



# PCT-SAFE Editor Training Course

Version 1.03

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# PCT-SAFE Editor Training Course

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# 1. Introduction to the PCT-SAFE Editor

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## Welcome

Course participants will learn how to create a basic patent application body using the PCT-SAFE Editor. Participants will learn how to prepare the complete application body using basic PCT-SAFE Editor functionality such as creating an application body, adding elements such as claim, lists, images and tables, and printing and previewing application bodies. The material also teaches participants how to import documents that were created using a word processor.

This documentation is primarily for use by trainers to help train the end users of the PCT-SAFE Editor.

Pre-requisite knowledge for the trainer assumes familiarity with word processors. Basic knowledge of XML and/or HTML is desirable but not required.

Pre-requisite knowledge for the participants assumes basic familiarity with word processors.

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## Main features

The PCT-SAFE Editor is a software application to help prepare international patent applications. The software has features similar to regular word-processors such as the ability to create new documents, edit, save, print and preview. The PCT-SAFE Editor creates structured patent applications where the application body contains the necessary components such as description, claims, abstract and drawings.

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## Document Conventions

This course uses several 'boxed-out' sections for certain conventions that we will now explain. There are three types of information boxes, 'Hint', 'Note', and 'Exercise', to provide additional information throughout the course. Exercise boxes may sometimes contain an 'Answers' box.

'Hint' boxes show valuable tips and guidance information that can help you use the PCT-SAFE Editor more effectively.

**Hint:**

Common short-cut keys can be used in PCT-SAFE Editor such as **[Ctrl+B]** for Bold.

Aqua 'Exercise' boxes contain practice questions that ask you to perform actual document editing. Most modules will have an exercise where you practice what has been taught in that module. Follow exercises step-by-step. If an exercise has specific questions, there will be an Answers box.

**Exercise**

This exercise demonstrates the validation procedure and how to troubleshoot errors in your application body.

- Open up "validation.xml" from the "Training Materials" folder.
- Make a change to the application body such as adding a new paragraph.
- Click on 'File/Save' to save the application body. A validation error will be displayed.
- Attempt to fix the application body until you can save without any validation errors.

**Answers**

The "validation.xml" application body is missing a claims section.

Try adding a claim from the Insert menu to add a claim to the application body.

Note boxes provide additional information.

**Note:**

To add special characters to your application-body, click on the 'Insert' menu then select 'Symbols.' A toolbar palette will open containing a selection of accepted special characters.

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## Course Material

The materials for this course are comprised of this Training document and the following exercise files inside the Training Materials zip file or folder.

The Training Materials folder should contain the following files:

- abstract.htm
- chemistry sample.jpg
- claims.htm
- description.htm
- dimage1.tif
- dimage2.tif
- dimage3.tif
- dimage4.tif
- drawing sample.jpg
- drawings.htm
- elongase gene sample.xml
- image001.jpg
- image002.jpg
- math sample.jpg
- transmyocardial implant application.xml
- transmyocardial implant application.doc

Course participants will need to use a computer that has PCT-SAFE Editor and Microsoft Word installed.

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## 2. Working with the Application Body

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Creating a New Application Body · Saving and Closing an Application Body · Document Views

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### Creating a New Application Body

Authors have two ways of creating an application body in the PCT-SAFE Editor. This module will explain how to create a new application body by opening up a default template. The next module will cover the second method of creating a new application body by importing existing HTML files.

To create a new application body within the PCT-SAFE Editor, click on 'File/New'. Two basic templates are provided. These templates are used to create new application bodies in the PCT-SAFE Editor:

- New Application Body
- New Minimal Application Body

Unlike most regular word-processors, a brand new application body is not completely blank. Whenever a new application body is opened, there will be some existing structural elements. The two types of templates both content and have a set structure. For now, do not focus on the structure of the application body. Application body structure will be discussed in a later module.

#### **Exercise**

Follow these steps to create a new application body:

- Select 'File/New' - the 'New' dialog will appear, allowing you to choose one of two templates.
- Select the "New Minimal Application Body" template.
- Add some text to the 'Invention Title' element
- Press 'F9' or select 'Tools/Validate Document'.



### **Note:**

The validation tool checks whether the application body has the correct patent application structure. Validation will be discussed further in a later chapter.

After validation, the editor automatically adds additional information about the application body in faint gray text at the top of the application body. The new information, or metadata, includes the name and version of the XML document type definition file, language and receiving Office settings.

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## **Saving and Closing the Application Body**

Saving and closing application bodies in the PCT-SAFE Editor should be a easy task for most authors. Like many word processing tools, authors can take advantage of standard "Save", "Save As" and "Close" toolbar items and buttons. There are entries on the 'File' menu for these functions as well as standard 'Save'  and 'Save All'  toolbar buttons on the main toolbar.

When closing an unsaved file, authors will be prompted to save the application body.

### **Exercise**

We will save the new application body created in the previous exercise:

- Select 'File/Save' - as this is a new application body, we are shown the 'Save As' dialog and prompted for a save location .
- Navigate to the 'Training Materials' folder, give the application body a filename and click 'Save'.

The new application body is now saved.

One difference in behaviour is that PCT-SAFE Editor will check that the application body structure conforms to the patent application structure before saving. If the application body is not correctly structured, the author is given a warning. During normal editing, the Save process should be identical to regular word processors. More information on the application body structure is offered in module 3.

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## **Document Views**

There are four views available to the author in the PCT-SAFE Editor. The views are "Normal", "Tags On", "Page Preview" and "Plain Text." Change the current view by clicking on the View Mode button at the bottom of the

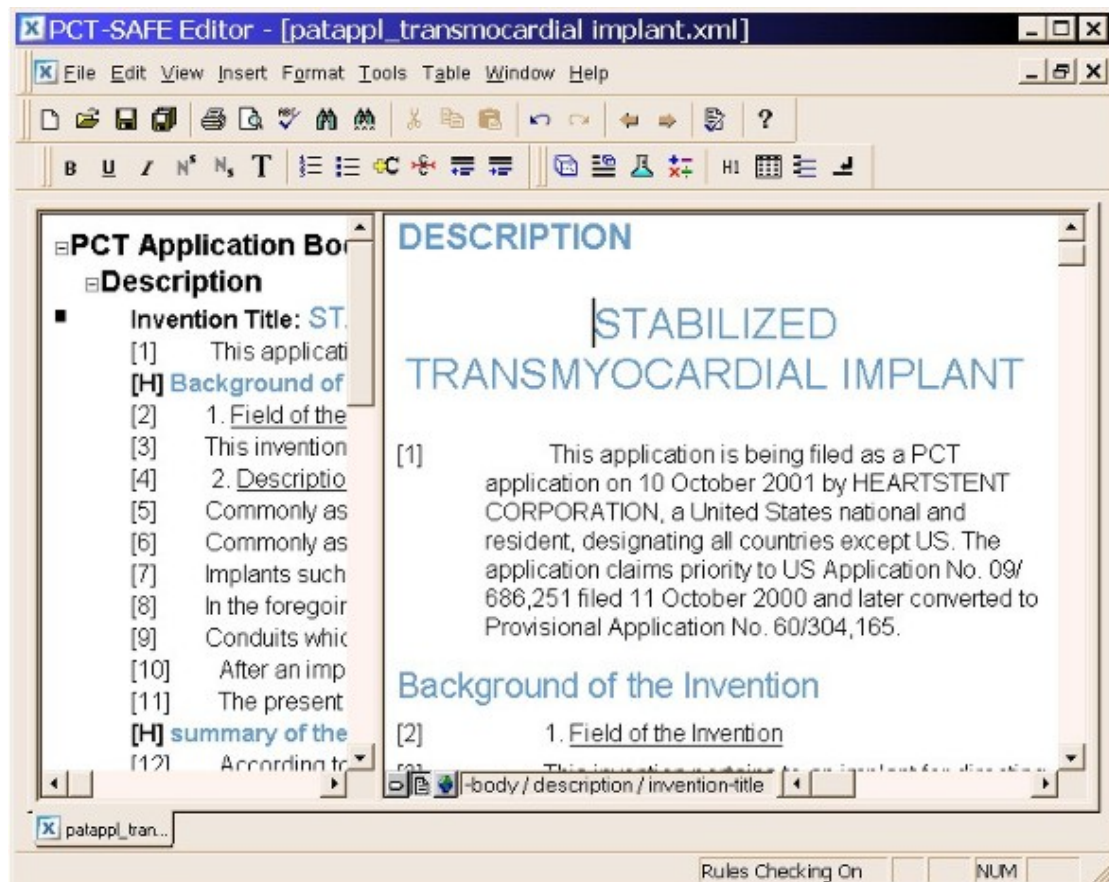
document window.



