# Cataloguing the chameleon: A guide to electronic resources

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# Foreword

One of the objectives of the Cataloguing Internet Resources Project, a collaborative endeavour of the Faculty of Information Studies at the University of Toronto (FIS), A-G Canada, Ryerson Polytechnic University, Canada Institute for Scientific and Technical Information, Hamilton Public Library, Peel Board of Education, University of Alberta Library, and the University of Manitoba Libraries, was to create a practical guide for Canadian libraries on how to catalogue electronic serials. As the project unfolded, we broadened the focus to include some guidelines for non-serial electronic items.

This manual was created during a time of change from the point of view of cataloguing electronic resources. In particular, questions regarding the use of Field 516 have been raised. CIRP recommends that cataloguers use Field 256 "File characteristics" instead of the more general Field 516 "Type of computer file or data note," because of the possibility of AACR accepting ISBD(ER) terminology for use in Field 256. If the terminology is accepted, Field 256 will be a more effective, comprehensive field than the 516, and it will eliminate any redundancy that arises when both fields are used in conjunction, as is the current prescribed practice.

Cataloguing the chameleon: a guide to electronic resources would not have been possible without the support and encouragement of the staff of the participating institutions. In particular we would like to thank Dean Lynne Howarth of FIS and Debra Wallace, formerly of A-G Canada, for making the concept of the Project a reality. Thanks, too, to all the individuals at the various institutions who provided expertise and guidance on this Project. We would also like to thank Grant Campbell and Margaret English-Haskin, former Project leaders at FIS, whose knowledge and insights provided a solid foundation for this manual.

The Department of Canadian Heritage, through the office of the Canadian Library Association also provided welcome funds to the Project through its Young Canada Works in Heritage Institutions Program.

We would welcome all comments and suggestions for an improved manual in the future.

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# **Objective**

This guide is intended as a quick reference manual containing information relevant to cataloguing electronic resources in Canadian libraries. It evolved as part of the Cataloguing Internet Resources Project (CIRP), a collaborative effort involving various institutions across Canada. While the procedures detailed in this manual originated from local practice, CIRP has also included "Alternative options," whereby practices not used by CIRP are given for informational purposes. CIRP acknowledges that cataloguing electronic resources is an area where there are many variations in practice, and it has therefore included current options where appropriate.

#### Content

The cataloguers working on this project designed this manual to contain both standard practice and local procedures. It is based on *Anglo-American Cataloguing Rules 2<sup>nd</sup> ed. 1998 Rev. (AACR2R 1998)* as well as *USMARC format for bibliographic description, Conser cataloging manual* and *ISBD(ER) : international standard bibliographic description for electronic resources*, which provide detailed instructions for the bibliographic description of electronic resources. Please note that this guide is not intended as a comprehensive manual, and contains only a selection of standard and local procedures. A bibliography has been provided pointing to resources containing more extensive information on cataloguing electronic resources.

# Use of examples

Guidance for making practical choices is provided by means of examples of CIRP practice. These have been drawn from the project's records, as well as from the University of Toronto's online catalogue. Selective instructions for MARC punctuation have also been included in this manual where possible.

Please note that the symbol b is used to denote a blank indicator in the examples and that the \$ is used to mark the beginning of each variable field.

# System considerations

CIRP assumes that the interface for the display of bibliographic records is equipped with the capacity to show hypertext links in the 856 field in bibliographic records.

# Working definitions

Access

A method of obtaining data resources and programs.

(ISBD(ER) 1997, 4)

**Direct access** 

Used to characterize access to an electronic resource that is resident in a carrier, such as a CD-ROM, that a user typically inserts into the computer (Conser module 31 1995, 4)

inserts into the computer. (Conser module 31 1995, 4)

#### **Electronic discussion group**

The term used for a forum conducted electronically. These services, commonly called newsgroups and listservs, allow a computer user to post messages to, and read messages from, a group of people, usually by means of the Internet, a commercial online service, or electronic mail. (*Draft interim guidelines* http://lcweb.loc.gov/catdir/cpso/dcmb19\_4.html)

#### Electronic image data

A resource consisting mostly of graphic images as opposed to alphabetic and numeric characters on a computer screen. (ISBD(ER) 1997, 94)

#### Electronic numeric data

A resource consisting mainly of numbers or representation by numbers (E.g. census data, survey data, etc...). (ISBD(ER) 1997, 95)

#### **Electronic programs**

A set of steps or routines instructing the computer to perform certain tasks, including processing of data. Also called "software." (ISBD(ER) 1997, 96)

# Electronic representational data

A resource consisting of the representation of the structure of an object. (ISBD(ER) 1997, 96)

#### **Electronic resource**

Local access items encoded for manipulation by computer (eg. Items on disk or on CD-ROM) or remote access items

which have no physical container. The term used to refer to a manifestation of a work residing in a carrier accessed either directly or remotely. It is used in lieu of other terms currently in use such as computer file or digital resource. Some electronic resources may require the use of a peripheral device attached to a computer (e.g. a CD-ROM player). (*Draft interim guidelines* http://lcweb.loc.gov/catdir/cpso/dcmb19 4.html)

Homepage

Main screen of a hypertext document for a World Wide Web site. Home pages are a part of a web page. (ISBD(ER) 1997, 8)

Online service

System-based activity that supports access to and use of information on the Internet. (ISBD(ER) 1997, 95)

**Publication** 

All remote electronic resources are considered published. (ISBD(ER) 1997, 11)

Remote access

Used to characterize access to an electronic resource resident in a carrier that a user cannot physically handle. Remote access usually involves connecting to the resource through a computer network. This type of access is also referred to as online access. (ISBD(ER) 1997, 12)

TEI

Text Encoding Initiative is descriptive and declarative information comprising an "electronic title page" that is attached to a TEI-conformant electronic text. The TEI contains four principle components: file description, encoding description, profile description, revision description. (ISBD(ER) 1997, 13)

Title screen

Title information appearing on a monitor or screen, usually displayed in the first or opening frame(s) of a resource. The title screen is the preferred chief source of information for electronic resources. (ISBD(ER) 1997, 14)

#### Title screen substitutes

When an electronic resource does not contain a title screen, or when the information contained on the title screen is inadequate, information may be taken from other formally presented evidence. These can include the physical carrier or its label, the information issued by the publisher, creator, etc., with the file (i.e. the documentation), the information printed on the container issued by the publisher, creator, etc.

