Utrecht University Repository: the evolution of the Igitur archive – a case-study

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Abstract

Purpose – The purpose of this paper is to outline the development of the institutional repository of Utrecht University, the Igitur Archive. The Utrecht repository is unique for several reasons: it was started several years before the international repository movement began; the repository is combined with an e-publishing service, Igitur, Utrecht Publishing and Archiving Services; and because the repository is firmly embedded in the structural tasks of the university library. This case-study highlights the advantages and disadvantages of this particular situation.

Design/methodology/approach – In order to give an outline of the evolution of the Igitur Archive, the paper uses information from policy papers and annual reports of the Utrecht University Library and Utrecht University, from the business plan of Igitur and from the Proceedings of the Dutch DARE project. The findings are sorted in four sections: the start of e-publishing in Utrecht; a section about Igitur; a section detailing the lessons learned; and finally a glance at the future is given.

Findings – The conclusion is that the position of Utrecht as an "early adapter" in the Dutch repository movement has caused some delays, but that the combination of the repository with the additional e-publishing services has proved to be very fruitful. Igitur has developed a strong position and both the e-publishing services and the repository have a sound base for further growth.

Originality/value – This paper gives useful information to other university libraries who want to start a repository and an e-publishing service or who are already developing such services.

Keywords Publishing, Information control, Communications, Archives management, The Netherlands

Paper type Case study

1. The start of e-publishing in Utrecht

Utrecht University is one of the largest universities in The Netherlands (28,000 students, 8,000 staff members, 7,500 academic publications). Existing since 1636, the university has developed into one of Europe's largest and most prominent institutes of research and education. Utrecht University Library (UBU) is the umbrella organisation of the various libraries within the university. The UBU collection is extremely varied, in line with the wide range of courses and research projects organised by the university. It contains approximately 4.5 million books and journal volumes. In addition, the UBU provides access to an increasing amount of electronic information, including approximately 7,000 periodicals that are available in full text. The

ever-increasing possibilities of ICT have caused, and continue to cause, great changes in the library's products and services. Consequently, the UBU is continually engaged in research and development.

Since 1990, scientific information has become increasingly available in digital formats. Research libraries have been forced to change from institutions that collect, store, and lend scientific material on paper, to institutions that provide access to digital information that to a large extent is not owned by the library: a change from collection to connection.

Libraries have also been confronted with the so-called serials crisis: due to extreme price rises of scientific journals, libraries had to cancel subscriptions, which in turn caused additional price increases. This posed a severe threat to the accessibility of scientific information (Savenije, 2003). In the USA, several initiatives to improve accessibility have arisen: SPARC (an initiative to increase competition) and Highwire (to help society publishers make their journals digitally available).

The Utrecht University Board of Directors and the management of the University Library were very aware of these developments. Therefore, funds were made available to allow the library to counter these problems which resulted in four new projects in the late 1990s.

1.1 E-journals
While the library management was thinking of a concrete action in tune with SPARC and Highwire, a Dutch professor in social medicine, Dr A.J.P. Schrijvers contacted the University Librarian, Bas Savenije. Researchers in a new interdisciplinary medical field, integrated care, found it extremely difficult to get their articles published in the existing journals so Professor Schrijvers asked the library for support in starting a new, preferably electronic, journal.

Together with Delft University of Technology, Utrecht started the Roquade project, for which a special project team was established in the library consisting of a coordinator, several project leaders and a technical developer. The mission of this project was to enhance scientific communication in the interest of the scientific community by setting up an infrastructure for organising, co-ordinating, supporting and facilitating the digital publishing process. One of the first concrete results of Roquade in Utrecht was the *International Journal of Integrated Care* (*IJIC*) whose first issue was published online in 2000 (www.ijic.org). More journals were to follow (*Vetscite, Ars Disputandi*) and by the end of the Roquade project in 2002, Utrecht University Library was "publishing" five electronic journals and three other publication sites.

