Power View

SQLBI møde 24. maj 2012

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- Konsulent i justB
- Underviser hos Orange Man
- MCITP og MCT
- Arbejdet med Microsoft BI i 6 år
- Stærkt fokus på front-end
  - Analysis Services
  - Reporting Services
  - PerformancePoint Services
  - Excel og PowerPivot
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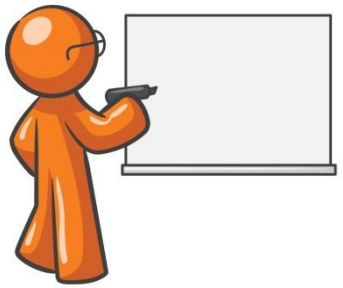
Microsoft CERTIFIED IT Professional

Microsoft CERTIFIED Trainer

Agenda



- Introduction
- Power View
- Demo: Exploring Self-Services Reporting
- Tabular BI Semantic Model Optimization
- Developer Opportunities
- Demo
- Summary
- More resources

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Introduction

- Power View is an interactive data exploration, visualization, and presentation experience
  - Highly visual design experience
  - Rich meta-driven interactivity
  - Presentation-ready at all times
- Provides intuitive ad-hoc reporting for business users such as data analysts, business decision makers, and information workers
- Ordinarily, a Power View report needs to be based on a tabular BI Semantic Model that has been optimized for the report authoring tool

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Power View is NOT

- Does not replace RB 2.0, 3.0 or BIDS
- Not a goal to edit or add new interactivity to Dev/IT Pro reports built in RB or BIDS
- Not a high-end analysis experience
  - Not a goal to provide complex calculation building
- Not a cell-based calculation tool
- Not a forecasting/write back tool
- Not a replacement for PPS scorecards or ProClarity

Developers

IT Pros

Power Users

End Users

Sophisticated Design Environment

Report Viewer Controls

Rich Design Capabilities

Productive Authoring

Re-use of insights

Flexible layout

Visual data representation

Highly Interactive

Rich Presentation

Report Designer

Report Builder

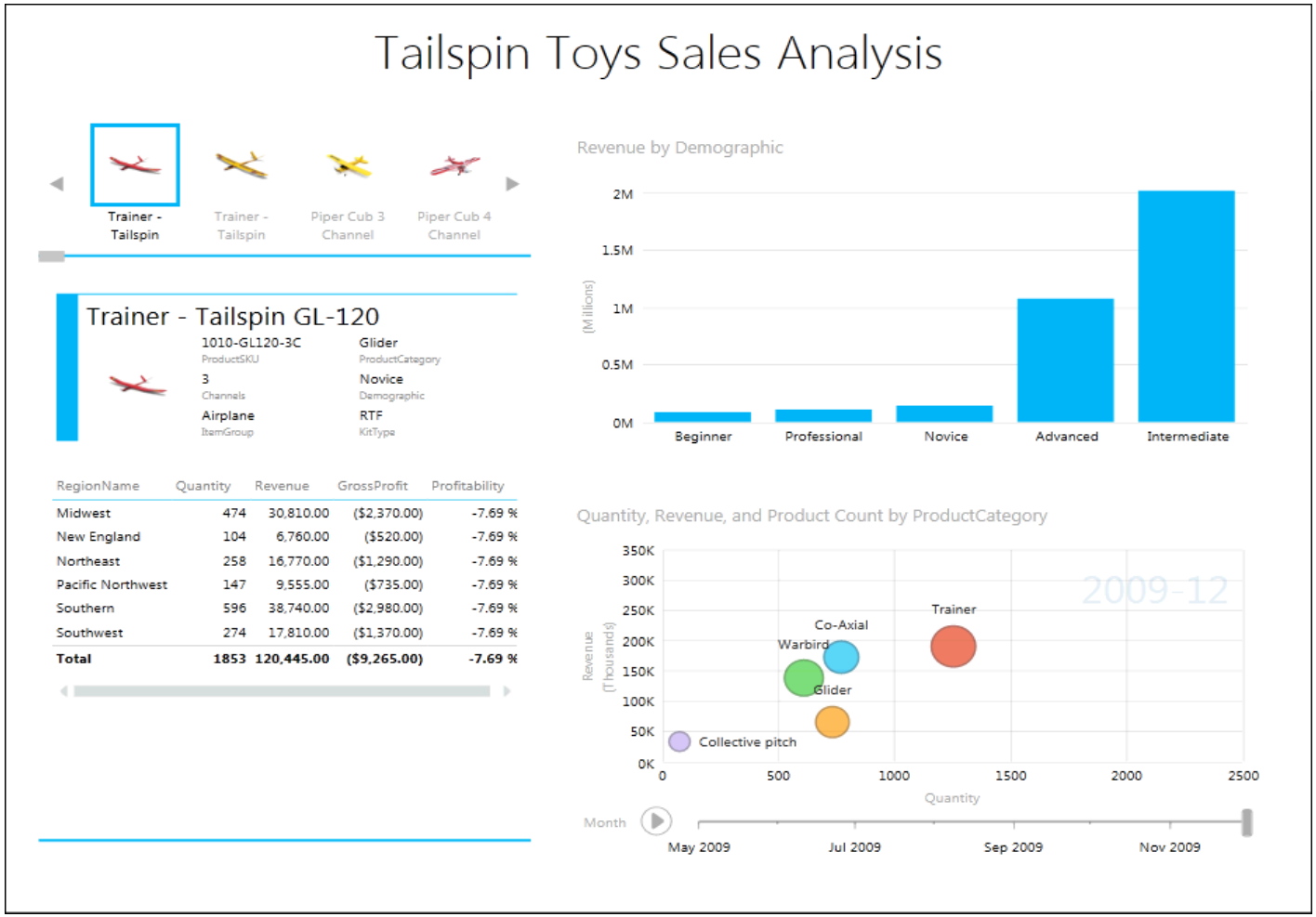
Project "Crescent"