(AACR2R 1998, 9.0B2)

URL Uniform Resource Locator is an address system for locating

an electronic resource on a computer network. (ISBD(ER)

1997, 14

Version As opposed to edition. Indicates major or minor changes

and, as such, may not constitute a reliable guide to indicate

a new edition. (ISBD(ER) 1997, 15)

Web page One of the layers of a World Wide Web site. Web pages,

including home pages, refer to the collection of documents that make up the World Wide Web. (ISBD(ER) 1997, 15)

World Wide Web site

A location, identified in the form of a URL, on the World Wide Web that stores Web pages for access and use. (ISBD(ER) 1997, 15)

# Organisation

The organisation of the manual has been determined by the order of information in the *USMARC* format for bibliographic data. When possible, the instructions introduce a general statement referring to remote access computer files and proceed to specific guidelines for cataloguing electronic serials or CIRP local practice.

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# Part one: background information

#### Theoretical foundations

This manual is based on chapters, 1, 9 and 12 in AACR2R 1998 which instruct to:

Describe the item based on the physical class to which it belongs.

"It is a cardinal principle...that the description of a physical item should be based in the first instance on the chapter dealing with the class of materials to which that item belongs...there will be need in many instances to consult the chapter dealing with the original form of the item, especially when constructing notes... In short, the starting point for description is the physical form of the item in hand, not the original or any previous form in which the work has been published" (AACR2R 1998, 0.24)

Adherence to this principle requires that cataloguers treat items in terms of their physical form. Therefore, CIRP uses separate bibliographic descriptions for electronic items, even when these are online versions of print items.

#### Alternative option

Some institutions may chose to use the MARC 530 (Other physical formats) field for bibliographic records to indicate that there is an electronic version of an item. CIRP considers this practice a legitimate alternative to the creation of separate bibliographic records. Please see section 530 for more information.

> Describe the item based on its intellectual organization.

"The rules in [Chapter 12: Serials] cover the description of serial publications of all kinds and in all media. Consult this chapter in conjunction with the chapter dealing with the physical form in which the serial is published." (AACR2R 1998,12.0A1)

With these principles in mind, CIRP will describe remote access files and serials as per the rules for remote access computer files in *AACR2R 1998*, in conjunction with chapter 12 (Serials), the prescribed standards for MARC coding in *USMARC format for bibliographic data*, and *ISBD(ER)* for the terminology in the General Material Designation, Resource Designations and Specific Material Designations areas.

The implications of doing this are as follows:

- ➤ There is a General material designation, [electronic resource] in the \$h subfield of Field 245.
- > There are file characteristics in Field 256.
- There is no physical description in Field 300.
- ➤ There is no 516 (Type of Computer file or Data note)
- ➤ There is a "System Requirements" note in Field 538.
- ➤ There is a "Mode of Access" note in Field 538, giving location and access information in online catalogues.
- > There is locational information in field 856. This appears as a hypertext link in many online catalogues.

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## Part two: Serials

#### Definition

A serial is a publication in any medium issued in successive parts bearing numeric or chronological designations and intended to be continued indefinitely. Serials include periodicals, newspapers; annuals (reports, yearbooks, etc.); the journals, memoirs, proceedings, transactions, etc., of societies; and numbered monographic series. (AACR2R 1998, 622)

# **Characteristics**

- > The publication is issued in successive parts. They are usually referred to as issues, or numbers on the items. All successive parts form one work.
- > The publication bears numeric or chronological designations. A numeric or chronological designation distinguishes individual parts from each other.
- > The publication is intended to continue indefinitely.

Where electronic resources combine characteristics from other ISBDs, (E.g. an electronic serial) to use the ISBD(ER) first, and apply provisions for other ISBDs as appropriate. (ISBD(ER) 1997, 2)

#### Keep in mind ...

- > The most frequent type of electronic serial is the newsletter or journal that is published on the Internet.
- > Serials issued in floppy disk or CD-ROM format are not considered electronic serials.
- > Conser considers government statistical documents, and corporate data reports, when they are updated and issued in frequent editions, to be serials. (Conser module 31 1995, 8)

# The following are NOT serial publications:

- > Online public access catalogues or databases (e.g. Amicus)
- Gopher servers
- > Listservs and listserv digests, when they do not have chronological designations
- > World Wide Web home pages
- > Online services, such as DIALOG and America Online. (Conser module 31 1995. 8)

# Part three: practical considerations

Level of description

CIRP has chosen to describe electronic information resources at the second level of description of AACR2R 1998 (1.0D2). The elements of this level are:

Title proper [general material designation] = Parallel title: other title information / first statement of responsibility; each subsequent statement of responsibility. — Edition statement / first statement of responsibility relating to the edition. — Materials (or type of publication) specific details. — First place of publication, etc.: first publisher, etc., date of publication, etc., — Extent of item: other physical details; dimensions. — (Title proper of series / statement of responsibility relating to series, ISSN of series; numbering within series. Title of subseries, ISSN of subseries; numbering within subseries). — Note(s). — Standard number

# Main entry

General practice

The choice for main entry for remote access files is based on AACR2R 1998, chapter 21.

Serials practice

Since serials are rarely the work of one individual, they are seldom entered under a personal name.

In most cases, the cataloguer must decide whether the work should be entered under a corporate name or its title.

AACR2R 1998 21.1B2 sets forth guidelines for determining when a work should be entered under corporate name.

## Example

110; 2\(\frac{1}{2}\); \(\frac{1}{2}\) a National Library of Canada. 245; 10; \(\frac{1}{2}\) a Annual report \(\frac{1}{2}\) h [electronic resource].

Serials are entered under title when:

- > There is no responsible corporate body
- > The serial does not emanate from the corporate body
- > The serial does not fall into one of the categories set forth

#### in AACR2R 1998 21.1B2

> There is no person who is responsible for the entire run of the serial.

#### Example

245;00; \$a Wired west \$h [electronic resource]: \$b Web journal of the SLA Western Canada chapter.

# Sources of information for electronic resources

#### General practice

- > The chief source of information for electronic computer files will be the title screen.
- If there is no title screen, information is to be taken from the file itself. On a browser such as Netscape, view "Page source" and "Page info" for additional information about the file. Additionally, the "readme file," "about" screen, TEI (Text Encoding Initiative) header, documentation file, internal menus, labels, subject line, program statements, etc. are also available as sources of information. (ISBD(ER) 1997, 22)
- If no information is available, use information from a home page, a menu that provides access to the file, or from any published description of, or citation to, the file.
- > If no information is available from any source, the cataloguer must supply a title in square brackets.
- ➢ Bracket only information taken from a source external to the publication. (OCLC 1997, 7-8)

Sources of information for electronic resources

Area	MARC field	Source
Title / statement of responsibility	245 \$a \$b \$c	Internal sources
Edition	250 \$a	Internal sources
Type/extent of resource	300 \$a \$b \$c	Any source
Publication, distribution, etc.	260 \$a \$b \$c	Internal sources
Series	440 \$a	Internal sources
Note	3XX \$a 5XX \$a	Any source
Standard numbers	020 \$a 022 \$a	Any source

(ISBD(ER) 1997, 24)

Serials practice

The chief source will be the title screen (see definition, p. 3) of the first available issue.

