

IS-0046

SUPPLIED BY BSB EDGE UNDER THE LICENSE FROM BIS FOR GALGOTIAS UNIVERSITY, GREATER NOIDA - GREATER NOIDA (Librarian@galgotiasuniversity.edu.in) DATED 2021-07-17 AGAINST OUR ORD. REF. BIS-20210716-5

**भारतीय मानक**  
**Indian Standard**



IS/ISO 22938 : 2017

**प्रलेख प्रबंधन — इलेक्ट्रॉनिक सामग्री / प्रलेख  
प्रबंधन (सीडीएम) डेटा इंटरचेंज प्रारूप**

**Document Management —  
Electronic Content / Document  
Management (CDM) Data  
Interchange Format**

ICS 37.080

© BIS 2019



**भारतीय मानक ब्यूरो**  
**BUREAU OF INDIAN STANDARDS**  
मानक भवन, 9 बहादुरशाह ज़फर मार्ग, नई दिल्ली - 110002  
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG  
NEW DELHI-110002  
[www.bis.gov.in](http://www.bis.gov.in) [www.standardsbis.in](http://www.standardsbis.in)

July 2019

Price Group 7

Documentation and Information Sectional Committee, MSD 05

## NATIONAL FOREWORD

This Indian Standard which is identical with ISO 22938 : 2017 'Document management — Electronic content/ document management (CDM) data interchange format' issued by the International Organization for Standardization (ISO) was adopted by the Bureau of Indian Standards on recommendation of the Documentation and Information Sectional Committee and approval of the Management and Systems Division Council.

The text of ISO Standard has been approved as suitable for publication as an Indian Standard without deviations. Certain terminologies and conventions are, however, not identical to those used in Indian Standards. Attention is particularly drawn to the following:

- a) Wherever the words 'International Standard' appear referring to this standard, they should be read as 'Indian Standard'.
- b) Comma (,) has been used as a decimal marker, while in Indian Standards, the current practice is to use a point (.) as the decimal marker.

The technical committee has reviewed the provisions of the following International Standard, referred in this adopted standard and has decided that it is acceptable for use in conjunction with this standard:

*International Standard*  
ISO/IEC 29500-2 : 2012

*Title*  
Information technology — Document description and processing languages — Office Open XML file formats — Part 2: Open Packaging Conventions

## Contents

	Page
<b>Introduction</b> .....	<b>iii</b>
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>1</b>
<b>3 Terms and definitions</b> .....	<b>1</b>
<b>4 Abbreviated terms</b> .....	<b>1</b>
<b>5 XML-based data interchange format with OPC-based packaging</b> .....	<b>2</b>
5.1 General.....	2
5.2 Use of XML and OPC for content/document management data.....	2
5.2.1 Overview of OPC structure.....	2
5.2.2 Content/document management (CDM) — Specific OPC structure.....	2
5.2.3 Content/document management (CDM) — Specific relationships.....	2
5.2.4 Overview of XML structure.....	2
5.2.5 Content/document management (CDM) — Specific XML structure.....	3
5.3 Representing CDM data — Example.....	7
5.4 Representing CDM data and associated content using the OPC package — Example.....	9
<b>Bibliography</b> .....	<b>13</b>

## Introduction

This document specifies a consistent interchange format for data contained in electronic content/document management (CDM) systems, including documents, their associated resources, and retrieval index values that are stored in, or managed by, these technologies. Such a standard should facilitate the *exact* interchange of CDM data, i.e. the standard should not require that the data be irreversibly modified or packaged within a format that does not allow the reconstruction of the original data. Therefore, this document avoids choosing one particular data format and anointing it as the interchange standard for CDM. Rather, this document specifies a common markup format, based on the XML (eXtensible Markup Language), which encapsulates all forms of CDM data. A DTD (document type definition) describes the XML markup used for CDM data transfer. The XML format is a W3C (World Wide Web Consortium) standard, adopted in February 1998. XML is extensible, so that additional CDM formats may be easily specified by appropriately updating the DTD.