The "Plain Text" view is recommended for advanced users only and will be covered in Module 16.

### 'Normal' view



This is the standard 'word-processor' view of the application body. Normal view lets you concentrate on the content of your patent application. Most new users will prefer to edit their application body in Normal view since the XML tags are hidden from sight.



This diagram shows a typical application body in the 'Normal' view.

**Note:**

The Structure View pane is displayed (by default) to the left of the document window. It can be viewed independently of the application body using the slider on the right hand side and can be used to edit text, and insert, cut, paste, copy, and drag-and-drop elements.

The Structure View allows for convenient manipulation of larger application bodies as by clicking on the  (plus) or  (minus) buttons to the left of each element, the different levels can be opened and closed for easy navigation through the application body.

In the structure view, you can edit text, and insert, cut, paste, copy, and drag-and-drop elements.

To display or hide the structure view, click 'Tools/Options'. Click the View tab then click 'Show Structure View.' Alternatively, drag the divider between the structure view and the document view to close the structure view.

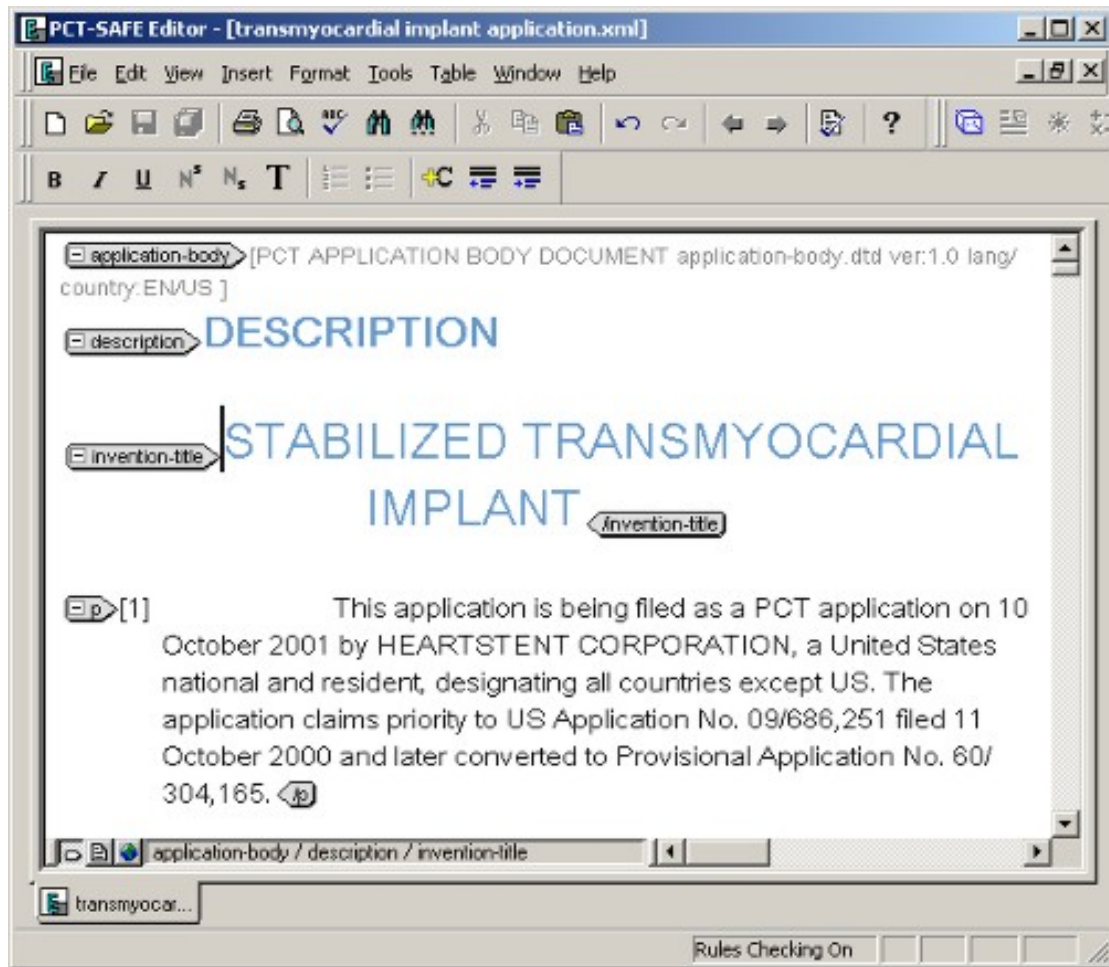
**'Tags On' view**

This view displays the application body in XML format where element tags are visible. Tags On view as the name suggests displays the element names, or tag names, for the document. This view allows for precise editing of structural elements.

**Hint:**

Users should not worry about having to understand the XML tags at this stage in the course material. These are simply tags that describe the content. For example, the XML tags around the title of this invention are called "invention-title."

Here is the same application body as shown above in Tags On view. Notice that the paragraph is surrounded by a "p" tag. Surrounding the content by tags will look familiar to users who have seen HTML. Tags On view is a valuable view for intermediate and advanced users who want to see the XML tags while editing their application body.



### Hint:

New users should start off working in 'Normal' view. As you become more comfortable with the PCT-SAFE Editor, switch to the 'Tags On' view for more advanced application body editing.

### 'Page Preview' view

Selecting the 'Page Preview' button will preview the application body in Portable Document Format (PDF) format using Adobe Acrobat.

This is the official rendering of the application body, and will be **identical** to the application body rendered at the receiving Office.

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## 3. PCT-SAFE Application Body Structure

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### Basic Application Body Structure: Description, Claims, Abstract and Drawings

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#### Application Body Structure

All patent application bodies created with the PCT-SAFE Editor will have the same basic structure. The application body is comprised of four major elements:

- Description
- Claims
- Abstract
- Drawing

Every application body must contain a description and claims element. The application body may also contain abstract and drawing elements. The elements must be arranged in the following order: description, claims, abstract and drawings. All new application bodies created with the PCT-SAFE Editor will already contain these basic elements. It is important for patent application authors to be familiar with these different elements.

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#### Description

The description element must disclose the invention in a clear and complete manner. The description section starts off with "invention-title" element. This is the appropriate place to type the title of the invention. There are many other elements available in the description section such as:

- Technical-field
- Background-art
- Disclosure
- Description-of-drawings
- Best-mode
- Mode-for-invention
- Industrial-applicability
- Sequence-list-text

The main difference between the description element and the other parts of the application body such as the claims or abstract is the large number of available elements which can be used in the description. Formatting such as bold, italic and underline is available, lists, tables and many types of patent-application specific elements such as "disclosure" or "industrial-applicability" elements are available to patent application authors.

## Exercise

- Select 'File/Open'
- Navigate to the file "elongase gene sample.xml" in the 'Training Materials' folder.
- Using the 'Insert/Description/xxx' menu, experiment with adding more of the description structures listed above to the open application body.

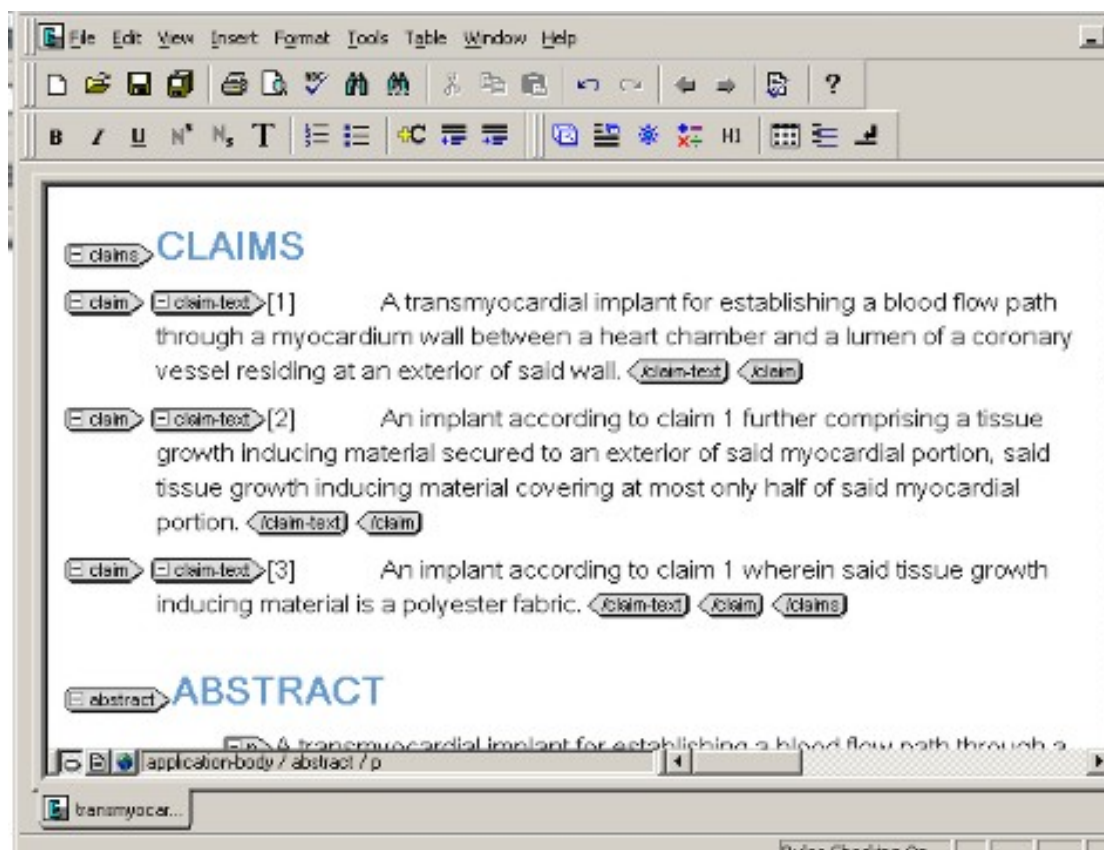
## Claims

Each application body will have a claims section. Both the description and claims sections are required for all application bodies.

