



OPEN SCRIPTURAL INFORMATION STANDARD

The OSIS Initiative

OSIS 1.5 User's Guide

First Draft – July 2003
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This document is a publication of the American Bible Society and the Society of Biblical Literature in furtherance of their joint project, OSIS (Open Scriptural Information Standard).

Groups Involved in Developing OSIS

OSIS is provided as a free resource by the Bible Technologies Group (BTG), which is a collaborative effort of:

- The American Bible Society
- The Society of Biblical Literature
- The Summer Institute of Linguistics
- The United Bible Society
- Individual volunteers around the world

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About This Document

Introduction

This section gives a brief overview of OSIS (Open Scriptural Information Standard). "Chapter 1: Getting Started with OSIS" leads you step-by-step through producing your first OSIS text.

What Is OSIS?

OSIS is a set of XML (Extensible Markup Language) structures that can be used to produce Bibles, commentaries, and related texts that easily can be:

- Interchanged with other users
- Formatted as HTML, PDF, Postscript, or any other desired format
- Searched on any personal computer

Advantages of Using OSIS

OSIS provides a standard way to express such documents, which is important because it saves time, money, and effort for:

- *Authors*, who will have less need to adjust their manuscripts for each different potential publisher
- *Publishers*, who will gradually come to experience lower costs by not having to:
 - Manage converting texts presented by authors in so wide a variety of formats
 - Provide texts in a different form to each electronic-book system vendor out there (or pay indirectly for those vendors to do the conversions)
- *Software vendors*, who can avoid writing a lot of code to manage different formats, and thus make their programs smaller, faster, and more reliable

Other Factors Affecting OSIS

In addition, the OSIS development team closely studied:

- Previous Bible encoding forms, and
- Tools for literary encoding in general

By doing this, we hope we have avoided some weaknesses and gained from some strengths of each one.

Similarity Between OSIS and TEI

Users familiar with the Text Encoding Initiative (TEI) will find OSIS markup quite familiar, because the bulk of the elements we define:

- Correspond directly to TEI elements, and
- Almost always have the same name (though often simplified content)

The schema also provides a *TEIform* attribute for such elements, so they can be recognized by form-aware processors as equivalent to their TEI counterparts.

NOTE: *For the sake of anyone using both systems, we have attempted to point out any elements that do not have TEI equivalents.*

Disclaimers

The following disclaimers apply to OSIS 1.1.1.

1. This document contains elements that were current at the time of publication. The information contained in this document is subject to change without notice.
 2. The elements described in this document do not represent a comprehensive list of the elements OSIS supports. This document is intended to represent the most common elements used for marking up online text.
-

Audience

OSIS is designed to meet the needs of diverse user communities who read, study, research, translate, or distribute biblical texts. OSIS users include, but are not limited to:

- Theology professors
 - Graduate students
 - Interested laity
 - Pastors
 - Teachers
 - Editors
 - Bible translators
-

Further Information

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Chapter

1

Getting Started with OSIS

This chapter introduces new users to OSIS. It covers the following topics:

- Common Questions of Users New to OSIS 2
- Creating Your First OSIS Document 4
- Dublin Core Elements in the Work Declaration 9
- Non-Dublin Core Elements in the Work Declaration 14

Common Questions of Users New to OSIS

First Question

The first question that is often asked when learning that OSIS uses XML (Extensible Markup Language) is:

I'm not a computer person. Can I learn to use OSIS?

If you can type and use even the most basic word processor or computer text-editing program, the answer is clearly, “Yes!”

OSIS Designed for Basic Markup

OSIS was designed to offer the beginning user a simple way to do the basic markup required for a standard biblical text. *Markup* refers to markers placed within the text, that indicate useful units (or *elements*) such as:

- Verses
- Quotations
- Cross-references, and
- Where other things begin and end

Similarity Between OSIS and HTML

If you know HTML, you already know most of what you need to know to use OSIS. OSIS uses the same pointy-bracket syntax as HTML (or XHTML to be completely precise). It merely provides a different set of element and attribute names. A few names, such as <p>, are the same; others are new, such as <v> for verse.

Fewer Elements in OSIS

The core set of elements or OSIS is actually smaller than the set for HTML 3.2. To be sure there, are some complex cases that we deal with later, but you can do useful work with no more information than is provided in this basic manual. That is, of course, provided that you work through the examples and exercises in each chapter.

Second Question

The second question that is most often asked is:

Do I need an XML editor to do OSIS?

This question often comes up after the friend of a friend has recommended some editor, and you then checked its price. XML editors vary from free to over \$10,000.00 (US), and many are difficult to use (though XMetal is a notable exception, and not very expensive).

The basic answer is *no*; you can use any text editor you like to create OSIS documents (or any other XML documents, for that matter). Many will even color the tags for you, because they know how to color HTML tags and the languages are similar enough.

Checking Documents for Errors

You should have a way to check your documents for errors. If your editor doesn't know enough about XML to warn you if you misspell a tag, or forget to end some element that you started, you will want to check for errors periodically using an *XML validator*. Many such programs are available for various computers; some are available as Web services. Both Internet Explorer and Netscape can also validate an OSIS file once you have installed the OSIS rules file (called a *schema*) and an appropriate style sheet.

OSIS-Aware Text Editor

An OSIS-aware text editor will do this checking for you, either on demand or continuously. A friendlier OSIS-aware text editor will provide help by showing you just which elements are permitted at any given place (for example, you can't insert a Bible book within a footnote). The friendliest editors also give you the option to see and edit a fully-formatted view on demand, rather than staring directly at pointy-brackets.

Free Authoring Tools

Even as this manual is being written, the OSIS team is working to adapt free authoring tools that will hide most if not all of the markup from the casual user of OSIS. In the meantime, the best way to learn OSIS is to use a simple text editor, such as:

- WordPad or Kedit on Windows
- BBEdit or Alpha on MacOS
- vi or emacs on Linux

You can even use a word processor, though any formatting that you do in it won't matter.

Short Examples

The examples in this guide have been kept deliberately short and can be downloaded as a package from the OSIS Web site. After you have gained some basic skill at using OSIS, then you may want try out more sophisticated editors.

Creating Your First OSIS Document

Headers and Text

Like HTML documents, an OSIS document starts with a *header*, and then goes on to the actual *text* content.

The header identifies the file as being in XML and as using the OSIS schema. It also provides places to declare a bibliographic description of the work and of any other works cited; and a place to record a history of editing changes.

Sample OSIS Document

Here is a very short, but valid, OSIS document.

NOTE: *The numbers preceding each line are for reference purposes only. Do not use them in your OSIS document.*

```
1) <?xml version="1.0" encoding="UTF-8"?>
2) <osis xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
3)   xsi:noNamespaceSchemaLocation
4)   ="http://www.bibletechnologies.net/osisCore.1.1.1.xsd">
5)   <osisText osisIDWork="CEV" osisRefWork="Bible" lang="en">
6)     <header>
7)       <work osisWork="CEV">
8)         <title>Contemporary English Version</title>
9)         <identifier type="ISBN">1585160555</identifier>
10)        <rights type="copyright">Copyright 1995, 2003
11)          American Bible Society</rights>
12)        <refSystem>Bible</refSystem>
13)        <scope osisRef="John.1.1"/>
14)      </work>
15)      <work osisWork="Bible">
16)        <refSystem>Bible</refSystem>
17)      </work>
18)    </header>
19)    <div type="book" osisID="John">
20)      <title>John</title>
21)      <chapter osisID="John.1">
22)        <title>Chapter 1</title>
23)        <v osisID="John.1.1">In the beginning was the
24)          one who is called the Word. The Word was with
25)          God and was truly God.</v>
26)      </chapter>
27)    </div>
28)  </osisText>
29) </osis>
```

XML and OSIS Declarations

The first several lines of any OSIS document generally will be identical.

Line 1

Line 1 in the preceding example identifies the document as being in XML; this is required in exactly the form shown, and enables computers to identify how to process the rest of the document.

Lines 2 Through 4

Lines 2 through 4 are a very long start-tag for the outermost OSIS element, which is called **osis**.

The first attribute, whose name is **xmlns:xsi** (line 2), refers to a *namespace* whose name is **http://www.w3.org/2001/XMLSchema-instance**, and declares that later tags or attributes beginning with the namespace prefix **xsi:** are drawn from that namespace. This sets things up so the very next attribute can be recognized as declaring the OSIS schema (the set of elements and attributes) used by the document.

The second attribute uses that **xsi:** (line 3) namespace prefix on a name: **xsi:noNamespaceSchemaLocation** is a name (from the **http://www.w3.org/2001/XMLSchema-instance** namespace) defined to mean that later elements and attributes come from the schema specified as its value. In this case, that is the OSIS schema, which is found at Web location **http://www.bibletechnologies.net/osisCore.1.1.1.xsd**.

If you have a local copy of the schema, you may replace this URI with a URI that specifies where to find it on your local disk. One such example might be **file://c/xml/schemas/osisCore.1.5.xsd**. Programs vary in whether they want such URIs to start with **file://**, **local://**, or nothing. Different platforms may also use a slash (/), backslash (\), or colon (:) to separate directory names. Try various combinations until you find out which symbol your software needs, and then remember it for later use.

Line 5

At this point, the OSIS document has begun. In the preceding example, it is a single document rather than a collection, so the next element opened is **<osisText>** (line 5):

```
<osisText osisIDWork="CEV" osisRefWork="Bible" lang="en">
```

Every **<osisText>** needs to supply the **osisIDWork** attribute to specify what work any **osisIDs** within it refer to. This will generally be the short name of the same work you are encoding, in this case the Contemporary English Version, or **CEV**. The value on this attribute must also appear as the value of the **osisWork** attribute on some work element in the same **<osisText>**.

Every <osisText> also needs to specify which reference or versification scheme any osisRefs within it refer to. This may or may not be the same work. Depending on how finely you distinguish things, there are several major versification traditions and countless fine-grained variations. For the present, we identify these major traditions:

<u>Versification</u>	<u>Description</u>
NA27	The scheme used in most English Bibles, with slight variations.
Hebrew	The Hebrew scheme. This tradition varies in several respects, the best known being that it number the proscriptions above Psalms as verse 1, and the beginning of the psalm proper as verse 2.
SamPent	The scheme used in the Samaritan Pentateuch, which was a quite different numbering system.
Loeb	The scheme used for most classical literature, though many major works have other systems as well.

OSIS is developing a schema for declaring versification systems formally, and for declaring some systems in terms of others. This will enable programs to map between systems. However, at this time, we merely reserve the preceding names for some systems we know to be substantially different and important.

OSIS Text Header (Lines 6 Through 18)

The first element within every <osisText> must be a header. The header:

- Declares various works (including the work being encoded and any that are being referenced)
- Provides a place to keep a revision history of the text

Revision History (Not Used in Example)

To record changes or edits to the text, authors and editors are encouraged to insert a <revHist> element every time significant editing is done. The <revHist> element should contain a date element which says when those edits were completed, in the form:

yyyy:mm:ddThh:mm:ss

It is permissible to omit the time and the preceding **T**. The data element is then followed by any number of **p** elements, in which the changes made are

summarized. The person responsible for making the changes should also be identified.

Recommended practice is that more recent <revHist> elements appear earlier in the document. That is, <revHist> elements should occur in reverse chronological order.

Work Declarations (Lines 7 Through 17)

A work declaration provides information comparable to that found on the title page of a printed work, using the fields defined by the Dublin Core Initiative.

The <work> element serves two purposes:

- The first work element in the <header> element identifies the work in which it occurs (much like the title page in a printed work).
- Subsequent <work> elements:
 - Identify other works (much like a citation in a footnote or bibliography in a printed work)
 - Assign a local name to each one

Works so declared can then be referred to from osisRefs throughout the document.

Each work declared must provide a short name on the osisWork attribute, which can be used to refer to it in osisIDs or osisRefs throughout the text. For Bibles, this should generally be the accepted acronym or abbreviated form of the translation's name.

NOTE: *No periods (.), hyphens (-), or colons (:) are allowed in short names.*

Each work must also declare whether it is one of the following:

- *Content work* (such as a Bible, commentary, lexicon, novel, history, and so on)
- *Declaration work* (such as a formal definition of a reference system; a formal list of characters, authors, places; and so on)

This information is provided on the type attribute, whose value must be given as either "**content**" or "**declaration**".

