



Extending the Scottish Collections Network

Final Report of the SCONE RSLP Project

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SCONE Final Report: Executive Summary

The Project's **aims** were: **(1)** to aid researchers by extending existing SCURL collaborative collection management work and associated user services and help, **(2)** to investigate effective, objective, non-labour intensive models for building and sustaining a co-ordinated Scotland-wide distributed national resource based on the RCO collections strengths database and CAIRNS, and **(3)** to provide online facilities to assist library staff in jointly managing collaborative collection management processes.

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SCONE met all of its deliverables. In particular, these **key deliverables** were met:

- Report on less labour intensive and more objective alternatives to Conspectus for measuring collection strength, together with recommended improvements to SCURL's approach to collaborative collection management, and an embryonic facility to implement this online.
- Development of a means of accommodating Scottish collections or collections strengths not included in the RCO database and associated information, including datasets from the Scottish Datasets Project<sup>1</sup>, online research papers, research strengths in the 'New Universities', other HE Institutions, and Public Libraries, national licenses, and collaborative tenders. Identification of a means of accommodating Shared Preservation Programme data if and when required.
- Provision of a finding tool that will enable researchers to identify research materials distributed across Scotland and beyond - see <http://scone.strath.ac.uk/Service/Index.cfm> (3,500 entries).
- Embryonic SCAMP collections management portal, with minimal functionality collection strengths and named collections updates facilities – at <http://scone.strath.ac.uk/scamp/index.html>.

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In addition, the project produced, or helped to produce, **other useful outcomes** in the following areas:

- Database used to produce the 2002 edition of *Scottish library and information resources* and discussions with SLIC on the possible future automation of SLIR via SCAMP.
- Improved infrastructure for CAIRNS, RCO and SCONE, making a single service feasible.
- Helped develop the Confederation of Scottish Mini-Co-operatives and the associated embryonic Scottish Co-operative Infrastructure (of which SCONE, SCAMP, and CAIRNS are key parts).
- Initiated the HILT Phase I and Phase II proposals on mapping terminologies.
- Contributed to three of the five UKOLN Collection Description Focus workshop series
- Formed the Celtic Collections Group with Wales, Northern Ireland and Eire.

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Future development and maintenance (**Exit Strategy**) is assured for the foreseeable future. SLIC and CDLR will collaborate to maintain, various funded projects will allow development, and general support from SCURL, SLIC, the CDLR and other COSMIC members will ensure a continuing role.

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A good deal of **future research and development** work is required to take the SCONE agenda forward. Some of this will be done through already funded projects such as the COPAC/ Clumps project, HILT Phase II, the Scottish Cultural Portal project, and the Hairst OAI project. SCONE's analysis of the possibilities of distributed collections strength indices

¹ <http://datalib.ed.ac.uk/projects/scotinit/>

built dynamically by local catalogue systems on good, specially designed, inter-compatible metadata designed for the purpose suggests there may be value in funding research into the possibility of utilising such indices to allow users to 'scope ahead' in the DNER, Digital Scotland, NOF, and elsewhere - an automated, and more reliable, variation on the CAIRNS dynamic clumping mechanism (see Annexe A.4 to this report).

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**On alternatives to Conspectus**, SCONE's **recommendations to SCURL** are **(1)** to utilise informed, functionally constrained, professional judgement in the short term, and **(2)** to move to automated methods in the longer term as improvements in metadata quality and compatibility make this feasible. SCAMP to begin to mediate these processes as it develops during the COPAC/clumps project. **On managing collaborative collecting**, it recommends **(3)** continuing the current voluntary approach but taking a more co-ordinated and pro-active role in monitoring collaborative collecting activities. In addition, it recommends **(4)** that SCURL should work with CURL and other interested parties (RSLP, RSLG, JISC, RESOURCE, SLIC, WHELP, M25, RIDING and others) to implement an initiative that would be regionally based but co-ordinated at a UK-wide level and would aim to build a consensus on a UK-wide collections mapping policy, informed by appropriate (specified) research.

## SCONE Final Report

### 1. Aims

SCONE<sup>2</sup> had the following general aims:

- 1.1 To aid researchers by extending existing collaborative collection management work carried out within the framework of the Scottish Confederation of University and Research Libraries (SCURL) into new areas. [Met: see deliverables 2.1, 2.2, 2.3, 2.4, 2.6, 2.8, 2.9, 2.10, 2.11, 2.16]
- 1.2 To investigate effective models for building and sustaining a co-ordinated Scotland-wide distributed national resource that would be conveniently accessible to researchers via the CAIRNS distributed catalogue, the associated collection strengths database, and SCURL inter-access policies. [Met: see deliverables 2.2, 2.3, 2.7, 2.11, 2.12, 2.13, 2.16]
- 1.3 To ensure that the model adopted was also hospitable to accommodating further new collaborative initiatives among Scottish university and research libraries. [Met: see deliverables 2.2, 2.3, 2.4, 2.6, 2.7, 2.8, 2.9, 2.10, 2.11, 2.13, 2.16]
- 1.4 To enhance existing online assistance to help researchers identify relevant collections. [Met: see deliverables 2.11, 2.12, 2.13, 2.16]
- 1.5 To provide online information and other facilities to assist library staff in jointly managing collaborative collection management processes in order to get the best out of limited national resources. [Met: see deliverables 2.1, 2.5, 2.13, 2.16]
- 1.6 Report on the project and disseminate the results within and beyond Scotland. [Met: see deliverables 2.14, 2.15]

The project was carried out in parallel with a SCURL 'sister' project, 'SEED'. SEED was funded by the Scottish Executive Education Department and was charged with investigating the feasibility of encompassing Public Library collections within the extended collections database. The project also informed, and was informed by, the CURL study into an automated method of measuring collection strength based on the OCLC iCAS software, and also spawned the HILT<sup>3</sup> High Level Thesaurus project because of the need to identify a solution to the problem of mapping the Conspectus subject scheme used to measure collection strength by SCURL with schemes used by other bodies and at item level.

### 2. Deliverables and Outcomes

The above aims were tackled through a series of more specific deliverables. The following is a list of those deliverables and their outcomes:

- 2.1 Web-site development work to support the programme (including directory information, inter-lending arrangements, access agreements, support information for inter-institutional collection management etc.). **[Web-site and various web-based tools and documents]**

A project web-site was set up to inform stakeholders as the project progressed. Other aspects of this deliverable were merged into 2.16 below, the embryonic SCAMP staff portal. This was accessible via the project web-site, as was the new database of named collections. SCAMP will support the extension of SCURL work into new areas, and provide facilities to support collaborative collection management.

- 2.2 Investigation of models for collection measurement in order to permit effective cross-checks and a mechanism for continuous assessment of research data. This is intended to investigate models for objective assessment. **[Report]**

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<sup>2</sup> Scottish Collections Network Extension Project - web site <http://scone.strath.ac.uk/>

<sup>3</sup> See <http://hilt.cdr.strath.ac.uk/>

SCONE was charged with identifying possible alternatives to the Conspectus-based scheme utilised by SCURL to measure collection strength and maintain the strengths database that supports collaborative collecting and underpins the CAIRNS landscaping mechanism. These were, for preference, to be more objective and less labour intensive than the Conspectus-based scheme was perceived to be. Although it was not planned in this way, in the event the work was carried out in three phases. Phase 1 comprised a detailed investigation of a range of alternatives to Conspectus conducted up to March 2001. Drafts of the report on this were discussed at a number of points with SCURL, SHERAL and others and agreement obtained on the basic strategy, which was to assess collection strength through the use of professional judgement, but help ensure objective assessment through peer review and a functional focus on user navigation and staff collaborative collecting. Originally intended as an interim report that was to await the conclusion of the CURL study on the iCas automated method of measuring collection strength before completion, it was subsequently determined that this 'interim report' was best left 'as is' – as a snapshot of the position held by the SCONE team, SCURL, SHERAL, and other participants at the time. It is presented, with only minor alterations in Annexe A.2 and still represents the basic position as regards manual alternatives to Conspectus and the short to medium path forward for SCURL and other Scottish systems where legacy metadata makes an automated approach difficult except as a long term aim (the usual position with hard copy material catalogues, for example). The proposed approach is integrated with the use of SCAMP and will support the extension of SCURL work into new areas, aid in the development and maintenance of a Scotland-wide distributed national resource, and integrate with UK-wide and international work. It also encompasses the results of deliverable 2.3 below, which was to identify mechanisms to improve the effectiveness of SCURL's approach to collaborative collection management. See 6.2 below for the SCONE recommendation associated with 2.3.

Phase II consisted of two facets:

- Work by the SCONE Project Director with the CURL iCAS study which provided a good deal of useful data on the possibilities and problems of automated approaches generally.
- A SCONE analysis of the theoretical possibilities of the automated approach in the light of the known problems with the current SCURL and CAIRNS approach.

This work is summarised in the CURL iCAS study evaluator's report, presented verbatim in Annexe A.3. It made recommendations on a UK-wide but regionally based approach to collection mapping, also echoed in SCONE's own recommendations. In addition, it affected the recommendations to SCURL on alternatives to Conspectus through the new suggestion that, whilst the short to medium term approach on alternatives to Conspectus should be professional judgement based, consideration should also be given to making an eventual move to automated methods a long term aim, the path to this being the improved inter-compatibility of legacy metadata (see 6.1 below for final recommendation).

Phase III was conducted subsequent to the CURL study and focused on the recognition in the Evaluator's Report (Annexe A.3) that, since the e-resources area had less of a problem with legacy metadata, it offered an ideal environment in which to investigate what appeared to be the best automated alternative to Conspectus – the idea of collection strength indices built automatically at marginal cost by local systems and cross-searched using Z39.50 to provide both, guidance for collaborative collectors and a dynamic landscaping based navigational aid for users. This phase is reported in Annexe A.4 and gave rise to the recommendation in Section 7 below on a project to investigate the potential of 'automated dynamic landscaping' in the DNER, Digital Scotland, NOF, or all three. If adopted by SCURL libraries, it could also, arguably, give a more practical tinge to the suggestion that SCURL make a move towards automated methods a long term aim.

