

An XHTML 2.0 Implementation

Mikko Pohja, Mikko Honkala, and Petri Vuorimaa
Helsinki University of Technology, Finland

`mikko.pohja@hut.fi`

Agenda

- Introduction
- XHTML 2.0
- Implementation
- Discussion
- Conclusions

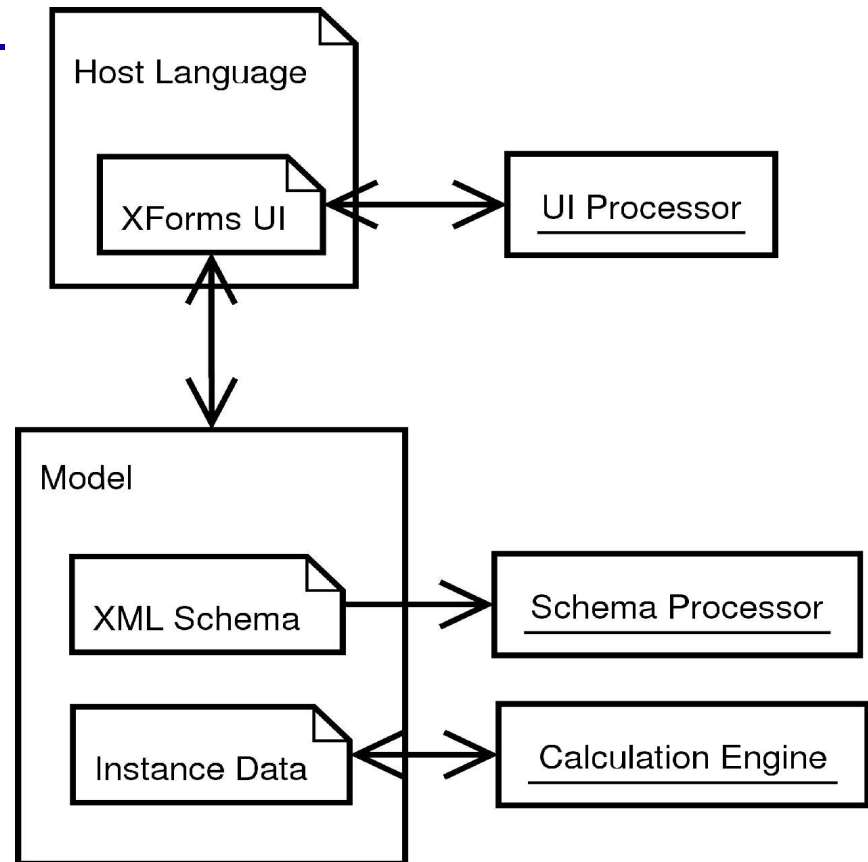
Introduction

- Web now
 - Designed for desktop computers
 - A lot of mixed markup (content, presentation, and scripts)
- Various kind of devices will have access to internet (PDA, digital televisions, mobile phones)
 - Varying processing power and screen size
- Aim: to bring HTML back to its origin
 - Describe only the structure of a document
 - Presentation through CSS
 - Reduce scripting
- New forms: XForms

- W3C Working Draft
- Generic XML
 - Intended to be used with other XML languages
- Describes only the structure
- Reduce scripting
 - Easier to write documents
 - Documents will be device independent
- Consists of modules
 - XHTML, XForms, XML Events, and Ruby
- More general use of attributes (e.g., src, href)