Content works must use the subtype attribute to declare which broad class of work they fall under, primarily in terms of reference method. The subtypes defined are:

- Bible
- Sacred
- Literary
- Commentary

Bible, Sacred, Literary, and Commentary types would normally contain osisIDs expressing some hierarchical canonical numbering scheme.

- Time line

This type includes any material organized primarily by dates or times, such as:

- Daily devotionals
- Lectionaries
- Historical time lines, etc.

- Lexicon

Lexica are documents primarily organized by words:

- Dictionaries
- Encyclopedias, etc.

- Other

It is important to distinguish these kinds of works because each uses a different syntax for identifiers and references.

Dublin Core Elements in the Work Declaration

Examining the Work Element

Each work element describes a single publication using several pieces of information, primarily:

- Title
- Creator
- Date
- Publisher
- Identifier
- Language

Sample Dublin Core Elements

All of the standard Dublin Core elements may be used, plus a few OSIS-specific additions (further information on the Dublin Core system may be found at dublincore.org). All Dublin core fields are repeatable. For example:

```
<work osisWork="EG" type="Content" subType="Lexicon">
  <title>Egyptian Grammar</title>
  <creator role="aut">Alan Gardiner</creator>
  <contributor role="dte">Francis Llewellyn Griffith
</contributor>
  <date type="original">1927</date>
  <date type="eversion">2003</date>
  <publisher>Griffith Institute, Ashmolean Museum, Oxford
</publisher>
  <language type="ISO-639">EN</language>
  <language type="Ethnologue">EG-ancient</language>
  <identifier type="ISBN">0900416351</identifier>
  <identifier type="LCCN">95230980</identifer>
</work>
```

<title>

Title elements in the work element contain the main title of the work. The type attribute can be used to specify a classification of a title, such as a subTitle, monographicSeriesTitle, etc., but no OSIS-specific types are established for this attribute.

<creator>

The <creator> element is used to specify the person(s) or organization(s) primarily responsible for the intellectual content of a work. The role attribute must specify the particular role the primary responsible party played. The most common values are:

- aut (author)
- edt (editor)
- cmm (commentator)
- trl (translator)

<contributor>

Many people may contribute to a work in roles other than the primary role listed under creator. They should be listed using the <contributor> element. Their specific role should be recorded in the role attribute of their contributor element.

A very complete list of role codes provided by the USMARC organization is included in "Appendix C: USMARC Relator Codes" on page 81.

<date>

The <date> elements in the work element record significant dates in the production or publication process. Use the type attribute to specify the type of date contained in each the date element. Those types are the:

- Original publication date of the first edition
- Date of publication of the referenced
- Printing date of the referenced edition
- Revision date, if any, of a referenced electronic edition

<publisher>

The <publisher> elements in the work element use the type attribute to specify which particular publisher is identified in that element. For example, the original and later editions of a work may have different publishers, as may reprints or digital editions. The publisher types are the same as the date types.

<language>

A <language> element must be provided for each language used substantially in a work. The language may be specified using an ISO 639 or ISO 639-2, or SIL Ethnologue codes. The type attribute must be set to:

- "ISO-639"
- "ISO-639-2," or
- "SIL," respectively

In the rare case that none of these is sufficient, a prose description should be inserted in the element and the type set to other.

<identifier>

The <identifier> elements provide one or more formal identifiers for the work. Common types of identifiers are:

- International Standard Book Numbers
- Library of Congress Control Number
- Serial Item and Contribution Identifier

Recommended values for the <identifier> type attribute are:

- "ISBN"
- "SICI"

A SICI is an ISSN with fields added to identify a particular issue of the serial publication, and a particular article or other contribution within that issue.

- "LCCN"
- "PURL"

ISBN and LCCN numbers must be recorded without spaces or hyphens. ISBNs must contain ten digits (that is, they must include the final check digit).

We strongly recommend the assignment of an ISBN to each published work using OSIS. This number must, if available, be specified in the identifier field for the work.

<coverage>

This element may be used to specify the:

- Spatial location (a place name or geographic coordinates)
- Temporal period (a period label, date, or date range), or
- Jurisdiction (such as a named administrative entity)

to which the work applies.

For example, an edition of Herodotus could be specified as Greek/Hellenic, Classical Period. Or a study of medieval Bibles could declare coverage as "medieval."

<description>

An account of the content of the resource. Examples of description include, but are not limited to:

- Abstract
- Table of contents
- Reference to a graphical representation of content
- Free-text account of the content

<format>

The physical or digital manifestation of the resource.

Typically, format may include the media-type or dimensions of the resource. Format may be used to identify the:

- Software
- Hardware, or
- Other equipment

needed to display or operate the resource.

Examples of dimensions include:

- Size
- Duration

Recommended best practice is to select a value from a controlled vocabulary (for example, the list of Internet Media Types (MIME) defining computer media formats).

<relation>

A reference to a related resource.

Recommended best practice is to identify the referenced resource by means of a string or number conforming to a formal identification system.

<rights>

Information about rights held in and over the resource.

Typically, rights will contain a rights management statement for the resource or reference a service providing such information. Rights information often encompasses:

- Intellectual property rights (IPR)
- Copyright, and
- Various property rights

If the rights element is absent, no assumptions may be made about any rights held in or over the resource.

<subject>

A topic of the content of the resource.

Typically, subject will be expressed as:

- Keywords
- Key phrases, or
- Classification codes

that describe a topic of the resource.

Recommended best practice is to select a value from a controlled vocabulary or formal classification scheme.

<source>

A reference to a resource from which the present resource is derived. The present resource may be derived from the source resource in whole or in part.

Recommended best practice is to identify the referenced resource by means of a string or number conforming to a formal identification system.

<type>

The nature or genre of the content of the resource.

Type includes terms describing:

- General categories
- Functions
- Genres
- Aggregation levels for content

Recommended best practice is to select a value from a controlled vocabulary (for example, the DCMI Type Vocabulary [DCT1]). To describe the physical or digital manifestation of the resource, use the format element.

Non-Dublin Core Elements in the Work Declaration

**Identifying a
Work Given a
Work Declaration
Element**

The six elements already described are the primary means of identifying a referenced work.

If a publication matches all of the above elements within work, it is presumed to be an acceptable resolution for any reference to that work as declared.

If no perfect match can be found, applications may, indeed should, attempt to fall back to the closest available publication. OSIS does not define a required method of fallback, or define what *closest* must mean in all contexts.

However, one possible approach is successively to ignore particular elements in this order:

1. Identifier

Identifiers are often ambiguous. For example, hardcover and softcover editions of a book typically have different ISBNs, and occasionally publishers re-use an old ISBN for a completely different book.

2. Date

A different imprint or edition of the same conceptual work is typically adequate. Precisely targeted links, however, may not refer to the exact location desired. Applications may wish to ignore all dates except for the original publication date.

3. Publisher

Several publishers may publish a given work (particular older works), change name, etc.

4. Language

Accepting a publication that does not match in language is a substantial concession. However, some variations of language are greater than others. For example, some modern Bible translations are available in separate American English and British English versions, and substituting one for the other is not unreasonable. This is particularly true because translations generally use translated titles as well, and so if the language is not closely related, the title will probably not match either. Applications may wish to encode some knowledge of language and dialect similarities to implement more sophisticated fallback.

5. Creator

Some authors have multiple forms of name, for example:

St. Augustine vs. *Augustine of Hippo* vs. *Augustine*

The Bible Technology Group intends to develop an authority list of normative name-forms for relevant authors, and when such a list is available, using it will help to avoid such problems. As with other elements, more sophisticated applications may attempt some kind of approximate matching to achieve better fallback.

6. Title

The final item to discard is probably title. If a work's title differs, it is probably a different work, or at least a translation into a non-close language. On the other hand, some titles have been used by multiple authors, and so a match on title alone should be considered suspect.

Arguments can easily be made for a variety of other fallback methods. For example, if the identifier element matches, the work is probably right, even though an identifier mismatch is not good evidence that the work is wrong.

Date Formats

All dates in the header and in attributes should be in this standard format, which is based on IETF RFC 3339 but adds features to allow for:

- Dates BCE
- Approximate dates
- Date ranges
- Yearless dates (as used in many daily devotionals)
- Named times (such as used in many prayer books)

The basic date format is: **yyyy:mm:ddThh:mm:ss**.

Leaving Off Fields

Any number of fields may be left off from the right end. The following table contains two examples.

If this occurs...	Then...
The seconds are dropped (along with the preceding colon).	The time refers to the entire minute specified.
The entire time section is left off (along with the preceding T).	The string refers to the entire day.

Requirements and Options for Dates

The year (**yyyy**) must always have four digits, but it may be preceded by a hyphen (-) to indicate years before the common era. Alternatively, the year may be entirely omitted to indicate dates that apply to any year, such as in a book of 365 daily readings.

The entire date/time string (possibly including a leading hyphen) may be preceded by a tilde (~), indicating that the time is approximate. No means is provided to express just how approximate a time may be.

Finally, a small set of named times is provided, which can be specified in place of the entire (post-**T**) time section. For example:

06:04T~(Vespers)

would be the identifier for a prayer, reading, or other work to be used at vespers on June 4 of any year. The named times (which are case-sensitive) include:

- Vigils, Matins, Lauds, Terce, Sext, None, Vespers, Compline
- Sunrise, Sunset
- Morning, Afternoon, Evening, Night
- AM, PM
- Fajr, Zuhr, _Asr, Maghhrib, _Isha, Lail, Dzuha, _Id

Works Organized by Dates and Times

Some works will be organized primarily by dates and times. For example:

- Lectionaries
- Daily devotionals
- Prayer books
- Historical time lines, etc.

In such works, use the timeID attribute instead of the osisID attribute to identify the retrievable portions; the value should be the applicable time in the format just shown. Typically, such works are organized in order of the times specified; however, OSIS does not impose that requirement.



Chapter

2

Basic Elements

This chapter describes the basic elements of OSIS. It covers the following topics:

- Significance of <div> Elements 18
- Simple Paragraphing, Quotes, and Notes 21
- Elements That Cross Other Elements 25

Significance of <div> Elements

Challenges of Using Book, Chapter, and Verse Numbers

While book, chapter, and verse numbers are a familiar and useful way of referring to locations in the Bible, they often conflict with the boundaries of:

- Parables
- Stories
- Genealogies
- Paragraphs
- Quotations, and
- Other important units of understanding

that also commonly must be marked. They are also a quite late addition, and are specific to the Bible.

Sample Markup Text Using <div>

It is possible to encode a Bible using only book, chapter, and verse markup. However, most encoders want also to represent sections, paragraphs, quotations, and so on.

Higher-level structures are tagged as **<div>**, for *division*, with a type attribute to specify the particular significance. These <div> elements can occur within other <div> elements to any number of levels. The first and outermost <div> should occur immediately after the end of the header. For example:

```
<div type="book" osisID="Gen">
  <head>Genesis</head>
  <chapter osisID="Gen.1">
    <head>1</head>
    <v osisID="Gen.1.1">In the beginning,...</v>
    <v osisID="Gen.1.2">The earth was formless and
      void...</v>
    ...
  </div>
</div>
```

Predefined Type Attributes

The <div> element makes heavy use of the type attribute. The predefined types include the most common major division found in present-day Bibles and related works:

- | | | |
|-------------------|---------------|----------------|
| • acknowledgement | • concordance | • index |
| • afterword | • coverPage | • introduction |
| • appendix | • dedication | • majorSection |
| • back | • devotional | • map |
| • body | • entry | • outline |
| • book | • front | • preface |
| • bookGroup | • gazetter | • section |
| • colophon | • glossary | • subSection |
| • commentary | • imprimatur | • titlePage |

The main body of a Bible typically will consist of <div> elements of the following type attributes:

- bookGroup (such as each Testament, the Apocrypha, and perhaps smaller groups such as the Pentateuch, the Minor Prophets, etc.)
- book
- majorSections (such as the sub-books in Psalms)
- sections (typically headed topical divisions)
- subSections (occasional minor divisions within sections)

and then break down into:

- paragraphs
- lists
- quotations
- inscriptions, etc.