There is one claims section for the entire application body.

Within the claims section, you can create one or more claim elements.

Each claim element can contain one or more claim-text elements. A claim-text element is similar to a paragraph.



## Exercise

Add new claims to the application body.

- Using the current application body, "elongase gene sample.xml," and the 'Insert/Claim' menu, add some new claims.

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## Abstract

Following the description and claims elements, a PCT-SAFE application body may contain an abstract. This abstract must consist of a summary of the disclosures contained in the description, claims and drawings elements. The abstract should be concise.

Unlike the description and claims elements, the abstract is not always required.

Authors can create one of two types of elements in an abstract:

- Paragraphs
- Problem and Solution

## Exercise

The Abstract element can contain either paragraphs or problem/solution elements. This exercise will demonstrate how the PCT-SAFE Editor enforces structured editing.

- To add an abstract and a paragraph inside that abstract, select 'Insert/Abstract/Paragraphs.'
- Now attempt to add a Problem/Solution pair to the abstract. Select 'Insert/Abstract/Problem-Solution.'

### Hint:

Remember that an Abstract can contain either paragraphs or problem/solutions but not both.

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## Drawings

A drawings section is not required for each application body as far as the PCT-SAFE Editor is concerned. However, sometimes drawings **are** necessary for the understanding of the invention. The PCT-SAFE Editor supports the use

of TIFF and JPEG graphics within the drawings section.

The Drawings section has very simple rules. A patent application author is allowed to insert any number of images into this element.

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## 4. Importing Documents from HTML or Word

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Importing HTML · Using the HTML Import Tool · Importing Description, Claims or Abstract · Copy and Paste from Word

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### Importing HTML

HTML files which have been exported by other applications can be imported into the PCT-SAFE Editor. HTML files can be imported as a new application body, or imported as a description, claims or abstract section into an existing application body. This module will focus on importing HTML files as a new application body.

#### **Exercise**

Most word processors have the ability to save files as HTML. To prepare non-HTML documents for import to PCT-SAFE Editor, use your word processor to export the files to HTML format.

- Using Windows Explorer, ,navigate to the Training Materials folder.
- Open the file called "transmyocardial implant application.doc" in Word.
- Within Word, select 'File/Save as html'.
- Click 'Save' to save the file with an \*.htm file extension in the same folder as the "transmyocardial implant application.doc" file.

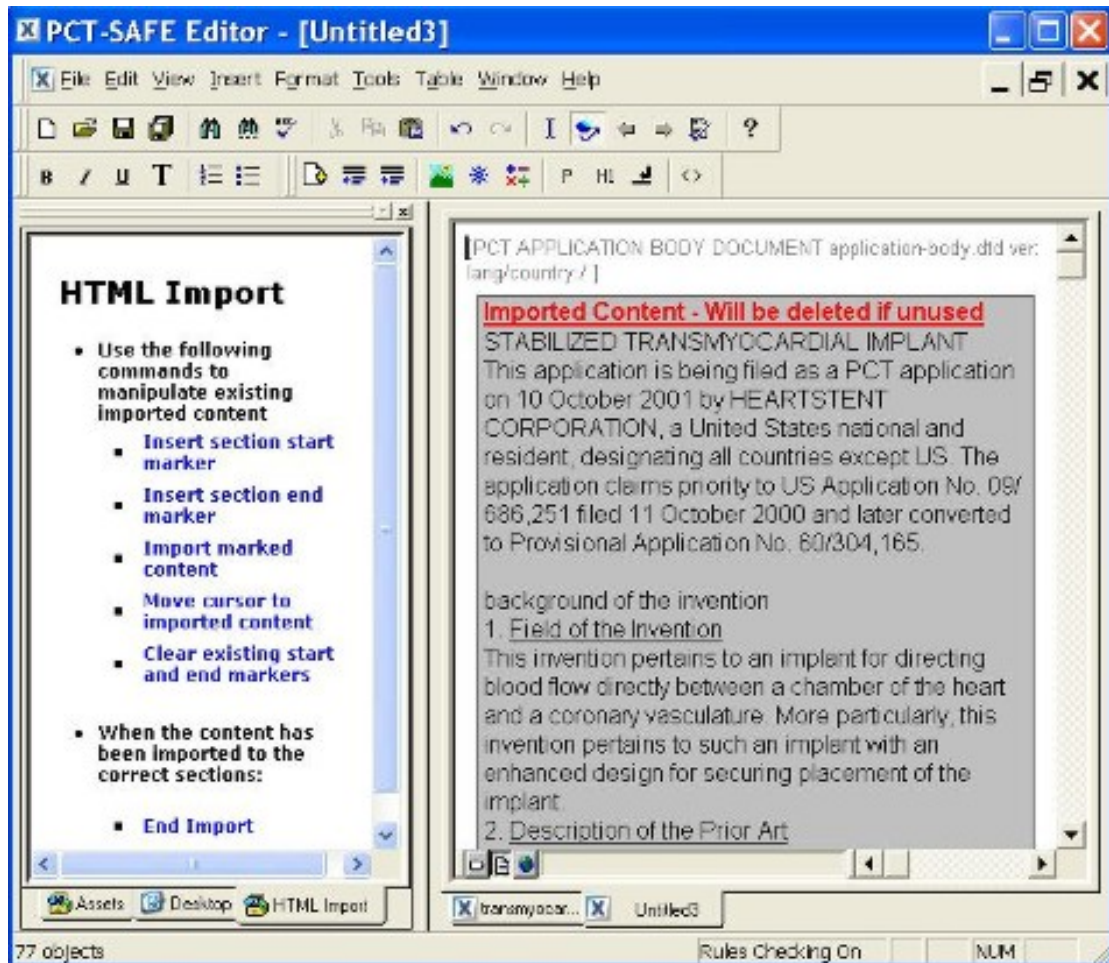
This document is now ready to be imported into the PCT-SAFE Editor.

Importing new documents into the PCT-SAFE Editor is a two-step process. The first step will be to select the HTML file which will be brought into the document window. The second step is to use the HTML Import tool to separate the imported content into description, claims and abstract elements.

To import a new Patent Application document from HTML:

- From the **Tools** menu select **Import HTML** then **Application Document**.
- Browse and select an HTML file from the Select HTML File dialog box and click Open.

A new document will open containing the imported content. Notice that the HTML Import tab has been opened and is displayed next to the document. The newly imported content has a gray background. The current document does not contain the required sections such as description and claims, we will be adding these sections with the HTML Import tool.



Once all of the content has been fully imported into the application body, clicking the "End Import" area in the HTML Import pane will close the pane and delete the grey imported content section in the document.

