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SUNCAT: the next steps for the UK's national serials catalogue

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Abstract
Purpose – This paper aims to discuss the findings of recent surveys conducted around SUNCAT, the Serials Union Catalogue for the UK research community and the implications for the development of the service.
Design/methodology/approach – The results of two surveys are discussed: the first, a short print survey with a small group of inter-library loan librarians, and the second, an online survey open to all SUNCAT users.
Findings – SUNCAT is used by both end users and a wide range of library and information professionals for a variety of purposes. The current level of satisfaction with the service is good but desirable developments include adding the serials' holdings data of more libraries, reducing the duplication on the catalogue and adding links to further information.
Research limitations/implications – The findings are based on responses from mainly library and information professionals, with limited input from end users.
Originality/value – The paper focuses on SUNCAT, which is the most comprehensive source of serials' holdings information in the UK.

Keywords Surveys, Interlending, Serials management

Paper type Research paper

1. Introduction

SUNCAT is the Serials Union Catalogue for the UK research community. The service is provided by EDINA[1], a JISC[2] funded national data centre, and is freely available at www.suncat.ac.uk

The primary aim for SUNCAT is to be a comprehensive serials location service covering titles and holdings. It is aimed at information professionals and researchers, trying to find and access serials held in the UK. As such, SUNCAT is an important tool for the inter-lending community providing information about the serials holdings of 70 UK research libraries, including the British Library[3] and the National Libraries of Scotland[4] and Wales[5]. In addition, the catalogue also contains the serials' records of the CONSER database[6], the ISSN Register[7] and the Directory of Open Access Journals[8]. A full list of the SUNCAT Contributing Libraries can be found at www.suncat.ac.uk/description/contributing_libraries.html

One of the main challenges for SUNCAT is to envisage how the service should develop and anticipate users' requirements within the changing UK information environment. In order to inform plans for the service and determine the current level of satisfaction with the service and the impact it has on users' work and research, SUNCAT conducted a number of user surveys in 2008 and 2009. This article explores the major findings of the surveys and how these will influence the future of the service.

2. How SUNCAT works

Each of the SUNCAT Contributing Libraries sends a file of its serials' bibliographic and holdings records to the SUNCAT team. The SUNCAT team conduct some manipulation on the records to normalise the data in order to create a consistent display on the SUNCAT interface before loading the records into the database. Records are de-duplicated to view with the best available or “preferred” bibliographic record chosen for display, with all the contributing libraries’ holdings listed underneath (Figure 1 shows the top portion of a full record display, with the holdings of only the first few libraries visible).

SUNCAT is kept as current as possible with most contributing libraries sending updates of their serials’ holdings on a monthly or quarterly basis.

3. Survey of inter-library loan librarians

Coinciding with a SUNCAT presentation at a meeting of the North West Libraries Interlending Partnership (NWLIP)[9] in May 2008 a short survey was conducted with the participants.

The participants were asked to rate five new or potential SUNCAT developments. The most popular of these was one which had recently been made to the SUNCAT interface, adding to the results screen a list of all the libraries holding a particular serial title. This enhancement means that users can...
see at a glance which libraries hold a title without the need to
enter each individual record.

The second most popular development was linking from
holdings details in SUNCAT records directly to the equivalent
record in contributing libraries’ local catalogues. This
development would enable users to see the most up to date
information about serials’ holdings and circulation data if
applicable.

The next most popular development was linking from
SUNCAT records to Table of Content (ToC) services.

Respondents were also asked what type of libraries they
would like added to SUNCAT. Unsurprisingly, given the large
number of participants from the public library sector, public
libraries received most support, but the addition of further
higher education and specialist libraries was also popular.

4. Impact and satisfaction survey

The SUNCAT team conducted a more inclusive online
survey in April 2009 to ascertain information about:

• Who is using the service and why.
• The current level of satisfaction with the service.
• How users would like to see the service develop.

