Visualising Your CMDB With Visio

David Cuthbertson
Square Mile Systems
### Square Mile Overview

- Develop AssetGen toolsets, training and techniques for operational management of complex IT infrastructure
- **Focus areas**
  - Data center management
  - Connectivity management
  - Service mapping
  - System change impact analysis
  - Documentation techniques
  - Infrastructure visualisation
- All technologies!

### Infrastructure Categories

<table>
<thead>
<tr>
<th>Category</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fixed Infrastructure</strong></td>
<td>Cabling, Power, Cabinets, Buildings</td>
</tr>
<tr>
<td><strong>Hardware Infrastructure</strong></td>
<td>Network, Servers, UPS, Storage, Other</td>
</tr>
<tr>
<td><strong>Virtual Infrastructure</strong></td>
<td>Network, Servers, Storage, DBMS</td>
</tr>
<tr>
<td><strong>Applications</strong></td>
<td>PC, server, mainframe, SOA</td>
</tr>
<tr>
<td><strong>Services</strong></td>
<td>End user, infrastructure, supplier</td>
</tr>
<tr>
<td><strong>Business Processes</strong></td>
<td>Departmental, Company</td>
</tr>
</tbody>
</table>

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*Image credits: [AssetGen](https://assetgen.com) [Square Mile](https://squaremile.com)*
Information Resources

• Web sites
  – www.squaremilesystems.com
  – www.assetgen.com
  – www.youtube.com

• Networking for IT Infrastructure
  – www.linkedin.com
  – www.datacenterprofessionals.net

• Third party
  – www.brighttalk.com
  – www.bcs-cmsg.org.uk
  – smsg.bcs.org
  – www.itsmf.co.uk
  – www.bicsi.org

  videos on “how to create visio”
  search for “assetgen”

Online webcasts
BCS config mgmt focus group
BCS ITIL focus group
ITIL issues
Cabling and data centres
Expectations

• Why do we want to link Visio diagrams to CMDBs or structured data?

• What do we mean by automation?
### Visio 2007 Professional Extras

**Building, space, and floor plans**

- Data-driven solution support (including data-related APIs)
- Data Graphics functionality
- Data Link functionality

**Database modeling diagrams**

- Database modeling diagrams with reverse engineering of any Open Database Connectivity–compliant data source
- Directory services diagrams
- Engineering diagrams—electrical, chemical, and more
- ITIL diagrams
- Logical network diagrams
- Network rack diagrams
- PivotDiagrams
- Sample diagrams
- Software diagramming and reverse engineering
- Value stream maps
- Web site mapping and documentation including auto-generation of Web site maps

**Extras we’ll cover today**
Visio 2007 Resources

- Microsoft web site
- Visioguy: www.visguy.com
- Books
- Linkedin group – Visio Enthusiasts
- Equipment manufacturer web sites
  - Cisco
  - HP, others: www.visiocafe.com
- Stencils
  - netZoom: www.altimatech.com
Not all Diagrams Help!

WHAT ARE THE GREEN, BLUE AND YELLOW THINGIES? SERVERS? APPLICATIONS? COMPONENTS?
Overview

• Using Visio manually
• Linking to spreadsheets / databases
• Navigating to more detail
• Understand the process of diagram creation
• Creating & maintaining Visio diagrams automatically
• Example
  – Visualising a CMDB from different aspects
I Need An Visio Diagram!

Requirement → Data Sources → Diagram

AssetGen
Software Solutions
Common Diagram Issues

- Using the same stencils
- Use of shapes
  - Logical
  - Physical
  - Architecture
- Use of connectors
- Consistent and accurate shape data
- Maintaining hyperlinks
The Process of Drawing a Diagram

1. Purpose
2. Gather data
3. Define shapes
4. Transfer data to diagram
5. Layout
6. Add extra detail
7. Save
8. Send / publish diagram

Where can we automate?
Shape Issues Affecting Automation

• Shape selection
• Shape positioning
• Shape linking
• Shape data definition
• Shape data update and maintenance
• Shape data display
• Shape hyperlinks
A Few Types of Diagrams