Embedded

Operational

Business

Example report



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System requirements

- Server(s):
  - SharePoint Server 2010 SP1 Enterprise Edition
  - SQL Server 2012 Reporting Services Add-in for SharePoint
- Client:
  - Supported browsers:
    - Windows Vista: IE7 32-bit, FireFox 4
    - Windows 7: IE8 32-bit, IE9 32-bit, FireFox 4, Safari
    - Note the InPrivate browsing feature of IE is not supported
  - Silverlight 5
    - No support for tables (iPad etc.)
    - In the "near-future"…

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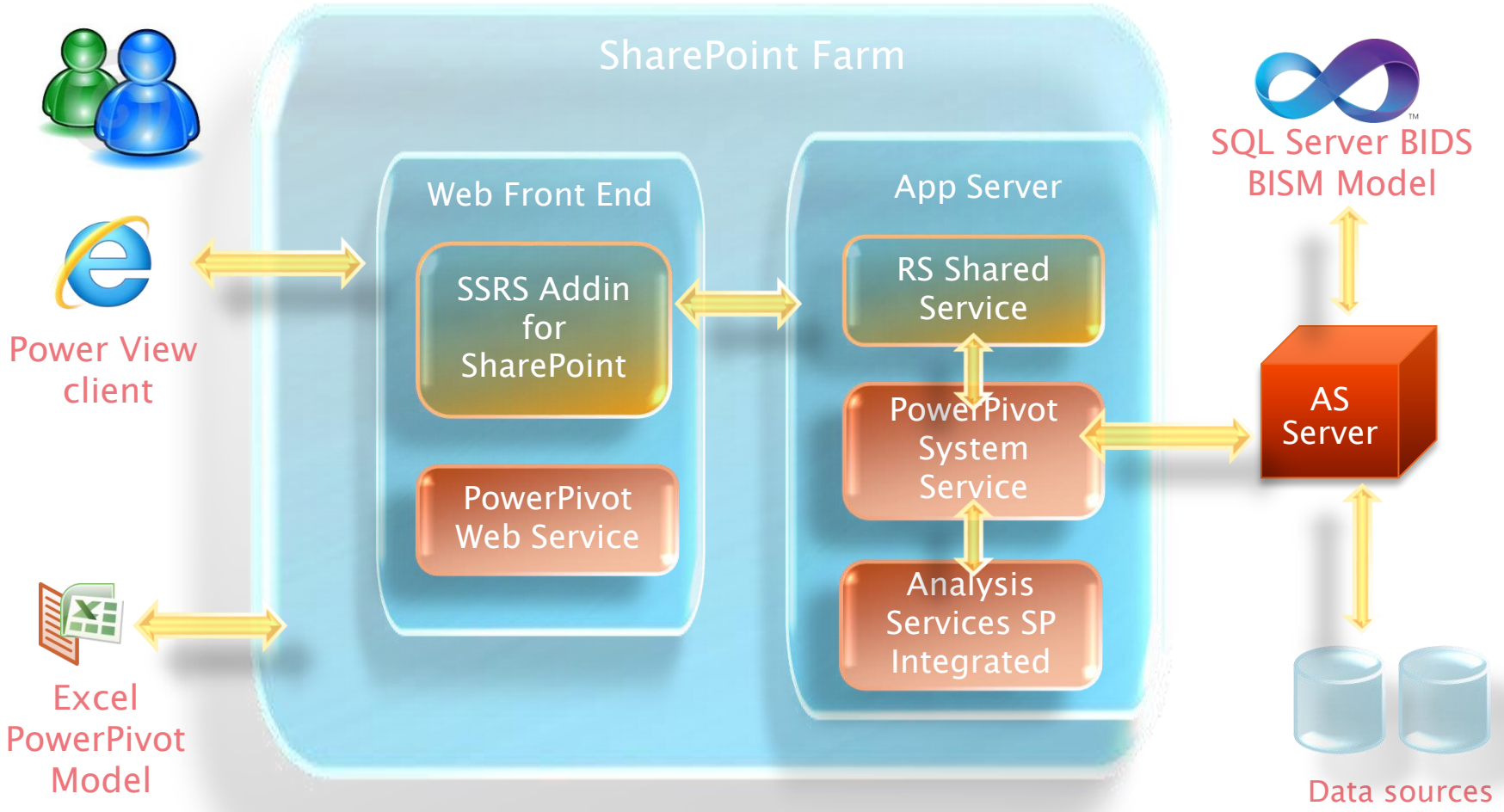
Architecture



