
**Information and documentation —
Bibliographic data element directory —**

**Part 4:
Circulation applications**

*Information et documentation — Répertoire des éléments de données
bibliographiques —*

Partie 4: Applications à la circulation



Foreword

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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.

International Standard ISO 8459-4 was prepared by Technical Committee ISO/TC 46, *Information and documentation*, Subcommittee SC 4, *Computer applications in information and documentation*.

ISO 8459 consists of the following parts, under the general title *Information and documentation — Bibliographic data element directory*:

- *Part 1: Interloan applications*
- *Part 2: Acquisitions applications*
- *Part 3: Information retrieval applications*
- *Part 4: Circulation applications*

Annex A forms an integral part of this part of ISO 8459. Annexes B and C are for information only.

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Introduction

Data are interchanged for the purpose of starting or supporting a process. In order to transmit information required to support a process, the various elements of data in the interchanged messages must be fully understandable to the processes concerned. This part of ISO 8459 describes, in the form of a directory, data elements used to support circulation processes.

The data elements that may occur in a circulation transaction are presented in four ways:

- a) A data element directory (see clause 4) with annexes containing code values and description for messages (see A.1) and date/time qualifier (see A.2).
- b) An index (see clause 5) consisting of names, keywords and synonyms for data elements and data element values including names assigned to messages.
- c) A structured order of data elements (see clause 6) which relates similar data elements in a hierarchical fashion.
- d) A matrix (see clause 7) showing the data elements pertaining to specific circulation messages.

This part of ISO 8459 is the fourth part in a series which will, when complete, comprise a comprehensive data element directory for bibliographic use. This part of ISO 8459 is primarily intended for new circulation systems, for the exchange of circulation messages between different systems and for the exchange of data between client and server in the client/server model.

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Information and documentation — Bibliographic data element directory —

Part 4: Circulation applications

1 Scope

This part of ISO 8459 specifies and describes data elements required in the interchange of data between circulation systems (i.e. terminal to computer or computer to computer). It also identifies messages and their data elements which are used in circulation systems.

It is intended to support both batch and interactive circulation transactions.

Annex B provides examples of how this part of ISO 8459 may be used.

The structuring of the data elements into messages falls outside the scope of this part of ISO 8459.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 8459. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 8459 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 639:1988, *Code for the representation of names of languages*.

ISO 2108:1992, *Information and documentation — International standard book numbering (ISBN)*.

ISO 3166-1:1997, *Codes for the representation of names of countries and their subdivisions — Part 1: Country codes*.

ISO 3297:1986, *Documentation — International standard serial numbering (ISSN)*.

ISO 3901:1986, *Information and documentation — International Standard Recording Code (ISRC)*.

ISO 4217:1995, *Codes for the representation of currencies and funds*.

ISO 5218:1977, *Information interchange — Representation of human sexes*.

ISO 7498-3:1989, *Information processing systems — Open Systems Interconnection — Basic Reference Model — Part 3: Naming and addressing.*

ISO 8601:1988, *Data elements and interchange formats — Information interchange — Representation of dates and times.*

ISO/IEC 10027:1990, *Information technology — Information Resource Dictionary System (IRDS) Framework.*

ISO 10957:1993, *Information and documentation — International standard music number (ISMN).*

3 Definitions

For the purposes of this part of ISO 8459, the following definitions apply.

3.1 character string: An arbitrary combination of letters, digits, punctuation marks or other symbols.

3.2 circulation: The work of controlling the loan and supply, user identification, status, return, recall, associated fees, bookings and reservations for items or copies thereof of the holdings of a library.

3.3 data element: A basic unit of identifiable and definable data. It has a data element name represented by a tag as identifier and one or more values for expressing (a) particular fact(s).

3.4 data element directory: A listing of data elements with specifications of representative data element values, as appropriate.

3.5 data element group: A set of related data elements.

3.6 data element group name: One or more words in a natural language identifying a data element group.

3.7 data element name: One or more words in a natural language identifying a data element.

3.8 data element value: A fact expressed by codes, digits or natural language corresponding to the data element description and representation.

3.9 message: A structured combination of data elements used in a circulation transaction.

3.10 record: A group of data usually treated as a unit.

3.11 representation: The way in which a particular data element value is expressed using one or more number(s), letter(s) or symbol(s).

3.12 tag: An identifier allocated for use in place of a data element name or data element group name. (In this part of ISO 8459, a group of three digits.)

3.13 transaction: The creation or modification of a message required to support the circulation of an item or to provide information concerning circulation status.

4 Directory

The directory names and defines data elements and data element groups used to support circulation transactions. The information pertaining to each data element or data element group is presented in four separate columns, labelled tag, name, description and representation. A "tag" is used to identify a data element as well as a data element group. "Name" contains data element names and data element group names. Data element group names are printed in bold letters to distinguish them from data element names. "Description" includes a definition for each data element or data element group followed by a list of corresponding tags for data elements that comprise the group. "Representation and Remarks" includes explanatory text about conventions and/or standards used to represent values applicable to a data element or a data element group as well as sample values, if applicable.

Tag	Name	Description	Representation and remarks
001	Message identification	Data used to identify a particular message. Group identifier for data elements 002-004, 010.	
002	Message name	A phrase or code identifying the function of a message	See A.1.
003	Date	Year, month and day on which a transaction is performed, a message is sent or an event occurs.	Also used in conjunction with date/time qualifier (905). See A.2 for the various qualifiers that can be specified. See ISO 8601.
004	Time stamp	Time at which a transaction is sent, a message is sent or received or an event occurs.	Used by automated systems to indicate the precise hour, minute and second that a transaction occurred. Used in conjunction with A.2. See ISO 8601.
010	Transaction number	A code or number assigned to a document or message exchanged in a circulation-related transaction .	This number is assigned by the institution responsible for creating the specific type of document or message (e.g. loan, user identification, return, etc.).
040	Session details	Data that identifies various details about a specific session. Group identifier for data elements 050-078, 080-090, 092-097, 110, 231, 724-725, 848-849.	

Tag	Name	Description	Representation and remarks
050	Transaction participant	Data that identifies an institution which participates in a circulation transaction. Group identifier for data elements 060-078, 110.	
060	Participant's function	A word or code specifying the function or role performed by a party to a circulation session.	Possible values: 0 = circulation service provider 1 = database provider 2 = intermediary, gateway server 3 = circulation service user
076	Password	A code used by a system to authenticate the identity of an individual or automated process that has requested, or is using, a system function or service.	This code may be revised periodically to preserve its security. A password is typically supplied by the user at session initiation time but it could also be requested at any time during a session.
077	Password edition	A code or phrase used to identify the current and previous password(s).	This data element is used in conjunction with a user identification number (303), an institution identifier (115-116) and telenetwork user identifier (165).
078	Password type	A code or phrase used to indicate the specific services allowed to the password holder.	This data element is used by systems to support multiple levels of authentication. Possible values: 0 = system connection 1 = database connection 2 = read access 3 = write access 4 = delete privileges 5 = output instructions Security level (849) is used to control access to classified information. Related to access privileges (724), which provides various details associated with a type of privilege. 078 states the type of privilege.

Tag	Name	Description	Representation and remarks
080	Session identifier	A code or number used to identify a specific period of interaction between a user and an automated system.	A session typically covers all transactions between user and system from log-on to log-off. Sessions may be aborted prematurely by unusual systems or telecommunications events to produce an artificial log-off point. Sophisticated systems allow sessions to be suspended and resumed later or to change applications during a particular session.
081	Subsession identifier	A code or number used to identify a period of interaction with one specific service provided within a single session on an automated system.	
086	Reference identifier	A code or number assigned to an intersystem communication.	This number is used to monitor and verify that all system interactions have been transferred and processed in the proper sequence.
087	Continue flag	An instruction that processing should continue even though resource constraints (090 and 725) have been exceeded.	Possible values: 0 = continue 1 = stop
088	Suspend flag	An indication whether processing has been suspended whenever resource constraints have been exceeded (090, 092 and 725).	Possible values: 0 = processing not suspended 1 = processing suspended
090	Cost constraint	A predefined monetary value, which, if exceeded, will result in a specific system action.	Cost constraints are frequently used to limit the system resources that may be consumed by any one user over a given period of time.
092	Session length constraint	A predefined time limit, which, if exceeded, will result in a predefined system action.	A system will typically terminate a session after a set amount of time of system usage or inactivity.