## Exercise

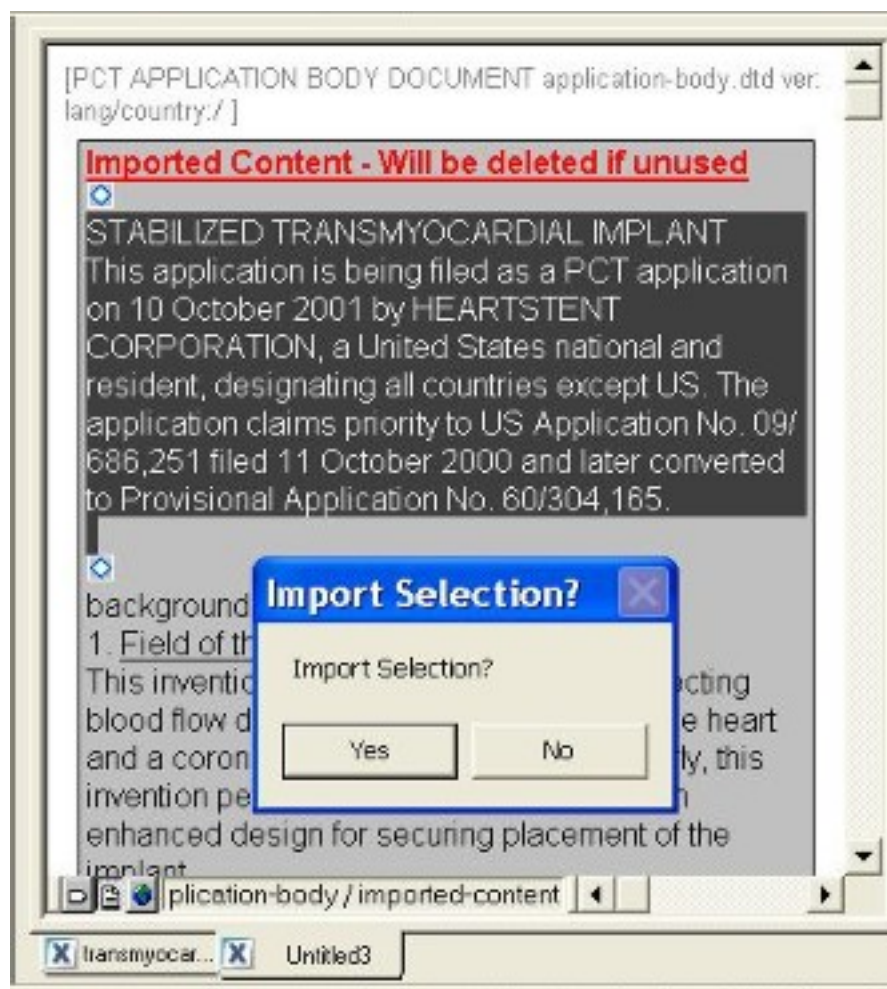
- In the PCT-SAFE Editor, select 'Tools/Import HTML/Application Document'
- Navigate to the file 'transmyocardial implant application.htm' in the 'Training Materials' folder and click 'Open'.

## Using the HTML Import Tool

The imported content needs to be split up into the following application body structure: description, claims, abstract and drawings (optional). The HTML Import tool is used to identify the Description, Claims, Abstract and Drawings sections.

To block out a section, use the HTML Import tool to add Section Start and End markers. These markers are small blue diamonds. ◆

- Place the cursor at the start of the content imported into PCT-SAFE Editor. The cursor should be inside the grey area.
- In the **HTML Import** tab, click on **Insert Section Start**.
- Scroll down the document until you reach the end of the content that belongs in the Description section. Place the cursor where the description section should end.
- In the **HTML Import** pane, click on **Insert Section End**.
- In the **HTML Import** pane, click on **Import Marked Content**.



- An 'Import Selection' dialog box will appear. Click on 'Yes' to confirm the Import.
- The Select Import Section dialog will be displayed with option types for 'Description', 'Claims', 'Abstract' and 'Drawings.' Choose 'Description' in the **Select Import Section** dialog box.



- Click on OK.
- Repeat steps to import each of the following elements: Claims, Abstract and Drawings (if necessary).
- When all the content has been fully imported, click on **End Import** in the HTML Import pane.

The import must be done in the following order: Description, Claims, Abstract and Drawings (if necessary).

The resulting application body should have all the major elements such as Description, Claims and Abstract. The HTML Import tab will be closed. Any content that was not identified and imported into the application body is deleted. The application body is now ready for further editing.

## Exercise

Identify and import the various sections of the application body.

Notice that there are differences in behaviour when importing into the Description, Claims and Abstract sections. For instance, lists are not allowed in the Claims section. All lists imported into the Claims section are transformed to claim-text elements.

- By following the above HTML Import instructions step-by-step, identify and import the Description section.
- Click on the "Move Cursor to Imported Content" button to bring the cursor back to the imported content. Now, identify and import the Claims section.
- Click on the "Move Cursor to Imported Content" button to bring the cursor back to the imported content. Now, identify and import the Abstract section.
- Select 'End Import' from the HTML Import.

### Hint:

If you select the wrong content to import, click 'Clear existing start and end markers' on the HTML import page.

Newly imported documents should be reviewed to make sure that they are correctly structured. Pay particular attention to the claims section. The HTML import process creates a single claim into the claims section. This claim and its multiple claim-texts should be split into multiple claims.

## Exercise

Split up the single claim into multiple claims.

- Scroll down to the claims section of the application body.
- Evaluate the content of each claim-text.
- If that claim-text should be split into a separate element, place the cursor in the claim-text and press **[Shift+Enter]** .

Claims will be revisited later in the course in module 9.

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## Importing Description, Claims or Abstract

The previous example showed how to create a brand new application body by importing a single HTML file into the PCT-SAFE Editor. There is a second way to import content by importing HTML files that only contain content targeted to one of the specific elements such as Description, Claims or Abstract.

Individual description, claims or abstract sections can be created by importing HTML files into an existing application body. For example, an author might want to create the Description section in HTML and import it into the PCT-SAFE Editor.

To import an HTML page into a section:

- From the **Tools** menu select **Import HTML** then choose one of the following sections:
  - Description Section
  - Abstract Section
  - Claims Section
- Browse and select an HTML file from the Select HTML File dialog box and click 'Open'. The content is inserted into the current application body at the end of the selected section.

## Exercise

In this exercise we will import some existing content for our description section.

- Open up a new application body template by selecting 'File/New/New Minimal Application Body'.
- Select 'Tools/Import HTML/Description Section'.
- Navigate to the file 'description.htm' in the 'Training Materials' folder and click 'Open'.

### Note:

The new description area only contains paragraphs. In the next few steps, we will add some more XML elements to the description section.

- Using the 'Insert/Description' menu, insert a new Invention Title. Drag and drop the following text "STABILIZED TRANSMYOCARDIAL IMPLANT" from the newly imported content into the Invention-Title.
- Using the 'Insert/Description' menu, insert a new Technical Field into the Description area. Drag and drop paragraphs from the newly imported content into the Technical Field element.

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## Copy and Paste from Word

Content can be inserted into a application body by copying and pasting it from other word processor applications such as Microsoft Word. Copying and pasting will also work from most text editors using the same steps.

To import content by copying and pasting from Word:

- Place the cursor within a paragraph or claim-text element.
- Switch applications to Microsoft Word and select and copy the text you want to import.
- Switch applications back to PCT-SAFE Editor and click **Paste** on the **Standard** toolbar or press **[Ctrl+V]**. The content will appear in the application body.

When a paste occurs, new elements might be created in order to keep the XML markup valid. The original content from the clipboard will be preserved but new or additional elements may be created.

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## 5. Adding New Elements to an Application Body

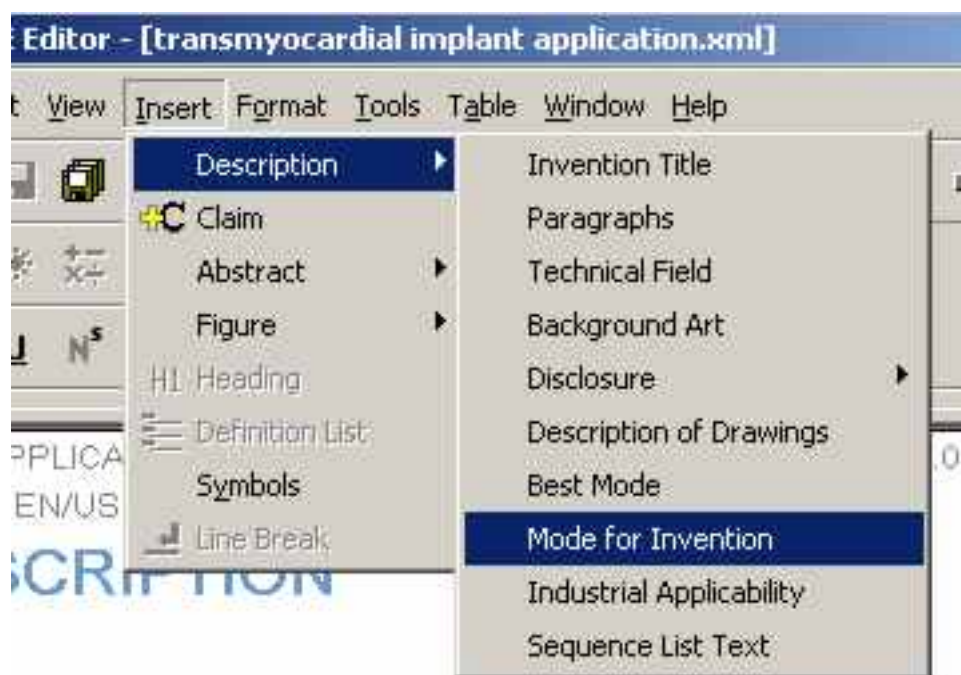
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Insert Menu · Insert Toolbar

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### The Insert Menu

Authors should now be familiar with the description, claims and abstract elements. Authors may wish to add even more elements to their application body and should use the Insert menu for this purpose. The following elements can be added to the application body through the Insert menu.



