

# Using Microsoft PivotViewer to Make Sense of the Chaos

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Principal Test Manager  
Microsoft



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# Introducing PivotViewer

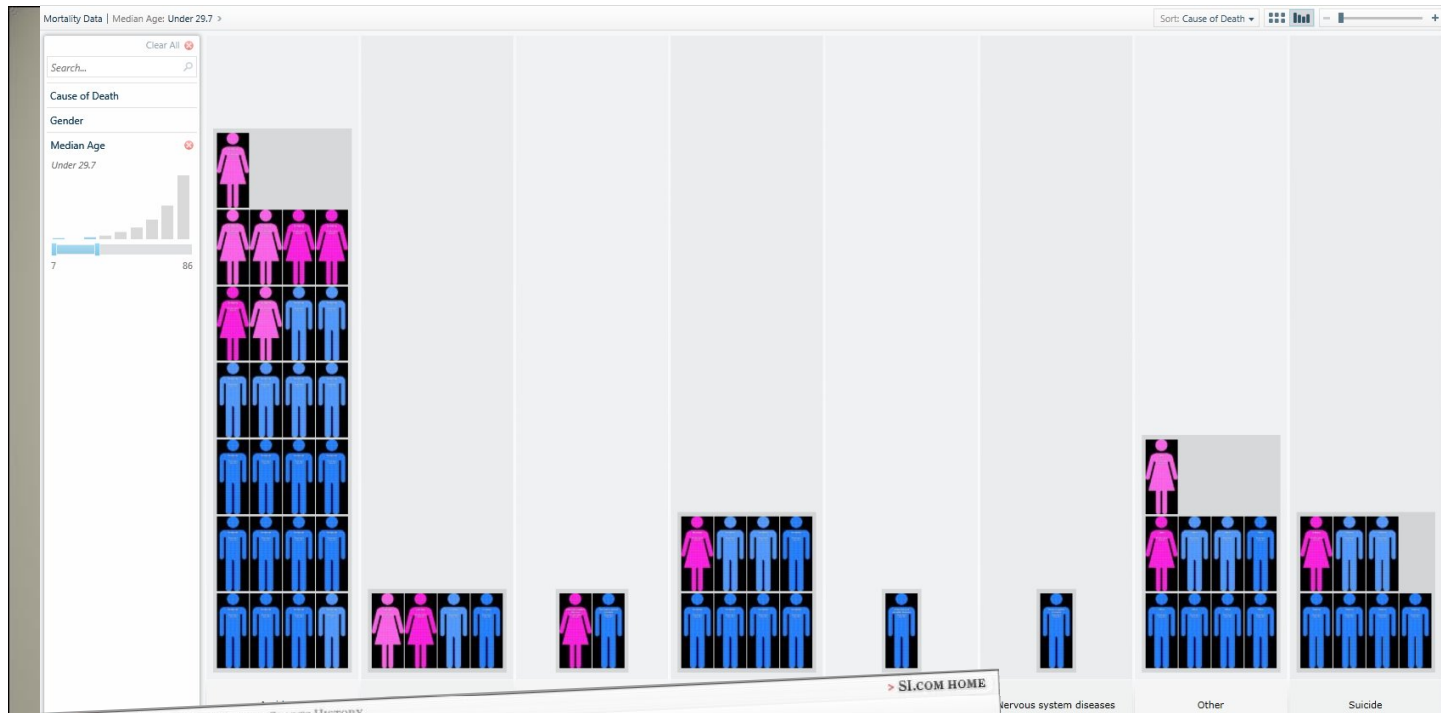
PivotViewer is fundamentally about:

- Visualizing collections of objects
- Revealing hidden patterns within data
- Acting on discovered insights

