

INTERNATIONAL STANDARD

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Information and documentation — International library statistics

*Information et documentation — Statistiques internationales de
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.

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 2789 was prepared by Technical Committee ISO/TC 46, *Information and documentation*, Subcommittee SC 8, *Quality — Statistics and performance evaluation*.

This fourth edition cancels and replaces the third edition (ISO 2789:2003), which has been technically revised to identify and overcome problems in the practical application of ISO 2789:2003 and to take account of the rapid developments in electronic library services.

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Introduction

This International Standard provides guidance to the library and information services community on the collection and reporting of statistics.

Clauses 3 and 6 form the core of this International Standard. Clause 3 provides definitions for most of the elements which constitute a library service; these are for statistical purposes only. Clause 6 recommends how each of these elements should be counted. Users will need to consult both clauses for the complete picture.

In addition to the original purposes of giving general guidance on the keeping of library statistics for the compilation of national statistics used for international reporting, there is a particular requirement to specify data provision required by ISO 11620.

This International Standard includes definitions and counting procedures for electronic resources and services. With regard to those clauses of the body of this International Standard that concern such electronic resources and services, readers should particularly bear in mind the important explanations and guidelines of Annex A. The form of an annex was chosen as it allows a more detailed description of methods and problems in measuring use of electronic library services.

It is recognized that not all measures specified in this International Standard can be collected by libraries of different type and size. To give greater completeness, several additional measures (important for some sectors only) are described in Annex B. The aim is to ensure that, where a particular statistic is collected, the same definitions and methods are used.

All the annexes are normative. Annex C is important for the compilation and publication of national statistics so that they can be truly comparable between countries and over time.

The strong requirement to describe and publicize library activities can only be satisfied if data collection in libraries follows the lines of this International Standard. As far as possible, libraries should collect all data named in this International Standard that concern their activities.

The presentation and publication of statistics always need careful attention but are considered to be beyond the scope of this International Standard.

This International Standard will be maintained by a Working Group that will monitor developments and incorporate additional statistical measures as needed.

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Information and documentation — International library statistics

1 Scope

This International Standard specifies rules for the library and information services community on the collection and reporting of statistics

- for the purposes of international reporting,
- to ensure conformity between countries for those statistical measures that are frequently used by library managers but do not qualify for international reporting,
- to encourage good practice in the use of statistics for the management of library and information services, and
- to specify data provision required by ISO 11620.

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 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*

ISO/TR 20983:2003, *Information and documentation — Performance indicators for electronic library services*¹⁾

3 Terms and definitions

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

3.1 Libraries

3.1.1

administrative unit

any independent library, or group of libraries, under a single director or a single administration

NOTE 1 The term “independent” does not imply legal or financial independence but only that the library is a recognizably separate unit, typically within a larger organization.

1) ISO/TR 20983 and ISO 11620:1998/Amd. 1 will be incorporated into the second edition of ISO 11620.

NOTE 2 Typically, the administrative unit is an organization containing a central/main library, branch libraries and administrative functions. See the Example in 6.1.1.

3.1.2

branch library

part of a larger administrative unit providing, in separate quarters, a service for a particular user group (e.g. children, faculties) or for a locally defined clientele

NOTE Institute, departmental and other affiliated libraries are included. Mobile libraries are excluded.

3.1.3

central library

main library

usually that part or those parts of an administrative unit where the main administrative functions and the important parts of the library collection and services are located

NOTE An administrative unit comprising several branch libraries does not necessarily include a central library.

3.1.4

external service point

point away from library premises at which a certain service is regularly offered to users

NOTE 1 This includes places within a locality at which library material is deposited for informal circulation to a restricted group of users but without other library services, for example, old peoples' homes, community centres, collections for hospital patients, etc. Mobile libraries are excluded.

NOTE 2 The points at which mobile libraries stop are not counted as external service points.

NOTE 3 A simple PC connection to a place outside the library (e.g. in a students' home) is not counted as an external service point.

3.1.5

library

organization, or part of an organization, the main aims of which are to build and maintain a collection and to facilitate the use of such information resources and facilities as are required to meet the informational, research, educational, cultural or recreational needs of its users

NOTE 1 These are the basic requirements for a library and do not exclude any additional resources and services incidental to its main purpose.

NOTE 2 Where a library has more than one function (e.g. school library and public library), it generally either decides what is its primary function or, in extreme cases, divides its functionality and report data accordingly.

3.1.6

library of an institution of higher education

library whose primary function is to serve students, academic and professional staff in universities and other institutions of education at the third (tertiary) level and above

NOTE It can also serve the general public.

3.1.7

mobile library

library, sometimes a division of a public library, using transport means and furnished to provide documents and services directly to users as an alternative to access on library premises

NOTE Adapted from ISO 5127:2001, definition 3.2.16.

3.1.8

national library

library that is responsible for acquiring and conserving copies of all relevant documents in the country in which the library is located; it may function as a legal deposit library

NOTE 1 Adapted from ISO 5127:2001, definition 3.2.02.

NOTE 2 A national library will also normally perform some or all of the following functions:

- produce the national bibliography,
- hold and keep up to date a large and representative collection of foreign literature including documents about the country;
- act as a national bibliographic information centre;
- compile union catalogues;
- supervise the administration of other libraries and/or promote collaboration;
- coordinate a research and development service.

NOTE 3 The definition of “national library” allows for more than one national library in a country.

3.1.9 public library

general library that serves the whole population of a local or regional community and is usually financed, in whole or in part, from public funds

NOTE 1 Adapted from ISO 5127:2001, definition 3.2.15.

NOTE 2 A public library can be intended for the general public or for special groups of users, such as children, visually impaired persons, hospital patients or prisoners. Its basic services are free of charge or available for a subsidized fee. This definition includes services provided to schools by a public library organization and services provided to public libraries in a region by a regional organization.

3.1.10 school library

library attached to all types of schools below the third (tertiary) level of education whose primary function is to serve the pupils and teachers of such a school

NOTE 1 A school library can also serve the general public.

NOTE 2 This includes libraries and resource collections in all educational institutions below the third level, which can be described as “Colleges”, “Colleges of Further Education”, “Vocational Institutes”, etc.

3.1.11 special library

independent library covering one discipline or particular field of knowledge or a special regional interest

NOTE 1 The term special library includes libraries primarily serving a specific category of users, or primarily devoted to a specific form of document, or libraries sponsored by an organization to serve its own work-related objectives.

NOTE 2 The statistics of special libraries are generally collected and presented separately for those in the areas given in 3.1.11.1 to 3.1.11.7 (differentiated according to funding institutions).

3.1.11.1 government library

library maintained to serve any government service, department or agency, or parliament, including both international, national and local (regional) government organizations

3.1.11.2 health-service library medical library

library which serves health-service professionals in hospitals or elsewhere, whether in the private or public sector

NOTE Pharmaceutical company libraries are generally included under 3.1.11.4.

3.1.11.3

library of professional and learned institutions and associations

library maintained by professional or trade associations, learned societies, trade unions and other similar bodies whose primary objective is to provide services to the members and practitioners of a specific trade or profession

3.1.11.4

industrial and commercial library

library in any industrial enterprise or business firm, maintained by the parent organization to serve the information needs of its staff

NOTE The term "industrial and commercial library" includes libraries maintained by information and management consultants, manufacturing and service industries and libraries of commercial legal practices.

3.1.11.5

media library

library serving media and publishing firms and organizations, including newspapers, publishers, broadcasting, film and television

3.1.11.6

regional library

major library serving a particular region whose primary function cannot be described as that of a public, school or academic library nor as part of a national library network

3.1.11.7

other special library

any library not included elsewhere, etc.

EXAMPLES Library within voluntary organizations, museums, religious institutions.

3.1.12

storage library

repository library

library whose primary function is to store less-used material from other administrative units

NOTE 1 Storage or repository libraries that are part of or administrated by another library (e.g. national or regional library) are excluded.

NOTE 2 Libraries whose stock remains the possession of the storing libraries are excluded. The collections and their use are counted with the proprietary libraries.

3.2 Collection

3.2.1

abstract and indexing database

collection of bibliographic references analysing and presenting, on a continuous basis, periodical and/or other titles that usually relate to a common discipline or geographic area

NOTE This includes electronic reference and indexing tools which, in print form, would be counted as periodicals. Databases primarily containing full text are excluded.

3.2.2

access rights

rights for reaching or using the library collection

NOTE For the electronic collection, this implies that the library has secured permanent or temporary access for its users by law, license or other contractual and/or cooperative agreement.

3.2.3 addition acquisition

document or item added to a collection during the reporting period

NOTE Additions can be obtained, for example, by purchase, licensing, legal deposit, digitization, donation or exchange.

3.2.4 audiovisual document

document in which sound and/or pictures are prominent, and which requires the use of special equipment to be seen and/or heard

NOTE 1 Adapted from ISO 5127:2001, definition 2.1.19.

NOTE 2 This includes audio documents such as records, tapes, cassettes, audio compact discs, DVDs, files of digital audio recordings; visual documents such as slides, transparencies, and combined audiovisual documents, such as motion pictures, video recordings, etc. Microforms are excluded.

NOTE 3 The use of networked audiovisual documents is counted in accordance with Annex A.

3.2.5 book

non-serial printed document in codex form

3.2.6 cartographic document

conventional representation, on a reduced scale, of concrete or abstract phenomena which can be localized in space and time

NOTE 1 Adapted from **map** in ISO 5127:2001, definition 2.2.1.28.

NOTE 2 This includes documents such as two- and three-dimensional maps, globes, plans, topographic models, tactile maps and aerial representations, but excludes atlases and any other cartographic documents in codex, micro, audiovisual and electronic form.

3.2.7 compact disc read-only memory CD-ROM

computer-based information storage and retrieval medium based on laser technology that contains data in text and/or multimedia formats

NOTE CD-ROMs are counted according to their contents as database, digital document, or electronic serial.

3.2.8 computer file

data or software program, e.g. computer game, language course and other application software that is available on computer-readable disks, tapes or other storage media to users for loan or in-house use

NOTE Adapted from ANSI/NISO Z39.7-2004.

3.2.9 content unit

computer-processed uniquely identifiable textual or audiovisual piece of published work that may be original or a digest of other published work

NOTE 1 Adapted from **item** in COUNTER code of practice, Release 2:2004.

NOTE 2 Descriptive records are excluded.

