Web Applications In XML

XForms — Online Forms To Web Applications

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Outline

- Online forms to Web Applications
- Anatomy Of A Web Application
- Discovering, codifying Web patterns
- XForms and Web Applications
- Re-democratizing the Web
  - Empowering authors, not browser vendors
Online Forms To Web Applications
Enabled interactivity on the Web.

- HTML forms collected data values,
- CGI scripts processed collected values,
- And served up the next step in the interaction.

Server-side has stayed the same since 1993.
Client-side Of Web Applications

Evolved to enable richer client-side interaction.

- Scripting implements client-side behaviors.
- DOM enables manipulation of the HTML UI.
- Enables separation of data from presentation.

Toward discovery of useful design patterns.
Anatomy Of A Web Application
Anatomy Of Web Applications

- Interaction widgets that collect data,
- Event handlers that implement behavior,
- Memory model synchronized with server,
- Server logic to knit together the application.

*Deploy User Interaction To A Universal Client*
Discovering Web Design Patterns
Web Interaction Idioms

Data Binding
- Data in ECMAScript objects,
- Data in XML,
- Bound to HTML view via DOM.

Data Sources
- Data from multiple sources,
- Submit to multiple destinations.
Web Design Idioms

Dynamic
- Grow or shrink the interface.
- Customize presentation on the fly.
- Interactively validate user input.
- Incremental user feedback.

Live UI
- Avoid page refresh where possible.
- XML data binding.
- XML-HTTP Request/Response.
XForms And Web Applications
Decrease cost of Web applications.

- Encapsulates data and constraints,
- Enables automatic server-side validation,
- Enables client-side code generation,
- Obviates frequent page refresh,
- Enables Web front-ends to Web Services.
XForms User Interface

*Designed for cross-device, multimodal access.*

- UI markup captures underlying intent.
- *Accessible* by design.
- Factors interaction logic from presentation.
- Controls can be optimized for target device.
XForms Submit

*Delivers well-formed XML to the server.*

- Submitting XML makes I18N easy.
- XML simplifies server-side processing.
- XML response transmits instance updates.
Empowering Users
Re-democratizing The Web
Universal Access

HTML made hypertext accessible to all.

- Accessible to authors,
- Accessible to all users,
- Accessible to a variety of user agents.

XForms —Achieve the same for Web Applications.
Democratizing The Web

- HTML Web enabled everyone to publish.
- This has been amplified by the blogosphere.
- But Web platform is limited to programmers.

Goal: Enable end-user programming of Web front-ends.
Compound Documents

- XHTML2 — Universal markup Container.
- DOM2 — Universal runtime container.
- XML Events — Eventing for authors.
- CSS2 — Style for the masses.
- XForms — universal Interaction.
- SVG — Rich visual effects.
- VoiceXML — Gives the Web its voice.

When the planets align . . . A platform is born.
Watch The W3C Web Take-Off!