Birmingham Central Library

One of Europe's largest public libraries has implemented Content Finder from Folding Space to provide a precise, rapid and cost-effective search and retrieval solution for its large and rapidly growing photographic and document image collection.

As one of the largest and most important public institutions of its kind in Europe, Birmingham Central Library combines comprehensive public access to a huge array of books, periodicals and data with a vibrant and modern atmosphere.

With material arranged over eight floors of the building, each department faces its own organizational and management challenges, where the needs of thousands of users are balanced against management, financial and developmental priorities.

Among the hugely diverse range of material on offer, the library's photographic and image collection is a very large and growing body of work with a particular focus on regional images from Birmingham and the West Midlands.

All this exists on an array of media from prints, negatives and lanterns, to books illustrated with original photographic prints and an increasing amount of digital copies, scanned for future access and preservation.

The collections include City archives, local and social studies and historically significant work, such as the prints created by Sir Benjamin Stone, one of the city's most noted amateur photographers who travelled and photographed extensively at the turn of the 20th century.

The department is relied on by the public and businesses alike with regular requests from individuals, publishing companies and journals looking for very specific or illustrative images.

Image Preservation versus Access

One of the challenges for the photographic department is that of the 22,000 images available, around 20% of the collection is the most popular and is therefore used about 80% of the time.

With preservation being one of the obvious and most important priorities, the Library has an ongoing objective to manage wear and tear, while enabling the public and other users to have access to the images.

Added to this there are the complex difficulties of search and retrieval, with old, historical images often presenting little in the way of factual information about their subject to aid the job of indexing.

Search and Retrieval Challenge

Before the library began its digitization process, researching and finding an image had been purely via a very large card index system, which still exists as the first port of call for the public.

But as the library began to scan the collection to build a digital archive, the problem of search & retrieval began to arise on a different level.

The use of the digitized images quickly grew in popularity in line with general trends, but because of the sparse descriptive data available and the limitations of search & retrieval technology, department staff would regularly spend many hours using browsing software to find the images that people were looking for.

Other requirements meant that frequently images need to be scanned quickly, which can add to the problem of retrieval, as the same image can be scanned on several occasions. This added to the overall expense of maintaining and developing the digital side to the collection.

Database Cost

The library considered and ruled out creating databases to organise the images, partly due to cost, but also because creating the accompanying metadata (i.e. categorization & descriptive labeling per image) was seen as very time consuming and would require a number of staff that couldn't be readily funded.

"We needed a technology solution to bridge the gap between our need for efficient and accurate retrieval based on often meagre file and descriptive information, our budgets and our desire to make rapid progress before the digital collection grew much larger," explained Richard Albutt, digital programs manager at Birmingham Central Library.

"It was important to move away for reliance upon the experience and memories of department staff, whose time could be more effectively spent managing and developing the department as a whole, rather than acting as a human search engines to complete the search and retrieval tasks our previous technology was not able to achieve."

Solving the Challenge with Folding Space

In keeping with the local theme of the collections within the department, the Library evaluated technology from Folding Space, a Birmingham-based software technology business with a specialism in developing indexing technologies designed to work without the use of databases

The solution from Folding Space (**Content Finder** with **Image & Tag Viewer**) is able to search and retrieve on the basis of file information or an array of other metadata types, which offered a good way to search across everything on the servers within the department.

Before Folding Space, the library had scanned many thousands of images using Photoshop image tagging, but were then unable to retrieve them easily.

'Image & Tag Viewer' from Folding Space allows editing of the image description tag, which is also viewable in Photoshop. 'Content Finder' then already knows the location of each image, and enables each to be found immediately.

Managing Terabytes

The Folding Space software is installed on a single server (with 4 Terabytes of local storage) and four client PCs residing in the Image Archive computer room.

It has a very simple to use interface, with a drop-down list of search items and a text box to input the text required for the image search.

Up to three of these searches can be chained together with 'AND', 'OR' and 'AND NOT' (Boolean) operators, and when the parameters have been input, a list of images, with filenames, locations and the first 100 or so characters from each image's Image Description tag are displayed.

Editing or updating the Image Description text is as simple as typing into a text box and clicking 'Save' to save changes back into the Image File.

The text entered is also viewable by Adobe PhotoShop and various other image and web editor programs and vice-versa; any Image Description previously attached by using Photoshop or another tool will be displayable and searchable via the image search program.

Database-free, Fast and Accurate

"One of the major benefits has been the versatility of the software," explained Richard Albutt. "We were able to move ahead quickly because there was no need for a database application to manage and store all the metadata associated with the images. So there was a strong cost argument, which was reinforced by the performance of the technology – it's very rapid and the rate at which the collection of digital images grows has no effect on that performance."

Finding Accuracy

The need for precise and accurate search results is demonstrated on a daily basis, with requests often made for images associated with a particular photographer, geographical area or street. This type of search is sufficient for most requirements and will typically fit with the record and description provided on the back on an old print, for instance.

