

# Word 2007 Content Control Toolkit

## End User Documentation

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## Overview

### ***Introduction***

The **Word 2007 Content Control Toolkit** was designed to make mapping *Content Controls* to *Custom XML* as simple as a drag and drop. This is a standalone tool (not a Word addin!) that opens any Word OpenXML document and lists all of the content controls. Then you just pick which Custom XML nodes you want to map to. The mapping is done via drag and drop in a WYSIWYG fashion. The editor allows you to also edit/add/remove XML parts, and manipulate content control properties.

The tool does not require Word to run because it operates directly on the new Open XML file formats (eg. docx) by reading and writing to them.

The project homepage for the tool is located [here](#) and provides the latest information, installation binaries, and source code. The source code itself can be used as a handy resource on how to perform complex manipulations of the format.

### ***Product Information***

The Content Control Toolkit is a Microsoft created tool to be used with our new release, Office 2007. The source code was released to the community via the [CodePlex website](#) and is under on going improvements by community members.

## Installation

### ***System requirements***

The following items are required for running the toolkit.

- Microsoft Windows XP SP2 or Windows Vista RC1 or later
- [.NET Framework 2.0](#)

It is recommended, but not required, that you have Office 2007 (B2TR or later) installed to take advantage of advanced functionality of the tool.

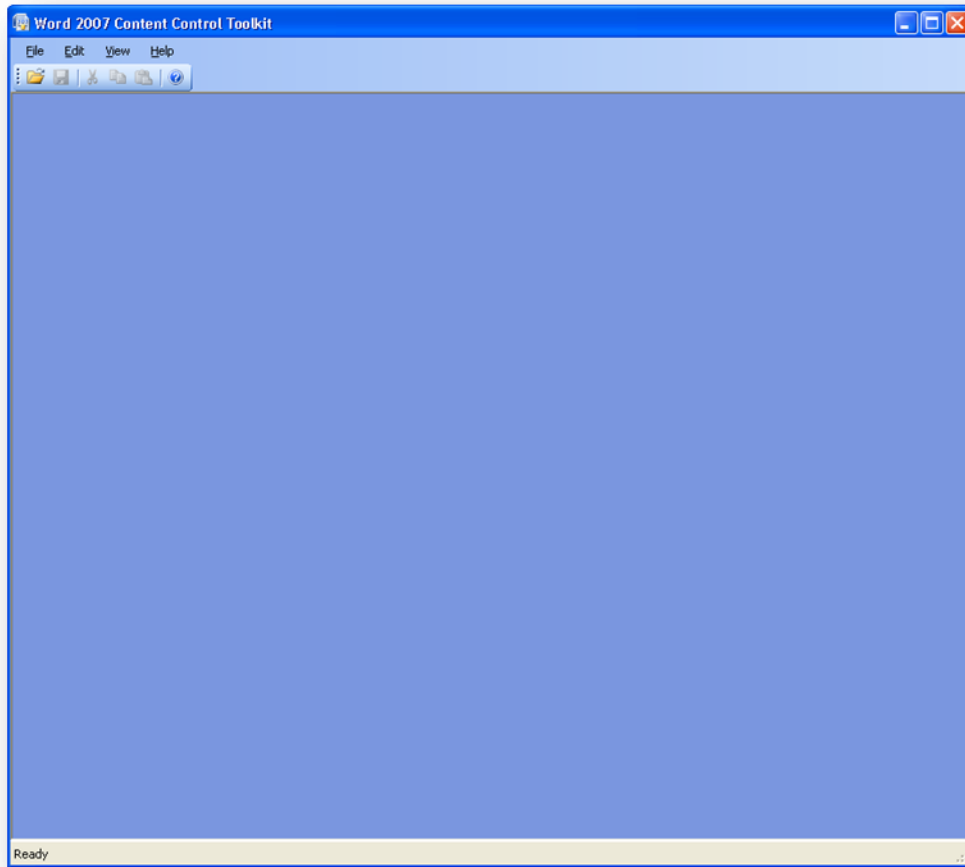
### ***Install/Uninstall***

To install, navigate to [the project website](#) and select “Install” under “Current Release”. Follow the instructions provided. To uninstall remove the “Word 2007 Content Control Toolkit” entry in Add/Remove Programs.

