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Information and documentation — MarcXchange

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Foreword

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ISO 25577 was prepared by Technical Committee ISO/TC 46, *Information and Documentation*, Subcommittee SC 4, *Technical interoperability*.

Introduction

In 2001, the U.S. Library of Congress developed a framework for working with MARC data in an XML environment. The core of the framework is a MARCXML schema that allows lossless round-trip conversion of an ISO 2709 MARC 21 record and an XML encoded MARC 21 record.

Because MARCXML is tightly coupled to ISO 2709, *Information and documentation – Format for information exchange*, ISO TC46/SC4 was requested to work on a general XML-based alternative for ISO 2709 at the May 2003 meeting in Rome. The goal was to generalize MARCXML so that any existing format based on ISO 2709 may be represented. A proposal for a generalised XML Schema was presented to ISO TC46/SC4 at the October 2004 meeting in Washington where a resolution was passed to initiate a new work project utilizing the working draft as the basis of the standard.

This Standard describes a generalized MARCXML schema that is useable for all records using the ISO 2709 syntax without changing the structure and with as few changes as possible to the original schema. Thus, the original elements are reused and verbal links to the terminology of ISO 2709 have been added. The resulting schema is an extension to ISO 2709 as well as to MARCXML. The international exchange of records uses very few internationally recognized formats. MarcXchange is mainly intended for regional usage or as a framework for making regional schemas. Experience has shown that there is a need for regional deviations—even if MARC 21 or UNIMARC is chosen as the regional format. This Schema provides a specification for the development of local simple schemas, ensuring compatibility.

Information and documentation — MarcXchange

1 Scope

The scope of MarcXchange is to provide a tool for exchange of MARC records in XML as a supplement to exchange of MARC records in ISO 2709.

This International Standard specifies the requirements for a generalized XML-based exchange format for bibliographic records as well as other types of metadata.

It does not define the length or the content of individual records and does not assign any meaning to tags, indicators, or identifiers, these specifications being the functions of an implementation format.

This International Standard describes a generalized structure; a framework designed primarily for communication between data processing systems, but may also be relevant for use as a processing format within systems.

1.1 Application areas

MarcXchange could potentially be used as follows:

- for representing a complete MARC record or a set of MARC records in XML;
- for original resource description in XML syntax;
- as an extension schema to METS (Metadata Encoding and Transmission Standard);
- for exchange of MARC records in XML;
- for transfer of MARC records in web services like SRW (Search/Retrieve Web service);
- to represent metadata for harvesting, e.g. OAI-PMH (The Open Archives Initiative Protocol for Metadata Harvesting);
- as a temporary format in all kinds of data transformation or manipulation, e.g. conversion, publication, editing, validation; and
- for metadata in XML that may be packaged with an electronic resource.

Validation of MARC records content is not enforced by the schema but by dedicated software tailored for the specific usage (e.g. the specific MARC-format).

1.2 Relationship to MARC and ISO 2709

The XML schema is constructed to contain MARC data. The schema may be used for the exchange of MARC records or to act as a "bus" to enable MARC data records to go through further transformations such as Dublin Core and/or processes such as validation. The basic components of ISO 2709 are treated in the following way in the XML schema:

- The record label is treated as a simple string.
- The record identifier field and the control fields are treated as elements with the tag as an attribute.
- Data fields are treated as elements with the tag and indicators as attributes.
- Subfields are treated as sub elements with the subfield code as an attribute.

2 Normative references

The following standards contain provisions, which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For updated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 2709, *Information and documentation — Format for information exchange*

ISO 10646, *Information technology — Universal Multiple-Octet Coded Character Set (UCS)*

Extensible Markup Language (XML), W3C Recommendation

XML Schema Part 1: Structures, W3C Recommendation

XML Schema Part 2: Datatypes, W3C Recommendation

3 Terms and definitions

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

**3.1
MARC**
MACHINE-Readable Cataloguing; family of format standards for the storage and exchange of bibliographic records and related information in machine-readable form.

NOTE: All MARC Standards conform to: ISO 2709:1996 Information and documentation – Format for Information Exchange.

**3.2
collection**
a root element representing a set of records

NOTE: The terms root element, element and attribute are in line with the definitions in XML. The term sub element is used for an element, which is the content (or child) of another element (the parent).