1.2 Electronic theses
At that time, e-publishing was quite new and needed to be promoted. With this in mind, another activity was initiated: the library began offering the possibility for PhD students to deliver their thesis electronically for online publication. As an incentive, a small remuneration was available for PhD students who wanted to publish their thesis electronically. By the end of 2002, almost one third of Utrecht's theses output was online. This was a positive result, however, most of the theses still remained available only on paper. Copyright issues proved to be the most important impediment to their online publication.

1.3 Dispute and DARE
As more and more scientific output became available in digital form, the University
Board of Directors decided that it should become a structural task of the library to
archive digital research and teaching material.

In 2001, the library started a pilot project in which Utrecht scholars were asked to
deliver digital versions of their publications to the library in order to preserve them and
make them freely available. Almost 1000 articles were entered in a database and
presented on a demo website: Dispute. In fact, this was a repository *avant-la-lettre*. When
the Open Archives Initiative started in 2002, the Dispute site was made OAI compliant.
The Dutch Digital Academic Repository project (DARE) (www.darenet.nl/en/page/
language.view/dare.start) was also launched by the Surf foundation in 2002 (see Figure 1).

DARE is a joint initiative of all Dutch universities and the National Library of the
Netherlands, the Royal Netherlands Academy of Arts and Sciences (KNAW) and the
Netherlands Organisation for Scientific Research (NWO). Its aim is to store and give
access to the full text results of all Dutch research publications via a network of
so-called "repositories". All the institutions involved perform these tasks in a similar
way but retain responsibility for and control over their own data. As a result of the
Dispute project, Utrecht was able to share specific experience with the other DARE
project members on a variety of matters. For example, Utrecht had already developed
its own metadata scheme, which was based on Qualified Dublin Core and Utrecht was
also able to contribute ideas in terms of the general strategy of DARE and DARE
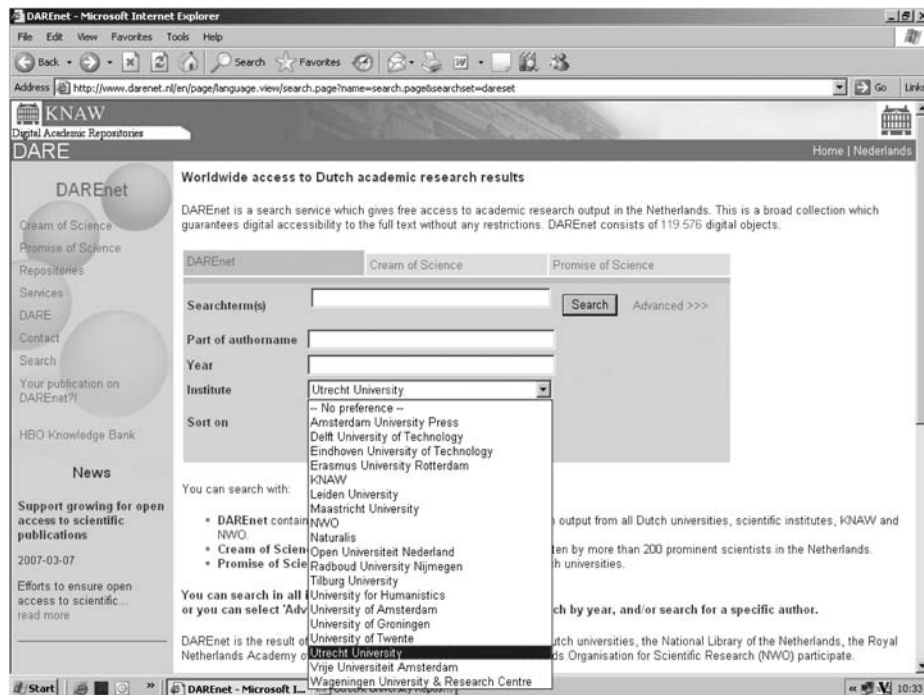communication.

Figure 1.