Tag	Name	Description	Representation and remarks
095	Resource usage type	A numeric value used to indicate the type of system resource that has been used within a session or given time period.	<p>Systems typically maintain information on the following resources in order to support planning, monitoring and controlling of these resources.</p> <p>Possible values: 0 = CPU time 1 = connect type 4 = number of sessions 7 = packets transmitted 8 = memory 9 = terminal transactions 10 = number of disk accesses 11 = number of tapes</p> <p>Used in conjunction with amount of usage (097).</p>
096	System performance	Data collected to inform management about system performance.	<p>Typical system performance measures include:</p> <p>Possible values: 0 = start-up delay 1 = percentage of down time 2 = number of system malfunctions 3 = number of telecommunication interruptions 4 = average response time</p> <p>Used in conjunction with amount of usage (097).</p>
097	Amount of usage	A figure that measures the values established under resource usage type (095) and system performance (096).	
110	Institution identification	<p>A group of data elements or code intended to identify an institution participating in a session or circulation transaction.</p> <p>Group identifier for data elements 111-118 and 130-142, 160-166.</p>	

Tag	Name	Description	Representation and remarks
111	Name of institution	A word, or phrase or initialism intended to identify an institution or corporation. Group identifier for data elements 112 to 114.	
112	Main unit of institution name	The base name of an institution.	
113	Subordinate unit of institution name	A part of a name of an institution that defines a subdivision or department or unit of the institution.	This data element may be repeated to define subordinates of subordinates.
114	Abbreviated name	Short form of an institution's name (111).	
115	Institution identifier code	A code used to identify the numbering system contained in the institution identifier.	
116	Institution identifier	Unique number or code used to identify an institution.	
117	Official seal of institution	A design, initial or other device serving to identify an institution in an official manner.	
118	Institution role	A code or phrase that defines the role of the institution in a particular circulation transaction.	Possible values: 0 = direct user 1 = associated with another user
130	Address	A code or phrase that gives the geographic location or place associated with an institution or user. Group identifier for data elements 131-142, 160-166.	This element may be used in conjunction with institution identification (110) or user identification (300). For telenetwork addresses see (160).

Tag	Name	Description	Representation and remarks
131	Address instruction	A word or code that indicates the type of message or mail that is sent to the address where there are multiple addresses associated with an institution or individual.	This data element is used in conjunction with address (130). Possible values: 0 = ship to 1 = bill to
132	Address type	A code, word or phrase that defines the nature of a particular address where there are multiple addresses associated with an institution or individual.	Possible values: 0 = Temporary address 1 = Permanent address 2 = Parent's address 3 = Business address 4 = Other
133	Delivery service	A code, word or phrase that indicates the mail service that will deliver to an address.	Possible values: 0 = National mail service 1 = Campus mail 2 = Internal courier 3 = Other
134	Current address flag	A code, word or phrase that indicates which address, of a series of addresses associated with an institution or individual, is valid.	Where all types of messages and mail are sent to only one address, this data element is used to indicate the current address from possible multiple addresses. Where different types of messages and mail are sent to different addresses, then the address instruction data element (131) is used instead of this element. Possible values: 0 = Address current 1 = Address not current 2 = Unknown
135	Post office box	A box number assigned by the postal authority.	
136	Location within building	A number and/or phrase used to identify a location within a building or building complex.	Used when a second sequence of numbering in addition to a street and number (data element 137) are needed to identify a particular location. Examples: Suite 42 Level 4

Tag	Name	Description	Representation and remarks
137	Street and number	A number and/or phrase used to identify a location of a building within a city, rural or local area.	This data element can be used to include the names of buildings. It is used in conjunction with the data element location within building (136). The two data elements may be combined into one address line.
138	City	A word or phrase used to identify a city, including suburb or postal area.	
139	Locality	A word or phrase identifying a subentity within a country.	Includes county, parish, etc.
140	Region	A word or phrase identifying an area within a country.	Includes state, province, department and prefecture.
141	Country	A word or phrase used to identify a country.	For country codes consult ISO 3166-1.
142	Postal code	A code assigned by the postal authorities of a country that uniquely identifies an address or group of addresses.	
150	Telecommunications carrier	A code, word, phrase or initialism used to identify the telecommunications carrier facilities being used to access a remote system.	It may be necessary to identify more than one carrier. The name of the carrier may also imply the switching technology that is being used (i.e. packet-switched or circuit-switched).
160	Telenetwork address	Unique number or code used to identify a device within a communications network. Group identifier for data elements 161-166.	
161	Telephone number	Unique number assigned to a telephone line.	
162	Telefacsimile number	Telecommunications number used for sending and receiving telefacsimiles.	

Tag	Name	Description	Representation and remarks
164	Electronic mail identifier	Unique number assigned to an electronic mail box or service connection.	
165	Telenetwork user identifier	Unique code assigned to a user in a communications network.	This data element may or may not be the same value as institution identifier (116).
166	Host system network address	Unique number or code used to identify a host system within a communications network.	See ISO 7498-3.
231	Session transaction history	A listing of transactions previously executed during a session.	
300	User identification	A group of data elements or code intended to identify an individual or institution involved in circulation transactions. Group identifier for data elements 301-308.	
301	User affiliation	Name of the system that has registered a unique number or code to identify a user.	Used in conjunction with user's internal identification (302) to identify a user uniquely on any circulation system. Can include standard codes such as SAN and vendor agency code.
302	User's internal identification	Unique number or code used by a circulation system to identify a person or institution involved in a circulation transaction.	This number is the number used by the system to identify the user, as distinct from the user identification number 303 that may appear on a borrower card.
303	User identification number	Number presented to a circulation system to identify a user.	
304	Check digit algorithm	Name of an algorithm used for generating a check digit in a user external identification number.	

Tag	Name	Description	Representation and remarks
305	Former identification number at this institution	Number formerly presented to a circulation system to identify a user.	This element is usually in the same format as the current user identification number (303).
306	User password	A string of octets used to validate a user for restricted or confidential activities.	Systems may require a password when the user is performing transactions personally, e.g. loans, renewals, reservations. The password may be encrypted. This can be, and usually is, different from the passwords needed to establish a session (076).
307	User's role	The role of a user in a circulation transaction.	<p>Possible values:</p> <ul style="list-style-type: none"> 0 = borrower 1 = user of an item within the building 2 = acquirer of a copy 3 = user reserving a title or an item 4 = user booking an item 5 = receiver of notification 6 = user incurring a fee or fine 7 = has previously borrowed item
308	Alternative user identity information	<p>Alternative information presented to a circulation system to identify a user.</p> <p>Group identifier for data elements 301-307.</p>	<p>Used when multiple IDs are issued for the same individual or institution.</p> <p>Examples:</p> <p>A research assistant borrowing on behalf of another researcher or department.</p> <p>A family whose members all have separate IDs but who all receive mail under a single user identification.</p>
309	Record status	A code that indicates the status of the record for file maintenance purposes.	<p>Possible values:</p> <ul style="list-style-type: none"> 0 = new record 1 = deleted record 2 = corrected record <p>If record status = "1", then the record may contain only this element (309), user identification information (300) and date and time of last update (A.2 - code 15).</p>

Tag	Name	Description	Representation and remarks
310	User's name	Name of the person or institution involved in the circulation transaction. Group identifier for data elements 312, 325.	
312	Personal name	Name of a person involved in a circulation transaction. Group identifier for data elements 314-319.	
314	Surname	Family name of an individual.	Part of the name by which a name is filed and retrieved from an ordered list. If an individual has only one name, then it is recorded as a surname data element. This data element includes compound names, that is names joined by a hyphen (e.g. Bridges-Webb) and complex surnames that contain more than one separate word (e.g. Day Lewis, La Fontaine Verwey).
315	Given name	A simple, double or compound name that distinguishes an individual within a family carrying a common name.	Part of a name that is used for secondary filing. The given name usually precedes the surname when constructing a personal name. Christian names and forenames are included as given names.
317	Suffix	A name element, placed on the end of a name that, in conjunction with a surname and a given name or names, serves to identify an individual, but does not form an integral part of a name.	Includes titles, epithets and indication of office. Examples: Jr., Esq.
318	Prefix	A name element, placed before other personal name elements such as surname and given names that, in association with these elements, serves to identify an individual, but does not form an integral part of a name.	Part of a name that is normally not used for sequencing. Includes titles, epithets and indication of office. Examples: Mr., Hon., Dr.

