OFC335

Microsoft Office Word 2007 XML Programmability: True Data/View Separation and Rich Eventing for Custom XML

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Agenda

- The world today (Microsoft Office Word 2003)
- Structural Integrity
  - Content Controls
- Data/View Separation
  - Microsoft Office XML data store
  - XML mapping
- Conclusion
- Questions

The World Today

- Word 2003 was a major step forward:
  - XML-based file format (WordprocessingML)
  - Customer-defined schema support
- However, a big toolbox doesn't mean it's easy to build a house
  - You need XML schema, XSLT, client-side code, etc.

The World of Word 2007

- Make it easier to push/pull customer data within Word documents

- How?

  - Structural integrity (Content Controls)
    - Provide content restriction, lockdown capability
  - Data/view separation (Office XML data store)
    - Place to store custom XML data in the new file format
    - Each item is stored as a separate part within the package

Demo

Structuring a Document

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Content Controls

- Evolution of customer-defined XML
  - No XML schema required
- Provide friendly end user exposure of structured content
- Each provides unique content restrictions / user interface that doesn't affect layout
- Controls can be grouped to lock them down as a unit
- Controls can be mapped to XML data

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XML Data Store / XML Mapping

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Office XML Data Store

- Customer-defined XML (incl. WSS/Office doc props) stored separately from WordprocessingML as a part in Open XML format

- Any XML can be stored (with or without XML schema)

- XML data is available as an editable tree (using familiar DOM) within Word

- Can be populated on a server using WinFX or a client using Word OM

XML Mapping

- Link document controls to nodes in the XML data store

- Provides for true data/view separation model in Word

- Mappings are created using standard XPath expressions

- Mappings can be set up to 'auto-attach' to incoming data

- Out-of-the-box support for mapping to Office properties

Demo

Mapping WSS Data Into Word

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Mapping WSS Data into Word

- Word 2007 has native integration between the WSS property set and the XML mapping architecture:
  - WSS properties are stored as items in the Office XML data store
  - Properties can be mapped to content controls in the document
  - WSS docs automatically get UI on the ribbon to do this mapping
  - InfoPath property panel is synchronized with the data store

Client Side Programming

- Recommended approach: program directly against the data
  - InfoPath or Office OM – your choice
  - Word will automatically take care of the effects on the presentation via the XML mappings
  - Use shared error board to communicate validation errors to the user
- Use controls OM if you need behavior for specific controls (e.g. to block user from exiting)

Demo

Using InfoPath for Client-Side Business Logic

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Using Office OM for Client–Side Business Logic

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Server Side Programming

- Recommended approach:
  Using WinFX to navigate the file format
  - Adding a part is as simple as adding a single relationship
  - Finding an existing part is done by namespace or GUID matching

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Using Custom XML Data on the Server

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Related Areas In VSTO V3

- Document control support in the Microsoft Visual Studio designer
  - Integration with .NET data binding
- .NET programming model for the XML data store for document manipulation on client/server
- Leveraging the XML data store / new file format for VSTO solution storage

Conclusion

- Two main themes to Word 2007 for solution creation
  - Make structured document more robust by providing controls and content groups
  - Provide true data/view separation by providing custom XML data store
- Result: you have to write less code and your solutions are more reliable with Word as the editing environment

Key Takeaways

- Word 2007 allows for more granular control over structured data via content controls
  - Specialized UI, Content restrictions, locking, etc.
- Word 2007 allows for separation of data and presentation via the Office XML data store
- Word 2007 allows for automatic two-way synchronization between data and view via XML mapping

Resources

Technical Chats and Webcasts
http://www.microsoft.com/communities/chats/default.mspx
http://www.microsoft.com/usa/webcasts/default.asp

Microsoft Learning and Certification
http://www.microsoft.com/learning/default.mspx

MSDN & TechNet
http://microsoft.com/msdn
http://microsoft.com/technet

Virtual Labs
http://www.microsoft.com/technet/traincert/virtuallab/rms.mspx

Newsgroups
http://communities2.microsoft.com/
communities/newsgroups/en-us/default.aspx

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