The purpose of this document is to define standards for information interchange in a way that benefits both the consumers and vendors of content/document management systems. Some possible benefits are as follows:

- a) document information can be exported from one standard's compliant CDM system and afterwards imported to another standard's compliant CDM system;
- b) disparate CDM systems within an enterprise (due to autonomous selection, replacement, or merger/acquisition) will be able to exchange or consolidate CDM information.

To this end, the standards are defined with the goal of striking a balance between being either too restrictive or too general. They should be broad enough to encompass all common CDM information types and all common uses of CDM systems, as well as ones that might be expected in the future. On the other hand, the standards should be restrictive enough so that CDM vendors do not have inordinate difficulty complying with the standards.

## Indian Standard

# DOCUMENT MANAGEMENT — ELECTRONIC CONTENT/DOCUMENT MANAGEMENT (CDM) DATA INTERCHANGE FORMAT

## 1 Scope

This document defines the interchange format for content/document management (CDM) data and all associated resources.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC 29500-2:2012, *Information technology — Document description and processing languages — Office Open XML file formats — Part 2: Open Packaging Conventions*

BERNERS-LEE T., FIELDING R. and MASINTER L. RFC 3986: *Uniform Resource Identifier (URI): Generic Syntax*. The Internet Society, 2005 [viewed 2017-05-15]. Available from: <http://www.ietf.org/rfc/rfc3986.txt>

## 3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

### 3.1

#### **document**

discreet unit or collection of content

### 3.2

#### **rendition**

electronic encoding of a *document* (3.1)

### 3.3

#### **packages**

collection containing *rendition(s)* (3.2) and related metadata

## 4 Abbreviated terms

CDM	content/document management
DTD	document type definition
W3C	World Wide Web Consortium
XML	eXtensible Markup Language

## 5 XML-based data interchange format with OPC-based packaging

### 5.1 General

The document interchange format for electronic documents is an application of the XML. XML is an extensible, flexible, platform-independent format, and has been adopted by the W3C as a standard (officially a "recommendation" in W3C terminology).

The primary use of this document is to exchange data between diverse document management systems that do not already have an exchange methodology in place. This document is considered to be the foundational platform from which other XML-based exchange standards are developed, ensuring a common framework throughout the document management industry. The use of the ZIP-based Open Packaging Convention (OPC) to group the document interchange format XML, the content it describes, and related resources into a single standardized archive file allows the interchange of documents among CDM systems without the risk of the related parts becoming separated or out of sync.

### 5.2 Use of XML and OPC for content/document management data

#### 5.2.1 Overview of OPC structure

The document interchange format for electronic documents utilizes the packaging format described in ISO/IEC 29500-2 ("OPC"). This is a ZIP-based format containing data files ("Parts") and metadata describing relationships between these parts.

#### 5.2.2 Content/document management (CDM) — Specific OPC structure

A document of the format specified in this document which implements OPC packaging shall be an OPC package, as specified in ISO/IEC 29500-2. In addition to the requirements specified in ISO/IEC 29500-2, the package shall contain the OPC parts shown in [Table 1](#).

**Table 1 — OPC parts**

Logical Name	Description	Content type
/metadata.xml	XML metadata content/document management structure (as specified in 5.2.4)	application/vnd.documentmanagement-metadata+xml
/_rels/.rels	XML representation of relationships between Parts included in the package as specified in 5.2.3.	application/vnd.openxmlformats-package.relationships+xml
<i>Other parts</i>	Renditions of content as specified in 5.2.5, f).	Appropriate to content

The content types of OPC Parts contained in the package shall be mapped to package data as defined in ISO/IEC 29500-2:2012, 10.1.2, which includes mapping of the content type of most types of data stored in the package to the data in a *Content Types stream* with the logical name *[Content\_Type].xml* included in the package as specified in ISO/IEC 29500-2:2012, 10.2.6.

#### 5.2.3 Content/document management (CDM) — Specific relationships

A document of the format specified in this document which implements the OPC packaging described in 5.2 shall include a *Relationships part* as specified in ISO/IEC 29500-2:2012, 9.3.1. The Relationships part shall include, at a minimum, a Relationship identifying the document interchange format XML, with the relationship type identified as [http://placeholder\\_uri/documentmanagement-metadata](http://placeholder_uri/documentmanagement-metadata).