Where a title screen is lacking, refer to any other formally presented bibliographic information.

Keep in mind ...

The source of the title must be stated in a note. (ISBD(ER) 1997, 24)

# Part four: instructions for cataloguers'

#### Leader

General practice

Code 'm' is used to describe the following classes of electronic resources: computer software (including programs, games, fonts), numeric data, computer-oriented multimedia, online systems or services.

Other classes of electronic resources are coded for their most significant aspect (e.g., language material, graphic, cartographic material, sound, music, moving image).

In case of doubt or if the most significant aspect cannot be determined, consider the item a computer file. (*Draft interim guidelines* http://lcweb.loc.gov/catdir/cpso/dcmb19\_4.html)

The following table gives the values for the 06 leader fixed field and their definitions.

#### Leader

Character position	Value	Definition
06 - Type of material		(Rabil
record	а	*Language material
TELOTOR	e	Cartographic material
and the state of t	i ter bere sak	Non-musical sound recording
	i	Musical sound recording
	m	Computer file
Colective of material - 1	p	Mixed material
07 – Bibliographic level		
	am	Monographic
<b>表标</b> 有	b	Serial component part
8.176	C	Collection
£6610	d	Subunit
State .	S	Serial

(USMARC 1997, Leader, 1)

<sup>\*</sup> Please note that in these instructions, the term "computer file" is used interchangeably with the term "electronic resource." The source of many of these instructions is the *US MARC bibliographic format*, which uses the term 'computer file.'

# Additional material characteristics [006]

The 006 field is a fixed length field whose data elements indicate the forms of materials. For electronic resources, use the following:

# Fixed length data elements for additional material characteristics

Character positions	Additional material characteristics
00 They are obtaine	Form of material m computer file
01-04	Undefined
05	Target audience
05 06-08	Undefined
09	Type of computer file
10	Undefined
11	Government publication
12-17	Undefined

(USMARC 1997, 006, 1)

#### Keep in mind ...

Electronic serials are catalogued on the workform using bibliographic level "s" with field 006 for the serial characteristics and field 007 for computer file characteristics. (OCLC 1997, http://www.oclc.org/oclc/man/9256cat/toc.htm)

# Category of material – computer file [007/00]

This fixed length field indicates the physical characteristics of an item in coded form. The code for "computer file" is c. It is a mandatory field for all electronic resources. This field is repeatable for items belonging to more than one physical class. (USMARC 1997, 007/00, 1)

For more detailed instructions on use of 007/00, see the USMARC bibliographic format.

# Specific material designation – computer file [007/01]

The [007/01] fixed length code is a one-character code indicating the Specific Material Designation of an electronic resource.

The code for remote access electronic items is **r**. (*USMARC* 1997, 007/01, 1)

# Colour – computer file [007/03]

This one character alphabetic code describes the colour characteristics of an electronic resource. For more information, see *US Marc bibliographic format* 1997, 007/03 (Computer file), 1.

# Dimensions – computer file [007/04]

This one character code indicates the dimensions of the medium used to encode the electronic resource. It usually refers to the container in which a magnetic or optical disk is encased. For more information, see *US Marc bibliographic format* 1995, 007/04, 1-2.

# Sound – computer file [007/005]

This is a one character alphabetic code that indicates whether sound is an essential part of the electronic resource. For more information, see *US Marc bibliographic format* 1995, 007/05, 1.

# Title proper [245 \$a]

## General practice

Following AACR2R 1998, 9.1B1, CIRP will take the title from the chief source of information, and provide the source of the title in a note.

#### Example

245;00; \$a Canadian government information on the Internet \$h [electronic resource]. 500; bb; \$a Title from title screen.

Sportific praterial designation - computer file [007/01]

The 1007/01] fixed length code in a 010-0 indicating the Specific Material Designation established Designation assessed in remaile access electronic file [887, 007/01]

This one distracter alphabetic code described one distribution resource distribution, see US filest bibliographic in (Computer file), 1

Simenations - computer file), 1

Simenations - computer file), 1

This one character code indicates the distribution in the file (1007/04).

➢ If there is no chief source of information present in the item, supply a title proper from another source in the item or a reference source (AACR2R 1998, 1.1B7) and enclose it in brackets.

#### General material designation [245 \$h]

#### General practice

The GMD is an optional subfield in the MARC bibliographic record.

CIRP chose to include the GMD for electronic resources because it helps to distinguish between book and non-book materials in integrated library catalogues.

If an intellectual item is comprised of more than one component, the primary component is the basis for the GMD.

The standard GMD for electronic resources is \$h [electronic resource] (ISBD(ER) 1997, 33). The General Material Designation always follows the \$a subfield.

#### Example

245;00; \$a Debates of the House of Commons of Canada (Hansard) \$h [electronic resource]: \$b 35<sup>th</sup>
Parliament - 1<sup>st</sup> and 2<sup>nd</sup> sessions.

For related information, see also Resource designations in the File characteristics area [256].

# Statement of responsibility [245 \$c]

#### General practice

In accordance with AACR2R 1998,1.1F2, provide a statement of responsibility only if a "formal" statement of responsibility appears on the title screen along with the title, in a format similar to a printed title page.

If no statement of responsibility exists, do not construct one.

Make notes for any individuals or corporate bodies appearing elsewhere in the document which may be important.

Example

245;04; \$a The abbey newsletter \$h [electronic resource]: \$b bookbinding and conservation. 500; bb; \$a "Ellen McCrady, editor".

Statements of responsibility generally apply to writers, programmers, principal investigators, graphic artists, composers, animators, etc... whose work is embodied in the item, whether directly or indirectly.

Additionally, since many electronic resources are complex works representing efforts of many contributors, statements of responsibility may be given for developers and designers. (ISBD(ER) 1997, 37-44)

Serials practice

In the case of serials a title screen substitute is acceptable as a source of information for the statement of responsibility. (AACR2R 1998, 9.0B2)

Punctuation

Field 245 ends with a period unless the last word in the field is an abbreviation, initial/letter, or data that ends with a period.