- 2.3** Evaluation of SCURL's approach to collaborative collection management with a view to identifying mechanisms for improving its effectiveness. **[Report]**

See under 2.2 above.

- 2.4** Identification of research level collections in the 'New Universities', and other Higher Education Institutions in Scotland; extension of Research Collections Online to include them, possibly applying an improved methodology identified in the SOEID 'sister project'. **[Report]**

Many of the 'New Universities' have conducted collection strength assessment exercises in conjunction with SCONE and the others have indicated a willingness to do so, as have some HE institutions. Further work will be done in the context of the two year COPAC/clumps extension project that will begin in May 2002, ultimately through the SCAMP updating mechanism. The assessment was based on professional judgement guided by Conspectus worksheets, a first test of an early version of the proposed new model as mechanism to support the extension of SCURL collaborative collecting work into new areas.

More detail on this work can be found in Annexe C.

- 2.5** Identification of an effective mechanism to automate the implementation of the existing SCURL Expensive Purchases Online policy. **[Specification and service facet]**

A basic mechanism was implemented, although there is room for improved functionality. Despite continued attempts throughout the lifetime of SCONE, very little use has been made of this facility and there is fairly limited enthusiasm for the policy amongst practitioners in SCURL libraries. It is recommended that the group SCURL agreed to set up to work with the COPAC/Clumps project on collection mapping and SCAMP consider the future of this policy as a matter of priority.

- 2.6** Development of a means of accommodating the Scottish datasets identified as a result of the Scottish Datasets Project<sup>4</sup> and an investigation of a model for keeping this data current.

Edina provided data on these and SCONE added them to the database, although it is assumed that further such datasets have yet to be identified and that digitisation projects will add to them. The future COPAC/clumps project will aim to continue to add to the SCONE database. The RSLP-based standard for collection level description as extended by SCONE<sup>5</sup> was developed with a range of requirements in mind, including those of datasets collections.

- 2.7** Investigation of possible means of accommodating the current Shared Preservation Programme data and identification of an effective model for doing so. **[Specification and service facet]**

After a number of discussions with Paul Byrne of SPIS Phase II, it was agreed that there were at least two mechanisms available for encompassing this data within the SCONE database and it was agreed that, all other things being equal, this would be the sensible way of handling the data. To date, however, the work proceeding out of SPIS II has not extended into areas that would require this to be carried out. Implementing it would require some unknown degree of amendment to the database structure and to associated software facilities.

- 2.8** Development of a means of holding information about national licences (online resources, CD-ROMs, etc.). **[Specification and service facet]**

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<sup>4</sup> <http://datalib.ed.ac.uk/projects/scotinit/>

<sup>5</sup> Work done by Gordon Dunsire of Napier University, seconded to CDLR

There is limited information available in this area and in many cases the details are likely to be confidential. What has been possible, has been included. Once SCAMP access control facilities are fully developed, it will be possible to consider holding confidential information in secure areas accessible only to appropriate members of staff. The same applies to information on collaborative tenders (2.10).

**2.9** Development of a way of providing distributed access to research papers held online (e.g. electronic materials identified in the CATRIONA II<sup>6</sup> project). **[Specification and service facet]**

Due to circumstances beyond the control of SCONE, progress made in this area was largely invisible. Work has been done at Strathclyde on a draft collection development policy that includes such material, and this has helped inform a similar policy being developed for Glasgow Digital Library, which includes 3 HE and 10 FE sites, but there have been no resulting additions to the SCONE database. Now that the Hairst<sup>7</sup> project has been funded, it will be possible to undertake development in this area since the project plan specifically proposes the use of SCAMP and the SCONE database in this project and the project focuses on research papers held online as well as on other materials.

**2.10** Inclusion of information about collaborative tenders implemented among Scottish university and research libraries. **[Specification and service facet]**

See under 2.8 above.

**2.11** Integration of this new data (2.4, 2.6, 2.8, 2.9) with the ongoing development of CAIRNS, RCO and the SEED-funded project to provide researchers with a finding tool that will enable them to identify research materials distributed across Scotland (and ultimately beyond). **[Enhanced database and service]**

A great deal of work was done in SCONE on record and database structures for collection level description and on changing RCO to an industry standard SQL compatible RDBMS. The work on structures was based on UKOLN standards, but extended to deal with a range of collection types (some of which are listed above), and was guided by the report on collection level description requirements produced by Michael Heaney<sup>8</sup> that has informed much of the work in the area and has enabled all of the new data to be integrated with the ongoing development of CAIRNS, RCO, and the SEED project. A good deal of this work is invisible but it has laid the groundwork for the future integration of CAIRNS within SCONE, a process that will be tackled within the COPAC/clumps project. During SCONE, over 3,500 named collections have been added to the SCONE database<sup>9</sup>, together with functionality to allow intelligent navigation for both users and staff. The collection strengths database (originally RCO) has also been extended.

Although others participated in the design process and in the development of the concept, this work was co-ordinated by Gordon Dunsire, a member of CDLR staff seconded from Napier University. Gordon was also wholly responsible for technical design and implementation, with the creation of the database, and of the user interface. A detailed description of his work is included as Annexe B.1 of this report. The SCONE Scottish Collections Network database is available online at <http://scone.strath.ac.uk/Service/Index.cfm>. The cooperation of SLIC was a welcome aid in the building of this resource.

<sup>6</sup> <http://catriona2.lib.strath.ac.uk/catriona/>

<sup>7</sup> Hairst (a Scots word for harvest) stands for Harvesting Access to Institutional Resources in Scotland Testbed. It has been recommended to JCIE for funding. It includes three HE and 10 FE institutions.

<sup>8</sup> An Analytical model of collections and their catalogues: a study carried out by Michael Heaney on behalf of the UK Office for Library Networking with support from OCLC. 3rd issue, revised. Oxford, 2000. Available at <http://www.ukoln.ac.uk/metadata/rsip/model/>

<sup>9</sup> The embryonic service is available at <http://scone.strath.ac.uk/Service/Index.cfm>

- 2.12** Provision of guidance to researchers on how to search individual online catalogues and of information about associated indexing practices. **[Specification and service facet]**

Extensive, detailed, and context-specific help has been implemented within CAIRNS, much of it provided through the work done by the CAIRNS cataloguers group, which was co-ordinated by CIGS. The SCONE database also has extensive help facilities and extends coverage to non-Z39.50 sites and sites that don't have network accessible catalogues. See, for example:

<http://cairns.lib.strath.ac.uk/CAIRNSHelp/HelpSelMenu.cfm>  
<http://scone.strath.ac.uk/Service/SCONEPublicHelp/hIndex.cfm>

- 2.13** Investigation of mapping of RCO Conspectus data to other collection management subject schemes, nationally and internationally. **[Specification and service facet (if possible)]**

After an initial survey of the problems in this area, it was decided that the work was beyond the resources of SCONE and new funding was sought for the HILT High Level Thesaurus project. This was funded by RSLP and JISC and reported in November 2001. Its proposals were subsequently taken up through a HILT Phase II bid which JISC have agreed to fund. This should produce practical outcomes of value to both CAIRNS and SCONE. Indeed, it will involve work with CAIRNS and SCONE. Some value has already been obtained from HILT Phase I, however, in that it has been established that a focus on DDC and LCSH is likely to provide the best route forward for SCONE, CAIRNS, and RCO. OCLC have a Conspectus to DDC mapping which we hope they will provide to HILT II and this should also aid development work.

- 2.14** Report on the project, including exit strategy and recommendations to SCURL and others and proposals for future research and development to improve the Scotland-wide information resource. **[Report]**

This deliverable is met through the present report. Proposals for future research, recommendations to SCURL and others, and an exit strategy are set out below - see sections 4 - 7.

- 2.15** Dissemination of project results within and beyond Scotland. **[various]**

A significant number of presentations have been given and articles written, sometimes on SCONE alone, sometimes with SCONE entailed through its relationship to other initiatives such as CAIRNS. These have included articles in internationally read journals and presentations to international audiences. More details are available in Appendix A. All articles and presentations have made reference to the project web-site where additional information on the project is available. New additions to the web-site such as the SCONE database and SCAMP have been announced on e-mail lists and at professional meetings. This process will continue for at least the next three years via HILT Phase II, COPAC/Clumps, and HalRST.

- 2.16** Demonstrator project illustrating the SCURL approach to collaborative collection development. **[Demonstrator]**

This has been instantiated through the embryonic SCAMP<sup>10</sup> staff management portal which provides a range of facilities to support collaborative collection management work, including embryonic updating facilities for the SCONE database and the collection strengths database. As specified in the deliverable, this is mainly a demonstrator, but it will be developed further within the COPAC/clumps project and other projects such as the Scottish Cultural Portal in which the CDLR and SCONE, SCAMP, and CAIRNS will play an important infrastructural role. SCAMP will also

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<sup>10</sup> SCAMP is at <http://scone.strath.ac.uk/scamp/index.html>

ultimately allow staff to control CAIRNS landscaping facilities, thereby further enhancing service and help to users. The hope is that future SCAMP development will be undertaken within the context of the proposed COSMIC joint R&D plan and that they will, through this mechanism, involve influential input from SCURL, SLIC and other COSMIC members.

SCAMP was conceived, designed, and implemented jointly by Dennis Nicholson, Cuna Ekmekcioglu, and Gordon Dunsire, with the latter implementing the final and most developed version. This latter version is described in Annexe B.2 of this report, authored by Gordon Dunsire.

### **3 SCONE Products Summary**

SCONE can claim to have been a very influential project and to have produced, or help to produce, useful outcomes in the following areas:

#### **3.1 Improved User help on CAIRNS and similar help on SCONE and SCAMP.**

See under 2.12 above.

#### **3.2 Report and Recommendations on Alternatives to Conspectus.**

See Annexe A.