NOTE 3 PDF, Postscript, HTML and other formats of the same content unit will be counted as separate items.

3.2.10

database

collection of electronically stored descriptive records or content units (including facts, full texts, pictures, and sound) with a common user interface and software for the retrieval and manipulation of the data

NOTE 1 The units or records are usually collected with a particular intent and are related to a defined topic. A database can 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.

NOTE 3 A common interface providing access to a packet of serials or digital documents, usually offered by a publisher or vendor, is also to be counted as database. Additionally, the single serials or digital documents need to be counted as serials or digital documents.

NOTE 4 For further subdivision of databases, see B.2.1.7.

3.2.11

descriptive record

computer-processed bibliographic or other individual record in a standard format that references and/or describes a document in any physical form or a content unit

NOTE 1 A collection of descriptive records is usually published in the form of a database.

NOTE 2 The record can include elements such as title, author, subject, abstract, date of origin etc.

3.2.12

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

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

NOTE 2 Items incorporated in databases are covered by 3.2.10.

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

NOTE 4 A digital document consists of one or more content units.

3.2.13

document

recorded information or material object, which can be treated as a unit in a documentation process

[ISO 5127:2001, definition 1.2.02]

NOTE Documents can differ in their physical form and characteristics.

3.2.14

digital versatile disk

DVD

a type of optical storage medium of the same size as a compact disk, but with significantly greater recording capacity

3.2.15

electronic book

eBook

digital document, licensed or not, where searchable text is prevalent, and which can be seen in analogy to a print book (monograph)

NOTE 1 The use of eBooks is, in many cases, dependent on a dedicated device and/or a special reader or viewing software.

NOTE 2 eBooks can be lent to users either on portable devices (eBook readers) or by transmitting the contents to the user's PC for a limited time period.

NOTE 3 Doctoral dissertations in electronic format are included.

NOTE 4 Documents digitized by the library are included.

3.2.16

electronic collection

all resources in electronic form in the library collection

NOTE The electronic collection includes databases, electronic serials, digital documents, and computer files. Free internet resources which have been catalogued by the library in its online catalogue or a database need to be counted separately (see 6.2.16).

3.2.17

electronic serial

serial published in electronic form only or in both electronic and another format

NOTE 1 Comprises serials held locally and remote resources for which access rights have been acquired, at least for a certain period of time.

NOTE 2 Serials digitized by the library are included.

NOTE 3 Open access journals are regarded as free internet resources (see 3.2.18)

3.2.18

free internet resources

internet resource with unrestricted access

3.2.19

full-text database

digital collection of original texts (monographs, reports, journal articles, etc.), printed music, cartographic or graphic documents

NOTE 1 Patents and electronic serials are excluded.

NOTE 2 A database with a mixture of full texts, moving images or sound and other items need to be counted as a full-text database.

3.2.20

government document

document published at government expense or as required by law or by an international agency (e.g. United Nations, European Union and UNESCO)

NOTE Patents are dealt with in 3.2.32. Other government documents are counted in accordance with their format (see B.3.3.).

3.2.21

graphic document

print document in which pictorial representation is the most prominent feature

NOTE This is pictorial rather than linguistic, musical or cartographic in form. It includes art prints, art originals, art reproductions, photographs, posters, study prints, technical drawings, etc., but excludes graphic items in codex form or in microform, audiovisual and electronic form.

3.2.22

library collection

all documents provided by a library for its users

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

NOTE 2 Access rights can 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 online catalogue or other databases of the library. Interlibrary lending and document delivery are excluded.

NOTE 4 Does not include links to internet resources for which the library has not secured access rights by legal agreements (e.g. legal deposit right), license or other contractual and/or cooperative agreement. Free internet resources which have been catalogued by the library in its online catalogue or a database need to be counted separately (see 6.2.16).

**3.2.23
manuscript**

original document that is handwritten or in typescript

NOTE Bound volumes and other units (fragments, rolls, autographs, etc.) can be counted separately.

**3.2.24
microform**

photographic document requiring magnification when used

NOTE 1 Adapted from ISO 5127:2001, definition 2.3.3.12.

NOTE 2 Microfiche and microfilm are included.

NOTE 3 Slides and similar documents are counted as audiovisual documents.

**3.2.25
monograph**

publication in print or non-print form, either complete in one volume or complete, or intended to be completed, in a finite number of volumes

[ISO 5127:2001, definition 2.4.02]

**3.2.26
monographic series**

number of monographs related to other monographs through the addition of a collective title

[ISO 9707]

**3.2.27
multimedia document**

document combining different information media, text, graphics, photos, video, audio for interactive use, in digital format

NOTE Multimedia documents are counted according to their main features or purposes e.g. as a database, an electronic serial or a digital document.

**3.2.28
newspaper**

serial, which contains news on current events of special or general interest, the individual parts of which are listed chronologically or numerically and usually appear at least once a week

NOTE Electronic newspapers are included.

**3.2.29
other database**

database containing descriptive information or numeric data that is usually consulted for specific pieces of information, e.g. directories, encyclopaedias, dictionaries, statistical tables and figures, and/or collections of scientific formulae

3.2.30**other digital document**

digital document other than an eBook, networked audiovisual document or electronic patent, e.g. report, preprint, cartographic or music document, etc. in electronic format

3.2.31**other library document**

non-electronic document or item other than a book, serial, manuscript, printed music document, microform, cartographic, audiovisual, graphic document, patent separately specified in this International Standard

NOTE This includes items such as dioramas and other three-dimensional documents, games, toys, etc. Documents in Braille are counted as print documents.

3.2.32**patent**

government document granting an inventor the sole right to use or license an invention together with associated documentation

3.2.33**periodical**

serial under the same title published at regular or irregular intervals, over an indefinite period, individual issues in the series being numbered consecutively or each issue being dated

NOTE 1 Adapted from ISO 9707:1991, definition 2.32.

NOTE 2 Series of reports, transactions of institutions, series of regular conference proceedings and annuals are included, while newspapers and monographic series are excluded.

NOTE 3 Electronic periodicals are included.

3.2.34**physical unit**

physically coherent document unit, inclusive of any protective devices, freely movable against other document units

NOTE 1 Coherence can be achieved, for example, by binding or encasement.

NOTE 2 For printed documents, the term "volume" is used for the physical unit (see also 3.2.39).

3.2.35**printed music document**

document, the essential content of which is a representation of music, normally by means of notes

NOTE Printed music document can be in sheet or codex form.

3.2.36**serial**

document in print or in non-print form, issued in successive parts, usually having numerical or chronological designations, and intended to be continued indefinitely, whatever its periodicity

NOTE 1 Adapted from ISO 5127:2001, definition 2.4.06.

NOTE 2 Monographic series are excluded and need to be counted as books.

NOTE 3 For the purpose of this International Standard, serials are subdivided into newspapers and periodicals, each of these by format into electronic and non-electronic serials.

3.2.37**stock**

number of documents of a certain type (e.g. books and serials, microforms, electronic serials) held locally or in remote resources for which access rights have been acquired, at least for a certain period of time

NOTE To be measured at the end of the reporting period.

3.2.38

title

words at the head of a document thus identifying it and normally distinguishing it from others

[ISO 5127:2001, definition 4.2.1.4.0.1]

NOTE For measuring purposes, "title" describes a document, which forms a separate item with a distinctive title, whether issued in one or several physical units, and disregarding the number of copies of the document held by the library.

[ISO 11620:1998/Amd 1:2003]

3.2.39

volume

physical unit for a printed document assembling a certain number of leaves under one cover to form a whole or part of a set

NOTE Adapted from ISO 5127:2001, definition 2.4.01.

3.2.40

withdrawal

document or item withdrawn from a collection during the reporting period

NOTE Withdrawals can be effected, for example, by discarding, transferring or, in the case of electronic resources, by deletion from files or cancelling licenses.

3.3 Library use and users

3.3.1

active borrower

registered user who has borrowed at least one item during the reporting period

3.3.2

active user

registered user who has visited or made use of library facilities or services during the reporting period

NOTE This can include the use of electronic library services within or outside the library.

3.3.3

content downloaded

content unit that is successfully requested from a database, electronic serial or digital document

3.3.4

download

successful request of a descriptive record or content unit, e.g. for displaying, printing, saving, or emailing

NOTE For web server logs successful requests are those with specific return codes, as defined by NCSA (National Center for Supercomputing Applications).

3.3.5

electronic document delivery (mediated)

electronic transmission of a document or part of a document from the library collection to a user, mediated by library staff, not necessarily via another library

NOTE 1 Electronic transmission of documents to members of the population to be served is included. Fax transmission is excluded.

NOTE 2 The electronic document delivery (mediated) can be split up as to transmission with or without charge to the user.

NOTE 3 Unmediated downloading by users from the electronic collection of the library is excluded.

NOTE 4 The forms of lending and delivery services defined in this International Standard are shown in Table 1.

Table 1 — Forms of lending and delivery services

Transmission format	Supplier		
	Library		Document supplier
	Recipient		
	User	Other library	User (via library)
Original	Loan	ILL	EDS
Print copy	Loan	ILL	EDS
Electronic	EDD	EDD	EDS

ILL: Interlibrary lending.
EDD: Electronic document delivery (mediated).
EDS: External document supply.

3.3.6**electronic service**

electronic library service, which is either supplied from local servers or accessible via networks

NOTE Electronic library services include the online catalogue, the library website, the electronic collection, electronic document delivery (mediated), electronic reference service, user training on electronic services and internet access offered via the library.

3.3.7**external document supply**

document or part of it, in printed or electronic form, delivered from outside the library collection by non-library suppliers (not through interlibrary lending) with the library being involved in the transaction and/or the payment

NOTE 1 It is irrelevant whether a number of individual transactions is paid per view or a certain number of transactions have been prepaid.

NOTE 2 The forms of lending and delivery services defined in this International Standard are shown in Table 1.

3.3.8**external user**

user of a library who does not belong to that library's population to be served

3.3.9**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

NOTE 1 Adapted from ANSI/NISO Z39.7-2004.

NOTE 2 The information request can also involve recommendations, interpretation, or instruction in the use of such sources.

NOTE 3 One information request can address several questions.

NOTE 4 The request can be delivered personally or by means of telephone, regular mail, fax or electronic media (via email, the library website or other networked communications mechanisms).