#### Variations in title [246 \$a]

General practice

AACR2R 1998 gives the option of transcribing a file name or data set name if it differs from the title proper. (9.7B4)

Additionally, CIRP has outlined some cases in which an added entry for a variation in title may be appropriate:

When the HTML header differs from the title proper. In these cases, begin the \$a subfield with "\$i HTML header:"

Example

245;00; \$a Welcome to Canada's geographical names! \$h [electronic resource] / \$c Natural Resources
Canada = Ressources naturelles Canada.
246;1\(\frac{1}{2}\); \$i HTML header: \$a Canadian geographical names - Natural Resources
Canada \$h [electronic resource]

When the title of listservs is familiar enough to be a likely access term and IF it is significantly different from (and not just a truncation of) the title proper.

#### Example

245;00; \$a Architronic \$h [electronic resource]: \$b the electronic journal of architecture.
246;13; \$a ARCITRON \$h [computer file]

Conser provides a list of other variations in title that warrant 246 Fields:

- > "At head of" titles.
- Running titles.
- > Abbreviated titles at the end of the file.
- ➤ File/directory names, if they are likely to be known and used by the user to search. (*Conser module* 31 1995, 20)

#### Punctuation

Field 246 does not end with a mark of final punctuation unless the last word in the field is an abbreviation, initial/letter, or data that ends with a mark of punctuation.

#### Edition statement [250 \$a]

#### General practice

Edition refers to substantial changes within an item. It does not include the frequent or minor updates made to electronic resources.

For electronic resources that are subject to continual revision, the suggested course of action is to make a note indicating that the resource is "frequently updated," as opposed to using the MARC 250 edition statement field. Including the date of last revision is not necessary, though some institutions may wish to include this information in the note.

If there is any change in the intellectual content of a remote access computer file, or any change in the programming language or operating system, or any change to make the computer file run more efficiently, the item is considered to be a new edition. (OCLC 1997, 13)

ISBD(ER) specifies differences that **do not** constitute new editions. Some of these are:

- Differences in printer-related file formats
- Differences in system-related formats
- > Differences in character code
- Differences in blocking or recording densities
- ➤ Differences in output medium or display format (ISBD(ER) 1997, 46)

#### Serials practice

Provide an edition statement for any of the cases outlined in AACR2R 1998 (12.2B1):

- > Local edition statements
- > Special interest edition statements
- > Special format or physical presentation statements
- > Language edition statements
- > Reprint or reissue statements indicating a reissue or revision of the serial as a whole.

#### Example

245;00; \$a Ariadne \$h [electronic resource].
250; bb; \$a Web version.

Where remote access services (E.g. online services) are updated continually, libraries are advised not to use the 250 edition field, but rather to give appropriate notes in the 500 note field.

## Alternative option: creating a new bibliographic record for an edition

ISBD(ER) requires that there be significant differences in intellectual or artistic content from previous editions in order to justify a new bibliographic record. (ISBD(ER) 1997, 45-49)

Punctuation

Field 250 ends with a period.

#### File characteristics [256 \$a]

General practice

All bibliographic records for electronic resources must carry file characteristics information in Field 256.

Differences in printer related file tomats
Differences in system-related formats
Differences in system-related formats
Differences in character code
Differences in character code
Differences in objecting or recercing dentity
Differences in outgut medium or display (1980/(2P) 1937, 48)

Senals practice Provide an edition statement for any of the AAGRZR 1968 (12.281)

Local adition statements
 Special Interest adiabat presentation statements
 Superial formet or physical presentation statements
 Language edition statements

Example Gashous Sa Astadne Sa Sebetrenic tesources 250:bbs Sa Web warston.

Where remote access services (E.g. ontine services) are updated continually, libraries are scheeze not in user to be eation field, but rather to give exprephere notes in the art note field.

(SHE) (FE) 1997, 15-49)

When selecting a designation for multi-layered electronic resource, choose the most appropriate for the item. If it is a self-enclosed, self-sufficient document, choose the designation which best describes that level only. However, many electronic resources are gateways to other computer programs such as search engines, databases, or geographic information systems. In these cases, the designation applies to the entire computer file.

CIRP uses the list of designations provided by ISBD(ER):

## Designations for electronic resources\*

General Material Designation	n Designations
Electronic resource	CHICAN D TOTAL HILL SECTION STATES CONTINUES NO.
Liectionic resource	Electronic data Electronic font data
	Electronic image data Electronic numeric data Electronic census data Electronic survey data
distin	Electronic representational data Electronic map data
· · · · · · · · · · · · · · · · · · ·	Electronic sound data
Socie	Electronic bibliographic database(s) Electronic document(s) (e.g. letters, articles) Electronic journal(s)
	Electronic newsletter(s)
Constant 1500	Electronic program(s) Electronic application program(s) Electronic CAD program(s) Electronic database program(s) Electronic desktop publishing program(s) Electronic game(s) Electronic spreadsheet program(s) Electronic word processor program(s)
PLES	Electronic system program (s)  Electronic operating system program(s)  Electronic programming language program(s)  Electronic retrieval program(s)
	Electronic utility program(s)
	Electronic data and program(s) Electronic interactive multimedia
Mensis practice Unit	Electronic online service(s) (e.g. bulletin boards, discussion groups / lists, World Wide Web sites)

<sup>\*</sup>Please note that ISBD(ER) has allowed for particular types of data and programs to be identified by combining terms in the lists above. The following terms may be used in conjunction with the above terms or alone as resource designations. (ISBD(ER) 1997, 91)

#### Specific material designations

Designations	
Electronic chip cartridge	
Electronic disk(s)	म् अस्ति । साथ गाउँ। विकास द्वार वे देखाला, द्वारण प्राप्त
Electronic optical disc(s)	Non-little victure designation of little sale
Electronic tape cassette(s)	could from an issue other than it a first
Electronic tape reel(s)	

Punctuation

Field 256 ends with a period.

Publication, distribution, etc. [260 \$a, \$b, \$c]

All electronic resources, including local and remote access resources are published.

General practice

State place, publisher and date; or use [S.I.] or [s.n.] as appropriate.

When determining who the publisher is, take care to distinguish the organisation responsible for the content of the item as opposed to the organisation upon whose site the document is mounted.

When searching for place of publication information, use the semantic structure of the URL with discretion; URLs do not necessarily reflect the organisational hierarchy, and are therefore not reliable sources of publication information.

