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**Information and documentation —
Performance indicators for electronic
library services**

*Information et documentation — Indicateurs de performance pour les
services électroniques des bibliothèques*



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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

In exceptional circumstances, when a technical committee has collected data of a different kind from that which is normally published as an International Standard ("state of the art", for example), it may decide by a simple majority vote of its participating members to publish a Technical Report. A Technical Report is entirely informative in nature and does not have to be reviewed until the data it provides are considered to be no longer valid or useful.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO/TR 20983 was prepared by Technical Committee ISO/TC 46, *Information and documentation*, Subcommittee SC 8, *Quality — Statistics and performance evaluation*.

Introduction

This Technical Report is concerned with the evaluation of electronic library services.

The successful provision of these services depends on close collaboration between publishers, network providers, and librarians. Their needs for data about various aspects of performance are different, and the ability to collect data may not rest with the person most interested in that data. For example, the publisher may be best placed to collect data on the usage of a particular service; whereas the librarian may have most interest in using that data in developing and evaluating the service.

The main purpose of this Technical Report is to spread knowledge about the practice of evaluating electronic library services. Although electronic library services have been developed over more than thirty years, the technical environment has changed significantly in the last ten years. The need for performance indicators for electronic services was acknowledged in ISO 11620: 1998 Information and documentation - Library performance indicators. It was also acknowledged that at the time of publication of that International Standard, there were no indicators that had been tested and documented, or that were in widespread use. Although there has been significant progress in the last few years on the definition, testing and documentation of indicators, it is still too soon to determine which indicators will be most generally useful, or become widely used. This Technical Report provides a standardized terminology and concise definitions and descriptions of a selection of performance indicators, in the same format as that used in ISO 11620. Publications listed in the Bibliography [2,3,5] provide more detailed information on data collection and analysis.

Only a small number of the indicators presented here are indicators of service quality: work on this area is not yet mature enough to be included. The indicators that are included have been tested in libraries, or are simple adaptations of similar indicators. In each case they have been judged against the criteria established in ISO 11620. That is, each indicator is judged to have informative content, to be reliable, valid, appropriate, practical, and in some circumstances may be used for comparative purposes.

The indicators presented in this Report are a representative selection of those which have been tested. A further selection would have taken longer to prepare, and to publish. Developments in the measurement and evaluation of electronic library services will be monitored by a Working Group, which will propose additional indicators, and modifications or adaptations to the indicators here as they are tested and validated. This Technical Report should be considered as work in progress towards the development of an International Standard. It is intended that, where appropriate, the contents of this Technical Report will be incorporated in a future revision of ISO 11620.

Information and documentation — Performance indicators for electronic library services

1 Scope

This Technical Report is applicable to all types of libraries in all countries. Limitations on the applicability of individual performance indicators are listed in the scope clause of the description of each indicator (see Annex B).

Indicators may be used for comparison over time for the services provided by the same library. Comparisons between libraries and services should only be made with caution, taking into account differences in the constituencies of the libraries, with good understanding of the indicators used, and careful interpretation of the data.

This Technical Report does not include indicators for the evaluation of the impact of libraries either on individuals or on society.

Throughout the text, the names of indicators are printed with initial capitals for significant words, e.g. Workstation Use Rate. This helps to distinguish the names from supporting text.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 2789:2003, *Information and documentation — International library statistics*

ISO 5127:2001, *Information and documentation — Vocabulary*

ISO 11620:1998, *Information and documentation — Library performance indicators*

ISO 11620:1998/Amd. 1:2003, *Information and documentation — Library performance indicators — Amendment 1: Additional performance indicators for libraries*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

database

collection of electronically stored data or unit records (facts, bibliographic data, texts) with a common user interface and software for the retrieval and manipulation of the data [ISO 2789]

NOTE 1 The data or records are usually collected with a particular intent and are related to a defined topic. A database may be issued on CD-ROM, diskette, or other direct access method, or as a computer file accessed via dial-up methods or via the Internet.

NOTE 2 Licensed databases are counted separately even if access to several licensed database products is effected through the same interface.

3.2
digital document
information unit with a defined content that has been digitized by the library or acquired in digital form as part of the library collection [ISO 2789]

NOTE 1 This includes eBooks, electronic patents, networked audiovisual documents and other digital documents, e.g. reports, cartographic and music documents, pre-prints etc. Databases and electronic serials are excluded.

NOTE 2 Items incorporated in databases are covered by 3.1.

NOTE 3 A digital document can be structured into one or more files.

3.3
document
recorded information or material object which can be treated as a unit in a documentation process [ISO 5127]

NOTE Documents may differ in their physical form or characteristics.

3.4
document downloaded
full text of a document or part of a document in the electronic collection that is delivered to a user [ISO 2789]

3.5
electronic collection
all resources in electronic form in the library collection [ISO 2789]

NOTE The electronic collection includes databases, electronic serials, and digital documents. Free Internet resources which have been catalogued by the library in its OPAC or a database should be counted separately.

3.6
electronic resource
a document in electronic form which forms a separate item with a distinctive title, whether issued in one or several units

NOTE This includes electronic books, serials, maps, but not databases.

