Stage three: Feature #107 Add `<strong>` and `<em>` elements, and redefine `<b>` and `<i>` in a more semantic manner

Add `<strong>` and `<em>` elements to a new domain, and redefine `<b>` and `<i>` in a more semantic manner.

Champion

Keith Schengili-Roberts

Tracking information

Event	Date	Links
Stage 1 proposal accepted	5 Mar 2018	https://lists.oasis-open.org/archives/dita/201803/msg00012.html
Stage 2 proposal submitted	23 Mar 2018	• DITA version: https://tools.oasis-open.org/version-control/svn/dita/trunk/DITA-2.0/stage-2/Issue107-strong_and_em.dita • HTML version: https://lists.oasis-open.org/archives/dita/201803/msg00065.html
Stage 2 proposal discussed	16 October 2018	https://www.oasis-open.org/apps/org/workgroup/dita/download.php/64149/minutes20181016.txt
Stage 2 proposal approved	30 October 2018	https://www.oasis-open.org/apps/org/workgroup/dita/download.php/64192/minutes20181030.txt
Stage 3 proposal submitted to reviewers	2 March 2020	• Bill Burns • Scott Hudson
Stage 3 proposal (this document) submitted to TC	23 March 2020	• DITA version: https://tools.oasis-open.org/version-control/svn/dita/trunk/DITA-2.0/stage-3/Issue107-stage3-strong_and_em.dita • HTML version: Pending

Approved technical requirements

1. Creation of a new domain ("emphasis") which will hold two new elements: `<strong>` and `<em>`.
2. Clarification of the definitions for the existing elements `<b>` and `<i>` within the highlighting domain, along with additional examples.

Dependencies or interrelated proposals

Not applicable.

Modified grammar files

highlightDomain.rng (before)

```
<define name="b.element">
```

highlightDomain.rng (after)

```
<define name="b.element">
```

highlightDomain.rng (before)

```
 <element name="b"
 dita:longName="Bold">
  <a:documentation>The bold (<b>)
element is used to apply bold
 highlighting to the content of the
element. Use this element
 only when there is not some other
more proper element. For
 example, for specific items such
as GUI controls, use the
 <uicontrol> element. This element
is part of the DITA
 highlighting domain. Category:
Typographic elements
 </a:documentation>
   <ref name="b.attlist"/>
   <ref name="b.content"/>
 </element>
</define>
```

highlightDomain.rng (after)

```
 <element name="b"
 dita:longName="Bold">
  <a:documentation>Bold text is used
to draw attention to a word or
 phrase for utilitarian purposes
without implying that there is any
 extra importance. Category:
Typographic elements
 </a:documentation>
   <ref name="b.attlist"/>
   <ref name="b.content"/>
 </element>
</define>
```

```
<define name="i.element">
 <element name="i"
 dita:longName="Italic">
  <a:documentation>The italic (<i>)
element is used to apply
 italic highlighting to the content
of the element. Category:
 Typographic elements</
a:documentation>
   <ref name="i.attlist"/>
   <ref name="i.content"/>
 </element>
</define>
```

```
<define name="i.element">
 <element name="i"
 dita:longName="Italic">
  <a:documentation>Italic text
is used to indicate either an
alternate voice
 or mood, or to otherwise offset
it from the content around it to
indicate
 a different quality of text.
Category: Typographic elements
 </a:documentation>
   <ref name="i.attlist"/>
   <ref name="i.content"/>
 </element>
</define>
```

`taskMod.rng` (new)

```
<?xml version="1.0" encoding="UTF-8"?>
<?xml-model href="urn:oasis:names:tc:dita:rng:vocabularyModuleDesc.rng"
                    schematypens="http://relaxng.org/ns/
structure/1.0"?>
<grammar xmlns:a="http://relaxng.org/ns/compatibility/annotations/1.0"
  xmlns:dita="http://dita.oasis-open.org/architecture/2005/"
  xmlns="http://relaxng.org/ns/structure/1.0">
  <moduleDesc xmlns="http://dita.oasis-open.org/architecture/2005/">
    <moduleTitle>DITA Emphasis Domain</moduleTitle>
    <headerComment>
MODULE: DITA Emphasis Domain VERSION: 2.0 DATE: November 2018

SYSTEM: Darwin Information Typing Architecture (DITA)
PURPOSE: Define elements and specialization attributes for Emphasis Domain

ORIGINAL CREATION DATE: November 2018

(C) Copyright OASIS Open 2005, 2009.
(C) Copyright IBM Corporation 2001, 2004. All Rights Reserved.
```