Conser supplies brackets only if an external source has been the origin of this information. (<sup>23</sup> Conser module 31 1995, 21) Remember that the entire hierarchical range of sites and subsites is legitimately available as a source of publication and distribution information.

CIRP will use the information provided within the electronic resource to obtain publisher information, whenever possible.

Serials practice

Omit the date [\$c] when cataloguing a serial from other than the first issue.

Punctuation

Field 260 generally ends with a mark of punctuation, a closing parenthesis, closing angle bracket, closing bracket, or a comma.

#### Dates of publication and/or volume designation [362 \$a]

General practice

When cataloguing from the first issue of a serial, give the dates of publication and/or volume designation. Do not use this field if cataloguing from an issue other than the first.

Example

245;00; \$a Ariadne \$h [electronic resource]. 362;0\(\text{b}\); \$a Issue 1 (Jan. 1996)-

Alternative option

When information is known about the first issue of a serial, the cataloguing agency may note it, even if the first issue is not the source of that information. *AACR2* 1998, 9.0B1 states that, "if cataloguing information is not available... published descriptions or other source for the information may be used."

#### Physical description [300 \$a]

AACR2R 1998, 9.5, footnote 3 states: "Do not give a physical description for a computer file that is available only by remote access."

#### Frequency of publication [310 \$a]

General practice

Give the current frequency of publication if known, or a probable frequency when there is evidence of a publishing pattern. If the actual frequency varies from the stated frequency, give the actual frequency when it can be determined.

Example

245;04;\$a The disseminator \$h [electronic resource].
310;bb;\$a Monthly

Punctuation

Field 310 does not end with any mark of punctuation, unless the last word in the field is an abbreviation, initial / letter, or other data that ends with a mark of punctuation.

Subfield \$a ends with a comma when followed by subfield \$b

Example

245;04;\$a The disseminator \$h [electronic resource].
310;bb;\$a Monthly

Punctuation

Field 310 does not end with any mark of punctuation, unless the last word in the field is an abbreviation, initial / letter, or other data that ends with a mark of punctuation.

Subfield \$a ends with a comma when followed by subfield \$b

#### Former frequency of publication [321 \$a]

General practice Give the former frequency of publication when applicable.

#### Example

245;00;\$a Biblionline magazine \$h [electronic resource].
310;bb;\$a Monthly, \$b Jan. 1997- \$
321;bb;\$a Bimonthly, \$b July 1996 - Jan.
1997

Punctuation

Field 321 does not end with any mark of punctuation, unless the last word in the field is an abbreviation, initial / letter, or other data that ends with a mark of punctuation.

Subfield \$a ends with a comma when followed by subfield \$b

#### Series [440, 490, 830]

General practice

CIRP will follow AACR2R 1998. For additional support, cataloguers can consult the Conser cataloging manual, Module 12 (1995), and Library of Congress Rule Interpretations.

Serials practice

Exercise caution when cataloguing remote access serials that appear to belong to a series. Publishers of electronic journals use series-like words or phrases, usually above the title or elsewhere on computer files. These words or phrases are often trademarked names that identify a particular publisher's products or search and retrieval software and should not be treated as series. Give the word or phrase in an "At head of title:" or quoted note, with additional added entry access in the 246 field.

Punctuation

The punctuation of subelements of a series statement field is generally dictated by descriptive cataloguing rules.

Field 490 does not end with a mark of punctuation unless the field ends with an abbreviation, an initial/letter, or data that ends with a mark of punctuation.

#### Notes [3XX, 5XX]

General practice

Notes play an important role when cataloguing remote access computer files. They can serve as the basis for added entries, give information relating to changes on specific issues, and provide additional information that is not appropriately placed in other areas of the bibliographic record.

CIRP recommends the following general guidelines:

- Whenever possible, prefer a specific note to a generic one.
- Notes may be constructed based on any information from inside or outside of the remote access file.
- ➤ Give notes in the order specified by AACR2R 1998.

For each stage of the notes sequence, provide the notes relevant to Chapter 9, followed by the notes relevant to any other chapter.

Serials practice

Numeric, alphabetic, and/or chronological designations should be used when the information in the note does not apply to all of the issues in the serial.

CIRP practice

This is the only required note for bibliographic description.

CIRP does not use the "Mode of access" [538] note. This decision was made based on the inclusion of an electronic location in the 856 field for electronic resources.

Notes may be taken from any source and any issue of a serial.

# Selective guidelines for notes

#### System requirements [538 \$a]

#### General practice

Begin the note with the wording, System requirements:

Give the following characteristics in this order:

- The make and model of the computer(s) for which the file is designed
- > The amount of memory required by the computer
- > The name of the computer operating system
- > The software requirements (including the programming language) of the resource
- The kind and characteristics of any required or recommended peripheral devices (such as a CD-Rom drive)

#### CIRP practice

Assuming that users have at least a web browser that supports ASCII text, CIRP will specify:

- > Web browser required.
- Amount of computer memory required to download files before viewing site.
- > Software needed to view multimedia files.
- > Any sites requiring a graphics-based web browser to view the site.
- Any sites requiring multimedia capabilities, such as video or sound clip software.
- Any sites requiring telnet, ftp, e-mail or gopher capabilities.
- > Any sites requiring special HTML graphics, such as forms, tables, or frames.

> Any sites that can only be downloaded to be viewed. In such cases, CIRP will specify the amount of computer memory and disk space needed.

#### Example

245;00; \$a Telemanagement \$h [computer file] :\$b the Angus report on business telecommunications in Canada. 538; bb; \$a System requirements: a graphicsbased World Wide Web browser.

#### Fxample

245;10; \$a Multiple listing service online Shicomputer file]. 538; bb; \$a System requirements: a World Wide Web browser which supports forms and graphics ; 256 colour mode is recommended.

Example 18 18 to a head for a very general location 538; bb; \$a System requirements: a World Wide Web browser with a graphics interface, and a video viewer such as QuickTime or MPEGPlay.

538; bb; \$a System requirements: a World Wide Web browser, ADOBE Acrobat reader, and 27K available disk space to download the file.

#### Mode of access [538]

General practice

AACR2R 1998, 9.7B1 specifies that "If a file is available only by remote access, always specify the mode of access."

#### Keep in mind...

This note is particularly useful for text based online catalogues because the display will not have a hyperlink to the online resource.

#### CIRP practice

CIRP has opted to include the electronic location in Field 856 rather than in Field 538. The 856 field is more effective on the local system because it displays as a hypertext link to the URL specified in this field. However, if the information contained in Field 856 is in any way confusing to the user, CIRP would include a note in Field 538 to clarify this

information.

