

EML - Bug #2272

Base datatypes in eml-attribute BoundsGroup preclude scientific notation

11/14/2005 09:41 AM - Wade Sheldon

Status:	Resolved	Start date:	11/14/2005
Priority:	Immediate	Due date:	
Assignee:	Matt Jones	% Done:	0%
Category:	eml - general bugs	Estimated time:	0.00 hour
Target version:	EML2.1.0	Spent time:	0.00 hour
Bugzilla-Id:	2272		

Description

The 'minimum' and 'maximum' elements defined in the eml-attribute BoundsGroup are currently based on the xml-schema data type 'xs:decimal'; however, this data type does not support scientific notation so metadata creators are forced to encode very large (or small) bounds in expanded decimal notation. This represents an unnecessary burden and could introduce problems if authors are required to display more digits than are known to be significant. Changing the base data type to 'xs:float' would accommodate both decimal and scientific notations so would not introduce backward compatibility issues.

History

#1 - 09/18/2008 03:14 PM - Margaret O'Brien

The advantage of using xs:decimal is that it's precise, and xs:float is not (and I presume, the original intent in making this choice?). We could switch this type now to ease the burden on document-authors, but it seems that float is not really the best representation of these values, and maybe we should not suggest so.

There might be another alternative forthcoming -- XML Schema 1.1 (still a working draft) is planned to have another data type "precisionDecimal" which corresponds to a IEEE type, "floating-point decimal" with features of both - ie, the values and notation of float, but treated as decimal in arithmetic and storage

What should we do? relax the type now to xs:float, and consider xs:precisionDecimal when it is available? or just wait?

links:

<http://www.w3.org/TR/xmlschema11-2/#precisionDecimal>
<http://www.w3.org/XML/2007/dc.pd.html> (and its references)
<http://754r.ucbtest.org/>

#2 - 09/22/2008 12:20 PM - Margaret O'Brien

targeting for 2.1.0, although may drop back to unspecified.

#3 - 10/01/2008 04:26 PM - Margaret O'Brien

schema bugs targeted for 2.1.0 set to P1

#4 - 10/02/2008 04:37 PM - Margaret O'Brien

in eml 2.1.0, the BoundsGroup's limits will be retyped to xs:float.

See bug [#3499](#): in the future, this group may be retyped again, if schema-1.1 includes a new data type called xs:precisionDecimal

#5 - 03/27/2013 02:19 PM - Redmine Admin

Original Bugzilla ID was 2272