`taskMod.rng`(new)

```
      </headerComment>
    <moduleMetadata>
      <moduleType>elementdomain</moduleType>
      <moduleShortName>emphasis</moduleShortName>
      <modulePublicIds>
        <dtdMod>-//OASIS//ELEMENTS DITA<var presep=" " name="ditaver"/>
Emphasis Domain//EN</dtdMod>
        <dtdEnt>-//OASIS//ENTITIES DITA<var presep=" " name="ditaver"/>
Emphasis Domain//EN</dtdEnt>
        <xsdMod>urn:oasis:names:tc:dita:xsd:emphasisDomain.xsd<var
presep=":" name="ditaver"/></xsdMod>
        <rncMod>urn:oasis:names:tc:dita:rnc:emphasisDomain.rnc<var
presep=":" name="ditaver"/></rncMod>
        <rngMod>urn:oasis:names:tc:dita:rng:emphasisDomain.rng<var
presep=":" name="ditaver"/></rngMod>
      </modulePublicIds>
      <domainsContribution>(topic emphasis-d)</domainsContribution>
    </moduleMetadata>
 </moduleDesc>

 <div>
    <a:documentation>DOMAIN EXTENSION PATTERNS</a:documentation>

    <define name="emphasis-ph">
      <choice>
        <ref name="strong.element"/>
        <ref name="em.element"/>
      </choice>
    </define>

    <define name="ph" combine="choice">
      <ref name="emphasis-ph"/>
    </define>
 </div>
 <div>
    <a:documentation>ELEMENT TYPE NAME PATTERNS</a:documentation>
    <define name="strong">
      <ref name="strong.element"/>
    </define>
    <define name="em">
      <ref name="em.element"/>
    </define>
 </div>
 <div>
    <a:documentation>ELEMENT TYPE DECLARATIONS</a:documentation>
    <div>
      <a:documentation>LONG NAME: Strong</a:documentation>
      <define name="strong.content">
        <zeroOrMore>
          <choice>
            <text/>
            <ref name="basic.ph"/>
            <ref name="data.elements.incl"/>
            <ref name="draft-comment" dita/>
            <ref name="foreign.unknown.incl"/>
            <ref name="required-cleanup" dita/>
          </choice>
        </zeroOrMore>
      </define>
      <define name="strong.attributes">
        <ref name="univ-atts"/>
        <optional>
```

taskMod.rng (new)

```
            <attribute name="outputclass"/>
          </optional>
        </define>
        <define name="strong.element">
          <element name="strong" dita:longName="Strong">
            <a:documentation>Strong text can be used to indicate content that
 is considered to be important
            or serious, or that has some form of urgency. Category: Emphasis
 elements
            </a:documentation>
            <ref name="strong.attlist"/>
            <ref name="strong.content"/>
          </element>
        </define>
        <define name="strong.attlist" combine="interleave">
          <ref name="strong.attributes"/>
        </define>
      </div>
      <div>
        <a:documentation>LONG NAME: Emphasis</a:documentation>
        <define name="em.content">
          <zeroOrMore>
            <choice>
              <text/>
              <ref name="basic.ph"/>
              <ref name="data.elements.incl"/>
              <ref name="draft-comment" dita/>
              <ref name="foreign.unknown.incl"/>
              <ref name="required-cleanup" dita/>
            </choice>
          </zeroOrMore>
        </define>
        <define name="em.attributes">
          <ref name="univ-atts"/>
          <optional>
            <attribute name="outputclass"/>
          </optional>
        </define>
        <define name="em.element">
          <element name="em" dita:longName="Emphasis">
            <a:documentation>Emphasized text is used to indicate stress or to
 otherwise
            highlight content. Category: Emphasis elements
            </a:documentation>
            <ref name="em.attlist"/>
            <ref name="em.content"/>
          </element>
        </define>
        <define name="em.attlist" combine="interleave">
          <ref name="em.attributes"/>
        </define>
      </div>
    <div>
      <a:documentation>SPECIALIZATION ATTRIBUTE DECLARATIONS</
a:documentation>
      <define name="strong.attlist" combine="interleave">
        <ref name="global-atts"/>
        <optional>
          <attribute name="class" a:defaultValue="+ topic/ph emphasis-d/
strong "/>
        </optional>
      </define>
```