4.1 Respondents

A total of 69 respondents completed the survey, with almost
all of them, 91 per cent, identifying themselves as library or
information professionals. The remaining six respondents
consisted of one researcher, two lecturers or teachers, two
postgraduates and one publisher.

The library and information professionals were asked to
specify their primary areas of responsibility. The results
demonstrated that a varied range of library and information
professionals use SUNCAT (Figure 2).

Respondents were based at a range of organisations,
including UK higher education institutions, charitable
organisations, NHS trusts, government agencies, museums
and learned societies.

4.2 Reasons for using SUNCAT

Respondents were asked to select the main purposes for which
they used SUNCAT:

Figure 2 Primary responsibilities of library/information professionals

<table>
<thead>
<tr>
<th>Systems</th>
<th>Other</th>
<th>Acquisitions</th>
<th>Cataloguing</th>
<th>Serials</th>
<th>Reference/Electronic Enquiries</th>
<th>Management</th>
<th>Liaison or Subject Librarian</th>
</tr>
</thead>
<tbody>
<tr>
<td>9%</td>
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<td>7%</td>
<td>17%</td>
<td>13%</td>
<td>10%</td>
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<td>16%</td>
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</table>
Unsurprisingly, the most popular option was to find where specific journals are held in the UK, with nearly two thirds of respondents selecting this option.

Almost half of the respondents reported that they used SUNCAT to check the bibliographic details of journals.

Similarly, around half used the service to check if specific journals are held in particular libraries, cities or regions.

Around one third of the respondents used SUNCAT to create or improve their local library catalogue records.

Less popular reasons to use SUNCAT were to check on other purposes, including specific library projects. These included:

- “Project to upgrade our substandard print serial bibliographic records”.
- “UKRR”[10].
- “Special Collections Britain in Print”[11].
- “Journal Binding Rationalisation”.
- “Teaching information skills”.
- “Research and support supply”.
- “SUNCAT is useful for checking the precise date ranges and titles of journals, and to check whether we have the complete run”.

A total of 28 of the respondents provided specific examples of how they had used SUNCAT. When categorised into broad themes the majority of these responses, 61 per cent, related to locating journal titles or holdings:

Regularly use SUNCAT to find locations for journals not available through British Library. Saves paying for a search!

Helpful if a journal can be found in the UK saves time/money applying overseas.

It is crucial utility for the location of easily accessible journal runs. As a historian this is a very important part of my research practices.

SUNCAT is invaluable in helping me locate libraries that hold journals when British Library is unable to satisfy ILL requests. SUNCAT is my first choice for serials location checking. It is easy to use and has exceptional coverage. I use it daily to trace journals and correct reference information. It has speeded my work up tremendously since it’s introduction and I’d be lost without it.

A total of 18 per cent related to verifying serials’ bibliographic details and 18 per cent to creating or improving serials’ records:

It has become one of our primary sources for locating and downloading serials bib records.

Some of our journal records are quite rudimentary, records from SUNCAT allow me to upgrade the records to international standard.

SUNCAT was very helpful in my previous role as a periodicals administrator as it allowed me to quickly check bibliographic details for obscure titles.

Quick way to check on title changes, ISSN.

These examples of usage largely corroborate the previous results for the purposes for using SUNCAT. Both the reported purposes and examples of use confirm SUNCAT’s major role as a serials’ location tool, but with a secondary role as a source of serials’ records and bibliographic data. They highlight how SUNCAT saves both library staff and researchers’ time and money in locating serials and improving their local serial information.

4.3 Future developments for SUNCAT

As with the earlier survey respondents were asked to rate the usefulness of five potential developments for the SUNCAT service (Figure 3):

1. The most popular development among the respondents was the addition of new libraries to the catalogue, with almost 90 per cent of the respondents indicating that this would be “very useful” or “useful”.

2. The next was the addition of links from SUNCAT records directly to the equivalent records on contributing libraries local catalogues, with over 70 per cent of the respondents indicating that this would be “very useful” or “useful”.

3. Next was linking from SUNCAT records to Table of Contents services such as Zetoc, with around 65 per cent of the respondents indicating that this would be “very useful” or “useful”.

