

NARCIS: research information services on a national scale

Arnoud Jippes, Wilko Steinhoff, Elly Dijk

Department of Research Information
Royal Netherlands Academy of Arts and Sciences (KNAW)
PO Box 95110
1090 HC Amsterdam
The Netherlands
{wilko.steinhoff, arnoud.jippes, elly.dijk}@bureau.knaw.nl

1 Introduction

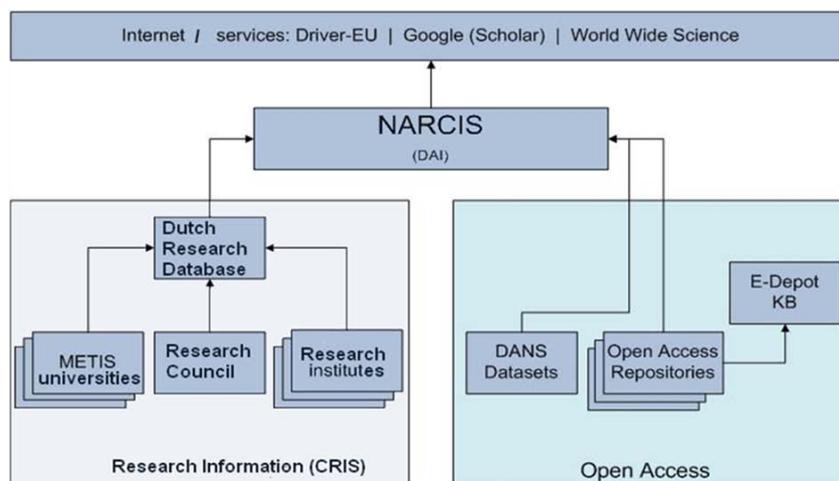
As a national aggregator, NARCIS contains the scientific output of 27 institutional OAI-PMH repositories (IRs), with publications and descriptions of research data (datasets) from the Dutch universities, the Academy (KNAW), the Netherlands Organisation for Scientific Research (NWO), the institute for Data Archiving and Networked Services (DANS)¹ and other research institutes. NARCIS also contains information from the Current Research Information Systems (CRISs) in the Netherlands on research, researchers (expertise) and research organisations. The data from the IRs and the CRISs in NARCIS are interlinked by identifiers such as the Digital Author Identifier (DAI), a unique identifier assigned to each researcher in the Netherlands.

The NARCIS Suite² consists of three main products: the NARCIS Portal (HTTP), the NARCIS Index (SRU) and the NARCIS Repository (OAI-PMH). The NARCIS Portal makes the combined data searchable and available to the public at a national level. Meeting the requirements of modern information systems requires continual development and a good understanding of NARCIS portal visitors and their needs.

This abstract focuses on the services provided by the NARCIS Suite and its context.

2 The Dutch research information landscape

INFORMATION INFRASTRUCTURE IN THE NETHERLANDS



2.1 NARCIS Portal users

In 2009, the Academy conducted a user survey. Over half of the users of the NARCIS Portal work for research universities, research institutions or universities of applied science. About 40% of the respondents describe themselves as researchers and 20% as information specialists. A few describe themselves as members of other professions (policy assistant, journalist). Dissertations are the most popular content of the portal. The

¹ See: <http://www.dans.knaw.nl>

² National Academic Research and Collaborations Information System: <http://www.narcis.nl>

respondents regard having a single gateway to different types of information very useful. When they were asked what they would like to see improved about the service, their most frequent answer was to have access to information from other countries. They also mentioned tools for analysing the NARCIS content as a useful service.

2.2 Institutional repositories

All 14 Dutch state universities, the Academy and the National Research Council have an Open Access Repository. The National Library (KB) is responsible for the long-term preservation of digital publications. As from 2007, other research institutes joined a total of 27 Open Access Repositories with over 200K full-text publications.

2.3 Current Research Information System (CRIS)

All the Dutch universities and the Academy use METIS as their Current Research Information System. Other research institutions may have similar systems.

The METIS system contains data on:

- researchers, with information on their research data and workplaces;
- research institutions, with profile information and addresses;
- research programmes and projects;
- bibliographical information on research results such as articles.

The Academy hosts a national Current Research Information System: the Dutch Research Database.³ The Dutch Research Database is an aggregation of the separate local CRIS systems, information from the university management systems, the National Research Council and information from non-academic research institutes. Data on researchers and institutions are standardized, interlinked and enriched with information on researcher expertise.

2.4 Research data (datasets)

Almost all university repositories lack research data (such as surveys or measurements). The DANS institute archives research data in EASY⁴, their repository for humanities and social sciences. The NARCIS Harvester includes EASY, making its datasets available in the NARCIS Portal. In addition to EASY, the three Dutch universities of technology are developing a repository with research data, and there are also plans to develop repositories for datasets in the life sciences.

2.5 Digital Author Identifier (DAI)

The DAI is a unique identifier assigned to each researcher in the Netherlands. It is often very hard to tell whether a variation in a name refers to the same person or to two different people. The DAI provides access to a researcher's official name and all the variations in his or her name. All the Dutch universities, the Academy and the NWO completed matching the DAIs and author names in their own CRISs by the beginning of 2008. Most IRs have implemented the DAI, making it possible to interlink the data from the different sources.

