

***Theses Alive!* : an E-theses management system for the UK**

1. Introduction

The concept of Electronic Theses and Dissertations (ETDs) is not a new one. E-Theses have been openly discussed by key players in the present worldwide ETD movement since 1987¹, and even accepted by some universities (e.g. Virginia Tech) since 1994². Presently, the acceptance of e-theses as a viable medium is increasing. This is reflected in the growing number of universities that actually require an electronic version to be submitted. At the last count the number of universities registered with the Networked Digital Library of Theses and Dissertations (NDLTD) that actively mandate electronic submission totalled 56, from a diverse background including not only North American and European institutes (e.g. California Institution of Technology, University of Texas at Austin, Virginia Tech), but also universities from South America, Asia and Africa. In contrast, no universities from the UK have adopted this policy, and only a select few are developing an e-theses capability. In order to encourage the disclosure and sharing of content, the Joint Information Systems Committee (JISC) initiated the Focus on Access to Institutional Resources (FAIR) programme in August 2002. It was under this programme that the Edinburgh University Library (EUL) gained funding for the *Theses Alive!* project, which began its work in a national effort to promote ETDs in November 2002. The *Theses Alive!* project is working with two other JISC-FAIR projects investigating electronic theses, namely *DAEDALUS*, based at Glasgow University Library, and *Electronic Theses*, based at Robert Gordon University Library.

2. The problem

It seems that in the UK there has been a greater hesitancy to adopt e-theses and the benefits that they offer. What are the reasons for this general reluctance? A frequent response is that the current demand for access to thesis literature is already well supported by the *British Theses Service* offered by the British Library.³ However, as research literature becomes increasingly available through aggregated e-journal services, offering instant access to sets of journals extending back now often to their origins, searchable in a variety of ways across a large online corpus, the thesis literature, by contrast, could appear antiquated and intractable.

With online dissemination now a viable option, the intuitive action, for the researcher using thesis and dissertation literature, is to proceed directly to the full-text at the instant they wish to. For that reason, and because web sites are now so prominent in the communications of researchers among themselves, thesis literature has been moving online anyway, but in a patchy and uncontrolled way. A recent study of research material posted in the University of Edinburgh online domain has shown that

¹ Fox, E. A., Eaton, J.L., McMillan, .G, Kipp, N.A, Weiss, L. Arce, E. & Guyer, S, (1996), ``*National Digital Library of Theses and Dissertations: A Scalable and Sustainable Approach to Unlock University Resources*,'' D-Lib Magazine, September, 1996.

[<http://www.dlib.org/dlib/september96/theses/09fox.html>]

² Weisser, C., Baker, J., & Walker, J.R. (1997), ``*Problems and Possibilities of Electronic Theses and Dissertations*'' CMC Magazine, November 1997.

[<http://www.december.com/cmc/mag/1997/nov/etduniv.html>]

³ British Theses Service website: <http://www.bl.uk/britishthesis>

there is already over 100 full-text PhD and MSc theses and dissertations freely available to anyone with an internet connection⁴. Thus, there is ‘grassroots’ pressure to provide ETDs, arguably more so than pressure from the organisations whose research is being published.

3. The *Theses Alive!* answer

The *Theses Alive!* project has been set up to investigate the technological and cultural issues involved for UK HE institutions wishing to attain e-theses capability, and to initiate a pilot national service through partner institutions. Theses Alive! is not a consortium, but being based at Edinburgh University Library, the project is working with the following non-funded partners and agencies; suppliers of open source software (e.g. the MIT-led *DSpace Federation*), universities involved in piloting the system (Cranfield University, Cambridge University, Leeds University and Manchester Metropolitan University) and theses metadata agencies (e.g. British Library *Theses Service* and the *Index to Theses* service) to achieve the following objectives;

- To develop an Open Archive Initiative (OAI)-compliant digital repository and thesis submission interface suitable for the UK HE environment.
- To develop and support a generic metadata standard for UK theses.
- To test the value of a national support service for e-theses creation and management in the UK
- To produce an institutional guide to adopting and managing ETDs.

