

TEI Metadata and Manuscript Description

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The <teiHeader>

The TEI header was designed with two goals in mind

- needs of bibliographers and librarians trying to document 'electronic books'
- needs of text analysts trying to document 'coding practices' within digital resources

The result is that discussion of the header tends to be pulled in two directions...

The Librarian's Header

- Conforms to standard bibliographic models, using similar terminology
- Organized as a single source of information for bibliographic description of a digital resource, with established mappings to other such records (e.g. MARC, EAD, etc. or embedding in containers like METS)
- General consensus on 'Best Practice for TEI in Libraries' is available from TEI-LIB SIG
- Pressure for greater and more exact constraints to improve precision of description: preference for structured data over loose prose

Everyman's Header

- Gives a polite nod to common bibliographic practice, but has a far wider scope
- Supports a (potentially) huge range of very miscellaneous information, organized in fairly ad hoc or individualistic ways
- Many different codes of practice in different user communities
- Unpredictable combinations of narrowly encoded documentation systems and loose prose descriptions

TEI Header Structure

The TEI header has four main components:

- **<fileDesc>** (file description) contains a full bibliographic description of an electronic file.
- **<encodingDesc>** (encoding description) documents the relationship between an electronic text and the source or sources from which it was derived.
- **<profileDesc>** (text-profile description) provides a detailed description of non-bibliographic aspects of a text, specifically the languages and sublanguages used, the situation in which it was produced, the participants and their setting. (just about everything not covered in the other header elements)
- **<revisionDesc>** (revision description) summarizes the revision history for a file.

Only **<fileDesc>** is required; the others are optional.

Example Header: Minimal required header

```
<teiHeader>
  <fileDesc>
    <titleStmt>
      <title>A title?</title>
    </titleStmt>
    <publicationStmt>
      <p>Who published?</p>
    </publicationStmt>
    <sourceDesc>
      <p>Where from?</p>
    </sourceDesc>
  </fileDesc>
</teiHeader>
```

More Usual Header Structure

```
<teiHeader>
  <fileDesc>
    <titleStmt>
<!-- title/author/editor information -->
    </titleStmt>
    <publicationStmt>
      <p>
<!-- Publication Information -->
      </p>
    </publicationStmt>
    <sourceDesc>
      <p>
<!-- Metadata about the source -->
      </p>
    </sourceDesc>
  </fileDesc>
  <encodingDesc>
    <p>
<!-- Description of the encoding -->
    </p>
  </encodingDesc>
  <profileDesc>
    <p>
<!-- Additional information -->
    </p>
  </profileDesc>
  <revisionDesc>
    <change>
<!-- Major stages for the electronic file -->
    </change>
  </revisionDesc>
</teiHeader>
```

Types of content in the TEI header

- free prose
 - prose description: series of paragraphs
 - phrase: character data, interspersed with phrase-level elements, but not paragraphs
- grouping elements: specialised elements recording some structured information
- declarations: Elements whose names end with the suffix Decl (e.g. subjectDecl, refsDecl) enclose information about specific encoding practices applied in the electronic text.
- descriptions: Elements whose names end with the suffix Desc (e.g. <settingDesc>, <projectDesc>) contain a prose description, possibly, but not necessarily, organised under some specific headings by suggested sub-elements.

A minimal header for 'Strange Meeting'

```
<teiHeader>
  <fileDesc>
    <titleStmt>
      <title>My 'Strange Meeting' document</title>
    </titleStmt>
    <publicationStmt>
      <p>An exercise for learning TEI.</p>
    </publicationStmt>
    <sourceDesc>
      <p>The primary resource of this file is
      <ref target="http://www.oucs.ox.ac.uk/wwllit/collections/item/3350">
        Strange Meeting</ref> from Jon Stallworthy's edition, available
      on the First World War Poetry Digital Archive. </p>
    </sourceDesc>
  </fileDesc>
</teiHeader>
```

File Description

<fileDesc>

- has some **mandatory** parts:
 - **<titleStmt>**: provides a title for the resource and any associated statements of responsibility
 - **<sourceDesc>**: documents the sources from which the encoded text derives (if any)
 - **<publicationStmt>**: documents how the encoded text is published or distributed
- and some **optional** ones:
 - **<editionStmt>**: yes, digital texts have editions too
 - **<seriesStmt>**: and they also fit into "series".
 - **<extent>**: how many floppy disks, gigabytes, files?
 - **<notesStmt>**: notes of various types

