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Robert C. Cain, MVP

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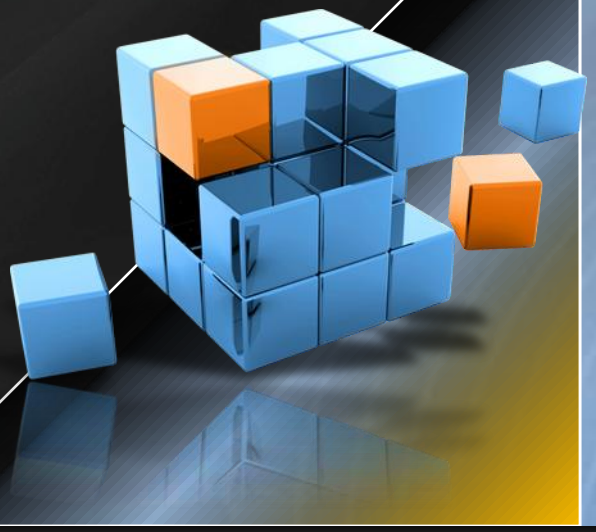
Introduction to Microsoft PowerPivot



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Your Presenter

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- Robert C. Cain
- Senior BI Architect COMFRAME
  - Offices in Birmingham, Nashville & Beijing
  - Microsoft Partner, 1 of 37 Nationally Managed
  - Systems Integrator
  - App Dev, SharePoint, BI, EPM
- 5 years BI at Nuclear Power Co.
- 10 years as a consultant in the B'ham Market
- Wide range of .Net applications, ASP & Win
- SQL Server Data Warehouse
- http://arcanecode.com
- http://twitter.com/arcanecode

What is PowerPivot?

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"PowerPivot is Microsoft Self-Service Business Intelligence"

Give that to me again…

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- Business Intelligence “BI” is all about taking data you already have and transforming it into knowledge you can take informed actions on.
- Every organization has someone doing BI, they just may not realize it.
- *“That guy”*

Measures

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- How do you know if your organization is doing well?
- You find a quantitative value that acts as an indicator.
- Example 1 – Sales Manager

Example 1. Sales Totals for each Salesperson

SalesPerson	Total Sales
Paul Randal	2,456,000
Kimberly Tripp	3,985,000
Andy Leonard	956,000

- Total sales becomes our *measure*.
- The measure is an *aggregation* of sales records.

Dimensions

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- Example 2 – Drilling down by dimensions

Example 2. Sales Totals for each Salesperson by year				
SalesPerson	**2007 Sales**	**2008 Sales**	**2009 Sales**	**Total Sales**
Paul Randal	1,200,000	850,000	406,000	2,456,000
Kimberly Tripp	1,285,000	1,340,000	1,360,000	3,985,000
Andy Leonard	0	150,000	806000	956,000

- Sales Person, yearly sales are *dimensions*
- Dimensions are the who, what, where, when
- The tool to use 2 or more dimensions to analyze measures is a *pivot table*
- Data changes over time are known as *trends*

“That guy” has problems

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- Two tools for doing BI today
- Excel
  - Pros:
    - Easily available on everyone’s desktop
    - Easy for user to create a solution on their own
  - Cons:
    - Data grows stale quickly, hard to refresh
    - Can only hold a limited volume of data
    - Sheets grow large quickly
    - Difficult to share

“That guy” has problems

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- The second tool
- Programmed BI solution with SQL Server Analysis Services
  - Pros:
    - Very robust and fast
    - Easy to share the data
    - Stays fresh
  - Cons:
    - Requires a lot of planning, development
    - Long time from user need to solution delivery
    - Expensive to implement

Our Hero!