#### 5.2.4 Overview of XML structure

XML consists of markup and data. The markup consists of (usually paired) tags called elements, which may contain descriptive data called attributes. The data are the non-markup content residing between

element pairs. The elements can be nested, so that one element may contain sub-elements, which can in turn contain sub-sub-elements, etc.

This document defines the elements, element structure, and element attributes suitably, so that the various forms of CDM data, resources, index values, etc., can be clearly and unambiguously described and included as data. The model which describes this is an XML Schema. The precise schema is the essential content of this document.

### 5.2.5 Content/document management (CDM) — Specific XML structure

The XML structure of a CDM is described in an XML Schema Definition (XSD) below. The elements used in that XSD and their meanings are the following.

a) **cdm\_interchange**

This is the root node of the interchange XML. It consists of an identifier to uniquely identify the interchange operation (**interchange\_id**), the action that a CDM system should execute when processing the interchange XML (**cdm\_action**), information about the creation of the interchange package (**creator**, **vendor**, **creation\_date**, **creation\_time**), and a set of document collections (**cdm\_collection**). **Creation\_time** should be a string in ISO 8601 format.

b) **cdm\_collection**

This is the collection of documents contained in the package. It consists of a collection identifier (**coll\_id**), a name (**coll\_name**), a set of index values for the collection (**index\_set**), and a set of documents (**cdm\_doc**).

c) **cdm\_doc**

This is the element representing a document contained in a document collection. It consists of a unique document identifier (**doc\_id**), a document type (**type**), a document title (**title**), a set of index values for the document (**index\_set**), and the content that comprises the actual document data (**doc\_content**). It shall contain an **index\_set** of metadata and a **doc\_content** element, which contains the method used to encode or provide explicit external reference to the data.

d) **index\_set**

This element contains metadata related to a document or document collection. It consists of a set of fields (**index\_field**) or a record (**index\_record**). **Index\_set** shall contain at least one **index\_field** for each **cdm\_doc**, with the attributes of **index\_name**, **index\_description** and **index\_content**.

e) **index\_field**

This element references **index\_name**, **index\_description**, and **index\_content** elements. Any **index\_set** element shall contain at least one **index\_field** element.

f) **index\_record**

This element organizes multiple **index\_field** entries into a logical group.

g) **doc\_content**

This element defines the document contents being transmitted as part of the **cdm\_interchange** operation. Each **doc\_content** shall contain one or more renditions.

h) **rendition**

This element defines the renditions, if any, and their attributes. Rendition includes the document content (**content**) and resources needed to use the content (**rsrc\_data**) elements. These elements are used to provide a mechanism to define the **access\_method**, encoding and compression for each rendition. The **access\_method** is required, and the encoding and compression attributes are optional. Supported values of **access\_method** include Base64, URI, and MIME.

When using OPC to package the CDM data XML, content, and rsrc\_data, the access\_method for renditions included in the OPC package shall be URI, and the encoding shall be set to the relative URI (as specified in RFC 3986:2005, 4.2) of the content or rsrc\_data within the OPC package as specified in ISO/IEC 29500-2:2012, A.3. For such renditions, the compression attribute should not be included by producing applications, and may be ignored by consuming applications.

