On Wed, 23 Mar 2005 19:44:03 -0800, kuyper wrote:

> Michael Wallace wrote:
>>> Oh, of course. Now what the hell is a DTD again?
>>
>> Document Type Definition.
>> ...
>> [Lots of good general-purpose information about DTDs]
>
> David's questions got me curious, so I spent a lot of time this
> afternoon wading through the IDL documentation for it's XML objects. At
> the end of that survey, I still couldn't figure out how to use a DTD in
> connection with those objects. There's lots of things that say "if a
> DTD is provided", but I couldn't find anything that indicated how to
> provide a DTD. Could someone give some actual IDL code for this?

It is actually rather automatic and you don't really need IDL code for it.

DTD's are actually "provided" by the XML doc itself referencing a DTD. If
it does so and the VALIDATION_MODE keyword to IDLffXMLDOMDocument::Init or
Load is set to 1, then the parser will validate the document using the
DTD, if one is available.

In the example below, note the DOCTYPE element. It refers to a file named
slideshow.dtd that contains the DTD, also shown below. The DTD info can
actually be in the XML file itself, within the DOCTYPE element, but it is
common to put the DTD in a different file for easier reuse.

When VALIDATION_MODE is 1, the parser will check the XML against the DTD
and throw a parse error if the XML does not conform to the DTD. This is a
HUGE deal when writing IDL code to parse the XML. If you know the XML doc
passed the validation step, you can make tons of safe assumptions in your
parser code and get to the job at hand. If you don't validate, your
parser needs to be robust enough to deal with what might be a totally
random XML file. Like, I could pass an XML file describing the channel
lineup for my PVR to David's app that is expecting some special type of
configuration data. It would be easier to let the parser throw a parse
error than to write IDL code to discover the mistake.

Hope this helps,
Karl

++++++

Here is the example :

```
<?xml version='1.0' encoding='us-ascii'?>

<!--  A SAMPLE set of slides  -->

<!DOCTYPE slideshow SYSTEM "slideshow.dtd">

<slideshow
   title="Sample Slide Show"
   date="Date of publication"
   author="Yours Truly"
   >

   <!-- PROCESSING INSTRUCTION -->
   <?my.presentation.Program QUERY="exec, tech, all"?>

   <!-- TITLE SLIDE -->
   <slide type="all">
     <title>Wake up to WonderWidgets!</title>
   </slide>

   <!-- OVERVIEW -->
   <slide type="all">
    <title>Overview</title>
    <item>Why WonderWidgets are great</item>
    <item/>
    <item>Who buys WonderWidgets</item>
   </slide>

   <slide type="exec">
    <title>Financial Forecast</title>
    <item>Market Size &lt; predicted!</item>
    <item>Anticipated Penetration</item>
    <item>Expected Revenues</item>
    <item>Profit Margin </item>
   </slide>

</slideshow>
```

The DTD (in file slideshow.dtd):

```
<?xml version='1.0' encoding='us-ascii'?>

<!--
   DTD for a simple "slide show".
-->
```

```
<!ELEMENT slideshow (slide+)>
<!ATTLIST slideshow
        title   CDATA   #REQUIRED
        date    CDATA   #IMPLIED
        author  CDATA   "unknown"
>
<!ELEMENT slide (image?, title, item*)>
<!ATTLIST slide
        type   (tech | exec | all) #IMPLIED
>
<!ELEMENT title (#PCDATA)>
<!ELEMENT item (#PCDATA | item)* >
<!ELEMENT image EMPTY>
<!ATTLIST image
        alt   CDATA   #IMPLIED
        src   CDATA   #REQUIRED
        type  CDATA   "image/gif"
>
```