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- PowerPivot!
- PowerPivot is not one tool but two:

PowerPivot for Microsoft Excel 2010

PowerPivot for Microsoft SharePoint 2010

PowerPivot for Microsoft Excel 2010

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- An add-on for Excel 2010
- Brings the power of SSAS to Excel
- Data compression allows millions of rows to be stored in a compact disk space
- *Linked tables* allow data to be easily refreshed
- Data can come from wide array of sources
- Provides full functionality of Excel formulas, formatting
- Adds new tools in Data Analysis eXpressions (DAX)
- Gives “that guy” the power to create his own analysis tool

PowerPivot for Microsoft SharePoint 2010

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- A new service for SharePoint 2010
- Enables the workbook to be viewed and manipulated in the browser
- Use the PowerPivot workbook as a data source
- Use pieces of the workbook in Dashboards
- Allows for automated updates of the underlying data
- Provides monitoring tools for usage
- Gives “that guy” the ability to share his PowerPivot worksheet easily

Limitations

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- PowerPivot for Excel only works with 2010 version. No backward compatibility.
- PowerPivot for SharePoint requires SQL Server 2008 **R2** Analysis Services to be installed. Not compatible with SQL Server 2005 or 2008.
- At some point usage may grow too much for PowerPivot to handle. At that point consider a full BI project. Monitoring tools can help with alerting before it becomes an issue.

PowerPivot Infrastructure Overview

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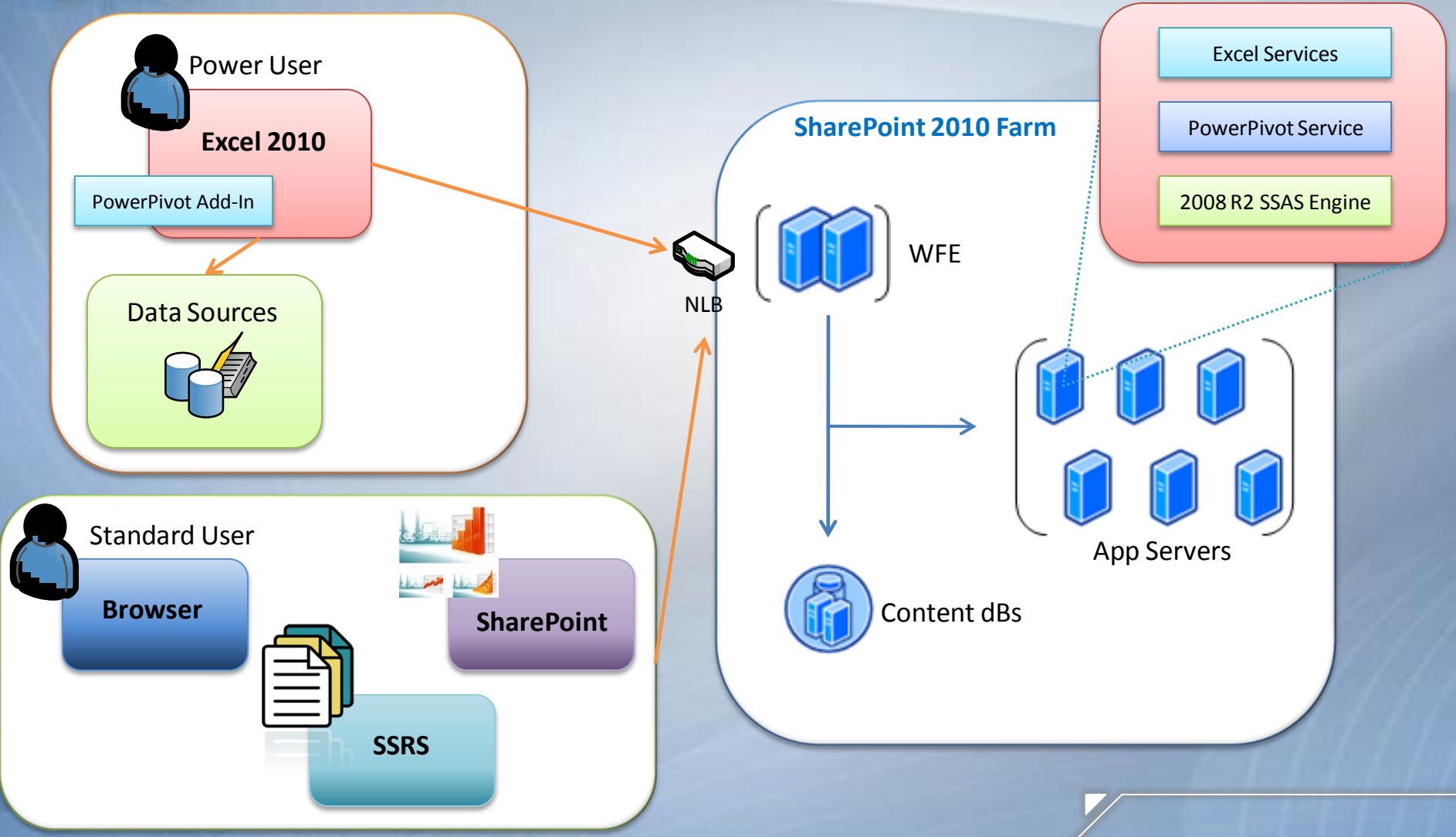