Chapter and Verse Elements

Such markup forms the primary backbone of an OSIS document. Chapter and verse elements are important, but considered to be an overlay onto the more linguistic or thematic structure. Therefore, as long as chapter and verses do not cross the boundaries of other elements, they may be expressed in the normal fashion (NASB):

```
<chapter osisID="Mark.10">
  <head>Mark Chapter 10</head>
  <div type="section"><head>Divorce</head>

  <v osisID="Mark.10.1">Jesus then left that place and went into
  the region of Judea and across the Jordan. Again crowds of
  people came to him, and as was his custom, he taught them.
  </v>
  <v osisID="Mark.10.2">Some Pharisees came and tested him by
  asking, "Is it lawful for a man to divorce his wife?"
  </v>
  <v osisID="Mark.10.3">"What did Moses command you?" he replied.
  </v>
  <v osisID="Mark.10.4">They said, "Moses permitted a man to
  write a certificate of divorce and send her away."
  </v>
  <v osisID="Mark.10.5">"It was because your hearts were hard
  that Moses wrote you this law," Jesus replied. </v>
  <v osisID="Mark.10.6">"But at the beginning of creation God
  'made them male and female.'[</v>
  <v osisID="Mark.10.1">] </v>
  <v osisID="Mark.10.7">'For this reason a man will leave his
  father and mother and be united to his wife,</v>
  <v osisID="Mark.10.8">and the two will become one flesh.' So
  they are no longer two, but one. </v>
  <v osisID="Mark.10.9">Therefore what God has joined together,
  let man not separate."
  </v>
  <v osisID="Mark.10.10">When they were in the house again, the
  disciples asked Jesus about this. </v>
  <v osisID="Mark.10.11">He answered, "Anyone who divorces his
  wife and marries another woman commits adultery against her.
  </v>
  <v osisID="Mark.10.12">And if she divorces her husband and
  marries another man, she commits adultery."
  </div><!-- end of section -->
  ...
</chapter>
```

Simple Paragraphing, Quotes, and Notes

Using Grouping Elements, Quotes, and Notes

Paragraphs and other grouping elements can be inserted around groups of verses, as shown below. Likewise, quotes and notes can be inserted where needed. The paragraph need not give an osisID for the set of verses it contains:

```
...
<p>
<v osisID="Esth.4.10">Then Esther spoke to Hathach, and gave
him a command for Mordecai: </v>
<v osisID="Esth.4.11"><q>All the king's servants and the people
of the king's provinces know that any man or woman who goes
into the inner court to the king, who has not been called, he
has but one law: put all to death, except the one to whom the
king holds out the golden scepter, that he may live. Yet I
myself have not been called to go in to the king these thirty
days.</q> </v>
<v osisID="Esth.4.12">So they told Mordecai Esther's words.
</v></p>
<p>
<v osisID="Esth.4.13">And Mordecai told them to answer Esther:
"Do not think in your heart that you will escape in the king's
palace any more than all the other Jews. </v>
</p>
<p>
<v osisID="Esth.4.14">For if you remain completely silent at
this time, relief and deliverance will arise for the Jews from
another place, but you and your father's house will perish. Yet
who knows whether you have come to the kingdom for such a time
as this?"
</v>
</p>
<p>
<v osisID="Esth.4.15">Then Esther told them to reply to
Mordecai: </v>
<q>
<v osisID="Esth.4.16">"Go, gather all the Jews who are present
in Shushan, and fast for me; neither eat nor drink for three
days, night or day. My maids and I will fast likewise. And so I
will go to the king, which is against the law; and if I perish,
I perish!</q>
</v>
</p>
<p><v osisID="Esth.4.17">So Mordecai went his way and did
according to all that Esther commanded him.<note
type="textual">Septuagint adds a prayer of Mordecai here.
</note></v></p>
```

Exact Number of Verses

Notice in this example that all the paragraphs and quotations still enclose an exact number of verses. As mentioned earlier, there are exceptions to this to be handled, as explained later.

Dealing with Quotations

When tagging quotations, do *not* also include quotation marks. They will be generated in the typesetting or display process. This is important for the following reasons:

- If some people use <q>, some use punctuation marks, and some use both, then anyone processing OSIS texts will have to check every text and account for all the variations. This is expensive and time-consuming; that is, it will make the Bibles cost more (to someone) and be delivered later.
- Punctuation for quotes differs around the world, so any given quotation mark may be meaningless to other communities. In Spanish, for example, there are special rules about how to mark quotes that continue after an interruption. Such cases can be distinguished by adding a type attribute to the <q> element, with values such as:
 - "initial"
 - "medial"
 - "final"

Dealing with Notes

Many editions of the Bible have accompanying notes. It is customary to include the notes directly within the text, at the point to which they apply. This can be done via the <note> element, which can be placed almost anywhere. In the future, it is likely that notes will more commonly reside outside the text, instead residing in a special notes file that can be attached to any Bible edition on request.

Predefined Note Types

Every note should have a type attribute to indicate its purpose. Many Bible editions show different kinds of notes in different places.

The predefined note types are listed below. They are not sharply-defined, wholly distinct categories. In addition, if none of these categories suffice, encoders may create their own so long as their names begin with **x-**.

<u>Type Attribute</u>	<u>Description</u>
allusion	The note explains an implicit reference that the text makes to another text or concept.
alternative	The note records an alternate possible reading of the text, whether due to ambiguity in translation or to manuscript variation.
background	The note provides background information, such as: <ul style="list-style-type: none"> • Cultural norms • Explanations of geographic or other information original readers would have known
citation	The note cites a supporting text or further explanation of some kind.
crossReference	The note provides a cross-reference to a related passage or other text.
devotional	The note includes information of interest for devotional reading.
exegesis	The note discusses a relevant point of exegesis or interpretation.
explanation	The note explains implicit, ambiguous, or otherwise non-obvious aspects of the passage.
study	The note provides helps for a deeper study of the passage.

<u>Type Attribute</u>	<u>Description</u>
translation	<p>The note discusses an issue of translation, such as:</p> <ul style="list-style-type: none">• A word whose meaning is unclear in the original• A reason for the translator's choice of phrasing <p>Bible translation projects will likely use this heavily, using the subtype attribute to mark the such items as the:</p> <ul style="list-style-type: none">• Status of each note as resolved or unresolved• Person responsible for the note
variant	<p>The note records a textual variation in manuscript tradition, relevant at its location.</p>

Sometimes a chapter or verse starts or ends in the middle of some other unit, such as a:

- Poetic line group
- Paragraph
- Quotation, or
- Speech

In such cases, an alternate form of the chapter or verse tag must be used. This usage is explained in the following section.

Elements That Cross Other Elements

Special Forms for Start and End Tags

The normal form of an element is a *start tag* and an *end tag*, for example, `<v> . . . </v>`.

The special form for handling markup that crosses boundaries, however, consists of two totally empty instances of the same element type:

- One to mark the *starting* point
- One to mark the *ending* point

The two empty tags identify themselves as to which is the start and which is the end, and co-identify themselves via an ID-like attribute they must share:

```
<v sID="xyz237" /> . . . <v eID="xyz237" />
```

This is equivalent to the TEI *milestone* method for marking such phenomena. It has the advantage that milestones representing a given type of element have the same name as the element, and automatically may have the same attributes. Although XML will not detect a validation error if attributes other than eID are specified on the ending milestone, it is an OSIS error and must not be done.

For OSIS purposes, there is no semantic difference between marking up a chapter or verse as a container using a start and an end tag, versus marking it up as a *milestone pair* consisting of two empty tags.



Chapter

3

The Rest of the OSIS Elements

This chapter describes the remainder of the OSIS elements. It covers the following topics:

- Three Classes of Elements 28
- Marking Up Epistles and Similar Materials 28
- Marking Up Dramatic Texts 29
- Marking Up Poetic Material 36
- Lists, Tables, Genealogies, Figures, and Other Material 37

Three Classes of Elements

Description of Classes

The majority of the remaining OSIS elements fall into the following classes:

1. Those that mark commonplace units such as:
 - Paragraphs
 - Lists
 - The occasional table and glossary (typically found in appendixes of printed Bibles)
2. Markup for special text types, such as:
 - Epistles
 - Drama
3. Small-scale elements that mark:
 - Quotations
 - Notes
 - Names, etc.

Marking Up Epistles and Similar Materials

Overview

Letters, epistles, and similar texts are marked up in basically the same way as any other text. However, the following sections describe three special elements that are available for marking portions unique to this genre.

<salute> Element

The <salute> element encloses the salutation or greeting, typically at the very beginning of a letter. It should include the whole salutation, including (if present) the “to,” “from,” and any following greeting or blessing.

If the boundaries of a salutation are the same as the boundaries of a paragraph, section, or other unit, that unit should be placed outside, with the salute element directly within. For example:

```
<div type="book" osisID="1Tim">  
  <head>The First Epistle to Timothy</head>  
</div>
```

<closer> Element The closer element surrounds the closing portion of a letter, typically consisting of:

- Final greetings or blessing, and
- Signature (See the <signed> element below.)

<signed> Element The signed element surrounds only the name signed at the end of a letter. It may appear with or without an accompanying closer element.

Marking Up Dramatic Texts

Two Features for Marking Up Texts OSIS provides two main features for marking up dramatic texts. It provides a way to:

- Declare the list of characters, or *castList*; and
- Identify speeches and speakers in the body of a dramatic text

<castList> Element A <castList> element contains a structured list of the roles, or cast, of a dramatic work. It is drawn directly from the TEI structure for the same thing. For example, in the Song of Songs, some translations may present the list of characters at the start of the book:

- Lover
- Beloved, and
- Friends

The same might be done for Job. However, these elements will be most commonly used for extra-Biblical materials, such as a play based on the Bible or dramas in classical or other literature.

Sample Marked-Up Text

A simple example of a <castList> is shown below. (Perhaps it is used for a dramatic re-enactment of Job.) As you will see, the <castList> element contains the entire casting list and consists of one or more <castGroup> elements. Multiple <castGroup> elements, each with its own head, would be used if there were multiple sub-groups of the cast to be listed separately.

```
<castList>
  <castGroup>
    <head>Cast of characters</head>
    <castItem>
      <actor>Patrick Durusau</actor>
      <role>Job</role>
```

```

        <roleDesc>A man of God who suffers greatly</roleDesc>
    </castItem>

    <castItem>
        <actor>(a whirlwind)</actor>
        <role>God</role>
        <roleDesc>The Almighty, who permits Job's suffering,
and responds to his questions about it.</roleDesc>
    </castItem>

    <castItem>
        <actor>(a disembodied voice)</actor>
        <role>Satan</role>
        <roleDesc>The instigator of Job's suffering</
roleDesc>
    </castItem>

    <castItem>
        <actor>Todd Tillinghast</actor>
        <role>Eliphaz</role>
        <roleDesc>The first of Job's friends to speak</
roleDesc>
    </castItem>

    <castItem>
        <actor>Chris Little</actor>
        <role>Bildad</role>
        <roleDesc>The second of Job's friends to speak</
roleDesc>
    </castItem>

    <castItem>
        <actor>Steve DeRose</actor>
        <role>Zophar</role>
        <roleDesc>The third of Job's friends to speak</
roleDesc>
    </castItem>

    <castItem>
        <actor>Troy Griffiths</actor>
        <role>Elihu</role>
        <roleDesc>The youngest and last of Job's friends to
speak, who was slightly less clueless than the rest.</roleDesc>
    </castItem>
</castGroup>
</castList>

```

NOTE: At this time, <castList> can occur only in the work declaration, after the Dublin Core elements. Thus, if Bible encoders want to include the casts of Song of Songs and of Job, they should each need to be marked as a separate <castGroup> within that one <castList>.

**<castItem>
Element**

The <castItem> element contains the full information for a single character. This must include a name for the role being played, and should include a description of that role. It may also include the name of an actor, if the text being encoded represents a particular enactment rather than, say, a libretto or script.

In general, there is no need to also encode an actor name or role name with an explicit name, unless the encoder wishes to provide a normalized form for later reference; in that case, the name element would be placed just within the actor or role element, not surrounding it.

ID Attribute

It is strongly recommended that each <castGroup> and <castItem> have an ID attribute.

Because IDs must be unique across all element types in a document, encoders may wish to prefix certain kinds of IDs to separate them and avoid conflicts. For example, an appropriate ID for <castItem> representing the friends in Song of Songs would be “cast.friends,” or perhaps “cast.song.friends.”

**<speaker>
Element**

The <speaker> element is used to identify the person or role that is uttering the content of an associated speech.

**<speech>
Element**

The <speech> element is used to indicate quoted direct speech. In that sense, it represents a kind of quotation. However, the <q> element is to be used for quotations in general, whereas the speech element is limited to accounts of an individual making an actual speech in some kind of performance context.