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Data model requirements

- A Power View report must be based on a deployed tabular BI Semantic Model:
  - Published PowerPivot workbook in a SharePoint library
  - Tabular database
- DAX Query is used to query the model
- Ordinarily, the model needs to be optimized for the Power View experience

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Creating Power View reports

- Users create a new Power View report (.rdlx) from:
  - A BISM Connection File (.bism)
  - A PowerPivot workbook (.xlsx) in the PowerPivot Gallery (in **Gallery** view)
  - An SSRS shared data source (.rsds) based on a tabular BI Semantic Model
- Reports can consist of multiple views and each view can be filtered
- Reports may be:
  - Printed
  - Saved to SharePoint libraries
  - Exported to PowerPoint
- Clicking the report will open it in **Preview** mode
- If the user has permission, they can switch to **Edit** mode

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Design experience

- The design experience consists of:
  - Ribbon
  - Canvas
  - Filter area
  - Field List
  - Layout selection
- The report may be viewed in **Preview** or **Full Screen** mode
- Visualizations can be added to the canvas and then configured using the **Layout Selection**

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Design experience (continued)

- Visualizations include:
  - Matrices
  - Charts
  - Cards
  - Tiles
  - Scatter and bubble charts

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Demonstration

EXPLORING SELF-SERVICE REPORTING WITH SQL SERVER 2012 POWER VIEW

(The Hans Rosling project)

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Tabular BI Semantic Model Optimization

- Ordinarily, the tabular BI Semantic Model needs to be optimized for the Power View experience
- This is required to exploit the unique capabilities of the report authoring tool by supplying hints and directives

- Note: Optimizing a model for Power View may de-optimize it for OLAP clients !!!

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Shortcomings

- The following model resources are not available in the Power View **Field List**:
  - Hidden tables, columns and measures
  - Hierarchies !
  - Implicit measures (defined in the **PowerPivot Field List**)
  - Key Performance Indicators (KPIs)
- Only the default perspective can be used

Optimize the model

- Providing friendly names for tables, columns and measures
- Hiding unnecessary tables, columns and measures
- Setting appropriate formats for columns and measures
- Providing descriptions for tables, columns and measures
  - These are surfaced as tooltips in the **Field List**
- Adding columns that contain images (binary data)
  - Images can also be referenced by their URL
- There may not be the need to define measures

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Defining measures

- By default, Power View will express numeric columns with a **Decimal** or **Currency** data type as measures
  - Advantage: Users can modify the aggregation function of a Power View expressed measure
  - Disadvantage: No measure will be available in OLAP clients
- Use the **SummarizeBy** property to:
  - Disable the automatic expression of a column as a measure
  - Set the default aggregation behavior to a function other than **Default** (for Power View this means **Sum**)
  - Ensure columns with a **Whole Number** data type are expressed as measures