- Service maps
- Physical
- Path
- Logical
- System
- Architecture – single / multi-technology
- Process maps
Server Diagrams

Floor Plan

Rack Position

H/W Build

Network Connections

Power Supply

Service impact
A Typical CMDB Structure

Parent

Attributes 1,2,3

Relationship

Child

Attributes A,B,C

Oracle Accounts
V6.7
DR Priority: 1

Payment Module

Sun V490 Solaris 500G Disk

SVRWIN001

Supporting Docs

Visio

Excel

AssetGen
Software Solutions

SquareMile
Layers of CMDB Structure

- **Business Processes**
  - Departmental, Company

- **Services**
  - End user, infrastructure, supplier

- **Applications**
  - PC, server, mainframe, SOA

- **Virtual Infrastructure**
  - PCs, Network, Servers, Storage, DBMS

- **Hardware Infrastructure**
  - PCs, Network, Servers, UPS, Storage, Other

Typically, a minimum of 5 layers,
Depends totally on scope
Infrastructure is difficult to layer
  - network
  - power
  - storage
Adding Another Layer
It Starts to Get Complex!

This is why we have a CMDB
Visio 2007 Automation Features

- Programmers toolkit
- Linking to External Data
- Shape Data
- Data graphics
- Hyperlinks to external data
A Few Issues With Data Linking

- Good for importing, bringing data into Visio
- Use data graphics to display appropriate data
- Requires good file management
- Multiple data sources / gaps/ overlaps cause problems
- Manual filtering and selection
The Process of Drawing a Diagram

1. Purpose
2. Gather data
3. Define shapes
4. Transfer data to diagram
5. Layout
6. Add extra detail
7. Save
8. Send / publish diagram

Linking Data still requires manual selection

Produces one diagram at a time
AssetGen Approach

1. Purpose
2. Gather data
3. Define shapes
4. Transfer data to diagram
5. Layout
6. Add extra detail
7. Save
8. Send / publish diagram

a. Select and filter data
b. Add/update shapes
c. Create diagrams
d. Layout (where practical)
e. Enable refresh of existing
The AssetGen Solution

- **Business Processes**
  - Departmental, Company

- **Services**
  - End user, infrastructure, supplier

- **Applications**
  - PC or server based

- **Virtual Infrastructure Components**
  - PCs, Network, Servers, Storage, DBMS

- **Hardware Infrastructure Components**
  - PCs, Network, Servers, UPS, Storage, Other

- **Fixed Infrastructure**
  - (Cabling, Power, Cabinets, Rooms, Buildings)

**AssetGen Connect**

**Physical Infrastructure**

**AssetGen SysMap**

**Logical Infrastructure**

**Visualisation**
Information Sets

Coordinated database, multiple viewpoints

Services
Software
Servers
Storage
Cabinets
Networks
Cabling
Power
Voice

Capacity and connectivity reports
Change impact analysis and audit trails
Spreadsheet outputs
Service maps
LAN/SAN/WAN/Power diagrams
Rack, floor plans
Examples of Visio Automation

- Floor plans
- Rack diagrams
- Network and other topology diagrams
- Service maps
- Data flow diagrams
- Architecture maps
- Path diagrams

Plus  Capacity reporting
  Audit trails
  Workflow
Visualising Your CMDB Summary

1. A better understanding of Visio capabilities
2. Different types of automation to reduce manual tasks
3. Multiple diagrams can be produced and maintained
4. Gained an understanding of Square Mile techniques and technology

Automation can give
   a. Increase in staff productivity – projects and operations
   b. Confidence in diagrams accuracy
   c. A portal to more detailed data
Next Steps

• Training Courses
  – Visio for IT Professionals (2 days) 30/6  12/7
  – Visio automation in-house workshop (1 day)

• Workshop at Microsoft London HQ 29/9

• Web content
  – Premier courses and consultancy
  – Videos on AssetGen site
  – Webcasts www.brighttalk.com

• Downloads
  – AssetGen SysMap Professional evaluation version
Thank You For Attending

Now you know about how Visio can work with CMDBs