GIS Solutions for Data Analysis and Project Data Management

Recent Advances and Experiences

Karen Blohm & Viv Harvey
• Background
• Explorationists Workstation Concept
  – Architecture
  – Collects Data
  – Manages Data
  – Creates Data
  – Analyses Data
• Market Research

GIS Use by Activity

Data Processing 40%

Data Management 12%

Data Visualisation 18%

Data Interpretation/Analysis 30%
EXPLORATIONISTS WORKSTATION REQUIREMENTS

- Data Analysis
- Data Creation
- Data Management
- Data Collection

Explorationists Workstation
Managed Portal
Portal
Increasing Business Value
• The key to all spatial integration solutions is metadata
META DATA POPULATION

Data Collection

Data Management

Data Creation

Data Analysis

ARCHITECTURE

DATA COLLECTION

DATA MANAGEMENT

DATA CREATION

DATA ANALYSIS

Repository

Data Attribute Populator

Spatial Updater

Data Parser

Export

Update Script
### Attribute Population Rules

<table>
<thead>
<tr>
<th>ID</th>
<th>Text to search for</th>
<th>Field to Search</th>
<th>Field to Update</th>
<th>Value to insert</th>
<th>Force</th>
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</thead>
<tbody>
<tr>
<td>8</td>
<td>core data</td>
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<td>DocCat1</td>
<td>GEOLOGY</td>
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<tr>
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<tr>
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<td>Grav</td>
<td>Path</td>
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<td>GRAVITY</td>
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<td>15</td>
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<td>Path</td>
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<td>On</td>
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<tr>
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<td>On</td>
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**Processing**

- Add Rule
- Edit Rule
- Delete Selected
- Process Selected
- Process All
- Done

**No. of Rules**: 190
### MANAGING DATA

<table>
<thead>
<tr>
<th>Country Outlines</th>
<th>Source 1</th>
<th>Source 2</th>
<th>Source 3</th>
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<td>Blocks and leases</td>
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<td>Well Spots and Status</td>
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<tr>
<td>Pipelines</td>
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<td>Etc.</td>
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</table>

**Architectures:**
- Architecture
- Data Collection
- Data Management
- Data Creation
- Data Analysis

**Sources:**
- Source 1
- Source 2
- Source 3

**Images:**
- Green shapes representing different data categories.

**Web Addresses:**
- www.fugro.com
NEW DATA WORKFLOW

Data Team:
QA/QC, Spatial and Non Spatial Data, Data Registration

WORKING Data Files In Client Systems

Search and Order

Copy

Update

QC Data Files In Client Systems

Spatial Database
GENERATING NEW DATA
Drawing on key digital data

ARCHITECTURE
DATA COLLECTION
DATA MANAGEMENT
DATA CREATION
DATA ANALYSIS

www.fugro.com
GENERATING NEW DATA
Drawing on other data sources
Input Reservoir Environment and Diagenesis layers

Output layer name
PLAY FAIRWAY ANALYSIS
Reservoir Result

Legend
Reservoir Analysis
Risk
0.000000 - 0.100000
0.100001 - 0.200000
0.200001 - 0.300000
0.300001 - 0.400000
0.400001 - 0.500000
0.500001 - 0.600000
0.600001 - 0.700000
0.700001 - 0.800000

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EXPLORATIONISTS WORKSTATION REQUIREMENTS

- Data Collection
- Data Management
- Data Creation
- Data Analysis

Increasing Business Value
Organisations that are benefiting from GIS

- See GIS as a core competence
- Put considerable effort into the development of portal technology
- Develop spatial analysis tools
- Train staff
- Have dedicated data management support personnel
- Implement GIS technology throughout their organisations
- Implement GIS at all scales

ARCHITECTURE | DATA COLLECTION | DATA MANAGEMENT | DATA CREATION | DATA ANALYSIS
<table>
<thead>
<tr>
<th><strong>CONTACTS</strong></th>
<th><strong>Robertson Research International Limited</strong></th>
</tr>
</thead>
</table>
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| **e-mail** | vrh@robresint.com - queries/opportunities  
knjb@robresint.com - first point of contact |
THANK YOU

Time for Questions?