PowerPivot CTP Demo

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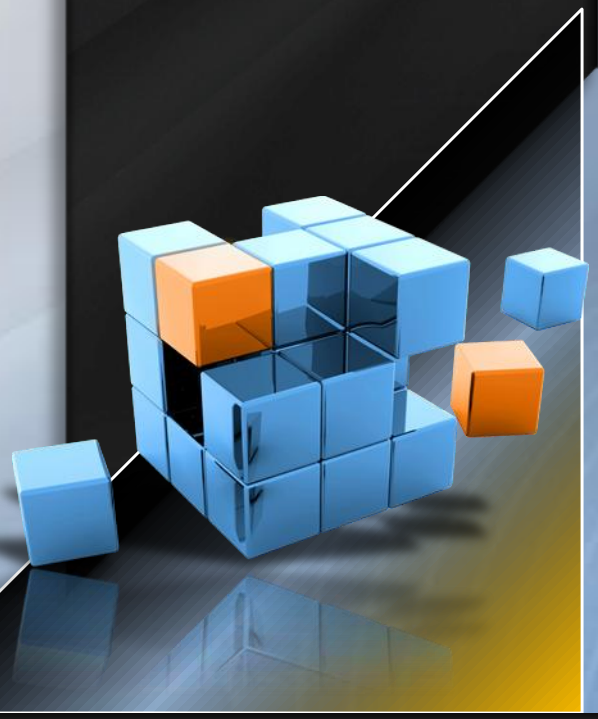
Demo



Resources

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- Of course, my blog:
  - http://arcanecode.com or
  - http://www.comframe.com/bi
- The official PowerPivot site:
  - http://powerpivot.com
- Handful of PowerPivot blogs
  - http://powerpivotpro.com/
  - http://powerpivotgeek.com/
  - http://powerpivottwins.com/
  - http://powerpivot-info.com/

Children in need

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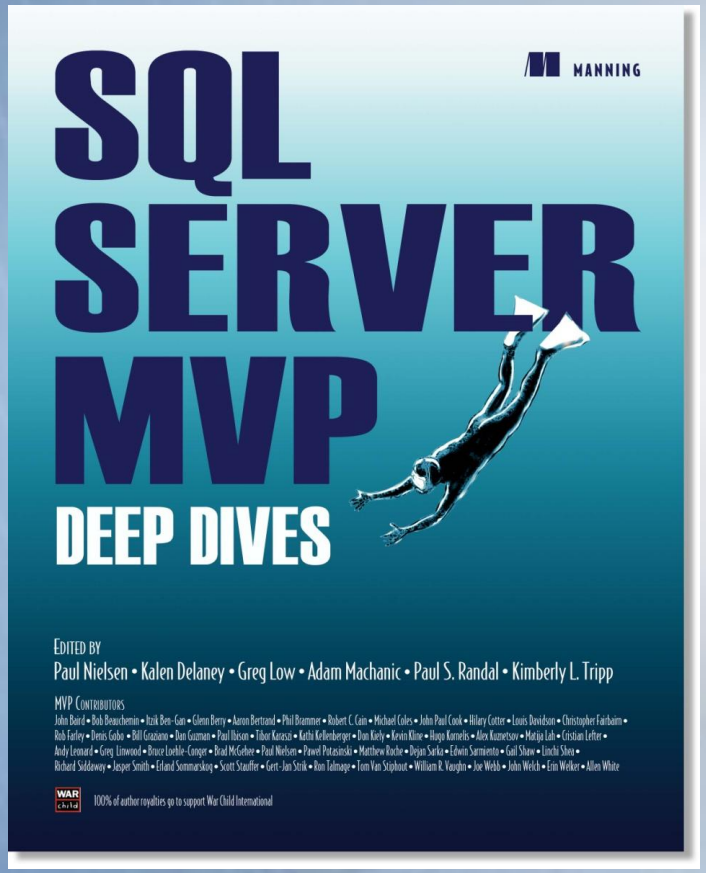

