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	24 February 2020	• Bill Burns • Scott Hudson
Stage 3 proposal (this document) submitted to TC	24 February 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
(&lt;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
&lt;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>The bold
(<xmlelement>b</xmlelement>)
        element 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. 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 (&lt;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>The
italic (<xmlelement>i</
xmlelement>)
        element 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, to indicate
        a taxonomic designation, a
phrase from another language,
        or a ship name.
        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"?>
```

`taskMod.rng`(new)

```
<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

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(C) Copyright IBM Corporation 2001, 2004. All Rights Reserved.

    </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>
```

taskMod.rng (new)

```
      <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>
          <attribute name="outputclass"/>
        </optional>
      </define>
      <define name="strong.element">
        <element name="strong" dita:longName="Strong">
          <a:documentation>The strong (<xmlelement>strong</xmlelement>)
element is used to indicate
          the importance, seriousness, or urgency of content. Typically,
it's content will be
    rendered in boldface at output. This element is part of the emphasis
domain. Use this
    element only when a more semantically appropriate element is not
available. For example,
    for a specific warning, consider using an appropriate element from the
hazard statement
          domain, such as <xmlelement>hazardstatement</xmlelement>.
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>
```

`taskMod.rng` (new)

```
      <define name="em.element">
        <element name="em" dita:longName="Emphasis">
          <a:documentation>The em (<xmlelement>em</xmlelement>) element is
  used to indicate emphasis.
          A stress emphasis is designed to change the meaning of a phrase
  or sentence, or to stress the
          importance of a particular noun, verb or adjective. Typically,
  it's content will be rendered
          in italics at output. This element is part of the emphasis
  domain. Use this element only when
    a more semantically appropriate element is not available. For example,
  when indicating a
          different mood or voice, the <xmlelement>i</xmlelement> element
  may be more relevant.
          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>
    <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 1.3 documentation:

1. Changed/expanded descriptions and accompanying example code for the redefined `<b>` and `<i>` elements
2. New documentation plus examples to describe the emphasis domain and the `<strong>` and `<em>` elements that belong to it

`<b>` element reference topic (before)	**`<b>` element reference topic (after)**
The `<b>` element is typically used to apply bold highlighting to the content of the element. This element	The `<b>` element 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

`<b>` element reference topic (before)

is part of the highlighting domain. Use this element only when a more semantically appropriate element is not available. For example, for specific items such as GUI controls, use the `<uicontrol>` element.

Example

```
<p><b>STOP!</b> This is <b>very</b>
 important!</p>
```

`<b>` element reference topic (after)

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 this element brings DITA more into alignment with the equivalent element in the current HTML specification.

Examples

The `<b>` element 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>
```

The `<b>` element 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>
```

The `<b>` element 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>
```

<i> element reference topic (after)

The <i> element is typically used to apply italic highlighting to the content of the element. This element is part of the highlighting domain. Use this element only when a more semantically appropriate element is not available. For example, for specific items such as citations, use the <cite> element.

Example

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

<i> element reference topic (before)

The <i> element 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, such as a taxonomic designation, a phrase from another language, or a ship name.

Redefining this element brings DITA more into alignment with the equivalent element in the current HTML specification.

Examples

The <i> element 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>
```

The <i> element 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>
```

The <i> element 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
```

`<i>` element reference topic (after)

`<i>` element reference topic (before)

```
oil spill.</p>
```

`<strong>` element reference topic

The `<strong>` element can be used to indicate content that is considered to be important or serious, or that has some form of urgency (without being a specific warning). Typically, its content will be rendered in bold at output. Use this element only when a more semantically appropriate element is not available. For example, for a specific warning, consider using an appropriate element from the hazard statement domain, such as `<hazardstatement>`.

This element is part of the emphasis domain. The addition of this element brings DITA more into alignment with its equivalent in the current HTML specification.

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

The `<em>` element can be used to indicate emphasis. 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 element only when a more semantically appropriate element is not available. For example, when indicating a different mood or voice, the `<i>` element may be more relevant.

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>` element reference topic

```
<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>
```

This element is part of the emphasis domain. The addition of this element 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>`

The `<b>` element 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.

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 within the `<b>` element ought to be rendered using a bold font.

Processing expectations

N/A

Specialization hierarchy

+ topic/ph hi-d/b

Attributes

The following attributes are available on this element: Universal attribute group, outputclass, and spectitle.

More specific contexts for using the bold element

The `<b>` element 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>
```

The `<b>` element 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>
```

The `<b>` element 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 this element brings DITA more into alignment with the equivalent element in the current HTML specification.

Element reference topic: `<i>`

The `<i>` element 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, such as a taxonomic designation, a phrase from another language, or a ship name.

Usage information

The redefining of this element brings DITA more into alignment with the equivalent element in the current HTML specification.

Formatting expectations

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

Processing expectations

N/A

Specialization hierarchy

+ topic/ph hi-d/i

Attributes

The following attributes are available on this element: Universal attribute group, outputclass, and spectitle.

More specific contexts for using the italics element

The `<i>` element 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>
```

The `<i>` element 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.
```

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

`<strong>`

The `<strong>` element 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). This element is part of the emphasis domain.

`<em>`

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

Element reference topic: `<strong>`

The `<strong>` element can be used to indicate content that is considered to be important or serious, or that has some form of urgency (without being a specific warning). Typically, its content will be rendered in bold at output.

Usage information

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

This element is part of the emphasis domain. The addition of this element brings DITA more into alignment with its equivalent in the current HTML specification.

Formatting expectations

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

Processing expectations

N/A

Specialization hierarchy

+ topic/ph emphasis-ph/strong

Attributes

The following attributes are available on this element: Universal attribute group, outputclass, and spectitle.

How the strong element 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>`

The `<em>` element can be used to indicate emphasis. 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.

Usage information

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

This element is part of the emphasis domain. The addition of this element brings DITA more into alignment with its equivalent in the current HTML specification.

Formatting expectations

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

Processing expectations

N/A

Specialization hierarchy

+ topic/ph emphasis-ph/em

Attributes

The following attributes are available on this element: Universal attribute group, outputclass, and spectitle.

How the em element 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>
```