The File Description

- **<titleStmt>**: contains a mandatory **<title>** which identifies the electronic file (not its source!)
- optionally followed by additional titles, and by 'statements of responsibility', as appropriate, using **<author>**, **<editor>**, **<sponsor>**, **<funder>**, **<principal>** or the generic **<respStmt>**
- **<publicationStmt>**: may contain
 - plain text (e.g. to say the text is unpublished)
 - one or more **<publisher>**, **<distributor>**, **<authority>**, each followed by **<pubPlace>**, **<address>**, **<availability>**, **<idno>**

Title- and Responsibility- statements...

You can duplicate any of these elements as necessary, and document additional responsibilities with a generic `<respStmt>`:

```
<titleStmt>
  <title>Letter to Leslie Gunston</title>
  <author>Wilfred Owen</author>
  <editor>Renée van Baalen</editor>
  <principal>James Cummings</principal>
  <meeting>Introduction to TEI Course</meeting>
  <respStmt>
    <resp>Improved encoding</resp>
    <name>James Cummings</name>
  </respStmt>
</titleStmt>
```

<publicationStmt> example

```
<publicationStmt>
  <publisher>TEI @ Oxford</publisher>
  <pubPlace>
    <address>
      <orgName>IT Services, University of Oxford</orgName>
      <street>13 Banbury Road</street>
      <settlement>Oxford</settlement>
      <postCode>OX2 6NN</postCode>
      <country>United Kingdom</country>
    </address>
  </pubPlace>
  <distributor>IT Services, University of Oxford</distributor>
  <authority>James Cummings</authority>
  <date when="2014-10-10">10 October 2014</date>
  <idno>tei-ex03</idno>
  <availability>
    <licence>Licensed with a
  <ref target="http://creativecommons.org/licenses/by/3.0/">Creative
    Commons Attribution</ref> licence.</licence>
  </availability>
</publicationStmt>
```

<notesStmt> example

<notesStmt> can contain notes on almost any aspect of the file or its contents:

```
<notesStmt>  
  <note>Transcribed for TEI Workshop</note>  
</notesStmt>
```

These notes can be short statements, or many paragraphs long.

The Source Description

All electronic works need to document their source, **even** 'born digital' ones! There are variety of ways to do so:

- prose description, just a `<p>`
- `<bibl>` : contains free text and/or any mixture of bibliographic elements such as `<author>`, `<publisher>` etc.
- `<biblStruct>` contains similar elements but constrained in various ways according to bibliographic standards
- `<biblFull>` special-cases texts which were born TEI by replicating an embedded `<fileDesc>`
- A `<listBibl>` may be used for lists of such descriptions, e.g. bibliographies
- Specialised elements for spoken texts (`<recordingStmt>` etc.) and for manuscripts (`<msDesc>`) **Discussed later!**

<sourceDesc> example

```
<sourceDesc>
  <biblStruct>
    <analytic>
      <title>Letter to Leslie Gunston</title>
      <author>Wilfred Owen</author>
    </analytic>
    <monogr>
      <title>The Wilfred Owen Collection</title>
      <ref target="http://www.oucs.ox.ac.uk/wllit/collections/document/5243/4769"> First World War Poetry Digital Archive</ref>
      <imprint>
        <publisher>The First World War Poetry Digital Archive</publisher>
        <pubPlace>Oxford</pubPlace>
        <biblScope type="pp" n="2">Two pages</biblScope>
      </imprint>
    </monogr>
    <relatedItem>
      <bibl>The source of this digital resource is a copy from the
<istributor>Harry Ransom Centre</istributor>.</bibl>
    </relatedItem>
  </biblStruct>
</sourceDesc>
```


<encodingDesc>

```
<teiHeader>
  <fileDesc>
    <titleStmt>
<!-- title/author/editor information -->
    </titleStmt>
    <publicationStmt>
      <p>
<!-- Publication Information -->
      </p>
    </publicationStmt>
    <sourceDesc>
      <p>
<!-- Metadata about the source -->
      </p>
    </sourceDesc>
  </fileDesc>
  <encodingDesc>
    <p>
<!-- Description of the encoding -->
    </p>
  </encodingDesc>
  <profileDesc>
    <p>
<!-- Additional information -->
    </p>
  </profileDesc>
  <revisionDesc>
    <change>
<!-- Major stages for the electronic file -->
    </change>
  </revisionDesc>
</teiHeader>
```