Sample Marked-Up Text

Just as with the <q> element, using the <speech> element makes quotation marks unnecessary, and they must not be used. For example:

```
<chapter osisID="Acts.7">
<head>Stephen's Speech to the Sanhedrin</head>

<p>
<verse osisID="Acts.7.1">Then the high priest asked him,
<speech>Are these charges true?</speech>
</verse>
</p>

<p>
<verse osisID="Acts.7.2">To this he replied: <speech>Brothers
and fathers, listen to me! The God of glory appeared to our
```

father Abraham while he was still in Mesopotamia, before he lived in Haran.

</verse>

<verse osisID="Acts.7.3">'Leave your country and your people,' God said, 'and go to the land I will show you.'

</verse>

<p>

<verse osisID="Acts.7.4">"So he left the land of the Chaldeans and settled in Haran. After the death of his father, God sent him to this land where you are now living. </verse>

<verse osisID="Acts.7.5">He gave him no inheritance here, not even a foot of ground. But God promised him that he and his descendants after him would possess the land, even though at that time Abraham had no child. </verse>

<verse osisID="Acts.7.6">God spoke to him in this way: 'Your descendants will be strangers in a country not their own, and they will be enslaved and mistreated four hundred years. </verse>

<verse osisID="Acts.7.7">But I will punish the nation they serve as slaves,' God said, 'and afterward they will come out of that country and worship me in this place.'

<verse osisID="Acts.7.8">Then he gave Abraham the covenant of circumcision. And Abraham became the father of Isaac and circumcised him eight days after his birth. Later Isaac became the father of Jacob, and Jacob became the father of the twelve patriarchs.</verse></p>

...

<verse osisID="Acts.7.51">"You stiff-necked people, with uncircumcised hearts and ears! You are just like your fathers: You always resist the Holy Spirit! 52Was there ever a prophet your fathers did not persecute? They even killed those who predicted the coming of the Righteous One. And now you have betrayed and murdered him-- 53you who have received the law that was put into effect through angels but have not obeyed it."</verse>

...</chapter>

<milestone> Element

The <milestone> element is an empty element, and so it is represented as <milestone> rather than as a typical start- or end-tag. It is used to mark point events in a text, often involving the layout of the original text, or special points of access into the electronic text.

For example, when digitizing a manuscript, it may be considered important to record where the page, column, and line boundaries of the original manuscript fell. This would be done as shown here:

```
<milestone type="pb" n="37-verso"/>
<p>The Lord said to Eliphaz:<milestone type="line"/>
What my servant Job has said about me is true, <milestone
type="line"/>
but I am angry with you and your two friends for <milestone
type="line"/>
not telling the truth. <verse osisID="Job.42.8">So I want you
to go
over to <milestone type="line"/>
Job and offer seven bulls and seven goats on an <milestone
type="line"/>
alter as a sacrifice to please me. After this, Job <milestone
type="line"/>
will pray, and I will agree not to punish you for <milestone
type="line"/>your foolishness.</verse><milestone type="line"/>
<verse osisID="Job.42.9">Eliphaz, Bildad, and Zophar obeyed the
Lord, and he answered Job's prayer.</verse>
```

NOTE: Because `<milestone>` is an empty or a point element, not a container, it may be placed freely without concern about violating the boundaries of other elements in the same region.

Using Breaks

Where a break to be represented by a `<milestone>` occurs between other units, such as verses or paragraphs, the `<milestone>` should be placed between those units, rather than just within either.

Setting Numbers

When setting attribute *n* on a `<milestone>`, *n* should indicate the number of the unit starting, not the unit ending. For example:

```
<milestone type="page" n="3"/>
```

indicates the break between pages 2 and 3, not between pages 3 and 4.

Numbering does not need to be unique across various types of `<milestone>` elements. For example, the twenty-fourth line on page 5 of a manuscript may be marked **simply** `n="5"`, rather than `n="24.5"`.

Predefined <milestone> Types

Several predefined types are provided for the <milestone> element.

<u>Type Attribute</u>	<u>Description</u>
pb	Marks the location of a page break in the source text.
column	<p>Marks the location of a column break in the source text. The start of the first column need not be marked unless something else (such as a footer) precedes it in the encoding of the page.</p> <p>Columns should be numbered in the order of reading (for example, right to left in Hebrew texts). In the case of, say, an English/Hebrew diglot edition, where there is no principled order of reading among the columns, the direction used for the pages (Hebrew or Greek) should be considered the dominant direction, and the same direction should be used for numbering columns.</p>
header	Precedes the encoding of the page header if it is being included in the encoded text. This would normally be true only for digitized editions of manuscripts or other important copy editions, because in modern print Bibles, headers are typically automatically generated.
footer	Marks the page footer area. Type “footer” should be used just like type “header.”
line	Marks line breaks in the copy text when they are considered significant. This normally only will be true for important manuscripts, where line numbering may be needed for paleographic or reference use. Line milestones must not be used to represent linguistically significant line breaks, such as in poetry, for which the <lg> and <l> elements are provided.

<u>Type Attribute</u>	<u>Description</u>
halfLine	Marks half-line units, which is important in certain languages.
screen	Marks preferred break points in an on-screen rendering of the text. For example, if users request to be taken to the book of Psalms in a given electronic edition, it may be best not to take them to Psalm.1.1, but to an earlier point, preceding any introductory material. In many cases this can be accomplished by taking them to the appropriate <div> (because the <div type="book" osisID="Ps"> should precede and Psalms-specific introductory material); but this <milestone> type is available for other cases. The OSIS specification does not impose requirements on how applications make use of such <milestone> elements.

**<milestoneStart
and
<milestoneEnd>
Elements**

These elements are deprecated, that is, we strongly recommend against their use. They represent an earlier version's way of marking up elements that cross other element's boundaries.

In OSIS versions prior to 1.5, an element that crossed another's boundary, such as a quote crossing a paragraph boundary, could be encoded like this:

```
<eg>
<![CDATA[
]]>
</eg>
```

Marking Up Poetic Material

Verses, Lines, and Line Groups

Although poetic material is commonly called “verse” material, OSIS avoids that term because of potential confusion with the book/chapter/verse reference system. Thus, like TEI, markup of poetry refers to lines and line groups.

In addition, OSIS provides a typographic line-break element. This is because in at least some editions of the Bible, the exact placement of typographic line-breaks within poetic lines is considered very important; while on the other hand it is determined in part by presentational concerns (for example, column width), rather than by linguistic characteristics of either the source or target language.

OSIS provides three main elements for marking up poetic material:

- `<lg>`
- `<l>`
- `<lb>`

The following sections describe these elements.

`<lg>` Element

The `<lg>`, or *line group*, element is used to contain any group of poetic lines. Thus, it covers for units such as:

- Couplet
- Stanza
- An entire poem

Line groups also can contain smaller line groups.

`<l>` Element

The `<l>` element is used to mark poetic lines, as determined by the linguistic nature of poetry in the language of the work. For example, much English poetry consists of lines that can be located by the position of rhyming words and/or by counting syllables; Hebrew poetry can often be divided into lines based on parallelism of thought or meaning.

`<lb>` Element

The `<lb>`, or *line break*, element is used to mark line breaks that are not the result of linguistically or poetically significant structure but are primarily part of the typography and layout. For example, a lone line might be broken to fit into a narrow column. The `<lb>` element is an empty element used to mark where such breaks occurred in an important copy text, or where they should be placed in a text to be rendered.

Bible typesetting has a long tradition involving placement of such breaks. In some cases, translators have carefully decided, preferred, or required break-points for various set widths. These can be accommodated by using the type attribute of `<lb>`. For example, `type="wide-pref"` and `type="narrow-pref"` might be used to identify the locations of preferred line-breaks for wide and narrow column layouts. Similarly, type might be used to distinguish various levels of indentation following the break, or other typographic factors deemed important.

The `<lb>` element should not be used merely to record where line breaks in general happened to occur in a source edition. For most source editions, this information is unimportant; for manuscripts, it may be important but must be marked up using the `<milestone>` element instead.

Lists, Tables, Genealogies, Figures, and Other Material

Encoding Glossaries

Simple glossaries, such as those that appear at the back of many Bibles, may be encoded at this time using the simple `<list>`, `<label>`, and `<item>` elements described below.

Dictionary Extension

A dictionary extension is well along in development and should be available as an extension module within the next few months. That module should be used for any but the simplest lexical tools; and once available, OSIS may decide to recommend against further use of lists to represent even simple glossaries.

`<list>` Element

All types of lists are marked using the `<list>` element; they can be distinguished by type attribute values such as:

- "ordered"
- "unordered"
- "compact"
- "definition"
- type

A list consists of any number of items, some or all preceded by labels, which corresponded to the definition-terms of definition lists in various schemas.

`<label>` Element

A leading label for a given list item. Labels are optional.

<item> Element	The main content or description for each list item.
<table> Element	OSIS provides only very rudimentary tables: a table consists of rows, which, in turn consist of cells. Formatting and layout is not part of the table markup; it can either be done automatically, as in HTML browsers, or by inserting some signal to the layout engine, such as type attributes or processing instructions.
<row> Element	[Description]
<cell> Element	[Description]
<figure> Element	[Description]
<caption> Element	[Description]
<a> Element	The <a> element is exactly analogous to the HTML a element, and likewise may be used to encode links within a document. This eases integration of OSIS documents into the Web environment.
<index> Element	<p>The index element may be placed at any point in the document to indicate a topic under which that location should be indexed.</p> <p>Multiple indexes (such as of places, names, theological or ethical issues, etc.) must be distinguished via the “name” attribute. The primary index entry name is specified on the “level1” attribute, with sub-level “level2,” “level3,” and “level4” also available.</p> <p>There is also a “see” attribute, which may be used to represent the need for a cross-reference to another index entry. Such elements should be placed at the end of the document body (since they do not refer to a particular location).</p>
<reference> Element	[Description]
<abbr> Element	Marks a portion of the content as an abbreviation. The expanded value should be supplied as the value of the expansion attribute.

<catchWord> Element	Catchwords and catchphrases are those parts of notes that are copied from the main text, to orient the reader as to the note's precise applicability. Catchwords in notes must be marked when present.
<divineName> Element	The <divineName> element is only for the Deity. Angels, demons, idols, and the like should be tagged with <name type='nonhuman'> .
<foreign> Element	The <foreign> element marks an insertion of text not in the primary language, such as " <i>Talitha cum</i> " in Mark 5:41. The specific language should be indicated via the xml:lang attribute.
<hi> Element	The <hi> element provides simple text highlighting capability. Types can be distinguished by the [???].
<inscription> Element	Inscriptions should not also be tagged as quotations. For example, where Paul refers to an alter inscription in Athens: <div style="text-align: center;"> <pre><inscription>To an unknown god</inscription></pre> </div>
<mentioned> Element	[Description]
<name> Element	[Description]
<q> Element	[Description]
<rdg> Element	[Description]
<seg> Element	[Description]
<transChange> Element	[Description]
<w> Element	[Description]



Canonical Reference Schemes

This chapter provides an overview of canonical references schemes and describes how they are used in OSIS. It covers the following topics:

- What Is a "Canonical Reference Scheme"? 42
- Partial Identifiers 43
- Works 43
- Sub-Identifiers 44
- Grouping 44
- Other Details of osisIDs 44
- Coding Multiple Versification or Reference Schemes in a Single Document 45

What Is a "Canonical Reference Scheme"?

Description

A *canonical reference scheme* is a system of agreed names and/or numbers for referring to parts of a document. In the Bible, the traditional system used in most languages consists of the following items:

1. Book name (such as *Genesis*)
2. Chapter number
3. Verse number

Most works of classical literature have similar schemes, nearly all of which are also hierarchical (that is, they work from larger units to smaller).

Basic Form for Biblical Verses

The basic form for Biblical verse references is strictly defined by OSIS, so that various electronic Bible versions can interoperate easily. Standard abbreviations for the canonical and deuterocanonical books are provided; chapter and verse numbers follow the book abbreviation separated by periods. For example:

`Matt.1.1`

OSIS uses such identifiers in several places:

- To identify a portion of text from an actual canonical work, such as a verse of the Bible. The verse element bears an `osisID` attribute that must include the identifier appropriate to the verse. For example:

```
<v osisID="Matt.1.1">
```

- To identify a reference (`<i>` to `</i>`) to a Biblical or other passage that is not contained at the point of reference. For example:

```
<p>The correctness of my exegesis is  
incontrovertibly proven by <reference  
osisRef="Matt.1.1"> the first verse of Matthew.  
</p>
```

- In the header, to identify what portions of the Bible are included in a declared work. For example, a particular edition may include only the New Testament (NT) and Psalms. The `<scope>` element may be used to specify each relevant portion.