- i) **rsrc\_data**  
This element encloses CDM resource data within each rendition. Examples of resource data are bitmaps and fonts that are needed to render the contained document. It provides information defining the method to be used to access the resource (access\_method), the type of the resource file (filetype), the encoding used to store the resource (encoding), and any method used to compress the resource in the package (compression). Examples of filetype could be TIFF, PDF, PDF/A, JPEG, JPEG2000 and RTF. It is recommended to use only IANA-registered mimetypes.
- j) **annotations**  
This element encloses the annotation-related information for a rendition. The annotation is expressed as a stream of knowledge that would be defined by the vendor. Some vendors have highlight information, while others might have blobs, bitmaps or data files. The knowledge content of the annotation would be vendor-specific. It provides information defining the method to be used to access the annotations (access\_method), the type of the annotation file (filetype), the encoding used to store the annotation (encoding), and any method used to compress the annotation in the package (compression).
- k) **content**  
This element provides information defining the method to be used to access the content (access\_method), the type of the content file (filetype), the encoding used to store the content (encoding), and any method used to compress the content in the package (compression). Encoding is the base64 representation of the document rendition data based on the value of the access\_method attribute.
- l) **index\_name**  
This element provides for a name to be associated with the index element record attributes.
- m) **record attributes**  
This element provides a name and description for the index record.
- n) **index\_description**  
This element allows a description containing unconstrained text to be associated with the index for documentation of information purposes.
- o) **index\_content**  
This element contains the value for the index.  
The schema used for CDM data interchange is below. Schemas for other XML parts included in CDM packages using OPC packaging are specified in ISO\IEC 29500-2:2012, Annex D.  
This schema is intended to provide the framework/mechanism to exchange data between diverse systems in the absence of a specific schema. Organizations that do not have an implementation-specific model of this schema shall use this model for specific information exchange between diverse document management systems.  
To create an application-specific instance of this schema, users shall use this schema as the framework, or model, ensuring the appropriate level of information exchange between diverse document management systems.



```
<?xml version="1.0" encoding="UTF-8"?>
<!-- The ISO 22938 CDM Data Interchange DTD -->
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema" elementFormDefault="qualified">
  <xs:element name="cdm_interchange">
    <xs:complexType>
      <xs:sequence>
        <xs:element maxOccurs="unbounded" ref="cdm_collection"/>
      </xs:sequence>
      <xs:attribute name="cdm_action">
        <xs:simpleType>
          <xs:restriction base="xs:token">
            <xs:enumeration value="store"/>
            <xs:enumeration value="get"/>
            <xs:enumeration value="verify"/>
            <xs:enumeration value="update"/>
            <xs:enumeration value="delete"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:attribute>
      <xs:attribute name="interchange_id" use="required" type="xs:ID"/>
      <xs:attribute name="creator" default="creator"/>
      <xs:attribute name="vendor" default="vendor"/>
      <xs:attribute name="creation_date"/>
      <xs:attribute name="creation_time"/>
    </xs:complexType>
  </xs:element>
  <xs:element name="cdm_collection">
    <xs:complexType>
      <xs:sequence>
        <xs:element ref="index_set"/>
        <xs:element maxOccurs="unbounded" ref="cdm_doc"/>
      </xs:sequence>
      <xs:attribute name="coll_id" use="required"/>
      <xs:attribute name="coll_name" use="required"/>
    </xs:complexType>
  </xs:element>
  <xs:element name="cdm_doc">
    <xs:complexType>
      <xs:sequence>
        <xs:element ref="index_set"/>
        <xs:element ref="doc_content"/>
      </xs:sequence>
      <xs:attribute name="doc_id" use="required"/>
      <xs:attribute name="type" use="required"/>
      <xs:attribute name="title" use="required"/>
    </xs:complexType>
  </xs:element>
  <xs:element name="index_set">
    <xs:complexType>
      <xs:choice minOccurs="1" maxOccurs="unbounded">
        <xs:element minOccurs="1" ref="index_field"/>
        <xs:element ref="index_record"/>
      </xs:choice>
    </xs:complexType>
  </xs:element>
  <xs:element name="index_field">
    <xs:complexType>
      <xs:sequence>
        <xs:element ref="index_name"/>
        <xs:element ref="index_description"/>
        <xs:element ref="index_content"/>
      </xs:sequence>
      <xs:attribute name="scheme"/>
      <xs:attribute name="datatype"/>
      <xs:attribute name="language"/>
    </xs:complexType>
  </xs:element>
  <xs:element name="index_name" type="xs:string"/>
  <xs:element name="index_description" type="xs:string"/>
  <xs:element name="index_content" type="xs:string"/>
  <xs:element name="index_record">
```

```
<xs:complexType>
  <xs:sequence>
    <xs:element ref="record_name"/>
    <xs:element ref="record_description"/>
    <xs:element maxOccurs="unbounded" ref="index_field"/>
  </xs:sequence>
  <xs:attribute name="record" use="required"/>
</xs:complexType>
</xs:element>
<xs:element name="record_name" type="xs:string"/>
<xs:element name="record_description" type="xs:string"/>
<xs:element name="doc_content">
  <xs:complexType>
    <xs:sequence>
      <xs:element maxOccurs="unbounded" ref="rendition"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="rendition">
  <xs:complexType>
    <xs:sequence>
      <xs:element maxOccurs="unbounded" ref="content"/>
      <xs:element minOccurs="0" maxOccurs="unbounded" ref="rsrc_data"/>
      <xs:element minOccurs="0" maxOccurs="unbounded" ref="annotations"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="content">
  <xs:complexType mixed="true">
    <xs:attribute name="access_method" use="required">
      <xs:simpleType>
        <xs:restriction base="xs:token">
          <xs:enumeration value="URI"/>
          <xs:enumeration value="base64"/>
          <xs:enumeration value="MIME"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:attribute>
    <xs:attribute name="filetype" use="required"/>
    <xs:attribute name="encoding" use="required"/>
    <xs:attribute name="compression"/>
  </xs:complexType>
</xs:element>
<xs:element name="rsrc_data">
  <xs:complexType mixed="true">
    <xs:attribute name="access_method" use="required">
      <xs:simpleType>
        <xs:restriction base="xs:token">
          <xs:enumeration value="URI"/>
          <xs:enumeration value="base64"/>
          <xs:enumeration value="MIME"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:attribute>
    <xs:attribute name="filetype" use="required"/>
    <xs:attribute name="encoding"/>
    <xs:attribute name="compression" default="None"/>
  </xs:complexType>
</xs:element>
<xs:element name="annotations">
  <xs:complexType mixed="true">
    <xs:attribute name="access_method" use="required">
      <xs:simpleType>
        <xs:restriction base="xs:token">
          <xs:enumeration value="URI"/>
          <xs:enumeration value="base64"/>
          <xs:enumeration value="MIME"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:attribute>
    <xs:attribute name="filetype" use="required"/>
  </xs:complexType>
</xs:element>
```

```
<xs:attribute name="encoding"/>
<xs:attribute name="compression" default="None"/>
</xs:complexType>
</xs:element>
</xs:schema>
```