At the same time, Utrecht profited from DARE. When Utrecht decided to switch from its own platform to the DSpace archival software, we were able to make use of the knowledge within the other universities that had already implemented DSpace. DARE also provided Utrecht with an additional stimulus to further develop our repository. For example, with the DARE initiative Cream of Science (Feijen and van der Kuil, 2005), each DARE partner selected ten of their prominent scientists and made their complete publication lists, with as much full text as possible, visible and digitally available through DAREnet. As a result of this initiative, approximately 4,000 publications were added to the Utrecht repository. In addition, other DARE partners have developed new services such as subject-specific websites (SCHOLAR's economic community website, a website aimed at bringing together researchers who work in the field of education and labour economics) and CoMa, (a Copyright Management tool) which will be of great value to Utrecht.

1.4 Omega

In 2001, the UBU began the development and implementation of a new search and retrieval system for digital scientific information, Omega. At present, more then 10 million journal articles are available via Omega (see: http://omega.library.uu.nl/seal/omegasearch.php?lan = en). In October 2006, the library introduced MyOmega, where the client can create his own "bookshelf" to put aside his favourite digital journals and store his search queries.

The development of Omega was a strategic choice of Utrecht University Library in keeping with its vision that the main function of the library of the future will no longer be to provide a collection of information in the traditional sense of the term, but to provide optimal access to that collection. The library has the task to take care of tools, facilities and the infrastructure to provide access to electronic resources, irrespective of where the information is stored. This includes: an excellent search facility, personal alerting systems, personal home page facilities and facilities for the integration of information services in the user's primary processes (Savenije and Grygierczyk, 2001). Omega is also very important for the repository as it is a "service provider/harvester" to the Igitur Archive. As such, it is an additional access point to the electronic resources stored in the repository.

2. Igitur, Utrecht Publishing and Archiving Services

In 2003, Utrecht University Library was faced with a difficult situation. The Roquade project had left the library with a number of e-journals and e-publishing was becoming going concern in the library, yet there was no specific department to which e-publishing was assigned as a structural task. The same situation existed for the repository. The library did have a department for Innovative Projects and both the e-publishing project and the repository were still part of this department. At the same time, the library was confronted with severe budget cuts, which resulted in a reorganization. However, despite the budget cuts the library was able to launch a dedicated unit responsible for e-publishing and archiving services: Igitur. The primary goal of Igitur is to improve and to increase access to scientific information (see Figure 2).

With Igitur, Utrecht is one of the first academic institutions in Europe to give electronic publishing a structural place within the organization.

Figure 2.

Igitur has two main functions:

(1) To further develop the Utrecht digital repository (the Igitur Archive) which is financed out of the library's budget.

(2) To support scholars in their e-publishing endeavours, for example, creating electronic journals and other types of publication websites. The e-publishing infrastructure for these projects is financed out of the library's budget but the marginal costs for other services must be recovered.

The Igitur team consists of 5.8 fte. For technical assistance, long term preservation, administration etc. Igitur makes use of the library organization and technical infrastructure.

In the last two years, Igitur has grown considerably and there are now ten electronic journals and the repository has grown from 2,000 to 15,000 items in December 2006 (see Figure 3).

The library considers the repository part of their basic services, so users do not have to pay for their use of the repository. However, clients who wish to set up and publish an electronic journal, for example, must have their own financing. In the future, Igitur's journals must be self-supporting.