**3.3
record**
a root element corresponding to a record in ISO 2709

NOTE: may occur alone or as a sub element of collection

**3.4
format**
an attribute of the record element specifying the bibliographic format

3.5**type**

an attribute of the record element specifying the type of the record e.g. bibliographic record, holdings record

3.6**leader**

a sub element of the record element corresponding to record label in ISO 2709

3.7**controlfield**

a sub element of the record element that incorporates record identifier field and reference fields from ISO 2709

3.8**datafield**

a sub element of the record element corresponding to data fields in ISO 2709

3.9**tag**

an attribute of the controlfield element and the datafield element corresponding to tag in ISO 2709

3.10**ind1, ..., ind9**

attributes of the datafield element corresponding to indicators in ISO 2709

3.11**subfield**

a sub element of the datafield element corresponding to subfield in ISO 2709

3.12**code**

an attribute of the subfield element corresponding to subfield identifier in ISO 2709

4 XML schema exchange of MARC records

The MarcXchange schema supports XML markup of MARC records, using terminology and element names consistent with ISO 2709.

ISO 2709 defines the general structure illustrated in Figure 1.

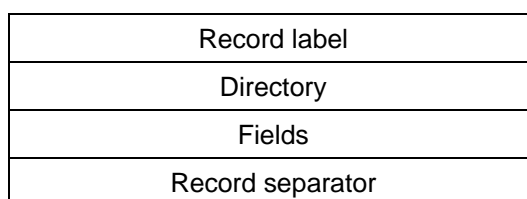


Figure 1 — ISO 2709 General Structure

An ISO 2709 record contains the following components:

- a) a record label (fixed length);
- b) a directory (variable length);
- c) a record identifier field (variable length);
- d) a number of reference fields (variable length);

- e) a number of data fields (variable length);
- f) a field separator, i.e. separator IS2 of ISO/IEC 646 or ISO/IEC 10646, which terminates the directory and each field; and
- g) a record separator, i.e. separator IS3 of ISO/IEC 646 or ISO/IEC 10646, which terminates each record.

In the MarcXchange schema the element "leader" is used for the ISO 2709 "record label"; the element "control field" is used for the ISO 2709 "record identifier field" and "reference field"; and the element "data field" is used for ISO 2709 "data field".

This schema is an extension to ISO 2709. It allows the usage of "data fields" for all legal ISO 2709 tags, including 001 to 009, 00A to 00Z and 00a to 00z; and two attributes are introduced to specify the content of a record—"format" to specify the MARC format and "type" to specify the kind of record.

This schema clarifies that subfield identifiers may consist of 8-bit characters from ISO 10646, BMP row 00 (Basic Latin and Latin-1 Supplement).

There is one restriction. A special mode (identifier length = 0) of ISO 2709 operates with data fields without subfields. In the MarcXchange schema subfields are required, i.e. identifier length = 0 is not supported.

4.1 Structure of XML Schema

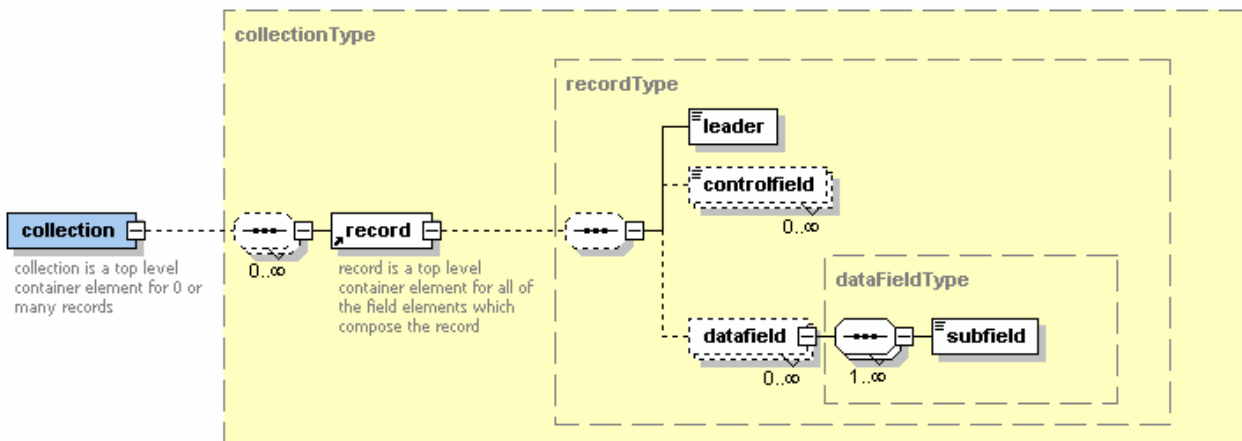


Figure 2 — MarcXchange General Structure

Figure 2 illustrates the structure of the MarcXchange schema and includes the following:

- **collection:** a top level container element for zero or many **records**
- **record:** a top level container element for the leader element and all of the **controlfields** and **datafields** elements which comprise the record; the record element has the following attributes:
 - **format** identifies the MARC format (examples: MARC 21, UNIMARC, danMARC2, Ibermarc).
 - **type** identifies the type of the record (examples: Bibliographic, Authority, Holdings, Classification, and Community).

- **leader:** corresponds to ISO 2709 record label, 24 bytes
- **controlfield:** corresponds to ISO 2709 record identifier field (tag 001) and reference fields (tags 002 to 009 and 00A to 00Z); the controlfield element has one attribute:
 - **tag** identifies the field (e.g. 008)
- **datafield:** may be used for all fields (tags 001 to 999 and 00A to ZZZ); it contains **subfields**; the datafield element has the following attributes:
 - **tag** identifies the field (e.g. 245).
 - **ind1 to ind9** contain the indicator values
- **subfield:** corresponds to ISO 2709 subfield; the subfield element has one attribute, code, which corresponds to ISO 2709 subfield identifier.

Annex A (normative) The MarcXchange Schema

A.1 The MarcXchange Schema in the version at publication of this standard:

```

<?xml version="1.0"?>
<xsd:schema targetNamespace="http://www.bs.dk/standards/MarcXchange" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns="http://www.bs.dk/standards/MarcXchange" elementFormDefault="qualified" attributeFormDefault="unqualified"
version="1.1" xml:lang="en">
  <xsd:annotation>
    <xsd:documentation>
      MarcXchange: The general XML Schema for MARC formatted records. Prepared by Tommy Schomacker - version
      1.0 - december 2004.
      MarcXchange is made as a generalization (mainly by weakening restrictions) of the MARCXML Schema for MARC 21.
      MARCXML is made by Corey Keith from the Library of Congress.
    </xsd:documentation>
    <xsd:documentation>
      The schema supports XML markup of MARC records as specified in ISO 2709.
      ISO 2709 defines the following general structure: Record Label - Directory - Record Identifier - Reference Fields -
      Data Fields.
      In the Schema the element "leader" is used for ISO 2709 Record Label,
      the element "control field" for ISO 2709 Record Identifier and Reference Fields,
      and the element "data field" for ISO 2709 Data Fields.
    </xsd:documentation>
    <xsd:documentation>
      Extensions and elucidations:
      The Schema allows the usage of "data fields" for all legal tags, including 001 to 009, 00A to 00Z and 00a to 00z.
      Subfield identifiers may consist of 8 bits characters from ISO 10646 BMP row 00 (Basic Latin and Latin-1
      Supplement).
      Two attributes are introduced to specify the content of a record - "format" to specify the MARC format, "type" to
      specify the kind of record.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:element name="collection" type="collectionType" nillable="true" id="collection.e">
    <xsd:annotation>
      <xsd:documentation>collection is a top level container element for 0 or many records</xsd:documentation>
    </xsd:annotation>
  </xsd:element>
  <xsd:element name="record" type="recordType" nillable="true" id="record.e">
    <xsd:annotation>
      <xsd:documentation>record is a top level container element for all of the field elements which compose the
      record</xsd:documentation>
    </xsd:annotation>
  </xsd:element>
  <xsd:complexType name="collectionType" id="collection.ct">
    <xsd:sequence minOccurs="0" maxOccurs="unbounded">
      <xsd:element ref="record"/>
    </xsd:sequence>
    <xsd:attribute name="id" type="idDataType" use="optional"/>
  </xsd:complexType>
  <xsd:complexType name="recordType" id="record.ct">
    <xsd:sequence minOccurs="0">
      <xsd:element name="leader" type="leaderFieldType"/>
      <xsd:element name="controlfield" type="controlFieldType" minOccurs="0" maxOccurs="unbounded"/>
      <xsd:element name="datafield" type="dataFieldType" minOccurs="0" maxOccurs="unbounded"/>
    </xsd:sequence>
    <xsd:attribute name="format" type="xsd:NMTOKEN" use="optional"/>
    <xsd:attribute name="type" type="xsd:NMTOKEN" use="optional"/>
    <xsd:attribute name="id" type="idDataType" use="optional"/>
  </xsd:complexType>
  <xsd:complexType name="leaderFieldType" id="leader.ct">
    <xsd:annotation>
      <xsd:documentation>ISO 2709 Record Label, 24 bytes</xsd:documentation>
    </xsd:annotation>
  </xsd:complexType>