4. Less popular was the potential development linking SUNCAT to local inter library loan or document delivery services, with only around 40 per cent of respondents indicating that this would be “very useful” or “useful”.

5. The least popular development was that of a new search interface for the service, with just over 30 per cent of respondents indicating that this would be “very useful” or “useful”. The low desirability of this option may, in part, be due to the lack of information or detail about a potential new interface, whereas the other options were more easily defined. Indeed around 35 per cent of the respondents indicated that they “didn’t know” if this would be a desirable development, which would also suggest that more information might have produced a different result. However, the SUNCAT interface has generally been described as a simple, easy to use interface in previous surveys, so it may be that there is genuinely no great desire for change among the respondents.

4.3.1 Web 2.0 developments

Respondents were also asked to rate the usefulness of five potential Web 2.0 developments:

1. Social bookmarking (marking and sharing records within SUNCAT service).

2. Share this tool (sharing records via social networks and Web 2.0 services).

3. Recommender services (people who used this, also used …).

4. Reviews or ratings.

5. Tagging (personal or shared labels).

Interestingly, none of these developments were particularly popular with the respondents, with the most popular being recommender services with around 30 per cent of the respondents indicating that this would be “very useful” or “useful”. This was followed by share this tool with around 25 per cent of the respondents indicating that this would be “very useful” or “useful”.

These results might reflect that these developments are indeed not particularly useful for a service such as SUNCAT where the primary function is as a location tool at the serial title level. Most resource sharing or recommender services operate at a more granular level such as article title, book title or author. However, the low level of interest may also reflect the respondents’ profile and their use of SUNCAT as a professional tool rather than as part of the research process.
4.3.2 Personalisation

The final developments that respondents were asked to comment on were connected to potential personalisation features for the service. These proved more popular with the respondents than the Web 2.0 developments.

The most popular feature was the location focussed results based on users’ own preferences, with around 65 per cent marking this as “very useful” or “useful”.

Next were the options to save records or searches across sessions both of which had around 60 per cent marking them as “very useful” or “useful”.

Again these results reflect SUNCAT’s primary role as a serials’ location service. Enabling users to customise results based on their location is a logical progression for the service to facilitate more mobile users, who may be involved in distance learning or research, part-time learning, on placement or on holiday from their “home” or affiliated institution. The results also reflect the growth in mobile technologies, an area that SUNCAT would do well to take advantage of.

4.3.3 Respondents’ suggestions

In addition to the potential listed developments respondents were given the opportunity to suggest how SUNCAT could be improved or developed in the future. Of the respondents to this question 33 per cent indicated that they were happy with the current service and could suggest no further improvements:

- Nothing. It is very user friendly and meets the information needs to improve the quality of records that we have currently.
- Suncat gives me all the information I need.

From the remaining responses two major desirable improvements can be highlighted:
1. Addition of more libraries.
2. Improved de-duplication of records.

4.4 Overall satisfaction with SUNCAT

Finally, respondents were asked to state their overall satisfaction with SUNCAT. The majority of the respondents, 92 per cent reported that their level of satisfaction with the service was “excellent” or “good”, with almost 50 per cent of the respondents rating the level as excellent. Only 1 per cent reported their level of satisfaction as “low” (Figure 4).

5. Implications for future developments

The results from both surveys have provided valuable insight into the use of SUNCAT by information professionals. In particular, the impact and satisfaction survey revealed that SUNCAT is a useful tool for a range of such professionals with a variety of responsibilities. The SUNCAT team can use this information to strengthen the service in key areas of importance to this user group. Unfortunately, however, neither of the surveys provided much information about the use of the service by end users: researchers; teaching staff; undergraduates etc., which would have provided a more holistic view of service usage, satisfaction and areas for development. It would be desirable to target future surveys to end users to ensure that the service does not develop solely as a service for information professionals.
5.1 Reducing duplication

One of the key areas highlighted for improvement was to reduce the level of duplication in the catalogue. Despite best efforts to de-duplicate records on SUNCAT using an automatic matching algorithm, duplicate records do still display on the catalogue. This issue is one that the SUNCAT team has been investigating for some time. The main reason for duplication is the variable quality of records submitted to SUNCAT; basic records lacking details such as the ISSN, publisher information etc. are unlikely to match with existing records in SUNCAT, so duplicate records are created.