3. Lessons learned

- The combination of archiving (digital repository) and publishing services (e-journals, e-books) proved very fruitful. In the first place, the same technical
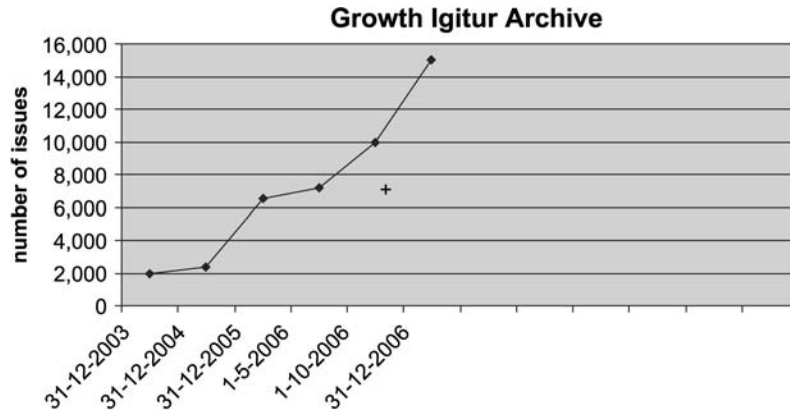
Growth Igitur Archive

skills are needed and can be interchanged easily but more important, as both services are strongly rooted in the Open Access Movement, Igitur is in the position to create awareness.

- Igitur started early with the institutional archive and this has sometimes also proven to be a disadvantage. For example, the implementation of the new archival software, DSpace, was a huge conversion project in Utrecht. Some Dutch universities, who started later, were able to start building their repository and the underlying policy immediately making use of new international insights and making maximal use of the DARE network.

- As a part of the library, Igitur can profit from the diverse knowledge within the library and from the existing infrastructure. For example, when new information retrieval software (Autonomy) is adopted in Omega, this can also be used for Igitur journals. Another excellent example is the experience with user-statistics in the library. The library has recently begun to keep user statistics for all public services and by means of the same software and methods, the use of the Igitur Archive can be measured. A third example is the experience concerning linking. The Utrecht University Library has purchased a system, SFX, which makes it possible to make a direct connection from the literature reference to the online collection of the library. This means that users will get a link, referred to as an UBU-link, to the full text article, including illustrations, graphs etc., without further search if the university has a digital subscription to the journal in question, or to the catalogue if there is a printed version of the journal. UBU-link also offers the possibility for further search in other databases and on the Internet. In the future, UBU-link will also be implemented in the repository and in the Igitur journals.

- Igitur has had the opportunity to experiment with new business models. For example, as a virtual community developed spontaneously in connection with The International Journal of Integrated Care, Igitur has tried to create a structure in which the community is responsible (also financially) for the publishing of IJIC. Nevertheless, it has proven to be quite difficult to implement an adequate business model for open access journals. Clients (editorial boards) are positive

with regard to open access, but are always a bit unsure when it comes to finding the money to finance an open access journal. Editorial boards which already have a subscription-based paper version are also less willing to switch over to open access. In these cases, Igitur proposes an embargo period. For example, each new issue of *LIBER Quarterly*, the subscription based *Journal of European Research Libraries*, is made publicly available after six months. Igitur also assists small publishers that do not have e-publishing expertise in setting up electronic versions of their journals.

- The support of the University board of directors, especially with regard to archiving services, has been very valuable. Utrecht strongly supported the DARE program and in 2005, Utrecht University signed the Berlin Declaration. The repository is now the largest in the Netherlands. Until now, the growth has been primarily achieved through special singular projects such as the "Cream of Science" project within DARE. Igitur is currently busy making agreements with the various faculties and research groups within the university regarding the regular delivery of their scientific output to the Igitur Archive. However, the differences in the publishing culture among the various disciplines is in fact quite large. The humanities have a culture of publishing monographs. E-publishing is not very popular yet; they are primarily interested in digitalisation projects. The Law faculty is extremely cautious with copyright-issues and plagiarism. In the faculty of medicine, scientists place a very high value on publishing in the big Elsevier journals and they primarily make use of Medline and PubMed when performing information searches, so there is less need for a repository. For the time being, Utrecht has consciously chosen not to make the delivery of publications to the repository a mandatory action. The conviction exists that it is too soon for a mandate and that it is better to concentrate first on building volume in the repository and to present it primarily as a service to the scholars. Our first experiences with the mandatory digital delivery of theses (since February 2006) corroborate this idea.