```

```

</xsd:annotation>
<xsd:simpleContent>
  <xsd:extension base="leaderDataType">
    <xsd:attribute name="id" type="idDataType" use="optional"/>
  </xsd:extension>
</xsd:simpleContent>
</xsd:complexType>
<xsd:simpleType name="leaderDataType" id="leader.st">
  <xsd:restriction base="xsd:string">
    <xsd:whiteSpace value="preserve"/>
    <xsd:pattern value="\d{5}\p{[IsBasicLatin]}\p{[IsBasicLatin]}{4}\d\d{5}\p{[IsBasicLatin]}{3}\d\d\d\p{[IsBasicLatin]}/>
  </xsd:restriction>
</xsd:simpleType>
<xsd:complexType name="controlFieldType" id="controlfield.ct">
  <xsd:annotation>
    <xsd:documentation>ISO 2709 Record Identifier and Reference Fields</xsd:documentation>
  </xsd:annotation>
  <xsd:simpleContent>
    <xsd:extension base="controlDataType">
      <xsd:attribute name="id" type="idDataType" use="optional"/>
      <xsd:attribute name="tag" type="controltagDataType" use="required"/>
    </xsd:extension>
  </xsd:simpleContent>
</xsd:complexType>
<xsd:simpleType name="controlDataType" id="controlfield.st">
  <xsd:restriction base="xsd:string">
    <xsd:whiteSpace value="preserve"/>
  </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="controltagDataType" id="controltag.st">
  <xsd:restriction base="xsd:string">
    <xsd:whiteSpace value="preserve"/>
    <xsd:pattern value="00[1-9A-Za-z]"/>
  </xsd:restriction>
</xsd:simpleType>
<xsd:complexType name="dataFieldType" id="datafield.ct">
  <xsd:annotation>
    <xsd:documentation>ISO 2709 data fields</xsd:documentation>
  </xsd:annotation>
  <xsd:sequence maxOccurs="unbounded">
    <xsd:element name="subfield" type="subfielddataFieldType"/>
  </xsd:sequence>
  <xsd:attribute name="id" type="idDataType" use="optional"/>
  <xsd:attribute name="tag" type="tagDataType" use="required"/>
  <xsd:attribute name="ind1" type="indicatorDataType" use="optional"/>
  <xsd:attribute name="ind2" type="indicatorDataType" use="optional"/>
  <xsd:attribute name="ind3" type="indicatorDataType" use="optional"/>
  <xsd:attribute name="ind4" type="indicatorDataType" use="optional"/>
  <xsd:attribute name="ind5" type="indicatorDataType" use="optional"/>
  <xsd:attribute name="ind6" type="indicatorDataType" use="optional"/>
  <xsd:attribute name="ind7" type="indicatorDataType" use="optional"/>
  <xsd:attribute name="ind8" type="indicatorDataType" use="optional"/>
  <xsd:attribute name="ind9" type="indicatorDataType" use="optional"/>
</xsd:complexType>
<xsd:simpleType name="tagDataType" id="tag.st">
  <xsd:restriction base="xsd:string">
    <xsd:whiteSpace value="preserve"/>
    <xsd:pattern value="(00[1-9A-Za-z]|0[1-9A-Za-z][0-9A-Za-z][1-9A-Za-z][0-9A-Za-z]{2})"/>
  </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="indicatorDataType" id="ind.st">
  <xsd:restriction base="xsd:string">
    <xsd:whiteSpace value="preserve"/>
    <xsd:pattern value="\p{[IsBasicLatin]}{1}"/>
  </xsd:restriction>
</xsd:simpleType>
<xsd:complexType name="subfielddataFieldType" id="subfield.ct">
  <xsd:simpleContent>
    <xsd:extension base="subfieldDataType">
      <xsd:attribute name="id" type="idDataType" use="optional"/>
      <xsd:attribute name="code" type="subfieldcodeDataType" use="required"/>
    </xsd:extension>
  </xsd:simpleContent>

