GammaLib - Action #804

Verify XML logic

03/16/2013 09:04 PM - Knödlseder Jürgen

Status:	Closed		**Start date:**	03/16/2013
Priority:	Normal		**Due date:**	
Assigned To:	Knödlseder Jürgen		**% Done:**	100%
Category:			**Estimated time:**	0.00 hour
Target version:	1.0.0			

Description

I guess that a XML element can either contain another element or a single text node. I'm not sure that the actual implementation respects this logic. It is likely that the actual implementation allows several text nodes within a given element, or even a mix of text nodes and other nodes. This should be checked and the required constraints should be implemented.

History

#1 - 03/16/2013 09:06 PM - Knödlseder Jürgen

- Description updated

#2 - 10/30/2014 12:00 PM - Knödlseder Jürgen

- Target version set to 1.0.0

Should be clarified for release version 1.0.0

#3 - 02/10/2015 10:09 PM - Knödlseder Jürgen

The following code

```
xml    = gammalib.GXml()
level1 = xml.append('element type="Measurement"')
level2 = level1.append('parameter name="Flux" value="1.0"')
level3 = level2.append(gammalib.GXmlText("This is a text"))
dump   = level2.append(gammalib.GXmlText("This is another text"))
dump   = level2.append(gammalib.GXmlText("This is a third text"))
level4 = level3.append(gammalib.GXmlText("This is a nested text"))
level4 = level4.append(gammalib.GXmlText("This is a nested text"))
```

produces the following XML document

```
<?xml version="1.0" encoding="UTF-8" standalone="no"?>
<element type="Measurement">
  <parameter name="Flux" value="1.0">
This is a text
This is another text
This is a third text
  </parameter>
</element>
```

Two observations:

- appending subsequent text nodes to a given XML element adds text fields to the element; they are represented in memory by multiple GXmlText objects; this was maybe not intended but does not really present a problem
- appending a text node to a text node does nothing; it's like the appended text node got lost; this is not a nice feature; probably an exception should be thrown.

#4 - 02/10/2015 10:23 PM - Knödlseder Jürgen

- Status changed from New to In Progress

- Assigned To set to Knödlseder Jürgen

- % Done changed from 0 to 50

I added some code to GXmlNode that throws an exception if an attempt is made to append anything to a text node. This now leads to

```
Traceback (most recent call last):
  File "./test_xml.py", line 90, in <module>
    xml = test1()
  File "./test_xml.py", line 47, in test1
    level4 = level3.append(gammalib.GXmlText("This is a nested text"))
  File "/usr/local/gamma/lib/python2.6/site-packages/gammalib/xml.py", line 330, in append
    return _xml.GXmlNode_append(self, *args)
RuntimeError: *** ERROR in GXmlNode::append(GXmlNode&): Invalid value.
Invalid attempt to append a XML node to a text node (GXmlText). Nothing can be appended to a text node.
```

for the above code, hence an exception for

level4 = level3.append(gammalib.GXmlText("This is a nested text"))

#5 - 02/10/2015 10:55 PM - Knödlseder Jürgen

- % Done changed from 50 to 90

Forbid now also to append to comment and processing instruction node. I think I got now all the issues.

#6 - 02/10/2015 11:13 PM - Knödlseder Jürgen

- Status changed from In Progress to Closed

- % Done changed from 90 to 100

- Remaining (hours) set to 0.0

Merged into devel