PivotViewer allows us to visualize the data that we use to measure quality

PivotViewer uses existing web technologies

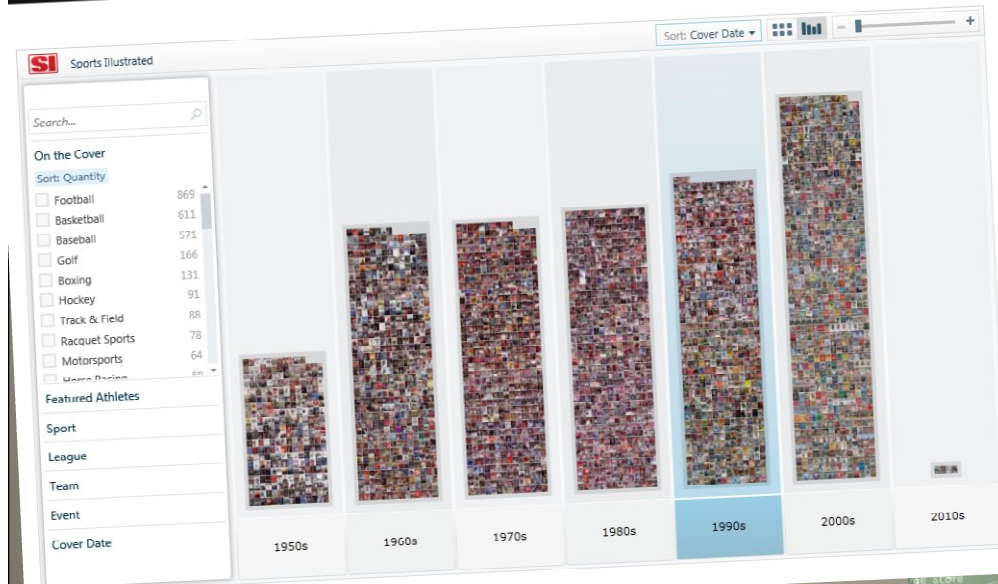
We think that PivotViewer is a way to deeply understand information and enable better decisions