Tag	Name	Description	Representation and remarks
319	Numeric qualifier	A numeric element, either Arabic, Roman or other numeric type, that in conjunction with surname and given names, forms an integral part of a name, serving to identify an individual.	Part of a name that is used for secondary filing. The numeric data element usually is placed after other name elements such as surname and given name. Example: IX.
320	Sex	A code indicating the gender of an individual.	See ISO 5218.
321	Language	A code indicating the language in which a user prefers to communicate.	For language codes used, consult ISO 639.
325	Corporate name	Name of an institution involved in a circulation transaction. Group identifier for data elements 111-118.	
330	User privacy information	A group of elements to protect the confidentiality of user information. Group identifier for data elements 331-332.	
331	Permission to use this record	An indication of the extent to which a user record may be used.	Possible values: 0 = access restricted to use within a single institution and/or database 1 = record may be read by another institution and/or database 2 = Record may be copied to another institution and/or database 3 = Information in this record may be used for non-traditional library activities, such as mailing lists
332	Further privacy restriction	Additional restriction on the use and distribution of information about a user.	Free-form privacy information, to be defined as needed.

Tag	Name	Description	Representation and remarks
345	Source of primary data	Source of user information found in this record when it was derived from another system.	
366	Identity document	A document, licence or card used to identify an individual, issued by a government or other administrative body. Group identifier for data elements 367-370.	
367	Type of identity document	A code or phrase indicating a document, licence or card used to identify an individual.	Possible values: 0 = Driver's licence 1 = Passport 2 = National identity card 3 = Residency permit 4 = Military serial identification 5 = Social security card 6 = Credit card 7 = Card issued by related institution, e.g. academic, local council 8 = Locally defined identity document 9 = Other
368	Administrative authority issuing identity document	A government or other administrative authority issuing an identity document.	Includes country, state and province.
369	Identity document number	A unique number or character string assigned by an administrative authority to identify an individual.	
370	Other information related to an identity document	Information related to an identity document that clarifies the relationship of the individual to the administrative body issuing the identification.	Examples: Visa information in a passport Military service and rank associated with a military service ID number Academic affiliation information

Tag	Name	Description	Representation and remarks
400	Address of user	A code or phrase which gives the geographic location or place associated with a user. Group identifier for data elements 130, 160.	
420	Descriptive elements for user	A group of data elements which are used to identify a user's relationship to the library and/or parent institution. Group identifier for data elements 421, 435-436.	Used for policy determination and statistics. Not related to borrowing history.
421	Borrowing privileges	A group of data elements indicating a user's borrowing characteristics and privileges. Group identifier for data elements 422-434.	
422	User type	A code or phrase given by a library or parent institution that signifies a user's normal borrowing and other privileges.	Examples: Undergraduate House-bound service Military service and rank
424	User loan status	A code or phrase that may indicate a user's borrowing and other privileges.	This code is used in conjunction with User type (422) that may determine default values for this data element. Possible values: 0 = No restrictions 1 = Loan privileges denied 2 = Renewal privileges denied 3 = Recall privileges denied 4 = Too many items on loan 5 = Too many items overdue 6 = Too many renewals 7 = abnormal returns count warning (claims item returned or never borrowed) 8 = Too many items lost

Tag	Name	Description	Representation and remarks
			9 = Excessive outstanding fines 10 = Excessive outstanding fees 11 = Recall overdue 12 = Too many items billed 13 = Self-service loan privileges denied 14 = Interloan privileges denied 15 = Card reported lost or stolen Additional values may be defined as required. Interpretation of "too many" is locally defined.
427	User's home library	A code or phrase representing the library at which a user is registered for borrowing and other privileges.	
428	User's home location or branch	A code or phrase representing the location within the library at which a user is registered for borrowing and other privileges.	
429	User service point	A code or phrase representing a location within or outside a library from which a user borrows library material.	Used where a user may regularly use more than one location, for example, both a branch and a bookmobile stop.
430	Minor flag	A code indicating that a user's age is lower than that of an adult and as a consequence another person, usually a parent, is responsible for his or her loans and financial transactions.	Possible values: 0 = Minor 1 = Age of majority 2 = Unknown The definition of the threshold may vary by lending location.
432	Budget / fund identification	A code or phrase representing a budget or fund to which a user's chargeable transactions are recorded.	

Tag	Name	Description	Representation and remarks
433	Billing information	A phrase indicating instructions for billing a particular user.	Used when another user receives a particular user's bills.
434	Additional borrowing privilege information	A phrase that indicates qualifications to a user's normal borrowing privileges.	
435	User reservation status	A code or phrase that may indicate a modification to a user's normal reservation privileges.	<p>This code is used in conjunction with user type (422) that may determine default values for this data element.</p> <p>Possible values: 0 = No restrictions 1 = Reservation privileges denied</p> <p>Additional values may be defined as required.</p>
436	User booking status	A code or phrase that may indicate a modification to a user's normal booking privileges.	<p>This code is used in conjunction with user type (422) that may determine default values for this data element.</p> <p>Possible values: 0 = No restrictions 1 = Booking privileges denied</p>
440	General organisational information for a user	<p>A group of data elements defining a user's relationship to a parent institution or organisation.</p> <p>Group identifier for data elements 110, 441-445.</p>	
441	User title in organisation	A phrase defining a user's role and function within an organisation.	<p>Examples: President, Managing director, Student, Visiting Professor, Research Associate</p>
442	User's activity	A word, code or phrase that indicates a particular task being undertaken by an individual, either individually or as part of a group.	<p>Includes details of academic enrolment and names of research projects within research institutions.</p> <p>Examples: AIDS research team; Ph.D in Physics</p>

Tag	Name	Description	Representation and remarks
445	Additional general organisational information	A phrase that provides information about a section of an organisation with which a user is associated.	
460	Additional descriptive user information	A phrase containing information, defined by a local system, concerning a user's relationship to a circulation system.	
465	Alternative user information	A group of data elements identifying alternative information for an individual. Group identifier for data elements 308, 310, 400, 466.	Used when an individual has more than one identification and may, or may not be, registered under that alternate information.
466	Type of alternative information	A code or phrase that defines the nature of alternative user information.	Examples: Maiden name Pseudonym or alias
467	Related personal user information	A group of data elements identifying another individual or user related to a user. Group identifier for data elements 300, 310, 400, 468-9.	This data element group may be used for other names of individuals or institutions that may share the borrowing privileges or responsibilities of a user and may or may not be given a separate identification. Used in association with the minor flag (430).
468	Personal relationship to user	A code or phrase that defines the relationship between an individual or institution and a user.	Possible values: 0 = Parent 1 = Guardian 2 = Referrer
469	Personal / corporate responsibility flag	A code that indicates that an individual or institution is responsible for the actions or obligations of an individual.	Possible values: 0 = Not Responsible 1 = Responsible 2 = Responsible for loans and fines
480	User note	A group of data elements carrying additional information concerning a user. Group identifier for data elements 481-483, 594-595.	

