Mapping the Scottish Common Information Environment, with a little help from Google

Gordon Dunsire describes how the simple incorporation of Google Maps within information services can add value for users

Introduction: Google Maps

Google Maps is a new service being developed by Google. It is currently available in a beta test version allowing developers and the curious to use the service and feed back comments to help improve it.

Google maps offers a number of features:

- The map can be dragged by mouse to view adjacent sections with no download delays.
- The map is integrated with a search facility to find business locations and contact information in the same area.
- The service can plot a road route between any two locations, displaying it on the map together with a written list of directions.
- The map can be panned and zoomed in any direction using keyboard shortcuts.

Recently, the service was extended to cover Great Britain and Ireland. It can be found at http://maps.google.co.uk/.

Entering a postcode will display a map centred on the corresponding location, e.g. ML3 6AU centres on the offices of the Scottish Library and Information Council. Then you can click on an option for directions "To here". This pops up another search box; entering another postcode displays a map encompassing both locations, plotting the road route between them, and listing directions. E.g. G4 0NS displays a map showing the location of the Centre for Digital Library Research in Glasgow and SLIC in Hamilton, marking the route between them via the M8, M73 and M74.

Google Maps also displays an option labelled "Link to this page". This is a feature not overtly described on the website, but it is very useful; it displays the full URL that generates the map, including the CGI names and values passed as parameters with the base URL. For example, the map displayed for the SLIC postcode has the full URL http://maps.google.co.uk/maps?q=ML3+6AU&hl=en.
This indicates that the GB map is specified by the value "en" for the name "hl". The postcode is a value for the name "q". The order of the name/value pairs is not significant, so the SLIC URL can also be http://maps.google.co.uk/maps?hl=en&q=ML3+6AU. Experimenting shows that the embedded space in the postcode can also be entered literally (http://maps.google.co.uk/maps?hl=en&q=ML3 6AU) or using HTML encoding (http://maps.google.co.uk/maps?hl=en&q=ML3%206AU).

Other types of search can lead to ambiguous results with more than one match; e.g. "Glasgow Road" results in ten possible locations, displayed as links. The user then has to choose one of the links to display the corresponding map.

An organisation can display a Google map for its location by proving a link from its website. The link has to use the full URL with the CGI parameters; specifying a postcode will provide an unambiguous result. This is a simple and effective way to provide a useful map of the organisation's location, with the facilities for identifying other organisations in the area, and for generating travelling instructions.

Information services can use Google Maps for multiple organisations, particularly if they store address postcodes in a structured format. It is easy to generate a Google map URL automatically by adding the postcode taken from a database to the "base" URL "http://maps.google.co.uk/maps?hl=en&q=". Most Web database programming languages such as ColdFusion make this a simple task, and allow the replacement of the space in the postcode with "+" or "%20" as required.

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This approach can be used effectively in services like SCONE, by giving a link to the Google map for a specific postcode when displaying addresses of archives, libraries, and museums. Using ColdFusion, it only took 15 minutes to incorporate Google maps into SCONE, including programming and testing. The Google map link is generated dynamically from the SCONE database if a postcode exists, which is the case for most SCONE addresses. Using the link opens up a Google map centred on the location of the postcode, with a facility to manually enter another postcode (or other part of an address) to get directions between the two.

There is nothing in the Terms and conditions of use on the Google Maps website to prevent linking to Google Maps using such pre-set searches, so this is a great way to add valuable functionality to information services for little cost.

Google map links have now been added to various components of the Scottish Common Information Environment, including SCONE, Scottish Library and Information Resources online, and the SLAINTE Events Calendar. We think they are going to be very helpful in promoting access to and use of the physical collections of Scottish archives, libraries, and museums.

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