Encoding Description

`<encodingDesc>` groups notes about the procedures used when the text was encoded, either summarised in prose or within specific elements such as

- `<projectDesc>`: goals of the project
- `<samplingDecl>`: sampling principles
- `<editorialDecl>`: editorial principals, e.g. `<correction>`, `<normalization>`, `<quotation>`, `<hyphenation>`, `<segmentation>`, `<interpretation>`
- `<classDecl>`: classification system/s used
- `<tagsDecl>`: specifics about usage of particular elements

Detailed notes in `<encodingDesc>` could be used to generate section of an editorial description.

<encodingDesc> Example (1)

```
<encodingDesc>
  <projectDesc>
    <p>The TEI@Oxford project created these teaching materials for teaching TEI
workshops.</p>
  </projectDesc>
  <editorialDecl>
    <correction>
      <p>Apparent errors have been marked as <gi>sic</gi> but correct
readings not provided.</p>
    </correction>
    <hyphenation>
      <p>Hyphens have been transcribed as they appear.</p>
    </hyphenation>
  </editorialDecl>
</encodingDesc>
```

<encodingDesc> Example (2)

```
<encodingDesc>
  <classDecl>
    <taxonomy xml:id="part-of-speech">
      <category xml:id="adje">
        <catDesc>adjectives</catDesc>
        <category xml:id="AJ0">
          <catDesc>adjective (unmarked) (e.g. GOOD, OLD)</catDesc>
        </category>
        <category xml:id="AJC">
          <catDesc>comparative adjective (e.g. BETTER, OLDER)</catDesc>
        </category>
        <category xml:id="AJS">
          <catDesc>superlative adjective (e.g. BEST, OLDEST)</catDesc>
        </category>
      </category>
      <category xml:id="AT0">
        <catDesc>article (e.g. THE, A, AN)</catDesc>
      </category>
    </taxonomy>
  </classDecl>
<!-- ... -->
</encodingDesc>
```

```
<w ana="#AJ0">brilliant</w>
```

<rendition> element

- **<rendition>**: structured information about appearance in the source document

```
<tagsDecl>
  <rendition xml:id="r-center"
    scheme="css">text-align: center;</rendition>
  <rendition xml:id="r-small"
    scheme="css">font-size: small;</rendition>
  <rendition xml:id="r-large"
    scheme="css">font-size: large;</rendition>
</tagsDecl>
```

which you can easily point to from the text:

```
<hi rendition="#r-center #r-large">this bit of text was large and centred</hi>
```

but compare:

```
<hi rend="large center">this bit of text was large and centred</hi>
```

Header: <profileDesc>

```
<teiHeader>
  <fileDesc>
    <titleStmt>
<!-- title/author/editor information -->
    </titleStmt>
    <publicationStmt>
      <p>
<!-- Publication Information -->
      </p>
    </publicationStmt>
    <sourceDesc>
      <p>
<!-- Metadata about the source -->
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    </sourceDesc>
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    <change>
<!-- Major stages for the electronic file -->
    </change>
  </revisionDesc>
</teiHeader>
```

Profile Description

A collection of descriptions, categorised only as 'non-bibliographic'. Default members of the model.profileDescPart class include:

- **<creation>**: information about the origination of the intellectual content of the text, e.g. time and place
- **<langUsage>**: information about languages, registers, writing systems etc used in the text
- **<textDesc>** and **<textClass>**: classifications applied to the text by means of a list of specified criteria or by means of a collection of pointers, respectively
- **<particDesc>** and **<settingDesc>**: information about the 'participants', either real or depicted, in the text
- **<handNotes>**: information about the hands identified in a manuscript

<creation> example

```
<creation>
  <date when="1918-05"/>
  <placeName>Ripon</placeName>
  <listChange ordered="true">
    <change xml:id="CHG-1">First stage, written in pencil in Owen's hand
  </change>
    <change xml:id="CHG-2">Second stage, revised in pencil in Owen's
hand</change>
    <change xml:id="CHG-3">Fixation of the revised passages and further minor
revisions by Owen using ink</change>
    <change xml:id="CHG-4">Addition of another stanza with a different ink,
probably at a later stage</change>
  </listChange>
</creation>
```

Here `<listChange>` records stages in changes to the document. Further down, in `<revisionDesc>` the same element is used to record changes to the electronic file.