Tag	Name	Description	Representation and remarks
481	Borrowing privilege note	A free text note that qualifies or explains the current borrowing privileges of a user.	Examples: Overdue charges are waived temporarily due to hospitalisation until a particular date.
482	Borrower status note	A free text note that qualifies or explains the current status of a user.	Examples: User requires large print books.
483	Miscellaneous user note	A free text note concerning a user that relates to library use.	
490	Locally defined element concerning a user	A data element defined by a local system containing information about a user.	
500	Item identification	A group of data elements that identify a particular item within a library collection. Group identifier for data elements 115-116, 502-509, 594-595.	
502	Circulation status	A code that indicates the availability of an item for loan.	Possible values: 0 = available on shelves 1 = circulation status undefined 2 = on order 3 = not available; undefined 4 = on loan 5 = on loan and not available for recall until earliest recall date 6 = in process 7 = recalled 8 = waiting on reservation shelf 9 = waiting to be re-shelved 10 = in transit between library locations 11 = claimed returned or never borrowed 12 = lost 13 = missing 14 = supplied 15 = other, e.g. rebinding, duplicating

Tag	Name	Description	Representation and remarks
503	Circulation category	A code that indicates special restrictions which apply at the time of a transaction.	<p>This code may be used in combination with the user type (422) and security level (849) in determining a loan period.</p> <p>Possible values: 0 = undetermined 1 = not for loan 2 = in library use only 3 = overnight only 4 = use only in rare book room 5 = renewals not permitted 6 = circulation limited by user type, short loan period 7 = circulation limited by user type, normal loan period 8 = circulation limited by user type, long time period 9 = term loan 10 = semester loan 11 = available for supply without return</p>
504	Current location	The section within a library at which an item is at a particular point in time, or where it was last lent, returned or sighted.	Related to permanent location (508) and temporary location (509).
505	Internal item identification	A unique number or code used by a circulation system to identify an item involved in a circulation transaction.	This number is the number used by the system to identify an item, as distinct from the identification number that may appear on the item in the form of a barcode (506).
506	Item identification number	Number or phrase presented to a circulation system to identify an item.	<p>Typically a barcode number. This number may be combined with the institution identification code and/or permanent location to ensure its uniqueness.</p> <p>This is distinct from the system's internal identification number (505) which is usually different.</p>
507	Item number check digit algorithm	Name of an algorithm used for generating and checking a check digit in an item identification number.	

Tag	Name	Description	Representation and remarks
508	Permanent location	Name of a section of a library that normally stores the item when it is not in use, on loan or on the reservation shelves.	If a current location exists that is different from the permanent location, it normally indicates where a item actually is, as opposed to where it should be.
509	Temporary location	Name of a section of a library that has been allocated to store an item for a defined period, overriding the normal permanent location.	If a current location exists that is different from the temporary location, it normally indicates where an item actually is, as opposed to where it should be.
510	Bibliographic information	A group of data elements that identify a particular bibliographic title or part. Group identifier for data elements 511-514, 594-595.	Bibliographic information is used when making reservations at a global level, for example any copy of a particular title.
511	International standard numbering code name	The name of an international standard numbering code used to identify a bibliographic title or part.	Possible values: 0 = ISBN (ISO 2108) 1 = ISSN (ISO 3297) 2 = ISRC (ISO 3901) 3 = ISMN (ISO 10957) 4 = other
512	International standard number	International standard number assigned to a bibliographic title or part.	
513	Bibliographic record identifier code	A code used to identify the numbering system or type of retrieval data contained in the bibliographic record identifier (514).	Possible values: 0 = British National Bibliography number 1 = Library of Congress control number 2 = Title search string 3 = Author/title search string 4 = other
514	Bibliographic record identifier	A unique identifier assigned to a bibliographic title.	Possible values include numbers assigned by national bibliographies and other agencies. This data element can also include alphabetic key data used to identify a title.

Tag	Name	Description	Representation and remarks
			Examples: British National Bibliography number Library of Congress Control number Title search string Author/title search string
526	Renewal number	A number representing the number of times the time period of a loan has been extended.	Possible values: 0 = not renewed 1 = renewed once (loan valid for 2 loan periods)
527	Overdue notice number	A number representing the number of times a notice has been sent requesting return of an item on loan.	Possible values: 0 = no overdue sent 1 = one overdue sent 2 = two overdues sent
530	Monetary information	A group of data elements that indicate the financial transactions associated with circulation transactions. Group identifier for data elements 531-534, 594-595.	
531	Amount of fee	A sum of money representing the amount of a fine or fee associated with a circulation transaction.	
532	Fees outstanding	The total of all fees and fines owed by a user to a library.	
533	Currency code	A code indicating the type of currency of a particular sum of money.	See ISO 4217 for a list of valid currency codes.
534	Fee type	A code representing the reason for a fine or fee.	Possible values: 0 = undefined fee 1 = administrative fee 2 = damage fee 3 = overdue fine 4 = processing fee 5 = rental fee 6 = replacement fee 7 = supply fee

Tag	Name	Description	Representation and remarks
540	Reservation and booking information	A group of data elements concerning reservations on titles and items within a library collection, and bookings for specific time periods for items. Group identifier for data elements 541-550, 594-595.	For a definition of the difference between a reservation and a booking, refer to message type definitions of reservation request (A.1 29) and booking request (A.1 33).
541	Reservation collection location	A location within a library from which a user wishes to collect a reserved item when it becomes available.	
542	Reservation advice notice	A code that indicates whether or not a user requires an advice notice to be sent when a reserved item becomes available.	Possible values: 0 = Advice required 1 = Advice not required
543	Reservation queue position	Position of a user on a reservation queue for a particular item, title or group of items.	
544	Reservation queue length	A count of the number of users in a reservation queue for a particular item, title or group of items.	
545	Reservation target location	Name of a location within a library holding an item or several items that can fulfill a user's reservation request.	
546	Reservation type	A code or phrase that indicates the scope of a reservation, defining a group of titles and items to which a reservation applies.	Possible values: 0 = undefined reservation type 1 = reserve any item related to a title 2 = reserve a particular item 3 = reserve any item related to a particular title at a particular location, 4 = reserve any item related to a particular title at a particular group of locations 5 = reserve any item related to a particular group of titles, e.g. subject reservation

Tag	Name	Description	Representation and remarks
			6 = reserve any item related to a group of titles at a particular location. 7 = reserve any item related to a group of titles at a particular group of locations
547	Reservation status	The status of a particular reservation.	Possible values: 0 = Current reservation 1 = Returned reservation 2 = On reservation shelves 3 = Expired reservation
550	Booking location	A location within a library where a user has booked a particular item for a particular time period.	Examples: Reserve book room Video branch library
570	Item history information	A group of data elements giving information on the transaction history of an item. Group identifier for 572-579.	
572	Borrower relationship to item	A code indicating the status of the relationship between a user and an item.	Possible values: 0 = Current borrower 1 = The last user who borrowed and returned an item, i.e. immediately prior to the current loan, if there is one 2 = The second last user who borrowed and returned an item 3 = The third last user who borrowed and returned an item 4 = Current reserving user (head of reservation queue) 5 = Current booking user (for a future time period closest to session date and time)
578	Total loans count	The number of times that an item has been lent over a given period.	
579	Total loans count period	The time period used to calculate the total loans count for an item.	