```


Annex B (informative) Examples

B.1 Example of a MARC 21 record that complies with MarcXchange

```
<?xml version="1.0" encoding="UTF-8"?>
<collection xmlns="http://www.bs.dk/standards/MarcXchange" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://www.bs.dk/standards/MarcXchange http://www.bs.dk/standards/MarcXchange.xsd">

  <record format="MARC 21" type="Bibliographic">
    <leader>01142cam 2200301 a 4500</leader>
    <controlfield tag="001"> 92005291 </controlfield>
    <controlfield tag="003">DLC</controlfield>
    <controlfield tag="005">19930521155141.9</controlfield>
    <controlfield tag="008">920219s1993 caua j 000 0 eng </controlfield>
    <datafield tag="010" ind1=" " ind2=" ">
      <subfield code="a"> 92005291 </subfield>
    </datafield>
    <datafield tag="020" ind1=" " ind2=" ">
      <subfield code="a">0152038655 :</subfield>
      <subfield code="c">$15.95</subfield>
    </datafield>
    <datafield tag="040" ind1=" " ind2=" ">
      <subfield code="a">DLC</subfield>
      <subfield code="c">DLC</subfield>
      <subfield code="d">DLC</subfield>
    </datafield>
    <datafield tag="042" ind1=" " ind2=" ">
      <subfield code="a">lcac</subfield>
    </datafield>
    <datafield tag="050" ind1="0" ind2="0">
      <subfield code="a">PS3537.A618</subfield>
      <subfield code="b">A88 1993</subfield>
    </datafield>
    <datafield tag="082" ind1="0" ind2="0">
      <subfield code="a">811/.52</subfield>
      <subfield code="2">20</subfield>
    </datafield>
    <datafield tag="100" ind1="1" ind2=" ">
      <subfield code="a">Sandburg, Carl,</subfield>
      <subfield code="d">1878-1967.</subfield>
    </datafield>
    <datafield tag="245" ind1="1" ind2="0">
      <subfield code="a">Arithmetic </subfield>
      <subfield code="c">Carl Sandburg ; illustrated as an anamorphic adventure by Ted Rand.</subfield>
    </datafield>
    <datafield tag="250" ind1=" " ind2=" ">
      <subfield code="a">1st ed.</subfield>
    </datafield>
    <datafield tag="260" ind1=" " ind2=" ">
      <subfield code="a">San Diego :</subfield>
      <subfield code="b">Harcourt Brace Jovanovich,</subfield>
      <subfield code="c">c1993.</subfield>
    </datafield>
    <datafield tag="300" ind1=" " ind2=" ">
      <subfield code="a">1 v. (unpaged) :</subfield>
      <subfield code="b">ill. (some col.) ;</subfield>
      <subfield code="c">26 cm.</subfield>
    </datafield>
    <datafield tag="500" ind1=" " ind2=" ">
      <subfield code="a">One Mylar sheet included in pocket.</subfield>
    </datafield>
    <datafield tag="520" ind1=" " ind2=" ">
```

```

    <subfield code="a">A poem about numbers and their characteristics. Features anamorphic, or distorted, drawings
    which can be restored to normal by viewing from a particular angle or by viewing the image's reflection in the provided
    Mylar cone.</subfield>
  </datafield>
  <datafield tag="650" ind1=" " ind2="0">
    <subfield code="a">Arithmetic</subfield>
    <subfield code="x">Juvenile poetry.</subfield>
  </datafield>
  <datafield tag="650" ind1=" " ind2="0">
    <subfield code="a">Children's poetry, American.</subfield>
  </datafield>
  <datafield tag="650" ind1=" " ind2="1">
    <subfield code="a">Arithmetic</subfield>
    <subfield code="x">Poetry.</subfield>
  </datafield>
  <datafield tag="650" ind1=" " ind2="1">
    <subfield code="a">American poetry.</subfield>
  </datafield>
  <datafield tag="650" ind1=" " ind2="1">
    <subfield code="a">Visual perception.</subfield>
  </datafield>
  <datafield tag="700" ind1="1" ind2=" ">
    <subfield code="a">Rand, Ted.</subfield>
    <subfield code="e">ill.</subfield>
  </datafield>
</record>
</collection>