NOTE 5 It is essential that libraries do not include directional and administrative inquiries, e.g. for locating staff or facilities, regarding opening times or about handling equipment such as reader printers or computer terminals.

NOTE 6 Inquiries are also excluded, if asked for the purpose of locating items of stock that have already been identified bibliographically.

3.3.10

in-house use

documents taken by a user from open access stock for use on the premises

NOTE In-house use includes browsing at the shelves in the sense of a short investigation of the contents, but excludes looking at the titles only for selecting material.

3.3.11

interlibrary lending

loan of a document in its physical form or delivery of a document, or part of it, in copied form, from one library to another which is not under the same administration

NOTE 1 Mediated transmission of documents in electronic form is counted as electronic document delivery.

NOTE 2 The forms of lending and delivery services defined in this International Standard are shown in Table 1.

3.3.12

internet session

internet access by a user from a workstation owned by the library or from a user's private computer in the library via the library's network

NOTE 1 Internet sessions can only be counted if users have registered or authenticated themselves when accessing the internet.

NOTE 2 Internet access via a user's private computer (e.g. laptop or handheld) inside the library need to be counted and reported separately.

3.3.13

library website

unique domain on the internet consisting of a collection of web pages that is published by a library to provide access to the library's services and resources

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

NOTE 2 Excludes documents that fit the definitions of electronic collection and free internet resources that can be linked from the library website.

NOTE 3 Excludes web services in the library's domain that are operated on behalf of other organizations.

3.3.14

loan

direct lending or delivery transaction of an item in non-electronic form (e.g. book), of an electronic document on a physical carrier (e.g. CD-ROM) or other device (e.g. eBook reader), or transmission of an electronic document to one user for a limited time period (e.g. eBook)

NOTE 1 Loans include user-initiated renewals as well as registered loans within the library (on-site loans). Renewals need to be counted separately.

NOTE 2 Loans include copied documents supplied in place of original documents (including fax) and printouts of electronic documents made by library staff for the user.

NOTE 3 Loans of documents in physical form to distance users are included here.

NOTE 4 Mediated electronic transmission of documents is counted as electronic document delivery if their use is permitted for unlimited time. This includes transmissions to members of the population to be served.

NOTE 5 The forms of lending and delivery services defined in this International Standard are shown in Table 1.

3.3.15

online catalogue

database of bibliographical records describing the collection usually of one particular library or library system

3.3.16**on-site loan**

document delivered, in most cases from closed access, for use on the premises

3.3.17**point-of-use IT training**

unstructured user training session in the use of information technology (IT) conducted by library staff at the impromptu request of users and usually at their point of use

NOTE Adapted from ANSI/NISO Z39.7-2004.

3.3.18**population to be served**

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

NOTE 1 Adapted from ISO 11620:1998, definition 3.18.

NOTE 2 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.

3.3.19**record downloaded**

descriptive record that is successfully requested from a database or the online catalogue

3.3.20**registered user**

person or organization registered with a library in order to use its collection and/or services within or away from the library

NOTE Users can be registered upon their request or automatically when enrolling in the institution.

3.3.21**rejected session****turnaway**

unsuccessful request of a database or the online catalogue by exceeding the simultaneous user limit

NOTE Request failure because of wrong passwords is excluded.

3.3.22**renewal**

active extension of the loan period for a document initiated by the user

NOTE Automatic renewals generated by the library system without user interaction are excluded.

3.3.23**reservation**

action taken when a user requests the supply of a document that is in the library collection or in the process of acquisition but not available at the time

3.3.24**search**

specific intellectual query, typically equated to submitting a search form of a database or the online catalogue to the server

NOTE 1 Adapted from COUNTER code of practice, Release 2, 2004.

NOTE 2 A search (query) is recorded each time a search request is submitted to the server.

NOTE 3 Immediately repeated duplicate searches, double clicks, or other evidence indicating unintended user behaviour needs to be excluded.

3.3.25

session

successful request of a database or the online catalogue

NOTE 1 A session is one cycle of user activities that typically starts when a user connects to a database or the online catalogue 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 min. If another time period is used, this needs to be reported.

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

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

NOTE 4 If possible, requests by search engines need to be excluded.

3.3.26

session time

duration of a session

NOTE This will usually be the period of time between a log-in to and an implicit or explicit log-off from a database or the online catalogue.

3.3.27

user

recipient of library services

[ISO 11620:1998, definition 3.24]

NOTE The recipient can be a person or an institution, including libraries.

3.3.28

user training

training programme set up with a specified lesson plan, which aims at specific learning outcomes for the use of library and other information services

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 lessons is irrelevant.

3.3.29

virtual visit

user's request on the library website from outside the library premises, regardless of the number of pages or elements viewed

NOTE 1 A website visitor is either a unique and identified web browser program or an identified IP address that has accessed pages from the library's website.

NOTE 2 The interval between two consecutive requests generally is no longer than a time-out period on 30 min if they are to be counted as part of the same virtual visit. A longer interval initiates a new visit.

NOTE 3 Web servers providing services whose statistics are reported at another site are to be excluded from the statistics of the library website.

3.3.30

visit

person (individual) entering the library premises

3.4 Access and facilities

3.4.1

access

ability of reaching and using a service or facility

3.4.2

network

several workstations that are connected to each other, usually via a computer server, and that can share information resources and services

3.4.3

opening hours

hours in a normal week when the main services of the library (e.g. reference and loan services, reading rooms) are available to users

3.4.4

public access workstation

library owned computer workstation, networked or stand alone, including those placed external to the library, and those whose acquisition and/or maintenance has in part or fully been sponsored by or donated to the library

NOTE Adapted from ANSI/NISO Z39.7-2004.

3.4.5

seat

seat provided for users for reading or studying, whether with or without equipment

NOTE Includes seats in carrels, in seminar and study rooms and the audiovisual and children's departments of the library. Excludes seats in halls, lecture and auditory theatres intended for audiences of special events. Also excludes floor space on which users can sit and similar informal seating.

3.4.6

space

area allocated for library functions

NOTE Space is expressed in square metres.

3.5 Expenditure

3.5.1

capital expenditure

expenditure which results in the acquisition of, or addition to, fixed assets

NOTE This includes expenditure on building sites, new buildings and extensions, furnishings and equipment for new and expanded buildings, computer systems (hardware and software), etc. When applicable, local and national sales/purchase taxes [e.g. Value Added Tax (VAT)] are included. Licensing costs need to be counted in open access publishing fees (3.5.2).

3.5.2

open access publishing fees

fees to be paid by authors for publishing in certain open access resources, especially journals

3.5.3

operating expenditure

ordinary expenditure

expenditure incurred in the running of a library

NOTE Money spent on staff and on resources that are used and replaced regularly (see ISO 11620). This includes expenditure on employees, rent, acquisitions and licensing, binding, computer network (operations and maintenance), telecommunication, building maintenance, repair or replacement of existing furnishings and equipment, etc. This can also

be termed 'current' or 'recurrent' expenditure. When applicable, local and national sales/purchase taxes [e.g. Value Added Tax (VAT)] are included.

3.5.4

special grant

grant of a non-recurrent nature to fund (or partly fund) projects

3.6 Library staff

3.6.1

library employee

person who works for a library in return for payment

3.6.2

professional education

formal training of students/trainees in librarianship and/or information sciences or related fields that is undertaken by the library, in most cases in conjunction with a library school or similar institution

NOTE The level of qualification will differ between countries.

3.6.3

professional staff

person, employed in a library, who has received training in librarianship and/or information science and whose duty requires professional education

NOTE The training can be by formal education or by means of an extended period of work of a professional nature, in a library, under supervision.

3.6.4

qualified specialist staff

library employee who has received training in a specialist discipline other than librarianship and/or information science

NOTE The training can be by formal education or by means of an external period of work of a professional nature under supervision in a specialization such as accountancy, computing, staff management, bookbinding, etc.

3.6.5

other staff

all other library employees without formal qualifications in librarianship/information science or other relevant specialization

NOTE Within this category, there can be a separate count of library employees who work in security and on domestic duties, for example cleaners, porters, caretakers and catering staff.

3.6.6

volunteers

person working on library tasks without payment

NOTE Volunteers can receive token reimbursements or expense allowances.

4 Uses, benefits and limitations of statistics

4.1 Background

4.1.1 The statistical data defined and described in this International Standard can be used for the evaluation and comparison of library and information services. The term "library" is used for convenience and should generally be read as including "information services".

4.1.2 Library statistics are collected by the individual library and should be summarized on a regional, national or international scale for all libraries or for different types of libraries. While individual libraries mostly use statistics for strategic planning, decision making and funding bids, statistics on a national scale are needed to review and formulate policy.

4.1.3 Objectives for library statistics can be summarized as follows:

- to monitor operating results against standards and data of similar organizations;
- to monitor trends over time and the results of innovation;
- to provide a base for planning, decision making, improving service quality, and feedback on the results;
- to demonstrate the value of library services obtained by users, including the potential value to users in future generations;
- to inform national or regional organizations in their support, funding and monitoring roles;
- to publicize the role of libraries both to politicians and to other external audiences.

4.1.4 While the form of statistics varies between academic, public, school and special libraries, and between closed, open and remote access situations, their objectives are the same. Generally, the value of such statistics is to point to particular problems and achievements, and to quantify their significance, rather than to provide specific answers or explanations. Statistics, being essentially historical, can only provide information after the event. However, plans for the future need to start from a solid statistical base.

4.2 Developments in library practice

4.2.1 Library statistics have traditionally focused on inputs, holdings and expenditure. Recent extensions have concentrated on outputs, use and availability, outcomes and impact.

4.2.2 While traditional library statistics are collected over the complete reporting period, this will not be possible for all library services, e.g. in-house use or reference questions. Therefore, this International Standard allows for the application of sampling methods, where data cannot be collected from automated systems, or where data collection over a reporting period would be too time-consuming. For the calculation of a reliable sample size, handbooks of statistical procedures should be consulted.

4.2.3 In recent years, there have been important developments to measure and compare the quality and effectiveness of library services and the efficiency of the use of resources. For this purpose, performance indicators have been developed by the library community. This International Standard specifies data provision required by the performance indicators specified in ISO 11620.

4.2.4 Since this International Standard was first published, electronic information and equipment as well as remote use of library services have spread widely. This International Standard defines statistics for all electronic library services and their use. In the body of this International Standard, data collection procedures are described for the electronic collection, electronic document delivery, reference service and training lessons. Statistics for the use of electronic services describing user activities like searches, downloads, or virtual visits are dealt with in Annex A, as their collection still offers the most challenges and more practical details about collection procedures are needed.

