Advanced CNXML using Edit-in-Place*

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Connexions

Based on *The Advanced CNXML*† by

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Abstract

This document explains and elaborates on CNXML tags that you can insert into a Connexions document using Edit-in-Place.

1 Para

When working in Edit-in-Place, notice that the first item of the "Add Here" drop-down menu is "Paragraph". When you select this item and click `Add Here`, a text box (Figure 1: A Paragraph Box) will appear. You can now insert text in the white box, including inline tags. Note the `id="element-143"` in the upper left hand part of the blue box in Figure 1 (A Paragraph Box). `element-143` is the paragraph's unique **ID**, which you can use to refer to the paragraph directly using a link tag. Also, you can find some helpful tips in the upper right-hand corner of the blue box: "Help editing <para>".

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†http://cnx.org/content/m9007/2.22/
‡http://creativecommons.org/licenses/by/3.0/

A Paragraph Box

Figure 1: When you click "insert and choose paragraph", a box like this should appear.

Example 1: Submitted by J. Cameron Cooper

```
<para id='intro'>
  Working on trees or bushes can generate a lot of limbs and
branches to haul away. If you just carry them, it'll take
all day. Instead, make a sledge.
</para>
<para id="intro2">
  Find a large, complex branch to make the base of your
sledge. It should be relatively flat, and broad and long
enough to make a decent pile; that is, as big or bigger than
anything else you need to haul away. Green branches from
hardwoods are best. Place it with the cut end pointing the
way you want to go. If no single branch is good enough, two
can be used. Just place their cut ends a couple feet apart.
</para>
<para id="intro3">
  Then pile on the remaining branches. Most will naturally
weave together; if not, give 'em a little help. Once the
pile it a few layers deep, smaller waste, like weeds or
maybe even leaves can be added to the pile. If it gets
unstable, another big branch will help.
```

```
</para>
<para id="intro4">
  When you're done, grab the cut end of the bottom branch,
and maybe the base of one of the other big branches in the
pile, and drag the thing where you want to go. You'll be
surprised how much one person can drag!
</para>
<para id="intro5">
  If you have a lot of leaves or similar small stuff to move,
you can use a similar technique. Get a tarp, toss the leaves
and weeds and whatnot in the middle, and then drag the whole
thing away.
</para>
```

which displays as the following:

Working on trees or bushes can generate a lot of limbs and branches to haul away. If you just carry them, it'll take all day. Instead, make a sledge.

Find a large, complex branch to make the base of your sledge. It should be relatively flat, and broad and long enough to make a decent pile; that is, as big or bigger than anything else you need to haul away. Green branches from hardwoods are best. Place it with the cut end pointing the way you want to go. If no single branch is good enough, two can be used. Just place their cut ends a couple feet apart.

Then pile on the remaining branches. Most will naturally weave together; if not, give 'em a little help. Once the pile it a few layers deep, smaller waste, like weeds or maybe even leaves can be added to the pile. If it gets unstable, another big branch will help.

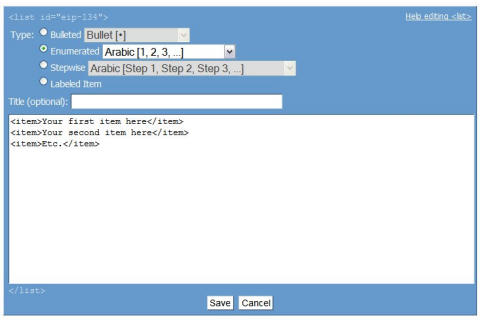
When you're done, grab the cut end of the bottom branch, and maybe the base of one of the other big branches in the pile, and drag the thing where you want to go. You'll be surprised how much one person can drag!

If you have a lot of leaves or similar small stuff to move, you can use a similar technique. Get a tarp, toss the leaves and weeds and whatnot in the middle, and then drag the whole thing away.

2 List

To insert a new list, select "list" from the "insert" drop-down menu. As with adding a paragraph, adding a list will insert a blue box (Figure 2: Lists Available in Edit-in-Place), with the list's unique ID in the upper left-hand corner and a helpful link in the upper right-hand corner.

Lists Available in Edit-in-Place



(a) Enumerated List

(b) Bulleted List

Figure 2: (a) After you add a list, you will see this blue box. You can then select the type of list you wish to use. Here an enumerated list has been selected (b) Here a bulleted list has been selected.

