

The background of the top half of the image is a dynamic, abstract composition of swirling blue and white light trails. These trails form a complex, interconnected network of lines and points, resembling a data visualization or a network of connections. The colors range from deep navy blue to bright, almost white highlights, creating a sense of depth and movement. The overall effect is that of a vast, energetic field of information or knowledge being explored.

powering  
knowledge

# **\_Mimas**

## **Bringing meaning to search**

Mining the research and teaching knowledge 'mountain'

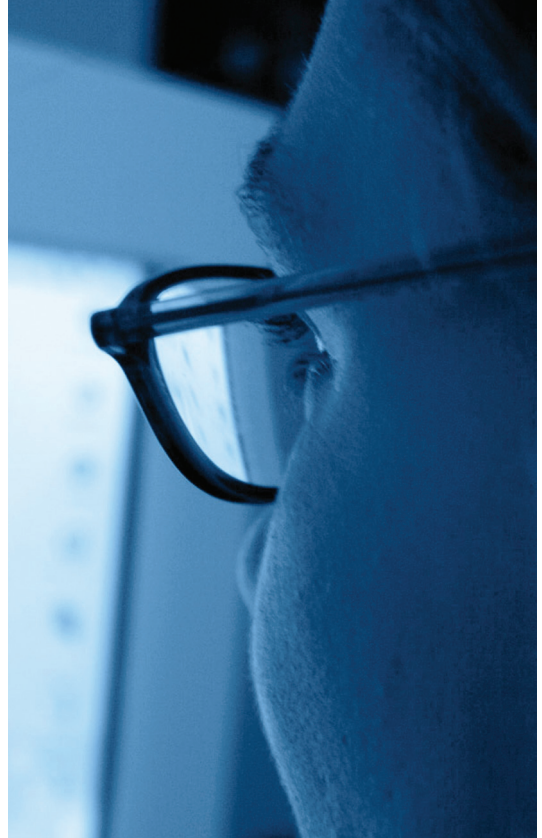
Institutions are confronting a massive and ever-increasing body of digital information. A **Meaning Based Computing** approach to search and discovery can harness the true value of these UK knowledge assets for research and teaching.

### **Information proliferation**

Many organisations are tasked with managing an exponential growth in research information. However, an incomprehensible amount of untapped information resides in silos across the UK – and much of this information is unstructured or has poor or limited associated metadata.

Traditionally, metadata has supported search and discovery and will continue to do so in critical ways. But as the mass of unstructured data grows and the costs of manual metadata creation are questioned, we need to find alternative, complementary solutions that facilitate efficient and effective search and discovery.

**Our challenge: To successfully leverage assets, bring them to researchers in meaningful ways, and demonstrably fuel the UK knowledge economy.**



“We’re exploring techniques that offer ways to surface potentially hidden research material. This requires a semantic search strategy.”

## **\_A meaning-based approach**

This challenge is our opportunity to provide users with a superior search experience – one that is more contextually meaningful and richer in possibility.

We're working with our partners to find new ways of supporting conceptual browsing across diverse bodies of information. Researchers will be able to use Mimas services to discover and retrieve conceptually and contextually-relevant information, uncovering patterns and relationships between archival documents and scientific theories.

Students will be able to jump more quickly into independent research, helping them find relevant materials for their work and to hone critical enquiry skills.

"We can help users efficiently leverage information assets for research, learning and teaching, by considerably speeding up the early, labour-intensive stages of the research cycle."

## **\_Overall benefits**

- Explore concepts across disciplines and media types
- Speed up early, labour-intensive stages of research
- Spend more time researching, less time searching

## **\_Key features**

- Cluster search results around related conceptual themes
- Full-text indexing of documents and associated materials
- Text-mining of full-text documents
- Dynamic clustering and serendipitous browsing
- Visualisation approaches to search results
- Personalisation and recommender functions

"In a knowledge-based society, graduates increasingly need core skills in managing, synthesising and deploying subject-based knowledge to solve real-world problems."

## Our experience

We're working with JISC Collections on the **Historic Books Platform** where we'll be using Autonomy IDOL, a world-leading platform that provides semantic search and pattern-matching capability of all full-text content and visual media. Academic users will be able to dig deeper into the content to find undiscovered historical or thematic relationships across Early English, 18th and 19th Century texts.

Other similar work includes the **JISC eJournal Archive** and the **UK Institutional Repository Search** demonstrator.

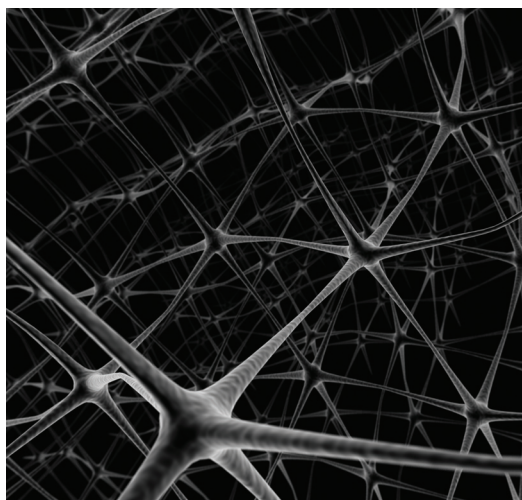
The eJournal Archive will bring together the journal archives from Oxford University Press, Institute of Civil Engineers, Institute of Physics, and Royal Society of Chemistry in a single interface – empowering users to cross-search some 4 million articles with one simple tool. Again, Autonomy IDOL will be deployed to generate more sophisticated and contextually meaningful results.

Mimas  
Roscoe Building (5th Floor)  
The University of Manchester  
Oxford Road  
Manchester  
M13 9PL

T +44 (0)161 275 6109  
E [info@mimas.ac.uk](mailto:info@mimas.ac.uk)  
W [mimas.ac.uk](http://mimas.ac.uk)

## What Mimas can offer

- Consultation, advice and bespoke deployments of meaning-based computing solutions using Autonomy IDOL
- Applications development, in-house and collaboratively
- An understanding of the complex needs of academic users
- An understanding of current and emerging open standards



 **JISC collections**

LIBRARY  
HSLIBR

E · S · R · C  
ECONOMIC  
& SOCIAL  
RESEARCH  
COUNCIL

MANCHESTER  
1824  
The University of Manchester

JISC