Partial Identifiers

Permissible Practices

It is permissible to refer to an entire chapter by simply omitting the verse number and the preceding period (.). For example:

`Matt . 5`

Similarly, it is permissible to refer to an entire book by omitting the chapter and verse number and both corresponding periods:

`1Cor`

For those books of the Bible that have only one chapter, the chapter number **1** must be specified. The first verse of Jude is thus **Jude . 1 . 1**, not **Jude . 1**.

Works

What References Identify

A reference can also identify:

- A place in a particular edition or translation of the Bible
- Other works entirely, such as:
 - Josephus
 - Writings of the Apostolic fathers
 - Classical or modern literature, etc.

Declaring Works

Later, we discuss how to declare particular works and give them local short names. When that is done, the short name for any declared work can be put before any reference to it, for example:

`NIV:Matt . 1 . 1`

The colon is required, to make sure it is clear where the work ends and the within-work reference begins. Most commonly, however, the work is omitted (the default work used, then, is whatever work was named on the `osisWorkID` attribute of the `<osisText>` element).

It is possible to refer to an entire work, such as the whole CEV, NIV, KJV, the Iliad, etc. However, to do so, the work name must be stated, and the following colon must be included (without the colon, it would be interpreted as a top-level identifier within the work).

Sub-Identifiers

Splitting Verses into Parts

Translations also often split verses into parts, providing labels such as *a* and *b* for the separate parts. Encoders may freely add sub-identifiers below the lowest standardized level. They are set off from the standardized portion by using an exclamation point (!), as opposed to a period (.), between levels of the standard system). For example:

Rev. 2. 20 ! b

Such subdivisions are not standard across different translations, so applications must be prepared to discard them when trying to locate a referenced location in a different edition.

These extensions are not considered a formal part of the canonical reference scheme, and so a work that uses them need not claim it is using a different scheme.

Grouping

Putting Verses into a Block

Translators often group several adjacent verses into a single block, so that they can translate them using word order more natural in the target language. In such cases, the larger unit (commonly a paragraph, or <p> element), gets an osisID that lists all the individual osisIDs for the verses included, separated by white space. For example:

<p osisID="Matt.1.1 Matt.1.2 Matt.1.3">...</p>

The osisIDs never allow the use of ranges. Only osisRefs do (this will be discussed later).

Other Details of osisIDs

Hierarchy

The period (.)-separated parts of an osisID are defined to represent a hierarchy. In the traditional versification (introduced by Whittingham about ???), the hierarchical parts are:

- Book
- Chapter
- Verse numbers

In other schemes for the Bible, or schemes for entirely different works, the names of the parts may differ, but the expectation is that they still form a hierarchy.

Using Numbers, Letter, and Other Characters

The parts of an osisID may contain any mixture of numbers, letters, hyphens (-), and underscore (_). However, to avoid conflict with the other punctuation marks used (such as a period (.) to separate the work from the in-work location, an at sign (@) to separate fine-grained references in osisRefs, and an exclamation point (!) to separate work-specific extensions to a versification scheme), no other characters are allowed.

Case-Sensitive Identifiers

As with XML in general, these identifiers are case-sensitive. **Matt** is the correct form, and there is no Bible book in OSIS that is called **matt** or **MATT**. Applications for end users may choose to accept case variants in such names, but applications for encoders (such as OSIS editors) must not produce documents with invalid reference names.

Coding Multiple Versification or Reference Schemes in a Single Document

Terminator Character

The exclamation point (!) is the terminator. After this character, encoders may append names and/or numbers to provide finer-grained reference points)

Identifiers from Other Schemes

A work may provide identifiers drawn from multiple distinct versification schemes. For example:

- A Bible may provide both the Hebrew and Greek traditional verse numberings.
- A work of classical literature may be made more accessible by marking the boundaries of canonical units drawn from completely unrelated systems, such as Loeb and Whiston for Josephus (and four more systems for Josephus' *Jewish War* specifically; see H. Douglas Buckwalter and Mary K. Shoaff, *Guide to Reference Systems for the Works of Flavius Josephus*, Evangelical Theological Society, 1995, ISBN 093205501X).

Using Multiple Reference Systems

A simpler case may also arise where multiple reference schemes are in use; for example, an <osisCorpus> that includes several <osisText> elements, each of which uses a different reference scheme. This case is simpler, because each <osisText> can provide its own default reference system, using the osisRefWork attribute on <osisText>.

This is accomplished in the same way as just described for discursive translations: the multiple identifiers are simply placed where needed, separated by spaces when they co-occur on a single element.

Each reference system used must be declared as a work in the header, and each identifier must indicate the reference system from which it is drawn. For example, a line of Josephus that has two distinct identifiers would appear like this (presuming the appropriate work declarations in the header):

```
<l osisID="josephus-war:loeb:245.22 josephus-war:whiston:22.3.14b">
```

Encoding Multiple Reference Systems

Because verse, chapter, and similar elements can be expressed by empty-element pairs when necessary, it is possible to encode multiple reference systems, even though they may have completely unrelated start and end points for their units.

For example, a work that has one reference system based on sentences and another based on lines of a normative print edition, can co-exist. However, taken to extremes, this would get rather messy and be difficult to maintain without OSIS-aware software to assist.



Chapter

5

OSIS References

This chapter describes OSIS references and shows how to refer to ranges and use grain identifiers. It covers the following topics:

- What Is an "OSIS Reference"? 48
- Referring to a Range 48
- Using a Grain Identifier 50

What Is an "OSIS Reference"?

Description

An OSIS reference is very much like an `osisID`. The fundamental difference is that an:

- `osisID` *identifies* the actual occurrence of canonical text.
- `osisRef` *refers* to canonical text from somewhere else.

For example, a footnote (particularly one of `type="crossReference"`) may refer to a related passage, or a section heading in the Mark may include references to the parallel passages in Matthew and Luke; in such cases an `osisRef` rather than an `osisID` is used.

Any valid `osisID` is also a valid `osisRef`, and refers to the same thing. Thus for example, a commentary might say:

```
<p>The same interpretive method applies also in
<reference osisRef="Luke.1.1">the first verse of
Luke</reference>.</p>
```

However, `osisRefs` provide additional capabilities. They can refer to:

- A contiguous range of:
 - Books
 - Chapters
 - Verses (or other units, as applicable to the work being referenced)
- Precise locations within a given canonically-reference unit

Referring to a Range

What to Do

To refer to a range, perform the following steps.

Step	Action
1	Include two <code>osisIDs</code> : <ul style="list-style-type: none"> • One for the <i>first</i> verse (or chapter or book) of the range • One for the <i>last</i> verse
2	Separate the two values by a single hyphen (-). <i>NOTE: White space is also permitted, but not recommended, on either or both sides of the hyphen.</i>

**Sample
References to
Ranges**

The following examples illustrate how to refer to ranges:

John.3.14-John.3.16
Prov.30-Prov.31
Esth-Song
Ps.149-Prov.3.4

**Making Sure the
Range is Valid**

Both sides of the hyphen (-) must hold complete references. It is not correct to abbreviate the first example above to merely **John.3.14-16**. (As always, the values of `osisID` and `osisRef` attributes need not be the same values displayed to the reader.)

**Encoding a
Discontiguous
Range**

A single `osisRef` cannot identify a discontiguous range of a work. For example, a complex reference such as **John 3:14-16, 18; 4:1-2; 19-20** cannot be encoded as a single reference. Instead, it must be encoded as several parts, each contiguous:

```
<p>See also
<reference osisRef="John.3.14-John.3.6">John 3:14-16,
</reference>
<reference osisRef="John.3.18">18; </reference>
<reference osisRef="John.4.1-John.4.2">4:1-2;
</reference>
<reference osisRef="John.19-John.20">19-20
</reference>.</p>
```

**Using Work-
Specific
Extension Fields**

It is permissible for `osisRefs`, including those on either side of a hyphen in a range reference, to use `osisIDs` that include the work-specific extension fields, which comprise an exclamation point (!) followed by a name.

Using a Grain Identifier

What to Do

To refer to specific locations within a named canonical reference element, perform the following steps.

Step	Action
1	Give the osisID, as usual.
2	Follow the osisID with a <i>grain identifier</i> , which consists of: <ul style="list-style-type: none"> • The at-sign character (@) and • An identifier for the portion desired. Such identifiers are of the form: <div style="text-align: center;"><code>grainType(parameters)</code></div>

Two Grain Types

Two grain types are defined at this time:

- **cp** (an abbreviation for *code point*) counts through the character content of the referenced element, essentially by characters. Technically, the units counted are Unicode code points, a term which is defined more precisely than the generic term *character*. The first code point of content is number 1, not 0.

No markup included within the element specified is counted, and markup does not imply a space for purposes of counting, even if it may for purposes of layout or printing.

When referring to a location in canonical content, text within non-canonical elements is not counted. Thus, the intuitive count will not be changed by the insertion of notes, references, critical apparatus, and the like). When referring to a location in non-canonical content, all text in all included elements counts, whether canonical or not.

- **s** finds the first match of the string value specified, with regard to case, within the canonical reference specified. If the canonical reference is one of several applied to the same target element (for example, when a paragraph has `osisRef="Matt.1.1 Matt.1.2 Matt.1.3"`), then that whole element is searched. If the string is not found, the user agent must warn the user, and may offer to suggest a best guess (for example, by searching again while ignoring case, white space, punctuation, accents, spelling variation, etc).



Different Versification Systems

This chapter discusses versification systems used in OSIS. It covers the following topics:

- Hebrew and Greek Traditions 52
- Other Reference Schemes 52

Hebrew and Greek Traditions

Overview

Hebrew tradition numbers the proscriptions above Psalms (such as "A Maskil according to David") as verse one, and goes on from there.

Greek tradition does not number the proscriptions, and starts verse 1 after it.

Of course, this would make all references in Psalms to be off by one verse, if the version reached is from the other tradition.

Other Reference Schemes

Overview

A few languages use traditional reference schemes that completely differ from the familiar book/chapter/verse one.

Many works of classical literature likewise have more than one standard canonical reference scheme, such as a Loeb numbers plus another method.

Disadvantages of Defining Different Versification Schemes

In such cases where there are large and systematic differences, different *versification schemes* must be defined and named.

On the other hand, nearly every edition of the Bible has some slight deviations from a standard versification scheme that it otherwise follows. For example:

- Subdividing verses into parts *a* and *b*
- Combining verses into a larger translation unit, etc.

It is highly undesirable to call these separate versification schemes, because:

- They differ so slightly.
- The differences can be mechanically resolved.
- There is considerable overhead to maintaining and mapping among versification schemes.

Thus, as described below, such minor extensions can be done without an edition having to say it is using a completely different versification scheme.

Upcoming XML Schema

The Bible Technologies Group (BTG) intends to develop an XML schema for declaration files that can express such systems, and their mapping to other systems. This work has not been completed. However, we reserve the following names for versification schemes we already know to be relevant:

- Hebrew
- NA27
- SamPent
- LXX

Works and References

Each work must identify which versification scheme(s) it uses; this is done on the work's entry in the header.

References can also state which versification scheme they are expressed in, so that they may be correctly interpreted.

HTML Targets

HTML may provide targets that look like canonical Bible references, but this would not remove the requirement to specify `osisID` where applicable. (The `osisID` is mandatory when applicable.)



Chapter 7

Conformance Requirements

This chapter describes the conformance requirements for markup in OSIS documents. It covers the following topics:

- Conformance Levels 56
- Quality Levels 58

Conformance Levels

Overview

The following sections describe the four levels of OSIS conformance for markup in OSIS documents.

Level 1: Minimal OSIS Document

A Level 1 document must:

- Be a well-formed and valid XML document according to the OSIS schema.
- Be complete in accordance with the scope declaration in its work declaration. For example, a document with a missing chapter is not OSIS-conforming.
- Mark all canonical references where applicable (for example, book, chapter, and verse boundaries in Bibles). Marking in groups (for example, a paragraph that includes several verses) is permissible.

Work Declarations

The header must include `<work>` declarations for the:

- Document itself
- Versification system it uses

All `<work>` declarations must provide unique `osisWorkID` values, and *only* those values may appear as work identifiers in `osisIDs` and `osisRefs` (whether by default or explicit) in the document.