# SI VAULT

YOUR LINK TO SPORTS HISTORY

ARTICLES SI COVERS PHOTO GALLERIES VIDEO SWIMSUIT COLLECTION



# Demo

Microsoft SharePoint 2010

Products Financial Results

Sort: Store Type

Large Store : Fourth Coffee #461

Store Type  
Large Store

Yelp Review Star Rating  
★★★★★

Revenue FY10 \$  
\$1,437,187.50

Yr Over Yr Growth 2010 %  
21.2 %

FY10 Avg \$/Sales  
\$5.25

FY10 Avg Profit Margin %  
32.27 %

Status  
Active

Open Date  
April 22, 2007

Owner  
Bradley Delahunty

Location  
Cumberland Ave & 21st St, Knoxville

City  
Knoxville

State  
Tennessee

Fourth Coffee

Store #461

★★★★★ Brewing love since April 22, 2007

Bradley Delahunty

Cumberland Ave & 21st St, Knoxville, Tennessee, 37916

21.2% Year-over-year growth

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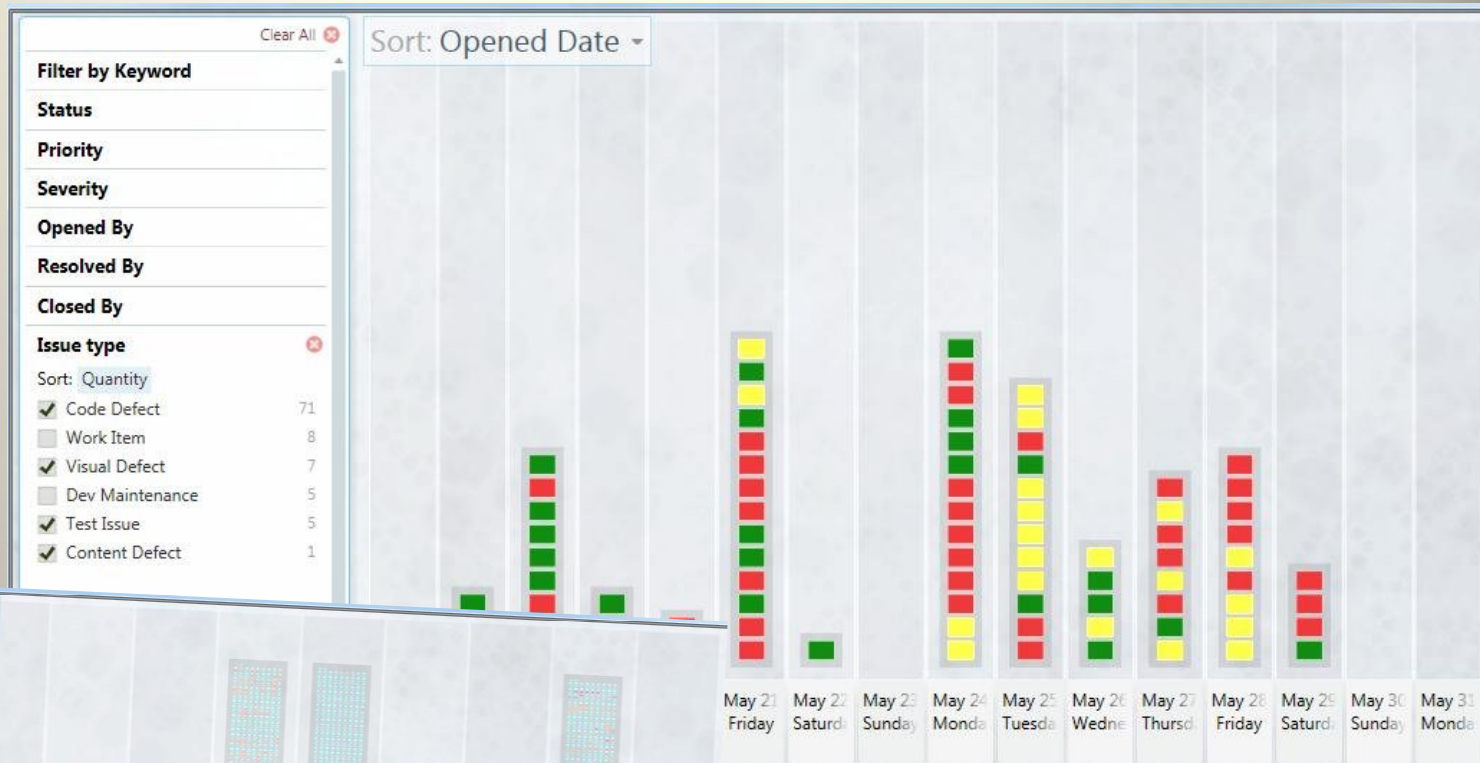
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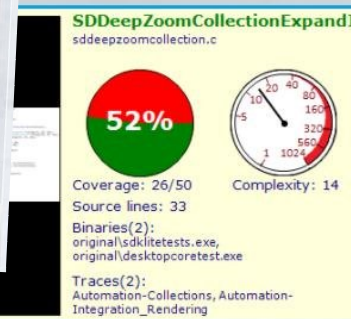




Source lines: 40

Binaries(2):  
original\sdklittests.exe,  
original\desktopcoretest.exe

Traces(4):  
Automation-URL, Automation-FileSources,  
Automation-Collections, Automation-  
Integration\_Rendering



SDDeepZoomCollectionExpandImage

|              |  |
|--------------|--|
| Class        | C-FUNCTIONS  |
| Binaries     | original\sdklittests.exe<br>original\desktopcoretest.exe   |
| Lines        | 33   |
| Blocks Hit   | 26   |
| Blocks Total | 50   |
| Coverage     | 52   |
| Complexity   | 14   |
| File         | sddeepzoomcollection.c                                     |
| Traces       | Automation-Collections<br>Automation-Integration_Rendering |

Demo

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# PivotViewer uses existing web technologies