- There are strong signs that the open access movement is strengthening: a greater quantity of open access journals are emerging, particularly as a part of the Public Library of Science (PloS). In 2004, Springer launched the Open Choice program where authors are offered the possibility to have their journal articles made available with full open access in exchange for payment of a basic fee. In 2006 Elsevier announced the conversion of six of its physics journals to hybrid open access journals, with 30 more Elsevier journals in various fields to follow. The quantity and popularity of repositories is also growing. Nevertheless, Igitur has observed that most scholars still feel dependent on their publishers and are uncertain and sometimes even afraid of offending them. They consider the publisher their friend who delivers a service to them. Authors do not always realize that many publishers have relaxed their policies and are willing to cooperate and that they can take the initiative by not transferring their rights to the publisher. Sometimes even if they are aware, giving away their copyright is not always a big deal to them because changing the licence means too much work. This shows that there is still much work to be done in creating awareness and changing the attitude of scholars. The recent experiences with the policy changes in delivering electronic theses at Utrecht University present a prime

opportunity to attract attention. Quite a few scholars have protested against the mandate and Utrecht University now plans to organize a public debate on the issue between advocates and opponents.

- Utrecht University Library has given a great deal of attention to international developments and is actively taking part in international initiatives such as SPARC and the organisation of international conferences. Igitur has benefited greatly from its international networking activities (for example: in search of new e-publishing software, we came into contact with the Public Knowledge Project in Canada, which has developed OJS) and of course, as already mentioned, in national cooperation (DARE).

4. The future

4.1 The library as partner in science

The role of the library within the university is changing rapidly and the prominence of the library's physical collection is decreasing as the importance of information reference is increasing. Thus, the policy of the Utrecht University Library is to make as much information as possible accessible to its users by electronic means. Another trend is the continuous integration of library services in the primary processes of the university: education and research. In both the teaching and learning processes, it is becoming increasingly important for students to improve their skills in accessing and using scientific information. Similar trends can be observed for research processes. Library services (information access as well as the tools to manage that information and to support the communication between researchers) must become part of the regular workflow of researchers. This new role of the library as a partner in science also has consequences for the services provided by Igitur:

- *Archiving.* By providing free access to the scientific output of the university in the repository, the library facilitates scientific research. Particularly when non-traditional, non-text digital objects, such as primary data and multimedia objects are also added to the other information collected in the repository. There is a growing need for repositories for educational material, such as learning objects: basic electronic building blocks for e-learning, which can be combined and reused in different courses. Igitur has concrete plans to create these facilities in the coming years.

- *Publishing.* The library will continue to support scientists with the setup and production of electronic journals. Igitur will use the Open Access model as much as possible for new products so that free access to scientific information is promoted. In this way, the library and Igitur offer assistance in scientific communication.

4.2 Professionalization of Igitur

Igitur began as a project and has built up its knowledge by trial and error. Over the years, Igitur has grown and it is definitely clear that there is a need for the services Igitur offers within the academic community. Igitur is now ready to enter the next phase in its development: professionalization. Last year Igitur developed a business plan in which the plans for the next five years are described. In order for Igitur to survive and continue to expand, professionalization is necessary. Igitur has to invest in

the publishing infrastructure to make further growth possible and to stay up to speed with international technical developments. The cooperation with the Public Knowledge Project/OJS, for example, is one step in this process. If Igitur is to increase the number of open-access journals, a feasible and sustainable business model is needed. Igitur should strive for more businesslike relationships with its clients, for example, by entering into service level agreements. With regard to the repository, the most important issues in its continued evolution are the acquisition of new content and ensuring the process of depositing publications is as easy as possible for the researchers by, for example, further integration within the research process (Gibbons, 2005). More content in the repository will contribute to the status of the repository and will stimulate its use which will ultimately convince researchers that repositories improve the visibility of their publications.

By continuing to develop in this way, Igitur intends to contribute even more to the overall goal of improving and creating access to scientific information.

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