



**XML Technologies:
W3C XForms Functionality in
OpenOffice.org**

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W3C XForms in OpenOffice.org

- About the Speaker
 - *Daniel Vogelheim, Sun Microsystems*
 - *OpenOffice.org Developer since foundation*
 - *Areas Of Interest*
 - *Writer application core*
 - *XForms support*
 - *XML File Format & related technologies*
 - *Standards Activities*
 - *W3C XForms Working Group*
 - *OASIS Open Office TC*



W3C XForms in OpenOffice.org

- Agenda

- *Forms*
- *Introduction to W3C XForms*
- *W3C XForms in OpenOffice.org*
- *Demo*
- *Questions*

Paper Forms

- What is a Form?
 - *fill-in-the-blanks doc.*
 - *layout + text to guide users*
 - ***structured data entry***
- Form Usage
 - *common in business + administration*
 - *established for decades*
 - *well understood by people*

The image shows a German tax form (EST 1 A) for the year 2003. The form is titled "Einkommensteuererklärung" and includes sections for "Allgemeine Angaben", "Bankverbindung", and "Unterschreiben". It features a grid layout with numbered rows and columns, and a header with the year "2003" and "12" in the top left corner. The form is designed for structured data entry.



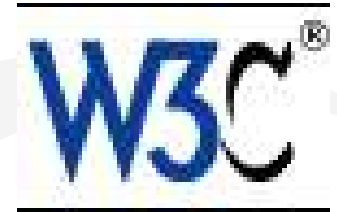
Electronic Forms

- Electronic Forms
 - *form controls*
- HTML Forms
 - *data model: name/value pairs*
 - *submission + return document*
 - *everything else: scripting (client or server)*
- Database Forms
 - *data model: SQL query*
 - *named columns + types*
 - *elementary data types + validation*
 - *load/store + navigation*

Introduction to XForms

- W3C XForms History

- *W3C XHTML needed better forms*
- *spin-off separate working group*
- *not only browsers anymore*
- *XForms 1.0: W3C Recommendation – Oct '03*



- How is it different?

- *arbitrary XML data*
- *bind controls through XPath expressions*
 - *supports dynamic forms (= data-dependent)*
- *declaratively add form logic*
 - *calculations, relevance, required*

Example: Payment Terms

- Example: Payment on Web Site
 - *payment options*
 - *credit card, pre-paid*
 - *credit card: type, number expiration date*
 - *dependencies*
 - *credit card data REQUIRED for credit card payment*
 - *credit card data NOT RELEVANT for other payment*
 - *business logic!*

Selected Payment Method:

Credit Card Cash

Credit Card Number:

12345678t|

Expiration Date:

12/94

submit

Example: Payment Terms

```
<xforms:model>
  <xforms:instance>
    <payment>
      <method>cash</method> <expiry/> <number/>
    </payment>
  </xforms:instance>
  <xforms:bind id="bind_949f49c" nodeset="number"
    relevant="../method = 'cc'"
    required="../method = 'cc'"/>
  <xforms:bind id="bind_710b52c" nodeset="expiry"
    relevant="../method = 'cc'"
    required="../method = 'cc'"/>
  <xforms:bind nodeset="number" type="Credit Card"/>
  <xforms:submission id="submit"
    action="http://localhost:8888/" method="Post" />
</xforms:model>
```




XForms Implementations

- Office Packages
 - *StarOffice, OpenOffice.org & friends*
- Browsers
 - *Mozilla (started)*
 - *XSmiles (XHTML + XForms browser)*
 - *plugins (FormsPlayer, Oracle)*
 - *Flash (Mozquito/SAP)*
- Server-Side
 - *HTML + submit (Chiba (Java))*
 - *HTML + JavaScript (IBM)*
- Specialised Forms Packages



Using Standards

- No single product fits all
 - *deploy over web*
 - *highly complex forms (e.g. tax declaration)*
 - *mobile use (e.g. mobile phones, hand-helds)*
 - *integration with business work-flow*
- ... but XForms does!
 - *It's about formats, not products!*
 - *up-size or down-size with new requirements*
 - *easy multi-channel deployment*
- How do we fit in?
 - *OASIS format, established office functionality*
 - *between browser & specialised form solution*