All `<work>` declarations must provide at least title, creator, and date(s). Creator may be coded as "(anonymous)" or "(unknown)" if applicable. The date of electronic publication is required, but other dates may be coded as "(unknown)" if applicable).

Revision Declarations

At least one revision declaration element must be included, describing the most recent substantial changes to the document.

Use of Elements

All elements must be used substantially in accordance with their intended meaning as conveyed in this documentation and documentation referred to, such as Dublin Core, USMARC Relator Codes (see page 81), and so on.

**Level 2: Basic
OSIS Document**

All requirements of Level 1 conformance must be fulfilled. In addition:

- A clear statement of rights must be provided within the <rights> element. If the document is licensed for free copying under certain conditions, those conditions or a reliable URI to them must be provided. If there are encumbrances or if clearance is required to copy or to use the work, contact information for the responsible party must be provided directly within the rights element.
- The source edition from which the electronic edition was produced, must be clearly identified, or clearly stated as unknown (the latter practice is deprecated, and encoders are strongly encouraged to make a serious effort to identify the source edition).
- All inscriptions (for example, "*mene mene tekel parsin*") must be marked where applicable.
- All instances, translations, or transliterations of the tetragrammaton must be marked via the <divineName> element.
- All languages substantially appearing in the text must be identified, and all points where the text itself identifies a phrase as coming from a particular language must be marked up to match (for example, "*Talitha cum*").
- All epistolary markup (opener, closer, signature, salute) must be provided where applicable.
- Poetic text must be marked sufficiently to enable rendering it readably as poetry. The distinction of using <l> for linguistically or poetically significant line breaks, versus using <lb> for typographically significant or preferred line breaks, must be maintained.
- If the source edition had section, paragraph, block quotation, or other similar markup in addition to book, chapter, and verse numbering, that markup must be included.
- If the source edition had footnotes, sidenotes, endnotes, or other notes, they must be included, and must be distinguished into as many types as can be readily distinguished by observing the typographic conventions of the source edition.

**Level 3:
Complete OSIS
Document**

All the requirements of Level 2 must be fulfilled. In addition, the following must be included:

- All notes
 - Front and back matter
 - Illustrations
 - Section heads
 - Other non-canonical phenomena
-

**Level 4: Scholarly
OSIS Document**

All the requirements of Level 3 must be fulfilled. In addition:

- Substantial critical apparatus must be available in the text, such as:
 - Strong's or comparable numbering of words
 - Part-of-speech and/or other linguistic markup
 - Encoding of variant readings, critical apparatus, and the like
 - Extensive translation, scholarly, interpretive, or other notes
- At least highly significant persons and places in the text must be marked as names, referring to the normative form of the corresponding individual (at this time, the Bible Technologies Group is preparing normative lists). Where such identification is a matter of non-obvious interpretation:
 - That fact must be marked, and
 - The encoders' practices and biases should be duly noted in the front matter.
- The text must conform to the requirements described in "Level 3: Proof Quality" on page 59.

Quality Levels

Overview

These conformance levels do not specify the level of accuracy and proofreading of the text proper. Instead, this is measured by the following four-level scale of quality.

**Level 1: Sub-OCR
Quality**

The text may have many typographical errors; essentially, it is non-proofread text from automated OCR, probably of a less-than-ideal original.

Level 2: OCR Quality

The text may have up to five typographical errors per source page. In addition, the text:

- May be non-proofread output from ideal OCR of an ideal source
- May have been:
 - Run at least through rudimentary spell-checking or vocabulary counting and repair
 - Entered by a double-keying or similar service that maintains accuracy to the required level

Level 3: Proof Quality

There may not be more than an average of one error per source page (or per 2000 characters of content) as compared with the stated copy text.

This requirement does not preclude producing new editions, which, for example, may:

- Fix typos in the original
- Normalize spelling of older texts, etc.

However in such cases, it is recommended that the best available copy of the source text (that is, as it existed prior to such modernizations) also be made available.

Level 4: Trusted Quality

A Trusted Quality document must fulfill all the requirements of a Proof Quality document, and also must have been:

- In use for at least one year, and
- Read by at least five independent proofreaders, with all noted errors fixed

The text should have available a complete log of changes made since it reached Proof Quality. Random spot-checks of at least 3% of the text must come up with no instances of more than one error per five pages (or 10,000 characters of content).



Chapter

8

Application Requirements

This chapter reviews the application requirements for OSIS.

List of Requirements

Required Items

The application requirements for OSIS are listed below.

- Applications should avoid making any processing distinctions between elements represented as either:
 - Non-crossing single elements, or
 - Milestone pairs
- Applications must interpret OSIS references as accurately as is feasible, but apply smart fallback as needed.

For example, grains will not map across translations or languages, though most will typically survive:

- Changes between successive editions of the same text, or
- Differences between British and American English versions

In general, applications should at least offer to take the user to the nearest reliably-found place; in this case, the verse.

- OSIS-compliant applications must be able to interpret the OSIS elements and process them in a manner consistent with their express intent:
 - As specified in this document, and
 - In accordance with standard practices of Bible publishing

For example, applications should be capable of distinguishing the:

- Typography used for inscriptions
- <divineName>
- Verse labels and references
- Foreign insertions in the text
- Notes, etc.

in ways readily recognizable to users of print Bibles.

Software Accessibility

The Bible Technologies group also strongly advocates making all OSIS-aware software accessible to print-disabled users. This includes details such as providing text alternates for all graphics.



Appendix

A

List of Elements

This appendix lists the elements, attributes, and normative values used in OSIS. It covers the following topics:

- Alphabetical List of Elements 64
- Alphabetical List of Attributes and Normative Values 67
- Normative Values for the Type Attribute, by Element 70
- Normative Abbreviations for Canonical and Deuterocanonical Books 74

Alphabetical List of Elements

Placement

Following is an alphabetical list of OSIS elements.

<u>Element Name</u>	<u>Where Used</u>
a	Content, inline
abbr	Content, inline
actor	castGroup structure
caption	Figure structure
castGroup	castGroup structure
castItem	castGroup structure
castList	castGroup structure
catchWord	Annotation
cell	table structure
chapter	Main content
closer	Epistolary
contributor	Dublin Core (in work)
coverage	Dublin Core (in work)
creator	Dublin Core (in work)
date	Dublin Core (in work)
description	Dublin Core (in work)
div	
divineName	
figure	Figure structure
foreign	Main content
format	Dublin Core (in work)
head	Main content

<u>Element Name</u>	<u>Where Used</u>
header	Header
hi	Main content
identifier	Dublin Core (in work)
index	Main content
inscription	Main content
item	List structure
l	Poetic structure
label	List structure
language	Dublin Core (in work)
lb	Poetic structure
lg	Poetic structure
list	List structure
mentioned	Annotation
milestone	Annotation
milestoneEnd	(Deprecated — do not use)
milestoneStart	(Deprecated — do not use)
name	Main content
note	Annotation
osis	Header
osisCorpus	Header
osisText	Header
p	Main content
publisher	Dublin Core (in work)
q	Main content
rdg	Annotation

<u>Element Name</u>	<u>Where Used</u>
reference	Reference system
refSystem	
relation	Dublin Core (in work)
revisionDesc	Header
rights	Dublin Core (in work)
role	castGroup structure
roleDesc	castGroup structure
row	table structure
salute	Epistolary
scope	Dublin Core (in work)
seg	Main content
signed	Epistolary
source	Dublin Core (in work)
speaker	
speech	
subject	Dublin Core (in work)
table	table structure
teiHeader	Header
title	Dublin Core (in work)
transChange	Annotation
type	Dublin Core (in work)
verse	Reference system
w	Annotation
work	Header

Alphabetical List of Attributes and Normative Values

Global Attributes These global attributes are in addition to `xml:base`, `xml:lang`, and `xml:space`, which are defined by the XML standard itself.

Attribute Name	Data Type	Usage	Description
<code>annotateWork</code>	<code>xs:string</code>	optional	
<code>annotateType</code>	<code>osisAnnotation</code>	optional	
<code>ID</code>	<code>xs:ID</code>	optional	May be added to any element, generally to make that element accessible as a link target for generic hypertext browsers, or for the OSIS a element.
<code>osisID</code>	<code>osisIDType</code>	optional	The <code>osisID</code> attribute identifies the element bearing it as a container for actual canonically-referenceable text, and provides the applicable <code>osisID</code> : <code>osisID="Matt.1.1"</code> . It must not be used on elements that merely refer to, or discuss, a canonically-referenceable text. For those cases, use the <code>annotateWork</code> and <code>osisRef</code> attributes, instead. See the section on reference systems for details on the form required for this attribute's value.
<code>canonical</code>	<code>true false</code>	optional	The <code>canonical</code> attribute identifies the element bearing it as containing actual text of the work being encoded, as opposed to annotations, commentary, inserted headings, header meta data, notes, and other (non-canonical) information. Its value inherits in the same way as <code>xml:lang</code> . That is, the value applies to all descendant elements except where overridden.

Attribute Name	Data Type	Usage	Description
resp	xs:string	optional	This attribute, whose name is short for <i>responsible party</i> , may be coded on any element to identify the party primarily responsible for that element and its content. For example, it might identify a member of a translation team; or on a note, it might identify the author of the note. Each distinct responsible party must be identified by the same value of this attribute wherever they are identified at all (that is, it is not permitted to use their initials sometimes, their last names other times, etc.). A list of responsible parties should be provided in the front matter or in the header.
type	xs:string (Several element types restrict the values, as listed below.)	optional	The type attribute allows encoders to identify more precise distinctions within the broad applicability of any given element. For example, the div (division) element has many subtypes, such as bookGroup, concordance, dedication, glossary, etc. Many other element types also have pre-defined values provided for the type attribute. Some, but not all, of those element types also permit users to add their own values, as long as they begin with x- . When a predefined type is applicable, it must be used instead of creating a new type.
subType	xs:string	optional	In the rare event that the type attribute does not provide a fine-enough grained distinction of element types, the subType attribute may be used to make such distinctions. There are generally no restrictions on the values permitted for subType, except that the encoder should be consistent and document the meaning of any values used.
n	xs:string	optional	This attribute is identical to the TEI n attribute, and may be used to provide a name or number to identify the particular element instance. However, it should not be used to encode a value that for which the oisID, oisRef, or ____ attribute is applicable.

Attribute Name	Data Type	Usage	Description
xml:lang	xs:language	optional	This attribute is defined by the xml standard itself and identifies the primary natural language of the content of an element. The value of this attribute is inherited; that is, any contained elements are presumed to be in the same language, unless they override it by specifying their own explicit xml:lang attribute value. The form of the xml:lang attribute is constrained by Internet specifications, particularly _____. However, many languages lack identifier codes in that system. In such cases, use instead the SIL Ethnologue codes, available from _____. For more details on language code see _____.
script	osisScripts	optional	This attribute provides a slight extension beyond the capabilities of the xml:lang attribute. For many languages, it is enough to specify the language itself, and the country where it is spoken (say, National French vs. Canadian French or other dialects of the French language). However, there are cases where a given language community may use multiple writing systems, that is, different character sets and character usage rules, different spelling or other conventions, etc. In such cases, the particular script system used for writing the current work (or element within a work) must be specified via this attribute. This attribute inherits in precisely the same manner as xml:lang.

Normative Values for the Type Attribute, by Element

Overview

The heading for each basic element type below indicates whether the list of values provided is *extensible* (by adding names beginning with **x-**) or *non-extensible*.

Contacting Editors

Users who find values potentially of general use that are not already provided are asked to send them to the editors for possible incorporation into future versions of the specification.

Likewise, users who discover any substantial ambiguity in the values provided are asked to notify us and to provide examples and explanations, so that we can attempt to rectify any such problem.

annotation

- commentary
- exposition
- meditation
- outline
- poeticRendering
- rebuttal
- sermon
- studyGuide
- translation

calendar

- Chinese
- Gregorian
- Islamic
- ISO
- Jewish
- Julian

**milestoneStart &
milestoneEnd
(deprecated)**

In OSIS 1.1, only one pair of element types was provided for marking up elements that cross others: milestoneStart and milestoneEnd. Each would set its type attribute to the name of the element it was standing in for. The types listed below were the only types permitted to be expressed via milestone pairs. This method, and thus this list, is now obsolete.

- abbr
- chapter
- closer
- div
- foreign
- l
- lg
- q
- salute
- seg
- signed
- speech
- verse

change types

- added
- amplified
- changed
- deleted
- moved
- tenseChange

div

The type attribute for div mainly identifies larger sections that occur in print volumes, especially Bibles. This list was determined in part by examining a large selection of print Bibles, and it covers most things that seem to be common. However, the list may be extended, if necessary, by adding names beginning with **x-**.