3 NARCIS services

The rich content interlinked by the DAI made it possible to develop several new services.

3.1 NARCIS Portal interface renewed

The portal to Dutch scientific information was recently rebuilt to include a faceted search function. Drill-down searches can be performed by publication year, open or closed access, IR and much more.

3.1.1 Researcher pages

For every researcher listed in the Dutch Research Database, a public researcher page is available with contact details and information on their research projects and publications linked by the DAI.

³ See: <http://www.researchinformation.nl>

⁴ See: <http://easy.dans.knaw.nl>

3.1.2 *Publication lists*

Metadata-only records have also been harvested since March 2009, making it possible to generate a researcher's complete publication list, possibly from more than one university, using the DAI. The Dutch metadata record format was extended by the addition of an access-right section. If no metadata-only records are available in the IR, then it is also possible to harvest METIS directly.

3.1.3 *RSS feed*

The NARCIS Portal offers an RSS feed on all searches. Using RSS, users can stay up-to-date on the latest open access publications, datasets and research in their area of interest. Scientists may use the feed to publicise their publications elsewhere.

3.1.4 *Reference tools*

The popular reference tool Zotero is supported by NARCIS. Zotero is a Firefox, Opera and Mosaic plug-in that allows the user to collect, organise, analyse and share citations. Zotero can also be used to export bibliographical data from a portal search into RIS format for EndNote, BibTeX or RDF, for example.

3.1.5 *Tag clouds on researcher pages*

A tag cloud on a researcher page gives an impression of the researcher's expertise. The tag cloud is derived from titles of publications, research projects, the chair and employer.

3.1.6 *National provision for Google Scholar*

The NARCIS portal contains a custom Google Scholar sitemap and the record pages are enriched with Scholar metadata tags to improve Scholar's index quality.

3.1.7 *Publication widget*

A researcher can use the publication widget to include their publication list on their website, blog and alike.

3.2 **NARCIS Repository (OAI-PMH)**

The NARCIS Repository acts as a national aggregator. NARCIS can be harvested by third parties such as DRIVER⁴ providing customised, rich metadata.

3.3 **NARCIS Index (SRU)**

The NARCIS Index provides access to the Narcis search engine by the SRU search protocol. Third parties can provide services on the index, for example meta-search for university libraries.

4 **Enhancements**

4.1 **Statistics on the Usage of REpositories (SURE)**

In the SURE project, the Dutch universities and the Academy are exploring how to aggregate download statistics from the IRs. One of the main aims of this project is to propose a standard for the aggregation of repository log files in order to provide comparable usage statistics.

4.2 **Communities of researchers**

Using the metadata of publications and the DAI makes it possible to discover networks of cooperating researchers. Some IRs have not fully implemented the DAI as yet, but DAI density should be sufficient in the near future.

4.3 **ORE resource maps**

ORE resource maps can describe the different data available in NARCIS, for example researchers, their publications, datasets and their co-workers.

4.4 **MyNARCIS**

Using the SURFederation⁵, researchers can log in and customise such preferences as citation format and open-URL resolver and update their other researcher IDs, expertise, etc.

⁴ See: <http://www.driver-repository.eu/>

4.5 Improved tag cloud/Expert finding

The tag cloud terms and weighting can be improved by analysing more data, for example the publications content. The next step would be to develop an expert-finding service.

4.6 More export formats for the NARCIS Portal

An RIS export for Endnote will be supported shortly, as well as Mendeley export.

During the presentation we will discuss more technical details.

⁵ <http://www.surffederatie.nl>

References

Baars, C., Dijk, E., Hogenaar, A., Van Meel, M. (2008) '[Creating an Academic Information Domain: a Dutch example](#)', Paper presented at EuroCRIS 2008, Maribor, Slovenia, 2008. pp. 77-78.

Hogenaar, A. and Steinhoff, W. (2008) '[Towards a Dutch Academic Information Domain](#)'. In: Third International Conference on Open Repositories 2008, 1-4 April 2008, Southampton, United Kingdom.

Dijk, E., Baars, C., Hogenaar, A., Van Meel, M. (2006) NARCIS: '[The Gateway to Dutch Scientific Information](#)', paper presented at EIPub 2006, Bansko, Bulgaria, 2006.

Hogenaar, A.TH.; Vries, R.E. de; Meel, A.M. van (supervisor); Dijk, E.M.S. (collaborator); Voorbij, H.J. (adviser) (2010): *Gebruikersonderzoek NARCIS 2009, Amsterdam*, 11 maart 2010, 22 p + appendix.
See: <http://www.onderzoekinformatie.nl/nl/oi/gebruikersonderzoek>

Dijk, E.; Hogenaar, A.; Meel, M. van; '[Users in the spotlight: study on the use of the Dutch scientific portal NARCIS, 2009](#)'; Paper presented at CRIS 2010, Aalborg, Denmark, 2010. pp. 9-19.