`taskMod.rng` (new)

```
    <define name="em.attlist" combine="interleave">
      <ref name="global-atts"/>
      <optional>
        <attribute name="class" a:defaultValue="+ topic/ph emphasis-d/em "/
>
      </optional>
    </define>
  </div>
</grammar>
```

Modified terminology

N/A

Modified specification documentation

The following changes are necessary for existing DITA 2.0 documentation:

1. Changed/expanded descriptions and accompanying example code for `<b>` and `<i>`
2. New documentation plus examples to describe the emphasis domain and the how `<strong>` and `<em>` are to be used

`<b>` element reference topic (before)

Bold text is used to draw a reader's attention to a phrase without otherwise adding meaning to the content.

Specialization hierarchy

The `<b>` element is specialized from `<ph>`. It is defined in the highlighting-domain module.

Attributes

The following attributes are available on this element: , `@class`, `@keyref`, and `@outputclass`.

Example

The following code sample shows bold highlighting used to draw a reader's attention to a phrase:

```
<p>Use the bold tag <b>for visual
 emphasis
only </b>; do not use it if another
 phrase-level
element better signifies the reason
 for the
emphasis.</p>
```

`<b>` element reference topic (after)

Bold text is used to draw attention to a word or phrase for utilitarian purposes without implying that there is any extra importance.

There is also no implication of an alternate voice or mood, or that its content should be actionable. For example, it can be used to indicate product names within a review, highlighting roles within a process, or for use in spans of text where the typical presentation is expected to be in a boldface.

Redefining `<b>` in this manner brings DITA more into alignment with its equivalent in the current HTML specification. Its redefinition also makes its usage transitional, as writers are encouraged to use more semantically-described alternatives instead.

Specialization hierarchy

`<b>` is specialized from `<ph>`. It is defined in the highlighting-domain module.

Attributes

The following attributes are available: , `@class`, `@keyref`, and `@outputclass`

Examples

`<b>` can be used to indicate a product name within a review:

```
<p>One of the best features
 of <b>Mr. Flip-it</b>
is its ability to manipulate objects
 within a
```

`<b>` element reference topic (before)

`<b>` element reference topic (after)

```
three-dimensional space so that you
 can see the
other side.</b>
```

`<b>` can be used to highlight related concepts within a topic:

```
<p>The <b>Solid Waste Operations
 Manager</b> plans
and manages the countywide transfer
 station and
landfill operations, coordinates
 solid waste
processing operations with the
 planning and
engineering staff, and performs
 related duties as
required.</p>

[... Lots of intervening text.]

<p>The <b>Sanitation Engineer</b>
 creates
strategies for landfill sites that
 minimize the
impact on the environment.</p>
```

`<b>` can also be used in situations where boldfaced text is expected for stylistic purposes, such as when the house style for an article lede is to be rendered in boldface:

```
<p><b>Know where to get help.</b>
 Before
proceeding to wrangle your first
 ostrich, ensure
you know the location of the closest
 first aid
station.</p>
```

`<i>` element reference topic (before)

Italic text is used to emphasize the key points in printed text, or when quoting a speaker, a way to show which words the speaker stressed.

Specialization hierarchy

The `<i>` element is specialized from `<ph>`. It is defined in the highlighting-domain module.

Attributes

The following attributes are available on this element: , `@class`, `@keyref`, and `@outputclass`.