The project will therefore work both to create the submission/management software required, and to promote the take up of electronic theses production and management generally in UK HE.

4. Progress

Various open-source packages are now in use that permit individual institutions to manage their own digital research outputs. We have evaluated two open source packages to deliver e-theses functionality via a web-based interface: ETD-db⁵ by Virginia Tech, and DSpace⁶ written in partnership between Hewlett-Packard (HP) and the Massachusetts Institute of Technology (MIT). Our conclusions from this study were that DSpace would provide a better core system for an e-theses repository.⁷ However, another recent study between the other major open-source software Eprints.org⁸ and DSpace concludes; ‘It is not a question of which software is better but rather which is appropriate for the institutional services which you are building, their purpose and the content’.⁹ I think we are all in agreement that technology is not now the key barrier, but the real challenge lies in gathering content for these services.

⁴ Andrew, T. (2003), “*Trends in Self-Posting of Research Material Online by Academic Staff*”, *Ariadne*, 37 [<http://www.ariadne.ac.uk/issue37/andrew/>]

⁵ ETD-db home page: <http://scholar.lib.vt.edu/ETD-db/>

⁶ DSpace home page: <http://www.dspace.org/>

⁷ Jones, R.D. (2003) “*DSpace versus ETD-db: Choosing software to manage electronic theses and dissertations*”. *Ariadne*, 38 [<http://www.ariadne.ac.uk/issue38/jones/>]

⁸ Eprints home page: <http://www.eprints.org/>

⁹ Nixon, W.J. (2003) “*DAEDALUS: Initial experiences with EPrints and DSpace at the University of Glasgow*”. *Ariadne*, 37 [<http://www.ariadne.ac.uk/issue37/nixon/>]

At Edinburgh University Library we have installed DSpace as our chosen package to develop our e-theses project upon. In order to achieve the aims of our project it has been necessary to develop our own tools to add extra functionality to DSpace. These tools have been developed as a modular add-on pack to the core DSpace code.

The current EUL- DSpace Add-On pack provides the ability within DSpace to operate a supervised authoring facility, allowing Thesis and Dissertation Supervisors to observe the ongoing work by their student on their project, to comment and to even make changes. This comes with an addition to the DSpace administration area to manage the supervising groups and their access policies to the student's work. It is envisaged that although developed specifically with ETDs in mind, that this software may also find other applications. In addition, two submission interfaces (one for e-prints and other documents, and one for e-theses) are now supported, with the option to choose between them.

Development of this product is ongoing under the funding of JISC, and the result will be an open source, freely available addition to the DSpace archiving software from MIT and HP. These tools and installation documentation are freely available to download from our website.¹⁰

The *Theses Alive!* project has also been working closely with the Robert Gordon University-led *Electronic Theses* project, the Glasgow University *Daedalus* project and the British Library to produce a recommended core metadata set for repositories hosting e-theses material. This core metadata set is available from the RGU *Electronic Theses* website¹¹

5. Deployment

With the software development side of the project nearing completion we are ready to offer a pilot e-theses service within the University of Edinburgh. Initially, as proof of concept, we will be working closely with two schools within Edinburgh University's academic structure; the School of Informatics and the School of GeoSciences. This pilot service will run from March 2004 to October 2004, during which time we hope to refine our e-thesis service from the combined experiences of users and administrators alike, before expanding to cover the whole university campus. At the same time we hope to assist our pilot partner institutions set-up similar e-theses repositories by providing technical and advocacy support. That work is now underway, and we hope that the *Theses Alive!* project will assist the process of liberating the thesis literature, for so long seen as a grey area. Finally, as we enter an age where digital documents are fast becoming the authoritative version, we hope to provide a robust management system and address some of the cultural and policy issues that need to be considered as e-theses become accepted as normal practice.

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¹⁰ *Theses Alive!* software downloads: http://www.thesesalive.ac.uk/dsp_home.shtml

¹¹ RGU *Electronic Theses* website : <http://www2.rgu.ac.uk/library/e-theses.htm>