Example 2: Enumerated List

```
<list id='sledge' list-type='enumerated'>
  <title>Making a Sledge</title>
  <item>
    Find a large, complex branch to make the base of your
sledge. It should be relatively flat, and broad and long
enough to make a decent pile; that is, as big or bigger than
anything else you need to haul away. Green branches from
hardwoods are best. Place it with the cut end pointing the way
you want to go. If no single branch is good enough, two can be
used. Just place their cut ends a couple feet apart.
  </item>
  <item>
    Then pile on the remaining branches. Most will naturally
weave together; if not, give 'em a little help. Once the pile
```

```
it a few layers deep, smaller waste, like weeds or maybe even
leaves can be added to the pile. If it gets unstable, another
big branch will help.
  </item>
  <item>
    When you're done, grab the cut end of the bottom branch,
and maybe the base of one of the other big branches in the
pile, and drag the thing where you want to go. You'll be
surprised how much one person can drag!
  </item>
</list>
```

The resulting list will look like:

Making a Sledge

1. Find a large, complex branch to make the base of your sledge. It should be relatively flat, and broad and long enough to make a decent pile; that is, as big or bigger than anything else you need to haul away. Green branches from hardwoods are best. Place it with the cut end pointing the way you want to go. If no single branch is good enough, two can be used. Just place their cut ends a couple feet apart.
2. Then pile on the remaining branches. Most will naturally weave together; if not, give 'em a little help. Once the pile it a few layers deep, smaller waste, like weeds or maybe even leaves can be added to the pile. If it gets unstable, another big branch will help.
3. When you're done, grab the cut end of the bottom branch, and maybe the base of one of the other big branches in the pile, and drag the thing where you want to go. You'll be surprised how much one person can drag!

Example 3: Bulleted List

```
<list id="ex-bulleted-list" list-type="bulleted">
  <item>branches</item>
  <item>leaves</item>
  <item>sweat</item>
  <item>lemonade</item>
</list>
```

- branches
- leaves
- sweat
- lemonade

3 Equation

The `equation` tag is used to set off and number equations in CNXML documents. If you have MathML-Enabled for your document, you will only be able to place MathML equations within the `equation` tags. Otherwise, to write the actual equations, you can use ASCII or images.

NOTE: Connexions strongly encourages the use equation with MathML tags when displaying math.

If you look at Figure 3 (Adding an Equation), you will find the equation's unique ID in the upper left-hand corner and a helpful link in the upper right-hand corner.

Adding an Equation

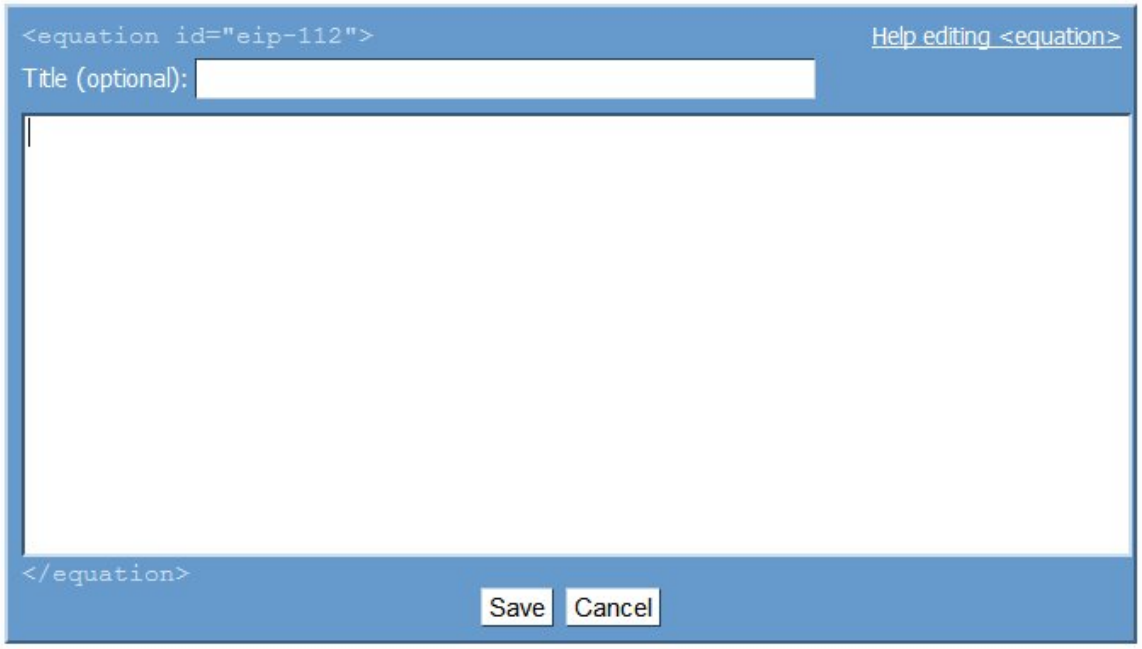


Figure 3

As with lists, you can add an optional `title` at the beginning of each equation.

