Documents for Publishing

```xml
<?xml version="1.0" encoding="UTF-8"?>
<procedure>
  <title>CNC Router Lubrication</title>
  <author>Don Wallace</author>
  <department>Research and Development</department>
  <revisionDate>2006-04-01</revisionDate>
  <abstract>
      The Larken 2424 CNC Router is a high-speed computer-controlled
      woodworking tool.  It was purchased new in 2004 and was fully
      lubricated when purchased.  The need for further lubrication
      depends on the number of hours of use as well as the elapsed
      calendar time.  With heavy usage, the machine should be
      lubricated every 9 months (lubrication interval should always
      be less than 18 months).

      Each of the three screw drives should be lubricated with a dry
      Teflon spray. Do not use any wet lubricants, as they will
      attract dust and cause fouling.  Before applying the lubricant,
      remove dust from screw mechanisms using compressed air
      and a clean brush.
```

```
    </abstract>
    <details>
      The detailed procedure will go right here!
    </details>
  </procedure>
```

- Narrative text documents are modeled easily with XML.

- The root element represents the whole narrative document.

- **Metadata** elements appear first as children of the root.

- Normal document content follows the metadata.

- Divisions of content are reflected by the element hierarchy.

```xml
<?xml version="1.0" encoding="UTF-8"?>
<procedure>
  <title>CNC Router Lubrication</title>
  <author>Don Wallace</author>
  <department>Research &amp; Development</department>
  <revisionDate>2006-04-01</revisionDate>
  <abstract>
    <paragraph>
      The Larken&#174; 2424 CNC Router is a high-speed
      computer-controlled woodworking tool.  It was purchased
      new in 2004 and was fully lubricated when purchased.
      The need for further lubrication depends on the number
      of hours of use as well as the elapsed calendar time.
      With heavy usage, the machine should be
      lubricated every 9 months (lubrication interval should always
      be &lt; 18 months).
    </paragraph>
    <paragraph>
      Each of the three screw drives should be lubricated with a dry
      Teflon spray. Do not use any wet lubricants, as they will
```

```
      attract dust and cause fouling.  Before applying the lubricant,
      remove dust from screw mechanisms using compressed air
      and a clean brush.
    </paragraph>
  </abstract>
  <details>
    The detailed procedure will go right here!
  </details>
</procedure>
```

- **Whitespace** (spaces and carriage returns) is usually not significant in an XML document.

- So, your markup application needs to include elements like `<paragraph>` to show logical divisions.

- The characters `<` and `&` are not allowed in the text of an XML document.

- These are replaced by the **general entity references** `<` and `&`.

- `>`, `'` and `"` are available for convenience.

- Many valid unicode characters are not available on your keyboard.

- Enter these as **character references** like `®` for the ® symbol.

```
<?xml version="1.0" encoding="UTF-8"?>
<procedure>
  <title>CNC Router Lubrication</title>
  <author>Don Wallace</author>
  <department>Research &amp; Development</department>
  <revisionDate>2006-04-01</revisionDate>
  <abstract>
    <paragraph>
      The <equipment>Larken&#174; 2424 CNC Router</equipment>
      is a high-speed computer-controlled
      woodworking tool.  It was purchased new in 2004 and was fully
      lubricated when purchased.  The need for further lubrication
      depends on the number of hours of use as well as the elapsed
      calendar time.  With heavy usage, the machine should be
      lubricated every 9 months (lubrication interval should always
      be &lt; 18 months).
    </paragraph>
    <paragraph>
      Each of the three screw drives should be lubricated with a dry
      <supply>Teflon spray</supply>. Do not use any wet lubricants,
```

```
    as they will
    attract dust and cause fouling.  Before applying the lubricant,
    remove dust from screw mechanisms using compressed air
    and a clean brush.
  </paragraph>
 </abstract>
 <details>
  The detailed procedure will go right here!
 </details>
</procedure>
```

About Example 3.10

- Enclosing selected words and phrases within running text is called **mixed content**.

- Enclosing elements act as modifiers and impart meaning and context to the text that is enclosed.

- Enclosing elements can trigger special formatting when the document is transformed into XHTML or XSL-FO.

```
<details>
    <frequency>Every 9 to 18 months</frequency>
    <duration>1 hour</duration>

    <steps>

        <step name="Determine Need for Lubrication">
            <paragraph>Follow the schedule defined elsewhere in
            this procedure.  If the machine should start to make a
            persistent squeaking or howling noise, lubricate the screw
            mechanism causing the noise immediately.</paragraph>
        </step>

        <step name="Procure Supplies">
            <paragraph>Use only dry <supply>Teflon spray</supply>.
            </paragraph>
        </step>

        <step name="Clean Machine First">
            <paragraph>Using the shop vac or a fine brush, remove any
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      dust or chips from all parts of the router.  Pay particular
      attention to removing dust from each screw
      mechanism.</paragraph>
      <paragraph>Take special care not to damage the threads of
      a screw mechanism while cleaning.  <warning>Do not use
      any liquid or spray cleaners.</warning></paragraph>
    </step>

    <step name="Apply Lubricant">
      <paragraph>Spray each screw mechanism lightly with the
      lubricant.  Clean any overspray off of visible machine parts
      using a soft damp cloth.</paragraph>
    </step>

  </steps>

</details>
```

About Example 3.11

- It is often helpful to wrap a repeating element group in an element like `<steps>`.

- Representing the name of each step as the attribute `name` helps the document read easily.

- It is not necessary to record the number of each step explicitly in the document.

- Element numbering can be generated by XSLT during transformation.

- Logical division elements like `<paragraph>` can be used in several different contexts.

- Modifying elements like `<supply>` can be used in several different contexts.

- Extra whitespace can be used liberally in order to make the document read easily.

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