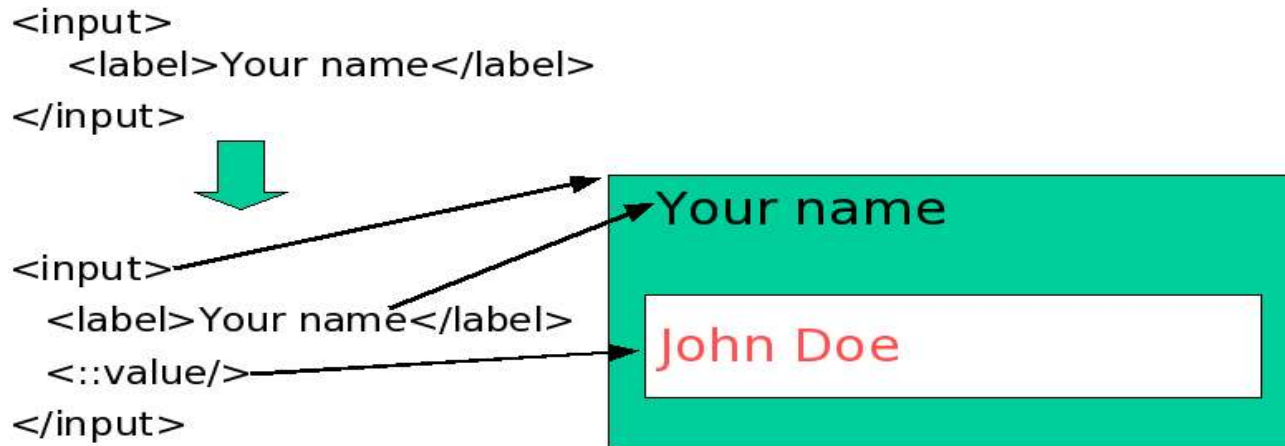
XForms

- Client-side operating (no scripting or server-side checking)
- Separates purpose and presentation
- Data types
- XML data is returned
 - Any XML language -> form can be XML editor
- Form controls markup is separated from data



XForms

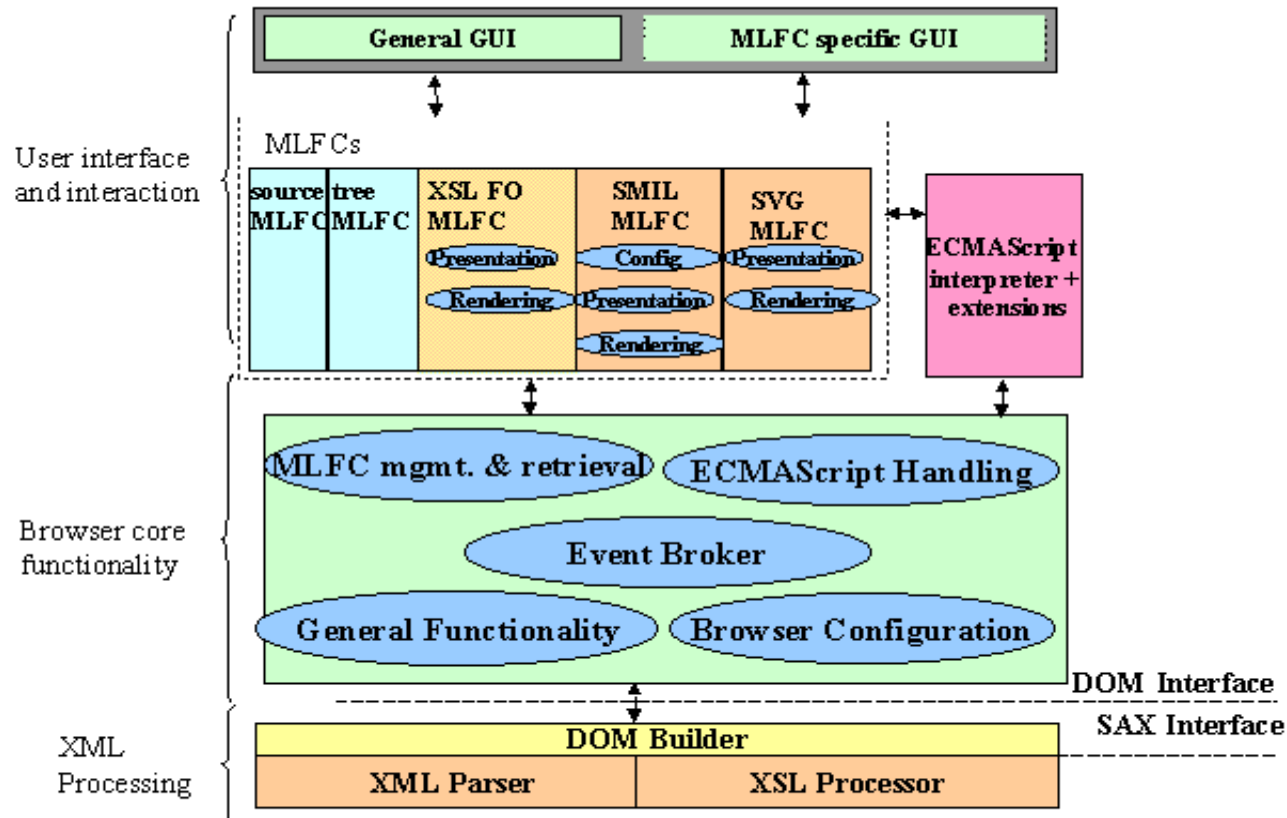
- Controls are device-independent and accessible.
- Two parts: the 'real' form (data, types, submission detail), and controls bound to data.
- Needs host language (e.g., XHTML)
 - Uses CSS pseudo-classes and pseudo-elements



