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ABSTRACT

The first stage of a study on the potential for collaborative development in library automation involved a study of more than 150 recent reports and papers, and visits to library sites in the United Kingdom, Scandinavia, West Germany, and the United States. Systems models were advanced to provide a basis for testing development proposals. Further study was recommended on the following topics: (1) minicomputer based library package systems; (2) the problems of handling non-MARC materials in computerized systems; and (3) the potential for a library oriented computer language. It was concluded that cooperation in library automation is both practical and desirable. (Author/EMH)

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CO-OPERATION IN LIBRARY AUTOMATION

the COLA Project

report of a research project undertaken by LASER  
and supported by a grant from the  
British Library Research and Development Department  
during the period November, 1974 to March, 1975

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## ABSTRACT

This is the report of the first stage of an extended project to study the potential for collaborative development in library automation. This stage comprises search of the literature, visits to centres of experience, and analysis of information already available. Material is presented derived from more than 150 recent reports and papers, and from visits to libraries in the United Kingdom, Scandinavia, West Germany and the United States of America.

System models are advanced, based on the study of existing systems and assessment of future trends, to provide a basis for testing development proposals. Further study is recommended of certain topics - mini-computer based library "package" systems, the problems of handling non-MARC material in library computing systems, and the potential for a library oriented computer language.

The report concludes that co-operation in library automation is both practical and desirable; it indicates also a number of issues for consideration by the British Library regarding technological leadership, and centralised bibliographic services.

## 2. Conclusions

This stage of the study has gone some way to meet all of the Project objectives, but its scope is restricted, since the stage was constrained to retrieval and interpretation of existing information resources.

- (a) The *feasibility* of collaboration is demonstrated; the economics require much more information, and will be difficult to establish; see Flowerdew and Whitehead (71).
- (b) The technical practicability of dedicated library computer systems is established; guidelines are set out for assessment of systems and proposals; further study is required on details of available hardware and software.
- (c) The study has gathered information and expert opinion on the prospects for the future development of BLBSD and Library Centres. Recommendations are made & for extending the necessarily limited conclusions of the Report to more intensive, (d) narrower studies of what are expected to be key issues.

### 2.1 General conclusions

- (a) Collaborative systems for library automation, and co-operation at all levels of development and use of computing systems in libraries, are practical and apparently economic, and show benefits in the use of library and personnel resources extending beyond the purely cost-effective.

The high cost of library automation systems - £100,000 to £200,000 for an integrated system is normal - indicates that any library considering automation must consider seriously the re-use of existing software: if it rejects this course, its action needs full justification.

The role and function of the central bibliographic and cataloguing agencies (the British Library Bibliographic Services Division, the Birmingham Libraries Co-operative Mechanisation Project, Hochschulbibliothekszentrum (Cologne), the Ohio College Library Center) are well established, and the automation systems are comprehensive. There is no need to develop more than marginal extensions to existing bibliographic centre software during the present cycle of computer and library development (such developments include, for example, translation of BLBSD packages into new computer languages).

There is considerable potential for the use of both isolated and network-based minicomputer systems in libraries. The recommendations at the end of this Report indicate certain areas which are not yet clear; however, there is little doubt that 'package' systems for loan control and acquisition will have a considerable impact both in the United Kingdom and the United States within two years. (Section 6.2)

- (b) All of those collaborative projects which we have examined, and which can be confidently assessed as 'successful' or 'likely to succeed', share certain characteristics which were perceived by their members (and agreed by the Project Team) as being essential to their success. These 'criteria for success' are:

The project has a determined, balanced, leadership, usually a single individual, combining clear vision of the end-objective with patience, tact and resourcefulness in convincing colleagues and overcoming inevitable setbacks and discouragement.

There is a clear, *desired* objective to be achieved by collaboration; as soon as this objective is determined and the idea of collaboration accepted, a *prompt* commitment of financial and staff resources is made by all parties. It is desirable that the scale of contingency support which can be tolerated is established *early*, so that when problems arise, these do not become unacceptable setbacks for a minority of the participants.

- It is important to set up a formal management structure, with clear and measurable performance objectives. The project manager must then establish common policy and common standards with all participants as a first priority.

The Project Team should include librarians (as managers), librarians (as experts in the

professional skills of librarianship), systems analysts (as organisers of information processing systems) and computer system designers (providing professional skills in system development). Clearly, some members will fulfil more than one role; however the distinction between the roles is important since a major source of difficulty is the conflict between technical excellence (e.g. in bibliographic standards) and management practicality.

- If at all possible, the project team -- including computer staff -- should remain stable throughout the project. Continuity must be supported by good documentation of both design concept and function.

In projects which are *co-operative* rather than fully collaborative, these criteria assume different weights depending on the actual structure for co-operation. The particular characteristic of collaboration is the element of innovative intent in a group of equal partners -- co-operation without collaboration can take place with a much narrower segment of common interest.

(c) The spread of library automation is likely to alter the role of Library Regions; those Regions placed to respond to new demands, not only in automation, but more widely in collaborative transport schemes, acquisition, subject-based services, should be able to expand the range of their services and the depth of their experience.

Certain functions -- notably bibliographic services and certain interlending services -- are probably best provided at national level; however, there are indications of strong support for regional collaborative nuclei -- on varying scales and not necessarily based on the present Library Regions -- dealing with local information services, local interlending, and other activities, all involving to a greater or lesser degree the use of computer-based information handling systems. The librarians whose views have been sought do not, in general, regard the British Library as having its premier position in bibliographic services 'of right', but will judge it on its effectiveness and in comparison with alternative commercial agencies.

## 2.2 *The British Library*

Many librarians have expressed firm and responsible opinions to the Project Team; the substance of their views is summarised in (a) and (b) below.

(a) There is a need for an improved flow of information between the British Library and the rest of the library community, particularly concerning development plans, consultation on user needs and the costs of its services. The Advisory Council for BLBSD envisaged in the 1971 White Paper on the British Library might go some way to help; the newly-formed MARC Users Group could prove a useful stimulant. However, it is clear that the confidence of libraries in the future development of the British Library depends on a more open discussion of policy and planning, and on timely execution of development projects.

(b) The external services of BLBSD, that is, the commercial exploitation of UK MARC and the production of catalogues for client libraries, should be separated from the Division's primary function of maintaining the National Bibliography and providing internal bibliographic services within the British Library. The external service agency could then be operated in a manner appropriate to a service bureau of high product and service standards, and would interact fairly and effectively with the various agencies now providing complementary or competitive services.

(c) In the view of the Project Team, the proposal to develop and install a comprehensive computer system for the British Library bibliographic and external services is likely to be a costly and prolonged project unless use can be made of existing proven developments in this field. By the end of 1975, systems for consideration include:

- the DOBIS/LMS integrated library system at present under development at the University of Dortmund; will be assessable July 1975;
- OCLC: currently in use in the United States for cataloguing and interlending;
- the external services currently being provided by the University of Toronto Library;
- LIBRIS; currently in use in Sweden for cataloguing and soon to include information retrieval;

the IBM ATMS/STAIRS text processing package; as used by the Greater London Council and Cheshire County Council.

We understand that studies are being undertaken by the Director-General, Bibliographic Services Division to establish whether a project for exploitation of existing systems is practicable; this represents, we believe, a good example of willingness to profit from co-operation in the development of a major computer system.