Example

The following code sample shows italic highlighting that is used to emphasize the importance of unplugging the unit before using the screwdriver:

`<i>` element reference topic (after)

Italic text is used to indicate either an alternate voice or mood, or to otherwise offset it from the content around it to indicate a different quality of text.

Redefining `<i>` in this manner brings DITA more into alignment with its equivalent in the current HTML specification. Its redefinition also makes its usage transitional, as writers are encouraged to use more semantically-described alternatives instead.

Specialization hierarchy

`<i>` is specialized from `<ph>`. It is defined in the emphasis module.

Attributes

`<i>` element reference topic (before)

```
<p>Unplug the unit <i>before</i>
 placing
the metal screwdriver against the
 terminal
screw.</p>
```

`<i>` element reference topic (after)

The following attributes are available: , `@class`, `@keyref`, and `@outputclass`.

Examples

`<i>` can be used for indicating text in a different voice, such as when foreign words or phrases are used:

```
<note type="caution">Even highly
 experienced
operators of heavy machinery should
 remain alert
for dangerous situations. Having a
<i>laissez-faire</i> attitude is a
 recipe for
disaster.</note>
```

`<i>` can also be used to indicate different character voices:

```
<p><i>Edgar</i>: I know thee well—a
 serviceable
villain, as duteous to the vices of
 thy mistress
as badness would desire.</p>
```

```
<p><i>Gloucester</i>: What, is he
 dead?</p>
```

It can also be used to indicate a taxonomic designation:

```
<p>When wrangling ostriches
 (<i>Struthio camelus</i>)
people are advised that while they
 are a type of bird
(Class: <i>Aves</i>), they are
 thought to be
descendants of their extinct
 dinosaur (Suborder:
<i>Theropoda</i>) relatives and
 share the same type
of temperament.</p>
```

`<i>` can also be used to designate the name of a ship:

```
<p>The <i>MV Rena</i> was a
 container ship that ran
aground near Tauranga, New Zealand,
 resulting in an
oil spill.</p>
```

`<strong>` element reference topic

Strong text can be used to indicate content that is considered to be important or serious, or that has some form of urgency.

`<strong>` element reference topic

Typically, its content will be rendered in bold at output. Use this only when something more semantically appropriate is not available. For example, for a specific warning, consider using something from the hazard statement domain, such as <hazardstatement>.

<strong> is part of the emphasis domain. The addition of <strong> brings DITA more into alignment with its equivalent in the current HTML specification.

Specialization hierarchy

<strong> is specialized from <ph>. It is defined in the emphasis module.

Attributes

The following attributes are available: , @class, @keyref, and @outputclass.

Examples

The following examples show how it can be used.

Emphasizing an important detail:

```
<p>Your doctor prescribed this medicine to treat an infection. It is
 important that you <strong>take all of
the medicine</strong> as described.</p>
```

Another example:

```
<p>When starting a car with a keyless ignition, you must <strong>step on
 the brake pedal</strong> before
   pressing the start button.</p>
```

Underscoring a serious point:

```
Use the word <em>very</em> <strong>sparingly</strong>. Where emphasis is
 necessary, use words strong in
themselves.
```

Pointing out a critical/urgent detail:

```
<p>SERVICE HEADLIGHT—<strong>Black</strong> wire with <strong>red tracer</
strong> from handlebar toggle switch
to large terminal screw; <strong>red</strong> wire with <strong>yellow
 tracer</strong> from handlebar toggle
switch to small terminal screw.</p>
```

`<em>` element reference topic

Emphasized text is used to indicate stress or to otherwise highlight content.

A stress emphasis is designed to change the meaning of a phrase or sentence, or stressing the importance of a particular noun, verb or adjective. Typically, its content will be rendered in italics at output. Use this only when a more semantically appropriate equivalent is not available. For example, when indicating a different mood or voice, <i> may be more relevant.

Specialization hierarchy

<em> is specialized from <ph>. It is defined in the emphasis module.

Attributes

The following attributes are available: , @class, @keyref, and @outputclass.

`<em>` element reference topic

Examples

The following examples show how it can be used.