Tag	Name	Description	Representation and remarks
590	Free text instruction	A code or phrase that may accompany a circulation transaction to provide additional information. Group identifier for data elements 591-592.	
591	Instruction code	A code, defined internally by a circulation system, identifying the nature of the contents of a free text message.	Possible values: 0 = instruction unrelated to a transaction, e.g. changes in opening hours 1 = overdue message 2 = reservation available message
592	Instruction override	A code, defined internally by a circulation system, indicating the actions that may follow from a particular message.	Used in conjunction with the free text instruction and instruction code (590 and 591). Possible values: 0 = override possible 1 = override possible with password 2 = override possible with security clearance 3 = override not possible 4 = affirmation not required; information only
594	Free text note	A message that relates to a database record, carrying additional information.	These are free text notes that may be attached to user records, item records, loan records, reservation records as required.
595	Free text note code	A code, defined internally by a circulation system, identifying the nature of the contents of a free text note.	Examples: 0 = item information 1 = miscellaneous borrower information 2 = additional loan information, e.g. location within a school of a particular borrowed item 3 = additional reservation information
598	Transaction completion flag	A code to indicate whether or not a transaction has been successful or not.	Possible values: 0 = Unsuccessful transaction 1 = Successful transaction

Tag	Name	Description	Representation and remarks
724	Access privileges	Services permitted for the user upon successful connection to circulation system.	Related to 078 Password type, which states the types of privilege. 724 provides various details associated with a type of privilege.
725	Resource limitation	A predefined value which imposes a limit on the amount of systems resources that may be consumed or which, if exceeded, will result in a specific system action.	Most systems will impose limits on the amount of disk storage that is available to the user, the number of lines that may be printed, etc. Used with 095 to identify the type of resource. Complements 090 and 092. Used in conjunction with 097.
848	Security violation	A phrase or code used to report a problem in carrying out an operation for security reasons.	Possible values: 0 = inappropriate authentication 1 = invalid credentials 2 = unrecognised security level 3 = insufficient access rights 4 = invalid signature
849	Security level	A phrase or code used to specify the right of a user to access information at various levels of confidentiality.	This data element can be associated with specific records, or fields within records. It can also be used to classify data fields in records.
905	Date/time qualifier	A word or code which identifies an activity or condition that will happen, or that has happened, on a given day.	For a set of specific qualifiers see A.2. Used in conjunction with date (003).
910	Help topic	A word or phrase that identifies system function, operations or services for which explanatory information is available to a user in order to clarify a given system capability and the steps to be followed in using that capability.	Help could be provided for free text instructions (590).

5 Index

The index entries include names, keywords and synonyms for data element groups and data element values (i.e. codes) listed in the directory and names, keywords and synonyms for specific messages and data types listed in annex A. The entries are arranged in alphabetical order. The right-hand column labelled "Reference" gives the tag or annex and code (if applicable) for the indexed entity.

Entry	Reference
Abbreviated name	114
Abnormal returns count warning	424 Code 7
Access privileges	724
Access request	A.1 Code 01
Acquirer of a copy	307 Code 2
Additional borrowing privilege information	434
Additional descriptive user information	460
Additional general organisational information	445
Address	130
Address current	134 Code 0
Address instruction	131
Address not current	134 Code 1
Address of user	400
Address type	132
Administrative authority issuing identity document	368
Administrative fee	534 Code 1
Advice not required	542 Code 1
Advice required	542 Code 0
Affirmation not required	592 Code 4
Age of majority	430 Code 1
Alternative user identity information	308
Alternative user information	465
Amount of fee	531
Amount of usage	097
Associated with another user	118 Code 1
Author/title search string	513 Code 3
Available for supply without return	503 Code 11
Available on shelves	502 Code 0
Average response time	096 Code 4
Bibliographic information	510
Bibliographic record identifier	514
Bibliographic record identifier code	513
Bill to	131 Code 1
Billing information	433
Booking cancellation request	A.1 Code 35
Booking cancellation response	A.1 Code 36
Booking location	550
Booking privileges denied	436 Code 1
Booking request	A.1 Code 33

Entry	Reference
Booking response	A.1 Code 34
Booking schedule request	A.1 Code 49
Booking schedule response	A.1 Code 50
Borrower	307 Code 0
Borrower relationship to item	572
Borrower status note	482
Borrowing privilege note	481
Borrowing privileges	421
British National Bibliography Number	513 Code 0
Budget/fund information	432
Business address	132 Code 3
Campus mail	133 Code 1
Card issued by related institution	367 Code 7
Card reported lost or stolen	424 Code 15
Charge: See Loan or see Fee	
Check digit algorithm	304
Checkin: See Return	
Checkout: See Loan	
Circulation category	503
Circulation limited by user type - long time period	503 Code 8
Circulation limited by user type - normal time period	503 Code 7
Circulation limited by user type - short time period	503 Code 6
Circulation service provider	060 Code 0
Circulation service user	060 Code 3
Circulation status	502
Circulation status undefined	502 Code 1
City	138
Claimed returned or never borrowed	502 Code 11
Connect type	095 Code 1
Continue	087 Code 0
Continue flag	087
Corporate name	325
Corrected record	308 Code 2
Cost constraint	090
Country	141
CPU time	095 Code 0
Credit card	367 Code 6
Currency code	533
Current address flag	134
Current booking user	572 Code 5
Current borrower	572 Code 0
Current location	504
Current reservation	547 Code 0
Current reserving user	572 Code 4
Damage fee	534 Code 2
Database connection	078 Code 1

Entry	Reference
Database provider	060 Code 1
Date	003
Date of birth	A.2 Code 16
Date/time address invalid	A.2 Code 14
Date/time address valid	A.2 Code 13
Date/time booking ends	A.2 Code 38
Date/time booking starts	A.2 Code 37
Date/time connect/disconnect	A.2 Code 01
Date/time current session begins	A.2 Code 02
Date/time due	A.2 Code 29
Date/time identity document commences	A.2 Code 21
Date/time identity document expires	A.2 Code 22
Date/time of automatic deletion	A.2 Code 19
Date/time of earliest recall	A.2 Code 30
Date/time of item's last activity	A.2 Code 41
Date/time of last return	A.2 Code 39
Date/time of last session	A.2 Code 03
Date/time of last transfer	A.2 Code 40
Date/time of last update	A.2 Code 15
Date/time of loan	A.2 Code 28
Date/time of registration	A.2 Code 17
Date/time of reservation collection	A.2 Code 35
Date/time of renewal	A.2 Code 32
Date/time of return	A.2 Code 31
Date/time of transaction	A.2 Code 12
Date/time of user booking status	A.2 Code 25
Date/time of user loan status	A.2 Code 23
Date/time of user reservation status	A.2 Code 24
Date/time of user's last activity	A.2 Code 20
Date/time overdue notice sent	A.2 Code 42
Date/time project or certificate commences	A.2 Code 26
Date/time project or certificate completes	A.2 Code 27
Date/time qualifier	905
Date/time registration expires	A.2 Code 18
Date/time reservation advice notice sent	A.2 Code 36
Date/time reservation expires	A.2 Code 33
Date/time reservation required	A.2 Code 34
Date/time session ended	A.2 Code 11
Date/time session started	A.2 Code 10
Delete privileges	078 Code 4
Deleted record	308 Code 1
Delivery service	133
Descriptive elements for user	420
Direct user	118 Code 0
Discharge: See Return	
Driver's licence	367 Code 0

Entry	Reference
Electronic mail identifier	164
Excessive outstanding fees	424 Code 10
Excessive outstanding fines	424 Code 9
Expired reservation	547 Code 3
Explain request	A.1 Code 63
Explain response	A.1 Code 64
Fee request	A.1 Code 17
Fee response	A.1 Code 18
Fee type	534
Fees outstanding	532
Former identification number at this institution	305
Free text instruction	590
Free text note	594
Free text note code	595
Further privacy restriction	332
General organisational information for a user	440
Given name	315
Guardian	468 Code 1
Has previously borrowed item	307 Code 7
Help topic	910
Hold: See Reservation	
Host system network address	166
Identification request	A.1 Code 02
Identification response	A.1 Code 03
Identity document	366
Identity document number	369
ILL: See Interloan	
In library use only	503 Code 2
In process	502 Code 6
In transit between library locations	502 Code 10
Inappropriate authentication	848 Code 0
Initialise request	A.1 Code 04
Initialise response	A.1 Code 05
Institution identification	110
Institution identifier	116
Institution identifier code	115
Institution role	118
Instruction code	591
Instruction override	592
Instruction unrelated to a transaction	591 Code 0
Insufficient access rights	848 Code 3
Interloan privileges denied	424 Code 14
Intermediary gateway server	060 Code 2