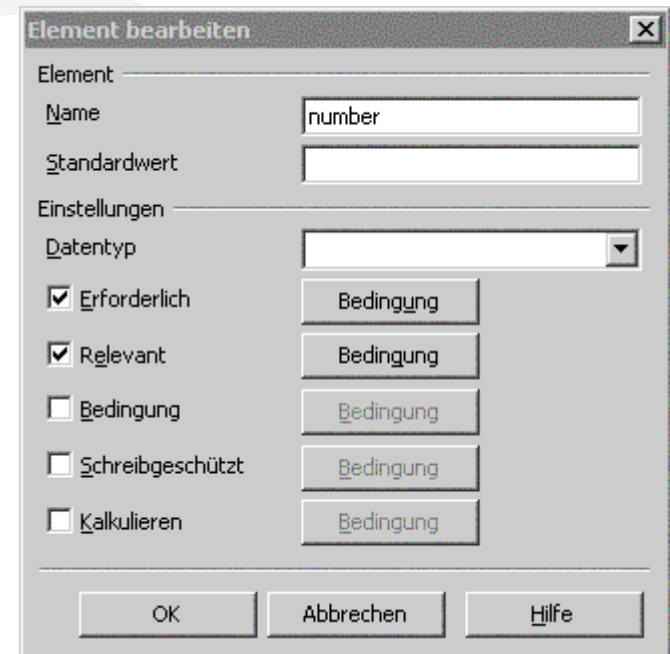
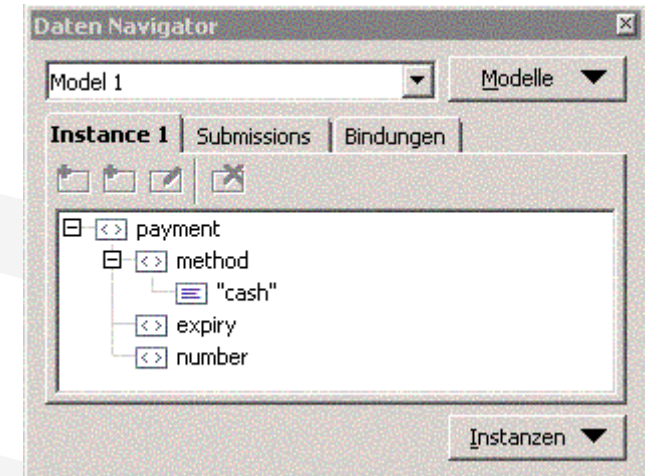


XForms in OpenOffice.org

- Previously in OpenOffice.org
 - *HTML-style forms*
 - *database forms*
- New in OpenOffice.org 2.0
 - *W3C XForms 1.0*
 - *create and deploy*
 - *XForms data model, OOo controls*
 - *support XSD data types, but not full XSD schema*
 - *embed XForms into OASIS Open Office format*
 - *also: improved database (not in this talk)*

Creating XForms

- Property Browser
 - *edit control properties*
 - *bind control to XForms model*
 - *direct access to binding*
- Data Navigator
 - *browse, edit instances*
 - *direct access to binding*
 - *edit submissions + bindings*
- Other
 - *live preview for XPath*



Using XForms

- Filling Out a Form
 - *only fillable content is editable*
 - *errors are clearly marked*
 - *comprehensible error messages*
 - *dynamic rebinding of controls*

The screenshot shows the StarOffice 8 EA interface with a form titled "Example Payment.oxt". The form contains the following elements:

- Selected Payment Method: Credit Card Cash
- Credit Card Number: (highlighted with a red border)
- Expiration Date:
- submit button

A yellow error message box is displayed next to the Credit Card Number field, containing the text: "Wert ist nicht vom Typ 'Credit Card'".



Other Use-Cases

- Mixed XForms/Free-Form Documents
 - *highly structured form-type information*
 - *plus conventional document body*
 - *use writable sections*
- Custom XML
 - *allows embedding of arbitrary XML*
 - *edit/display custom XML with form controls*
 - *covers most common use-cases*

Use-Case: Mixed Document

XForms Graphical User Interface (GUI) Specification - Part 1
OpenOffice.org 2.0 and StarOffice 8

Document ID	Specification Owner	Last Change	Status
	Frank Loehmann	03/11/04	Draft

Conforms to:
Applies to: XForms module, Writer
Task ID(s): 37300
Category: Feature

Abstract:
XForms is an international standard for web forms. OO.o is able to create and edit XForms compatible forms. Part 1 of the specification describes the graphical user interface (GUI) for toolbars, menus and the Data Navigator for the new XForms functionality.

Team Members (The specification owner is part of the team)

	Name	Email Address
User Experience	Frank Loehmann	Frank.Loehmann@sun.com
Development	Daniel Vogelheim	Daniel.vogelheim@sun.com
Quality Assurance	Mark Neumann	Mark.neumann@sun.com
Documentation	Uwe Fuchs	Uwe.fuchs@sun.com

Approved for Implementation

	Approved by	Date
User Experience	Frank Loehmann	03/11/04
Development	Paul Bux	03/14/04
Quality Assurance		
Documentation		

String Review

	Reviewed by	Date
	Kirubalan Muthu	03/20/04

String List:
Item: English
Menu Entry: ~XMLForm

Default Position of Toolbars:
The screenshot on page 12 below shows the initial default positioning of toolbars and floating windows when the Writer is in the OO.o mode (i.e. OVD) to carry out a future task (OK?)

Default Position of Floating Windows:
The Form Navigator is located in the upper right and the Data Navigator is also located in the lower right of the new XForms document. The Forms and Controls toolbar is located and placed in the upper right corner of the document. In any right-to-left (RTL) languages, the position will be automatically mirrored. The status (visibility of checked/unchecked) and positions of these toolbars are saved as default for new XForms documents.

The new XForms menu will be provided by Kirubalan Muthu. Please contact the string review approver for further details.
<http://www.openoffice.org/modifications/modded/Gui/xmlform.spec>
The final document will be provided by SFS.

- Specification
 - formal header
 - work-flow
 - embedded XForms
- office body
 - headers, lists, images
 - OASIS Open Office
- automate w/ XForms
 - check workflow rules
 - name/email lookup



Demo: Electronic Invoice

- Electronic Invoice
 - *use UBL (Universal Business Language)*
 - *data types*
 - *dependent calculations*
 - *sum, taxes, rebate*
 - *export as XHTML + Xforms*
 - *use in XSmiles*



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Questions?