- acknowledgement
- afterword
- appendix
- back
- body
- book
- bookGroup
- colophon
- commentary
- concordance
- coverPage

	<ul style="list-style-type: none"> • dedication • devotional • entry • front • gazetter • glossary • imprimatur • index • introduction • majorSection • map • outline • preface • section • subSection • titlePage
osisMilestonePt	<hr/> <ul style="list-style-type: none"> • column • footer • halfLine • header • line • pb • screen
name	<hr/> <ul style="list-style-type: none"> • geographic • holiday • nonhuman • person • ritual
notes	<hr/> <ul style="list-style-type: none"> • allusion • alternative • background • citation • crossReference • devotional • exegesis • explanation • study • translation • variant

**contributor roles
(base set, not
complete)**

- adp
- ann
- art
- aut
- aqt
- aft
- aui
- bnd
- bdd
- bkd
- bkp
- bjd
- bpd
- ctg
- clb
- cmm
- cwt
- com
- ctb
- cre
- edt
- ilu
- ill
- pbl
- trl

titles

- acrostic
- continued
- main
- parallel
- psalm
- sub

Normative Abbreviations for Canonical and Deuterocanonical Books

Naming Conventions

The following abbreviations are defined in the *SBL Handbook of Style* published by the Society of Biblical Literature. The handbook also provides normative abbreviations for works of:

- Classical literature
- Manuscripts
- Journals
- Other information objects of interest to Biblical studies

Spaces have been removed from the abbreviations for some Apocryphal and Septuagint books.

Note that because XML prohibits digits as the first character of IDs and other XML names, these abbreviations cannot be used directly as XML IDs, and are not of that schema data type.

Hebrew Bible/Old Testament

Following is a list of abbreviations for books in the Hebrew Bible.

<u>Abbreviation</u>	<u>Book Name</u>
Gen	Genesis
Exod	Exodus
Lev	Leviticus
Num	Numbers
Deut	Deuteronomy
Josh	Joshua
Judg	Judges
Ruth	Ruth
1Sam	1 Samuel
2Sam	2 Samuel
1Kgs	1 Kings
2Kgs	2 Kings

<u>Abbreviation</u>	<u>Book Name</u>
1Chr	1 Chronicles
2Chr	2 Chronicles
Ezra	Ezra
Neh	Nehemiah
Esth	Esther
Job	Job
Ps	Psalms
Prov	Proverbs
Ecc1	Ecclesiastes
Song	Song of Solomon
Isa	Isaiah
Jer	Jeremiah
Lam	Lamentations
Ezek	Ezekiel
Dan	Daniel
Hos	Hosea
Joel	Joel
Amos	Amos
Obad	Obadiah
Jonah	Jonah
Mic	Micah
Nah	Nahum
Hab	Habakkuk
Zeph	Zephaniah
Hag	Haggai

<u>Abbreviation</u>	<u>Book Name</u>
Zech	Zechariah
Mal	Malachi

New Testament

Following is a list of abbreviations for books in the New Testament.

<u>Abbreviation</u>	<u>Book Name</u>
Matt	Matthew
Mark	Mark
Luke	Luke
John	John
Acts	Acts
Rom	Romans
1Cor	1 Corinthians
2Cor	2 Corinthians
Gal	Galatians
Eph	Ephesians
Phil	Philippians
Col	Colossians
1Thess	1 Thessalonians
2Thess	2 Thessalonians
1Tim	1 Timothy
2Tim	2 Timothy
Titus	Titus
Phlm	Philemon
Heb	Hebrews
Jas	James

<u>Abbreviation</u>	<u>Book Name</u>
----------------------------	-------------------------

1Pet	1 Peter
2Pet	2 Peter
1John	1 John
2John	2 John
3John	3 John
Jude	Jude
Rev	Revelation

**Apocrypha and
Septuagint**

Following is a list of abbreviations for books in the Apocrypha and the Septuagint.

<u>Abbreviation</u>	<u>Book Name</u>
----------------------------	-------------------------

Bar	Baruch
AddDan	Additions to Daniel
PrAzar	Prayer of Azariah
Bel	Bel and the Dragon
SgThree	Song of the Three Young Men
Sus	Susanna
1Esd	1 Esdras
2Esd	2 Esdras
AddEsth	Additions to Esther
EpJer	Epistle of Jeremiah
Jdt	Judith
1Macc	1 Maccabees
2Macc	2 Maccabees
3Macc	3 Maccabees

<u>Abbreviation</u>	<u>Book Name</u>
4Macc	4 Maccabees
PrMan	Prayer of Manasseh
Sir	Sirach/Ecclesiasticus
Tob	Tobit
Wis	Wisdom of Solomon



Appendix

B

Encoding Various Forms of Documentation

This appendix describes how to use OSIS to encode various forms of documentation. It covers the following topics:

- Encoding Multilingual Editions 80
- Encoding Commentaries 80
- Encoding Devotionals, Lectionaries, and Time-Organized Documents 80
- Encoding Glossaries, Dictionaries, and Lexica 80

Encoding Multilingual Editions

(TBD) (This section is still to be written.)

Encoding Commentaries

(TBD) (This section is still to be written.)

Encoding Devotionals, Lectionaries, and Time-Organized Documents

<timeDiv> Element

Information that is organized by time must mark those organizational units using the <timeDiv> element. This element is distinguished because its `osisID` attribute must conform to the rules for OSIS dates, rather than to the rules for canonical references. Other than that, the encoding is fundamentally the same as for other works. Actually, quotations of canonical works should be labeled as such using the `osisID` attribute, and discussions of canonical passages should be marked.

Encoding Glossaries, Dictionaries, and Lexica

Dictionary Markup Elements

A set of dictionary markup elements, drawn directly from the TEI, is currently in preparation, and is expected to be added in the next release of OSIS, as an optional add-on module.



Appendix

C

USMARC Relator Codes

This appendix contains a complete list of USMARC relator codes.

List of Codes

Codes and Their Descriptions

Following is a list of USMARC relator codes.

<u>Code</u>	<u>Description</u>
Actor [act]	Use for a person who principally exhibits acting skills in a musical or dramatic presentation or entertainment.
Adapter [adp]	Use for a person who 1) reworks a musical composition, usually for a different medium, or 2) rewrites novels or stories for motion pictures or other audiovisual medium.
Annotator [ann]	Use for a person who writes manuscript annotations on a printed item.
Architect [arc]	
Applicant [app]	
Appraiser	USE Expert
Arranger [arr]	Use for a person who transcribes a musical composition, usually for a different medium from that of the original; in an arrangement the musical substance remains essentially unchanged.
Artist [art]	Use for a person (e.g., a painter) who conceives, and perhaps also implements, an original graphic design or work of art, if specific codes (e.g., [egr], [etr]) are not desired. For book illustrators, prefer Illustrator [ill]. (UF Graphic technician)
Assignee [asg]	Use for a person or organization to whom a license for printing or publishing has been transferred.
Associated name [asn]	Use as a general relator for a name associated with or found in an item or collection, or which cannot be determined to be that of a Former owner [fmo] or other designated relator indicative of provenance.
Attributed name [att]	Use to relate an author, artist, etc. to a work for which there is or once was substantial authority for designating that person as author, creator, etc. of the work. (UF Supposed name)

<u>Code</u>	<u>Description</u>
Auctioneer [auc]	Use for a person or corporate body in charge or the estimation and public auctioning of goods, particularly books, artistic works, etc.
Author [aut]	Use for a person or corporate body chiefly responsible for the intellectual or artistic content of a work. This term may also be used when more than one person or body bears such responsibility. (UF Joint author)
Author in quotations or text extracts [aqt]	Use for a person whose work is largely quoted or extracted in a works to which he or she did not contribute directly. Such quotations are found particularly in exhibition catalogs, collections of photographs, etc.
Author of afterword, colophon, etc. [aft]	Use for a person or corporate body responsible for an afterword, postface, colophon, etc. but who is not the but who is not the chief author of a work.
Author of introduction, etc. [aui]	Use for a person or corporate body responsible for an introduction, preface, foreword, afterword, or other critical matter, but who is not the chief author.
Author of screenplay, etc. [aus]	Use for a person or corporate body responsible for a motion picture screenplay, dialog, spoken commentary, etc.
Bibliographic antecedent [ant]	Use for the author responsible for a work upon which the work represented by the catalog record is based. This may be appropriate for adaptations, sequels, continuations, indexes, etc.
Binder [bnd]	
Binding designer [bdd]	(UF Designer of binding)
Book designer [bkd]	Use for the person or firm responsible for the entire graphic design of a book, including arrangement of type and illustration, choice of materials, and process used. (UF Designer of book)

<u>Code</u>	<u>Description</u>
Book producer [bkp]	Use for the person or firm responsible for the production of books and other print media, if specific codes (e.g., [bkd], [egr], [tyd], [prt]) are not desired. (UF Producer of book)
Bookjacket designer [bjd]	(UF Designer of bookjacket)
Bookplate designer [bpd]	(UF Designer of bookplate)
Bookseller [bsl]	
Bowdlerizer	USE Censor
Calligrapher [cll]	
Cartographer [ctg]	
Censor [cns]	Use for a censor, bowdlerizer, expurgator, etc., official or private. (UF Bowdlerizer, Expurgator)
Choreographer [chr]	Use for a person who composes or arranges dances or other movements (e.g., "master of swords") for a musical or dramatic presentation or entertainment.
Client [cli]	Use for a person or organization for whom another person or organization is acting.
Collaborator [clb]	Use for a person or corporate body that takes a limited part in the elaboration of a work of another author or that brings complements (e.g., appendices, notes) to the work of another author.
Collector [col]	Use for a person who has brought together material from various sources, which has been arranged, described, and cataloged as a collection. The collector is neither the creator of the material nor the person to whom manuscripts in the collection may have been addressed.
Collotyper [clt]	
Commentator [cmm]	Use for a person who provides interpretation, analysis, or a discussion of the subject matter on a recording, motion picture, or other audiovisual medium.

<u>Code</u>	<u>Description</u>
Compiler [com]	Use for a person who produces a work or publication by selecting and putting together material from the works of various persons or bodies.
Complainant [cpl]	Use for the party who applies to the courts for redress, usually in an equity proceeding.
Complainant-appellant [cpt]	Use for a complainant who takes an appeal from one court or jurisdiction to another to reverse the judgment, usually in an equity proceeding.
Complainant-appellee [cpe]	Use for a complainant against whom an appeal is taken from one court or jurisdiction to another to reverse the judgment, usually in an equity proceeding.
Composer [cmp]	Use for a person who creates a musical work, usually a piece of music in manuscript or printed form.
Compositor [cmt]	(UF Typesetter)
Conceptor [ccp]	Use for a person or corporate body responsible for the original idea on which a work is based, this includes the scientific author of an audio-visual item and the conceptor of an advertisement.
Conductor [cnd]	Use for a person who directs a performing group (orchestra, chorus, opera, etc.).
Consultant [csl]	Use for the person called upon for professional advice or services in a specialized field of knowledge or training.
Contestant [cos]	Use for the party who opposes, resists, or disputes, in a court of law, a claim, decision, result, etc.
Contestant-appellant [cot]	Use for a contestant who takes an appeal from one court of law or jurisdiction to another to reverse the judgment.
Contestant-appellee [coe]	Use for a contestant against whom an appeal is taken from one court of law or jurisdiction to another to reverse the judgment.
Contestee [cts]	Use for the party defending a claim, decision, result, etc. being opposed, resisted, or disputed in a court of law.

<u>Code</u>	<u>Description</u>
Contestee-appellant [ctt]	Use for a contestee who takes an appeal from one court or jurisdiction to another to reverse the judgment.
Contestee-appellee [cte]	Use for a contestee against whom an appeal is taken from one court or jurisdiction to another to reverse the judgment.
Contractor [ctr]	Use for the person or corporate body who enters into a contract with another person or corporate body to perform a specific task.
Copyright claimant [cpc]	Use for the person listed as copyright owner at the time of registration. Copyright can be granted or later transferred to another person or agent, at which time the claimant becomes the copyright holder.
Copyright holder [cph]	
Corrector [crr]	Use for a corrector of manuscripts, such as the scriptorium official who corrected the work of a scribe. For printed matter, use Proofreader [pfr].
Correspondent [crp]	Use for a person or organization who was either the writer or recipient of a letter or other communication.
Costume designer [cst]	Use for a person who designs or makes costumes, fixes hair, etc., for a musical or dramatic presentation or entertainment.
Counterfeiter	USE Forger
Curator of an exhibition [cur]	Use for a person who is responsible for conceiving and organizing an exhibition.
Dancer [dnc]	Use for a person who principally exhibits dancing skills in a musical or dramatic presentation or entertainment.
Dedicatee [dte]	Use for a person or organization to whom a book, manuscript, etc., is dedicated (not the recipient of a gift).
Dedicator [dto]	Use for the author of a dedication, which may be a formal statement or in epistolary or verse form.