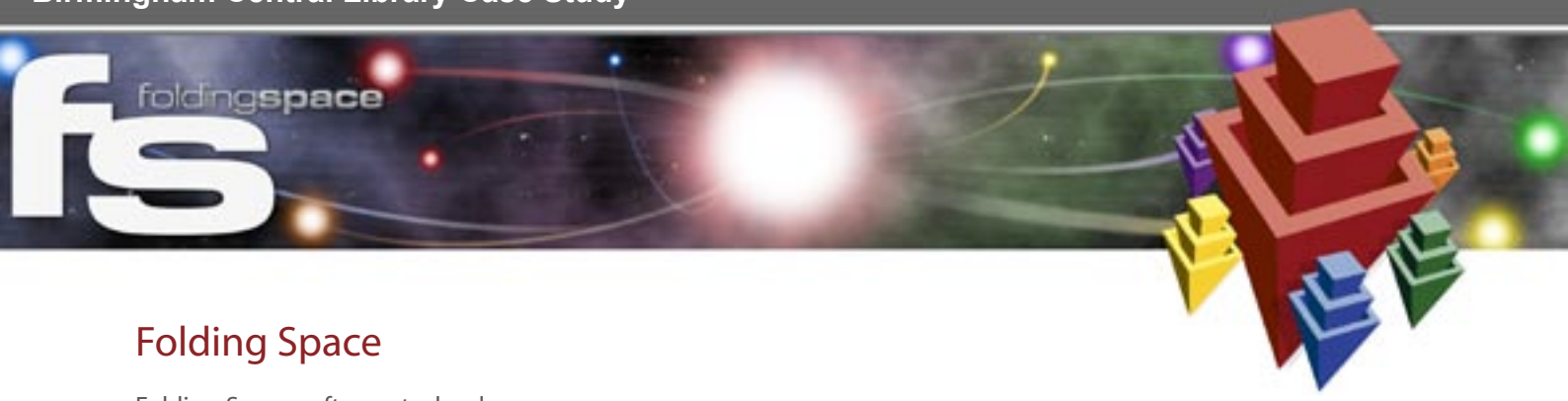
Other requirements are less specific and had previously presented a greater challenge to the department staff that had to rely on their personal knowledge of the collection to find a suitable suggestion.

For instance, to find all the images by a single photographer was a problem, even with a digital system. The images could be held with different files on the servers, so quite often people had to rely on the memories of the department staff that had originally scanned the images to arrive at a complete, accurate search.

Speedy Delivery

"The technology has speeded up the search process tremendously – in effect it doesn't care where the files are held and the file structure itself is less important than if we were approaching this challenge from a traditional storage and search perspective. It has improved accuracy and reduced the instances where images are scanned several times, so many of our efficiency challenges have also been addressed," explained Richard Albutt.

Members of the public can still search using the card index system or ask department staff for help via the new search and retrieve technology. "Our plans include opening up the electronic search to the general public as their main method of finding the images they need. We have a great deal of confidence that whatever the future holds for the size and scale of our digital image collection, search and retrieve will not return as a pressing technology or organizational issue."



Folding Space

Folding Space software technology enables users to find, identify, discover, retrieve and manage all the folders, files, programs, documents, emails, images, scans and records across their network. Also, to create, collaborate and route files, documents, records, forms and dynamic data across the network via automated workflows and business processes.

This technology is manifested in a number of complementary software products and applications which can also be treated as software 'modules' or 'aspects' that can be assembled and customized into new products, applications and niche solutions upon demand.

Folding Space has developed an 'intelligent software' technology IPR that is truly unique – **symbiotic indexing** via **distributed computing** allied to a breakthrough in the concept of **intelligent, self aware documents** and **business process automation ('symbiotic intelligence').**

This world class technology and the resulting products and applications are demonstrably superior to anything comparable providing significant and sustainable competitive edge, both in terms of cost of purchase and cost of ownership.

Folding Space products and applications address various parallel and complementary IT areas:

- o Business process management
- o Document/Records management
- o Document & Email search & retrieval
- o Document & Email Archiving
- o Document de-duplication
- o Document scanning
- o Document workflow management
- o Enterprise-wide intra-mail
- o Forensic document & data discovery
- o Image editing & redaction
- o Intelligent Electronic Forms
- o Metadata management
- o Program asset management
- o Website construction & content management

Products:

Search & Retrieval
- **Content Finder**
- **Desktop Finder**

Email management
- **Exchange Finder**
- **Exchange Archive**
- **Message & Search Manager**

Records management
- **Image Viewer**
- **Scan Manager**

Metadata management
- **Image Tagger**
- **Document Tagger**
- **Metadata Manager**
- **Taxonomy Manager**
- **Process Manager**

Document management
- **Document Workflow Manager**

Content management
- **Site Manager**

47A George Street | Birmingham | B3 1QA
Tel: 0121 236 8979 | Fax: 0121 236 9035
email: studio@foldingspace.co.uk | web: www.foldingspace.co.uk