#### **3.3 SCONE Named Collections Database with over 3,500 entries, including public and FE collections.**

See service at <http://scone.strath.ac.uk/Service/Index.cfm>

#### **3.4 Extended collection strengths database.**

See Annexe C,

#### **3.5 Initial work with SLIC to utilise SLIR updates to help maintain currency of SCONE.**

This was conducted partly in response to discussion with SLIC arising out of the SEED Project. SLIC agreed to encompass a request for information on collections held in its annual paper questionnaire based SLIR updates round which is sent to all Scottish libraries.

#### **3.6 Discussions with SLIC on the possible future automation of SLIR via SCAMP.**

Although the detail has yet to be agreed and additional development is required, this has been agreed in principle to be a preferred development path for SLIC in this area.

#### **3.7 Database used to produce the 2002 edition of *Scottish library and information resources (SLIR)*.**

The latest edition of SLIR was produced from the SCONE database – re-purposing of collection level descriptions in action.

#### **3.8 Improved infrastructure for CAIRNS, RCO and SCONE, making a future merger to for a single service feasible.**

See 2.11 above.

- 3.9** Embryonic SCAMP collections management portal, including minimal functionality collection strengths updates demonstrator, minimal functionality named collections updates demonstrator, minimal functionality expensive purchases online facility.

See Annexe B.2

- 3.10** Created, together with CAIRNS, SLIC, CDLR, ALF, SCURL, TAFLIN, UHI, GI, GDL, SESLIN, the Confederation of Scottish Mini-Clumps and the associated embryonic Scottish Co-operative Infrastructure (including the Scottish Portals Initiative and the joint CORC, funded by SLIC).

See Appendix C and <http://cosmic.cdlr.strath.ac.uk/>

- 3.11** Initiated the HILT Phase I and Phase II proposals.

See summary of both projects included as Appendix F.

- 3.12** Contributed significantly to the UKOLN Collection Description Focus workshop series.

SCONE staff made significant contributions to the workshops, offering presentations in three out of the five and also contributing to the discussions in the workshops.

- 3.13** Formed the Celtic Collections Group with Wales, Northern Ireland and Eire.

After the first RSLP projects day in June 2001, SCONE forged links with two other RSLP funded projects working in similar areas; Research and Special Collections Available Locally (RASCAL) at Queens University Belfast and Mapping Wales at the University of Wales Aberystwyth. All three projects aim to improve resource discovery in order to enable researchers to access relevant collections and the idea of working together seemed worth discussing. A first meeting was held at the University of Strathclyde in July 2001 where the formation of a 'Celtic Collections' group was agreed. This would further the integration of similar work going on – or planned – in Wales (Mapping Wales), Northern Ireland (RASCAL), and Eire. The SCONE vision is of 'regional' collections databases and clumps agreeing standards to ensure inter-regional interoperability. It is based on the belief, based on decades of experience, that 'small is beautiful' (or, more accurately, that small is manageable, and a good basis for co-operative activity) provided there is also UK-wide co-ordination. The belief is that this will also work best in regions of England and, indeed, is occurring already in some parts (e.g. London's M25, with which CAIRNS has close links). The creating (with colleagues elsewhere) of the Celtic Collections Group was a reflection of this view.

- 3.14** Informed the Glasgow Digital Library project amongst a range of others.

The GDL plans to work within the Scottish Cooperative Infrastructure built around SCONE, SCAMP, CoSMic and CAIRNS. It is expected to continue beyond the end of RSLP funding as a regional infrastructure, working within the national one, and offering support for collaborative collecting, shared cataloguing, and interoperability to projects with Glasgow based participants such as the NOF funded Glasgow's Story (Glasgow University) and Victorian times (Strathclyde University), HalRST (GCG, Strathclyde University), and others.

## **4 Exit Strategy**

In line with RSLP requirements, Strathclyde University, through the CDLR, has committed to long term maintenance and development. SCURL, SLIC and other COSMIC members all support SCONE and CAIRNS as key elements in the developing Scottish Co-operative Infrastructure and SLIC has indicated a willingness to support it financially and sees it as an updating portal for SLIR related data in future and as a

medium term mechanism for incorporating public, FE and other collections not accessible via Z39.50 into the Scottish system. With strong support from CDLR, SLIC, SCURL and COSMIC, and funding secured for at least two related projects, its future seems secure provided that Scottish institutions from all sectors commit to keeping the data up to date. The long term aim will be a low maintenance centrally co-ordinated facility updated in a distributed fashion. The possibility that collections added and maintained through SCAMP can be utilised to create output suitable for local use so that there is no duplication of effort will be actively pursued in the COPAC/clumps project. This project will also aim to make Scottish collections available for UK-wide harvesting by the DNER and others.

## **5 Future Research and Development**

A good deal of additional R&D work is required to take the SCONE agenda forward. Some of this will be done through deliverables associated with already funded projects such as the COPAC/clumps project, HILT Phase II, the Scottish Cultural Portal project, and Hairst. Other work will be 'scoped out' through the proposed COSMIC R&D plans suite and funding then sought (by any individual COSMIC institution) for specific aspects, either as opportunities arise, or through known sources. In addition to these, one key area that requires future research is the agreement of a UK-wide approach to collaborative collection management. The recommendation set out at 8 below under the UK-Wide Collaboration heading covers this aspect of future R&D requirements. It is partly informed by data from the CURL iCAS project and by feedback from the institutions involved, and partly informed by SCONE itself, and by a SCONE analysis of the requirements of an automated approach to collection strength measurement. A similar recommendation was made to CURL, via the External Evaluator's report on their examination of the iCAS approach to measuring collection strength by automated methods (see Annexe A.3). At time of writing, however, it is not known whether CURL will accept or pursue this recommendation.

## **6 Recommendations to SCURL**

The following recommendations are made to SCURL alone, although they may have application elsewhere also. Additional recommendations applicable both to SCURL and to others are presented in sections 7 and 8 below.

### **6.1 Alternatives to Conspectus**

SCURL asked SCONE to examine alternatives to Conspectus as a means of assessing collection strength, the context being a concern within SCURL that the Conspectus-based method employed to date was felt by some to be too subjective and too labour intensive. SCONE has conducted a good deal of research in this area, of which full details may be found in Annexe A to this report. In essence, the conclusion reached - and the path recommended to SCURL - is that objectivity and low labour intensity is best achieved in SCURL libraries through:

- A short to medium term programme based on informed professional judgement. This to be constrained – in the interests of objectivity - by informal peer review and a functional focus on user navigational and discovery needs and staff local and collaborative collection development needs. Online interaction, conducted through the SCAMP collection management portal, would mediate this process which will be developed over the next two years in the context of SCURL work with the CDLR in the context of the COPAC/clumps extension project.
- A linked gradual progression towards an increasingly automated approach in the longer term, this being regarded – potentially at least - as a key element in any future approach to reducing effort, improving objectivity, and enhancing staff tools for collaborative collection development on the one hand user facilities for accessing strong collections on the other.

Although the first of these points would not require the use of any particular methodology in coming to a judgement, the decision as to whether or not to use a methodology (or even just a guideline such as the Conspectus worksheets) to help inform the process would be in the hands of the professionals making the judgement. In an ideal world, any methodology or guideline adopted would be applied in a standard way by all. Although the group would mostly communicate online, it would be open to them to hold meetings in order to take the agenda (particularly point 2) forward. It has been agreed by the SCURL Business Committee that this should be a special sub-group with appropriate members, membership to be discussed by the CDLR Director and the SCURL Development Director. This sub-group would report to the SCURL Business Committee and SHERAL.

## 6.2 Evaluation of SCURL's Current Approach to Collaborative Collection management

SCURL asked SCONE to evaluate SCURL's current approach to collaborative collection management and make recommendations for improvement (if applicable). SCURL's approach at the beginning of the project was an informal one based on:

- Identifying and recording collection strengths and weaknesses, utilising what was then the RCO database.
- Making this information readily accessible to contributing libraries.
- Jointly agreeing an informal approach to sustaining the strengths and addressing the weaknesses.

In the absence of either a clear directive from SHEFC to undertake a deeper, more formal level of collaboration, or a UK-wide initiative to investigate and implement deeper resource sharing between institutions, SCONE recommends:

- Continuing the present approach, which encourages co-operation at a level institutions are willing and able to commit to but does not rule out deeper resource sharing where institutions wish to pursue this.
- Asking the SCURL Business Committee to take an active role in:
  - Co-ordinating the voluntary policy.
  - Ensuring that SCURL practitioners involved in collection development working through the SCAMP portal are aware of and are implementing agreed policy 'at the coal face'.
  - Ensuring that policy is informed by input from these practitioners, as well as from other sources.
  - Actively monitoring the voluntary policy with a view to ensuring its application and optimising its effectiveness within this voluntary context.
  - Identifying areas of concern and acting on these - for example, identifying likely future needs or gaps in coverage in Scotland and making representations to funding bodies with a view to tackling them.
  - Keeping abreast of developments elsewhere - in Scotland (through COSMIC, for example), in the UK (through RSLG, for example), and Internationally (through ICOLC, for example) - and ensuring that the interests of SCURL members and Scotland generally are taken account of in more global arenas.

The informal approach has value and has served SCURL well for many years - as is evidenced by the fact that SCURL has had a collaborative collection management programme in place since the mid-1980s, has its collection strengths database integrated with the CAIRNS distributed catalogue system, and is collaborating at a level of granularity not in evidence elsewhere in the UK<sup>11</sup>. However, the lack of a clear two way reporting path between policy makers and practitioners, and a regulated monitoring mechanism involving these groups, has meant:

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<sup>11</sup> As far as SCONE is aware

- That collaboration has been poorly co-ordinated and directed.
- That even when decisions were taken at policy level they were often neither communicated to practitioners nor informed by their expertise.
- That key elements of policy such as attempting to identify gaps with a view to finding ways of dealing with them have, at best, been tackled in a piecemeal, as opposed to co-ordinated, fashion.

The situation would be greatly improved if SCURL were to act on recommendation 6.2 above.