Emphasizing meaning within a sentence:

```
<p>What was previously called <em>block-level</em> content up to HTML 4.1
 is now called
<em>flow</em> content in HTML5.</p>
```

Stressing the importance of a noun within a sentence:

```
<p>A <em>condenser</em> is an apparatus for condensing a large quantity of
 electricity
on a comparatively small surface.</p>
```

Stressing the importance of a verb or actions within a sentence:

```
To remove a message from a pigeon, first <em>catch</em> the bird,
 then <em>hold</em> it
in one hand, <em>extend</em> its leg, and <em>remove</em> the message
 holder with the other hand.
```

Stressing the importance of an adjective or adjectival phrase within a sentence:

```
<p>A good plan once adopted and put into execution <em>should not be
 abandoned</em> unless it
becomes clear that it can not succeed.</p>
```

`<em>` is part of the emphasis domain. The addition of `<em>` brings DITA more into alignment with its equivalent in the current HTML specification.

Migration plans for backwards incompatibilities

Not applicable. Two new elements are created, and two existing ones are redefined but not substantially changed.

Element reference topic: `<b>`

Bold text is used to draw attention to a word or phrase for utilitarian purposes without implying that there is any extra importance.

Usage information

`<b>` can be used to indicate product names within a review, highlighting roles within a process, or for use in spans of text where the typical presentation is expected to be in a boldface.

Rendering expectations

Content enclosed by `<b>` ought to be rendered using a bold font.

Processing expectations

N/A

Specialization hierarchy

`<b>` is specialized from `<ph>`. It is defined in the highlighting-domain module.

Attributes

The following attributes are available: , `@class`, `@keyref`, and `@outputclass`

More specific contexts for using `<b>`

`<b>` can be used to indicate a product name within a review:

```
<p>One of the best features of <b>Mr. Flip-it</b>
        is its ability to manipulate objects within a
        three-dimensional space so that you can see the
        other side.</b>
```

`<b>` can be used to highlight related concepts within a topic:

```
<p>The <b>Solid Waste Operations Manager</b> plans
        and manages the countywide transfer station and
        landfill operations, coordinates solid waste
        processing operations with the planning and
        engineering staff, and performs related duties as
        required.</p>

        [... Lots of intervening text.]

        <p>The <b>Sanitation Engineer</b> creates
        strategies for landfill sites that minimize the
        impact on the environment.</p>
```

`<b>` can also be used in situations where boldfaced text is expected for stylistic purposes, such as when the house style for an article lede is to be rendered in boldface:

```
<p><strong>Know where to get help.</strong> Before
        proceeding to wrangle your first ostrich, ensure
        you know the location of the closest first aid
        station.</p>
```

The redefining of `<b>` brings DITA more into alignment with its equivalent in the current HTML specification. Its redefinition also makes its usage transitional, as writers are encouraged to use more semantically-described alternatives instead.

Element reference topic: `<i>`

Emphasized text is used to indicate stress or to otherwise highlight content.

Usage information

The redefining of `<i>` brings DITA more into alignment with its equivalent in the current HTML specification. Its redefinition also makes its usage transitional, as writers are encouraged to use more semantically-described alternatives instead.

Formatting expectations

Content enclosed within `<i>` ought to be rendered using an italic font.

Processing expectations

N/A

Specialization hierarchy

`<i>` is specialized from `<ph>`. It is defined in the highlighting-domain module.

Attributes

The following attributes are available: , `@class`, `@keyref`, and `@outputclass`

More specific contexts for using `<i>`

`<i>` can be used for indicating text in a different voice, such as when foreign words or phrases are used:

```
<note type="caution">Even highly experienced operators of heavy machinery
  should remain
alert for dangerous situations. Having a <i>laissez-faire</i> attitude is a
  recipe for
disaster.</note>
```

`<i>` can also be used to indicate different character voices:

```
<p><i>Edgar</i>: I know thee well—a serviceable villain, as duteous to the
  vices of thy
mistress as badness would desire.</p>
<p><i>Gloucester</i>: What, is he dead?</p>
```