### 5.3 Representing CDM data — Example

The following example shows how the CDM interchange format could be used to exchange multiple CDM documents.

```
<?xml version="1.0" encoding="UTF-8" ?>
<!DOCTYPE cdm_interchange SYSTEM "22938.dtd">
<cdm_interchange creation_time="18:00:00" vendor="ECM Vendor A"
cdm_action="store"
interchange_id="ID001"
creator="System Admin" creation_date="2007-01-01">
  <cdm_collection coll_id="Feb-2007" coll_name="Testing Supplies">
    <index_set>
      <index_field datatype="Alphanumeric" language="en">
        <index_name>Supplier</index_name>
        <index_description>Supplier Name</index_description>
        <index_content>Testing Supplies</index_content>
      </index_field>
    </index_set>
    <cdm_doc doc_id="DOCID000000" type="Vendor Invoices" title="Invoice
2007-101 from Testing Supplies">
      <index_set>
        <index_field datatype="alphanumeric" language="En">
          <index_name>Invoice Number</index_name>
          <index_description>Vendor Invoice
Number</index_description>
          <index_content>2007-101</index_content>
        </index_field>
        <index_field datatype="currency" language="En">
          <index_name>Invoice amount</index_name>
          <index_description>Total amount of
Invoice</index_description>
          <index_content>$1021.55</index_content>
        </index_field>
      </index_set>
      <doc_content>
        <rendition>
          <content filetype="RTF"
encoding="http://invoices/data/invoice101.rtf"
access_method="URI"
compression="None" />
        </rendition>
        <rendition>
          <content filetype="PDF"
encoding="http://invoices/data/invoice101.pdf"
access_method="URI"
compression="None" />
          <annotations filetype="PDF"
encoding="http://invoices/data/invoice101_note.pdf"
access_method="URI"
compression="None" />
        </rendition>
      </doc_content>
    </cdm_doc>
    <cdm_doc doc_id="DOCID000001" type="Vendor Invoices" title="Invoice
2007-102 from Testing Supplies">
      <index_set>
        <index_field datatype="alphanumeric" language="En">
          <index_name>Invoice Number</index_name>
          <index_description>Vendor Invoice
Number</index_description>
          <index_content>2007-102</index_content>
        </index_field>
        <index_field datatype="currency" language="En">
          <index_name>Invoice amount</index_name>
```