4.3 Selection of statistics for the library

This International Standard recognizes that there are many different types of libraries, in different settings, serving different user groups and having a range of unique characteristics (structure, funding, governance, etc.). Not all statistical data named in this International Standard will be relevant for all types of libraries and there will be much additional data relevant for individual libraries.

This International Standard points out which data would be useful on a national scale for different types of libraries. Some data are offered for optional use. Such data are described in Annex B, which recommends more detailed categories of statistics that are already collected nationally in some countries.

5 Reporting statistical data

5.1 General

Statistics referred to in this International Standard should be drawn up at regular intervals, for example annually. The information given should be presented in conformity with the definitions of Clause 3 and should, unless otherwise stated, comply with the recommendations in this International Standard. Every item and activity should be counted as mutually exclusive, i.e. not in more than one category (for example “book” or “digital document”; “interlibrary lending”, “electronic document delivery” or “external document supply”).

5.2 Time period to which data refer

The time period covered should be explicitly stated. It will usually be a year. Data referring to a period should cover the specified period in question, not the interval between two successive surveys. Where total numbers are required, e.g. the total of staff or stock of documents, they usually refer to the end of the reporting period unless explicitly stated otherwise.

5.3 Data estimated by sample

Where statistics have been compiled by sample survey rather than from a full count, the method used should be indicated. Care needs to be taken that samples are representative as regards time, place and selection methods, and that bias is not present in the responses. It also needs to be understood that, even where samples are fully representative, the procedure produces estimates that are subject to some error, mainly dependent on the sample size. Where appropriate, the error limits should be included with the published data.

6 Collecting statistical data

6.1 Libraries

6.1.1 Counting administrative units and libraries

Each library should appear in one of the categories defined in 3.1 according to its primary function.

For each entity, statistics for the total number of administrative units plus the number of central/main, branch and/or mobile libraries should be supplied. This is illustrated in the following example.

EXAMPLE A public library consisting of five branch libraries and two mobile libraries besides the central library would comprise the following:

— administrative units:	1
— central/main libraries:	1
— branch libraries:	5
— mobile libraries:	2
— total libraries:	8

6.1.2 Counting types of libraries

6.1.2.1 National library

The following should be counted:

- a) number of administrative units;
- b) number of libraries:
 - number of those being central/main libraries;

- number of those being branch libraries;
 - number of those being mobile libraries;
- c) number of external service points;
- d) population of country (at the beginning of the reporting period).

6.1.2.2 Library of an institution of higher education

The following should be counted:

- a) number of administrative units;
- b) number of libraries:
- number of those being central/main libraries;
 - number of those being branch libraries;
 - number of those being mobile libraries;
- c) number of external service points;
- d) total number of students (undergraduate and graduate), faculty and staff eligible to use the service, both full-time and part-time;
- e) total number of students (undergraduate and graduate), faculty and staff eligible to use the service as full-time equivalent (FTE).

6.1.2.3 Special library

The following should be counted:

- a) number of administrative units; the recommended classification for reporting by type is as follows:
- government (including agencies and international organizations);
 - health service/medical;
 - professional and learned institutions and associations;
 - industrial and commercial;
 - media;
 - regional;
 - other (including voluntary organizations);
- b) number of libraries in each of the above areas.

6.1.2.4 Public library

The following should be counted:

- a) number of administrative units; the recommended classification for reporting by size of population to be served is as follows:
- up to 3 000;
 - from 3 001 to 5 000;

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- from 5 001 to 10 000;
- from 10 001 to 50 000;
- from 50 001 to 100 000;
- from 100 001 to 500 000;
- over 500 000;

NOTE A distinction can be made between public libraries that are financed mainly by public authorities and those that are financed mainly from private sources.

- b) number of libraries:
- number of these being central/main libraries;
 - number of those being branch libraries;
 - number of those being mobile libraries;
- c) number of external service points;
- d) total population to be served in a local community or group (population at the beginning of the reporting period).

NOTE This is normally the population of the legal service area.

6.1.2.5 School library

The following should be counted:

- a) number of administrative units; the recommended classification by the number of pupils to be served is as follows:
- up to 200;
 - from 201 to 500;
 - from 501 to 1 000;
 - more than 1 000;
- b) number of libraries in each of the above areas;
- c) total number of pupils and teachers in schools served by the school library.

6.1.2.6 Storage library (repository library)

The following should be counted:

- a) number of administrative units;
- b) number of libraries.

6.2 Collection

6.2.1 Introduction

For further subdivisions of the categories in 6.2.2 to 6.2.16, see Annex B.

6.2.2 Books and serials (printed material)

6.2.2.1 Stock

The following should be counted:

- a) number of physical units in total stock;
- b) number of physical units normally housed on open-access shelves;
- c) number of titles in total stock.

NOTE 1 Where a count of physical units is not feasible, an alternative measure is the length of shelving occupied by stock (see 6.4.7.4). This space measure can also be used to estimate the number of physical units.

Bound periodicals should be counted as physical units. Unbound periodicals and newspapers should be included in the count as if they were collected into bound physical units. Usually a volume will comprise the issues of one year. One loose-leaf binder should be counted as one physical unit.

NOTE 2 If required by the library, books and serials, can be counted separately.

NOTE 3 Books can contain enclosures like CD-ROM's, diskettes, slides etc. These enclosures need to not be counted separately.

6.2.2.2 Additions

The following should be counted:

- a) number of physical units added to total stock;

NOTE As an alternative, the number of linear metres added to total stock can be calculated.

- b) number of titles added.

NOTE This will frequently equal the number of new full-catalogue records added.

6.2.2.3 Withdrawals

The number of physical units withdrawn should be counted.

NOTE As an alternative, the number of linear metres withdrawn from the stock can be calculated.

6.2.3 Manuscripts

6.2.3.1 Stock

The following should be counted:

- a) number of linear metres of shelves occupied by total manuscript collection;
- b) number of physical units.

NOTE Bound volumes and other units (fragments, rolls, autographs, etc.) can be counted separately.

6.2.3.2 Additions

The following should be counted:

- a) number of linear metres of shelves added to manuscript collection;
- b) number of physical units added.

6.2.3.3 Withdrawals

The number of physical units withdrawn should be counted.

6.2.4 Microforms

6.2.4.1 Stock

The number of physical units should be counted.

Count the number of individual sheets and rolls of microfilm.

6.2.4.2 Additions

The number of physical units added should be counted.

6.2.4.3 Withdrawals

The number of physical units withdrawn should be counted.

6.2.5 Cartographic documents

6.2.5.1 Stock

The number of physical units should be counted.

6.2.5.2 Additions

The number of physical units added should be counted.

6.2.5.3 Withdrawals

The number of physical units withdrawn should be counted.

6.2.6 Printed music documents

6.2.6.1 Stock

The following should be counted:

- a) number of physical units in total stock;
- b) number of physical units normally housed on open access shelves;
- c) number of titles in total stock.

Bound collections of music need to be counted as physical units. Unbound items need to be included in the count as if they were collected into bound physical units. Where appropriate, cases or folders with separate units in them need to be counted.

EXAMPLE Sets of chamber music and orchestral parts are generally counted by the set, not as separate parts.

6.2.6.2 Additions

The following should be counted:

- a) number of physical units added;
- b) number of titles added.

NOTE This will frequently equal the number of new full catalogue records added.

6.2.6.3 Withdrawals

The number of physical units withdrawn should be counted.

6.2.7 Audiovisual documents

6.2.7.1 Stock

The number of audiovisual documents in the library collection should be counted:

- on analogue carriers (physical units);
- on digital carriers (physical units);
- networked or installed on stand-alone workstations (titles).

The categories should be subdivided by type:

- a) audio: music;
- b) audio: talking books;
- c) visual;
- d) combined audiovisual.

If the sub-unit counts are not available, the total count, irrespective of type, should be supplied.

NOTE Physical units will usually be CD cases, record sleeves or cassette, or video boxes.

6.2.7.2 Additions

Count the number of audiovisual documents added

- on analogue carriers (physical units),
- on digital carriers (physical units), and
- networked or installed on stand-alone workstations (titles).

The categories should be subdivided by type:

- a) audio: music;
- b) audio: talking books;
- c) visual;
- d) combined audiovisual.

If the sub-unit counts are not available, the total count, irrespective of type, should be supplied.

6.2.7.3 Withdrawals

Count the number of audiovisual documents withdrawn

- on analogue carriers (physical units),
- on digital carriers (physical units), and
- networked or installed on stand-alone workstations (titles).

6.2.8 Graphic documents

6.2.8.1 Stock

The number of physical units should be counted.

6.2.8.2 Additions

The number of physical units added should be counted.

6.2.8.3 Withdrawals

The number of physical units withdrawn should be counted.

6.2.9 Patents

6.2.9.1 Stock

Count the number of patents in the library collection:

- in print or microform format;
- in electronic format.

6.2.9.2 Additions

Count the number of patents added:

- in print or microform format;
- in electronic format.

6.2.9.3 Withdrawals

Count the number of patents withdrawn:

- in print or microform format;
- in electronic format.

6.2.10 Other library documents and items

6.2.10.1 Stock

The number of physical units should be counted.

Count the units handled where articles are normally housed, issued and used in sets, boxes, or on sheets then the unit to be counted will be the "handling" unit (e.g. boxes or trays of tickets; sheets or albums of postage stamps; albums of photographs). This will frequently correspond with the unit for cataloguing purposes. Items separately catalogued should normally be counted as separate units.

6.2.10.2 Additions

The number of physical units added should be counted.

6.2.10.3 Withdrawals

The number of physical units withdrawn should be counted.

6.2.11 eBooks

6.2.11.1 Stock

The number of eBooks (titles) in the electronic collection should be counted.

NOTE The number of titles can be higher than the number of subscriptions, as there can be several titles comprised in one eBook, and eBooks can also be acquired by purchase, gift or legal deposit right.

6.2.11.2 Additions

The following should be counted:

- a) number of eBooks added by purchase (titles);
- b) number of eBooks added by digitization of the library (titles).

6.2.11.3 Withdrawals

Count the number of eBooks (titles) withdrawn.

