Best Practices for Map Design
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Outline of session

Some basic cartography
Why make the map?
Getting to grips with design
  hierarchy : contrast : figure-ground : projections
  symbols : generalization: colour : typography
Putting the pieces together
Review the outcome
Some basic cartography
Compromise

ART

Opportunity

GRAPH

Y why?

Map User

Map Maker

Knowledge Transfer

GIS User

Cartographer

Best Practices for Map Design
Design is crucial to communication in cartography
The design process

Identify map problem

Initial ideas

Refine ideas

Build a draft/prototype

Test and decide on final design

Map production

Map use
Why make the map?
Cartographic requirement
What’s the story?
Speaking in graphical tongues

Written/spoken word: SERIAL

Graphics: PARALLEL
Audience
Media resolution
Viewing distance
Output medium
Anticipated level of understanding
Conditions of use
One map or multiple maps
What areal extent to show
Insets/multiscale
Demo: Requirement
Getting to grips with design
Visual hierarchy

Source: www.direct.gov.uk
Visual hierarchy
Demo: Visual hierarchy
Visual contrast
Figure-ground
Demo: Figure-ground
Projections

WGS 1984 Web Mercator (Auxiliary Sphere)
Projections

Perspective

Isometric
Demo: Projection
Symbol palette

- **Spacing**
- **Size**
- **Shape**
- **Orientation**
- **Hue**
- **Lightness**
## Symbol meaning

<table>
<thead>
<tr>
<th>Points</th>
<th>Lines</th>
<th>Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nominal</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Airport</td>
<td>Motorway</td>
<td>Forest</td>
</tr>
<tr>
<td>Emergency Phone</td>
<td>Railway</td>
<td>Agricultural</td>
</tr>
<tr>
<td>Picnic site</td>
<td>River</td>
<td></td>
</tr>
<tr>
<td><strong>Ordinal</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Large</td>
<td>Motorway</td>
<td></td>
</tr>
<tr>
<td>Medium</td>
<td>A road (dual)</td>
<td></td>
</tr>
<tr>
<td>Small</td>
<td>A road</td>
<td></td>
</tr>
<tr>
<td></td>
<td>B road</td>
<td></td>
</tr>
<tr>
<td><strong>Interval or Ratio</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>500 - 999</td>
<td>30 - 39</td>
<td>40 - 49</td>
</tr>
<tr>
<td>100 - 499</td>
<td>20 - 29</td>
<td>30 - 39</td>
</tr>
<tr>
<td>0 - 99</td>
<td>10 - 19</td>
<td>20 - 29</td>
</tr>
<tr>
<td></td>
<td>0 - 9</td>
<td>10 - 19</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0 - 9 %</td>
</tr>
</tbody>
</table>
Demo: Symbols
Feature generalization

Large scale

1:147,914,382
1:577,791
1:72,224

Small scale

1:18,489,298
1:144,448
1:4,514
Feature generalization

- Simplify
- Smooth
- Aggregate
- Amalgamate
- Collapse
Feature generalization

Merge

Refine

Exaggerate

Enhance

Displace
Classifying data
Demo: Feature generalization
Colour – sequential
Colour – diverging

Diverging Critical Class

Diverging Critical Break
Colour – qualitative
Demo: Colour
Typography

Purpose

Size

Conflict

Position

Style

sans serif

serif
Demo: Typography
Putting the pieces together
User interface for web maps

- Map/app title
- Main map
- Pop-ups
- Dynamic legends
- Sliders, clickable icons
- Multi-media content
- Credit and source
Demo:

2D/3D layout
Review the outcome
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Thank you…

- Please fill out the session survey:

  **First Offering ID:** 1437
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