Entry	Reference
Internal courier	133 Code 2
Internal item identification	505
International standard number	512
International standard numbering code name	511
Invalid credentials	848 Code 1
Invalid signature	848 Code 4
ISBN	511 Code 0
ISMN	511 Code 3
ISRC	511 Code 2
ISSN	511 Code 1
Issue: See Loan	
Item history information	570
Item history request	A.1 Code 25
Item history response	A.1 Code 26
Item identification	500
Item identification number	506
Item location transfer request	A.1 Code 27
Item location transfer response	A.1 Code 28
Item number check digit algorithm	507
Item status request	A.1 Code 21
Item status response	A.1 Code 22
Item status update	A.1 Code 23
Item status update response	A.1 Code 24
Language	321
Last user who borrowed and returned an item	572 Code 1
Library of Congress Control Number	513 Code 1
Loan privileges denied	424 Code 1
Loan request	A.1 Code 11
Loan response	A.1 Code 12
Locality	139
Locally defined element concerning a user	490
Locally defined identity document	367 Code 8
Location within building	136
Lost	502 Code 12
Main unit of institution name	112
Memory	095 Code 8
Message: see also instruction	
Message identification	001
Message name	002
Military serial identification	367 Code 4
Minor	430 Code 0
Minor flag	430
Miscellaneous user note	483
Missing	502 Code 13
Monetary information	530

Entry	Reference
Name of institution	111
National identity card	367 Code 2
National mail service	133 Code 0
New record	308 Code 0
Not available; undefined	502 Code 3
Not for loan	503 Code 1
Not renewed	526 Code 0
Not responsible	469 Code 0
Number of disk accesses	095 Code 10
Number of sessions	095 Code 4
Number of system malfunctions	096 Code 2
Number of tapes	095 Code 11
Number of telecommunications interruptions	096 Code 3
Numeric qualifier	319
Official seal of institution	117
On loan	502 Code 4
On loan and not available for recall until...	502 Code 5
On order	502 Code 2
On reservation shelves	547 Code 2
Operation approval	A.1 Code 08
Other information related to an identity document	370
Output instructions	078 Code 5
Overdue fine	534 Code 3
Overdue message	591 Code 1
Overdue notice number	527
Overnight only	503 Code 3
Override not possible	592 Code 3
Override possible	592 Code 0
Override possible with password	592 Code 1
Override possible with security clearance	592 Code 2
Packets transmitted	095 Code 7
Parent	468 Code 0
Parent's address	132 Code 2
Participant's function	060
Passport	367 Code 1
Password	076
Password edition	077
Password type	078
Patron: See User	
Percentage of down time	096 Code 1
Permanent address	132 Code 1
Permanent location	508
Permission to use this record	331
Personal/corporate responsibility flag	469
Personal name	312

Entry	Reference
Personal relationship to user	468
Post office box	135
Postal code	142
Prefix	318
Processing fee	534 Code 4
Processing not suspended	088 Code 0
Processing suspended	088 Code 1
Read access	078 Code 2
Recall overdue	424 Code 11
Recall privileges denied	424 Code 3
Recall request	A.1 Code 19
Recall response	A.1 Code 20
Recalled	502 Code 7
Receiver of notification	307 Code 5
Record status	309
Reference identifier	086
Referrer	468 Code 2
Region	140
Related personal user information	467
Renewal number	526
Renewal privileges denied	424 Code 2
Renewal request	A.1 Code 15
Renewal response	A.1 Code 16
Renewals not permitted	503 Code 5
Renewed once	526 Code 1
Rental fee	534 Code 5
Replacement fee	534 Code 6
Reservation advice notice	542
Reservation and booking information	540
Reservation available message	591 Code 2
Reservation cancellation request	A.1 Code 31
Reservation cancellation response	A.1 Code 32
Reservation collection location	541
Reservation privileges denied	435 Code 1
Reservation queue length	544
Reservation queue position	543
Reservation queue request	A.1 Code 47
Reservation queue response	A.1 Code 48
Reservation request	A.1 Code 29
Reservation response	A.1 Code 30
Reservation status	547
Reservation target location	545
Reservation type	546
Reserve a particular item	546 Code 2
Reserve any item related to a group of titles	546 Code 5

Entry	Reference
Reserve any item related to a group of titles at a group of locations	546 Code 7
Reserve any item related to a group of titles at a particular location	546 Code 6
Reserve any item related to a particular title at a group of locations	546 Code 4
Reserve any item related to a particular title at a particular location	546 Code 3
Reserve any item related to a title	546 Code 1
Residency permit	367 Code 3
Resource limitation	725
Resource report request	A.1 Code 65
Resource report response	A.1 Code 66
Resource usage type	095
Responsible	469 Code 1
Responsible for loans and fines	469 Code 2
Return notification	A.1 Code 13
Return response	A.1 Code 14
Returned reservation	547 Code 1
Security level	849
Security violation	848
Self service loan privileges denied	424 Code 13
Semester loan	503 Code 10
Session details	040
Session identifier	080
Session length constraint	092
Session transaction history	231
Sex	320
Ship to	131 Code 0
Social security card	367 Code 5
Source of primary data	345
Start-up delay	096 Code 0
Stop (Continue flag)	087 Code 1
Street and number	137
Subordinate unit of institution name	113
Subsession identifier	081
Successful transaction	598 Code 1
Suffix	317
Supplied	502 Code 14
Supply fee	534 Code 7
Surname	314
Suspend	A.1 Code 07
Suspend flag	088
Suspend user rights request	A.1 Code 45
Suspend user rights response	A.1 Code 46
System connection	078 Code 0
System performance	096

Entry	Reference
Telecommunications carrier	150
Telefacsimile number	162
Telenetwork address	160
Telenetwork user identifier	165
Telephone number	161
Temporary address	132 Code 0
Temporary location	509
Term loan	503 Code 9
Terminal transactions	095 Code 9
Terminate	A.1 Code 09
Time stamp	004
Title search string	513 Code 2
Too many items billed	424 Code 12
Too many items lost	424 Code 8
Too many items on loan	424 Code 4
Too many items overdue	424 Code 5
Too many renewals	424 Code 6
Total loans count	578
Total loans count period	579
Transaction completion flag	598
Transaction number	010
Transaction participant	050
Transaction session log request	A.1 Code 67
Transaction session log response	A.1 Code 68
Type of alternative information	466
Type of identity document	367
Undefined fee	534 Code 0
Undefined reservation type	546 Code 0
Undetermined (Circulation category)	503 Code 0
Unrecognised security level	848 Code 2
Unsuccessful transaction	598 Code 1
Use only in rare book room	503 Code 4
User affiliation	301
User booking an item	307 Code 4
User booking status	436
User history request	A.1 Code 41
User history response	A.1 Code 42
User identification	300
User identification number	303
User identification update	A.1 Code 55
User identification update response	A.1 Code 56
User incurring a fee or fine	307 Code 6
User loan status	424
User note	480
User notification	A.1 Code 43
User notification response	A.1 Code 44

Entry	Reference
User of an item within the building	307 Code 1
User password	306
User privacy information	330
User reservation status	435
User reserving a title or an item	307 Code 3
User service point	429
User status request	A.1 Code 37
User status response	A.1 Code 38
User status update notification	A.1 Code 39
User status update response	A.1 Code 40
User title in organisation	441
User type	422
User's activity	442
User's current transactions request	A.1 Code 51
User's current transactions response	A.1 Code 52
User's home library	427
User's home location or branch	428
User's internal identification	302
User's name	310
User's role	307
Waiting on reservation shelf	502 Code 8
Waiting to be reshelved	502 Code 9
Welcome herald	A.1 Code 06
Write access	078 Code 3

6 Structured order of data elements

This clause provides a structured presentation of the data elements and data element groups list in clause 4.

Data elements which identify information in textual form are given in preference to data elements which identify the same information in another form, for example, coded, pictorial, etc. The various forms of representing a given data value have been noted in clause 4 and are not repeated here.