6.2.12 Computer files

6.2.12.1 Stock

The number of physical carriers (disks, tapes, and other storage media) should be counted.

6.2.12.2 Additions

Count the number of physical carriers added.

6.2.12.3 Withdrawals

Count the number of physical carriers withdrawn.

6.2.13 Other digital documents

6.2.13.1 Stock

Count the number of other digital documents in the library collection:

- on physical carriers (physical units);
- networked or installed on stand-alone workstations (titles).

NOTE Physical carriers are usually available for lending or use on stand-alone workstations in the library.

6.2.13.2 Additions

Count the number of other digital documents added:

- on physical carriers (physical units);
- networked or installed on stand-alone workstations (titles).

6.2.13.3 Withdrawals

Count the number of other digital documents withdrawn:

- on physical carriers (physical units);
- networked or installed on stand-alone workstations (titles).

6.2.14 Databases

6.2.14.1 Stock

Count the number of databases in the library collection:

- on physical carriers (physical units);
- on the local network or installed on stand-alone workstations (titles);
- on other servers where the library has acquired access rights (titles).

NOTE Library catalogues acquired and paid for to serve as reference databases are also counted here.

6.2.14.2 Additions

Count the number of databases added:

- on physical carriers (physical units);
- on the local network or installed on stand-alone workstations (titles);
- on other servers where the library has acquired access rights (titles).

NOTE The number of descriptive records or content units added to (and amended on) locally held databases can also be reported where this is feasible.

6.2.14.3 Withdrawals

Count the number of databases withdrawn:

- on physical carriers (physical units);
- on the local network or installed on stand-alone workstations (titles);
- on other servers where the library has acquired access rights (titles).

6.2.15 Current serials received (at the end of the reporting period; all formats including print, microform, electronic)

6.2.15.1 In print or microform

The following should be counted:

- a) number of current periodical subscriptions;
- b) number of current periodical titles;
- c) number of current newspaper subscriptions;
- d) number of current newspaper titles.

Reports that appear regularly and regular conference proceedings are to be included here as periodicals. Monograph series, other reports and proceedings of occasional conferences are to be included in books and serials (6.2.2) or microforms (6.2.4).

NOTE Includes additional print licenses to titles held in electronic format.

6.2.15.2 Electronic serials

The following should be counted:

- a) number of current periodical titles;
- b) number of current newspaper titles.

NOTE 1 Includes titles held locally and titles acquired for remote access.

NOTE 2 Includes additional electronic licenses for access to titles held in print format.

NOTE 3 Includes titles comprised in "additional access" or "cross access" in consortia agreements for the time of the contractual agreement.

NOTE 4 Includes journals for which access is only allowed after a time limit. Such journals might be counted separately.

NOTE 5 Electronic journals in free internet resources which have been catalogued by the library in its online catalogue or a database need to be counted and reported separately (see 6.2.16).

6.2.15.3 Serials in total

The following should be counted:

- a) number of current periodical subscriptions (all formats);
- b) number of current periodical titles (all formats);
- c) number of current newspaper subscriptions (all formats);
- d) number of current newspaper titles (all formats).

NOTE The number of multiple subscriptions can be calculated from the difference between a) and b) and between c) and d), respectively.

6.2.16 Free internet resources

Number of links to unique free internet resources (digital documents, databases, open access journals, etc.) which have been catalogued by the library in its online catalogue or a database but for which the library has not acquired access rights

6.3 Library use and users

6.3.1 General

The use of electronic library services except electronic document delivery (see 6.3.11.3), electronic reference service (see 6.3.8) and user training (see 6.3.11.7) is in accordance with Annex A.

6.3.2 Users

The following should be counted:

- a) number of registered users (at the end of the reporting period);
- b) number of those newly registered (during the reporting period);
- c) number of active borrowers;
- d) number of active users.

NOTE 1 If enrolling (registering) in the institution automatically includes registration for the library, the number of registered users will equal the size of the population to be served.

NOTE 2 The count of active users can be established either by a direct *identity* count at the entry or exit, by a population sample survey or by a sample of users to establish the proportion to be added to c) above.

NOTE 3 See also B.2.2.1.

6.3.3 Loans (excluding interlibrary lending)

Loans are counted in the following categories:

a) number of loans to users that allow removal from the library premises (ordinary loans) including:

- number of initial loans (excluding on-site loans);
- number of user-initiated renewals;
- number of eBooks (on eBook readers);
- number of eBooks (contents only transmitted to users);

Copied documents supplied in place of original documents (including fax) and printouts of electronic documents made by library staff for the user should be counted separately.

NOTE 1 Short loans are included.

NOTE 2 Loans to distance users delivered by mail are included.

NOTE 3 See also B.2.2.2.

b) number of on-site loans.

6.3.4 Physical units on loan

Count the number of physical units on ordinary and on-site loan on a specified day.

NOTE These can be counted in addition to loans, at specific times of year that represent an average activity level.

6.3.5 In-house use

Count the number of physical units removed from open-access shelves by users for use on the premises, including browsing at the shelves. This count may be estimated by one of several methods:

- reshelving count;
- observation studies;
- user questionnaire (handed out before the search);
- techniques used for book identification like radio frequency identification (RFID).

The method used should be reported.

The annual total is to be established from a sample count. The sample should be taken in one or more normal weeks and grossed up (see also 4.2.2).

On-site loans should, if possible, be excluded or deducted (to avoid double counting with 6.3.3).

6.3.6 Physical units in use within the library

Count the number of physical units that are used in-house on a specified day.

NOTE These can be counted in addition to in-house use, at specific times of year that represent an average activity level.

With some counting methods, the results might include items on ordinary and on-site loan being used in the library. These should be deducted to avoid double counting with 6.3.4.

6.3.7 Reservations

Count the number of transactions initiated by the user.

6.3.8 Information requests

Count the number of information requests (see also B.2.2.3).

Count the number of these delivered to the library by electronic media (via email, the library website or other networked communications mechanisms).

It is essential that libraries do not include directional or administrative inquiries (see 3.3.9).

The annual total is to be established from a sample count. The sample should be taken in one or more normal weeks and grossed up (see also 4.2.2).

6.3.9 Copying

6.3.9.1 Photocopies and microforms produced by libraries

Count the number of copies replacing original documents produced by libraries for their users (excluding those made by self-service copying machines installed on library premises and those made for interlibrary lending):

- a) number of sheets photocopied;
- b) number of physical units microfilmed;
- c) number of sheets printed out.

NOTE Copies in electronic form are counted as electronic document delivery (see 6.3.11.3).

6.3.9.2 Photocopying by users (from non-electronic resources)

The following should be counted:

- a) number of sheets copied in self-service by users on the library premises (normally taken from the counter on the machine);
- b) number of sheets scanned in self-service by users on the library premises.

6.3.10 Interlibrary lending within the country

6.3.10.1 Interlibrary lending requests received from other libraries

The following should be counted:

- a) total number of requests received from other libraries;
- b) number of interlibrary lending requests satisfied, by form:
 - number of loans supplied (original documents);
 - number of copies in print form in place of original documents.

If the sub-unit counts are not available, the total count, irrespective of form, should be supplied.

6.3.10.2 Interlibrary lending requests made to other libraries

The following should be counted:

- a) total number of interlibrary lending requests made to other libraries;
- b) number of responses to interlibrary lending requests received by form:
 - number of loans received (original documents);
 - number of copies in print form in place of original documents.

If the sub-unit counts are not available, the total count, irrespective of form, should be supplied.

6.3.11 Interlibrary lending at the international level

6.3.11.1 Interlibrary lending requests received from other countries

The following should be counted:

- a) total number of requests received from other countries;
- b) number of interlibrary lending requests satisfied by form:
 - number of loans supplied (original documents);
 - number of copies in print form in place of original documents.

If the sub-unit counts are not available, the total count, irrespective of form, should be supplied.

6.3.11.2 Interlibrary lending requests made to other countries

The following should be counted:

- a) total number of interlibrary lending requests made to other countries;
- b) number of responses to interlibrary lending requests received by form:
 - number of loans received (original documents);
 - number of copies in print form in place of original documents.

If the sub-unit counts are not available, the total count, irrespective of form, should be supplied.

6.3.11.3 Electronic document delivery (mediated)

Count the number of documents transmitted by a library from its collection in electronic format:

- with charge;
- without charge.

NOTE 1 Counts can be additionally subdivided as to the number of direct deliveries to end-users and those via another library.

NOTE 2 Unmediated downloading by users who have access to the library's electronic resources is not counted as electronic document delivery but is in accordance with Annex A.

6.3.11.4 External document supply

Count the number of documents in print or digital form received from non-library suppliers (not through interlibrary lending) with the library being involved in the transaction and/or the payment by form:

- print;
- electronic.

6.3.11.5 Events organized by the library

The following should be counted:

- a) number of exhibitions;
- b) number of events (including virtual events), typically with a literary, cultural or educational intent.

NOTE See also B.2.2.5.

6.3.11.6 Visits

Count the number of visits made by persons (individuals) to the library premises annually. This may be counted at either entrance or exit by one of the following methods:

- turnstile count;
- electronic counter;
- manual count.

Any of these methods, but particularly the manual count, may be used for one or more sample time periods and grossed up to give an annual estimate. The method used should be reported. Where necessary, the count should be adjusted to deduct entrances and exits of library staff.

6.3.11.7 User orientation and training

The following should be counted:

- a) total hours of user training undertaken by the library, either in the orientation of collections, services and facilities or in the use of information sources;
- b) number of attendances at user-training lessons;
- c) hours of user training on the use of electronic services and information technology undertaken by the library;
- d) number of attendances at user-training lessons on electronic services;
- e) number of hours users have accessed web-based training services offered by the library.

NOTE 1 c) is a subset of a); d) is a subset of b).

NOTE 2 See also B.2.2.4

6.4 Access and facilities

6.4.1 Opening hours

Count the number of hours when the main services are available to users during a normal week:

- a) in the central/main library;
- b) in branch libraries (average).

6.4.2 Days open

Count the number of days during the reporting period when the main services were available to users:

- a) central/main library;
- b) branch libraries (average).

6.4.3 Seats

Count the number of seats available in the library to users at the end of the reporting period.

Count the number of these where users can connect their own computers to the library network.

