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Un accesso migliore e' possibile... verso l'integrazione delle risorse informative per l'architettura e l'urbanistica

## THE Xgrain PROJECT - implications for architectural sources

**Sylvia Harris**

Welsh School of Architecture  
e-mail HarrisS@Cardiff.ac.uk

Strategies for learning and teaching in educational institutions are in the process of shifting from a teacher-centred to a user-centred approach. The functionality offered by the World Wide Web is central to this shift. The Web is fast becoming the principle means of opening up access to resources on the Internet. Moreover, information retrieval and evaluation are core, transferable skills and are crucial in this Information Age

A student-centered model of education recognizes that the ability to find, use and evaluate information is essential in a society increasingly dependent upon the knowledge of its citizens for wealth creation. Within the set of skills expected of graduates, the ability to find and evaluate information from primary sources and the development of research and literacy skills are becoming ever more important.

However, there is evidence that services providing key discovery facilities for references to journal articles and other information that can be accessed from the desktop are **underused** especially in learning and teaching. This is attributed to a lack of interconnectivity between the services, which diminishes the utility of each individual service, and a perception that they may be too complex for use by undergraduates, while not apparently offering any great advantages in terms of learning.

A difference in needs and search habits has also been identified between undergraduate and postgraduate students, the former generally having much tighter timetables for their assignments, more specific queries and less time and need for in-depth searching. More generally, there are different needs at different learning stages. Similarly the pattern of database use differs between subject areas, e.g. users in some discipline areas keep returning to the same database(s), and in others, one-off uses may be the pattern. In some disciplines the format is as important as the context, e.g. in areas such as the built environment where information needs are often design based.

It is hoped that Xgrain will address these underlying problems by developing a broker using the **Z39.50 protocol** amongst others offering '**shallow**' **cross-searching** between abstracting and indexing and tables of contents services and **in-depth searching** of local institution-level portals with a single ATHENS log-on.

The Joint Information Systems Committee (JISC) under its Distributed National Electronic Resource (DNER) Programme has made funding available that enhance the information skills of both staff and students for learning and teaching purposes as well as for research. A consortium of staff from educational institutions in the Ukhave been encouraged to undertake projects to do this. The X-grain Project (pronounced "cross grain") is an example

Th project established to run from January 2001 to May 2003 is managed by EDINA, a JISC-funded national datacentre based at Edinburgh University. "EDINA" is the ancient and poetic name for Edinburgh, Scotland.

### **The aim of X-Grain**

The aim of Xgrain is to enhance and promote the use and usability of specialist Abstracting and Indexing and Tables of Contents services.

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These services lie within the JISC Information Environment and are available for use in learning and teaching, as well as research.

### **The Objectives of Xgrain**

1. To enable Z39.50 cross-searching between abstracting and indexing and tables of contents services
2. To provide an interface to enable a student to carry out 'shallow' cross-searching with an option to link to the local interfaces.
3. To develop a cross-searching interface for learning and teaching
4. To make learning materials available to students and teachers

Xgrain forms part of the JOIN-UP programme. The task of JOIN-UP is to link the discovery of references to the location of services that provide access to them.

Xgrain addresses the aspect of **discovery** within the four-part DNER structure of Discovery/Locate/Request/Deliver and will: -

- To provide a cross-search portal which will help to remove barriers to the searching of bibliographic databases for inexperienced users, and offer a useful facility for both shallow and in-depth searches for experienced users
- To act as a broker for third party services such as the subject portals and institutional portals etc.

- In addition to the above, to be developed with the needs of learning and teaching **especially with information searching and retrieval concepts** in mind.

## **My role in X-Grain**

In 1998 the Learning and Teaching Support Network (LTSN) was established to offer subject-specific expertise and information on learning and teaching. This would be co-ordinated through a network of 24 subject centers across the UK. The Centre for Education in the Built Environment (CEBE) is one of these, based in the Welsh School of Architecture. The Centre aims to promote high quality learning and teaching within the disciplines of Architecture, Planning, Landscape, Building and Surveying.

In January 2001, the CEBE Centre was invited by EDINA to be involved in the development of Xgrain. EDINA viewed the engagement of the user community, described above as being, crucial to the success of the cross-search portal, both in terms of its **design, functionality and accessibility**, and for its impact, uptake and use by the community.

The Centre approached me as Architecture Librarian with a teaching role within the School to participate as a Learning and Teaching Associate.

### Summary of Associate Tasks

EDINA project leaders requested that all Associates attend: -

- two focus groups a year in Edinburgh
- and to gather a selection of users within their respective institutions to look at the cross-searching interface to be developed in EDINA in order to offer advice and suggestions for its improvement.

I have attended two workshops in Edinburgh, the first in 2001 was introductory, and participation involved representatives with a range of skills and subject specialisms for the identification of needs. At the second workshop in 2003, participants tested the features and usability of the Xgrain interface that had been developed by EDINA computer software engineers and made recommendations on this first encounter with the software.

It was decided to extend the test to teaching staff, researchers and students of the participating institutions. I selected members of the School who agreed to trial a special version of the cross-search portal software was able to return 11 completed surveys for the first Trial Period.

These results were to be assessed by an independent team based at the **School of Information Studies, University of Northumbria at Newcastle**. This group has a through grasp of current trends in Higher Education and the impact of electronic information provision on academic, student learners and library and information services staff.

This year I arranged for three telephone interviews to take place by Dr Ken Waters who heads the IMPEL team in Northumbria University prior to the production of his evaluation report on Xgrain.