Language and character set usage

The `<langUsage>` element is provided to document usage of languages and writing systems in the text. Languages are identified by their ISO codes:

```
<langUsage>
  <language ident="en">English</language>
  <language ident="fr">French</language>
  <language ident="bg-cy">Bulgarian in Cyrillic characters
</language>
  <language ident="bg">Romanized Bulgarian</language>
</langUsage>
```

Entities

Recognising the need to distinguish clearly the encoding of references from the encoding of referenced entities (occurrences in the real world) themselves, the TEI provides:

- `<person>` corresponding with `<persName>`
- `<place>` corresponding with `<placeName>`
- `<org>` corresponding with `<orgName>`
- and in addition `<state>`, `<event>` and others

Why?

- To facilitate a more detailed and explicit encoding source documents (historical materials for example) which are primarily of interest because they concern objects in the real world
- To support the encoding of "data-centric" documents, such as authority files, biographical or geographical dictionaries and gazeteers etc.
- To represent and model in a uniform way data which is only implicit in readings of many different documents

<particDesc> example (1)

```
<particDesc xml:id="p2">
  <p>Female informant, well-educated, born in Shropshire UK,
  12 Jan 1950, of unknown occupation. Speaks French fluently.
  Socio-Economic status B2 in the PEP classification
  scheme.</p>
</particDesc>
```

<particDesc> can just contain paragraphs of prose, or a more structured <person> element in <listPerson>

<particDesc> example (2)

```
<particDesc>
  <listPerson>
    <person xml:id="SL">
      <persName>Stuart Lee</persName>
      <note>
        <ref target="http://users.ox.ac.uk/~stuart/Site/About_Me.html"> Stuart
Lee's home page</ref>
      </note>
      <!-- We could give more details about Stuart here -->
    </person>
    <person xml:id="IH">
      <persName>Ian Hislop</persName>
      <birth>
        <date when="1960-07-13">13 July 1960</date>
        <placeName>Swansea, Wales, United Kingdom</placeName>
      </birth>
      <occupation>Satirist, Journalist, Presenter, Libel Defendant</occupation>
      <note>
        <ref target="http://en.wikipedia.org/wiki/Ian_Hislop"> Ian Hislop's
entry in Wikipedia</ref>
      </note>
    </person>
  </listPerson>
</particDesc>
```

Where to store information about named entities?

Information about a person is stored within a `<person>` element. These elements may appear only within a `<listPerson>` element, eg within `<particDesc>` (participant description) element in the `<profileDesc>` element of a TEI header

```
<profileDesc>
  <particDesc>
    <listPerson type="historical">
      <person xml:id="ART1">
        <persName>Arthur</persName>
      </person>
      <person xml:id="BERT1">
        <persName>Bertrand</persName>
      </person>
    <!-- ... -->
  </listPerson>
</particDesc>
</profileDesc>
```

Basic <person>

```
<person xml:id="W0">
  <persName>
    <forename>Wilfred</forename>
    <forename>Edward</forename>
    <forename>Salter</forename>
    <surname>Owen</surname>
  </persName>
  <birth when="1893-03-18">
    <placeName>Oswestry</placeName>, 18th March
    1893</birth>
  <death when="1918-11-04">
    <placeName>Ors</placeName>, 4th November
    1918</death>
  <bibl type="wikipedia">
    <ptr target="http://en.wikipedia.org/wiki/Wilfred_Owen"/>
  </bibl>
</person>
```

What can we say about named entities?