```

B.2 The same MARC 21 record in a labelled display

For indicators the value "blank" is represented by underscore.

```

000 01142cam 2200301 a 4500
001 92005291
003 DLC
005 19930521155141.9
008 920219s1993 caua j 000 0 eng
010 __|a 92005291
020 __|a0152038655 :|c$15.95
040 __|aDLC|cDLC|dDLC
042 __|alcac
050 00|aPS3537.A618|bA88 1993
082 00|a811/.52|220
100 1_|aSandburg, Carl,|d1878-1967.
245 10|aArithmetic /|cCarl Sandburg ; illustrated as an anamorphic adventure
by Ted Rand.
250 __|a1st ed.
260 __|aSan Diego :|bHarcourt Brace Jovanovich,|cc1993.
300 __|a1 v. (unpaged) :|bill. (some col.) ;|c26 cm.
500 __|aOne Mylar sheet included in pocket.
520 __|aA poem about numbers and their characteristics. Features anamorphic,
or distorted, drawings which can be restored to normal by viewing from a
particular angle or by viewing the image's reflection in the provided

```


Mylar cone.

650 _0|aArithmetic|xJuvenile poetry.

650 _0|aChildren's poetry, American.

650 _1|aArithmetic|xPoetry.

650 _1|aAmerican poetry.

650 _1|aVisual perception.

700 1_|aRand, Ted, |eill.

B.3 Example of a UNIMARC record that complies with MarcXchange

```
<?xml version="1.0" encoding="windows-1251"?>
<collection xmlns="http://www.bs.dk/standards/MarcXchange" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://www.bs.dk/standards/MarcXchange http://www.bs.dk/standards/MarcXchange.xsd">
  <record format="UNIMARC" type="Bibliographic">
    <leader>01307nam0 2200349 i 450 </leader>
    <controlfield tag="001">RU/NLR/BIBL/128053</controlfield>
    <controlfield tag="005">20050608165836.0</controlfield>
    <datafield tag="010" ind1=" " ind2=" ">
      <subfield code="a">0-19-925621-7</subfield>
    </datafield>
    <datafield tag="100" ind1=" " ind2=" ">
      <subfield code="a">20050512d2003 u y0engy0189 ba</subfield>
    </datafield>
    <datafield tag="101" ind1="0" ind2=" ">
      <subfield code="a">eng</subfield>
    </datafield>
    <datafield tag="102" ind1=" " ind2=" ">
      <subfield code="a">GB</subfield>
    </datafield>
    <datafield tag="105" ind1=" " ind2=" ">
      <subfield code="a">y |||||</subfield>
    </datafield>
    <datafield tag="200" ind1="1" ind2=" ">
      <subfield code="a">The Liberal Party in rural England, 1885-1910</subfield>
      <subfield code="e">radicalism and community</subfield>
      <subfield code="f">Patricia Lynch</subfield>
    </datafield>
    <datafield tag="210" ind1=" " ind2=" ">
      <subfield code="a">Oxford</subfield>
      <subfield code="c">Clarendon press</subfield>
      <subfield code="d">2003</subfield>
    </datafield>
    <datafield tag="215" ind1=" " ind2=" ">
      <subfield code="a">X, 262 p.</subfield>
      <subfield code="d">22</subfield>
    </datafield>
    <datafield tag="225" ind1="1" ind2=" ">
      <subfield code="a">Oxford historical monographs</subfield>
    </datafield>
    <datafield tag="320" ind1=" " ind2=" ">
      <subfield code="a">Bibliogr.: p.236-248</subfield>
    </datafield>
    <datafield tag="320" ind1=" " ind2=" ">
      <subfield code="a">Index: p.249-262</subfield>
    </datafield>
    <datafield tag="601" ind1="0" ind2="2">
      <subfield code="a">Liberal Party (Great Britain)</subfield>
      <subfield code="2">lc</subfield>
    </datafield>
    <datafield tag="607" ind1=" " ind2=" ">
      <subfield code="a">Great Britain</subfield>
      <subfield code="x">Politics and government</subfield>
      <subfield code="z">1837-1901</subfield>
      <subfield code="2">lc</subfield>
  </record>
</collection>
```

```

</datafield>
<datafield tag="607" ind1=" " ind2=" ">
  <subfield code="a">Great Britain</subfield>
  <subfield code="x">Rural conditions</subfield>
  <subfield code="2">lc</subfield>
</datafield>
<datafield tag="676" ind1=" " ind2=" ">
  <subfield code="a">324.24106'09'034</subfield>
  <subfield code="v">21</subfield>
</datafield>
<datafield tag="700" ind1=" " ind2="1">
  <subfield code="a">Lynch</subfield>
  <subfield code="b">P.</subfield>
  <subfield code="g">Patricia</subfield>
</datafield>
<datafield tag="712" ind1="0" ind2="2">
  <subfield code="3">RU/NLR/RU/AUTH/10023815</subfield>
  <subfield code="a">Liberal Party</subfield>
  <subfield code="c">Great Britain</subfield>
  <subfield code="4">570</subfield>
</datafield>
<datafield tag="801" ind1=" " ind2="0">
  <subfield code="a">RU</subfield>
  <subfield code="b">NLR</subfield>
  <subfield code="c">20050512</subfield>
  <subfield code="g">RCR</subfield>
</datafield>
<datafield tag="801" ind1=" " ind2="1">
  <subfield code="a">RU</subfield>
  <subfield code="b">NLR</subfield>
  <subfield code="c">20050512</subfield>
</datafield>
<datafield tag="801" ind1=" " ind2="2">
  <subfield code="a">RU</subfield>
  <subfield code="b">NLR</subfield>
  <subfield code="c">20050608</subfield>
</datafield>
</record>
</collection>