DeepZoom

Silverlight Control

XML Schema

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# Tools and Resources

for you to build upon

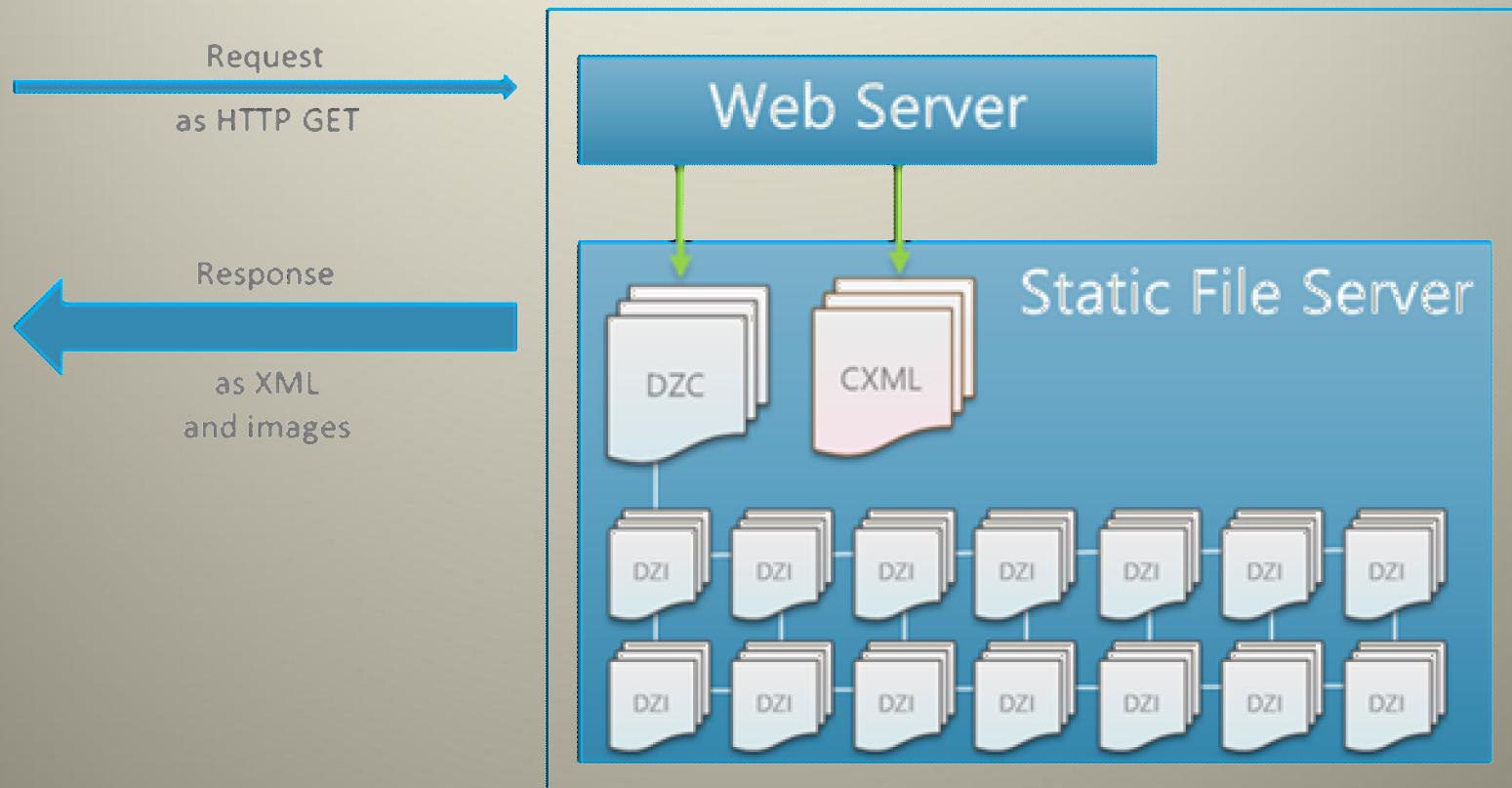
Ritchie Hughes

Software Development Engineer in Test II

Microsoft



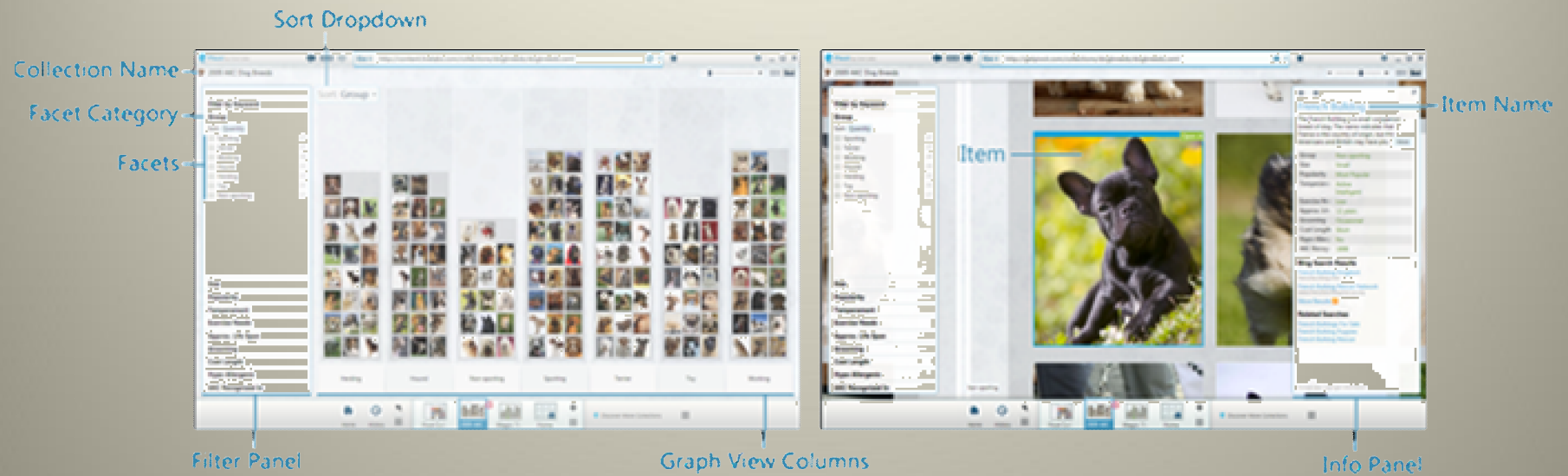
# What makes a Collection?