Example

110; 2\(\frac{1}{2}\); \(\frac{1}{2}\) a Library and Information

Technology Association (U.S.)

245; 10; \(\frac{1}{2}\) a LITA newsletter \(\frac{1}{2}\) h[electronic resource].

538; \(\frac{1}{2}\)b; \(\frac{1}{2}\) a Mode of access: available through FIS gopher:

gopher://gopher.fis.utoronto.ca/11/library/ejournal/lita; also available through subscription via electronic mail on the Internet, listserv@dartmouth.edu or Bitnet, listserv@dartcms1, with the message, subscribe litanews [firstname lastname]

Conser and Cataloging Internet resources both recommend using Field 538. It can be used for a very general location indicator such as,

538; bb; \$a Mode of access: Internet.

in cases where there might be some confusion as to how or where to access the resource.

Punctuation

Field 538 ends with a period unless another mark of punctuation is present.

## Source of title proper [500 \$a]

General practice

Always give the source of the title proper for remote access computer files.

Serials practice

When no original or first issue is available for a serial or frequently-updated website, combine the "Source of title proper" note with the "Description based on" note, and place it at the end of Area 7 (notes). (Conser module 31 1995, 14)

Example

500; bb; \$a Description based on July 1996 update; title from title screen.

# Statements of responsibility [500 \$a]

General practice

When it is helpful, use the 500 field "statement of responsibility" note to include any responsible party who has

not been named in the 245 \$b Statement of responsibility field.

Punctuation

Field 500 ends with a period unless another mark of punctuation is present.

#### Edition and history [500 \$a]

General practice

AACR2R 1998 instructs to give the source of the edition if it is different from that of the title proper. (9.7B7)

Give details of minor changes in this area, such as "corrections of misspellings of data, changes in the arrangement of the contents, changes in the output format or the display medium, and changes in the physical characteristics." (AACR2R 1998, 9.7B7 & 9.2B4)

This field can also be used to cite other works upon which the item's content is based.

Give the dates covered by the content of the file, the date when data were collected, if helpful to understanding the content, use or nature of the file.

**Punctuation** 

Field 500 ends with a period unless another mark of punctuation is present.

## Type of computer file or data [516 \$a]

General practice

This note generally contains information about the computer file. It is often used to enhance the computer file

characteristics information in Field 256.

CIRP practice

CIRP does not use this field, as it includes file characteristics

information in Field 256.

Punctuation

Field 516 does not end with a mark of punctuation unless the field ends with an abbreviation, initial/letter, or other data that

ends with a mark of punctuation.

# Other physical formats [530 \$a]

General practice

In order to determine whether one should give a 530 note instead of creating a separate bibliographic record, the following policies have been suggested by the Library of

# Congress.

If the resource is a directly accessed manifestation of another work, LC suggests employing a multiple-record approach. In other words, create new bibliographic records for each separate manifestation of the work.

If the resource is a remotely accessed manifestation of an item already owned by the cataloguing agency, LC suggests the single record approach, and using a 530 note to indicate the existence of the remote version of the work. CIRP does not practice this, because it adheres to the principles mentioned in the theoretical foundations section of this manual, but this method is recognized as an alternative option to creating new records. (*Draft interim guidelines* http://lcweb.loc.gov/catdir/cpso/dcmb19\_4.html)

#### CIRP practice

Give details of other formats in which the content of the file has been issued.

#### Example

245;00; \$a Liaison \$h[computer file] /\$c Council of Federal Libraries. 530;bb; \$a Also available in print.

#### Punctuation

Field 530 ends with a period unless another mark of punctuation is present.

# Language [041] and [546]

#### [041]

#### General practice

041 is used in conjunction with 008/35-37 (Language) when the 008/35-37 code is not sufficient to convey full information for a multilingual item, or for an item that has been translated.

Use the 041 field in the following cases:

- When an item contains more than one language (one of which may be a sign language),
- > When an item includes a translation,
- When the language of summaries, abstracts, or accompanying material differs from the language of the main item,

When the language of the table of contents differs from the language of the main item.

With respect to electronic resources, use the 041 field to record codes for languages associated with the data and/or user interface (e.g., screen displays). This field is not used to code machine languages (e.g. C++) or character codes (e.g. ASCII). Machine languages and other system-specific information is recorded in the 538 (Systems details) note. (USMARC 1997, 041, 1-6)

For specific instructions on indicator values and subfield codes, please see the *USMARC bibliographic format* for information.

The 041 field can be supplemented by a note in the Language [546] field.

Serials practice

When the language of the text of a serial changes over time, codes for all languages are used.

#### Language note [546 \$a]

General practice

The language note is used to describe the language of an item. It is also used to describe the alphabets, script, or other symbol systems appearing on the item.

Subfield \$a is used for the text of the note. Subfield \$b is used to describe the name of the alphabet, script or information code (see [041]) that is used to record the language. It includes specialised scripts, typefaces, or codes.

Subfield \$3 indicates the part of the described materials to which the language note belongs.

Punctuation

Field 546 ends with a period unless another mark of punctuation is present.

#### Numbering peculiarities [515 \$a]

General practice

This note contains information on complex or irregular numbering or publishing patterns.

USMARC bibliographic format outlines the types of irregularities or complexities that can be included:

Irregularities or peculiarities in numbering, including double numbering, combined issues or volumes, confusion in the use of series numbering or multiple numbering systems, publication of preliminary issues not included in the regular numbering, and numbering that does not begin with volume one. (*USMARC* 1994, 515 1-2)

Example

245;00;\$a Wired \$h [electronic resource]. 515;bb;\$a Vol. 1.1 also called Premiere issue.

Punctuation

Field 515 ends with a period unless another mark of punctuation is present.

#### Issuing body [550 \$a]

General practice

The issuing body note is useful for cataloguing remote access files, since websites and remote access serials often are issued by an organisation, without necessarily containing information about that body. Including a Field 550 note justifies an added entry in such cases.

Include in this field "notes denoting the item as an official organ of a society, etc..." (USMARC 1994, 550 1-2)

Example

245;00;\$a Occasional newsletter about uses of simulations and games for education and training \$h [computer file].
550; bb;\$a Issued by the staff of Project SIMILE of the Western Behavioral Sciences Institute.

Example

245;00;\$a Ergonomics \$h [computer file]. 550;bb;\$a Official publication of the Ergonomics Research Society, 1957-

Punctuation

Field 550 ends with a period unless another mark of punctuation is present.