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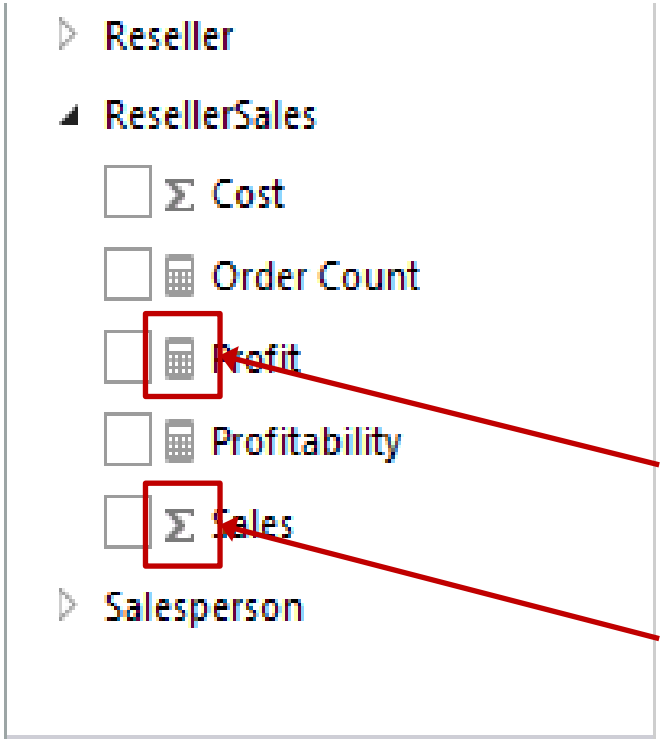
Defining measures

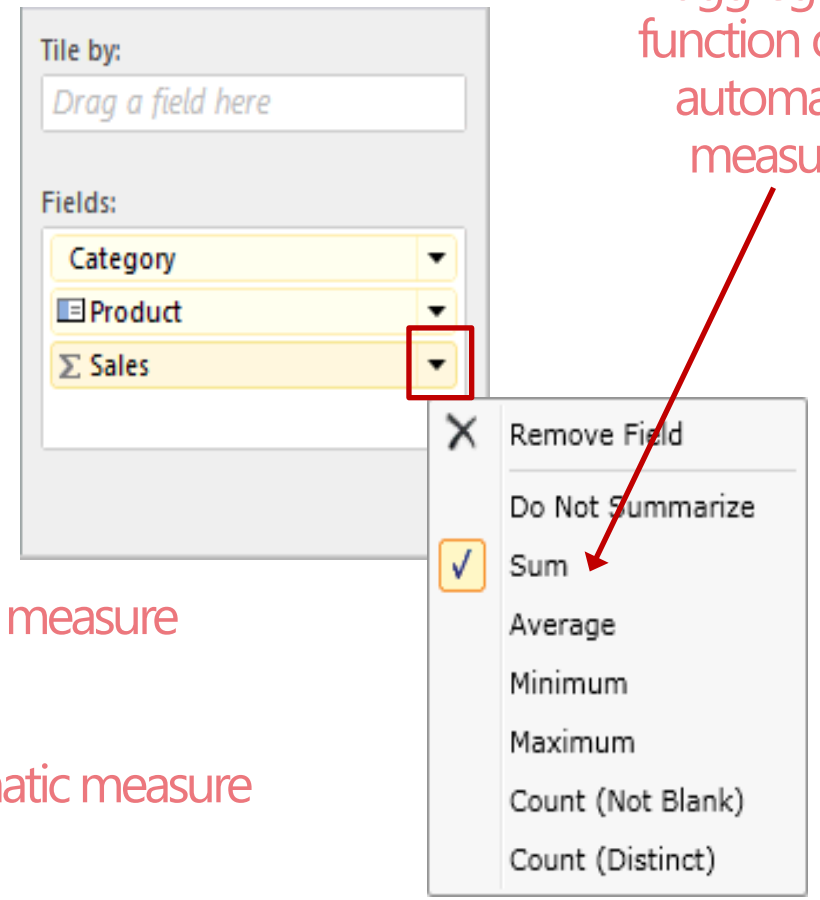
Field List:



