

# A Framework for Serving Inclusive Web Forms to Disabled and Elderly Individuals

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Introduction

Technology considerations

Server framework

Client framework

Example application

Results

Conclusions

Inclusive web services

DIADEM project

Disabled and elderly individuals

Cognitive/intellectual deficits

Underestimated user group

Trial system

Test driven development

Several development cycles, refinement of requirements specification

Client server structure

HTML 2.0-4.01

Served to client due to lack of satisfactory support of other technologies

Web Forms

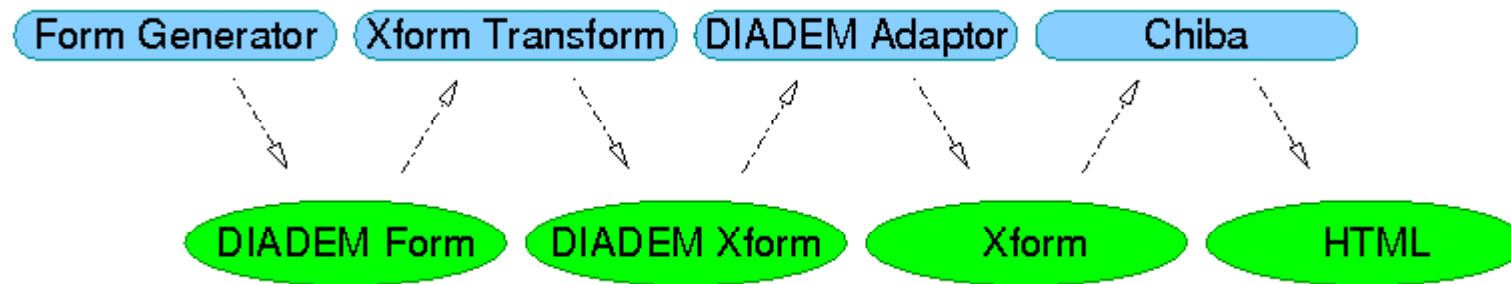
Superseded by HTML 5

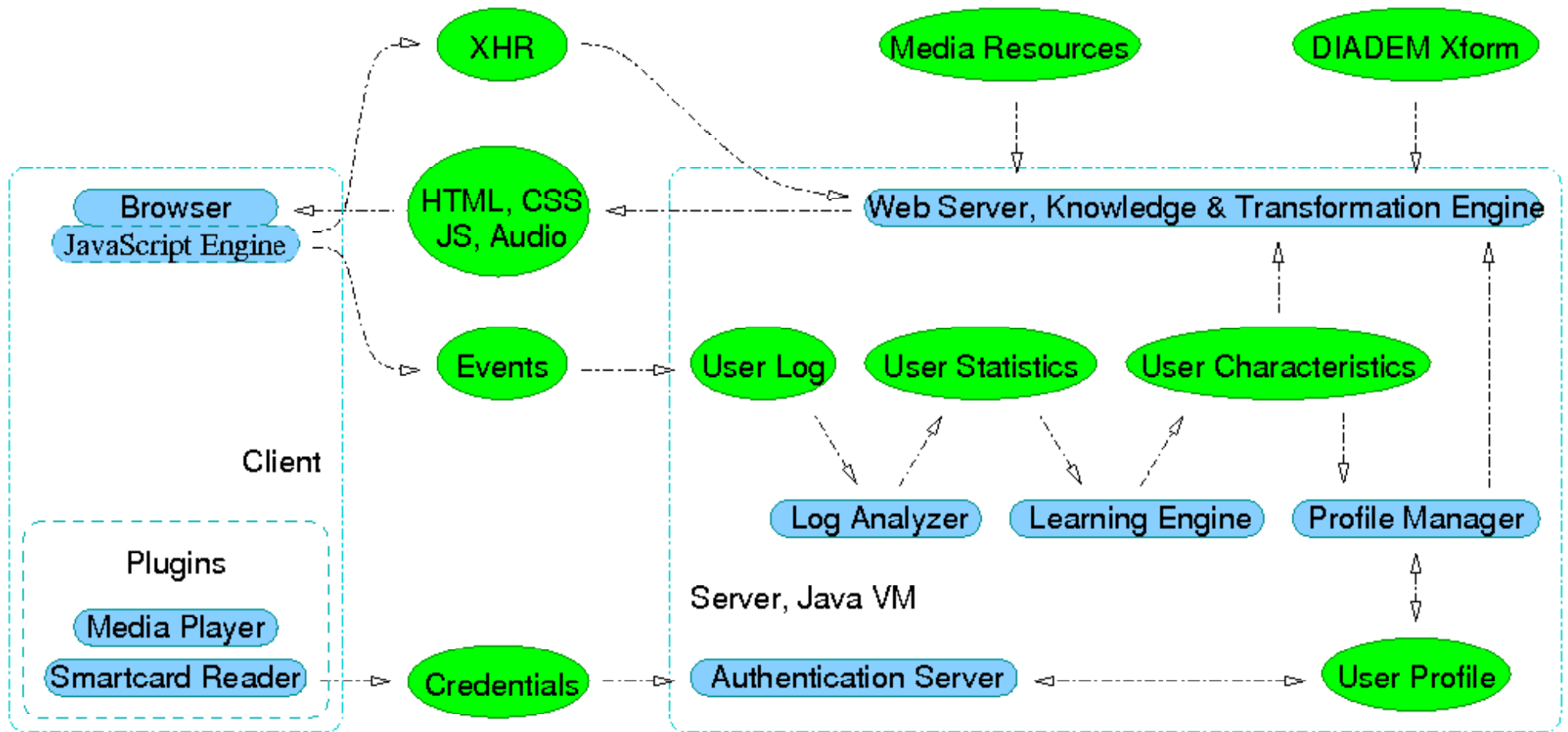
HTML 5

Not ripe yet

Xforms

Meets most requirements





## System adaptation

Per user, per session, per form

## Personalized user profiles

Preferences

System parameters

## Adaption process

User behavior monitoring

User statistics generation

## Form transformation

Rules

Modification of DOM and style sheet

Basic web technologies

HTTP, HTML, CSS,

Other

XHR

Plugins

Screen

Dialog bar

Navigation bar

"Tabbed" forms

Blocking



Unanswered questions remain.  
Would you like the system to identify them now?

YES	SAY ALOUD	EXIT
NO	CALL HELP	HELP

Completing form **Tell us you have moved** from **Sheffield City Council**. We know that Council Taxpayers have different circumstances, so the on-line form is designed to provide us with the information we need to amend your bill. Please read the questions carefully and only complete the sections you are asked to.

- 1) Instructions
- 2) **New Home (Contains errors)**
- 3) Summary

