

COMFRAME

Robert C. Cain, MVP

COMFRAME  
precision software innovation

# Introduction to Microsoft PowerPivot

**Microsoft**  
GOLD CERTIFIED

*Partner*

Data Management Solutions  
Information Worker Solutions  
Business Intelligence  
Custom Development Solutions

BIRMINGHAM • NASHVILLE • BEIJING





# Your Presenter

- 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?

*“PowerPivot is Microsoft Self-Service Business Intelligence”*





# Give that to me again...

- 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

- 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

- Example 2 – Drilling down by dimensions

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

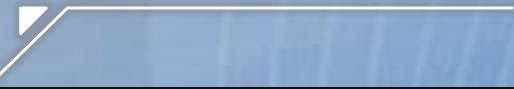
- Two tools for doing BI today
- Excel
  - Pros:
    - Easily available on everyone’s desktop
    - Easy for user to create a solution on their own
  - Cons:
    - Data grows stale quickly, hard to refresh
    - Can only hold a limited volume of data
    - Sheets grow large quickly
    - Difficult to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





# “That guy” has problems

- 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





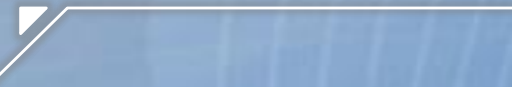


# Our Hero!

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

PowerPivot for Microsoft Excel 2010

PowerPivot for Microsoft SharePoint 2010





# PowerPivot for Microsoft Excel 2010

- 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

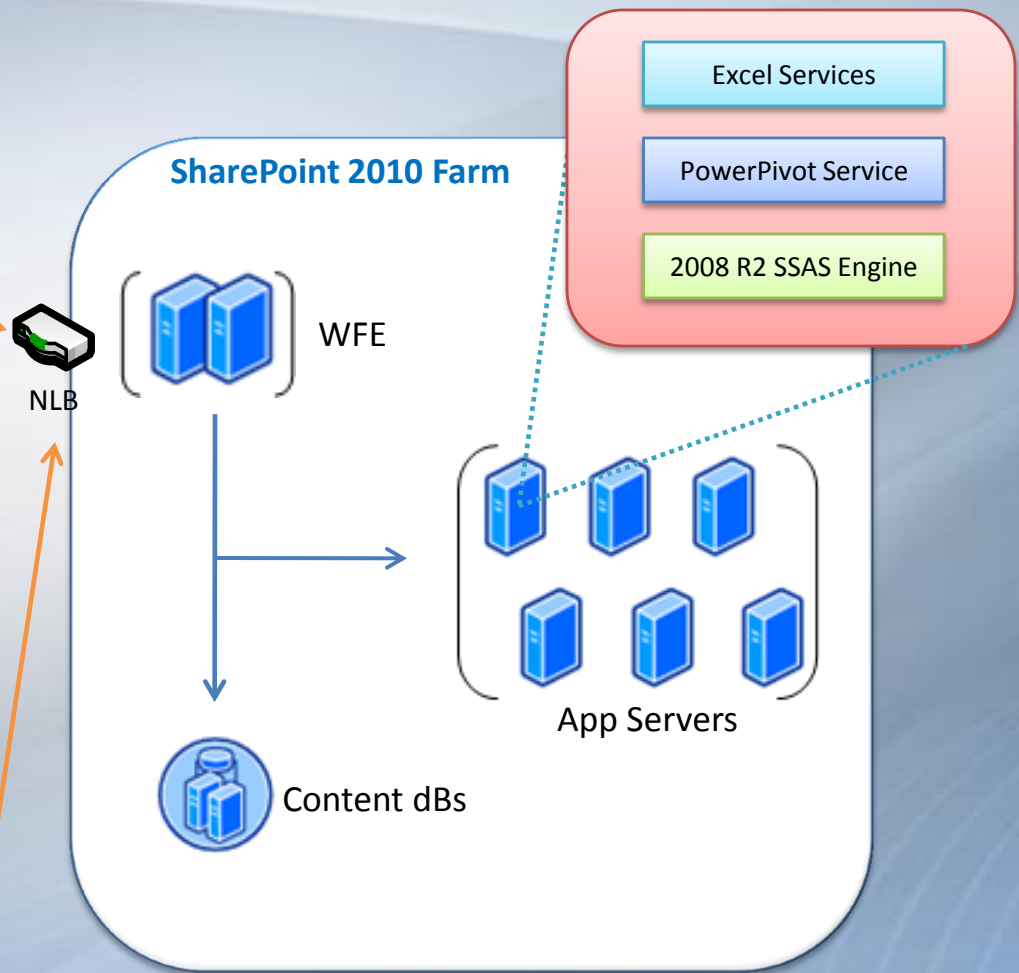
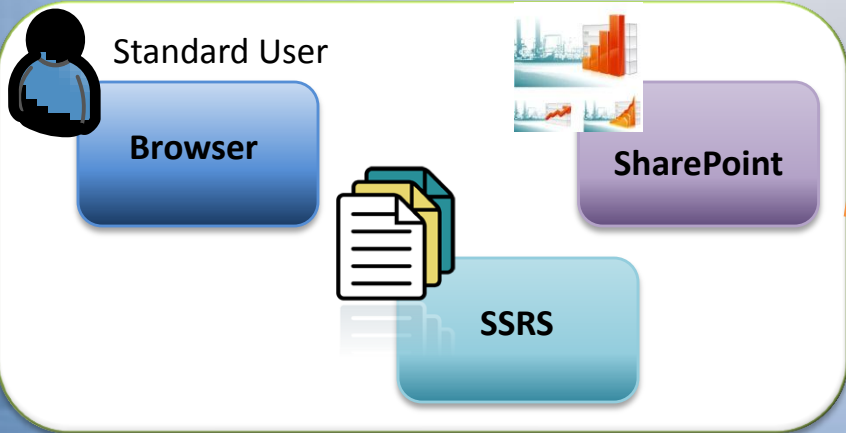
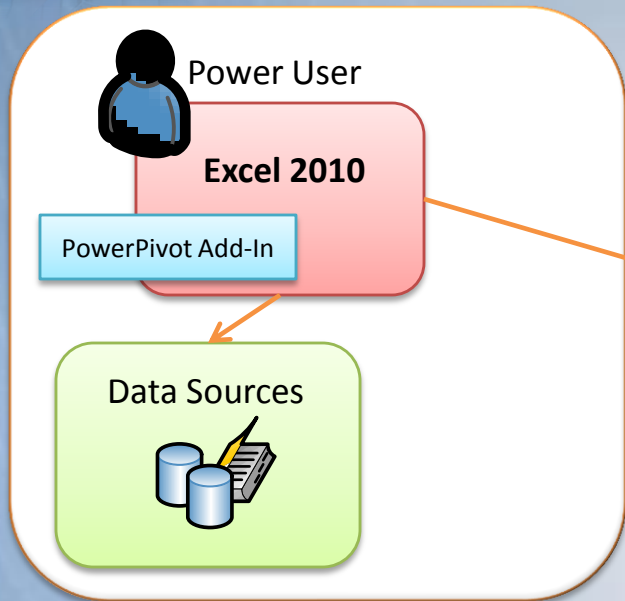
- A new service for SharePoint 2010
- Enables the workbook to be viewed and manipulated in the browser
- Use the PowerPivot workbook as a data source
- Use pieces of the workbook in Dashboards
- Allows for automated updates of the underlying data
- Provides monitoring tools for usage
- Gives “that guy”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