The logical relationship is presented in three columns: ordering number, name and tag. Name and tag refer to the name and tag of a data element or data element group as given in columns 2 and 1 in clause 4 respectively. An order number identifies a level within a hierarchical arrangement. A dash separates each level of a multi-level ordering number as illustrated below.

01	Level one
01-01	Level two
01-01-01	Level three

NOTE — The number of levels is not limited.

The structured order gives users a better overall understanding of the data elements listed in the directory (clause 4). The structured order is illustrative of relationships between data elements in this directory. It is not prescriptive.

Ordering No.	Name	Tag
01	Message identification	001
01-01	Message name	002
01-02	Date	003
01-03	Time stamp	004
01-04	Date/time qualifier	905
01-04-01	Date/time current session begins	905/02
01-04-02	Date/time of last session	905/03
01-05	Transaction number	010
01-06	Date/time of transaction	003/004 905/12
02	Session details	040
02-01	Transaction participant	050 060
02-01-01-01	Institution identification	110
02-01-01-01-01	Institution role	118
02-01-01-01-02	Name of institution	111
02-01-01-01-02-01	Main unit of institution name	112
02-01-01-01-02-02	Subordinate unit of institution name	113
02-01-01-01-02-03	Abbreviated name	114
02-01-01-01-03	Institution identifier code	115
02-01-01-01-04	Institution identifier	116
02-01-01-01-05	Official seal of institution	117
02-01-01-02	Address	130
02-01-01-02-01	Address instruction	131
02-01-01-02-02	Address type	132
02-01-01-02-03	Delivery service	133
02-01-01-02-03-01	Post office box	135
02-01-01-02-03-02	Location within building	136
02-01-01-02-03-03	Street and number	137
02-01-01-02-03-04	City	138
02-01-01-02-03-05	Locality	139
02-01-01-02-03-06	Region	140
02-01-01-02-03-07	Postal code	142
02-01-01-02-03-08	Country	141
02-01-01-02-03-09	Date/time address valid	003/004 905/13
02-01-01-02-03-10	Date/time address invalid	003/004 905/14
02-01-01-02-04	Telenetwork address	160
02-01-01-02-04-01	Telephone number	161
02-01-01-02-04-02	Telefacsimile number	162
02-01-01-02-04-03	Electronic mail identifier	164

Ordering No.	Name	Tag
02-01-01-02-04-04	Telenetwork user identifier	165
02-01-01-02-04-05	Host system network address	166
02-01-01-02-04-06	Telecommunications carrier	150
02-01-01-03	Session identifier	080
02-01-01-03-01	Subsession identifier	081
02-01-01-04	Reference identifier	086
02-01-01-05	Cost constraint	090
02-01-01-06	Session length constraint	092
02-01-01-07	Resource usage type	095
02-01-01-08	Amount of usage	097
02-01-01-09	System performance	096
02-01-01-10	Password	076
02-01-01-10-01	Password edition	077
02-01-01-10-02	Password type	078
02-01-01-11	Access privileges	724
02-01-01-12	Resource limitation	725
02-01-01-13	Security level	849
02-01-01-14	Security violation	848
02-01-01-15	Continue flag	087
02-01-01-16	Suspend flag	088
02-01-01-17	Help topic	910
02-01-01-18	Session transaction history	231
02-01-01-18-01	Date/time session started	003/004 905/10
02-01-01-18-02	Date/time session ended	003/004 905/11
03	User identification	300
03-01	User's role	307
03-02	User control number	
03-02-01	User affiliation	301
03-02-02	User's internal identification	302
03-03	Record status	309
03-04	Date/time of last update	003/004 905/15
03-05	User privacy information	330
03-05-01	Permission to use this record	331
03-05-02	Further privacy restriction	332
03-06	User status	
03-06-01	User loan status	424
03-06-01-01	Date/time of user loan status	003/004 905/23
03-06-02	User reservation status	435
03-06-02-01	Date/time of user reservation status	003/004 905/24
03-06-03	User booking status	436
03-06-03-01	Date/time of user booking status	003/004 905/25

Ordering No.	Name	Tag
03-07	Registration information	
03-07-01	Date/time of registration	003/004 905/17
03-07-01-01	Date/time registration expires	003/004 905/18
03-07-01-02	Date/time of automatic deletion	003/004 905/19
03-07-01-03	Date/time of user's last activity	003/004 905/20
03-07-01-04	Source of primary data	345
03-08	User identification information	
03-08-01	User identification number	303
03-08-02	Check digit algorithm	304
03-08-03	Former identification number at this institution	305
03-08-04	User password	306
03-09	Alternative user identity information	308
03-09-01	User affiliation	301
03-09-02	User's internal identification	302
03-09-03	User identification number	303
03-09-04	Check digit algorithm	304
03-09-05	Former identification number at this institution	305
03-09-06	User password	306
03-10	Identity document	366
03-10-01	Type of identity document	367
03-10-02	Administrative authority issuing identity document	368
03-10-03	Identity document number	369
03-10-04	Other information related to an identity document	370
03-10-05	Date/time identity document commences	003/004 905/21
03-10-06	Date/time identity document expires	003/004 905/22
03-11	User's name	310
03-11-01	Personal name	312
03-11-01-01	Surname	314
03-11-01-02	Given name	315
03-11-01-03	Suffix	317
03-11-01-04	Prefix	318
03-11-01-05	Numeric qualifier	319
03-11-01-06	Date of birth	003/004 905/16
03-11-01-07	Sex	320
03-11-01-08	Language	321
03-11-02	Corporate name	325
03-11-02-01	Name of institution	111
03-11-02-01-01	Main unit of institution name	112
03-11-02-01-02	Subordinate unit of institution name	113

Ordering No.	Name	Tag
03-11-02-01-03	Abbreviated name	114
03-11-02-02	Institution identifier code	115
03-11-02-03	Institution identifier	116
03-11-02-04	Official seal of institution	117
03-12	Address of user	400
03-12-01	Address instruction	131
03-12-02	Current address flag	134
03-12-03	Address type	132
03-12-04	Delivery service	133
03-12-04-01	Post office box	135
03-12-04-02	Location within building	136
03-12-04-03	Street and number	137
03-12-04-04	City	138
03-12-04-05	Locality	139
03-12-04-06	Region	140
03-12-04-07	Postal code	142
03-12-04-08	Country	141
03-12-04-09	Date/time address valid	003/004 905/13
03-12-04-10	Date/time address invalid	003/004 905/14
03-12-05	Telenetwork address	160
03-12-05-01	Telephone number	161
03-12-05-02	Telefacsimile number	162
03-12-05-03	Electronic mail identifier	164
03-12-05-04	Telenetwork user identifier	165
03-12-05-05	Host system network address	166
03-12-05-06	Telecommunications carrier	150
03-13	Descriptive elements for user	420
03-13-01	Borrowing privileges	421
03-13-01-01	User type	422
03-13-01-02	User's home library	427
03-13-01-03	User's home location or branch	428
03-13-01-04	User service point	429
03-13-01-05	Minor flag	430
03-13-01-06	Security level	849
03-13-01-07	Budget/fund identification	432
03-13-01-08	Billing information	433
03-13-01-09	Additional borrowing privilege information	434
03-13-02	General organisational information for a user	440
03-13-02-01	User title in organisation	441
03-13-02-02	User's activity	442
03-13-02-03	Date/time project or certificate commences	003/004 905/26
03-13-02-04	Date/time project or certificate completes	003/004 905/27
03-13-02-05	Additional general organisational information	445