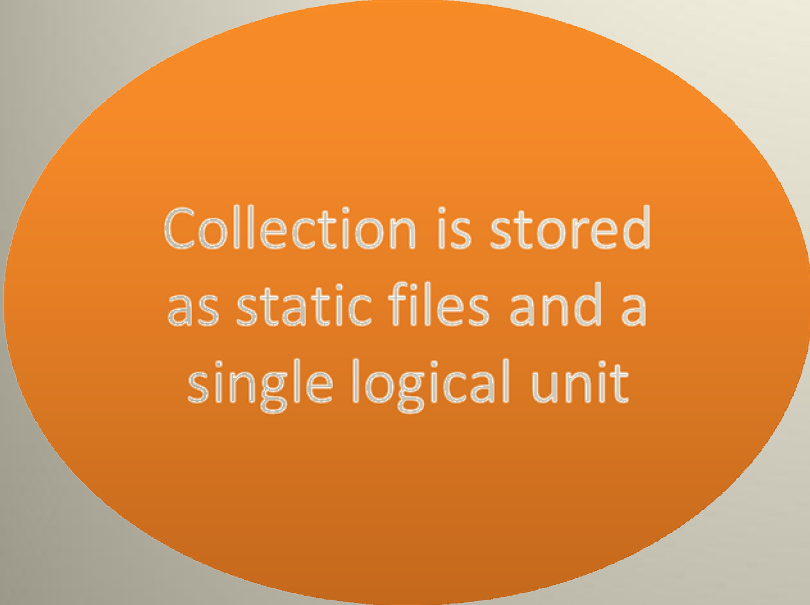
# Defining a Collection



# Defining a Collection



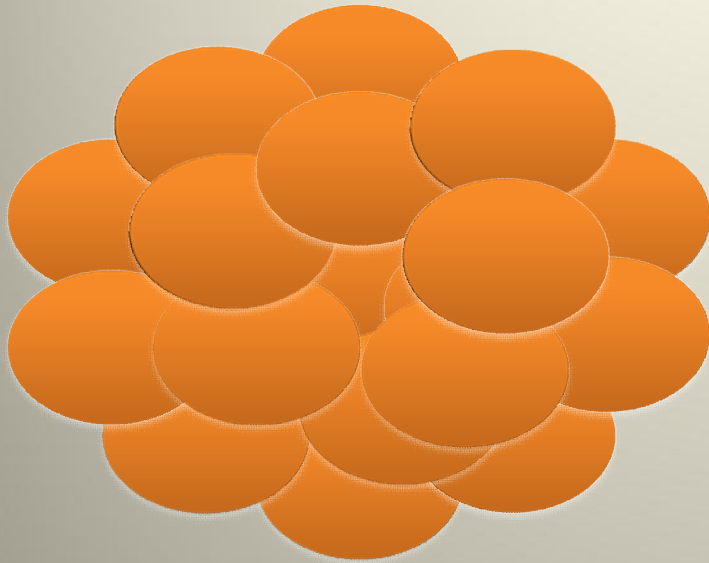
# Simple Static Collections



Collection is stored  
as static files and a  
single logical unit

- Up to 5,000 items
- Metadata is static and loaded all at once
- Visuals are static and contained in one DZC
- Examples:
  - Dog breeds
  - Sport Illustrated covers