It can also be used to indicate a taxonomic designation:

```
When wrangling ostriches (<i>Struthio camelus</i>) people areadvised that
  while they are
a type of bird (Class: <i>Aves</i>), they are thought to be descendants of
  their extinct
dinosaur (Suborder: <i>Theropoda</i>) relatives and share the same type of
  temperament.
```

`<i>` can also be used to designate the name of a ship:

```
The <i>MV Rena</i> was a container ship that ran aground near Tauranga, New
  Zealand,
resulting in an oil spill.
```

Emphasis elements

The emphasis domain is intended for marking up content that is important, serious, or requires emphasis. It is comprised of `<strong>` and `<em>`, and are designed as semantic alternatives to bold (`<b>`) and italic (`<i>`) from the highlighting domain.

`<strong>`

`<strong>` is typically used to indicate content that is considered to be important or serious, or that has some form of urgency (without being a specific warning). It is part of the emphasis domain.

`<em>`

`<em>` is typically used to indicate content that should be stressed. It is part of the emphasis domain.

Element reference topic: `<strong>`

Strong text can be used to indicate content that is considered to be important or serious, or that has some form of urgency.

Usage information

Use this only when a more semantically appropriate alternative is not available. For example, for a specific warning, consider using something from the hazard statement domain, such as `<hazardstatement>`.

`<strong>` is part of the emphasis domain. The addition of `<strong>` brings DITA more into alignment with its equivalent in the current HTML specification.

Formatting expectations

Content enclosed within `<strong>` ought to be rendered using an bold font.

Processing expectations

N/A

Specialization hierarchy

`<strong>` is specialized from `<ph>`. It is defined in the emphasis-domain module.

Attributes

The following attributes are available: , `@class`, `@keyref`, and `@outputclass`

How <strong> can be used in context

The following examples show how it can be used.

Emphasizing an important detail:

```
<p>Your doctor prescribed this medicine to treat an infection. It is
 important that you <strong>take all of
the medicine</strong> as described.</p>
```

Another example:

```
<p>When starting a car with a keyless ignition, you must <strong>step on the
 brake pedal</strong> before
   pressing the start button.</p>
```

Underscoring a serious point:

```
Use the word <em>very</em> <strong>sparingly</strong>. Where emphasis is
 necessary, use words strong in
themselves.
```

Pointing out a critical/urgent detail:

```
<p>SERVICE HEADLIGHT—<strong>Black</strong> wire with <strong>red tracer</
strong> from handlebar toggle switch
to large terminal screw; <strong>red</strong> wire with <strong>yellow
 tracer</strong> from handlebar toggle
switch to small terminal screw.</p>
```

Element reference topic: `<em>`

Emphasized text is used to indicate stress or to otherwise highlight content.

Usage information

Typically, its content will be rendered in italics at output. Use this only when something more semantically appropriate is not available. For example, when indicating a different mood or voice, `<i>` may be more relevant.

`<em>` is part of the emphasis domain. The addition of `<em>` brings DITA more into alignment with its equivalent in the current HTML specification.

Formatting expectations

Content enclosed within `<em>` ought to be rendered using an italic font.

Processing expectations

N/A

Specialization hierarchy

`<em>` is specialized from `<ph>`. It is defined in the emphasis-domain module.

Attributes

The following attributes are available: , `@class`, `@keyref`, and `@outputclass`

How `<em>` can be used in context

The following examples show how it can be used.

Emphasizing meaning within a sentence:

```
<p>What was previously called <em>block-level</em> content up to HTML 4.1 is
 now called
<em>flow</em> content in HTML5.</p>
```

Stressing the importance of a noun within a sentence:

```
<p>A <em>condenser</em> is an apparatus for condensing a large quantity of
 electricity
on a comparatively small surface.</p>
```

Stressing the importance of a verb or actions within a sentence:

```
To remove a message from a pigeon, first <em>catch</em> the bird,
 then <em>hold</em> it
in one hand, <em>extend</em> its leg, and <em>remove</em> the message holder
 with the
other hand.
```

Stressing the importance of an adjective or adjectival phrase within a sentence:

```
<p>A good plan once adopted and put into execution <em>should not be
 abandoned</em>
unless it becomes clear that it can not succeed.</p>
```