## Usage/Workflow

### ***First Boot***

On first boot of the tool, the user will encounter the empty state of the application. The operation to perform at this point is “Open” – which can be accessed from the toolbar or the File menu.



## ***Open***

The types of valid files are OpenXML Word documents: docm, docx, dotm, dotx. The main entry point to opening a document is via the Open dialog accessible via the File menu or Toolbar. Upon open, all of the Content Controls in the document will be listed on the left task pane, and all Custom XML Parts will be listed in the right task pane. The total number of Content Controls and Custom XML Parts in the document will be listed briefly in the status bar.

## ***Save***





Any changes made to the document opened by this tool are not persisted to the file until the user clicks to "Save" which is accessible via the File menu or Toolbar. The user can only save once the document is modified (or "dirty") which is indictable by the "\*" appended to the filename.

## ***Content Controls***

After loading a document containing [Content Controls](#), the user can view, group, and modify content control properties using the "Content Controls" task pane.

## Grouping

To group, select the “Group By” combo box on the toolbar. This is a handy feature to find out very quickly the properties of your content controls. By grouping by, for example “Bound”, you can see which content controls are bound to Custom XML.


Content Controls				
Group By: Namespace				
	ID	Tag	Type	XPath
<b>http://schemas.microsoft.com/office/2006/metadata/properties</b>				
Aa	4065844		PlainText	/ns0:properties[1]/documentManagement[1]/ns2:SS
Aa	3888421	Patient Name	PlainText	/ns0:properties[1]/documentManagement[1]/ns2:Pa
Aa	3888433	Patient Address	PlainText	/ns0:properties[1]/documentManagement[1]/ns2:Pa
Aa	245484392		PlainText	/ns0:properties[1]/documentManagement[1]/ns2:Ins
<b>http://schemas.medchart</b>				
Aa	4065845		PlainText	/ns0:chart/ns0:personal/ns0:id
	4065945	YY	DatePicker	/ns0:chart/ns0:personal/ns0:dob
Aa	6909940	Occupation	PlainText	/ns0:chart/ns0:personal/ns0:occupation
Aa	3888443	EMPLOYER	PlainText	/ns0:chart/ns0:personal/ns0:employer
	9995317	epilepsy	DropDownList	/ns0:chart/ns0:familyHistory/ns0:illness[@illnessNar
	9995351	thyroid	DropDownList	/ns0:chart/ns0:familyHistory/ns0:illness[@illnessNar
	9995377	OSTEOPORO...	DropDownList	/ns0:chart/ns0:familyHistory/ns0:illness[@illnessNar





## Properties

To directly manipulate the properties of a content control you can double click on it or right click and click “Properties” like so:

Content Controls

Group By: Location



ID	Tag	Type	XPath	
MainDocument				
Aa	4065844	PlainText	/ns0:properties[1]/documentManagement[	
Aa	4065845	PlainText	/ns0:chart/ns0:personal/ns0:id	
	6224361	photo	Picture	
Aa	3888421	Patient Name	PlainText	/ns0:properties[1]/documentManagement[
	3888449	MF	ComboBox	/ns0:chart/ns0:personal/ns0:gender
	4065945	YY	DatePicker	/ns0:chart/ns0:personal/ns0:dob
Aa	3888433	Patient Address	PlainText	/ns0:properties[1]/documentManagement[
	3888454	MS	ComboBox	
Aa	6909940	Occupation	PlainText	/ns0:chart/ns0:personal/ns0:occupation
Aa	6909987	Home Phone	PlainText	
Aa	3888443	EMPLOYER	PlainText	/ns0:chart/ns0:personal[1]/ns0:employer[1
Aa	3888648	Word Phone	Properties	
Aa	245484392		PlainText	/ns0:properties[1]/documentManagement[

The properties dialog enumerates all the properties for a content control including a section specifically for mapping to Custom XML.