Restrictions on access [506 \$a]

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General practice

This field can be used to record any restrictions on access.

Example

245;00;\$a Cyberspace lawyer \$h [computer file].
506;\$b;\$a Subscription based access.

#### Summary [520 \$a]

General practice

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Field 520 can be used to give additional information about the subject and content of an electronic resource. The indicators used to denote what type of information is contained in the note follow:

# Summary [520 \$a] indicators and values

First indicator	Value
0	Subject
1	Review
2	Scope and content
3	Abstract
Second indicator	Value
Undefined	Undefined

(USMARC 1997, 520,1)

Example

110;1\(\frac{1}{2}\); \(\frac{1}{2}\) Canada. \(\frac{1}{2}\) Parliament. \(\frac{1}{2}\) House of Commons.

245;10;\$a Debates of the House of Commons of Canada (Hansard) \$h [electronic resource] : \$b 35th Parliament-1st and 2<sup>nd</sup> sessions.

520;2b;\$a A site providing users with chronologically organised hansards for the first (January 1994-February 1996) and second (February 1996-April 1997) sessions of the 35th Parliament of Canada. A keyword index is provided for each session.

# Other parts of the bibliographic record

# Standard numbers and terms of availability [020, 022]

General practice Give the International Standard Serial Number (ISSN) or International Standard Book Number (ISBN) as applicable.

#### Local call number [090 \$a]

General practice Some cataloguing agencies have opted to give their records

for remote access computer files classification numbers.

This provides the element of collocation of items, while the

location is given in Field 856.

The decision whether or not to classify electronic items is one that each cataloging institution will want to make.

CIRP practice CIRP

CIRP is using "Internet" for the 090 MARC field.

# Uniform titles [130/240]

CIRP practice CIRP has chosen, due to local display conventions in the

online public access catalog, not to use the optional Uniform title main entry for remote access files.

Christian (Areas and and Areas and Areas

## Subject headings [6XX]

General practice Assign subject headings as required by the cataloguing

agency

CIRP practice CIRP assigns Library of Congress Subject Headings using

the latest edition online edition available through the University of Toronto DRA cataloguing utility.

## Added entries [7XX]

General practice

CIRP will assign added entries to catalogue records according to the rules prescribed in *AACR2R 1998*, chapter 21.

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#### Electronic location and access [856]

#### General practice

See Guidelines for the Use of Field 856 (Library of Congress, Network Development and MARC Standards Office, 1997) for detailed instructions relating to the use of indicators and subfield tags in Field 856.

Field 856 is intended to provide the location of and access to remote access computer files.

This field can be repeated if there is more than one way to access an electronic resource and if there are multiple file formats with different names, or groups of files.

The method of access is described in either the first indicator or subfield \$2. For each means in which a site can be accessed (i.e., by e-mail, hypertext, ftp, etc), provide a specific 856 field. For example many electronic serials are accessible both by the Internet and by subscription to a listsery. In this case, two separate 856 fields are appropriate.

The following lists the indicator values for field 856.

# Electronic location and access [856] indicators and values

First indicator (Access method)	Value
b	No information provided
0	Email
1	FTP
2	Remote login
3	Dial-up
4	HTTP
7	Method specified in subfield \$2
Second indicator (relationship)	Value
þ	No information provided
0	Resource
1	Version of resource
2	Related resource
8	No display constant generated

(USMARC 1997, 856, 1-2)

Electronic location and accass (856)

General practice

See Guidelinas for the Use or Text 856 (Library of Congress, Network Devalument and MARC Standards Office 1957) for detailed instructions retaining to the use of indicators and subfield lags in Field 856.

Field 855 is interrued to provide the bouring of and accass remote access comparer tiles.

This field oan be reported of there is more than one way to access an electronic me purch and there are multiple file formats with different causes, or groups of files or sufficient of access to the same accessable file, as when a site can be accessable file, as when a site can be accessable for the access in which a site can be accessable for the design of the secondard of accessable for exempte many electronic sorials are accessable for exempte many electronic sorials are accessable for only in termer and by subscription to a appropriation.

Electronic location and access (809) Indicators and values at indicator (Access and Mails)

To bleidue in before a borrold

Selection of a solution of

Associated designation of the de

Example

245;04; \$a The disseminator \$h {electronic resource].
856;40; \$u http://rs6000.nshpl.library
.ns.ca/ provlib/disseminator/
856;0b; \$a nshpl.library.ns.ca \$f dissemlist \$h listserv \$i subscribe

Example

245;00; \$a Associates \$h [computer file]: \$b the electronic library support staff journal. 856;71; \$u gopher://gopher.fis.utoronto.ca/11/library/ejournal/associates 56;71; \$a ukanvm.cc.ukans.edu \$a ukanvm.bitnet \$f assoc-l \$h listserv \$i sub

Example
245;00; \$a Emerging technologies interest
group news \$h [computer file].
856;40; \$u http://www.mgmt.dal.ca/slis/

# Appendix A: checklist for electronic serials

022	ISSN
090	Local call number
1XX	Main entry
100	Personal name.
110	Corporate name.
111	Meeting name.
245	Title statement and general material designation
246	Variations in title and general material designation
250	Edition statement
256	File characteristics
260	Publication, distribution, etc.
310	Frequency of publication
321	Former frequency of publication
362	Numeric, alphabetic, chronological designation for serials online. Enter the Date catalogued when information on its first issue is not available
4XX	Series statement
8XX	
440	Series statement /title traced
490	Series statement /title not traced or traced differently
830	Series added entry
538	System requirements (required) and mode of access (if applicable)
530	Availability of other formats
500	Description based on; source of title
506	Restrictions on access
515	Numbering peculiarities
550	Issuing body
520	Summary
546	Language
6XX	Subject headings
600	Personal name.
610	Corporate name.
611	Meeting name.
650	Topical term.
651	Geographic name.
7XX	Added entries
700	Personal name.
710	Corporate name.
711	Meeting name.
856	Electronic location and access