## **7 Automated Dynamic Landscaping: Joint Recommendation to SCURL, SLIC, DNER**

SCONE's analysis of the possibilities of distributed collections strength indices built dynamically by local catalogue systems on good, specially designed, inter-compatible metadata designed for the purpose suggests there may be value in funding research into the possibility of utilising such indices to allow users to 'scope ahead' in the DNER, Digital Scotland, NOF, and elsewhere - an automated, and more reliable, variation on the CAIRNS dynamic clumping mechanism (see Annexe A.4 to this report).

## **8 Towards a UK Wide Collections Mapping Policy**

The following recommendation is a result of joint work with the CURL iCAS project, and has also been made to CURL who included it in their draft final report to RSLP. CURL's final view on it is not known at this point in time. The reasoning behind the recommendation is provided in Annexe A, particularly A.3 and A.2.

### **Recommendation**

SCURL should work with CURL and other interested parties (RSLG, JISC, RESOURCE, SLIC, WHELP, M25, RIDING and others) to implement an initiative that would be regionally based but co-ordinated at a UK-wide level and would:

- 8.1** Aim to build a consensus on a UK-wide collections mapping policy, this to be based initially on a mix of automated and non-automated methods but to have the long-term goal of optimising the use of automated methods where these are the most cost-effective and affordable option.
- 8.2** Inform this process by funding research into the issues listed below, either through a single project or through a co-ordinated group of projects:
  - Research on actual requirements of funding bodies and policy makers, inter-institutional groups (like CURL, SCURL, M25, RIDING, CALIM), institutions, collection managers, and users in respect of access to materials and resource sharing, and on the best way of building these into either automated or non-automated assessment methods.
  - An examination of alternative manual and automated approaches to meeting these requirements, their limitations, and the best means of overcoming these. This to include an examination of costs against benefits in relation to each approach, involve OCLC, system vendors and open source experts, and include a consideration of a UK-wide deal with OCLC iCAS.
  - An examination of associated requirements on institutional policies and practices and of the practicalities and value of implementing these as widely as is necessary in UK institutions, taking into account considerations such as the metadata creation and maintenance requirements of a particular approach.

One possible approach would be a project that seeks to combine the 'constrained professional judgement approach' recommended by SCONE to SCURL (see 6.1 above) as an approach to existing collections and an automated approach based on distributed indices for newly acquired materials. Comparing this with an iCAS based approach would permit research into the various elements outlined above but only require 'full disclosure', adopting a single scheme, adding additional metadata elements, and so on, in respect of newly acquired material. Possible participants would include CURL, SCURL, M25, RIDING and CALIM institutions, the DNER and the RDN. DNER and RDN might have an interest because of the possible usefulness of distributed collection strength indices as a means of allowing users to navigate the JISC Information Environment.

**8.3** Determine at the end the best way forward in respect of a UK-wide policy, bearing in mind all of the following:

- The requirement of all of the key stakeholders, including funders and users.
- The implications of a particular approach in terms of institutional and inter-institutional practices (e.g. the need to do things such as implement Full Disclosure, adopt a common subject scheme, agree and apply common standards generally, build new indices, do deep resource sharing, agree relevant inter-access policies, and so on).
- The likelihood that institutions will implement and maintain these practices over time, given staffing and funding implications and other relevant consideration.

## Appendix A Dissemination Activities

### Articles

SCONE and initiatives incorporating SCONE, such as the Scottish Co-operative Infrastructure are a major element in the following:

Nicholson, D et al. Towards a Scottish Portal: the Past, present, and Future of CAIRNS, *New Review of Information Networking*, V.6, 2000. P.17-35

Nicholson, D. Researching and Developing Virtual Scotland - A Perspective from the Centre for Digital Library Research. *The Electronic Library*. 18(1) February 2000. P.51-62 . ISSN 0264-0473

Law, D. and Nicholson, D. Digital Scotland, the relevance of library research, and the Glasgow Digital Library Project. *Program*. January 2001

Law, Derek, Nicholson, Dennis, and Dunsire, Gordon. Whole Environment Research on Distributed and Collaborative Digital and Non-digital Networked Libraries in Scotland. Forthcoming issue of *Bibliothek. Forschung und Praxis*.

### Presentations

Gordon Dunsire. Demonstration of SCONE and SCAMP demonstrator services at Unlocking Scottish collections on-line: projects revealed, Glasgow University, 18th June, 2002.

Gordon Dunsire. Demonstration of SCONE and SCAMP demonstrator services and project exhibition stand at the RSLP Open Day, Business Design Centre, London, 14th June, 2002.

Gordon Dunsire. Bridging digital collections. Presented at the CILIPS Branch/Group day, Peebles Hydro Hotel, 22nd May, 2002. Available as a PowerPoint Presentation (<http://www.slainte.org.uk/cilips/bgday2002/dunsireg.pps>).

Gordon Dunsire. SCONE: some issues in managing a collections description service. Presented at Realising the potential of collection-level description: practitioners and policy makers share experiences (Collection Description Focus, Briefing Day 2), British Library, 14th May, 2002. Available in HTML (<http://www.ukoln.ac.uk/cd-focus/events/bd2/dunsire/>).

Gordon Dunsire. Demonstration of SCONE and SCAMP demonstrator services at the CoSMiC/SHERAL consultation day, Centre for Digital Library Research, Glasgow, 3rd May, 2002.

Dennis Nicholson. Talk to CNI in Washington, April 2002 on the Glasgow Digital Library and its context within the Scottish Co-operative Infrastructure, including SCONE and SCAMP. Gordon Dunsire & Dennis Nicholson. 'SCONE: reusability, granularity, and collection strength'. 8th February 2002. Aston Business School, Birmingham.

Dennis Nicholson & Gordon Dunsire. 'SCONE, HILT, collection strengths and standards. 21st March 2002. University of Edinburgh Library, Edinburgh.

Dennis Nicholson. SCURL and SCONE: Past, Present, Future. Presented at University of Edinburgh, 21<sup>st</sup> February, 2002. Available in [HTML](#) and as a [PowerPoint Presentation](#)

Gordon Dunsire. The Scottish Collections Network (SCONE). Presented at Information for Scotland 8, University of Edinburgh, 16th November, 2001. Available as a PowerPoint Presentation (<http://www.slainte.org.uk/ifs/dunsireg8b.pps>).

Dr Cuna Ekemekcioglu. Collaborative Collection Management in Scotland: SCAMP. Presented at Information for Scotland 8, University of Edinburgh, 16<sup>th</sup> November, 2001. Available in [HTML](#) and as a [PowerPoint Presentation](#)

Dr Cuna Ekemekcioglu. SCONE progress to date. Presented at the SCONE update and SCAMP launch, University of Strathclyde, 25<sup>th</sup> September, 2001. Available in [HTML](#) and as a [PowerPoint Presentation](#).

Dr Cuna Ekemekcioglu. SCAMP: Scottish Collections Access Management Portal. Presented at the SCONE update and SCAMP launch, University of Strathclyde, 25<sup>th</sup> September, 2001. Available in [HTML](#) and as a [PowerPoint Presentation](#).

Dennis Nicholson. Vision of a Scottish co-operative infrastructure. Presented at meeting of Tayside and Fife Library and Information Network, University of Dundee, 15<sup>th</sup> June, 2001. Available in [HTML](#) and as a [PowerPoint Presentation](#).

Gordon Dunsire, Cuna Ekemekcioglu, Jake Wallis. Demonstration of the SCONE database and project exhibition stand at the RSLP Dissemination Event. Business Design Centre, London, 14<sup>th</sup> June 2001.

Dr Cuna Ekemekcioglu. Presentation to LIS students on the SCONE Project. Department of Information Science, University of Strathclyde, 1 May 2001. Available in [HTML](#) and as a [PowerPoint Presentation](#).

Dennis Nicholson. Presentation to LIS students on Building Digital (and non-digital) Scotland. Department of Information Science, University of Strathclyde, 26 April 2001. Available in [HTML](#) and as a [PowerPoint Presentation](#).

Jake Wallis. Electronic developments in Scotland in the context of library co-operation and collaboration. Presentation given to the ASVIN seminar on library co-operation and collaboration at the British Library, 25 April 2001. Available in [HTML](#) and as a [PowerPoint Presentation](#).

Gordon Dunsire. CAIRNS, clumps and cooperation. Presented to the Edinburgh Libraries Strategy Group (Training Group), Napier University, Edinburgh, 25th January, 2001. Available as a PowerPoint Presentation (<http://catriona.napier.ac.uk/docs/lis/dunsire/cairclua.pps>).

Gordon Dunsire. The RSLP Collection Level Description framework, SQL, and the SCONE project. Presented at RSLP Collection Description 3rd concertation day, Charity Centre, London, 23rd October 2000. Available in HTML (<http://www.ukoln.ac.uk/metadata/rsdp/concertation/2000-10/scone/>).

Dennis Nicholson. CAIRNS, SCONE, SEED, SPIS and CoSMiC. A presentation at the CoSMiC Awareness Day, University of Strathclyde, 30 June 2000. Available in [HTML](#) and as a [PowerPoint Presentation](#).

Dennis Nicholson. SCONE and SHERAL: Co-ordinating collaborative collecting across Scotland. A presentation to SHERAL, Robert Gordon University, 19 May 2000. Available in [HTML](#) and as a [PowerPoint Presentation](#).

Dennis Nicholson. Expanding the possibilities of the CAIRNS distributed catalogue. Presentation delivered at the Library Resource Sharing and Discovery: Catalogues for the 21<sup>st</sup> Century, A One-Day Workshop presented by the eLib Clump Projects and co-ordinated by UKOLN, University of Glasgow, 11 April 2000.

Dennis Nicholson. Scotland's 'National Electronic Library'. Presentation delivered at the National Strategy for Scottish Material seminar. Available in [HTML](#) and as a [PowerPoint Presentation](#).

Extending the Scottish collections network  
Final report of the RSLP SCONE project

Dennis Nicholson. Building Digital (and non-digital) Scotland. Available in [HTML](#) and as a [PowerPoint Presentation](#).

Dennis Nicholson. A Scottish Portal? Available in [HTML](#) and as a [PowerPoint Presentation](#).