Properties

Content Control

ID: 3888443

Type: PlainText

Location: MainDocument

Title: EMPLOYER

Tag: EMPLOYER

Custom XML Mapping

XPath: /ns0:chart/ns0:personal[1]/ns0:employer[1]

Prefix Mappings: xmlns:ns0='http://schemas.medchart'

Custom XML ID: {DD6E220C-54BC-47B3-8AE8-A0A61D4934FF}

Namespace: http://schemas.medchart

OK

Cancel

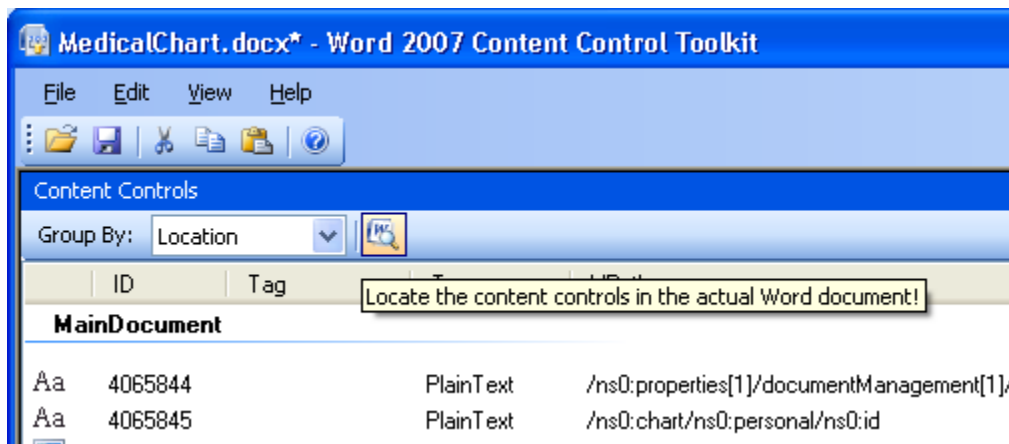
The following table enumerates all the properties name, type, and description:

Name	Type	Description
<b>ID</b>	Read Only	The unique identifier of this content control for this document. The ID is not globally unique across files
<b>Type</b>	Read Only	The type of content control. The following are possible types: Plain Text, Rich Text, Picture, Combo Box, Drop Down List, Date Picker, and Building Block Gallery.
<b>Location</b>	Read Only	The general location of the content control in the document. The following are possible locations: MainDocument, Header, Footer, Comments, End Notes, Foot Notes
<b>Title</b>	Editable	The title of the content control. In Word, the title is visible on the Content Control when the mouse hovers over the control.
<b>Tag</b>	Editable	The tag of the content control. This information is hidden from the user on the document surface. The tag is useful for the solution developer or template designer to be able to associate some string with a content control for their solution.
<b>XPath</b>	Editable	The <a href="#">XPath</a> “points” to a leaf element or attribute in a Custom XML part to create a mapping between the surface of the document and the data store. Once a Content Control is mapped it can be considered data bound such that changing the data in the store will reflect the changes to the surface, and visa versa. It is recommended that you do not modify this field directly, rather you should drag nodes from the “Custom XML Parts” task pane to the node to automatically create this mapping.
<b>Prefix Mappings</b>	Editable	The prefix mappings provide the mapping of the namespace shorthand and the actual namespace used in the XPath.
<b>Custom XML ID</b>	Editable	The globally unique identifier for the Custom XML Part.
<b>Namespace</b>	Read Only	The namespace of the Custom XML Part. If no namespace was provided “(No Namespace)” will be displayed in this field.

## Locating

[**NOTE:** This feature requires Word 2007 to be installed on your system.]

If you need to find the exact locations of the Content Controls in the actual document, use the “Content Control Locator” feature available on the toolbar of the “Content Controls” task pane:



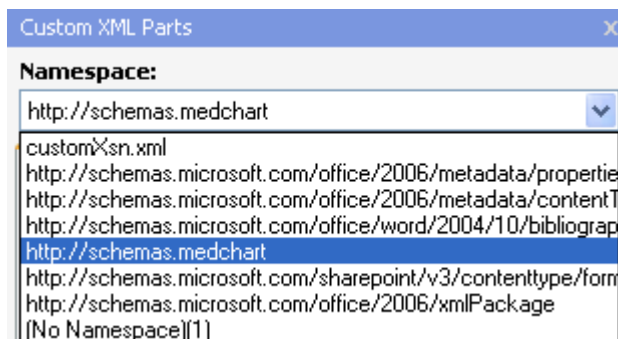
This feature requires Word 2007 and the Word 2007 [Primary Interop Assemblies](#) because it will automate Word by opening and positioning the window next to a dialog listing all of the Content Controls. When you select a Content Control in the dialog, the actual control in the document will become selected. An visa versa, when you select a Content Control (clicking inside of it, not grabbing it's handle) in the document, the corresponding entry in the dialog will become selected. This allows for precision location of the Content Controls and is strictly for viewing and is therefore **Read Only**. To make edits to the document close the toolkit and make changes then reopen.