# Limitations

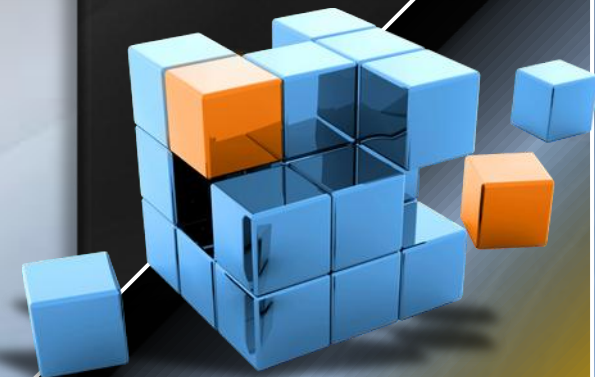
- PowerPivot for Excel only works with 2010 version. No backward compatibility.
- PowerPivot for SharePoint requires SQL Server 2008 **R2** Analysis Services to be installed. Not compatible with SQL Server 2005 or 2008.
- At some point usage may grow too much for PowerPivot to handle. At that point consider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

# PowerPivot Infrastructure Overview



# PowerPivot CTP Demo

# Demo

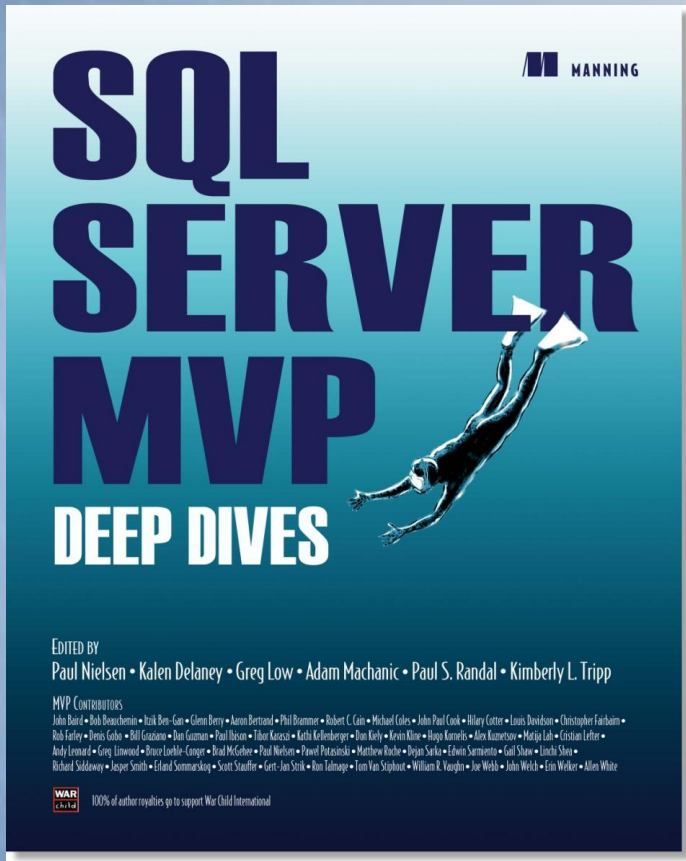


- Of course, my blog:
  - <http://arcanecode.com> or
  - <http://www.comframe.com/bi>
- The official PowerPivot site:
  - <http://powerpivot.com>
- Handful of PowerPivot blogs
  - <http://powerpivotpro.com/>
  - <http://powerpivotgeek.com/>
  - <http://powerpivottwins.com/>
  - <http://powerpivot-info.com/>

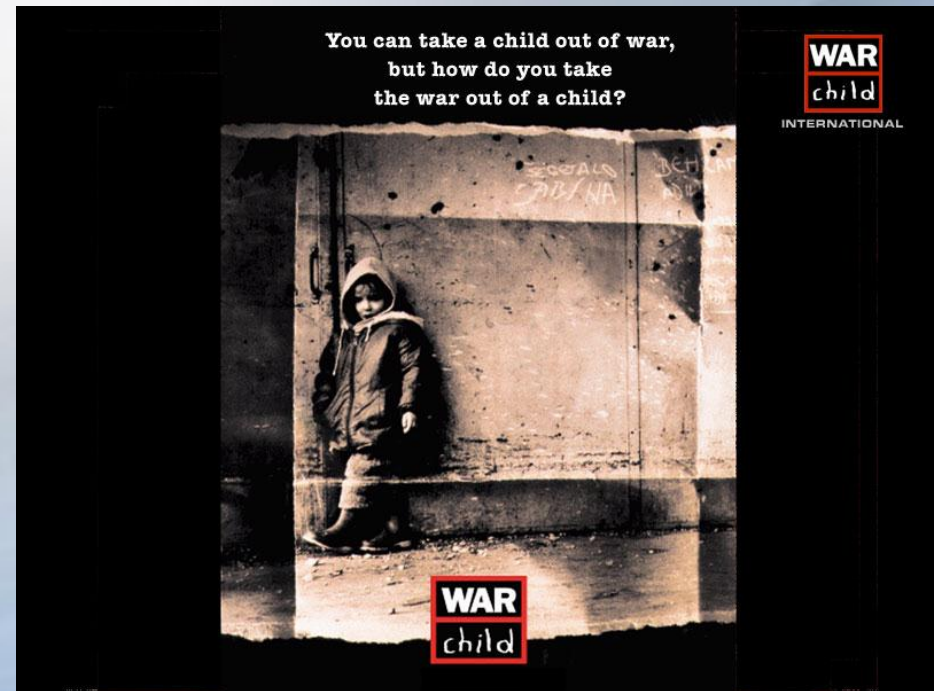


# Children in need

**COMFRAME**  
precision software innovation



<http://www.warchild.org>  
[www.SQLServerMVPDeepDives.com](http://www.SQLServerMVPDeepDives.com)





# Thanks!

- Questions?
- All material available at either <http://arcanecode.com> or <http://www.comframe.com/bi>
- [rcain@comframe.com](mailto:rcain@comframe.com)

