Creating XML files with KDE's KXML Editor

XML on KDE

Since it was first introduced, Extensible Markup Language (XML) has been acclaimed as a revolution in the IT landscape. Visionaries even predicted the end of HTML and conventional web design. Some of the hype has subsided, but XML is stronger than ever. XML is not only for web design; it is also an important format for sharing data between applications. This article shows how to create and edit XML files using KDE's KXML Editor.

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XML [1] is a simple and powerful format for exchanging data. Linux users access XML files every day to complete their daily work. OpenOffice, for instance, uses XML to store information. KDE help also uses XML. Even a program like TuxCards [2], the Linux cue card application, uses the XML file format. And XML is also used as an extensible markup language for web design. Despite XML's affinity for automation, you may occasionally have to take the old-fashioned approach of editing an XML file line by line with a text-based editor. Of course, you can always fire up vi, but an editor designed especially for XML offers many advantages over an ordinary text editor. This article examines the KXML Editor tool

KTools

In this column we present tools, month by month, which have proven to be especially useful when working under KDE, solve a problem which otherwise is deliberately ignored, or are just some of the nicer things in life, which – once discovered – you would not want to do without.

(kxmleditor), which is included in the KDE tool set.

Do You Speak XML?

This article does not offer enough room for a full discussion of the XML format, so I'll assume you have some familiarity with XML. (In case you're interested, you'll find more on XML at [3].) The important thing to remember is that an XML file is hierarchical, and an editing tool that represents the relationships among the elements in the file helps the user manage the complexity of this structured data.

To create or edit an XML file, all you really need is a simple editor, however, it is extremely difficult to read large, nested documents using an ordinary text editing tool. It makes far more sense to use special tools. KXML Editor is one of these

tools, and as the name suggests, it is designed for the KDE desktop environment.

KXML offers many useful options but the following features receive special notice on the KXML home page:

• drag and drop editing and clipboard support;
• DOM Level 2 Qt library parser;
• KParts technology support;
• DCOP technology support. support;
• support for editing KOffice compressed files.

If your distribution does not include KXML Editor, the current version is available at [4].

Creating the Basic Structure

When first launched, KXML Editor comes up with a well-organized workspace (Figure 1). The first thing you need to do is select *File / Version&Encoding* to define the basic characteristics of the file. Specify the XML version and character set in the dialog that then appears.

The next step is to start adding XML elements to the XML file. You can select: *Insert / Element* to add an element. In the dialog box that appears (Figure 2),
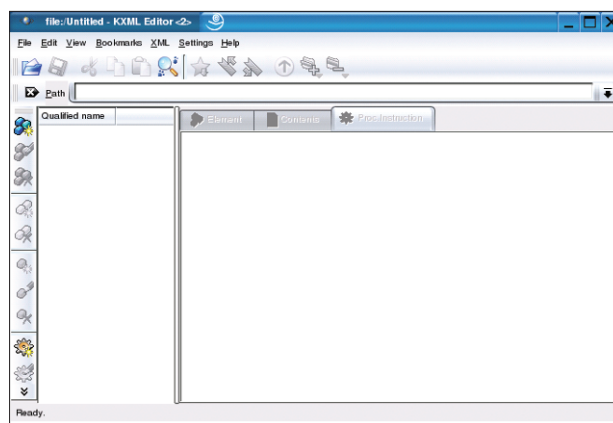

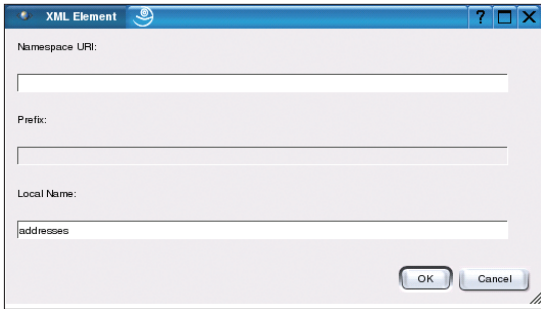**Figure 1: The KXML workspace. Your view of the workspace may vary depending on which version of KXML Editor you are using.**

Figure 2: The Insert Element dialog box.

you could then type *addresses* for *Local Name*, for example. Click on *OK* to add the element to the file.

To add a sub-element to an existing element, first select the element in the tree view on the left side of the screen. Then either right click the element to drop down the context menu and select *Element*, or use the *Insert / Element* menu item. Both approaches open the same dialog. You can then assign a *Local Name* to the element and specify its position in the tree.

You can repeat this procedure to build up a document structure. If you are cre-

ating multiple elements at the same level in your structure, you can copy the elements. To copy an element, click the element with your mouse, press [Ctrl-C] to copy the element to the clipboard, and then [Ctrl-V] to insert the element at the new location where you would like to place the copy.

If an element called < *phonenumber* > has an attribute called *type*, you can define the attribute by first selecting an element, then choosing *Insert / Attribute* in the menu to open the input windows. Type a name for the attribute in the *Qualified Name* line, and then add a *Value* > (Figure 3).

You now have an empty structure but not a document. To create a document, you need to add content to the elements you have defined. To do so, select an element and then select *Insert / Text* or *Insert / CData* in the menu. The elements in a XML

file are all parsed, with the exception of elements tagged as *CData*.

Well-Formed Documents

The KXML Editor makes it easy to create so-called well-formed XML documents by making sure you keep to the XML language rules. There is no need to pay attention to the positioning of individual characters. This said, the software has no way of ensuring that a document will be recognized as valid by an XML parser. The parser needs the Document Type Definition (DTD) to be able to do this. Check out [3] for a HOWTO and help on creating definition files. ∎
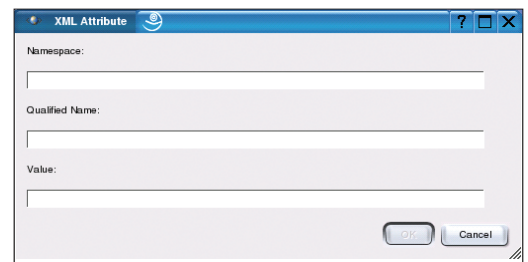

Figure 3: Each element can have attributes. The attributes are defined in this dialog.