Example 4: Using Images as Equations

```
   <equation id="eqn14">
  <media id="img12" display="block" alt="1+2=3"
 <image mime-type='image/gif' src='euler.gif' />
</equation>
```

displays as:

$$1+2=3 \tag{1}$$

Example 5: ASCII equations

```
   <equation id='eqn15'>
  <title>Simple Arithmetic</title>
   11+27=38
</equation>
```

This equation will display as:

Simple Arithmetic

$$11+27=38 \tag{2}$$

4 Exercise

The `exercise` tag allows authors to add practice problems into their documents. When you initially add an exercise, you will see the familiar blue box (Figure 4: Adding an Exercise), with the unique ID and the helpful link in the top corners. However, also notice that new tags have been premade in your text box: `problem` and `solution`.

Adding an Exercise

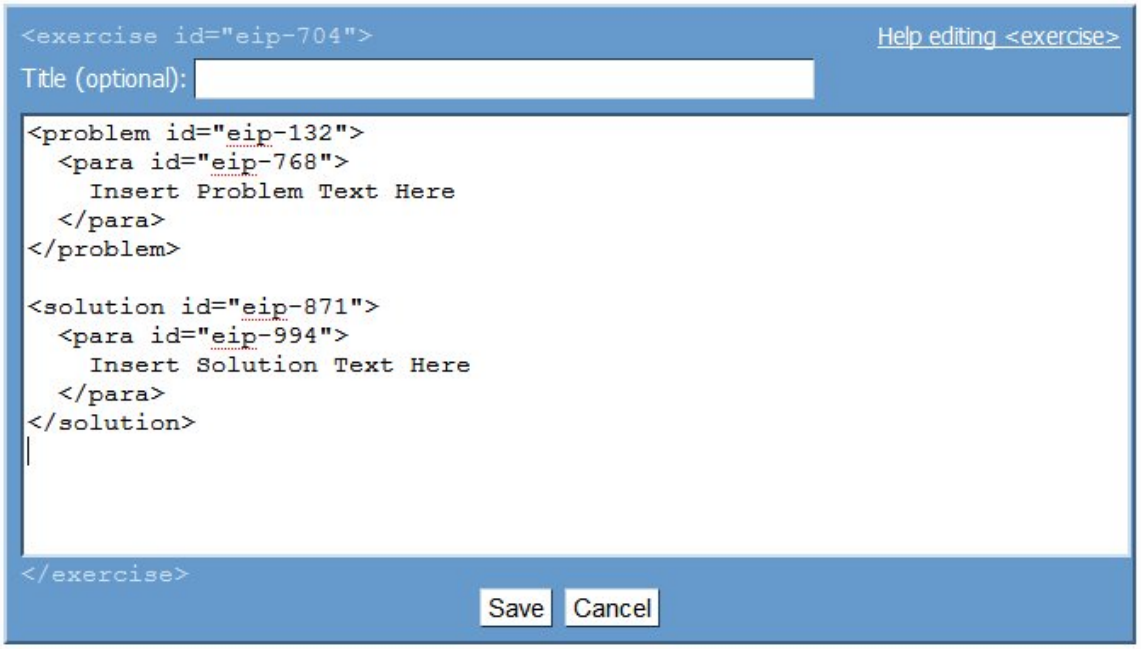


Figure 4

To continue utilizing edit-in-place to edit your exercise, press the `Save` button (see Figure 5 (A New Exercise after Saving)). You can now add various block tags to your problem and solution, including paragraphs and lists!