The positive results that I returned from those surveyed, especially researchers demonstrated agreement that the aims of Xgrain were worth the effort. Even in its trail format use of the interface had been an eye-opener on the amount of information available.

At present the Cardiff network holds three significant databases for Architecture. They are APId, Avery and ICONDA. These databases have to be searched each one in turn by teaching staff, the research group and students for a comprehensive but not necessarily the widest frame of reference on any topic.

The interface envisaged by Xgrain has the potential of both extending the effectiveness with which these databases to which Cardiff University already subscribes are employed. Also enhancing searching by including Abstracting/Indexing and Tables of Contents services supported by the DNER, thereby extending the use of ATHENS authentication to which the University already has access.

The development of Xgrain falls naturally into contemporary developments within the commercial sector of database providers. For example the current Ovid trial that allows the multiple searching of Silverplatter databases. It is possible currently at the American site of ISI Web of Knowledge to trial search all ISI products using a cross searching strategy with ATHENS authentication. This service offers the choice of CrossSearching (by) Form for field directed searching and CrossSearching (by) Concept for free text searching across its products.

Students are already familiar with the cross searching when using Google-like search engines and will need little persuading to cross search if it were made possible and certainly if was made possible by default.

According to the JISC Second Annual Report, August 2001 on user behaviour monitoring and evaluation framework: -

“Search engine use predominates and can be an important arena for practising search skills”

I have not conducted a survey myself but in my daily task as the Reference Librarian working on the library floor and from over-heard student conversation amounting to anecdotal evidence, it is clear that students tend towards developing a favourite database and using just one of those available for their searches. This could be because one has provided them with the “hits” they have wanted in the past or because they find one easier to use and produced more assessable results.

They are clearly instructed about the scope and difference of the three networked databases both with guidance sheets and via the library - based

project I teach entitled "Adopting an Architect" that forms part of the assessment at First Year.

I welcome an interface like that envisaged by Xgrain as it will enrich students information searches for both design and written work especially if it provides better interconnectivity between the three net-worked databases and in the future, on-line databases for example the full-text services provided by Technical Indexes and includes Cardiff University own on-line catalogue.

For the first time I this year I have asked First Year students to include in their essays a short literature survey or report on how they have gone about finding information for "Adopting and Architect." A high proportion of the cohort of 60 students said they began their search on the Internet and finding that it did not provided the kind of information for which they were looking, they returned to searching the university catalogue and the net-worked databases.

Very few of them searched all three. This is reflected in the statistics covering all users of the three databases, which show that from October 2002 to March 2003 the most heavily consulted database was Avery with APId a very close second and the use of ICONDA is poor by comparison. It seems a pity that that these figures demonstrate an underuse of the generous provision of information sources available to architecture students in Cardiff University. While most First Years demonstrate in feed-back the value of being made aware of the range of sources available to them as beginners there is evidence that they soon forget these skills of discovery if they are not exercise through the Second and Third year They can often demonstrate an alarming lack of awareness of the sources available to them when researching for the Final Dissertation in the Fifth Year.

There is clearly a need for training at the beginning of undergraduate courses, supplemented by ongoing advice and guidance as and when course requirements dictates a need for example prior to major assignments and final dissertations.

If Xgrain is to be really successful, both academic and library support staff must be made made aware of its discernible advantages as a cross-searching facility designed to enhance the learning environment by making the best use of JISC- funded Abstracting & Indexing database services that form part of the DNER.

It should be promoted as contributing to the development of information literacy and embedded into the curricula and appropriate recognition of its use made in terms of **assessment**. As it is a well acknowledged fact that students research behaviour is frequently determined in terms of assessment.

Students should also be made to understand that cross searching will help them discover sources of quality and through the security of of ATHENS authentication allow the downloading of information for incorporation into learning materials and essays while protecting copyright and Intellectual Property Rights (IPR).

For the preparation of this paper Dr Ken Waterson of Northumbria University has kindly given me access to his April 2003 Draft Evaluation Report on the Xgrain Project that have implications for its future development.

I will attempt to summarise his various findings based on his survey of the experience of the L&T Associates, academic staff, researchers and students who have trailed Xgrain. They concern the following recommendations

-Xgrain must be better promoted.

A strategy to make it known must be put in place.

-Any difficulties in its operation of the inter-face and functionality must be removed.

It must have the ease of use akin to searching Google

It should also look as appealing as Google if students are to take it to their hearts

-Academic Staff must be persuaded to support it by embedding its use in their teaching programmes. This increase in use presumes that the strategy to make it known is approached in a more effective and commercial manner

-The overwhelming view is that Library support staff were the best to deliver training in cross-searching facilities and skills. Hence the task of the preparation of Learning and Training Materials will fall on them. As in Dr Waterson's words "most notable was the almost universal reluctance to be involved in the actual writing of such materials".

-Finally, consideration should be given to revising the current Xgrain website to facilitate easier user-feedback allowing interactive dialogue between users and developers.

It is good to know that according to the Project Leader, Sandy Shaw, "What is currently under discussion is a proposal from us for a further year's work on the Xgrain broker. This will be to make Xgrain better able to provide a cross-searching interface for subject and institutional portals."

Even though at this point an advanced portal for use by researchers will not be developed is discouraging, if Xgrain is seen to be a real-life search tool forming part of students' core activities this will count as achievement. We can surely hope that some of today's undergraduates will be tomorrow's researchers.