



**DEV19
Excel Services,
Applications and Extensions**

European Microsoft SharePoint
Conference 2007

February 12 to 14, 2007
Convention Center
Hotel Estrel, Berlin, Germany




**DEV19
Excel Services, Server APIs and
Managed UDFs**

Jens Häupel
Developer Evangelist
Microsoft Deutschland GmbH
<http://blogs.msdn.com/jensha>




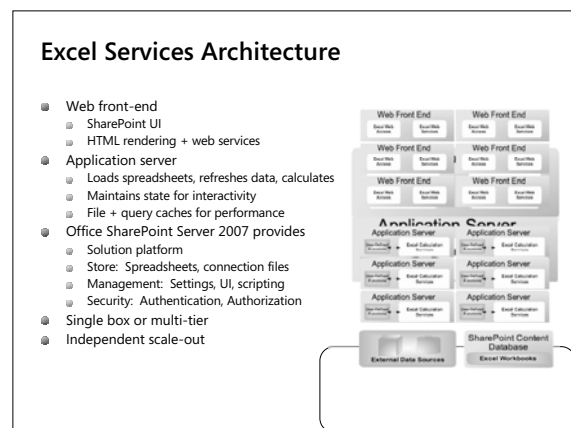
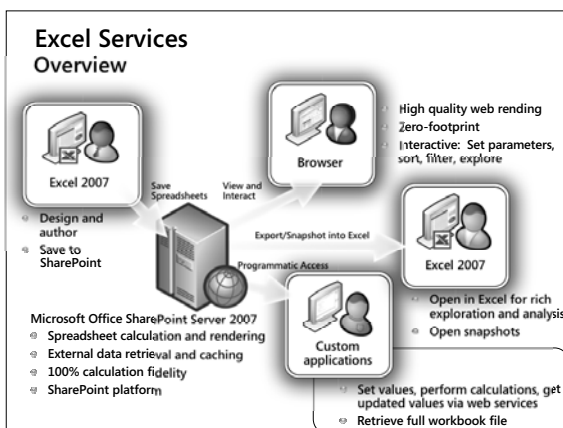
**Microsoft Office Excel on Servers
Customer needs and challenges**

- "Many versions of the truth"
- Excel often doesn't 'play' in the BI dashboard and reporting world because there is no live thin solution for sharing spreadsheets
- Information in Spreadsheets is difficult to protect
- Incorporating Excel logic into applications often requires re-coding
- Excel was designed as a client program



**Excel Services
What is it?**

- A new server code-base built on the SharePoint platform
- Server-side Excel calculation engine
- Browser access to live, interactive server spreadsheets
- Web service access to server-side Excel calculation

Demo

Browser-Based Spreadsheet Rendering



Limited Possibilities?

- Limited built-in functions?
- No VBA available?
- Want external data sources?
- What about Webservices?
- How about .NET Framework functionality?



User Defined Functions

- Extend calculation and data-import capabilities
 - Functions that are not built into Excel.
 - Custom implementations to built-in functions.
 - Custom data feeds for legacy or unsupported data sources
 - Call WebServices
- Compiled Code based on .NETFx 2.0
 - Needs Reference to **Excel Services UDF Framework**



Demo

Excel Services & UDFs



User Defined Functions Things to know

- Visual Studio 2005 Class Library
- Assembly Reference
 - **Microsoft.Office.Excel.Server.Udf.dll**
 - \Program Files\Common Files\Microsoft Shared\web server extensions\12\ISAPI
- Classes
 - **Microsoft.Office.Excel.Server.Udf.UdfClass** attribute
- Functions
 - **Microsoft.Office.Excel.Server.Udf.UdfMethod** attribute
 - **IsVolatile** property
 - **ReturnsPersonalInformation** property



Excel Web Services Scenarios

- Using server-side Excel logic in applications
 - Author part of the business logic in Excel
 - Protect and maintain proprietary information
- Automating spreadsheet updates on servers
 - Refresh external data and parameterize
 - Process generated spreadsheets
 - Create, store and deliver snapshots
- Custom UI to server-side Excel calculation



Excel Web Services Functionality

- Open a spreadsheet file
(Start a session with Excel Services)
- Set values to cells and ranges
- Process the session spreadsheet
 - Refresh data from external sources
 - Calculate spreadsheet or specific ranges
- Get results
 - Values from cells and ranges
 - Entire calculated spreadsheet – live or snapshot



Demo

Using Excel Functionality in WinForms Applications thru WebServices



Summary

Thank You

- Excel Services
 - Excel spreadsheets processed on the server
 - Web Service API for code access to server Excel calculation
 - Extendable spreadsheets thru UDFs
 - Based on Microsoft Office SharePoint Server 2007



Resources

- Creating Custom Solutions with Excel Services
 - <http://msdn2.microsoft.com/en-us/library/ms517343.aspx>
- Excel 2007 blog:
 - <http://blogs.msdn.com/Excel>
- Shahar Prish's (Software Design Engineer) blog:
 - <http://blogs.msdn.com/cumgranosalis/>