## Custom XML

Custom XML parts are conceptually just a collection of XML documents in a Word document's [data store](#). This tool can enumerate all the Custom XML parts in a document as well as create new parts or delete existing parts.

## Namespaces

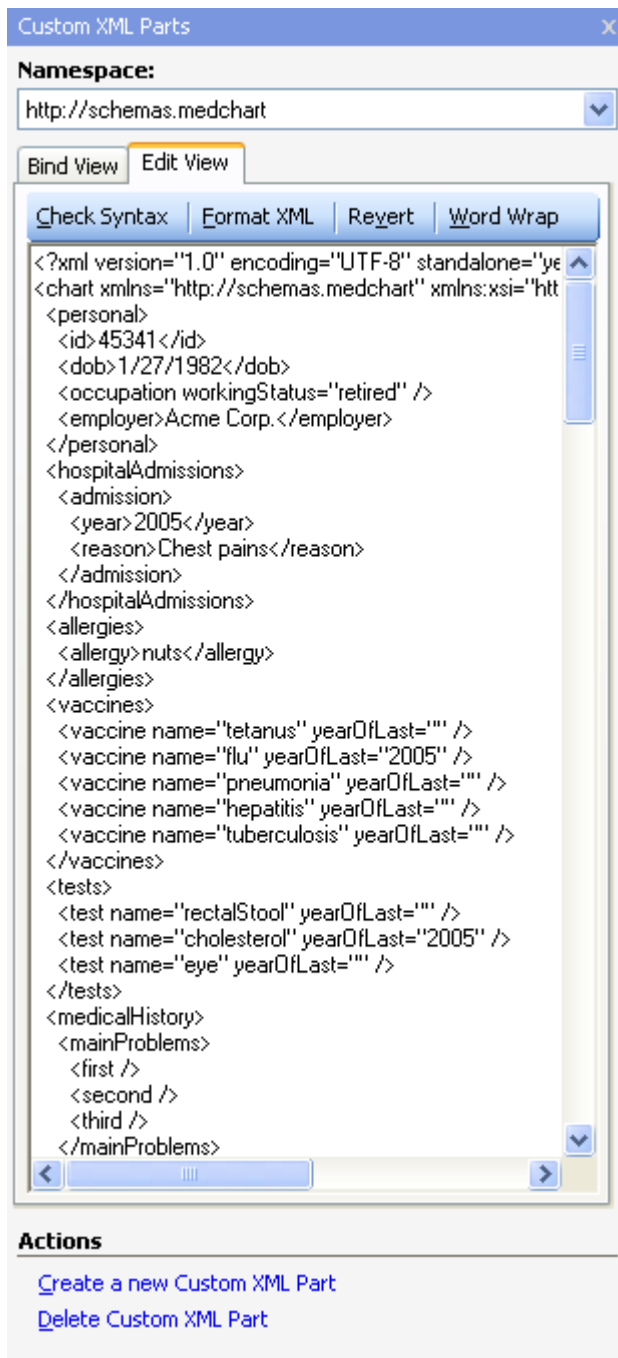
Once the document has Custom XML parts they are accessible via their [namespace](#) in the "Namespace" combo box as seen in the figure below:



If a Custom XML part lacks a namespace it can still be accessed by the name "(No Namespace)(N)" where N represents this part's position amongst other no-namespaces parts. Note that this combo box stays in sync with an XML document in "Edit View" – even as the user is making edits.

## Editing Custom XML

A Custom XML part can be edited in raw text form by switching to the “Edit View” tab in the “Custom XML Parts” task pane as in the following figure:



“Edit View” provides basic functionality for editing XML. It is recommended that for complex editing of XML, you use a powerful XML editor such as the one provided in [Visual Studio 2005](#) and copy/paste the xml back into this “Edit View” window.