IS/ISO 22938 : 2017

```
<index_description>Total amount of
Invoice</index_description>
<index_content>$1040.00</index_content>
</index_field>
</index_set>
<doc_content>
<rendition>
<content filetype="RTF" access_method="base64"
compression="None"
encoding =
"THISwouldBetheBASE64
representationOFtheRTFfiledata"/>
</rendition>
<rendition>
<content filetype="PDF"
encoding="http://invoices/data/invoice102.pdf"
access_method="URI"
compression="None" />
<content filetype="PDF"
encoding="http://invoices/data/invoice102_2.pdf"
access_method="URI"
compression="None" />
</rendition>
</doc_content>
</cdm_doc>
<cdm_doc doc_id="DOCID000002" type="Purchase Order"
title="Purchase order 200701_101 Testing
Supplies">
<index_set>
<index_record record="Supplier">
<record_name>Testing Supplies</record_name>
<record_description>Vendor contact
information</record_description>
<index_field datatype="alphanumeric" language="en">
<index_name >Vendor Name</index_name>
<index_description></index_description>
<index_content></index_content>
</index_field>
<index_field datatype="alphanumeric" language="en">
<index_name>Street</index_name>
<index_description> Street location or PO Box
</index_description>
<index_content></index_content>
</index_field>
<index field datatype="alphanumeric" language="en">
<index_name>City</index_name>
<index_description>
City where vendor headquarters is located
</index_description>
<index_content></index_content>
</index field>
<index field datatype="alphanumeric" language="en">
<index_name>State</index_name>
<index_description>State of vendor headquarters
</index_description>
<index_content></index_content>
</index field>
<index field datatype="numeric" language="en">
<index_name>Zip Code</index_name>
<index_description>5 digit zip
code</index_description>
<index_content>44444</index_content>
</index field>
</index_record>
</index_set>
<doc_content>
<rendition>
<content filetype="RTF"
encoding="http://invoices/data/
purchaseorder200701_101.rtf"
access_method="URI">
```

```
        compression="None" />
    <rsrc_data filetype="PNG" access_method="MIME"
      compression="none"
      encoding="http://invoices/data/
      purchaseorder200701_101.png " />
  </rendition>
  <rendition>
    <content filetype="PDF" access_method="MIME"
      compression="none"
      encoding = "MIME-version: 1.0
      Content-type: application/pdf ; boundary = &quot;
      --separator--
      &quot; Content-transfer-encoding: base64
      --separator''
      THISwouldBEtheBASE64representationOfthePDFfiledata
      --separator-"/>
  </rendition>
</doc_content>
</cdm_doc>
</cdm_collection>
</cdm_interchange>
```

#### 5.4 Representing CDM data and associated content using the OPC package — Example

The following example shows how an OPC package could be used to contain rendition content. The contents of the package specific to this document are as follows:

[Package Root]

- metadata.xml
- invoice101.rtf
- invoice101.pdf
- invoice102.rtf
- invoice102.pdf
- invoice102\_2.pdf
- purchaseorder201301\_101.rtf
- purchaseorder201301\_101.pdf