Notice that the Insert menu contains submenus. To add a specific element inside the Description element, go to the Insert menu then select Description then select the sub-element.

- **'Description' sub-menu**
  - 'Invention Title'
  - 'Paragraphs'
  - 'Technical Field'
  - 'Background Art'
- **'Disclosure' sub-menu**
  - 'Problem-Solution'
  - 'Paragraphs'

- 'Description of Drawings'
- 'Best Mode'
- 'Mode for Invention'
- 'Industrial Applicability'
- 'Sequence List Text'
  
- 'Claim'
- **'Abstract' sub-menu**
- 'Problem Solution'
- 'Paragraphs'
  
- **'Figure' sub-menu**
- 'Drawing'
- 'Inline Image'
- 'Chemistry'
- 'Math'
  
- 'Heading'
- 'Definition List'
- 'Symbols'
- 'Line Break'

PCT-SAFE has a strict application body structure and this is reflected in the submenus. The 'abstract' element can only contain paragraphs or problem-solutions. The 'description' element can contain many more different types of elements. Sometimes, an element may only contain one sub-element.

## Exercise

In this exercise, we will practise adding elements to an existing application body.

- Select 'File/Open'
- In the Open File dialog box, navigate to the file "transmyocardial implant application.xml" in the 'Training Materials' folder and click 'Open'
- Move to the 'Tags On' view.

### Note:









In Tags On view, the start and end tag for each element are visible. In this view, it is easier to see how the elements are nested.

- Find the <p> paragraph element inside the <description> element and click on the greyed text. Type on top of this text to add content to your paragraph.
- Now insert a line break into your paragraph by selecting 'Insert/Line Break'
- Using the Insert menu try to find and add the following elements to the current application body:
  - 'Best Mode'
  - 'Disclosure' - Paragraphs
  - 'Disclosure' - Problem-Solution
- Move your cursor around the application body and experiment with adding different types of elements from the Insert menu.

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## The Insert Toolbar

The Insert toolbar contains buttons that you can use to insert new elements in your application body. This table shows the buttons that appear on the Insert toolbar.

Button	Name/Tooltip	Menu command	Description
	Insert Drawing	Insert > Figure > Drawing	Insert Drawing
	Insert Inline Image	Insert > Figure > Inline Image	Insert Inline Image
	Insert Chemistry	Insert > Figure > Chemistry	Inserts a Chemistry figure
	Insert Math	Insert > Figure > Math	Inserts a Math figure
	Heading	Insert > Heading	Inserts a Heading Insert
	Table	Table > Insert Table	Inserts a Table
	Insert Definition List	Insert > Definition List	Inserts a Definition List. Definition Lists contain paired values of terms and definitions.
	Insert Break	Insert > Line Break	Inserts a Line Break

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## 6. Working with Formatting and Lists

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Bold, Italic and Underline styles · Adding Lists

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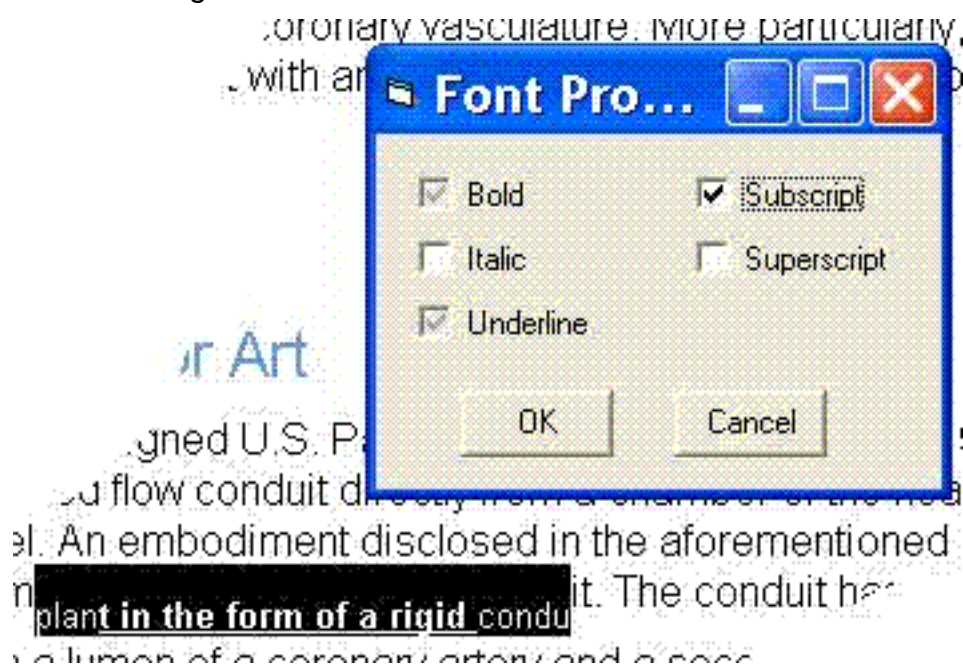
### Bold, Italic and Underline styles

The PCT-SAFE Editor allows you to style paragraph text with bold, underline, italic, subscript and superscript styles.

Within a paragraph, table entry elements and other types of elements, the formatting styles functions are available from the Formatting toolbar.

Bold	<b>Sample</b>
Sample	<i>Italic</i>
Underline	<u>Sample</u>
Superscript	Sample <sup>2</sup>
Subscript	Sample <sub>2</sub>

Formatting styles can also be applied with the Font properties dialog box available through the 'Format/Font' menu.



## Exercise

- Using the 'Format/Font' menu item to open the font properties dialog, add formatting to the current application body.

### Hint:

When a font property check box is displayed in grey, it means that **some** rather than all of the current selection is bold or italic.



It should now be apparent that the PCT-SAFE Editor behaves slightly differently from regular word processors. This software application focuses on the document's structure and tries to enforce structural rules. As a result, these formatting styles may not be available in every type of element. In general, you can use formatting styles in most areas inside the Description element and within any paragraph element.

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## Adding Lists


Three types of lists are supported in the PCT-SAFE Editor. Numbered, bulleted and definition lists.

To insert a new numbered or bulleted list:

- Place the cursor where you want to insert the list.
- Click **Numbered List**  or **Bulleted List**  on the **Formatting** toolbar.
- A new list is created, containing a single list item.

If the contents of the list item are not surrounded by a sub-element such as a paragraph, then pressing [Enter] in a list item inserts a new list item after the current one. If the contents are surrounded by a sub-element, then you need to press [Enter] twice to create a new list item.

Definition lists are structured lists made up of pairs of terms and definitions. To insert a new definition list:

- Place the cursor where you want to insert the list.
- Click **Definition List**  in the **Insert** toolbar.
- A new list is created, containing a pair of list items.

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## 7. Working with Images

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Drawings, Inline Images, Math and Chemistry · Editing Image Properties

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### Drawings, Inline Images, Math and Chemistry

The PCT-SAFE Editor allows you to include images within your application body. The PCT-SAFE Editor supports the use of JPEG and TIFF images. There are four basic types of images:

- Drawings
- Inline Images
- Math
- Chemistry

Drawings are images that are contained in the Drawings element at the end of the application body. Inline images can be added throughout the application body. Math and Chemistry figures can be added throughout the application body but should only contain images related to Math or Chemistry figures or equations.