## Change of Address

### Section A: Details about the address of your new property

House (or flat) Name	<input type="text" value="Austin Drive"/>
House (or flat) Number	<input type="text" value="3"/>
Street	<input type="text"/>
Area (e.g. Broomhill)	<input type="text"/>

<b>Postcode</b>	<input type="text" value="B"/>	<input type="text" value="Please provide a valid postcode"/>
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Is your new property located within Sheffield	<input checked="" type="radio"/>	<input type="radio"/> Yes	<input type="radio"/>	<input checked="" type="radio"/> No
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### Section H: Your Contact Details

### Scalable system

- Number of rules, number and size of forms, number of concurrent users

### Time consuming development cycles and cumbersome deployment process

- Java and Java VM not perfect choice for design of user interfaces

- Put as much functionality as possible into client

### Many system components

- High degree of freedom leads to difficult implementation decisions

### Xform not the perfect choice for online services

### Form producing implications

- Difficult form building

Higher likability of DIADEM forms as compared to other e-services, and high level of user satisfaction

### Preliminary set of adaptation rules

System requirements met

It works!

True web technologies recommended

HTML & JavaScript more powerful combination in future

Lower complexity

Preliminary system behavior

Knowledge gained about best practices and recommended design principles

No conclusions about final rule set

Ongoing user testing

Thank you for your attention!

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Questions?