One of SUNCAT’s aims is to improve the quality of serials’ records in the UK, a problem which was highlighted in the UKNUC Report (Stubley et al., 2001) which led to the creation of SUNCAT. MARC records can be freely viewed by anyone using SUNCAT and the information used to upgrade records on local catalogues. Further, contributing libraries are able to download MARC records directly into their local catalogues, again helping to upgrade serials’ information locally. Any upgrades made to records locally are picked up in SUNCAT when records are loaded in the regular update files from libraries thus improving serials’ discovery on the national level. However, this is a long-term strategy for improving duplication. Other plans include introducing a librarians’ interface onto SUNCAT which would facilitate contributing libraries in manually matching and upgrading records which should help to speed up the process somewhat, although again, this work will be longer term as dependent as it is on the commitment of contributing libraries’ local resources.

Shorter-term strategies for dealing with duplication have included making improvements to the original matching algorithm and also making changes to the SUNCAT interface. Introducing holding libraries to the results display means that users can see at a glance where titles are held and reduces the number of records that users need to enter (Figure 5). Results of a number of SUNCAT surveys on duplication revealed that this change had made a significant improvement to searching the catalogue and has also led to a greater tolerance of duplication among users.

However, it is unlikely that the issue of duplication will ever be completely resolved and the addition of additional libraries’ data will inevitably exacerbate the problem. SUNCAT is not the only catalogue to grapple with issues around duplication. A recent OCLC report (Calhoun and Cellentani, 2009) highlighted that the management of duplicate records is in the top three of WorldCat’s data quality priorities, with the merging of duplicate records the top data quality priority among librarians using the service.

Additionally, more radical changes to the SUNCAT interface might help to ameliorate the effects of duplication in the future. For example, introducing more restrictive searches might return fewer more focussed results and introducing improved pre- and post-search location filters could also help users navigate more quickly and easily through the noise of duplication.

5.2 Expanding the coverage of the catalogue

SUNCAT currently contains data from 70 research libraries, including national libraries, higher education libraries, specialist libraries and one public library. The libraries are based in Scotland, Northern Ireland, England and Wales and their distribution can be viewed on a map at www.suncat.ac.uk/description/suncatmap/Suncatsubs_final.htm (Figure 6).

Almost 90 per cent of the respondents indicated that adding more libraries to SUNCAT would be “useful” or “very useful” and this was therefore the most popular development among the respondents to the impact and satisfaction survey. The addition of more public libraries was seen as most desirable by the NWLIP respondents but respondents to the impact and satisfaction survey favoured higher education and specialist libraries.

SUNCAT is in the process of emerging from a phase of consolidation during which the addition of new libraries was given a low priority in order to concentrate on setting up regular updating procedures and schedules for the existing contributors. Previous feedback had indicated that the currency of data on SUNCAT is vital; hence resources were channelled to ensure that the catalogue is kept as up to date as possible. Now, with almost all of the contributing libraries providing regular updates, attention can once again return to expanding the coverage of the service.

Options include concentrating on higher education libraries, with the aim of eventually including as many of these institutions holdings as possible. Indeed, a recent report (Research Information Network, 2009) recommends the creation of a “shared catalogue for the whole UK higher education sector” highlighting the benefits and efficiencies of information available at the network level.

Alternatively, adding more specialist libraries is likely to increase the number of unique or rare titles on the catalogue and thus help to expose these to a larger audience. Both of these factors, alongside issues of data quality, data currency, sustainability and resource capacity, will be considered as new libraries are added to SUNCAT.