X-Smiles XML Browser

- Java based XML browser
 - Support several XML specifications, e.g., SMIL, XForms, SVG, X3D, XSL, etc.
 - Graphical user interfaces for different devices
- Open source software since 2001
 - Started as a student project in 1998
 - www.x-smiles.org

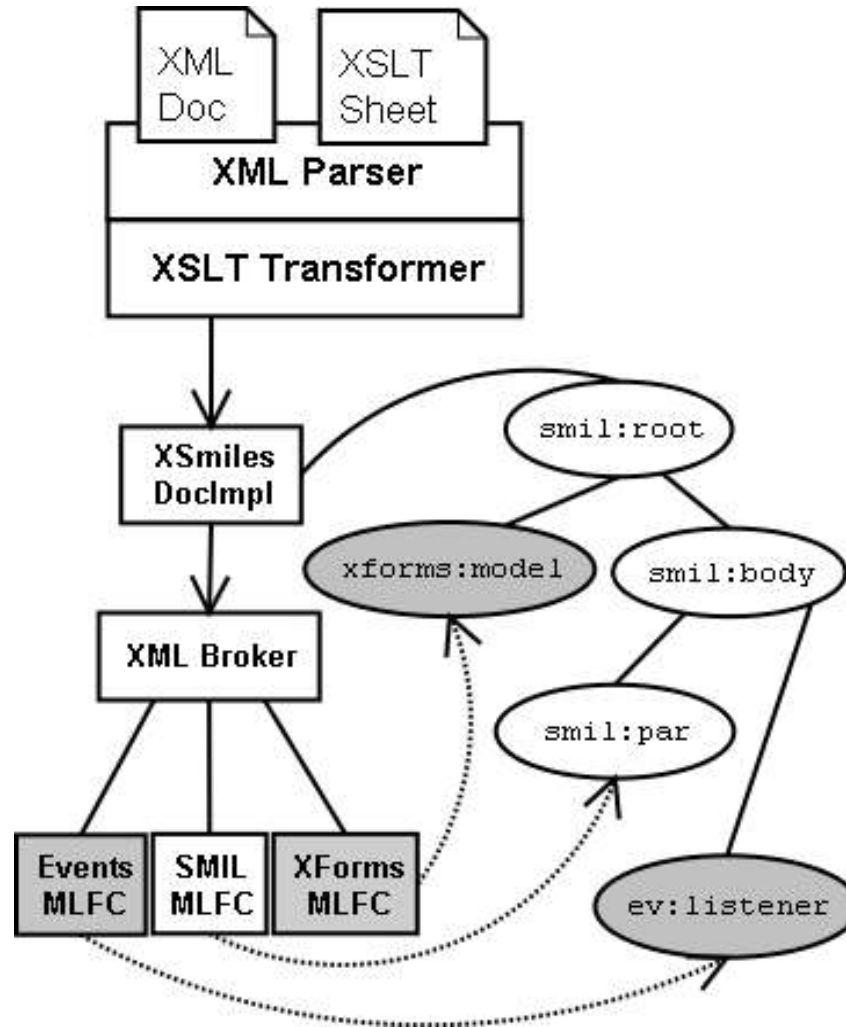
X-Smiles Architecture



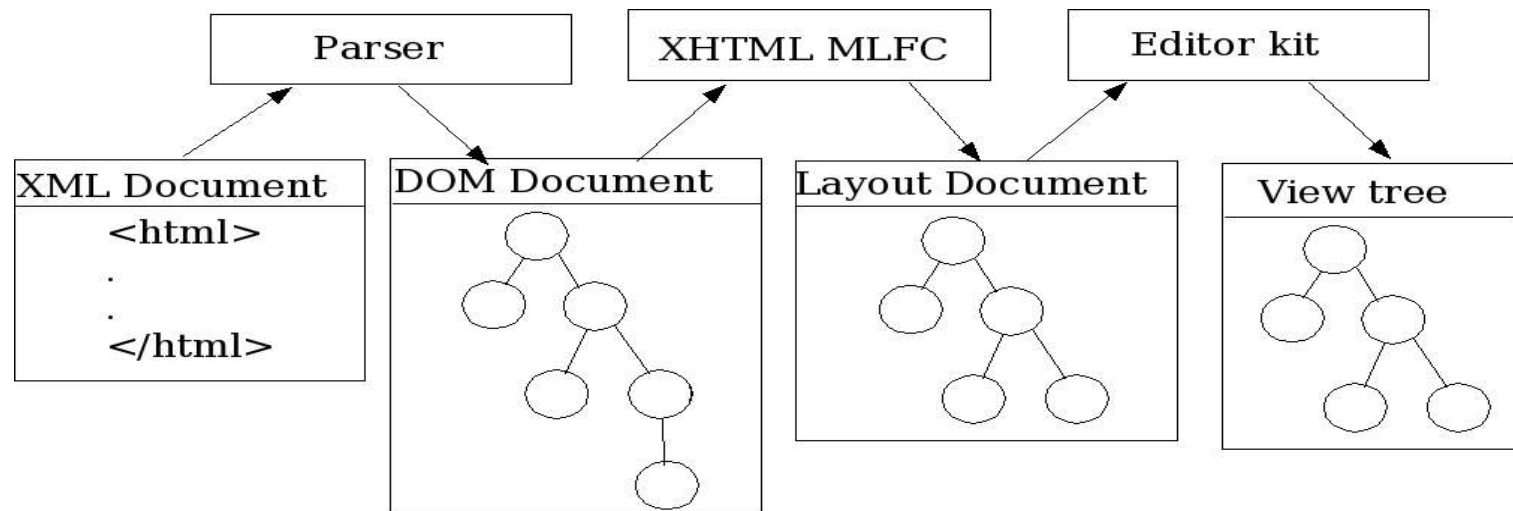
MLFCs & XML Brokering

- XML documents can consist of several XML languages
 - Elements are separated by namespaces
 - Hybrid or combined documents
 - Browser must be able to handle all the elements
 - This work: XHTML, XForms, and XML Events
- In X-Smiles there are Markup Language Functional Component (MLFC) for each language
 - Creating specific elements
 - Providing functionalities
- XML Broker controls the MLFCs