Potentially, quite a lot...

```

<person xml:id="ID1485">
  <persName>Ioannes Dantiscus</persName>
  <persName>Johannes von Höfen</persName>
  <persName>Jan Dantyszek</persName>
  <persName>Johannes Flachsfinder</persName>
  <persName>Ioannes de Curii</persName>
  <birth notBefore="1485-01-01"
    notAfter="1485-12-31">1485</birth>
  <death when="1548-10-27">†1548-10-27</death>
  <occupation>diplomat, neo-Latin poet and traveller</occupation>
  <occupation from="1504-01-01"
    to="1504-12-31">1504 royal scribe</occupation>
  <occupation from="1507-01-01"
    to="1507-12-31">1507 referendary for Prussian affairs at the court of
  Sigmund Jagiellon; </occupation>
  <occupation from="1508" to="1513">1508-1513 royal envoy to Prussian towns
  and to the Prussian assemblies;</occupation>
  <occupation from="1515">1515 secretary of the Polish legation at the
  imperial court; </occupation>
  <occupation from="1516" to="1532">in 1516-1532 envoy in the service of the
  king of Poland Sigmund Jagiellon and emperors Maximilian and Charles V of
  Habsburg; </occupation>
  <event when="1529">Kulm canon; </event>
  <occupation from="1530" to="1537">1530-1537 bishop of Kulm; </occupation>
  <occupation from="1537" to="1548">1537-1548 bishop of Ermland</occupation>
</person>

```


Traits, States, and Events

Inside entities there are generally three *classes* of information:

- **<state>**: more general-purpose, but usually a time-related property (e.g. **<occupation>**, **<floruit>**, **<education>**)
- **<trait>**: if you want to distinguish between time-bound and static, use this for properties that (usually) don't change over time (e.g. **<faith>**, **<langKnowledge>**, **<nationality>**, **<sex>**, **<climate>**, **<location>**, **<population>**)
- **<event>**: an independent event in the real world which may lead to a change in state or trait (e.g. **<birth>** or **<death>** for a person, a war for a place)

Additionally, all these elements are members of the 'datable' class so can have time/dating attributes.

Example

```
<person xml:id="SS">
  <persName>Siegfried Loraine Sassoon</persName>
  <birth when="1886-09-08">
    <placeName>Weirleigh Mansion, Matfield, Kent</placeName>
  </birth>
  <death when="1967-09-01"/>
  <event when="1914-08-04"
    type="military">
    <desc>In service with Sussex Yeomanry on the day the United Kingdom
      declared war</desc>
  </event>
  <event when="1933-12" type="marriage">
    <desc>Married Hester Gatty in December 1933</desc>
  </event>
  <event when="1945" type="separation">
    <desc>Separated from his wife in 1945</desc>
  </event>
</person>
```

How do we identify the entity being named?

Every element which is a member of the `att.naming` class inherits two attributes from the `att.canonical` class:

- `@key` provides an externally-defined means of identifying the entity (or entities) being named, using a coded value of some kind.
- `@ref` provides an explicit means of locating a full definition for the entity being named by means of one or more URIs.

Arguably, `@key` is redundant, since `@ref` is defined as anyURI, this can point from the name instance to the `@xml:id` of metadata about the entity, prefixing it with a '#' if in the same file, or use a private URI syntax.

References take many forms

Even within a single language, in a single document, there may be many ways of referencing the same person:

```

<!-- ... definition in the header --><person xml:id="LG">
  <persName>Leslie
    Gunston</persName>
<!-- everything we want to say about Leslie -->
</person>
<!-- ... and in the text -->

... <persName>Leslie Gunston</persName>....
<persName>Leslie</persName>
....
<rs>Wilfred's cousin</rs>

```

The `@ref` can be used simply to combine all references to a specified person:

```

....
<persName ref="#LG">Leslie Gunston</persName>....
<persName ref="#LG">Leslie</persName> ....
<rs ref="#LG">Wilfred's cousin</rs>

```

Pointing Mechanisms

The ref attribute can take any kind of pointer.
Entity defined within the same XML document

```
That silly man<name ref="#DPB1" type="person">David Paul  
Brown</name> has suffered ...
```

or in some other place, referred to by means of a URI

```
That silly  
man  
<name ref="http://www.example.com/personography.xml#DPB1"  
type="person">David Paul Brown</name> has suffered ...
```

Multiple pointers: reference to 'the Browns' might be encoded

```
That wretched pair <name ref="#DPB1  
#EBB1" type="person">the Browns</name> came to dine ...
```