## Appendix B Scottish Datasets List Provided by EDINA

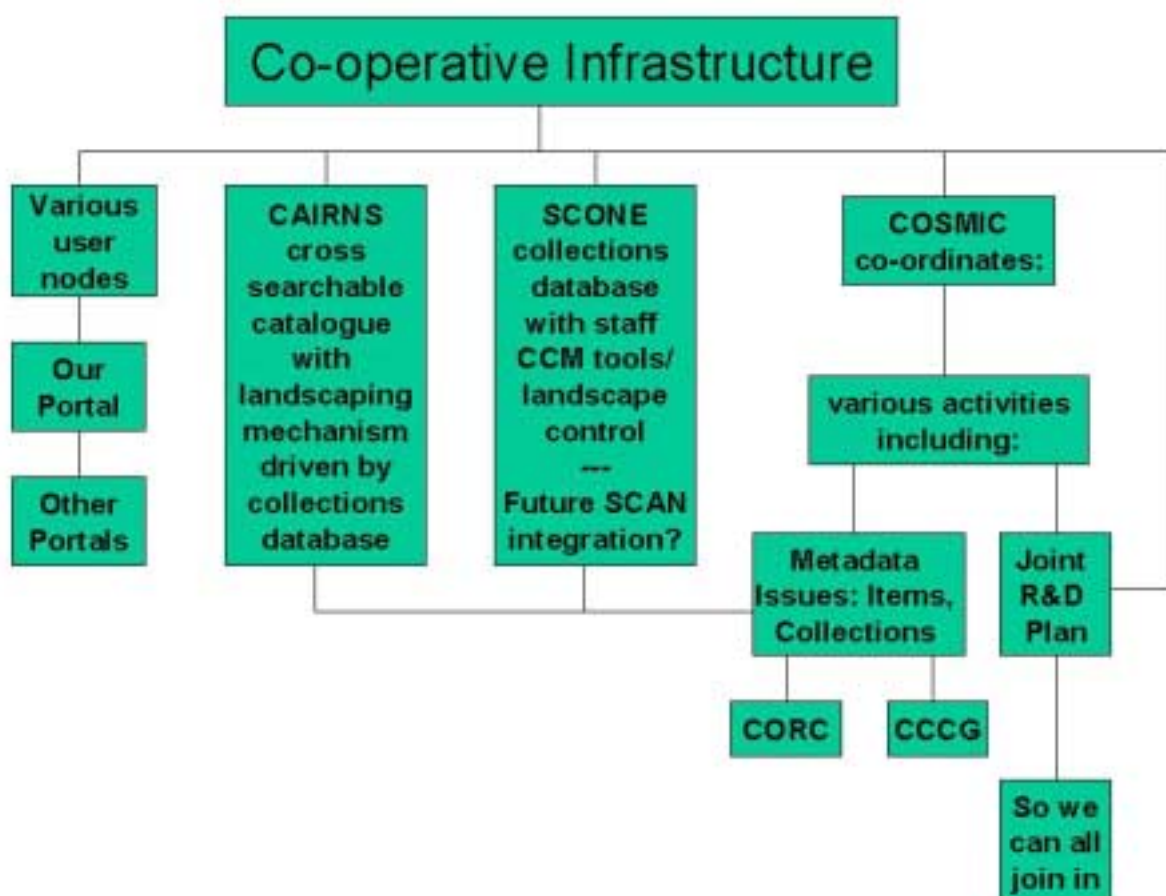
| Resource name/title                                                                         | URL                                                                                                                                                                                                                          |
|---------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Aberdeen Bestiary                                                                           | <a href="http://www.abdn.ac.uk/library/bestiary/index.html">http://www.abdn.ac.uk/library/bestiary/index.html</a>                                                                                                            |
| Postcode Unit boundaries, Scotland                                                          | <a href="http://datalib.ed.ac.uk">http://datalib.ed.ac.uk</a>                                                                                                                                                                |
| Scottish Health Boards' Dental<br>Epidemiological Programme Report on<br>Fourteen Year Olds | <a href="http://www.dundee.ac.uk/DHSRU/shbdep94/report94.htm">http://www.dundee.ac.uk/DHSRU/shbdep94/report94.htm</a>                                                                                                        |
| George Washing Wilson Photographic<br>Archive                                               | <a href="http://www.abdn.ac.uk/library/gww/about.html">http://www.abdn.ac.uk/library/gww/about.html</a>                                                                                                                      |
| Statistics compiled by the Tayside<br>Economic Research Centre                              | <a href="http://river.tay.ac.uk/~bstbcm/">http://river.tay.ac.uk/~bstbcm/</a>                                                                                                                                                |
| Tayside Economic Review                                                                     | <a href="http://river.tay.ac.uk/~bstbcm/">http://river.tay.ac.uk/~bstbcm/</a>                                                                                                                                                |
| Scotland since the Union                                                                    | <a href="http://www.bodley.ox.ac.uk/ilej/">http://www.bodley.ox.ac.uk/ilej/</a>                                                                                                                                              |
| The Romans in Scotland                                                                      | <a href="http://www.bodley.ox.ac.uk/ilej/">http://www.bodley.ox.ac.uk/ilej/</a>                                                                                                                                              |
| On the miseries of Ireland, and their<br>Remedies                                           | <a href="http://www.bodley.ox.ac.uk/ilej/">http://www.bodley.ox.ac.uk/ilej/</a>                                                                                                                                              |
| The Curse of Glencoe                                                                        | <a href="http://www.bodley.ox.ac.uk/ilej/">http://www.bodley.ox.ac.uk/ilej/</a>                                                                                                                                              |
| Am Braighe                                                                                  | <a href="http://www.chatsubo.com/ambraighe/">http://www.chatsubo.com/ambraighe/</a>                                                                                                                                          |
| The Scottish Brewing Archive Collections<br>Index                                           | <a href="http://www.arts.gla.ac.uk/Archives/sbahold.htm">http://www.arts.gla.ac.uk/Archives/sbahold.htm</a><br><a href="http://www.arts.gla.ac.uk/Archives/scotbrew.htm">http://www.arts.gla.ac.uk/Archives/scotbrew.htm</a> |
| Index of the Greater Glasgow Health Board<br>(GGHB) Archive                                 | <a href="http://www.arts.gla.ac.uk/Archives/gghbarc.htm">http://www.arts.gla.ac.uk/Archives/gghbarc.htm</a>                                                                                                                  |
| Alchemical Manuscripts held in Scottish<br>Libraries                                        | <a href="http://www.levity.com/alchemy/home.html">http://www.levity.com/alchemy/home.html</a><br><a href="http://www.levity.com/alchemy/alch_mss.html">http://www.levity.com/alchemy/alch_mss.html</a>                       |
| Catalogue of the book series, St Andrews<br>Studies in Reformation History                  | <a href="http://www.st-and.ac.uk/institutes/reformation/pubserie.htm">http://www.st-and.ac.uk/institutes/reformation/pubserie.htm</a>                                                                                        |
| Technical Reports from the Laboratory for<br>Foundations in Computer Science (LFCS)         | <a href="http://www.dcs.ed.ac.uk/publications/lfcsreps.html">http://www.dcs.ed.ac.uk/publications/lfcsreps.html</a>                                                                                                          |
| The Scotsman Web site                                                                       | <a href="http://www.scotsman.com/index.html">http://www.scotsman.com/index.html</a>                                                                                                                                          |
| Articles by students at the Scottish Centre<br>for Journalism Studies                       | <a href="http://www.fob.gcal.ac.uk/depts/lam/scjs/article.htm">http://www.fob.gcal.ac.uk/depts/lam/scjs/article.htm</a>                                                                                                      |
| Unitary Authorities Scotland                                                                | <a href="http://borders.ed.ac.uk">http://borders.ed.ac.uk</a>                                                                                                                                                                |
| LRT BUS STOP Locations                                                                      | <a href="http://digimap.ed.ac.uk:8081/">http://digimap.ed.ac.uk:8081/</a>                                                                                                                                                    |
| Glasgow Zoopark Web-site                                                                    | <a href="http://www.metro.cc/glasgowzoo/index.html/">http://www.metro.cc/glasgowzoo/index.html/</a>                                                                                                                          |

## Appendix C CoSMiC and the Co-operative Infrastructure

SCONE played a key role in the development of the Confederation of Scottish Mini-Co-operatives or **CoSMiC**. CoSMiC was set up during CAIRNS with support from the various Scottish regional co-operatives (ALF, SESLIN, Grampian Information, TAFLIN) and others such as the UHI and the Glasgow Digital Library project. A confederation of independent organisations, services and projects working together to foster and sustain co-operation between Libraries, Archives, Museums, Electronic Learning Services and others actively engaged in building and developing 'virtual Scotland', it now has additional support from SLIC, SCURL, the National Library, and SCAN. It is one part of the developing Scottish co-operative infrastructure shown in diagrammatic form in table 1 below, the other aspects being:

- A CAIRNS-based distributed Scottish union catalogue with a dynamic landscaping mechanism driven by an associated collection descriptions database and potentially capable of generating virtual portals for member organisations where this is desired.
- A SCONE-based collection descriptions database with staff updating facilities and collaborative collection management support (SCAMP), aiming in time to be one part of a cross-searchable collections system that also includes independent archives (SCAN) and, in time, museums collections databases.
- Central co-operative support for distributed, otherwise independent, Scottish portals based on these core services.

**Table 1: Scottish Co-operative Infrastructure**



## **Appendix D**

### **cc-interop Project (funded by JISC - led by LSE)**

#### **Work Package B: Clumps Focus (Led by CDLR)**

##### **Aim of the Clumps Focus Work Package**

The aim of this module is to enhance the role of clumps in the DNER, and of COPAC within clumps, by:

- Investigating and specifying collection description standards requirements for clumps as DNER nodes.
- Enhancing the coverage of clumps services by extending collections coverage in two clumps and encompassing COPAC both as a service and a set of collections.
- Enhancing intra- and inter-clumps interoperability by compiling guidelines for best practice in respect of cataloguing and indexing standards in clumps and outlining a medium-term strategy for implementing them.
- Investigating the landscaping of mini-clumps involving services and collections from two clumps and collections from COPAC.