5.3 Adding value links to SUNCAT records

The next most popular developments from both surveys were:

- Linking from serial records in SUNCAT to the equivalent records in each library’s local catalogue.
- Links from serial records in SUNCAT to Table of Contents (ToC) services, e.g. Zetoc[12].

The first of these would enable users to click from a holdings statement in SUNCAT directly to the equivalent record in the appropriate libraries’ own catalogue. This would enable users to check the most up-to-date holdings and also to check on the status of any circulated items. In the longer term it might also mean that SUNCAT could consider only loading bibliographic records and linking out to holdings statements.
**Figure 5** Search results display

**Figure 6** Map of SUNCAT contributing libraries
that would release resource to work on the addition of new libraries and other developments.

The second of these, linking to ToC services, is currently in development as part of the Discovery to Delivery (D2D) JISC funded project[13]. The development facilitates users linking directly from a record on SUNCAT to the most recent ToC for that title. This information should help users decide if particular titles are of interest to them and therefore worth making efforts to access them, whether in person or via document delivery.

As discussed earlier, the Web 2.0 developments listed in the survey were not particularly popular with respondents. It seems unlikely, therefore, that much resource will be placed in developing these in the immediate future. However, due to the survey results being heavily biased towards information professional users above end users, it might be desirable to take small steps in this direction by adding links from SUNCAT records to social bookmarking services such as Delicious[14]. This would allow some functionality to be introduced and enable its popularity among end users and library professional users to be gauged in the future.

Additional enhancements that the team are investigating relate to enriching the data available in the search interface, including linking directly from the holdings statements in SUNCAT records to access details for the contributing libraries. Currently, there are links from SUNCAT to each of the contributing libraries’ library homepages to enable users to easily find a range of information including the local library catalogue, contact details, directions and access arrangements. If it is possible to introduce deep linking to the library catalogues then it might be more relevant to be able to also point users directly to access arrangements, particularly if these could be personalised to the users’ profiles.

In addition, it would also be useful to be able to link directly from the holdings statements on SUNCAT to the appropriate library on the SUNCAT map that provides address, contact information and directions to each of the contributing libraries.

OCLC’s report (Calhoun and Cellentani, 2009) similarly found that the addition of ToCs was the second highest data quality priority for both librarians and end users of catalogues, confirming that users “rely on and expect enhanced content including summaries/abstracts and tables of contents”. These results provide further evidence for enriching the existing data on SUNCAT.

5.4 Personalisation on SUNCAT

As a freely available service SUNCAT does not require any form of registration or login details and thus far has not pursued any level of personalisation or customisation that would require these. However, as other free web services and online catalogues become more sophisticated and offer users greater flexibility and choice in relation to customisation this is an area that SUNCAT is considering for the future.

Two of the most obvious areas of functionality which could be introduced with registration would be the ability for users to save records and searches across sessions, creating “my serials” and “my searches” areas. In both cases around 60 per cent of respondents to the impact and satisfaction survey felt that the functionality would be “useful” or “very useful”. The most popular personalisation development, however, related to a facility that would enable users to filter their search results according to their geographical location. Given that SUNCAT’s strength is as a serials location tool and the increase in part-time and distance learning, alongside the exponential growth of mobile devices, this could be a very valuable enhancement to the service. Work on location-based searching on SUNCAT is currently being investigated as part of the JISC IE Personalisation project[15].

5.5 Search limits, filters and views

Another area of development that the SUNCAT team intend to investigate, in a similar theme to the personalisation work above, is providing improved geographical search limits or even regional views onto the catalogue.

Currently, users can limit their search to look for serials held in a particular geographic region, city or library. However, due to the architecture of SUNCAT, although the user will only be returned serials held in the desired location they will also see all the other libraries, even if without the limits, that those same serials are held at. This means that, although the limit is working correctly, the user is presented with superfluous information. Ideally, applying these limits would mean that extraneous holdings would be hidden from view.