#### **Exercise**

Add an Image to the Drawings section:

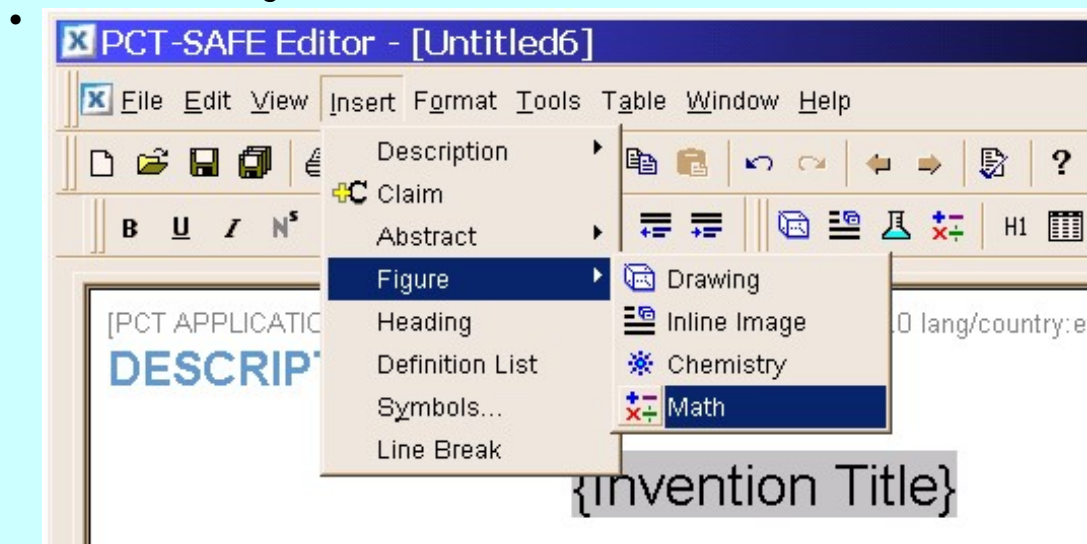
- Select 'Insert/Figure/Drawing'.
- Navigate to the "drawing sample.jpg" file in the 'Training Materials' folder.
- Click OK - this will insert the drawing into your application body.

Math and Chemistry formulas need to be prepared as JPEG or TIFFs in order to be used in the PCT-SAFE Editor. To insert a Math or Chemistry figure, select 'Insert/Figure' and then the appropriate menu item.

## Exercise

Add a math formula:

- Select 'Insert/Figure/Math'



- Navigate to the "math sample.jpg" file in the 'Training Materials' folder
- Click OK - this will insert the math formula into your application body

Add a chemistry formula:

- Select 'Insert/Figure/Chemistry'
- Navigate to the "chemistry sample.jpg" file in the 'Training Materials' folder
- Click OK - this will insert the chemistry formula into your document

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## Editing Image Properties

Every image has some associated properties including a description of the image content, height and width and alternative text (textual description about the image useful when images cannot be displayed).

To view or edit the image properties associated with an image:

- Place the cursor on the image.
- Right-click and select **Image Properties**.
- The Image Properties dialog is shown, make any required changes and click on 'OK'

### **Hint:**

Shaded image properties are not editable in the 'Image Properties' dialog.

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## 8. Working with Tables

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### Inserting Tables

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#### Inserting Tables

The PCT-SAFE Editor allows you to insert tables within your application body. The Table menu items offers standard Table operations such as the following:

- Insert Table
- Insert Caption
- Insert Rows or Columns
- Delete Row
- Delete Column
- Move Row Or Column
- Merge Cell
- Split Cell Into Columns
- Split Cell Into Rows
- Table Properties

The default size for new tables is 2 rows by 2 columns.

#### **Exercise**

- Select 'Table/Insert Table'
- Create a table with 5 rows and 4 columns.
- Select 'OK.'
- Click inside one of the table cells.
- Select 'Table/Insert Table Title' - the table title is added which you may edit.
- Click inside one of the table cells. Try adding some text and formatting - note that you can insert the same content within a table cell as you can inside a paragraph, with the exception of line breaks and further tables.
- Select 'Table/Insert Rows or Columns' - this opens the insert rows and columns dialog.
- Check that 'Row Below' is selected. Click 'OK' - this will add a row to your table.

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## 9. Working with Claims

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### Importing and Splitting Claims · Promoting and Demoting Claim Text

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#### Importing and Splitting Claims

The PCT-SAFE Editor allows you to import HTML sections directly into a Claims element. This concept was introduced in an earlier module. When claims are imported into the PCT-SAFE Editor application body, their structure is modified from a list-based structure to a claim based structure. Authors should review the imported claims and ensure that each claim has been imported correctly and if necessary, split these claims. Claims may need to be split.

To split a claim:

- Position the cursor inside the claim-text that needs to be split.
- If the claim-text needs to be split, click on **[Enter]**
- Click on **[Shift+Enter]** to split the claim.

#### **Exercise**

Import HTML content into our claims section.

- Open up a new application body.
- Select 'Tools/Import HTML/Claims Section'.
- Navigate and open 'claims.html' file in the 'Training Materials' folder.

#### **Note:**

Note that each paragraph of the HTML content is now a `<claim-text>` and not a separate `<claim>`. Authors will have to determine where each claim should be split.


- Select groups of claim-texts, or place the cursor in the claim-text and run the Split Claim function, **[Shift+Enter]**, to break up the claim into multiple claims.

---


#### Promoting and Demoting Claim Text

Claim-text items can be promoted or demoted. Promoting or demoting is an action similar to indenting or outdenting paragraphs. Claim text items are nested inside one another to mimic indenting or outdenting.

To promote a claim-text:

- Place the cursor inside the claim-text element.
- Click **Promote Claim Text** on the **Formatting**  toolbar or press **[Shift+Tab]**.

To demote a claim-text:

- Place the cursor inside the claim-text element.
- Click **Demote Claim Text** on the **Formatting**  toolbar or press **[Tab]**.

### **Exercise**

Practice promoting and demoting claim-text with the current application body. How does promoting and demoting claim text affect the claim element's structure?

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## 10. PDF Print and Preview

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PDF Page Preview · PDF Print

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### PDF Page Preview

PCT-SAFE Editor application bodies are formatted in XML. The use of XML is powerful because it allows the application body to be transformed from XML to different formats. In this software, the XML application body can be previewed in PDF format. There is a built-in Page Preview window which uses Acrobat Reader to display the PDF file. From this Page Preview window, authors may use the various Acrobat functions such as Print to PDF, Save As, Zoom and Rotate.

To see a PDF Preview of the current application body:

- Click on the **Page Preview**  button at the bottom of the document window.

A DOS window will appear briefly while the application body is being transformed.

#### **Exercise**

PCT-SAFE Editor will allow you to preview the application body in Adobe Acrobat within the Page Preview pane.

- Select 'View/Page Preview'
- Use Acrobat's built-in functions such as "Save A Copy" to save the PDF onto the local machine.
- If the local machine has access to a printer, print the application body using the Acrobat print button.

---

## PDF Print

To quick print from PCT-SAFE Editor:

- On the **File** menu, click **Print**.
- A PDF document will be generated and sent to the default printer.

### Exercise

XML application bodies can be transformed into different output types using XML style sheet transformations (XSLT). Think of XML application bodies as raw material. Raw material can be processed to create many different types of products. An XML application body can be transformed to many different types of output types.

When clicking on Page Preview, the application body is transformed using XSLT into the PDF format. The resulting PDF file is then displayed in the Page Preview pane.

Name other types of output that could be created with the same application body.

### Answers

Using different types of transformations, the same patent application could be delivered in HTML format, translated to Wireless Markup Language (WML) for use in mobile phones, transformed to Word format, plain text or reorganized to publish only certain parts of the application such as the abstract.

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## 11. Using Editing Tools

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### Spell Check · Thesaurus

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#### Spell Check

PCT-SAFE Editor features spell-checking capabilities. Spell checking is available from the 'Tools' menu.

#### **Exercise**

We will now spell check our current application body using the PCT-SAFE spell checker:

- Select 'Tools/Spelling'
- Click 'Next' 'Replace' or 'Ignore' for all the words the spell checker identifies as potentially incorrect.
- Click 'Cancel' to close the dialog once you are finished.

---

#### Thesaurus

To run the Thesaurus tool:

- Go to 'Tools/Thesaurus'

The Thesaurus dialog will open.

#### **Exercise**

Replace some of the words in your application body with alternatives provided by the thesaurus:

- Select a word
- Select 'Tools/Thesaurus' to open the thesaurus dialog.
- Click on a replacement word from the selection in the text box.
- Click 'Replace' to replace the word in your document with the one selected.
- Click 'Cancel' to close the dialog.

**Note:**

It should be kept in mind that the person using the PCT-SAFE Editor may not be the author and would probably not be in a position to make editorial changes such as changing words using the Thesaurus tool.

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## 12. Advanced Topics: Introduction to XML

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XML Basics · What are Elements · What are Attributes

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### XML Basics

Extensible markup language or 'XML' to give it the appropriate abbreviation, is the underlying format for the PCT-SAFE Editor. XML is a text based 'mark-up' format, designed to be both human and machine readable.

XML may seem familiar to those who are familiar with HTML (Hypertext Markup Language). HTML is a structured markup language that is used to create documents that can be viewed in web browsers. The PCT-SAFE Editor is an XML application that creates documents that are structured in the correct format expected for patent applications.

Every application body that is created with PCT-SAFE Editor will conform to the set document structure that has been described throughout this course. In XML jargon, the document structure is known as the **Document Type Definition** (DTD). All documents must comply with this structure. Documents that comply are said to be "valid" documents.

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### What are Elements?