6.4.4 Public access workstations

The following should be counted:

- a) number of computer workstations owned by the library available to users:
 - number of these networked;
 - number of these connected to the internet;
- b) number of printers available for public use;
- c) number of scanners available for public use;
- d) number of eBook readers available for public use;
- e) number of computer workstations available only to staff.

NOTE 1 The total of library computer workstations is represented by the sum of a) and e). Each workstation in a) can appear in several subsets.

NOTE 2 Seats where users can connect their own computer to the library network are counted in 6.4.3.

6.4.5 Catalogue records

The following should be counted:

- total number of catalogue records at the end of the reporting period;
- percentage of these automated;
- number of these added during the year.

6.4.6 Photocopiers

Count the number of photocopying machines available for unmediated use by users.

6.4.7 Space

6.4.7.1 Net usable area for library functions

The net usable area is expressed in square metres.

It includes space for readers and reading areas, materials shelving and storage areas, staff working areas, space for services to clientele, public service desks, exhibit space, equipment areas, aisles, and all other space used for library resources and services. It excludes vestibules, lobbies, traffic areas, janitorial or custodial storage and service areas, rest rooms, staff recreation areas, cafés, elevators, stairway space, building corridors, space occupied by heating ventilation and cooling devices.

NOTE Separate figures can be given for main library and branch libraries.

6.4.7.2 Net usable area by function

The net area calculated in 6.4.7.1 may be allocated to the following main functions:

- a) user services including space for reading, studying, information delivery, computer terminals and any other services delivered to users, also open-access storage areas as integrated parts of user service areas;
- b) library operations including receipt of materials, bindery, acquisitions, cataloguing, computing and management;
- c) materials storage including all areas devoted principally to storing materials, whether open access or closed;
- d) events, etc. including seminar and meeting rooms, space for meetings and story telling, and formal exhibition space.

The total of a), b), c) and d) should be equal to the area reported in 6.4.7.1.

6.4.7.3 Gross measured area of library buildings

The gross measured area is expressed in square metres.

This is the total space in the library building or buildings and will include those areas specifically excluded from 6.4.7.1.

NOTE Areas devoted to cafes and staff recreation areas can be reported separately.

6.4.7.4 Shelf counts

The following should be counted:

- a) number of linear metres of shelves occupied by total stock;
- b) number of linear metres occupied by collections on open-access shelves.

6.5 Expenditure (during the reporting period)

6.5.1 Operating (ordinary) expenditure

6.5.1.1 On employees

The following should be counted:

- a) total amount of money spent on salaries and wages, allowances and other employee benefits, and other related expenditure;

NOTE Separate figures can be given for professional staff, qualified specialist staff, other staff, and student assistants.

- b) costs of staff training.

NOTE Staffing costs spent on training are excluded.

6.5.1.2 On acquisitions

Count the costs of all items added to a library collection for the benefit of users by resource type:

- a) printed books;
- b) printed serials;
- c) non-electronic audiovisual documents;
- d) other non-electronic documents;
- e) databases;
- f) electronic serials ;
- g) digital documents (excluding eBooks);
- h) eBooks;
- i) computer files.

NOTE 1 Subsets a) to d) can be amalgamated to give a sub-total for "print or other material".

NOTE 2 Subsets e) to i) can be amalgamated to give a sub-total for the electronic collection. This sub-total can be further split up as to expenses on digital material acquired physically and expenses on electronic media licensed.

NOTE 3 Value-added taxes, sales and service taxes or other local taxes are included. Their inclusion can affect international comparisons.

NOTE 4 If databases or electronic serials are financed within a consortium or partially by central funding, only the library's own expenditure needs to be counted.

NOTE 5 If free electronic access is added to a print document bought or subscribed to by the library, the expenditure needs to be counted only for the print document. If a surplus has to be paid for electronic access, only this surplus needs to be counted in e), f), or g).

6.5.1.3 On external document supply and interlibrary lending

Count the costs of document deliveries from non-library suppliers that are mediated by the library and costs of interlibrary lending.

Costs for loans supplied by the library should be counted separately.

6.5.1.4 On collection maintenance

The following should be counted:

- a) costs of binding, preservation and conservation where carried out by outside contractors;
- b) costs of material conversion (microfilming, copying) where carried out by outside contractors;
- c) costs of digitization where carried out by outside contractors.

Figures for the rare book collection should be given separately.

6.5.1.5 On premises

Count the costs of rent, maintenance and services (heat, light, water, sewage).

6.5.1.6 On automation

Count the costs of computer, network (operations and maintenance), software licenses and telecommunications.

6.5.1.7 On open access publishing fees

Count the costs of institutional or single author fees for open access publishing paid by the library.

6.5.1.8 Miscellaneous

Count all other costs including cataloguing records, copying, postage, promotion of services, stationery, insurance, transport and communications, consulting, equipment costs and interest payments on debt, if applicable.

6.5.2 Capital expenditure

The following should be counted:

- a) expenditure for the acquisition of, or addition to, building sites, new buildings and extensions;
- b) expenditure on computer systems (hardware and software);
- c) all other capital expenditure including furniture and equipment.

Books and other materials acquired for a new or extended library building should normally be entered as capital expenditure, not as costs of acquisition.

6.5.3 Income and funding

The following should be counted:

- a) funding from the library's own institution or parent authority;
- b) funds from other public sources;
- c) funds from corporate and private sources (including donations);
- d) special grants;
- e) income generated, i.e. the income generated by library operations and from fees, charges, subscriptions and donations that is available to the library for expenditure.

6.6 Library staff (at the end of the reporting time period)

6.6.1 General

In counting library employees, the concept of full-time equivalent (FTE) should be used to convert figures for the number of part-time workers to the equivalent number of full-time workers.

EXAMPLE If out of three persons employed as librarians, one works quarter-time, one works half-time, and one works full-time, then the FTE of these three persons would be $0,25 + 0,5 + 1,0 = 1,75$ librarians (FTE).

6.6.2 Total staff

6.6.2.1 General

The following should be counted:

- a) total number of people employed by the library;
- b) number of employees (full time equivalent, FTE);
- c) of b), the total number of staff being funded from sources outside the library's own institution or parent authority (full-time equivalent, FTE).

NOTE Volunteers are excluded.

6.6.2.2 Professional staff

Count the number of professional staff members (FTE).

6.6.2.3 Qualified specialist staff

Count the number of qualified specialist staff members (FTE).

6.6.2.4 Other staff

Count the number of other staff members (FTE).

6.6.2.5 Student assistants

Student assistants are generally employed on an hourly basis. The total hours per year that student assistants have been employed should be converted to full-time equivalents (FTE).

6.6.3 Volunteers

Count the number of voluntary non-remunerated assistants (FTE).

6.6.4 Staff training

The following should be counted:

- a) staff hours of formal training received (during the reporting period);
- b) number of staff who have received formal training (during the reporting period).

NOTE Training can be received in-house or outside the library.

6.6.5 Professional education

The following should be counted:

- a) the number of students/trainees in librarianship and/or information sciences or related fields that have received formal training by the library (during the reporting period).

NOTE Students/trainees can be educated during the whole reporting period or only in short-time courses.

- b) the time of education of all students/trainees counted in months.

EXAMPLE If three persons have been educated during the whole year and three persons only for one month each, the total months would be 39.

6.6.6 Staff allocation to service areas/working areas

Total staff calculated in 6.6.2 may be allocated to the following main services of the library:

- a) user services including the functions of lending, reference, interlibrary lending, user education, photocopying, shelving and retrieving items (adapted from ISO 11620:1998/Amd 1:2003);
- b) media processing including acquisitions, licensing negotiations, cataloguing, technical book processing, binding;
- c) electronic services including planning, maintaining, providing and developing IT services and technically developing and improving the library's web-based services (ISO/TR 20983:2003);
- d) administration including management, planning and steering, budget control, staff management, statistics;
- e) all other services.

The number of library staff employed in a service area is calculated by adding the time spent by all permanent and temporary, including project-based staff, on that service area. Several methods are possible:

- Calculate the number of full-time-equivalent positions directly assigned to a certain service area. Estimate the average time spent by employees of that service area on other services and deduct the time from the number. Estimate the average time spent by employees of other service areas spent on the service in question and add the time to the number of FTE positions.
- Choose a sampling period (normally one or two weeks) during which the service in question experiences average workload. Record the time (by work diaries) that staff members, including members of other areas, spend on the service area in question. The sample counts are grossed up to FTE numbers for the reporting period.

Annex A (normative)

Measuring the use of electronic library services

A.1 General

This annex specifies rules for libraries and information services on the collection and reporting of statistics on the use of electronic library services. The form of an annex was chosen for this topic as it allows a more detailed description of methods and problems.

To a growing extent, libraries today provide electronic services beside the traditional services. With new forms of information resources and new ways of providing and delivering information, library collections and services have changed fundamentally, and the use of electronic (especially web-based) library services has increased substantially.

In spite of further changes to be expected in the information world, libraries cannot wait for consolidation of this process, but need to try to measure and report their activity in this field in order to demonstrate the full extent of their services and output. This annex relies on the results of projects worldwide that during the last years have developed and tested methods of measuring and reporting the use of electronic library services.

While most traditional statistics can be produced by the library itself, statistical data for electronic services, especially for their use, to some extent need to be collected from different sources, some of which are not under the direct control of libraries (e.g. vendors and suppliers, computing centres and library consortia can be involved). The most important issue is that libraries reach agreement about the statistical data they need to evaluate their service, and that they negotiate with vendors, and suppliers of information resources (e.g. consortia, national libraries) and suppliers of automated library systems to such data.

This International Standard sets out to define the

- various forms of electronic library services,
- various forms of electronic information resources, and
- various forms of use of electronic services.

Definitions and collection of data for electronic information resources, electronic document delivery, electronic reference service and user training on electronic services and information technology are covered in the main text of this International Standard.

This annex deals with statistics for the use of electronic services, describing user activities like searches, downloads, or virtual visits, as their collection still offers the most challenges and more practical details about collection procedures are needed.

A.2 Measuring the electronic collection

A.2.1 General

In contrast to conventional resources, electronic resources often have neither physical form nor boundaries, and this will affect the measurement of both collection and use.

A.2.2 Local and remote resources

Two key issues regarding electronic collections are defining the scope of the collection (span) and an actual content unit (most often described as a document). Fundamentally, a library's electronic collection consists of two broad categories:

- a) items that the library hosts directly (e.g. digitized content, web pages, images);
- b) items that the library licenses to which remote access is provided (e.g. databases, e-journals, eBooks).