An additional development would be to create different views onto the catalogue so that users are only searching for serials held in particular groups of libraries. These might be regional groups, such as the M25 libraries[16] or strategic groups such as members of the UK Research Reserve. This would have obvious advantages for both end users based within such regional groups and to information professionals working with partner institutions. In the longer term, enabling users to select their own groups and views onto the catalogue would provide an even greater level of flexibility and customisation.

5.6 Searching, browsing and faceting

Although there appears to be a high level of satisfaction with the SUNCAT interface among information professionals the SUNCAT team are aware of developments in online library catalogues, primarily the rise of interfaces offering post-search browsing, faceting and filtering options. Products such as AquaBrowser[17] have enabled libraries to transform their traditional library catalogues with search interfaces more akin to the web search engines now so familiar to and popular with end users. As with web search engines, users are presented with a simple search box but with the option of refining and filtering their results post search. Such an approach might assist users in filtering out duplicate records and records for similar titles, while also facilitating the discovery of titles produced by particular organisations or published in particular years and also potentially help users to locate serials most accessible to them:

End users want to be able to do a simple Google-like search and get results that exactly match what they expect to find. At the same time, they appreciate the ability to conduct advanced, guided searches … They view faceted narrowing of results as an effective way to reduce what may be unmanageable results lists (Calhoun and Cellentani, 2009).

Another alternative for SUNCAT is to change the architecture of the service completely, including: how records are ingested; the level of detail held in SUNCAT; and linkages to library and other union catalogues. Such changes would inevitably require alterations to the search
interface. Again the team are exploring possibilities which would support SUNCAT’s sustainability and growth. Any such changes to the SUNCAT search interface would need to be thoroughly tested with both end users and information professional users to ensure that the service continues to meet the needs of both user groups.

6. Next steps for SUNCAT

SUNCAT has a number of options to examine and decisions to make about its future development including:
• the selection of new libraries;
• the architecture of the service;
• enhancing the search interface, data and links;
• how best to improve or manage duplication; and
• possible personalisation and customisation for the service.

However, the recent surveys conducted by the SUNCAT team have clarified the most important areas for improvement and highlighted areas for further exploration.

The main area of concern is that of duplication on the catalogue. Unfortunately, there are limited options for improvement in this area in the short term, but steps have been taken to help manage its effects, such as the introduction of holdings to the search results listing. Potential additional developments to the search interface and to the search options should also help in the medium term. Manual matching and the downloading of records are expected to bring larger improvements both to SUNCAT and to local catalogues in the long term.

The existing high level of satisfaction with SUNCAT is excellent news for the service, as is the strong interest in the expansion of the catalogue. Indeed, the survey indicates that the addition of more libraries’ holdings should be the primary focus for the service over the next few years.

Enhancing the search interface, making it easier for users to quickly identify titles of interest, their preferred locations and links out to additional information on how to access titles will also be priorities for development. Further, providing users with some level of customisation or personalisation will also help to ensure that the service continues to be relevant and attractive to both end users and information professionals.

These enhancements should consolidate SUNCAT’s position in the UK scholarly information environment; strengthening its key role as a location tool in the discovery to delivery process, but also improving discovery of and access to serials held in the UK.

Notes
1 EDINA, www.edina.ac.uk/
2 JISC, www.jisc.ac.uk/
3 British Library, www.bl.uk/
4 National Library of Scotland, www.nls.uk/
5 National Library of Wales, www.llgc.org.uk/
6 CONSER (Cooperative Online Serials), www.loc.gov/acq/conser/
7 ISSN Register, www.issn.org/en
8 DOAJ (Directory of Open Access Journals), www.doaj.org/
10 UKRR (UK Research Reserve), www.ukrr.ac.uk/
11 Britain in Print, www.britaininprint.net/
12 Zetoc, http://zetoc.mimas.ac.uk/
13 D2D (Discovery to Delivery), http://edina.ac.uk/projects/d2d/
15 Supporting Personalisation across the JISC Information Environment, http://edina.ac.uk/projects/Personalisation_summary.html
16 M25 Consortium of Academic Libraries, www.m25lib.ac.uk/
17 AquaBrowser, www.aquabrowser.com/

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