# Dynamic Server Collections



Collection is dynamically generated at each view

- Unbounded in size
- Metadata is dynamic and loaded in parts
- Visuals are partially dynamic and contained in dynamic DZCs
- Examples: Wikipedia



# Available Tools

- Website creation
  - PivotViewer Silverlight control
- Static collection creation
  - Excel Plug-in
  - Command-line Tool
- Dynamic collection creation
  - Just-In-Time server sample

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# Excel Plug-in

- Columns for item name, description, href
- Additional column map to custom facets
- Images are referenced directly

|   | A  | C   | G             | H   | J      | K          | L         |
|---|--|---|---------------|---|--------|------------|-----------|
| 1 | Image Location   | Preview   | Name          | Href  | Rating | Date taken | Subject   |
| 2 | C:\Users\Public\Pictures\Sample Pictures\Chrysanthemum.jpg |   | Chrysanthemum | <a href="http://en.wikipedia.org/wiki/Chrysanthemum">http://en.wikipedia.org/wiki/Chrysanthemum</a> | 5      | 11/10/2009 | flower    |
| 3 | C:\Users\Public\Pictures\Sample Pictures\Desert.jpg        |  | Desert        | <a href="http://en.wikipedia.org/wiki/Desert">http://en.wikipedia.org/wiki/Desert</a>               | 3      | 5/10/2008  | landscape |
| 4 | C:\Users\Public\Pictures\Sample Pictures\Hydrangeas.jpg    |  | Hydrangeas    | <a href="http://en.wikipedia.org/wiki/Hydrangeas">http://en.wikipedia.org/wiki/Hydrangeas</a>       | 3      | 12/23/2008 | flower    |
|   | C:\Users\Public\Pictures\Sample                            |  | Jellyfish     | <a href="http://en.wikipedia.org/wiki/Jellyfish">http://en.wikipedia.org/wiki/Jellyfish</a>         | 4      | 7/4/2007   | animal    |

# Demo

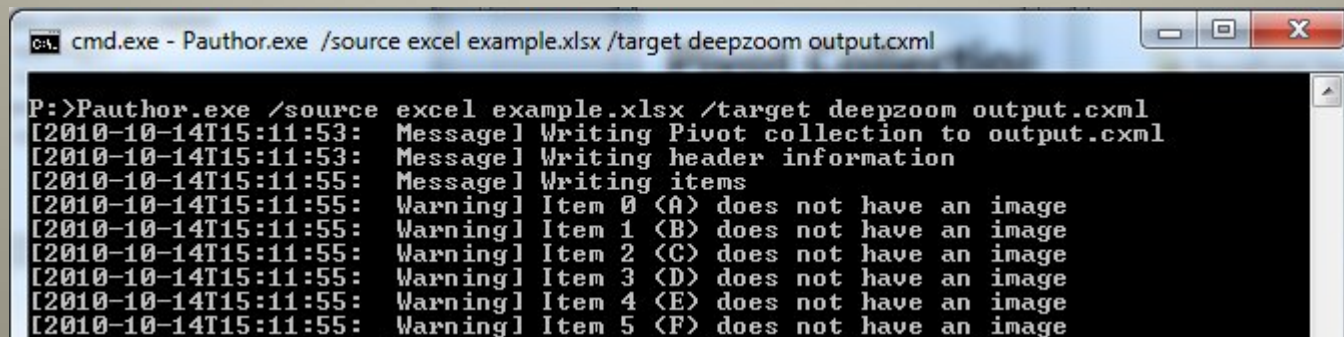


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# Command-line tool

- Suitable for deploying in a server environment
- Data sources include Excel, CSV and existing collections
- Images can be created using HTML templates



```
cmd.exe - Pauthor.exe /source excel example.xlsx /target deepzoom output.xml

P:>Pauthor.exe /source excel example.xlsx /target deepzoom output.xml
[2010-10-14T15:11:53: Message] Writing Pivot collection to output.cxml
[2010-10-14T15:11:53: Message] Writing header information
[2010-10-14T15:11:55: Message] Writing items
[2010-10-14T15:11:55: Warning] Item 0 (A) does not have an image
[2010-10-14T15:11:55: Warning] Item 1 (B) does not have an image
[2010-10-14T15:11:55: Warning] Item 2 (C) does not have an image
[2010-10-14T15:11:55: Warning] Item 3 (D) does not have an image
[2010-10-14T15:11:55: Warning] Item 4 (E) does not have an image
[2010-10-14T15:11:55: Warning] Item 5 (F) does not have an image
```