<u>Code</u>	<u>Description</u>
Defendant [dfd]	Use for the party defending or denying allegations made in a suit and against whom relief or recovery is sought in the courts, usually in a legal action.
Defendant-appellant [dft]	Use for a defendant who takes an appeal from one court or jurisdiction to another to reverse the judgment, usually in a legal action.
Defendant-appellee [dfe]	Use for a defendant against whom an appeal is taken from one court or jurisdiction to another to reverse the judgment, usually in a legal action.
Delineator [dln]	Use for a person or organization executing technical drawings from others' designs.
Depositor [dpt]	Use for a person or organization placing material in the physical custody of a library or repository without transferring the legal title.
Designer [dsr]	Use for a person or organization responsible for design if specific codes (e.g., [bkd], [tyd]) are not desired.
Designer of binding	USE Binding designer
Designer of book	USE Book designer
Designer of bookjacket	USE Bookjacket designer
Designer of bookplate	USE Bookplate designer
Designer of type	USE Type designer
Director [drt]	Use for a person who is responsible for the general management of a work or who supervises the production of a performance for stage, screen, or sound recording.
Dissertant [dis]	Use for a person who presents a thesis for a university or higher-level educational degree.
Distributor [dst]	Use for an agent or agency that has exclusive or shared marketing rights for an item.

<u>Code</u>	<u>Description</u>
Donor [dnr]	Use for the donor of a book, manuscript, etc., to its present owner. Donors to previous owners are designated as Former owner [fmo] or Inscriber [ins].
Draftsman [drm]	Use for the person who prepares technical or mechanical drawings. (UF Technical draftsman)
Dubious author [dub]	Use for a person or corporate body to which authorship has been dubiously or incorrectly ascribed.
Editor [edt]	Use for a person who prepares for publication a work not primarily his/her own, such as by elucidating text, adding introductory or other critical matter, or technically directing an editorial staff.
Electrotyper [elt]	
Engineer [eng]	Use for a person or organization that is responsible for technical planning and design, particularly with construction.
Engraver [egr]	
Etcher [etr]	
Expert [exp]	Use for a person in charge of the description and appraisal of the value of goods, particularly rare items, works of art, etc. (UF Appraiser)
Expurgator	USE Censor
Film editor [flm]	Use for an editor of a motion picture film. This term is used regardless of the medium upon which the motion picture is produced or manufactured (e.g., acetate film, video tape). (UF Motion picture editor)
Forger [frg]	(UF Counterfeiter)
Former owner [fmo]	Use for the person or organization who owned an item at any time in the past. Includes those to whom the material was once presented. The person or organization giving the item to the present owner is designated as Donor [dnr].
Funder [fnd]	Use for the person or agency that furnished financial support for the production of the work.

<u>Code</u>	<u>Description</u>
Graphic technician	USE Artist
Honoree [hnr]	Use for the person in memory or honor of whom a book, manuscript, etc. is donated. (UF Memorial)
Host [hst]	Use for the person who is invited or regularly leads a program (often broadcast) that includes other guests, performers, etc. (e.g., talk show host).
Illuminator [ilu]	
Illustrator [ill]	Use for the person who conceives, and perhaps also implements, a design or illustration, usually to accompany a written text.
Imprimatur	USE Licensor
Inscriber [ins]	Use for the person who signs a presentation statement.
Instrumentalist [itr]	Use for a person who principally plays an instrument in a musical or dramatic presentation or entertainment.
Interviewee [ive]	
Interviewer [ivr]	
Inventor [inv]	
Investigator	USE Originator
Joint author	USE Author
Landscape architect[lsa]	Use for the person or organization whose work involves coordinating the arrangement of existing and proposed land features and structures.
Lender [len]	Use for a person or organization permitting the temporary use of a book, manuscript, etc., such as for photocopying or microfilming.
Libelant [lil]	Use for the party who files a libel in an ecclesiastical or admiralty case.
Libelant-appellant [lit]	Use for a libelant who takes an appeal from one ecclesiastical court or admiralty to another to reverse the judgment.

<u>Code</u>	<u>Description</u>
Libelant-appellee [lie]	Use for a libelant against whom an appeal is taken from one ecclesiastical court or admiralty to another to reverse the judgment.
Libelee [lel]	Use for the party against whom a libel has been filed in an ecclesiastical court or admiralty.
Libelee-appellant [let]	Use for a libelee who takes an appeal from one ecclesiastical court or admiralty to another to reverse the judgment.
Libelee-appellee [lee]	Use for a libelee against whom an appeal is taken from one ecclesiastical court or admiralty to another to reverse the judgment.
Librettist [lbt]	Use for the writer of the text of an opera, oratorio, etc.
Licensee [lse]	Use for the original recipient of the right to print or to publish.
Licenser [lso]	Use for the signer of the license, imprimatur, etc. (UF Imprimatur)
Lithographer [ltg]	Use for the person who prepares the stone or plate for lithographic printing, including a graphic artist creating a design directly on the surface from which printing will be done.
Lyricist [lyr]	Use for the writer of the text of a song.
Memorial	USE Honoree
Metadata contact [mdc]	Use for the person or organization primarily responsible for compiling and maintaining the original description of a metadata set (e.g., geospatial metadata set).
Metal-engraver [mte]	
Moderator [mod]	Use for the person who leads a program (often broadcast) where topics are discussed, usually with participation of experts in fields related to the discussion.

<u>Code</u>	<u>Description</u>
Monitor [mon]	Use for a person or organization that supervises compliance with the contract and is responsible for the report and controls its distribution. Sometimes referred to as the grantee, or controlling agency.
Motion picture editor	USE Film editor
Musician [mus]	Use for the person who performs music or contributes to the musical content of a work when it is not possible or desirable to identify the function more precisely.
Narrator [nrt]	Use for the speaker who relates the particulars of an act, occurrence, or course of events.
Originator [org]	Use for the author or agency performing the work, i.e., the name of a person or organization associated with the intellectual content of the work. This category does not include the publisher or personal affiliation, or sponsor except where it is also the corporate author. Includes a person designated in the work as investigator or principal investigator. (UF Principal investigator)
Other [oth]	Use for relator codes from other formats which have no equivalent in USMARC or for terms which have not been assigned a code.
Papermaker [ppm]	
Patent holder [pth]	
Patron [pat]	Use for the person responsible for commissioning a work. Usually a patron uses his or her means or influence to support the work of artists, writers, etc. This includes those who commission and pay for individual works.
Performer [prf]	User for a person who exhibits musical or acting skills i a musical or dramatic presentation or entertainment, if specific codes for those functions ([act], [dnc], [itr], [voc], etc.) are not used. If specific codes are used, [prf] is used for a person whose principal skill is not known or specified.

<u>Code</u>	<u>Description</u>
Photographer [pht]	Use for the person or organization responsible for taking photographs, whether they are used in their original form or as reproductions.
Plaintiff [ptf]	Use for the party who complains or sues in court in a personal action, usually in a legal proceeding.
Plaintiff-appellant [ptt]	Use for a plaintiff who takes an appeal from one court or jurisdiction to another to reverse the judgment, usually in a legal proceeding.
Plaintiff-appellee [pte]	Use for a plaintiff against whom an appeal is taken from one court or jurisdiction to another to reverse the judgment, usually in a legal proceeding.
Platemaker [plt]	
Plates, Printer of	USE Printer of Plates
Principal investigator	USE Originator
Printer [prt]	Use for the person or organization who prints texts, whether from type or plates.
Printer of plates [pop]	Use for the person or organization who prints illustrations from plates. (UF Plates, Printer of)
Process contact [prc]	Use for a person or organization primarily responsible for performing or initiating a process, such as is done with the collection of metadata sets.
Producer [pro]	Use for a person who is responsible for the making of a motion picture, including business aspects, management of the productions, and the commercial success of the work.
Producer of book	USE Book producer
Production personnel [prd]	Use for a person who is associated with the production (props, lighting, special effects, etc.) of a musical or dramatic presentation or entertainment.

<u>Code</u>	<u>Description</u>
Programmer [prg]	Use for a person or corporate body responsible for the creation and/or maintenance of computer program design documents, source code, and machine-executable digital files and supporting documentation.
Promoter	USE Thesis advisor
Proofreader [pfr]	Use for a person who corrects printed matter. For manuscripts, use Corrector [crr].
Publisher [pbl]	
Publishing director [pbd]	Use for a person who presides over the elaboration of a collective work to ensure its coherence or continuity. This includes editors-in-chief, literary editors, editors of series, etc.
Recipient [rcp]	Use for the person to whom correspondence is addressed.
Recording engineer [rce]	Use for a person who supervises the technical aspects of a sound or video recording session.
Redactor [red]	Use for a person who writes or develops the framework for an item without being intellectually responsible for its content.
Renderer [ren]	Use for the draftsman who prepares drawings of architectural designs (i.e., renderings) in accurate, representational perspective to show what the project will look like when completed.
Respondent [rsp]	Use for the party who makes an answer to the courts pursuant to an application for redress, usually in an equity proceeding.
Respondent-appellant [rst]	Use for a respondent who takes an appeal from one court or jurisdiction to another to reverse the judgment, usually in an equity proceeding.
Respondent-appellee [rse]	Use for a respondent against whom an appeal is taken from one court or jurisdiction to another to reverse the judgment, usually in an equity proceeding.
Reviewer [rev]	Use for a person or corporate body responsible for the review of book, motion picture, performance, etc.

<u>Code</u>	<u>Description</u>
Rubricator [rbr]	
Scenarist [sce]	Use for the author of a motion picture screenplay.
Scientific advisor [sad]	Use for a person who brings scientific, pedagogical, or historical competence to the conception and realization on a work, particularly in the case of audio-visual items.
Scribe [scr]	Use for a person who makes pen-facsimiles of printed matter, as well as for an amanuensis, and for a writer of manuscripts proper.
Sculptor [scl]	Use when the more general term Artist [art] is not desired.
Secretary [sec]	Use for a recorder, redactor, or other person responsible for expressing the views of a corporate body.
Signer [sgn]	Use for the person whose signature appears without a presentation or other statement indicative of provenance. When there is a presentation statement, use Inscrber [ins].
Singer [sng]	Use for a person who uses his or her voice with or without instrumental accompaniment to produce music. A singer's performance may or may not include actual words.
Speaker [spk]	Use for a person who participates in a program (often broadcast) and makes a formalized contribution or presentation generally prepared in advance.
Sponsor [spn]	Use for the person or agency that issued a contract or under the auspices of which a work has been written, printed, published, etc.
Stereotyper [str]	
Supposed name	USE Attributed name
Surveyor [srv]	Use for a person or organization who does measurements of tracts of land, etc., to determine location, forms, and boundaries.

<u>Code</u>	<u>Description</u>
Thesis advisor [ths]	Use for the person under whose supervision a degree candidate develops and presents a thesis, memoir, or text of a dissertation. (UF Promoter)
Transcriber [trc]	Use for a person who prepares a handwritten or typewritten copy from original material, including from dictated or orally recorded material. For makers of pen-facsimiles, use Scribe [scr].
Translator [trl]	Use for a person who renders a text from one language into another, or from an older form of a language into the modern form.
Type designer [tyd]	Use for the person who designed the type face used in a particular item. (UF Designer of type)
Typesetter	USE Compositor
Typographer [tyg]	Use for the person primarily responsible for choice and arrangement of type used in an item. If the typographer is also responsible for other aspects of the graphic design of a book (e.g., Book designer [bkd]), codes for both functions may be needed.
Vocalist [voc]	Use for a person who principally exhibits singing skills in a musical or dramatic presentation or entertainment.
Wood-engraver [wde]	
Writer of accompanying material [wam]	Use for a person who writes significant material which accompanies a sound recording or other audiovisual material.