A New Exercise after Saving

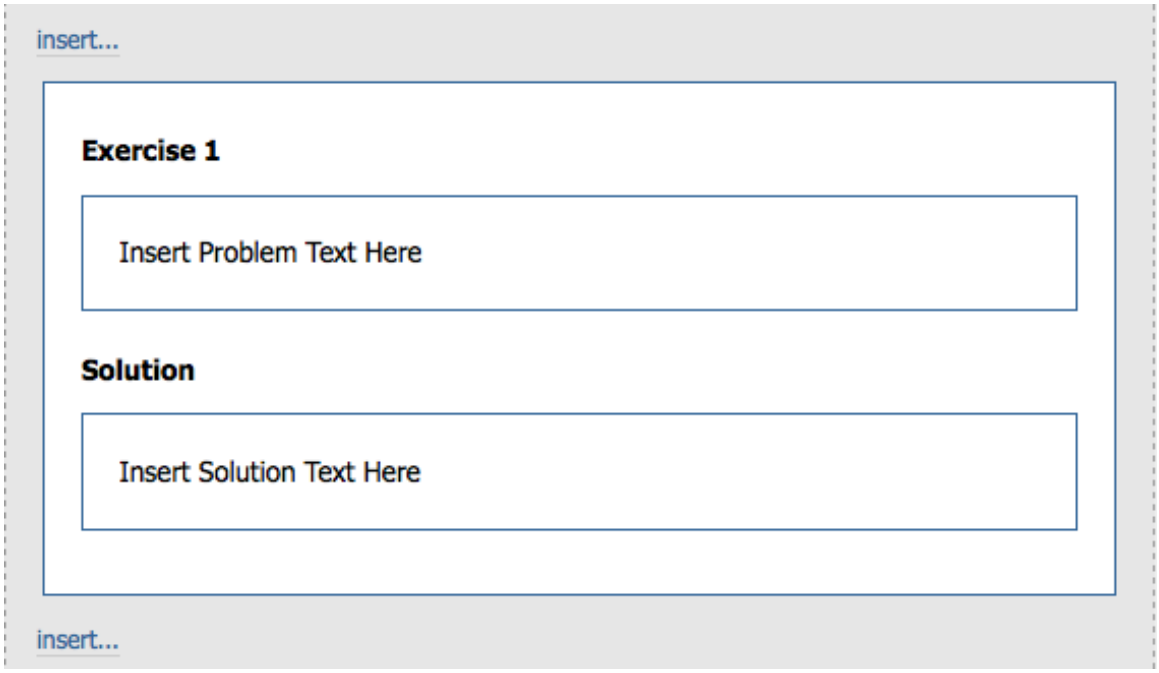


Figure 5: If you save immediately after creating a new exercise, you can continue to edit the exercise using the familiar edit-in-place interface.

To create more complex exercises, such as multiple-choice, multiple-response, ordered-response, and free-response questions, QML (Questions Markup Language) may used in place of the problem and solution tags. For more information, please see the information about QML.

Example 6

```
  <exercise id='hyd_test'>
<problem id="id9">
  <para id='hyd_testp1'>
    The color of a hydrangea changes with the pH of the
    soil. What color would the hydrangea be if the soil
    were highly acidic?  Highly basic?  Neutral?
  </para>
</problem>
<solution id="id10">
  <para id='hyd_sol1p1'>
    Highly acidic soil produces blue flowers.  Highly
    basic soil produces pink flowers. Neutral soil produces
    very pale cream flowers.
  </para>
```

```
  </solution>
</exercise>
```

This code will display as:

Problem
The color of a hydrangea changes with the pH of the soil. What color would the hydrangea be if the soil were highly acidic? Highly basic? Neutral?

Solution
Highly acidic soil produces blue flowers. Highly basic soil produces pink flowers. Neutral soil produces very pale cream flowers.

5 Figure

The `figure` tag provides the structure for creating a figure within a document. They can contain either two or more subfigure tags, or a single media, table, or code (Section 6: Code) tag.

Adding a Figure

Figure 6: Adding a figure will create this familiar blue box, with a helpful link in the upper right corner and the figure's unique ID in quotes in the upper left corner.

The optional first tag of the `figure` tag is title which is used to title a figure.

The `title` tag is followed by any of the tags listed above; however, the most commonly used tag is media, which is used to include any sort of media such as images, video, music, or java applets. For more information on what media you can add to your content, and how to add it, see Adding Multimedia to Your Connexions Content.

The final tag is the optional `caption` which is used to add a small caption to the figure.

Example 7: Example of a Figure

```
<figure id='blossom'>
   <title>Momosa Blossom</title>
   <media id="image-example" display="block" alt="A Momosa Blossom.">
      <image id="flower" mime-type="image/jpeg" src="alb_jul_flo_1.jpg">
   </media>
   <caption>
      Picture taken by Jenn Drummond (CC Attribution).
   </caption>
</figure>
```

This code will display as:

Momosa Blossom

Figure 7: Picture taken by Jenn Drummond (CC Attribution).

6 Code

As seen in Using Basic CNXML in Edit-in-Place, you can add inline code to your document; edit-in-place also allows you in insert a block of code (Figure 8: Adding a Block of Code), separate from text.

Adding a Block of Code

Figure 8: Note that `code` has a required unique ID **if and only if** the display attribute is **block**.

If you need to use the > and < symbols in your block of code, you must either use the unicode for these characters (> and <, if you have MathML enabled), or use the CDATA method. To utilize the CDATA method, insert `<![CDATA[` before your code and `]]>` after it, as seen in Example 8 (A Block of Code, Using CDATA).