Throughout this course, we have referred to "elements." What is an element? It is the proper name for a set of XML tags and the content within them. Elements normally have start and end tags such as claim-text:  
**<claim-text>***your content goes here***</claim-text>**.

As you have learned in this course, different elements have different rules about what can be contained inside them. For example, "claims" can only contain "claim" elements which can only contain "claim-text."

Fundamental to XML is the concept of having document elements describe their content. The element names are meaningful in XML:

```
<heading>The joys of patenting</heading>  
<p>Everybody should <keyword>patent</keyword> something!</p>
```

By using XML elements, a person can look at the document and know that that <p> is the paragraph and that <heading> is a title of some sort - and we have even identified a keyword. This sort of tagging allows us to tell two pieces of text apart. This is also useful for computer programs which can be instructed to read the tags and treat the pieces of text in different ways.

A single XML document is made up of many "hierarchical" elements. All the elements exist within other elements, which are contained within one "root" element. The "root" element for PCT-SAFE Editor is the "application-body"

element.

XML documents are often described as "trees" starting with the "root" element, "application-body", which is the "ancestor" of all the elements below it.

```
<application-body dtd-version="1.0" lang="en-US" country="IB">
  <description>
    <invention-title>title
    </invention-title>
    <heading id="h01">heading</heading>
    <p id="p01" num="1">child</p>
  </description>
  <claims>
    <claim id="c01" num="1">
      <claim-text>some
        <b>claim
          <i>text</i>
        </b>
      </claim-text>
    </claim>
  </claims>
  <abstract>
    <p id="p02" num="2">abstract text</p>
  </abstract>
</application-body>
```

The graphic above shows the "tree" shape of XML documents. It has been highlighted in blue.

---

## What are Attributes?

The term "attribute" might be a new concept. During this course, we mentioned "elements" frequently. Attributes are properties of elements. Attributes are values that provide additional information about a particular element.

The top-level element for a document is called the "application-body" element. It contains some additional information about the document such as the language, receiving Office and the DTD version. This information is displayed in light grey text at the top of every application body. The XML tag would look like: **<application-body lang="EN" country="US">...</application-body>**

In the case of the application-body element, the extra attributes add extra information about this particular application body to the XML. Here we see that the default language for the application body is English and that the receiving Office, or country, is the United States.

Different elements will have their own unique attributes. Many elements will have at least one "id" attribute which can be used to identify that particular piece of text. Some elements have no attributes such as "claim-text"

elements.

Under normal editing, authors should not have to add attributes to the XML. This is done automatically by the PSE.

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## 13. Advanced Topics: The Element List

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### The Element List

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#### The Element List

The various options on the 'Insert' menu, together with other buttons and functions within the PCT-SAFE Editor are used to insert elements into the application body. There is a second way to add elements into your application body through a dialog called the Element List. The Element List is appropriate for more advanced users.

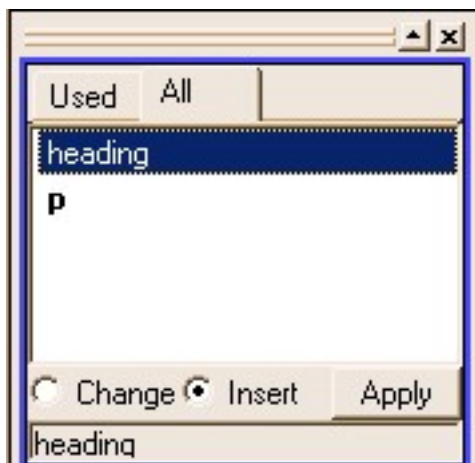
The Element List can be toggled to show or hide using the 'View' menu.

The Element List displays a list of the elements that can be inserting into the application body. The Element List is context-sensitive which means that only the elements which can be inserted at the current cursor position are shown. For example, in the image below, only two elements can be inserted at the current cursor position: heading and paragraph.

To insert an element:

- Double-click on the element name

Element names displayed in bold are "required" elements at that cursor position.



## **Exercise**

Use the Element List to insert the following types of Elements into a PSE application body:

- heading
- disclosure
- technical-field
- claim-text
- i ( italics )

### **Hint:**

Move into Tags On view and click around various parts of the document. Notice that the Element List changes depending on your position in the document.

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## 14. Advanced Topics: The Attribute Inspector

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### The Attribute Inspector

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#### The Attribute Inspector

When creating and editing application bodies with the PCT-SAFE Editor, attribute values for elements are automatically added to the XML. Users will not normally have to use the Attribute Inspector to add attribute values to elements.

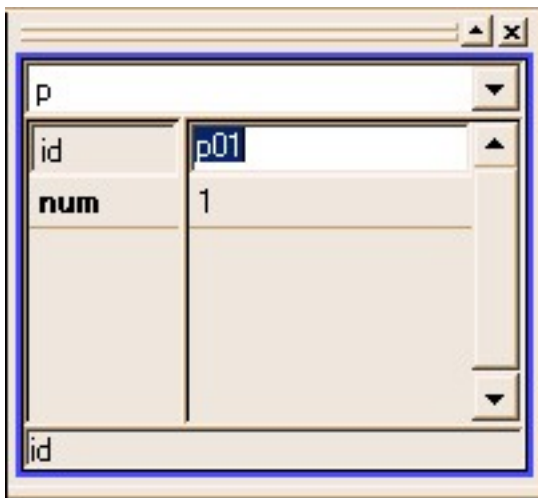
The Attribute Inspector can be toggled to show or hide using the 'View' menu.

The Attribute Inspector displays the current element followed by a list of the attributes that can be set for that element. The attribute names are displayed on the left, the attribute values are entered by the author on the right.

To view an element's attributes:

- Make the Attribute Inspector visible by selecting 'View/Attribute Inspector'
- Click inside or on the element whose attributes you wish to view.

Here we see that the paragraph element has two attributes:



Attribute names displayed in **bold** within the Attribute Inspector are required and must hold a non-empty string value. Attribute values can contain text or maybe have drop-down lists.

**Note:**

Avoid manually changing attribute values. Many attributes are set automatically by the Editor.

In most cases, editing attributes manually is not necessary.

**Exercise**

Open the sample file "transmyocardial implant application.xml" from the Training Materials folder.

Use the Attribute Inspector to view the attributes of the following elements:

- application-body
- description
- technical-field
- claim-text
- img

**Hint:**

Use 'Tags On' view to see the element names.

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## 15. Advanced Topics: Validation

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### XML and Validation · Validating the Application Body

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#### XML and Validation

In the XML vocabulary, the term "validation" refers to the process of evaluating a document to ensure that it complies with a specific document structure. This document structure is defined by a set of rules called the Document Type Definition (DTD). The DTD will dictate what a "valid" document should contain. For instance, the PCT-SAFE Editor uses a DTD called "application-body" which dictates that each application-body document must have a description, a claims section and optionally can have abstract and/or drawing elements. By now, authors should be familiar with this basic application body structure.

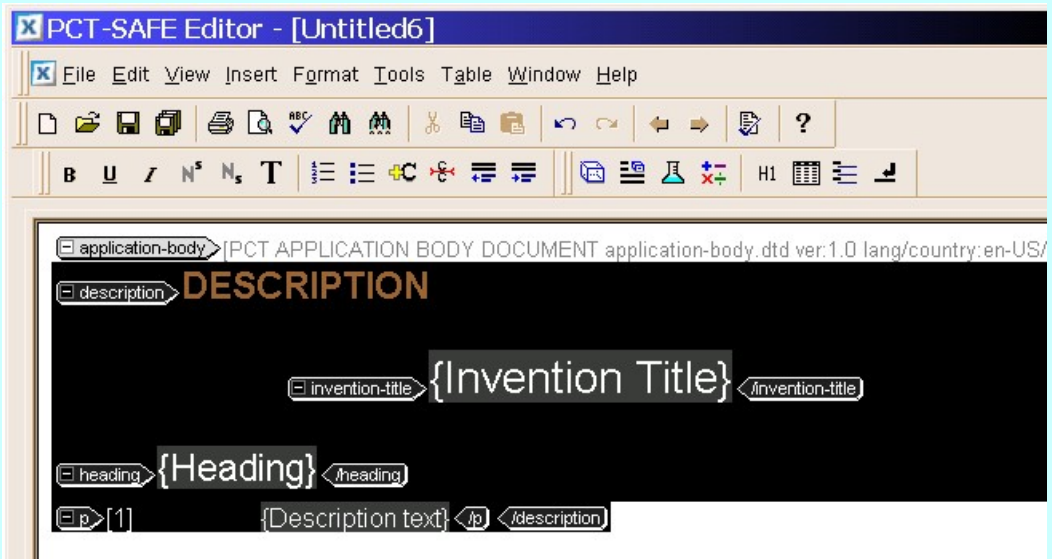
The PCT-SAFE editor will check, or "validate", each application body against this set of rules to ensure that it meets the requirements set out by WIPO. If the application body structure matches the rules described in the DTD, we call that application body "valid".