```

B.4 The same UNIMARC record in a labelled display

For indicators the value "blank" is represented by underscore.

```

000 01307nam0 2200349 I 450
001 RU/NLR/BIBL/128053
005 20050608165836.0
010 __$a0-19-925621-7
100 __$a20050512d2003 u y0engy0189 ba
101 0_$aeng
102 __$aGB
105 __$ay | | | | | | | |
200 1_$aThe Liberal Party in rural England, 1885-1910$eradicalism and
community$fPatricia Lynch
210 __$aOxford$cClarendon press$d2003
215 __$aX, 262 p.$d22
225 1_$aOxford historical monographs
320 __$aBibliogr.: p.236-248

```

320 __\$aIndex: p.249-262
601 02\$aLiberal party (Great Britain)\$2lc
607 __\$aGreat Britain\$xPolitics and government\$z1837-1901\$2lc
607 __\$aGreat Britain\$xRural conditions\$2lc
676 __\$a324.24106'09'034\$v21
700 _1\$aLynch\$bP.\$gPatricia
712 02\$3RU/NLR/AUTH/10023815\$aLiberal party\$GGreat Britain\$4570
801 _0\$aRU\$bNLR\$c20050512\$gRCR
801 _1\$aRU\$bNLR\$c20050512
801 _2\$aRU\$bNLR\$c20050608

Annex C
(normative)
Maintenance Responsibilities

The maintenance agency for ISO 25577 shall:

- ensure that the MarcXchange schema remains valid in future versions of XML and XML schema;
- register and maintain an informative list of MARC formats; and
- publish a website with an updated version of the MarcXchange schema, the informative list of MARC formats and other relevant information.

Annex D
(informative)
Maintenance Agency

The designated Maintenance Agency for ISO 25577, *MarcXchange*, is:

Library of Congress
Network Development and MARC Standards Office
Washington, DC 20540 USA
Email: marcxchange@loc.gov
Web: <http://www.loc.gov/iso25577/agency/>

The MarcXchange Schema may be updated to correct possible errors and/or to conform to future version of the XML Schema standards.

Reference to current version of the MarcXchange Schema:

<http://www.bs.dk/standards/MarcXchange.xsd>