Example 8: A Block of Code, Using CDATA

Using CDATA in a Code Block

Figure 9

When saved, Figure 9 (Using CDATA in a Code Block) will display as:

```
<para id='copy'>
  In a unix terminal the command to copy a file is
  <code display='inline'>cp original copy</code>.
</para>
```

7 Note

As mentioned in Using Basic CNXML in Edit-in-Place, the `note` tag creates an "out of line" note to the reader. You can also insert a note using the drop-down box in Edit-in-Place; however, unless you edit the full source, the type of note will be set to the default.

Adding a Note using Edit-in-Place

Figure 10: As with `code`, notes require a unique ID when the display attribute is "block".

Example 9

```
<note>
  Gardening requires a lot of intense physical exertion.
  Please drink plenty of water to avoid dehydration!
</note>
```

The above markup will display as:

NOTE: Gardening requires a lot of intense physical exertion. Please drink plenty of water to avoid dehydration!

8 Example

As is often the case in textbooks, authors will include examples in the middle of a chapter or section. For this reason CNXML provides the example (Figure 11: Adding an Example Using Edit-in-Place) tag that allows an author to include examples in a document.

Adding an Example Using Edit-in-Place

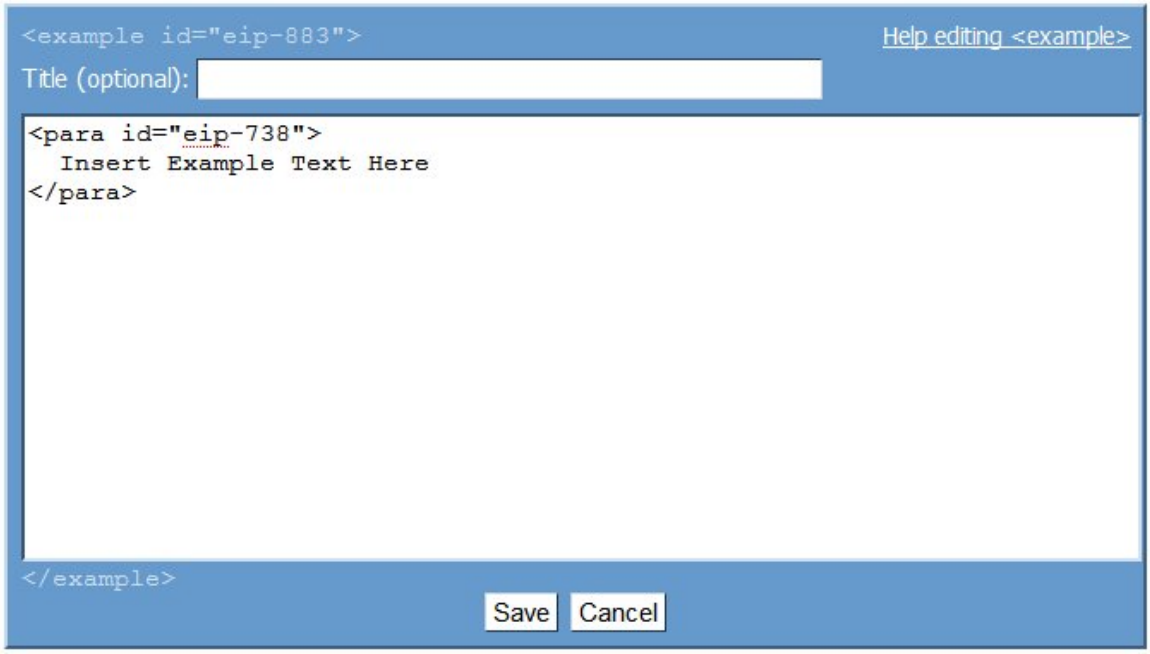


Figure 11

Example 10
Here is the code for Example 9:

```
<example id="notexamp">
  <code id="codeseg1" display="block">
    <note>
      Gardening requires a lot of intense physical exertion.
      Please drink plenty of water to avoid dehydration!
    </note>
  </code>
  <para id="notep2">
    The above markup will display as:
  </para>
  <note>
    Gardening requires a lot of intense physical exertion.
    Please drink plenty of water to avoid dehydration!
  </note>
</example>
```

9 CALS Table

The final element you can add using Edit-in-Place is `table`. To learn more about adding and editting tables using Edit-in-Place, see CALS Table. For a more complete description of the CALS Table consult the CALS Table Spec[1] .

[1] http://www.oasis-open.org/specs/a502.htm