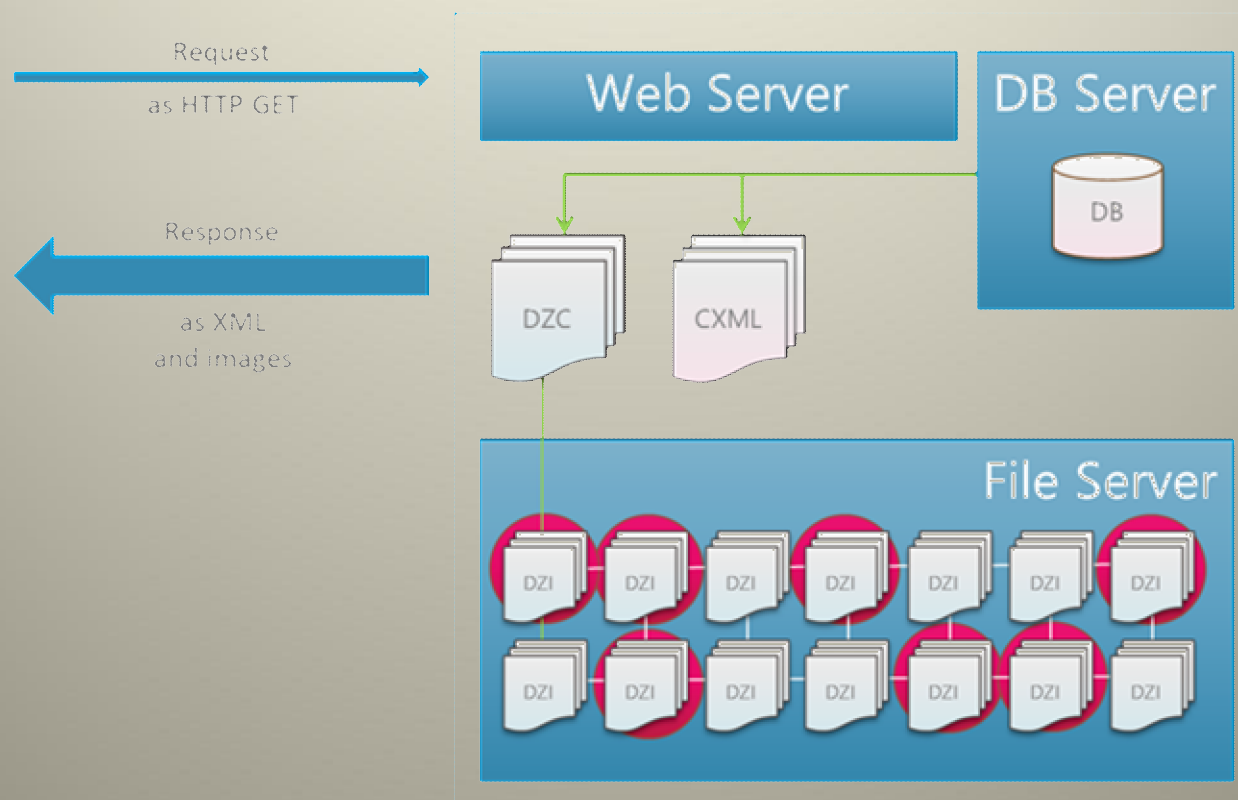
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# Just-in-Time Collection Server

- Host in the cloud or inside the enterprise.
- Best option for massive or fast-changing data sources.
- Generates CXML, DZC and image tiles at request time.
- Create your own data-sources...
  - SQL, XML, OData, web APIs...

# Just-in-Time Collection Server



# Demo



# Q&A

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[maxs@microsoft.com](mailto:maxs@microsoft.com)

# Appendix A

## Contributors:

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Code Coverage Collection; Frederick Fourie, Microsoft