##### **Collection and Service Description**

This sub-section of the project will build on work already done on CLD standards and their instantiation at UKOLN, MIMAS, the Collection Description Focus, and SCONE and on any necessary additional discussions within the work package with clumps, COPAC, JISC/DNER, selected FE and Public libraries, SUNCAT, and - if and when applicable - an UKNUC for monographs, bearing in mind:

- That a service in this context might be a range of things, including a Z39.50 compatible service, a service with a standalone webpac, telnet catalogue or a named collection with no associated online finding tool.
- That a collection in this context might be a wide range of things, including anything from a single named collection to a distributed collection strength.
- That collection level descriptions for particular collections may be used in a number of different contexts and may have to meet slightly different requirements in the differing contexts.

##### **Extending Collections Coverage and Encompassing Clumps and COPAC Collections**

Having agreed the requirement for describing collections for the purposes described above, the project would then:

- Enhance the structure of the SCONE database to take account of the full requirement if necessary. The approach used in SCONE is based on the original model produced by Michael Heaney when the UKOLN instantiation required extension to take account of practical requirements within SCONE/CAIRNS<sup>12</sup>. A look at the collections in the SCONE named collections database at <http://scone.strath.ac.uk/Service/Index.cfm> and their inter-

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<sup>12</sup> CAIRNS uses the UKOLN CLD content guidelines, but had to modify the UKOLN Access instantiation substantially, based on examination of the fairly large set of real-world collection descriptions at our disposal, including SLIR, Exploring Scottish history, and SWOP. In particular, GD used Heaney's paper to guide decisions, rather than the UKOLN instantiation. An example is with opening hours. UKOLN had this as an attribute of the entity Location, but Heaney has it as an attribute of the relationship 'Location is administered by Agent', ESH data gave examples of a family history society collection being available for one set of opening hours if agent A was around, and another set if it was Agent B; clearly, this is not a function of the Location per se, but of the Agent administering the Location, so Heaney's analysis had to be instantiated directly in the CAIRNS database.

relationships will help illustrate the position as it is now. The UKOLN Collections Description Focus have had a look at these collection descriptions and are happy with them.

- Enhance the test-bed collections adding and amendment facility in the associated SCAMP staff portal to take account of the new structure. The current - largely undeveloped - SCAMP service is at <http://scone.strath.ac.uk/scamp/index.html>. It requires a good deal of work, but we are already sure that there is no technical barrier to progress.
- Agree a common subject scheme or schemes for describing collections based on HILT (1) outcomes (probably DDC or LCSH or both) and - if appropriate - HILT (2)<sup>13</sup> outcomes.
- Create a new regional database<sup>14</sup> and updating portal appropriate to the specific requirements of RIDING, populate it with a set of collection descriptions appropriate to the RIDING clump, and link it within the RIDING service<sup>15</sup>. This database would include a minimum of 5 collections for each of the RIDING libraries and include examples of various agreed types of services and collections – but the aim would be to add as many as possible. It would encompass some public library collections, including – but not limited to - collections from Leeds Public Libraries. It would also include collections from other projects involving RIDING members, such as the CASE project (law libraries collaboration in Yorkshire and Humberside) and Mapping Asia. The database would be based at CDLR and use currently available CDLR software and equipment but this would not be evident to RIDING users. The source data would be provided to RIDING at any time they requested it.
- Provide guidelines for the use of the staff updates portal within RIDING.
- Create a set of records that can be added to the databases of both clumps (and others), describing COPAC collections to a sufficient degree to allow COPAC to be appropriately landscaped when particular kinds of wider-world searching requirements arise, or, more likely, COPAC collections strengths, perhaps based on the outputs of the current CURL/RSLP iCAS Collection Analysis Project<sup>16</sup> into this and on the collection strengths data from CURL libraries already in CAIRNS.
- Add them to both databases, enhancing coverage further.
- In CAIRNS, encompass COPAC appropriately as a service within the environment, so that it will be added to dynamically generated landscapes in appropriate circumstances (e.g. When the user's 'task' requires it).
- Investigate simulating the same process for RIDING, but using the CAIRNS Z39.50 client.
- Investigate the collection descriptions-generated dynamic landscaping of 'mini-clumps' that offer cross-searches of a mix of services from RIDING and CAIRNS, together with COPAC where appropriate.
- Write routines that will allow the collection description databases to be output in formats that other UK users of collection descriptions, including the DNER<sup>17</sup>, can harvest and use.
- Conduct extensive tests of the databases and their operation to determine whether or not the structure and content of the databases are adequate to the requirement. Enhance the structure and content if this proves not to be the case.
- Provide guidelines to other project participants for implementing the agreed requirement in respect of collection descriptions within their own environments, either by utilising the CAIRNS/RIDING approach or by utilising some other agreed approach.
- Write a report on the results that can be utilised by others, including DNER services.

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<sup>13</sup> A follow up to the original HILT project has been proposed and JISC funding is being sought

<sup>14</sup> We believe that regional databases are necessary for a number of reasons: to support cross-sectoral and cross-domain collaborative collection development at a regional level, to support local and regional control of the navigation paths taken by local and regional users through the national landscape, to ensure local representation within - and 'buy in' to - the national DNER approach, to allow manageable interoperability between people and organisations, size being an important factor in how practical this is, to allow manageable quality control of the collection and services descriptions themselves, to support regional differences (e.g. the Scottish education system).

<sup>15</sup> The existing brief descriptions on the RIDING web-site would be utilised as an initial basis.

<sup>16</sup> See <http://www.curl.ac.uk/projects/icas.html>

<sup>17</sup> We assume that national DNER collections database would be the first port of call for anyone who knew they were seeking to use the major DNER services, but that in some cases the regional database would be the starting point, with navigation outward to the national database or to other clumps as required. Similarly there might be a point at which the DNER database would offer access to regional clumps.

## Guidelines and Strategy for Cataloguing and Indexing Standards

One output from the CAIRNS eLib project was an investigation of interoperability problems caused by variations in cataloguing and indexing practices in participant libraries. In aiming to deal with this situation, CAIRNS sought the help of CIGS, the Cataloguing and Indexing Group in Scotland. The CIGS/CAIRNS group established the nature of the problem in detail and then agreed short-term and long-term strategies for dealing with it, providing user help screens to minimise the effects of the problem in the short term and set of agreed cataloguing and indexing standards<sup>18</sup>, together with a strategy for implementing these, in the long-term. The group then secured the backing of SCURL<sup>19</sup> for these strategies with a view to ensuring a gradual improvement in interoperability across the clump.

The aim of this sub-section of the project would be to build on the CAIRNS and MLO<sup>20</sup> experience and methodologies, with a view to agreeing a similar set of guidelines and short and long-term strategies applicable to enhancing interoperability within all of the regional clumps and, if possible, for COPAC-enhanced clumps also.

## Summary of Work Package B Deliverables and Timescales

The following table lists the proposed deliverables for Work Package B.

|            | <b>Deliverable Date</b>               | <b>Deliverable</b>                                                                                                                                                                                         |
|------------|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>B1</b>  | September 2002                        | Report on collection description standards requirements.                                                                                                                                                   |
| <b>B2</b>  | January 2003 (initial implementation) | Extended SCONE collections database and database structure; Improved, standards-based, collections database for RIDING; Joint database encompassing both; all with COPAC strengths. <b>[Depends on B1]</b> |
| <b>B3</b>  | April 2003                            | Report, guidelines for best practice, and implementation strategies for cataloguing and indexing standards.                                                                                                |
| <b>B4</b>  | May 2003                              | Dynamic generation of mini-clump landscapes that include COPAC as a cross-searchable service. <b>[Depends on B2]</b>                                                                                       |
| <b>B5</b>  | May 2003                              | Dynamic generation of mini-clump landscapes that include services from different clumps. <b>[Depends on B2]</b>                                                                                            |
| <b>B6</b>  | August 2003                           | Enhanced online collections adding and amendment facility with guidelines for use. <b>[Depends on B2]</b>                                                                                                  |
| <b>B7</b>  | November 2003                         | <b>Automated routines</b> to allow the CD databases to be output in various formats. <b>[Depends on B2]</b>                                                                                                |
| <b>B8</b>  | January 2004                          | Field test results and associated improvements to B2 and B4 to B7 outputs. <b>[Depends on B1, 2, 4, 5, 6, 7]</b>                                                                                           |
| <b>B9</b>  | February 2004                         | Guidelines on implementing collection descriptions requirement for DNER. <b>[Depends on B1 and B8]</b>                                                                                                     |
| <b>B10</b> | April 2004                            | Final Report on this work package. <b>[Depends on B1 - 9]</b>                                                                                                                                              |

<sup>18</sup> See <http://cairns.lib.gla.ac.uk/docs/CAIRNSCatStrat.pdf>

<sup>19</sup> See <http://scurl.ac.uk/>

<sup>20</sup> [Katherine Hogg], Music Libraries Online, Bibliographic Standards Final Report, [2001 ?]

## Appendix E HaIRST FAIR Project (JISC funded)

The following excerpt from the HaIRST bid document describes the aims of the project and the links with SCONE:

Funding is sought by a consortium consisting of the ten Glasgow FE colleges, and one 'ancient', one 'modern', and one 'new' university to support research into the design, development and implementation of a pilot service to provide stable ongoing UK-wide access to locally created learning and research resources in HE and FE institutions in Scotland, the aim being to investigate and advise on requirements in respect of changes in institutional cultures, policies, strategies, and organisational structures, as well as on technical and metadata level considerations. HaIRST – the name is taken from an old Scots word meaning harvest – recognises that success in this area requires research and development activity on a number of levels:

- Action to ensure the existence of institutional environments that will stimulate and sustain the creation and *deposit* of quality resources, and of collaborative collection development policies that will support co-operative activity in the area.
- Agreement on, and adherence to, inter-institutional protocols to facilitate a coherent and interoperable approach to the provision of associated metadata in line with the developing requirements of the JISC Information Environment.
- The provision of a range of different *disclosure* and *discovery* routes to promote community wide access in a variety of service contexts, including local institutional interfaces, regional 'clumps' like CAIRNS<sup>21</sup>, and national subject-based access mechanisms like the Resource Discovery Network<sup>22</sup> (RDN).
- HaIRST will accordingly take a 'whole environment' approach to the issues addressed, encompassing all of the general areas mentioned above, together with associated specifics such as policies on IPR, preservation mechanisms, and similar.