#### Example record for electronic serial

022; bb; \$a 1205-5743 090; bb; \$a Internet 245;00; \$a CH working papers \$h [electronic resource]. 246;32; \$a Computing in the humanities working papers \$h [electronic resource] 246;32;3\$a CHWP \$h [electronic resource] 256; bb; \$a Electronic data. 260; bb; \$a [Toronto] : \$b [s.n.], 546; bb; \$a Each article is accompanied by an abstract in both English and French. 500; bb; \$a Editors: Russon Wooldridge; Willard McCarty; William Winder. 500; bb; \$a Description based on CHWP home page; title from home page. 538; bb; \$a System requirements: this site has been designed to be viewed with Netscape 2.0 and higher. 538; bb; \$a System requirements: a graphics based World Wide Web browser. 650; \$0; \$a Information storage and retrieval systems \$x Humanities \$x Periodicals. 650; \$0; \$a Human-computer interaction \$x Periodicals. 856;40; \$u http://www.chass.utoronto.ca:8080/epc/chwp/ index.html 856;40; \$u http://www.kcl.ac.uk/humanities/cch/chwp

# Example record for electronic serial

```
022; bb; $a 1056-6694
090:bb; $a Internet
245;00; $a ALCTS network news $h [electronic resource] : $b
an electronic publication of the Association for Library
Collections & Technical Services.
246;13; $a AN2 $h [electronic resource]
246;10; $a Association for Library Collections & Technical
Services, altook news $h ...
256; bb; $a Electronic data.
260; bb; $a Chicago, Ill, : $b Association for Library
Collections & Technical Services, $c [1991]-
310; bb; $a Irregular
362; b0; $a Vol. 1, no. 1 (May 13, 1991)-
500; bb; $a Description based on printout of online display;
title from title screen.
538; bb; $a System requirements: a World Wide Web browser.
650; $0; $a Processing (Libraries) $ Periodicals.
650; €0; $a Collection development (Libraries) $x ∨
710;20; $a Association for Library Collections & Technical
Services.
856;40; $a http://www.lib.ncsu.edu/stacks/a/ann/
856;0b; $a uicvm.bitnet $f aclts $h listserv $i subscribe
```

#### Example record for electronic serial

```
022; bb; $a 1048-6542
090; bb; $a Internet
110; bb; $a University of Houston. $b Libraries.
245;14; $a The public-access computer systems review $h
[electronic resource].
246;13; $a PACS review $h [electronic resource]
250; bb; $a [Electronic ed.]
256; bb; $a Electronic data.
260; bb; $a Houston, Tex. : $b University Libraries,
University of Houston, $c 1990-
310; bb; $a Three times a year
362;0b; $a Vol. 1, no. 1-
500; bb; $a Title from title screen.
530; bb; $a Also available in an annual print ed. under the
same title.
538; bb; $a System requirements: A World Wide Web browser.
650; $0; $a Libraries $x Automation $x Periodicals.
650; $0; $a Online catalogs $x Periodicals.
856;40; $u http://www.fis.utoronto.ca/ejournals/pacsr.html
```

# Appendix B : checklist for electronic items

020	ISBN
090	Local call number
1XX	Main entry
100	Personal name.
110	Corporate name.
111	Meeting name.
245	Title statement and general material designation
246	Variations in title and general material designation
250	Edition statement
256	File characteristics
260	Publication information
4XX	Series statement
8XX	
440	Series statement /title traced
490	Series statement /title not traced or traced differently
830	Series added entry
538	System requirements (required) and mode of access (if applicable)
530	Availability of other formats
500	Description based on; source of title
506	Restrictions on access
550	Issuing body
520	Summary
546	Language
505	Contents
6XX	Subject headings
600	Personal name.
610	Corporate name.
611	Meeting name.
650	Topical term.
651	Geographic name.
7XX	Added entries
700	Personal name.
710	Corporate name.
711	Meeting name.
856	Electronic location and access

## Example record for electronic item

090; bb; \$a Internet

100;1b; \$a Nitecki, Joseph Z.

245;14; \$a The Nitecki trilogy \$h [electronic resource] /

\$c J. Z. Nitecki.

246;3b; \$a Metalibrarianship \$h [electronic resource]

256; bb; \$a Electronic data.

260; bb; \$a Denton, Tex. : \$b School of Library and Information Studies, Texas Woman's University, \$c c1993-

1997.

538; bb; \$a System requirements: a graphics based World Wide Web browser.

500; bb; \$a Introduction, form and format by Joanne Twining Williams.

500; bb; \$a Title from title screen.

550; bb; \$a This doctoral student project is supported by

the Texas Woman's University.

505;0b; \$a v. 1. Metalibrarianship: a model for intellectual foundations of library information science. --

v. 2. Philosophical aspects of library information science in retrospect. -- v. 3. Philosophical ancestry of American library information science.

530; bb; \$a Also available in microform from ERIC.

650; \$0; \$a Library science.

650; \$a Library science as a profession.

700;1b; \$a Williams, Joanne Twining.

710;2b; \$a Texas Woman's University.

856;40; \$u http://venus.twu.edu/library/Nitecki

## **Example record for electronic items**

020; bb; \$a 0777859181 043; bb; \$a n-cn-on 090:bb; \$a Internet 110;1b; \$a Ontario. \$ b Advisory Panel on Future Directions for Postsecondary Education. 245;10; \$a Excellence accessibility responsibility \$h [electronic resource] : \$b report of the Advisory Panel on Future Directions for Postsecondary Education. 246;30; \$a Report of the Advisory Panel on Future Directions for Postsecondary Education \$h [electronic resourcel 256; bb; \$a Electronic data. 260; bb; \$a Toronto: \$b Queen's Printer, \$c 1996. 500; bb; \$a "December 1996". 500; bb; \$a Title from title screen. 500; bb; \$a Submitted to the Ontario Ministry of Education and Training. 500; bb; \$a Commission chaired by David C. Smith. 500; bb; \$a Contains a consultation schedule and list of groups, and a background paper on the history of postsecondary education and public policy in Ontario. 505;0b; \$a Introduction -- Sharing the costs -- Roles and linkages -- Meeting future needs -- Conclusion. 520; bb; \$a Report of the Panel to the Minister of Education and Training for Ontario, containing its recommendations concerning cost-sharing in post-secondary education, and the relationship between colleges and universities, and between public and private postsecondary institutions. 538; bb; \$a System requirements: a World Wide Web browser. 546; bb; \$a Contains hypertext link to the French version. 650; \$a Postsecondary education \$z Ontario \$x Finance. 650; \$0; \$a Educational fund raising \$z Ontario. 650; \$0; \$a Universities and colleges \$z Ontario \$x Finance. 710;1b; \$a Ontario. \$b Ministry of Education and Training. 856;40; \$u http://www.edu.gov.on.ca/eng/document/reports/ futuree.html

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  1998. http://lcweb.loc.gov/acq/conser/module31.html
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   http://lcweb.loc.gov/acq/conser/homepage.html
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for electronic resolutes annother. Dermany R.S.

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