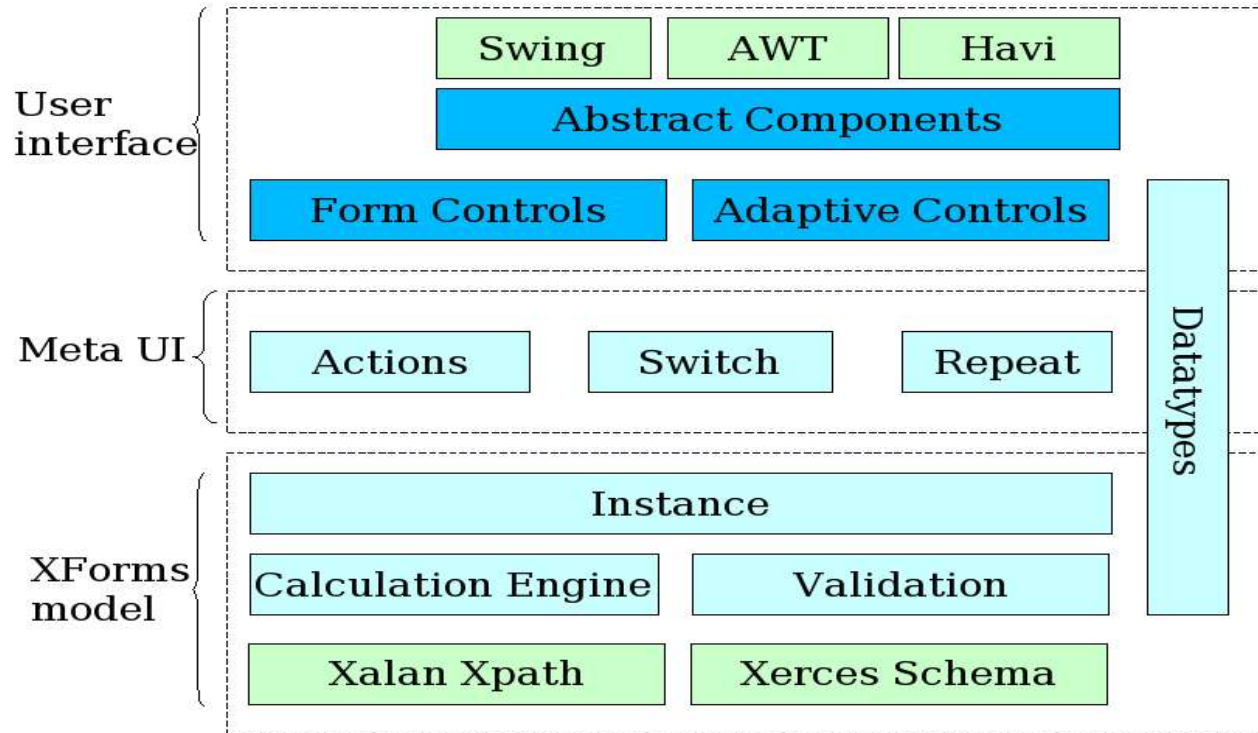
MLFCs & XML Brokering



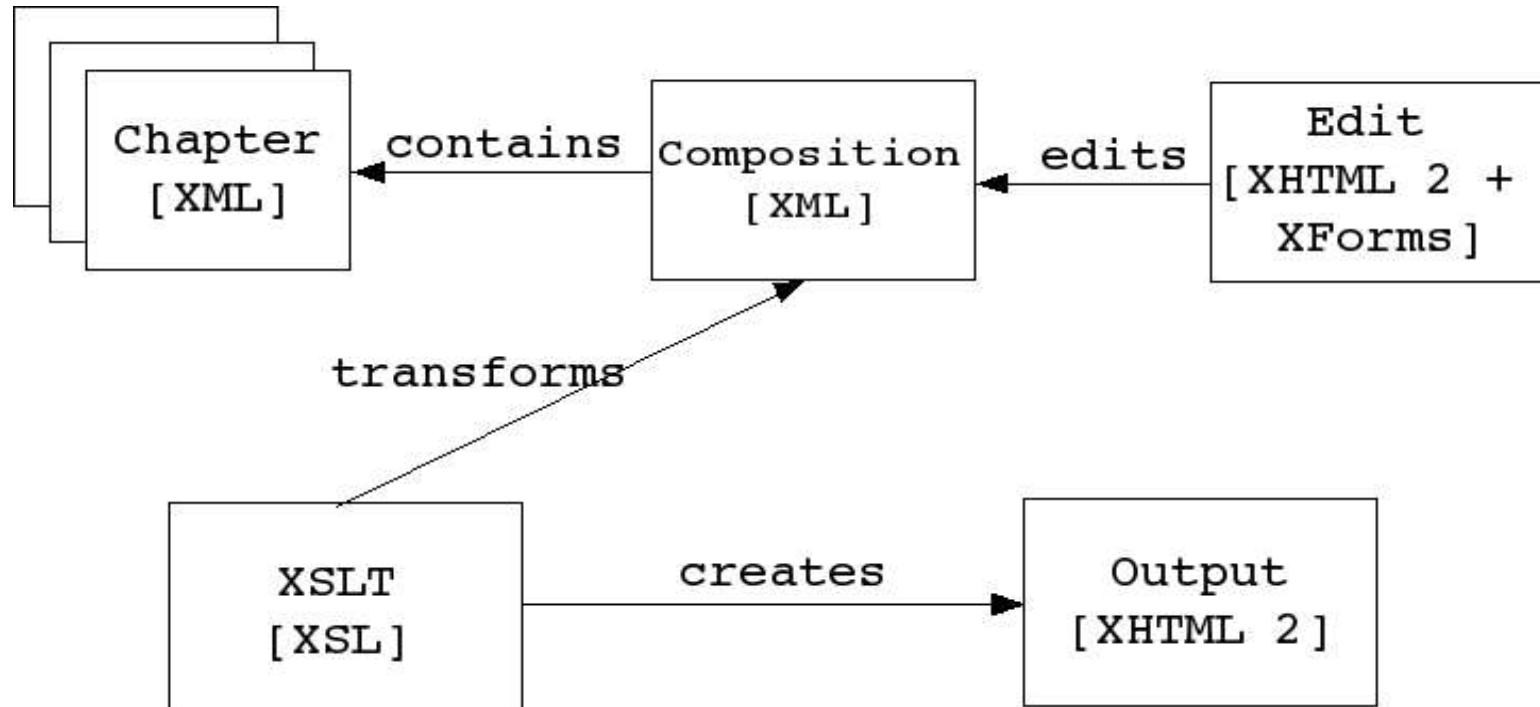
1. Parser parses the XML document and creates DOM
2. Layout document is created from DOM
3. Every layout element has its own View
4. Layout document is displayed by Views in the browser



XForms Module



A Case Study



Discussion

- Transition to XHTML 2.0 influences to both user agent manufactures and authors
- Authors
 - XHTML 2.0 is not backward compatible
 - New forms
- User agent manufactures
 - XForms, XML Schema, and XPath
- Less scripting, content and presentation separated
 - Documents are easier maintain and reuse
 - Device independency
- Advantages outweigh the problems

Conclusions

- XHTML 2.0 requires major changes in user agents
- Authors have to adopt new language and form concept
- Anyway, it's worthwhile
- Future work: XHTML 2.0 in restricted devices
 - XForms Basic
- www.x-smiles.org