Organizational names

An organization is any named collection of people regarded as a single unit. An `<orgName>` can point back to an `<org>` in the header.

```
<p>On <date when="1915-10-21">21 October 1915</date> Owen  
enlisted in the  
<orgName ref="#AROTC">Artists' Rifles Officers' Training  
Corps</orgName>.</p>
```

```
<org xml:id="AROTC">  
<!-- Information about the organization -->  
</org>
```

Components of `<persName>` elements

if it's a person we can use specialized elements divided further into subparts

```
<p>
  <persName>
    <forename>Wilfred</forename>
    <forename>Edward</forename>
    <forename>Salter</forename>
    <surname>Owen</surname>
  </persName>
  did not know <persName ref="#jsbach" xml:lang="fr">
    <forename type="composer">Jean-Sebastien</forename>
    <surname>Bach</surname>
  </persName>
</p>
```

Not to mention... `<roleName>` (e.g. 'Emperor'),
`<genName>` (eg 'the Elder') `<addName>` (e.g.
'Hammer of the Scots'), `<nameLink>` a link between
components (e.g. 'van') ...

A place is defined by its <location>

The <location> element can contain

- a more or less well-structured description using the hierarchy of place name components (a politico-geographical location)
- a set of geographical co-ordinates

```
<place xml:id="craiglockhart">
  <placeName>Craiglockhart War Hospital</placeName>
  <settlement>Edinburgh</settlement>
  <region>Scotland</region>
  <country key="UK">United Kingdom</country>
  <location>
    <geo>55.91812 -3.24019</geo>
  </location>
</place>
```


Another <location>

```
<place type="building">
  <placeName>Brasserie Georges</placeName>
  <location>
    <country key="FR"/>
    <settlement type="city">Lyon</settlement>
    <district type="arrondissement">Perrache</district>
    <placeName type="street">cours de Verdun</placeName>
  </location>
  <location>
    <geo>45.748 4.828</geo>
  </location>
</place>
```

A place can be fictional

```
<place type="imaginary">  
  <placeName>Atlantis</placeName>  
  <location>  
    <offset>fifty leagues beyond</offset>  
    <placeName>Pillars of <persName>Hercules</persName>  
  </placeName>  
</location>  
</place>
```

<listPlace> in context of <settingDesc>

```
<settingDesc>
  <listPlace>
    <place xml:id="west01">
      <placeName>West Copice</placeName>
      <region>Shropshire</region>
      <note>'Westcopice' was approximately three-quarters of a
mile
      east of Sheinton, on the south bank of the Severn
opposite
      Buildwas, near the abbey ruins. Probably Henry
Wood's manor
      or estate is named in this reference.</note>
    </place>
    <place xml:id="shei01">
      <placeName>Sheinton</placeName>
      <region>Shropshire</region>
    </place>
    <place xml:id="shro01">
      <placeName>Shropshire</placeName>
    </place>
  </listPlace>
</settingDesc>
```

Header: <revisionDesc>

```
<teiHeader>
  <fileDesc>
    <titleStmt>
<!-- title/author/editor information -->
    </titleStmt>
    <publicationStmt>
      <p>
<!-- Publication Information -->
      </p>
    </publicationStmt>
    <sourceDesc>
      <p>
<!-- Metadata about the source -->
      </p>
    </sourceDesc>
  </fileDesc>
  <encodingDesc>
    <p>
<!-- Description of the encoding -->
    </p>
  </encodingDesc>
  <profileDesc>
    <p>
<!-- Additional information -->
    </p>
  </profileDesc>
  <revisionDesc>
    <change>
<!-- Major stages for the electronic file -->
    </change>
  </revisionDesc>
</teiHeader>
```

Revision Description

- A list of `<change>` elements, each with a `@date` and `@who` attributes, indicating significant stages in the evolution of a document. Most recent first.
- Can be grouped into `<listChange>` elements. Used here it is about the electronic file, used in `<creation>` it is about the document.
- Can be maintained manually, or done by means of a version control system (like SVN)

```
<revisionDesc>
  <listChange>
    <change when="2014-07-03">
      <persName>James Cummings</persName> improved the header.</change>
    <change when="2012-02">
      <persName>Renée van Baalen</persName> transcribed the <title>Letter to
      Leslie Gunston</title> document. </change>
    </listChange>
  </revisionDesc>
```