During editing, the PCT-SAFE Editor tries to keep each application body valid. For instance, elements can only be inserted in the locations permitted by the DTD. When deleting elements, the PCT-SAFE Editor will try to keep the application body structure valid even if that means that the deletion may not occur.

## Exercise

This exercise demonstrates how an application body is prevented from becoming invalid during an editing session.

- Open up a new application body using the "New Minimal Application Body" template.
- Select 'Tags On' view.
- Click on the opening <description> tag to select the description element. Make sure that you have selected both the contents and the actual <description> tags. The <description> tag should now be highlighted.



- Press the "Delete" key on your keyboard.

What would you expect from a regular word processor? Why did the PCT-SAFE Editor prevent you from making this deletion?

### Answers

Most regular word processors do not enforce document structure. They would allow the user to delete this element.

PCT-SAFE Editor would not delete the description element because it is required. The PCT-SAFE Editor will prevent most actions that invalidate your application body.

---


## Validating the Application Body

Ensuring that the XML application body is valid is vital to the submission of your patent application. Even though the PCT-SAFE Editor tries to prevent the

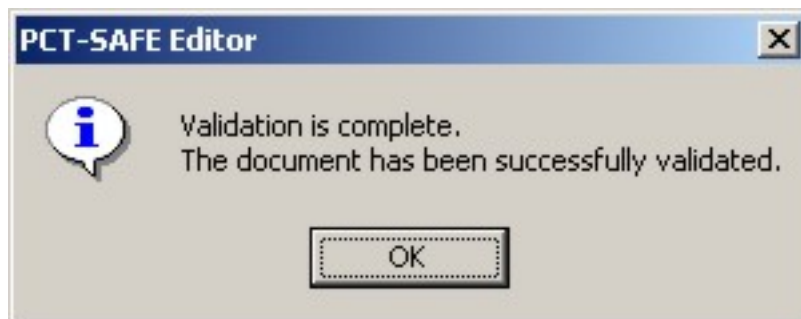
creation of invalid XML, problems may still occur especially when authors use advanced features such as the Element List, Attribute Inspector and Plain Text view.

**Hint:**

During editing, periodically use the Validate Document function to ensure that the current application body has no structural errors.

PCT-SAFE automatically validates application bodies before saving them. The validation routine can also be run through the "Validate Document" function on the **Standard**  toolbar or by pressing the **[F9]** key.

When the application body is valid, the following dialog is shown:



When a document does not meet the DTD requirements, the Validation Log is shown with the various errors. Clicking on an error message will move the cursor to the problematic element.

## Exercise

This exercise will demonstrate how to use the Validate Document function to troubleshoot an invalid application body.

- Open up the sample "transmyocardial implant application.xml" application body in the Training Materials folder.
- Press 'F9' to validate your application body. The application body should be valid.
- Ensure that the application body is in 'Tags On' view.
- Move down to the drawings element. Select and delete some of the "img" tags.

### Note:

The drawings element must contain figure elements. Each figure element must contain exactly one img element which refers to the actual graphic image file.

- Press 'F9' to validate your application body.
- Click on the top-most error message.
- Click on 'Go To' which moves the selection to the part of the application body where the error occurred.
- Click on 'Close' to dismiss the dialog.
- By clicking around the document area and using the Element List to help, find a way to make the application body valid again.
- Press 'F9' to validate your application body.

### Answers

There are three different ways to make this application body valid again such as:

- Using the 'Undo' toolbar button to undo the deletion
- Remove the figure element
- Add an img tag using the Element List. Notice that you would also have to add in the attributes for the img manually using this method.

---

## 16. Advanced Topics: Plain Text view

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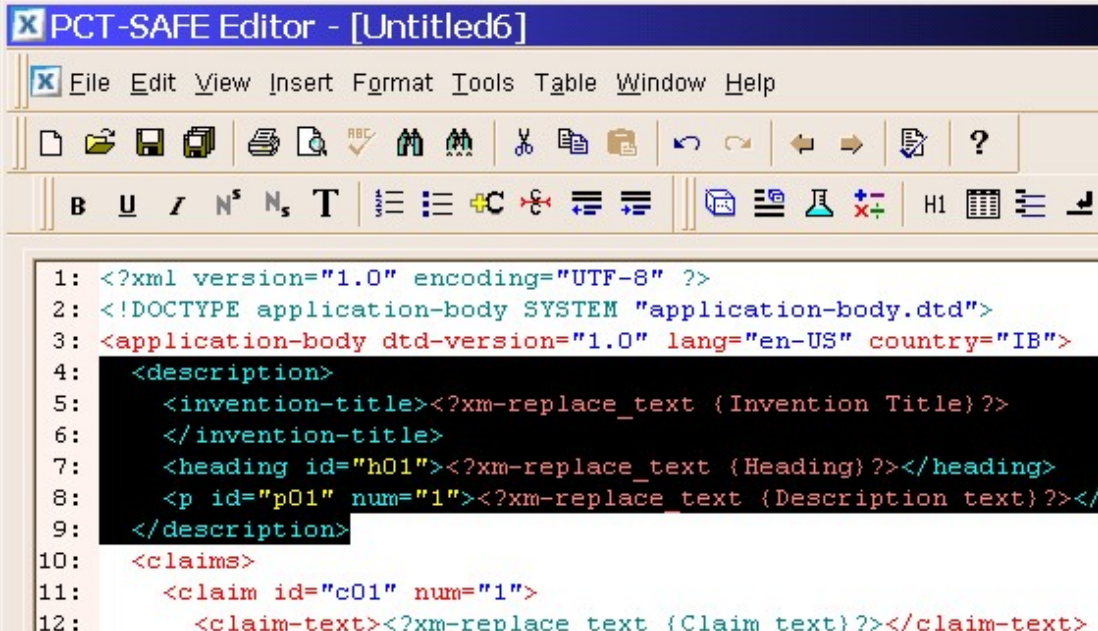
### Editing in Plain Text view

---

#### Editing in Plain Text view

The three views, 'Normal', 'Tags On' and 'Page Preview' were introduced in an early module, 'Plain Text' view, which displays the raw XML markup, is intentionally introduced at the end of the course. The 'Plain Text' view is only recommended for experienced XML authors.

To move to 'Plain Text' view go to the View menu then click on 'Plain Text'. This view shows the raw XML application body which the PCT-SAFE Editor has created. All of the XML tags are visible and an author can change any and all tags.



The screenshot shows the PCT-SAFE Editor interface with the title bar 'PCT-SAFE Editor - [Untitled6]'. The menu bar includes File, Edit, View, Insert, Format, Tools, Table, Window, and Help. The toolbar contains various icons for file operations, editing, and formatting. The main text area displays the following XML code:

```
1: <?xml version="1.0" encoding="UTF-8" ?>
2: <!DOCTYPE application-body SYSTEM "application-body.dtd">
3: <application-body dtd-version="1.0" lang="en-US" country="IB">
4:   <description>
5:     <invention-title><?xm-replace_text {Invention Title}?>
6:   </invention-title>
7:     <heading id="h01"><?xm-replace_text {Heading}?></heading>
8:     <p id="p01" num="1"><?xm-replace_text {Description text}?></
9:   </description>
10:  <claims>
11:    <claim id="c01" num="1">
12:      <claim-text><?xm-replace_text {Claim text}?></claim-text>
```

That there are no editing constraints in this view. An author could make a application body invalid by deleting required tags or by introducing any number of common XML errors. However, if the application body is made invalid in Plain Text view, the author will not be able to return to 'Tags On' or 'Normal' view until those errors have been fixed.

## Exercise

It is possible to invalidate your application body with potentially damaging results. To demonstrate this, we will now deliberately make our application body invalid.

- Create a new application body using the "New Application Body" template.
- Save the application body as "MyPlainText.xml" on the local machine.
- Click on 'View/Plain Text' to get into the 'Plain Text' view. This is the raw XML view of the application body - notice the color coding of the different parts of the text.
- Select a group of XML tags such as the description tags.
- Delete this selection with the 'Delete' key.
- Press [F9] to validate your application body.
- Try to select the 'Normal' or 'Tags On' view.
- Try to make the application body valid in order to move to 'Normal' or 'Tags On' view.

### Hint:

Authors familiar with XML can fix these types of problems manually, otherwise select 'Edit/Undo' to undo the changes to the application body.

The 'Plain Text' view is available for authors who know the rules of XML and understand the DTD well enough to edit in raw XML. The general introduction to XML given in this course is not a sufficient basis for raw XML authoring.