All Fields marked with * are mandatory.

Change Request #:	**203**
Assigned OGC Document #:	**12-015**
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Document Name/Version:	*WFS / 2.0
OGC Project Document:	*09-025r1

If this is a revision of a previous submission and you have a Change Request Number, then check here: ☐

Enter the CR number here:

Enter the Revsion Number that you are revising here:

Title:	*Add support for unit of measure conversions
Source:	*WFS-FES.SWG
Work item code:	
Category:	* B (Addition of feature)

Reason for change:	* The current WFS standard has no support for unit of measure conversions.
Summary of change:	* Change 7.9.2.5.3.5 Units of measure handling to read: This International Standard only supports conversions between units of measure if the following conditions are met: * The implementation has indicated in its GetCapabilities document that it supports unit of measure conversions * The GetFeature request includes the parameter UOM_CONVERSIONS set to the value of 1 or true Change Filter encoding specification to modify the FilterCapabilities element to include a flag indicating whether a service implementation can support unit of measure conversions (as described above) Change Filter encoding specification to include a note saying that the LiteralType can include a complex gml measure type (which has a UOM attribute). The specification already allows this but it would be good to state it explicitly. Change 7.9.2.3 - Table 8 - Keywords for Ad hoc query KVP-encoding to include: | UOM_CONVERSIONS | O | See 7.9.2.5.3.5 |

Consequences if not approved:	WFS Filters, from a scientific point of view, lack interoperability and place excessive load on the client. Without being aware of how the WFS stores its underlying data, a client must make first make 'exploratory' queries in order to make a best guess at the underlying unit of measure. This must be done before a client can actually make a filter query to get the data they are really interested in. It's analogous to the server not being able to translate between spatial reference systems, which is strange when spatial transformations are essentially the same class of problem as unit of measure conversions.
Clauses affected:	* 7.9.2.5.3.5 - Units of measure handling 7.9.2.3 - Table 8 - Keywords for Ad hoc query KVP-encoding Additionally the Filter encoding specification () will need changes
Additional Documents affected:	09-026r1 - OpenGIS Filter Encoding 2.0 Encoding Standard
Supporting Documentation:	A thorough overview of the existing problem and (unworkable) workarounds is documented at: https://twiki.auscope.org/wiki/Grid/AuscopePortalUOMFilters
Comments:	
Status:	Assigned
Assigned To:	WFS/FES SWG
Disposition:	Referred and Posted