3.7
electronic service
electronic library service which is either supplied from local servers or accessible via networks [ISO 2789]

NOTE Electronic library services comprise the OPAC, the library web site, the electronic collection, electronic document delivery (mediated), electronic reference service, user training on electronic services and Internet access offered via the library.

3.8
entry
a unit of bibliographic or factual information or multimedia objects included in a searchable database

3.9
information request
information contact that involves the knowledge or use of one or more information sources (such as printed and non-printed materials, machine-readable databases, the library's own and other institutions' catalogues) by library staff [ISO 2789]

NOTE 1 May also involve recommendations, interpretation or instruction in the use of such sources.

NOTE 2 The request can be delivered personally or by means of telephone, regular mail, fax or electronic media (via e mail, the library web site, instant messaging or other networked communications mechanisms).

NOTE 3 It is essential that libraries do not include directional and administrative inquiries, eg for locating staff or facilities, regarding opening times or about handling equipment such as reader printers or computer terminals.

NOTE 4 Inquiries are also excluded if library staff simply help the user to locate items of stock that have already been identified bibliographically.

3.10

library collection

all documents provided by a library for its users [ISO 2789]

NOTE 1 Comprises documents held locally and remote resources for which permanent or temporary access rights have been acquired.

NOTE 2 Access rights may be acquired by the library itself, by a consortium and/or through external funding.

NOTE 3 Acquisition is to be understood as deliberately selecting a document, securing access rights and including it in the OPAC or other databases of the library. Interlibrary lending and document delivery and excluded.

NOTE 4 Does not include links to Internet resources for which the library has not secured access rights by legal agreements (eg legal deposit right), license or other contractual and/or co-operative agreement. Free Internet resources which have been catalogued by the library in its OPAC or a database should be counted separately.

3.11

population to be served

number of individuals for whom the library is set up to provide its services and materials [ISO 11620]

NOTE For public libraries this will normally be the population of the legal service area (authority); for libraries of an institution of higher education this will normally be the total of academic and professional staff plus students.

3.12

rejected session (turnaway)

unsuccessful request of a database or the OPAC because of requests exceeding simultaneous user limit [ISO 2789]

NOTE Rejection through entry of wrong passwords is excluded.

3.13

remote session

a successful request of a database or the OPAC established from outside the library building (adapted from EQUINOX^[1])

3.14

session

successful request of a database or the OPAC [ISO 2789]

NOTE 1 A session is one cycle of user activities that typically starts when a user connects to a database or the OPAC and ends with explicit (by leaving the database through log-out or exit) or implicit (timeout due to user inactivity) termination of activities in the database. The average timeout period would be 30 minutes. If another time period is used this should be reported.

NOTE 2 Sessions on the library web site are counted as virtual visits.

NOTE 3 Requests of a general entrance or gateway page should be excluded.

NOTE 4 If possible, requests by search engine should be excluded.

3.15

user training

training programme set up with a specified lesson plan, which aims at specific learning outcomes for the use of library services [ISO 2789]

NOTE 1 User training can be offered as a tour of the library, as library tuition, or as a web based service for users.

NOTE 2 The duration of a lesson is irrelevant.

3.16

virtual visit

a user's request of the library web site from outside the library premises regardless of the number of pages or elements viewed [ISO 2789]

3.17

web site

electronic service that has a unique domain on the Internet and consists of a collection of digital documents [ISO 2789]

NOTE 1 The pages of a web site are usually interconnected by the use of hypertext links.

NOTE 2 Excludes the documents that fit the definitions of electronic collection and external Internet resources that may be linked from the library web site.

3.18

workstation

computer that may stand alone or be networked, or a dumb terminal [ISO 2789]

4 Relationships with other indicators

4.1 The networked environment

The networked environment provides a different frame of reference for the provision of services: the boundaries between internal and external provision are different. For example, consider document delivery. In traditional library services this is represented by the interlending of physical documents between libraries. In the electronic world, document delivery is accomplished using a network. The network may be provided by a variety of external providers. Special equipment has to be installed in the libraries at both ends of document delivery process and staff have to be trained to use it. The suppliers of documents may be publishers or libraries; the end users may be directly in communication with the suppliers.

Again, the provision of equipment within the organisation of which the library forms a part, may be outside the library's own control: however, the library's performance may be judged on its service delivery even though it does not control some of the infrastructure essential to the delivery of the service.

It is because the boundaries within which electronic services operate differ from those in which traditional library services operate that comparisons between traditional and electronic library services are difficult, if not impossible. Since the extent to which different libraries have adopted electronic library services will differ then comparisons between libraries are increasingly difficult. The position is further complicated by the changes in expectations, experience and behaviour of users and of publishers. New generations of users will increasingly, at least in the developed world, be familiar with the use of computers and Internet applications generally and will expect electronic services as a matter of course. There will, however be for some considerable time significant numbers of older users who are less familiar with the concepts and practice of computer usage and will need careful support if they are not to be disadvantaged.

On the other hand, publishers are operating in a variety of ways to deal with the possibilities of electronic publishing. Long established practices in the supply of printed materials do not operate in the same way when original works are often generated in electronic format. The economics of publication in electronic formats are significantly different from those in printed formats and different charging models are being tried. The preferred format varies for electronic publications between types of publication, and may also vary from year to year; and the financial arrangements between library and publisher also vary between publications and from year to year.