These distinctions, however, are not mutually exclusive. There are some libraries which license resources (i.e. eBooks) and those libraries which actually purchase the same resource. Thus, the same resource may be a licensed resource, and not hosted directly by the library, whereas for other libraries, the resource is actually hosted by the library. How the library provides access to these resources is of significant importance, as with a library hosted resource, the library will have direct access to usage data regarding that resource. Libraries which license the resource, however, will need to attain usage data from the resource hosting entity (i.e. vendor).

A further distinction in determining the library's collection is library-provided versus library-linked resources. There are a number of free resources that a library may make available to its users by way of linking to such resources from a library's website or online catalogue. Usage reporting of these resources is only recommended optionally (see A.5.5.3).

A.2.3 Content units

The content unit of an electronic resource is the fundamental informational unit that the user accesses. Determining the content unit is a challenge in the electronic collection, as some resources provide a full-text article, an image that resides within an image database, an audio file that resides within an audio database, or a combination of several file types (e.g. text, image, audio, moving image). Another complicating factor is that some content units are not pre-defined within a particular resource. Databases can be configured to combine and sort information so that every search command may constitute a new object (document). Active server page (ASP) technology, for example, allows the generation of a web page out of a number of database entries upon each request. These cannot be counted as content units prior to their generation, and it is difficult to measure use. Finally, the contents of electronic resources, in various formats (e.g. full text, annotated, image, other) can undergo changes over time. Uniform resource identifiers (URI), or other forms of metadata that identify the content unit, are becoming more widespread and support the clear identification of documents. Thus, libraries will need to determine the appropriate content unit for each electronic resource in order to know what counts as a usage of that resource.

Over time, libraries can expect the continued evolution of electronic resources and the content units such resources provide.

As abstracts and indexing, full text, and other databases begin to merge into complex database products, it becomes increasingly difficult to differentiate between them. Therefore, subdivision is only proposed as an optional measure in Annex B. In the future, many differences between electronic serials and full-text databases will likely diminish. A precise count of their number, or a precise definition of what units count as a content unit, will therefore become difficult. Libraries will need to review their electronic collection resources and ensure that there is an agreement on what constitutes a content unit for usage measurement purposes.

A.3 Measuring use

A.3.1 General

Broadly described, there are three key resources that constitute a library's electronic collection:

- a) the library's online catalogue, which assists users to find various content;

- b) the library's website, on which numerous types of resources may reside (e.g. digitized content, eBooks, text) or links to non-library material are provided;
- c) the library's licensed resources, which can include e-journals, databases, eBooks, and other content.

Within each of these resources, libraries may have various applications that also provide additional services and resources to users. For example, digital reference services often make use of specific software to provide users with digital reference services. Increasingly, the library's website serves as a portal to the library's electronic collection, thus most users begin their interaction with the library's electronic collection through the website or through portals.

A.3.2 Web log files

Usage of all of these resources is transactional and thus captured in a log file that may be system specific (i.e. unique to the online catalogue, vendor, or digital reference software) or standard, such as the "common log format" (CLF) or "extended log format" (ELF) generated by web servers. Libraries that use proprietary systems as part of their electronic collection components will need to:

- understand the log file structure and implementation particular to the system(s);
- know how to query the log file(s), which often occurs through a proprietary script/analysis system;
- know and understand the definitions of the usage data elements that the proprietary system(s) report.

Web servers utilize either a CLF or ELF which place website usage data into standard ASCII formatted log files. All major web servers use the same log file formats, thus enabling common analysis techniques across web servers through web log analysis software. Typically, web log files record seven basic elements, including the requesting IP address (unique internet Protocol number attached to each internet computer), authentication information, a time stamp, the transfer success status, and the transfer volume. Using web log analysis software enables libraries to analyze the use of a website in various ways such as a virtual visit (session to the website), page access (web page accessed by the user), and content unit (document, image, or other form of unit). Each software program analyses the log files differently and uses differing terminology for the types of analysis performed, thus it is important for libraries to know how their analysis software programs operate and the definitions used.

A.3.3 Search systems

A new and increasing trend in libraries is the implementation of federated searching systems or portals. These programs enable users to search across the library's entire electronic collection from a single search interface. Federated search systems are an important development in facilitating user access to the library's electronic collection. However, such systems also will affect the usage numbers of key statistics in this standard, particularly sessions and searches/queries. In addition, most federated systems also provide log files that report the usage of the federated system. These log files are most often proprietary and do not necessarily use the same terminology as this standard or other vendor products. Thus, as with other log files, libraries will need to understand the structure, location, and definitions used in federated system logs.

A.3.4 Measurement challenges

There are additional factors that affect the ability of libraries to measure the use of their electronic collection. Selected key factors include authentication, caching, and proxy servers. In order not to affect the usability of electronic collections, personal authentication is rarely implemented by libraries. Use by members of the population to be served, however, can only be determined if some identification information is being recorded. For the purpose of measurement, a request is therefore regarded as being originated by a member of the population to be served if the IP address belongs to the library or institution/legal service area. The access to paid-for electronic library services (e.g. acquired or licensed databases, serials, etc.) is usually authenticated for lists or blocks of IP addresses. Therefore it needs to be presumed that all successful requests will have been originated by members of the population to be served. Requests for free services (e.g. online catalogue and library website), however, are impossible to validate in total. While access from inside the institution

(identified by IP addresses) is assumed to originate from members of the population, remote use (e.g. from computers at home) will generally be anonymous.

Furthermore, individual IP addresses using the same proxy server will not be recognizable, as only the IP address of the proxy will be recorded in the log file. Finally, some servers “cache” or store content from other resources locally. Users can activate local cache files in their browsers to store copies of documents that have previously been accessed. In a proxy server environment, repeat requests for a document are supported within caches/proxies instead of through the document server, thereby shortening the time of transmission. As these requests will not reach the document server, no statistical entry will be recorded in the log file, and the number of requests counted will underestimate the amount of real use. Individual browser cache settings can thus add more complications, however, some professional web-analysis tools (many of them developed to measure web advertising) can induce computers to ignore the stored copy and instead newly request the document.

Measuring the usage of a library's electronic collection is affected by a number of situational factors. A key factor among these is the information technology architecture that a library has adopted and implemented for its various electronic collection services and resources. Libraries need to understand that how libraries implement their online catalogue, website, and access to licensed resources has a direct impact on the usage statistics libraries can collect, what those usage statistics will look like, and what the usage statistics mean. For example, if libraries want individual IP address information for sessions to licensed resources, libraries cannot access such resources through a proxy server, as the vendor of that resource will only be able to report the sessions as being initiated from the proxy server's IP address.

While there are a number of issues regarding electronic collection usage data, it is important to note that much progress is being made with vendor supplied data. Though standards initiatives such as this one and that of the National Information Standards Organization (NISO), the International Coalition of Library Consortia (ICOLC), and Project COUNTER, vendor data are becoming increasingly standardized in definitions, usage reporting, and data file format reporting. These are significant and important steps towards the standardization of licensed resource data.

A.4 Electronic services

A.4.1 General

Electronic services at present offered by libraries are defined in 3.3.6:

- online catalogue;
- library website;
- electronic collection;
- electronic document delivery (mediated);
- electronic reference service;
- user training on electronic services;
- internet access offered via the library.

Of these, the following services and facilities are dealt with in the body of this International Standard:

- a) electronic collection on physical carriers;
- b) electronic document delivery;
- c) equipment for the use of electronic services;

- d) user/staff training on electronic services;
- e) electronic reference service.

The necessary equipment (see 6.4.4) and user training in the use of electronic services (see 6.3.11.7) are not regarded as integral parts of electronic-library-services provision itself but rather as the essential environment. An overview of electronic services is given in Figure A.1.

Electronic information requests are regarded as an additional communication medium for information inquiries. Data concerning electronic reference inquiries are therefore collected together with other information requests (see 6.3.8).

Electronic resources on physical carriers will either be issued on loan or provided on stand-alone workstations for their in-house use. Their use will, therefore, be included in the number of loans (see 6.3.3) or as in-house use (see 6.3.5).

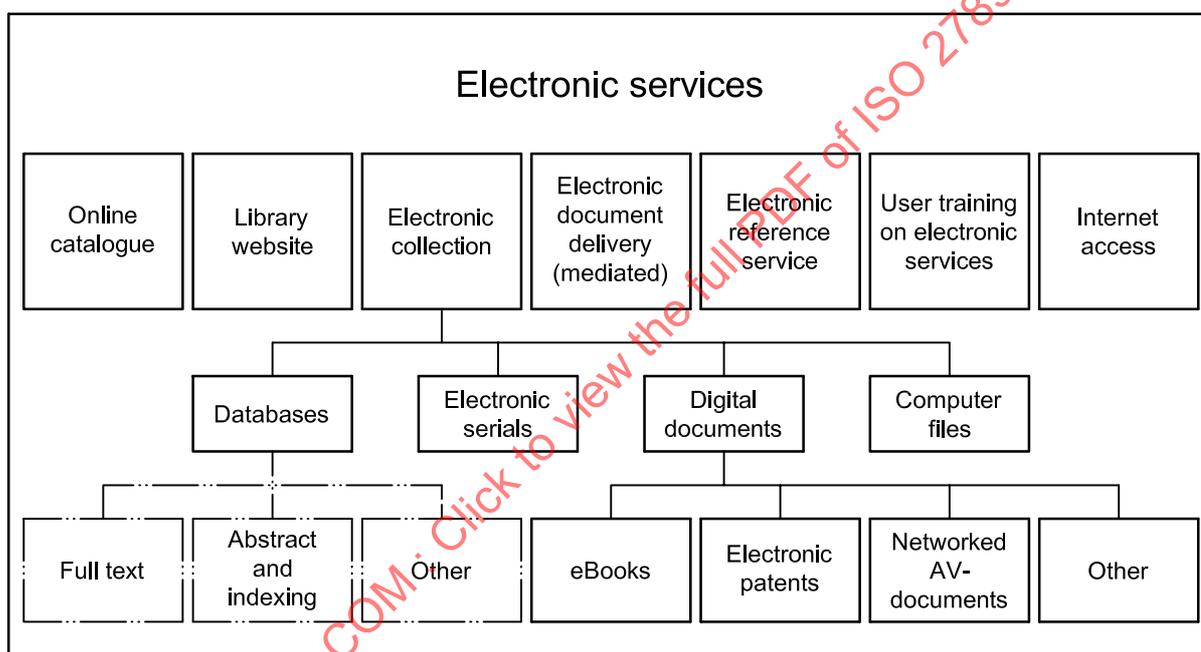


Figure A.1 — Overview of electronic services

Procedures to count mediated electronic document delivery are dealt with in Clause 6 together with all lending and mediated document delivery activities (see 3.3.5 and 6.3.11.3). Only unmediated access to electronic data is dealt with in this Annex.