[Content\_Type].xml

\_rels/.rels

The content of the metadata.xml part is as follows:

```
<?xml version="1.0" encoding="UTF-8" ?>
<!DOCTYPE cdm_interchange SYSTEM "22938.dtd">
<cdm_interchange creation_time="18:00:00" vendor="ECM Vendor A" cdm_action="store"
interchange_id="ID001"
  creator="System Admin" creation_date="2013-01-01">
  <cdm_collection coll_id="Jan 2013" coll_name="Testing
  Supplies">
    <index_set>
      <index_field datatype="Alphanumeric" language="en">
        <index_name>Supplier</index_name>
        <index_description>Supplier Name </index_description>
        <index_content>Testing Supplies </index_content>
      </index_field>
    </index_set>
    <cdm_doc doc_id="DOCID000000" type="Vendor Invoices "
      title="Invoice 2013-101 from Testing
      Supplies">
      <index_set>
```

```
<index_field datatype="alphanumeric" language="En">
  <index_name>Invoice Number</index_name>
  <index_description>Vendor Invoice
  Number</index_description>
  <index_content>2013-101</index_content>
</index_field>
<index_field datatype="currency" language="En">
  <index_name>Invoice amount</index_name>
  <index_description>Total amount of
  Invoice</index_description>
  <index_content>$1021.55</index_content>
</index_field>
</index_set>
<doc_content>
  <rendition>
    <content filetype="RTF" encoding="invoice101.rtf"
    access_method="URI"
    compression="None" />
  </rendition>
  <rendition>
    <content filetype="PDF" encoding="invoice101.pdf"
    access_method="URI" compression="None" />
  </rendition>
</doc_content>
</cdm_doc>
<cdm_doc doc_id="DOCID000001" type="Vendor Invoices"
  title="Invoice 2013-102 from Testing Supplies">
  <index_set>
    <index_field datatype="alphanumeric" language="En">
      <index_name>Invoice Number</index_name>
      <index_description>Vendor Invoice
      Number</index_description>
      <index_content>2013-102</index_content>
    </index_field>
    <index_field datatype="currency" language="En">
      <index_name>Invoice amount</index_name>
      <index_description>Total amount of
      Invoice</index_description>
      <index_content>$1040.00</index_content>
    </index_field>
  </index_set>
  <doc_content>
    <rendition>
      <content filetype="RTF" encoding="invoice102.rtf"
      access_method="URI"
      compression="None" />
    </rendition>
    <rendition>
      <content filetype="PDF" encoding="invoice102.pdf"
      access_method="URI"
      compression="None" />
      <content filetype="PDF" encoding="invoice102_2.pdf"
      access_method="URI"
      compression="None" />
    </rendition>
  </doc_content>
</cdm_doc>
<cdm_doc doc_id="DOCID000002" type="Purchase
  Order" title="Purchase order 201301_101 Testing
  Supplies">
  <index_set>
    <index_record record="Supplier">
      <record_name>Testing Supplies</record_name>
      <record_description>Vendor contact
      information</record_description>
      <index_field datatype="alphanumeric" language="en">
        <index_name>Vendor Name</index_name>
        <index_description></index_description>
        <index_content></index_content>
      </index_field>
      <index_field datatype="alphanumeric" language="en">
```

```
<index_name>Street</index_name>
<index_description> Street location or PO Box
</index_description>
<index_content></index_content>
</index_field>
<index_field datatype="alphanumeric" language="en">
  <index_name>City</index_name>
  <index_description>
    City where vendor headquarters is
    located
  </index_description>
  <index_content></index_content>
</index_field>
<index_field datatype="alphanumeric" language="en">
  <index_name>State</index_name>
  <index_description>State of vendor
  headquarters
  </index_description>
  <index_content></index_content>
</index_field>
<index_field datatype="numeric" language="en">
  <index_name>Zip Code</index_name>
  <index_description>5 digit zip
  code</index_description>
  <index_content>44444</index_content>
</index_field>
</index_record>
</index_set>
<doc_content>
  <rendition>
    <content filetype="RTF"
      encoding="purchaseorder201301_101.rtf"
      access_method="URI"
      compression="None" />
    <rsrc_data filetype="PNG" access_method="MIME"
      compression="none"
      encoding="http://invoices/data/
      purchaseorder200701_101.png " />
  </rendition>
  <rendition>
    <content filetype="PDF"
      access_method="URI"
      compression="none"
      encoding = "purchaseorder201301_101.pdf"/>
  </rendition>
</doc_content>
</cdm_doc>
</cdm_collection>
</cdm_interchange>
```

The content types of each Part are identified in the [Content\_Type].xml as specified in OPC as follows:

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<Types xmlns="http://schemas.openxmlformats.org/package/2006/content-types">
  <Default Extension="rtf" ContentType="application/rtf"/>
  <Default Extension="rels"
    ContentType="application/vnd.openxmlformatspackage.
    relationships+xml"/>
  <Default Extension="xml" ContentType="application/xml"/>
  <Default Extension="pdf" ContentType="application/pdf" />
  <Override PartName="metadata.xml"
    ContentType="application/vnd.
    documentmanagementmetadata+xml"/>
</Types>
```

Relationships between the package Parts may be represented in the \_rels/rels Part. The following example identifies a relationship for the document interchange format XML stored in metadata.xml of type "http://placeholder\_uri/documentmanagement\_metadata".