Explicit measure

Automatic measure

Modifying the aggregate function of an automatic measure



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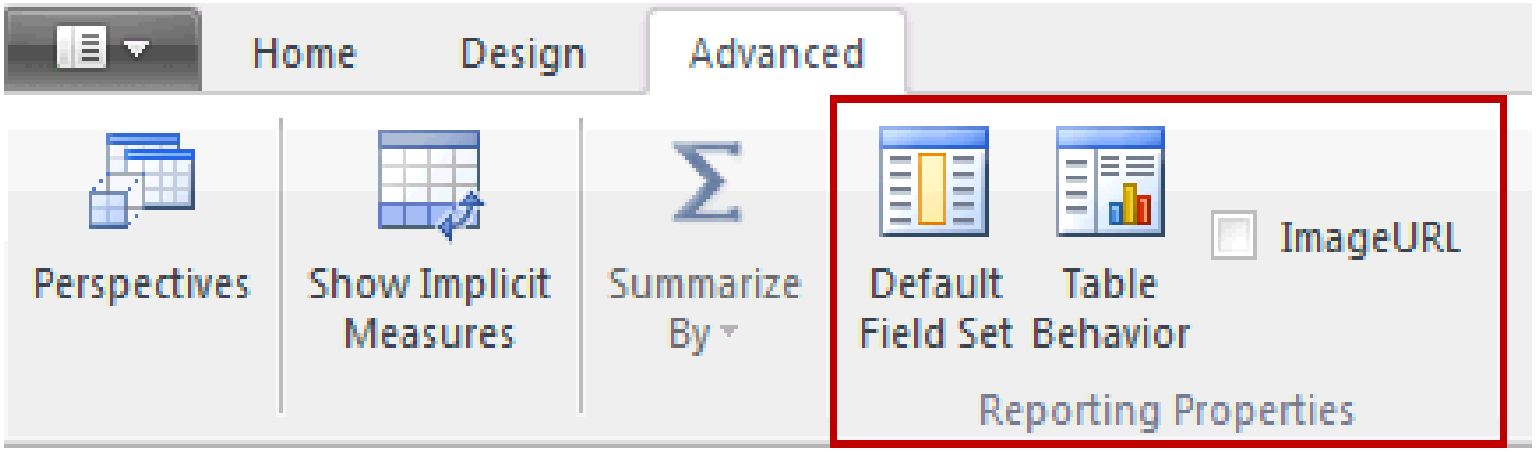
Configuring reporting properties

- Reporting properties can also be configured
- The properties apply to tables and columns



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Configuring reporting properties

- Reporting properties:
  - **Default Field Set**: Ordered set of columns and measures that can be conveniently added as a table with one click
  - **Table Behavior**:
    - **Row Identifier**: Sets the unique identifier column for a table (like a primary key), and it cannot be based on a calculated column
    - **Keep Unique Rows**: Columns that relate directly to the row identifier
    - **Default Label**: Behaves as the user-friendly label for the table
    - **Default Image**: Behaves as the image for the table
  - **Image URL**: Column contains a URL to an image
    - The URL can reference an HTTP directory or a SharePoint library

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Developer opportunities

- Develop, optimize and deploy tabular models
- Create SharePoint libraries of **BISM Connection Files** for each tabular data model
- Develop SharePoint libraries of Power View reports to provide intuitive, highly interactive and presentation-ready experiences

- Note: Power View reports cannot be embedded into solutions by using the **ReportViewer** control

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Demonstration

EXPLORING SQL SERVER 2012 REPORTING SERVICES POWER VIEW

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Summary

- Power View provides intuitive and visually impressive ad-hoc reporting targeting business users
- Reports must be based on a deployed tabular BI Semantic Model
- Ordinarily, the model author needs to optimize the model by configuring the reporting properties
- Power View is only available with SharePoint Server SP1 Enterprise Edition

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More ressources

- TechEd North America 2011 - DBI208: Abundantly "Crescent": Demos Galore
  - http://channel9.msdn.com/Events/TechEd/NorthAmerica/2011/DBI208
- SSRS Team Blog
  - http://blogs.msdn.com/b/sqlrsteamblog/
- TechNet: Power View Overview - Includes many useful links to related topics
  - http://social.technet.microsoft.com/wiki/contents/articles/project-crescent-overview.aspx
- More demos of Power View available
  - http://blogs.msdn.com/b/oneclickbi/archive/2011/12/27/more-demos-of-power-view-available.aspx
- Microsoft BI Demo Image XII:
  - http://www.microsoft.com/betaexperience/pd/BIVHD/enus/default.aspx
- The Hans Rosling project:
  - http://blogs.msdn.com/b/cathyk/archive/2011/12/21/the-hans-rosling-project.aspx

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