The diagram in Figure A.1 does not show the way in which a user accesses the different services. It displays the interconnection of definitions in Clause 3. The dotted lines refer to the optional categories of databases given in B.2.1.7.

A.4.2 Electronic collection

The most important electronic service is the electronic collection (see 3.2.16) which consists of

- digital documents,
- databases,

- electronic serials, and
- computer files.

Their definitions and data collection procedures for stock and acquisition are treated in Clauses 3 and 6, respectively.

Digital documents, as defined in 3.2.12, include eBooks, electronic patents, networked audiovisual documents and other digital documents.

Patents are defined in 3.2.32 as a special group of documents and include all formats (print, microform, electronic). The use of electronic patents should nevertheless be included here together with all other digital documents.

All electronic services are shown in Figure A.1.

A.5 Use of electronic services

A.5.1 Introduction

During the last few years, libraries, institutions and publishers have tested datasets that can be used to assess the amount and the different ways of use of some or all electronic library services. Measures have been developed that turn out to be reliable when based on the same definitions and the same methods of data collection.

The main questions are as follows:

- How many times have users accessed an electronic library service?
- How many documents (citations or elements of information) did they find that they thought relevant?

Three core datasets have been identified which should, if possible, be collected for all services, separately for each service as well as summed for all services (see A.5.4):

- a) number of sessions;
- b) number of downloads (split up into content downloaded and record downloaded);
- c) number of virtual visits;

In addition to these core datasets which provide basic information on the use of electronic services, some additional data have been found relevant and should be collected when possible and appropriate:

- d) session time;
- e) number of rejected sessions (turnaways);
- f) number of searches;
- g) number of internet sessions.

All data refer to the use of the library collection, the library's website, the online catalogue and internet access via the library, and not to users accessing documents on the internet that are publicly available and free via the internet access in the library.

A.5.2 The datasets

A.5.2.1 Number of virtual visits

A virtual visit is defined as a user's request on the website from outside the library premises, regardless of the number of pages or elements viewed. A website visitor is either a unique and identified web browser program or an identified IP address that has accessed pages from the library's website (see 3.3.29).

NOTE 1 Virtual visits can be compared to traditional library visits.

NOTE 2 Methods for counting virtual visits are dealt with in A.5.3.

A.5.2.2 Number of searches

A search is defined as a specific intellectual query. Typically, a search is recorded each time a search request is submitted to the server (see 3.3.24).

NOTE Mistyped search strings do not represent unique intellectual inquiries. In practice, however, libraries will have difficulties to differentiate these unintended searches from intended, but unsuccessful searches.

A.5.2.3 Number of sessions

A session is defined as a successful request of a database or the online catalogue. It is one cycle of user activities that typically starts when a user connects to a database or the online catalogue and ends by terminating activity in the database or online catalogue that is either explicit (by leaving the database through log-out or exit) or implicit (timeout due to user inactivity) (see 3.3.25).

For services which are the aggregation of a number of individual databases, further information should be provided as to the separate databases hosted.

NOTE 1 In some cases, e.g. online catalogue use inside the library, several users might make use of the same workstation one after the other, and sessions could not be separated. In most systems, a session is cut off after a specified time of non-use, thus avoiding part of the problem. The average timeout setting would be 30 min. If another timeout period is used, this needs to be reported.

NOTE 2 Browser or proxy caching will be likely to reduce the number of requests registered in logfiles.

A.5.2.4 Number of rejected sessions (turnaways)

A rejected session (turnaway) is defined as an unsuccessful request of a database or the online catalogue by exceeding the simultaneous user limit (see 3.3.21). Request failure because of wrong passwords is excluded.

This dataset shows how far the simultaneous user limit is sufficient for users' demand.

NOTE The number of sessions exceeding the simultaneous user limit cannot always be differentiated from other rejections, e.g. missing or mistyped passwords.

A.5.2.5 Session time

Session time is defined as the period of time between a log-in to and an implicit or explicit log-off from a database or the online catalogue (see 3.3.26).

This count gives additional information on the intensity of use of a certain service.

NOTE The search time depends on many variables. These include the ease of handling (manuals, online help functions and self-explanatory menus), users' experience and automatic log-off settings. A long connect time, therefore, does not always reflect the users' interest in the service.

A.5.2.6 Number of contents downloaded

A content downloaded is defined as a content unit being successfully requested from a database, electronic serial or digital document (see 3.3.3).

Downloading content units from the library collection indicates that the users have found items that they consider relevant.

NOTE Browser or proxy caching will be likely to reduce the number of requests registered in logfiles.

A.5.2.7 Number of records downloaded

A record downloaded is defined as a descriptive record being successfully requested from a database or the online catalogue (see 3.3.19).

Downloading records from a database or the online catalogue indicates that the users have found bibliographical or other information that they consider relevant.

A.5.2.8 Number of internet sessions

An internet session is defined as internet access by a user from a workstation owned by the library or from a user's private computer inside the library via the library's network (see 3.3.12).

This dataset shows to what extent the library provides access to the internet for its users via its workstations or a network connection.

NOTE 1 Internet sessions via network connection needs to be counted separately.

NOTE 2 The number of internet sessions can only be counted if users have registered or authenticated themselves when accessing the internet. If these data are not available, the number might be estimated by surveying users.

A.5.3 Measuring virtual visits

A.5.3.1 General

A virtual visit is a series of requests for data files from one and the same website visitor. The interval between two consecutive requests in the series should not be longer than a *time-out period* of 30 min if they are to be counted as part of the same virtual visit. An interval longer than the time-out period initiates a new virtual visit.

The website visitor is either a unique and identified web browser program or an identified IP address that has accessed pages from the library's website during the measurement period.

A visitor usually means a person. However in the transaction logs only IP-addresses are registered. Between the reading person and the IP-address that is registered by the web server there is always at least one browser and a computer. Often there is also a proxy server that allows many visitors to be represented by the same IP-address.

There are three ways to measure virtual visits. The number of visits is based on visiting web browsers or IP addresses, or visits to the homepage are counted.

A.5.3.2 Web browser visit

A web browser visitor is a unique and identified installation of a web browser program which has been used by a physical person and which has fetched pages from the library's website during the measurement period. A web browser visit is a series of requests (with an interval of less than 30 min between two consecutive requests) for data files from the library's website to be sent to the same web browser visitor.

A way to avoid the problem with firewalls and proxy servers is to use cookies to identify a unique browser. The technique reduces uncertainty compared to the technique to use IP-addresses as an identifier. The relationship between person and browser is not unambiguous (many persons can use a public browser and a person can use different browsers at home, at work or elsewhere).

a) Advantages:

- The statistics for virtual visits are to a larger extent comparable to physical visits and more correct in relation to what is usually understood as a visit by a person.

b) Disadvantages:

- 1) Many persons using the same public browser are counted as one visitor.
- 2) Persons using more than one browser are counted as more than one visitor.
- 3) All web servers and browsers in the service shall be able to handle cookies and be configured for extended transaction log.

Statistics collection demands an analysis tool that manage to handle cookies.

A.5.3.3 IP visit

An IP visitor is an identified IP address which has been used by a physical person and which has fetched pages from the library's website during the measurement period. An IP visit is a series of requests (with an interval of less than 30 min between two consecutive requests) for data files from the library's website to be sent to the same IP visitor.

a) Advantages:

- 1) Simple, demands no web server modifications.
- 2) The analysis can be done with simple analysis tools.

b) Disadvantages:

- 1) All persons behind one and the same firewall/proxy server become one visitor.
- 2) Many persons using the same public browser are counted as one visitor.
- 3) Persons using more than one computer are counted as more than one visitor.

A.5.3.4 Home page visit

On a web presence, the home page is the page which serves as the visual unit that is displayed when accessing the library's Base. The home page may appear after the redirection through an entry page.

If the home page is a single HTML page, the deliveries are counted. If the home page consists of a frameset, however, the HTML document should be counted that comprises the most essential contents of the frameset.

Two different counting methods are suggested (in either case, the deliveries to known harvesters are to be eliminated):

- Counting the deliveries of the HTML document that is identified as the home page.

When using this counting method, all variants of the document's name have to be taken into account (i.e. including alias names defined through hardlinks or softlinks). For websites that are not frame based and do not have a redirecting entry page, accesses of the base URL (with and without a terminating slash) have to be counted, as well.

- Counting the deliveries of a Transparent GIF that is placed on the home page solely for counting purposes.

If the Transparent GIF graphic is used for counting, it shall only be included in the HTML document of interest (in this case: the home page). The number of deliveries of the Transparent GIF is identical to the number of home page deliveries.

Sometimes the home page exists in several languages. In this case, counting according to the first method above has to be done separately for every language and the partial results have to be added. When counting a Transparent GIF (second method), there are two options: Using the same Transparent GIF for all languages leads directly to the total number of deliveries. A separate Transparent GIF for every language requires the adding of partial results.

a) Advantages:

- Simple to use.

b) Disadvantages:

- The direct access to other pages of the library website is not counted.

A.5.4 Location of use

In order to know how far electronic library services enlarge the range of library services and increase their market penetration, it is important to know the provenance of each use. Three locations should be differentiated:

- a) inside the library (includes use by non-members of the population);
- b) outside the library, but inside the institution or authority (population to be served); includes use by members of the population from anywhere in the world);
- c) outside the institution or authority (population to be served).

Accuracy problems may arise from uses inside the library which may include those by external users (outside the population to be served), so that locations a) and b) together would not always show the exact number of uses by the population to be served. It may be difficult to distinguish between use by the population to be served and use by external users. Reliable results can be obtained from access systems requesting identification for every session. Controlled access is generally needed for bought or licensed services, and identification/authentication systems will probably be introduced widely to resolve this problem.

Table A.1 shows the data concerning the use of the library's electronic services that are considered necessary and useful for collection by libraries, as described in this annex.