Functionality supported by the “Edit View”:



- Syntax Checking – If your document has an XML syntax error, the line number and message is given of the error
- XML Formatting – The entire XML document can be reformatted to be displayed with proper indenting, otherwise known as “Pretty Printing”
- Revert – You can revert all changes made to an XML document . The most recent well formed document is restored
- Word Wrap
- Copy/Paste

### Creating a New Custom XML Part

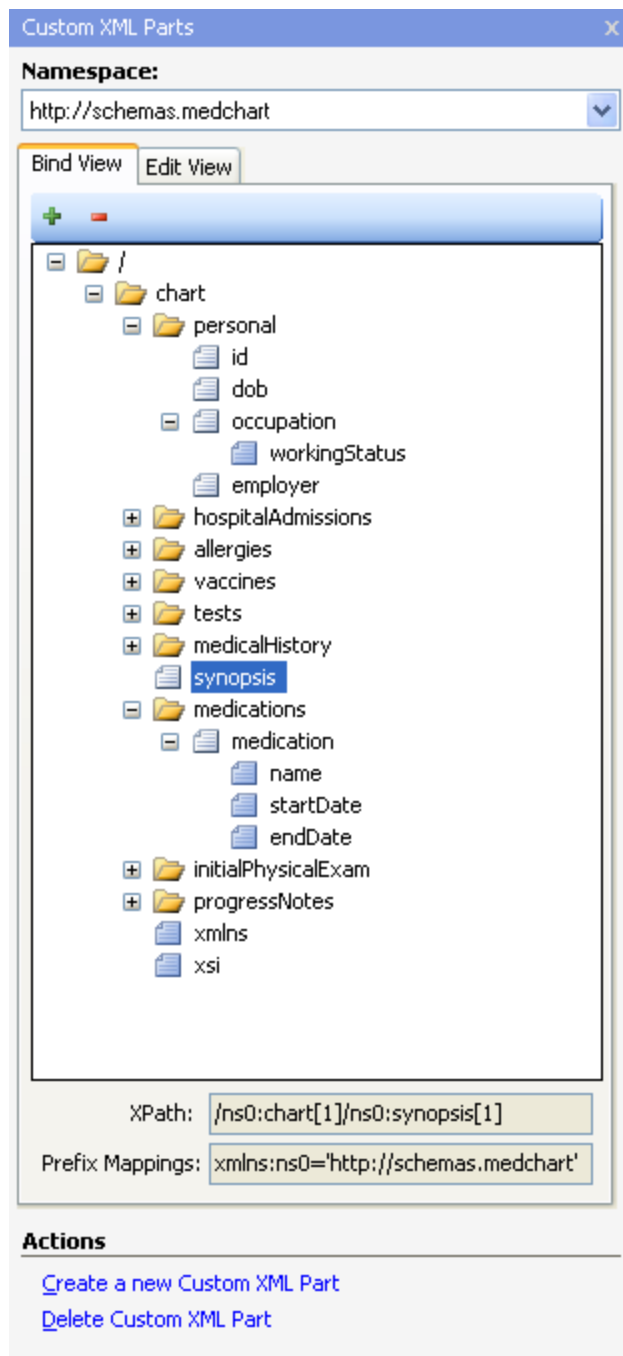
This tool supports creating new XML parts for the document. To do this, click the “Create a new Custom XML Part” link at the bottom of the “Custom XML Parts” task pane. A minimal XML document (“<root/>”) is then created as a new part. Note that because it is a minimal XML document there is no namespace to represent the part until you actually add one in “Edit View.” At this point you can copy/paste in another XML document or edit the minimal one to fit the needs of your document.

### Deleting a Custom XML Part

This tool supports deleting existing XML parts. To do this, click the “Delete Custom XML Part” link at the bottom of the “Custom XML Parts” task pane. You will be prompted to make sure you want delete the part. Note that only on “Save” of the document does this change actually happen.

### Bind View

To “bind” (or “map”) a Custom XML node to a Content Control, switch to the “Bind View” tab in the “Custom XML Parts” task pane as in the following figure:



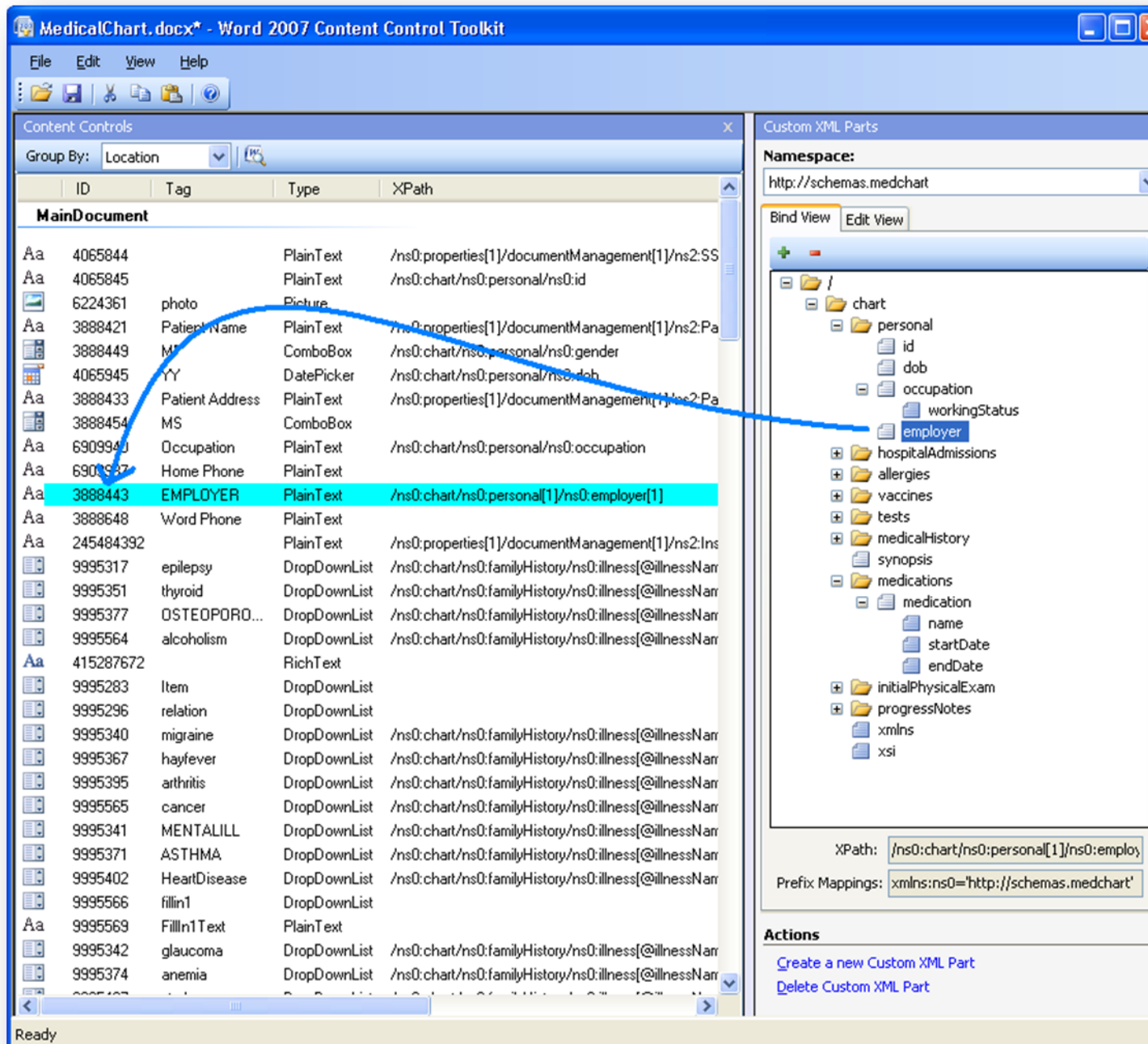
This view lets you explore the tree representing the Custom XML part. As you select a node it's XPath and Prefix Mappings are automatically generated. Note that you can expand or collapse the current level of XML seen in the tree by clicking the "plus" or "minus" buttons on the toolbar in "Bind View".

### ***Mapping Content Controls to Custom XML nodes***

If the document contains both Content Controls and Custom XML – then the tool can be used to ["map"](#) between them via dragging a node from "Bind View" in the "Custom XML Parts" task pane onto a row representing a Content Control in the "Content Controls" task pane. Note that only *leaf elements*

(elements with no child elements) and *attributes* can be mapped to which are represented by the non folder icons in the “Bind View” of the Custom XML Parts task pane.

The figure below illustrates an example mapping. The blue arrow was superimposed to represent user drag/drop action.



What actually constitutes a “mapping” is the Xpath, Prefix Mappings, and Custom XML Part ID of a node to be associated with the properties of a content control.