

Case Study: Trovo Searchable Directory for a research website

Designing search, mapping and collaboration tools for researchers

Megalithic Navigation is a new website (at <http://megalithicnavigation.co.uk>) developed by Trovo for a group of enthusiasts to promote their ideas about navigation and standing stones to the archaeological research network.

They are investigating the relationship between standing stones and journeys between locations that were important to Megalithic society (such as stone axe factories).

They also wanted to use other archaeological and standing-stone websites **as a source of information** to help continue their research, and **they needed to collaborate** on further research.

And as amateur enthusiasts, they had a **tight budget**...



A Megalithic Mash-Up

We suggested a [Trovo Searchable Directory](#) to **allow selected sites** from the archaeological research network **to be searched together**. The Trovo Searchable Directory has the added advantage of allowing information about the sites in the Directory to be [published](#) so visitors can find out more about them too.

We also suggested a [Google Map](#) that could be overlaid with Megalithic Navigation's data to show the [journeys ancient travellers may have made](#). The map would also allow users to zoom in and view satellite images of the standing stones.

To get their [research papers](#), related images, bibliography and other project information online in a way that **gave them editorial control**, we suggested using [Microsoft Office Live Small Business](#), which **makes publishing to the web easy** and contains tools to **monitor usage** and **interact with visitors**.

And Office Live also contains a **Document Manager** and other online collaboration tools (based on Microsoft SharePoint) so they could [work together](#).

Bringing together existing solutions helped us keep the costs down. We didn't build a site from scratch – we just [plumbed it together](#).

Hooking it all up

To build our Megalithic Mash-Up, we first set up a **free Office Live Small Business Account** for Megalithic Navigation. (Microsoft charge small amounts but only once you're using your site a lot).

Office Live gave us some essential parts of Megalithic Navigation's solution:

- A **built-in web publishing system** to allow Megalithic Navigation to put their research online, monitor site usage and interact with users.
- Tools to create a **usable, manageable and attractive public website**.
- A private **online Document Library** only they can access, so they can collaborate on further research before it goes public (handy as one of the researchers lives in Australia).
- **Data lists** (like online Excel spreadsheets) for storing data to configure the Google-based parts of the solution in an easily-editable format.

Then we set up a [Trovo Searchable Directory](#), which uses a [Google Custom Search Engine](#) to return [search results](#) from a selected set of websites. It took its data from one of Megalithic Navigation's Office Live data lists, meaning:

1. Changes to the list **change the Google Custom Search Engine automatically**.
2. The list could be **published** to the web as Megalithic Navigation's [Research Directory](#).



1: Search results integrated into the site



2: The front-end of the Research Directory



3: The Google Map with overlaid points and lines



4: Data from an Office Live list configures the map

The Google Map works in the same way: Megalithic Navigation has two lists of data about the locations of stone circles and the journeys between important locations from Megalithic society. We use that data to put points and lines on a Google Map. All Megalithic Navigation have to do is add more data to their lists and new points and lines will appear on [their map](#).

All Trovo had to create to get all this working was some code to plumb Office Live and Google together. It only took a few hundred lines of code (and half of them were our [Unit Tests](#)).

What's next?

Megalithic Navigation now have the tools they need to:

- Add more of [their research](#) to the web and promote it effectively.
- Collaborate on further research wherever they are.
- [Search within](#) and expand their [Research Directory](#).
- Add their findings about ancient navigation to an interactive [Google Map](#).

Trovo hopes that undertaking this work will put them firmly in the centre of the archaeological and ancient history research communities.

As for Trovo, we see this implementation of a [Trovo Searchable Directory](#) and a mash-up between Office Live and Google Maps as just a starting point:

- We've **proved the Trovo Searchable Directory concept** in Office Live Small Business, but the Google Custom Search Engine allows results from up to 50,000 sites to be returned. So we'd like to **apply the technology to a much larger directory** (perhaps for a Chamber of Commerce or similar large business network).
- We've got plans for **easy-to-use tools** that **allow centrally-maintained directory information to be distributed** throughout a network of websites, so more people can find it and the links between sites in the network are strengthened.
- We want to develop **widgets and applications** that deliver directory information to the desktop and mobile applications as well as to web browsers.
- We'd like to work with [Google Earth](#) as well as Google Maps, as **Google Earth works in 3D**.
- We'd like to work on tools to allow **people with no web presence to create their own site** with membership of a network, and a [Trovo Searchable Directory](#), built in.

Trovo is an IT company specialising in search, online collaboration and web-enabled systems. Find out more about Trovo and contact us at <http://trovo.co.uk>.

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