In the pilot, institutional and inter-institutional OAI and other servers would be set up or re-worked, and metadata adhering to agreed format and content standards would be harvested regularly from the servers and made available through web-accessible OAI indices, the CAIRNS distributed catalogue (either via Z39.50 or an enhanced cross-search mechanism), the RDN subject gateways<sup>23</sup>, and (if acceptable to JISC) the CORC shared cataloguing service run by OCLC to which the Centre for Digital Library Research (CDLR<sup>24</sup>) has access. Collection level metadata on the materials would be added to the SCONE Scottish collections database<sup>25</sup> and would also be made available for harvesting on a UK wide basis. The CDLR's Digital Information Office<sup>26</sup>, set up to manage such institutional resources at Strathclyde University and to address and advise on a range of associated issues<sup>27</sup>, would co-ordinate inter-institutional activity, stimulate institutional activity, and offer advice and support to those running institutional or inter-institutional archiving services on issues such as standards, IPR, managing security, and preservation.

Examples of materials available at the institutions include e-prints, electronic teaching materials, digitised collections of Victorian era parliamentary papers, learning support materials, digitised ephemera from the first Scottish Parliament elections, electronic teaching materials, lecture notes, publications in computing, digitised historical photograph collections.

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<sup>21</sup> <http://cairns.lib.strath.ac.uk/>

<sup>22</sup> <http://rdn.ac.uk/>

<sup>23</sup> A letter of support from the RDN is included, work with the RDN will focus mainly on filtering out e-prints for harvesting by the proposed RDN project which is focussing on e-prints

<sup>24</sup> <http://cdlr.strath.ac.uk/>

<sup>25</sup> <http://scone.strath.ac.uk/> and <http://scone.strath.ac.uk/Service/Index.cfm>

<sup>26</sup> <http://130.159.238.185:8080/DIO/>

<sup>27</sup> [http://130.159.238.185:8080/DIO/stories/storyReader\\$41](http://130.159.238.185:8080/DIO/stories/storyReader$41)

Other aspects to be developed include draft institutional collection development policy documents, covering all institutional e-resource activity, from institutionally created learning or research materials, through digitisation priorities, to the purchase of commercial research and learning materials. Associated inter-institutional activity through the SCAMP gateway<sup>28</sup> will explore areas such as collaborative collecting and development of e-learning materials and digitisation programmes.

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<sup>28</sup> <http://scone.strath.ac.uk/scamp/index.html>

## Appendix F HILT Phase I and II

The following description covers HILT Phase I and II and indicates the relevance of HILT II to SCONE and to collection level subject description:

### Introduction: HILT Phase I to HILT Phase II

The subject-based interoperability issues covered in this paper arise from two projects, now called HILT Phase I and HILT phase II. HILT Phase I (previously referred to only as the HILT Project) reported in November 2001. It was funded jointly by the Joint Information Systems Committee (JISC) and the Research Support Libraries Programme (RSLP) and lasted just over a year. JISC funding for HILT Phase II is expected to be confirmed in April 2002. Phase II will last for 12 months, and will utilise the work of HILT Phase I, and the skills and experience of the team that carried it out, to build on the cross-community consensus achieved in HILT Phase I by creating a pilot terminologies mapping service or route map with a specific focus on current concerns in the developing Distributed National Electronic Resource (DNER), including – but not necessarily limited to – Higher Education (HE) and Further Education (FE) focused subject terminologies for collection level description in the JISC's planned Information Environment (IE). The user evaluation and cost benefit analysis of various levels of service will also be features of the project.

### The Problem

Ensuring that FE and HE users of the IE can find appropriate learning, research and information resources by subject is one of the major challenges facing the JISC, the DNER, the Resource Discovery Network (RDN), and the various key information and learning service providers across the archives, libraries, museums, and electronic services domains. As HILT Phase I discovered, the various service providers use a range of subject schemes (from general schemes like LCSH, UNESCO, DDC, and AAT, to specific schemes like MeSH) to meet the requirement to adequately and consistently describe their resources for accurate retrieval. If cross-searching and browsing is to function coherently for users of the IE, these schemes must be mapped to one another, perhaps using a common 'spine' such as DDC with international and multi-lingual application and the potential to facilitate machine to machine (M2M) interworking. More importantly, perhaps, the terminologies in the minds of different types of FE and HE users must be 'disambiguated'<sup>29</sup>, then translated into the service-assigned terms the users need to cross-search or browse the group of services of relevance to their query. The aim of HILT Phase II is to build and evaluate a pilot service that will mediate this process as a DNER 'Shared Service' in the Information Environment.

### HILT Phase 1

HILT Phase 1 found that:

- Many different subject schemes and practices are in use in UK services who believe that subject searching across their services is of value both to their users and their staff.
- There was a strong consensus across the Archives, Electronic Services, Library, and Museums communities in favour of a more practically focused follow-up pilot project that would develop, and accurately determine the full costs and benefits of, a networked, user and machine responsive, interactive route map to the terminologies used by these communities and the relationships between these terminologies (previously referred to within HILT as a 'pilot mapping service' - see Terminologies Route Map (TeRM) diagram below for an outline description of what it is and how it would function).

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<sup>29</sup> The process of determining whether the user who types in 'lotus' is searching for information on the car, the software package, the flower, or one of the many additional meanings of this term

- Further research was required into the effectiveness, level and nature of user need, practicality, design requirements, and costs against benefits of such an approach before a long term commitment to a possibly expensive service could be justified. This, it was determined, could best be done via a pilot project that would examine these and related issues.

Further details of HILT Phase 1 can be found on the HILT web-site<sup>30</sup> generally, and in the HILT Final Report<sup>31</sup> in particular.

### **HILT Phase II: Aims**

HILT Phase II moves this process into the pilot project stage, focusing - as recommended by the HILT Phase I evaluator - on terminology and thesauri requirements at collection level, but also bearing in mind the need to extend this in due course to the needs of item level retrieval. It will utilise the work of HILT Phase I, and the skills and experience of the team that carried it out, to set up a pilot terminologies route map or TeRM service, similar to that proposed in HILT Phase I, aiming to:

- a. Provide a practical experimental focus within which to investigate and establish subject terminology service requirements for the JISC Information Environment, with particular reference to DNER, RDN, User, Collection Level, International Compatibility, and local, regional, national and UK-wide access considerations.
- b. Make recommendations as regards a possible future service, taking into account a range of factors, including the level and nature of user need, practicality, design requirements, effectiveness, functionality available in existing commercial software packages as against original development, and (above all) costs against benefits to FE and HE users of a full terminologies service focussed primarily on collection level needs.

### **HILT Phase II: Participants**

HILT Phase II will last for 12 months, and will involve roughly the same mix of participants as HILT Phase I, but with the addition of more direct involvement from representatives from the DNER, the RDN, and FE. Specifically:

- The Centre for Digital Library Research (CDLR) at Strathclyde University – lead;
- DNER representative.
- mda (formerly the Museums Documentation Association).
- National Council on Archives (NCA).
- National Grid for Learning (NGfL) Scotland.
- Online Computer Library Center (OCLC).
- RDN representative.
- FE Representative.
- Scottish Library and Information Council (SLIC).
- Scottish University for Industry (SufI).
- UK Office for Library and Information Networking (UKOLN).
- Terminology experts, Alan Gilchrist and Leonard Will (external evaluator).

Through its involvement in the CAIRNS<sup>32</sup> clumps project (which utilised collection strengths to landscape mini-clumps), the SCONE and SEED<sup>33</sup> projects which combined to build a cross-sectoral collections database<sup>34</sup>, and HILT<sup>35</sup> Phase I, the lead site - Strathclyde University's Centre for Digital Library Research<sup>36</sup> - has extensive experience in the use of collection level

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<sup>30</sup> <http://hilt.cdlr.strath.ac.uk/>

<sup>31</sup> <http://hilt.cdlr.strath.ac.uk/Reports/FinalReport.html>

<sup>32</sup> See <http://cairns.lib.strath.ac.uk/> - Z39.50 catalogue including universities, NLS, NGfL, and others

<sup>33</sup> See <http://scone.strath.ac.uk/> and <http://seed.cdlr.strath.ac.uk/>

<sup>34</sup> See <http://scone.strath.ac.uk/service/index.cfm>

<sup>35</sup> See <http://hilt.cdlr.strath.ac.uk/>

<sup>36</sup> See <http://cdlr.strath.ac.uk/>

descriptions in a dynamic distributed environment, and of associated terminology problems. It also has available a rich distributed information environment in which to study the operation of the pilot and its interaction with users and services. This includes the CAIRNS distributed catalogue with universities, National Library of Scotland (NLS), NGfL, SLAINTE, and Glasgow Digital Library (GDL) databases, a subject-based collection strengths landscaping mechanism, the SCONE named collections database, an Open Archives Initiative (OAI) e-prints server, New Opportunities Fund (NOF) and other digitisation project databases, and the potential to mount other Z39.50 databases. Other participants - particularly UKOLN, mda, NCA, the RDN and the DNER, and the HILT terminology experts, add additional depth and breadth to the team. In addition, OCLC has agreed to assist the study by providing access to a machine-readable mapping of LCSH to DDC and associated access to expertise. The CDLR also works closely with the ten Glasgow FE colleges within the RSLP GDL project.

