder (Inprise)
 - **ActiveX Entwicklungsumgebungen**
 - Visual C++ (Microsoft)
 - **JavaScript Entwicklungsumgebungen**
 - Visual JavaScript (Netscape)

Aktueller Stand und Zukunft

- HTML Client <---> Aktiver Client
 - Welche Technologie wofür?
- Neue <---> etablierte Technologien
 - DHTML, XML Push Technologien
- Java <---> Active-X