Ordering No.	Name	Tag
03-13-03	Additional descriptive user information	460
03-14	Alternative user information	465
03-14-01	Type of alternative information	466
03-14-01-01	Related personal user information	467
03-14-01-01-01	Personal relationship to user	468
03-14-01-01-02	Personal/corporate responsibility flag	469
03-14-01-01-03	User identification number	303
03-14-01-01-03-01	Check digit algorithm	304
03-14-01-01-04	Personal name	312
03-14-01-01-04-01	Surname	314
03-14-01-01-04-02	Given name	315
03-14-01-01-04-03	Suffix	317
03-14-01-01-04-04	Prefix	318
03-14-01-01-04-05	Numeric qualifier	319
03-14-01-01-04-06	Date of birth	003/004 905/16
03-14-01-01-04-07	Sex	320
03-14-01-01-04-08	Language	321
03-14-01-01-05	Corporate name	325
03-14-01-01-05-01	Name of institution	111
03-14-01-01-05-01-01	Main unit of institution name	112
03-14-01-01-05-01-02	Subordinate unit of institution name	113
03-14-01-01-05-01-03	Abbreviated name	114
03-14-01-01-05-02	Institution identifier code	115
03-14-01-01-05-03	Institution identifier	116
03-14-01-01-05-04	Official seal of institution	117
03-14-01-01-06	Address of user	400
03-14-01-01-06-01	Address instruction	131
03-14-01-01-06-02	Address type	132
03-14-01-01-06-03	Current address flag	134
03-14-01-01-06-04	Delivery service	133
03-14-01-01-06-04-01	Post office box	135
03-14-01-01-06-04-02	Location within building	136
03-14-01-01-06-04-03	Street and number	137
03-14-01-01-06-04-04	City	138
03-14-01-01-06-04-05	Locality	139
03-14-01-01-06-04-06	Region	140
03-14-01-01-06-04-07	Postal code	142
03-14-01-01-06-04-08	Country	141
03-14-01-01-06-04-09	Date/time address valid	003/004 905/13
03-14-01-01-06-04-10	Date/time address invalid	003/004 905/14
03-14-01-01-06-05	Telenetwork address	160
03-14-01-01-06-05-01	Telephone number	161
03-14-01-01-06-05-02	Telefacsimile number	162
03-14-01-01-06-05-03	Electronic mail identifier	164

Ordering No.	Name	Tag
03-14-01-01-06-05-04	Telenetwork user identifier	165
03-14-01-01-06-05-05	Host system network address	166
03-14-01-01-06-05-06	Telecommunications carrier	150
03-15	User note	480
03-15-01	Borrowing privilege note	481
03-15-02	Borrower status note	482
03-15-03	Miscellaneous user note	483
03-15-04	Free text	
03-15-04-01	Free text note	594
03-15-04-02	Free text note code	595
03-16	Locally defined element concerning a user	490
04	Item identification	500
04-01	Institution identifier code	115
04-02	Institution identifier	116
04-03	Internal item identification	505
04-04	Circulation status	502
04-05	Circulation category	503
04-06	Current location	504
04-07	Item identification number	506
04-08	Item number check digit algorithm	507
04-09	Permanent location	508
04-10	Temporary location	509
04-11	Free text	
04-11-01	Free text note	594
04-11-02	Free text note code	595
05	Bibliographic information	510
05-01	International standard numbering code name	511
05-02	International standard number	512
05-03	Bibliographic record identifier code	513
05-04	Bibliographic record identifier	514
05-06	Free text	
05-06-01	Free text note	594
05-06-02	Free text note code	595
06	Transaction information	
06-01	Date/time of loan	003/004 905/28
06-02	Date/time due	003/004 905/29
06-03	Date/time of earliest recall	003/004 905/30
06-04	Date/time of renewal	003/004 905/32
06-05	Renewal number	526
06-06	Date/time overdue notice sent	003/004 905/42

Ordering No.	Name	Tag
06-07	Overdue notice number	527
06-08	Date/time of return	003/004 905/31
06-09	Free text	
06-09-01	Free text note	594
06-09-02	Free text note code	595
07	Monetary information	530
07-01	Amount of fee	531
07-02	Fees outstanding	532
07-03	Currency code	533
07-04	Fee type	534
07-05	Free text	
07-05-01	Free text note	594
07-05-02	Free text note code	595
08	Reservation and booking information	540
08-01	Reservation	
08-01-01	Date/time reservation expires	003/004 905/33
08-01-02	Date/time reservation required	003/004 905/34
08-01-03	Date/time reservation collection	003/004 905/35
08-01-04	Reservation collection location	541
08-01-05	Reservation advice notice	542
08-01-05-01	Date/time reservation advice notice sent	003/004 905/36
08-01-06	Reservation queue position	543
08-01-07	Reservation queue length	544
08-01-08	Reservation target location	545
08-01-09	Reservation type	546
08-01-10	Reservation status	547
08-01-11	Free text	
08-01-11-01	Free text note	594
08-01-11-02	Free text note code	595
08-02	Booking	
08-02-01	Booking location	550
08-02-02	Date/time booking starts	003/004 905/37
08-02-03	Date/time booking ends	003/004 905/38
08-02-04	Free text	
08-02-04-01	Free text note	594
08-02-04-02	Free text note code	595
09	Item history information	570
09-01	User's internal identification	302

Ordering No.	Name	Tag
09-01-01	Borrower relationship to item	572
09-01-01-01	Date/time of last return	003/004 905/39
09-02	Total loans count	578
09-02-01	Total loans count period	579
09-03	Date/time of last transfer	003/004 905/40
09-04	Date/time of item's last activity	003/004 905/41
10	Free text information	
10-01	Free text instruction	590
10-01-01	Instruction code	591
10-01-02	Instruction information	592
10-02	Free text	
10-02-01	Free text note	594
10-02-02	Free text note code	595
11	Transaction completion flag	598
12	Date/time connect/disconnect	003/004 905/01

7 Circulation application message matrix

Messages, comprising specific data elements, are interchanged by participants to support the circulation process or application. Each message has a name and a code by which it may be identified (see A.1).

The following matrix identifies the data elements that are essential in each message to ensure that all the information required to support a given transaction is available. The individual messages are listed across the top of the matrix. The numbers 01 through 68 correspond to the code values in A.1.

Data elements that may be used for each message are listed in the left-hand column. They correspond to the data elements in clause 4 but this list is not exhaustive, merely indicative.

It is recognized that a given item of information can be transmitted by specifying a data element group or alternatively the individual data elements comprising that group. The preferred level of precision to be used for identifying data comprising the message will be specified in other International Standards which take cognizance of medium of communication (i.e. manual or mechanized) and operational requirements of the systems (i.e. paper forms for selective dissemination of information, visual displays or systems-to-systems communication, etc.) used by institutions interchanging these messages.

The following symbols, grouped below into four categories, are used to indicate the need to provide each of the data elements within specific messages. Based on operational experience, participants in

exchanging circulation messages may find it necessary to modify the recommended provision of data elements given in the matrix.

- a) Mandatory under all conditions.
m = mandatory.
- b) Choice available for providing mandatory information.
a = alternative data element.
- c) Optional.
p = optional.
- d) 00-99 = number which identifies a specific data element value applicable to the particular data element group.

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Annex A (normative)

Selected data element values

This annex provides values, in coded and textual form, for a limited number of message types identified in this part of ISO 8459. These values illustrate the information that is conveyed by particular data elements within the circulation application.

Descriptions or definitions are given to clarify the meaning of certain values, if necessary.

A.1 Message name (data element 002)

The messages pertinent to circulation represent four discrete aspects of this application. These aspects are:

- a) initiating and terminating a circulation session;
- b) circulation transactions;
- c) maintaining user database records;
- d) providing user assistance and information.

Code	Name	Description
1.	Initiating and terminating a session	
01	Access request	A user request to access a system, database or service.
02	Identification request	A system request to a user for the user's identity.
03	Identification response	A user response to an identification request.
04	Initialise request	A system proposal of a set of capabilities such as loan, return, etc. to be executed within a given session.
05	Initialise response	A system response giving the capabilities that are available to support a given session.
06	Welcome herald	A system, database or service response to an access request.
07	Suspend	A user request to stop a process or session with the intent that the process or session will be resumed later.
08	Operation approval	A user confirmation to a target system that a given transaction should continue to termination.
09	Terminate	A user or system request to end the session.