## Building the TeRM

For the purposes of this project, the pilot TeRM would be built using commercially available Wordmap<sup>37</sup> software. This is known (through HILT Phase I experience) to provide a good initial illustration of the kind of facilities needed for the pilot. This does not imply a preference for this software or supplier, nor even for a commercial as opposed to a 'home-grown' or open source approach. The project would aim to develop a full requirement specification through evaluative activities conducted by user and service focus groups and external experts. It would then compare *all* relevant packages available, having conducted an in-depth survey of all current commercial and other solutions. WordMap would be amongst those able to offer software that might meet a significant part of the specification, but would not be favoured. The question of whether or not a community-based open source approach is preferable to buying a commercial solution would also be examined.

There are good reasons for using a specific piece of commercial software at this stage of development. Experience within HILT Phase I suggests that project participants find it easier to discuss the requirements of such a service given a real illustrative example on which to focus. It is therefore believed essential that we mount an illustrative pilot early on in the project in order to help engage the interest and attention of users and other stakeholders and give them a practical environment within which to envisage and consider the problem. Wordmap is being used because we want to have a real working demonstrator at an early stage for users and service providers to interact with. Attempting to draw out the full requirement *before* implementing an illustrative pilot would, it is believed, result in a poorly researched requirement as users and service providers would not have been sufficiently stimulated by operation in a real context to allow a full specification to emerge. This approach is viewed as a pragmatic one that will enable us to evaluate the real uses and issues in a timely way, whilst also avoiding the potential waste and risk involved in development from scratch before a full requirement has been established.

## Terminologies and Terminology Related Issues

The initial illustrative TeRM would be based on the RDN terminologies<sup>38</sup>, on terminologies available as part of the Wordmap taxonomies set, which include, in particular, a set of terms used by general internet users, and on selective subsets of LCSH, DDC, UNESCO, and AAT. OCLC will provide an LCSH – DDC mapping, and may also be able to provide a DDC to Conspectus subject headings<sup>39</sup> mapping. The UNESCO thesaurus is available online<sup>40</sup> and we will look to obtain AAT selections from manual sources. The aim would be a *selective* mapping sufficient for the purposes of the pilot in the first instance – i.e. not a comprehensive terminologies map. Consideration would also be given to the various

<sup>37</sup> See [www.wordmap.com](http://www.wordmap.com)

<sup>38</sup> See, as an indication, the list created by Andy Powell at <http://www.rdn.ac.uk/cgi-bin/browse>

<sup>39</sup> Conspectus subject headings are used in the CAIRNS collection strengths database

<sup>40</sup> See <http://www.ulcc.ac.uk/unesco/thesaurus.htm>

issues raised by the HILT Phase I evaluator, Leonard Will (HILT Final Report, Section 10), and two additional questions:

1. The question of whether or not the TeRM needs a central spine

A key element in the provision of such a pilot will be to 'translate' the user's subject retrieval 'problem' as couched in the user's own terminology to the various terminologies used in the distributed environment, and to do so in an intelligent and helpful way. This will usually require a certain amount of user-TeRM interaction to 'disambiguate' the term or terms used by the user (e.g. does she mean lotus, the flower, or the car, or the software package, or what?). There is then a question as to whether it is:

- a. Feasible
- b. Best in terms of good resulting retrieval for the user (note that this includes a need to retrieve across language barriers)

for this interaction to take place between the user and a single central scheme to which all other schemes in the environment are mapped in the TeRM, or between the user and each individual scheme in turn. Following this, if the best answer is a single spine scheme, there is a question as to which existing scheme, if any, would best serve this purpose, the most likely possibility being DDC (a well-structured, hierarchical scheme already translated into a significant number of major world languages).

2. The question of whether or not the best long term solution to the subject terminologies problem in a distributed environment might not be the identification and adoption of a single scheme accepted as adequate to cover all purposes in all domains - either an entirely new scheme, or an existing scheme, possibly amended to suit an accepted model requirement.

This is, in essence, an extension of any cost-benefit analysis of the idea of a terminologies mapping service – an external reference point against which to assess the value to the community of the TeRM approach as against other possible approaches.

## Building the Research Environment

This would be achieved by adding a range of DNER and other collections, including RDN collections, Archives collections, Museums collections, and a local OAI collection, to a copy of the SCONE Collections database<sup>41</sup> to create a HILT Phase II testbed collections database and CLD-based landscaping and cross-searching environment using the CAIRNS dynamic landscaping mechanism and broadcast search facility. The aim would be to utilise 'native subject schemes' for the collections in the environment, and to use the pilot TeRM to 'disambiguate' user terms and resolve differences between schemes. A range of user base-landscapes would be utilised, roughly associated with subject hubs as regards subject interests, but representing a variety of user circumstances, local, regional, national, UK-wide (general) and UK-wide (subject hub)<sup>42</sup>. The aim would be to link the TeRM to the landscaping mechanism if possible (CAIRNS experience suggests it should be), or to simulate this aspect if it is not (this would be less elegant, but sufficient for project research purposes).

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<sup>41</sup> <http://scone.strath.ac.uk/Service/Index.cfm>

<sup>42</sup> Specifically, a university, an FE college, HE, FE in Glasgow landscape, HE, FE in Scotland landscape, HE, FE DNER level landscapes, HE, FE landscapes at an RDN subject hub

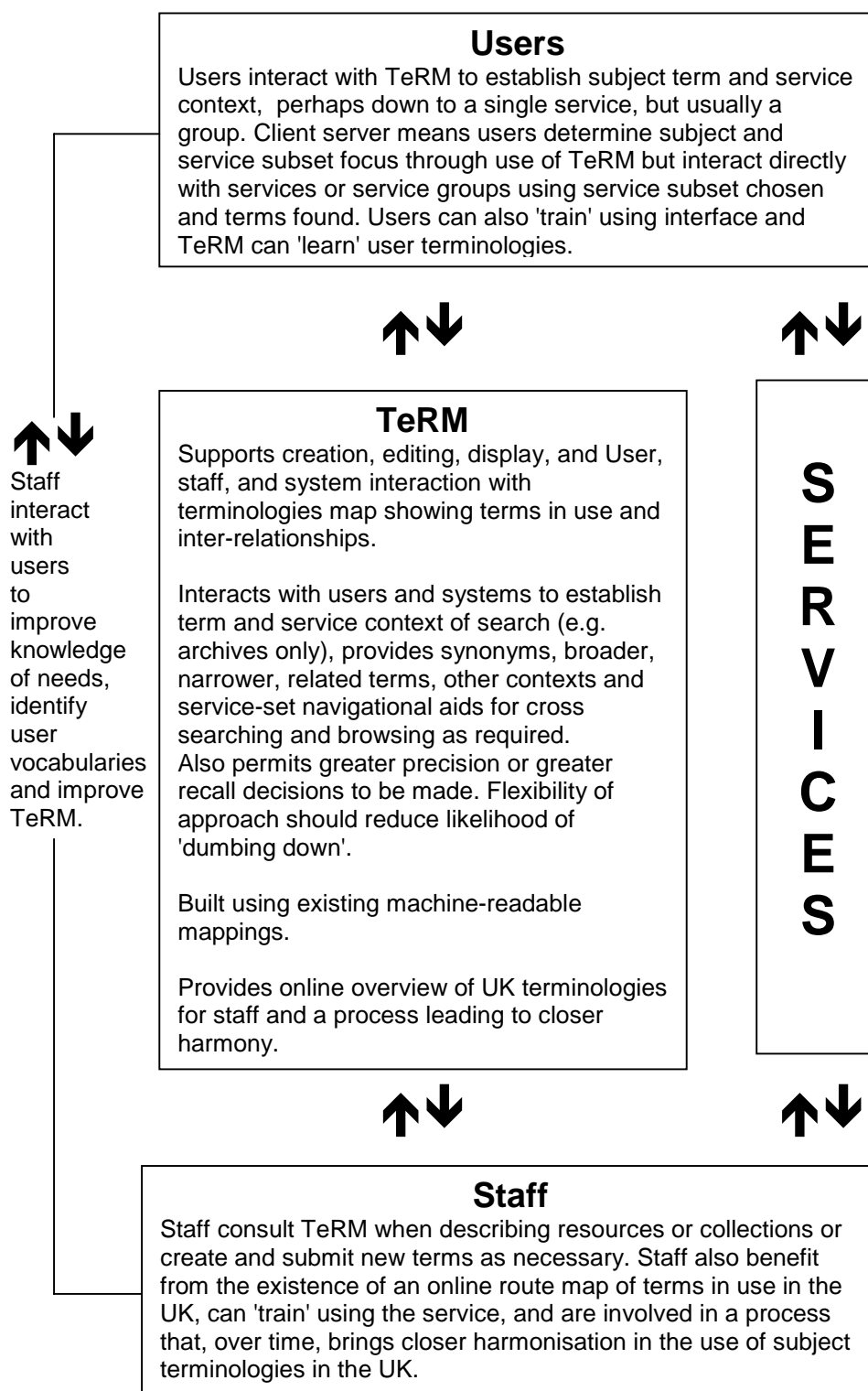
## **HILT Phase II Deliverables**

The specified deliverables for HILT Phase II are:

1. Greater understanding of the problem and of the needs of FE and HE users in respect of subject retrieval in the projected JISC Information Environment, both within JISC, JISC services, and - though dissemination activities - in the community as a whole.
2. An in-depth understanding of terminology mapping requirements in the DNER and associated UK services, taking local, regional, national, international, subject-hub, FE and HE, and archives, libraries, museums, and electronic services considerations into account.
3. A working pilot terminologies demonstrator service for the JISC IE (with limited functionality and with a full service possibly requiring a change of software).
4. Requirements, set up and maintenance costs, and costs against benefits, for a future service, including both user and M2M terminological and functional requirements.
5. Final Report on the project, together with appropriate recommendations.

Provided the expected funding is forthcoming (only informal notification received at time of writing), HILT Phase II will begin in May 2002.

## Interactive Terminologies Route Map (TeRM) Diagram



\*Note: Examples can be seen at [www.wordmap.com](http://www.wordmap.com) with [www.oingo.com](http://www.oingo.com) and [vivisimo.com](http://vivisimo.com)