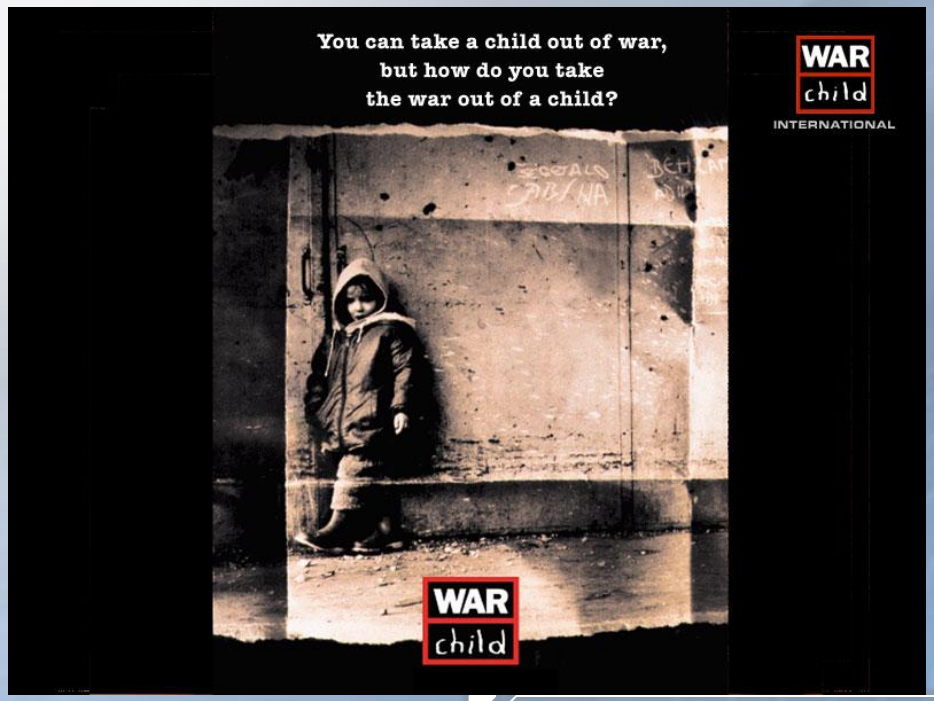

http://www.warchild.org
www.SQLServerMVPDeepDives.com

Thanks!

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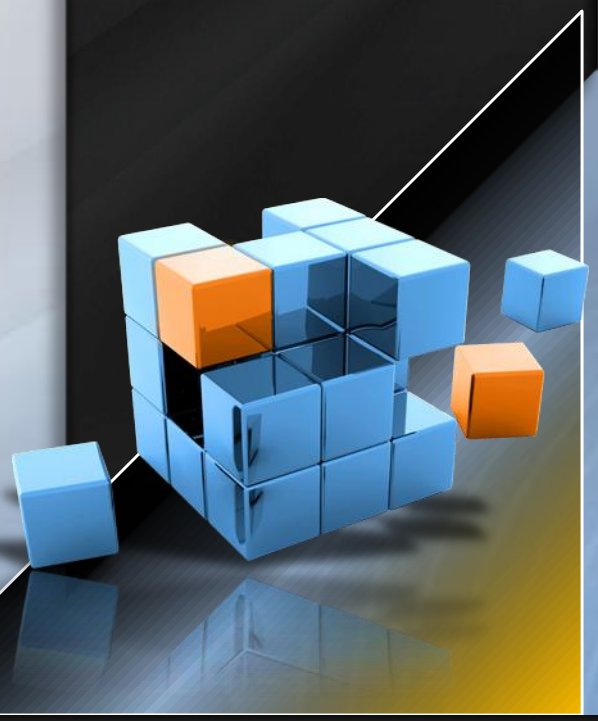
- Questions?
- All material available at either http://arcanecode.com or http://www.comframe.com/bi
- rcain@comframe.com