```
<url>http://www...</url>
<url>http://www...</url>
<url>http://www...</url>
<url>http://www...</url>
<url>http://www...</url>
<url>http://www...</url>
```



## Bibliography

- [1] ISO 639 (all parts), *Codes for the representation of names of languages*
- [2] ISO 8601, *Data elements and interchange formats — Information interchange — Representation of dates and times*
- [3] ISO 12651 (all parts), *Electronic document management — Vocabulary*
- [4] ISO 15836, *Information and documentation — The Dublin Core metadata element set*
- [5] W3C Recommendation, *Extensible Markup Language (XML) 1.1*, 2nd ed., 16 August 2006
- [6] W3C Recommendation, *Namespaces in XML 1.1*, 2nd ed., First published 4 February 2004, revised 16 August 2006
- [7] W3C Recommendation, *XML Encryption Syntax and Processing*, 10 December 2002
- [8] W3C Recommendation, *XML Information Set*, 2nd ed., 4 February 2004

### Bureau of Indian Standards

BIS is a statutory institution established under the *Bureau of Indian Standards Act, 2016* to promote harmonious development of the activities of standardization, marking and quality certification of goods and attending to connected matters in the country.

### Copyright

BIS has the copyright of all its publications. No part of these publications may be reproduced in any form without the prior permission in writing of BIS. This does not preclude the free use, in the course of implementing the standard, of necessary details, such as symbols and sizes, type or grade designations. Enquiries relating to copyright be addressed to the Director (Publications), BIS.

### Review of Indian Standards

Amendments are issued to standards as the need arises on the basis of comments. Standards are also reviewed periodically; a standard along with amendments is reaffirmed when such review indicates that no changes are needed; if the review indicates that changes are needed, it is taken up for revision. Users of Indian Standards should ascertain that they are in possession of the latest amendments or edition by referring to the latest issue of 'BIS Catalogue' and 'Standards: Monthly Additions'.

This Indian Standard has been developed from Doc No.: MSD 05 (13376).

### Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

### BUREAU OF INDIAN STANDARDS

#### Headquarters:

Manak Bhavan, 9 Bahadur Shah Zafar Marg, New Delhi 110002  
Telephones: 2323 0131, 2323 3375, 2323 9402

Website: [www.bis.gov.in](http://www.bis.gov.in)

#### Regional Offices:

	Telephones
Central : Manak Bhavan, 9 Bahadur Shah Zafar Marg NEW DELHI 110002	{ 2323 7617 2323 3841
Eastern : 1/14 C.I.T. Scheme VII M, V.I.P. Road, Kankurgachi KOLKATA 700054	{ 2337 8499, 2337 8561 2337 8626, 2337 9120
Northern : Plot No. 4-A, Sector 27-B, Madhya Marg CHANDIGARH 160019	{ 265 0206 265 0290
Southern : C.I.T. Campus, IV Cross Road, CHENNAI 600113	{ 2254 1216, 2254 1442 2254 2519, 2254 2315
Western : Manakalaya, E9 MIDC, Marol, Andheri (East) MUMBAI 400093	{ 2832 9295, 2832 7858 2832 7891, 2832 7892

**Branches :** AHMEDABAD. BENGALURU. BHOPAL. BHUBANESHWAR. COIMBATORE.  
DEHRADUN. DURGAPUR. FARIDABAD. GHAZIABAD. GUWAHATI.  
HYDERABAD. JAIPUR. JAMMU. JAMSHEDPUR. KOCHI. LUCKNOW.  
NAGPUR. PARWANOO. PATNA. PUNE. RAIPUR. RAJKOT. VISAKHAPATNAM.

Published by BIS, New Delhi