Mulgara - Bug #34

NUC-disjunction fails when one term is unconstrained.

11/14/2006 04:02 AM - ronald -

Status:	Closed	**Start date:**	
Priority:	High	**Due date:**	
Assignee:	Andrae Muys -	**% Done:**	0%
Category:	Mulgara	**Estimated time:**	0.00 hour
Target version:			
Resolution:	fixed		

Description

```
The following is a minimal example that triggers the bug:
<br/>

<br/>
    create &lt;<a href="local:///topazproject#test&gt;;">
local:///topazproject#test&amp;gt;;</a>
<br/>
    insert
<br/>
      &lt;foo:one&gt; &lt;p:type&gt; &lt;t:p&gt;
<br/>
      &lt;foo:one&gt; &lt;p:hasA&gt; &lt;bar:one&gt;
<br/>
      &lt;foo:one&gt; &lt;p:hasB&gt; 'mollusks'
<br/>

<br/>
      &lt;foo:two&gt; &lt;p:type&gt; &lt;t:p&gt;
<br/>
      &lt;foo:two&gt; &lt;p:hasA&gt; &lt;bar:two&gt;
<br/>
      &lt;foo:two&gt; &lt;p:hasB&gt; 'mollusks'
<br/>

<br/>
      into &lt;<a href="local:///topazproject#test&gt;;">
local:///topazproject#test&amp;gt;;</a>
<br/>

<br/>
    select $a $t from &lt;<a href="local:///topazproject#test">
local:///topazproject#test</a>&gt; where
<br/>
      $b &lt;p:type&gt; &lt;t:p&gt; and
<br/>
      $b &lt;p:hasA&gt; $a and
<br/>
      (
<br/>
        ($b &lt;p:hasB&gt; 'mollusks' and $t &lt;<a href=
"http://mulgara.org/mulgara#is">http://mulgara.org/mulgara#is</a>&gt; '0')
<br/>
        or
<br/>
        ($t &lt;<a href="http://mulgara.org/mulgara#is">
http://mulgara.org/mulgara#is</a>&gt; '1')
<br/>
      );
<br/>

<br/>
```

```
The result is
<br/>

<br/>
  QueryException thrown in resolve:
<br/>
  org.mulgara.query.QueryException: Failed to resolve query
<br/>
  
Caused by: org.mulgara.query.TuplesException: Prefix failed to meet defined minimum prefix
<br/>
```

History

#1 - 04/17/2007 12:01 PM - Andrae Muys -

```
Testing indicates that this is definately a problem with the handling of non-union compatible disjunction.
<br/>

<br/>
Specifically this bug only shows up in a query that contains a conjunction with at least two normal constraint
s and a nuc-disj.
<br/>

<br/>
The product/filter implementation currently used to provide correct joins in the presence of nuc-disj suppress
es the prefixing of variables that may be unbound in one of the joins arguments.  Unfortunately the join optim
isation has committed [[UnboundJoin]] to providing a prefix from the first to the second normal constraint.  T
he supression of this prefix then triggers the [[TuplesException]] above.
<br/>

<br/>
The base query shape required to trigger this is
<br/>

<br/>
Constraint($var) and Constraint($var) and ( Constraint($var) or Constraint(!var) )
<br/>

<br/>
The Constraint(!var) causes the [[UnboundJoin]] to supress the use of $var in *all* prefixing.
<br/>

<br/>
Fixing this will be fun.
```

#2 - 04/19/2007 06:52 AM - Andrae Muys -

```
Confident now that this bug is fixed and fixed correctly.
<br/>

<br/>
There is code in [[TuplesOperations]] that catches the case where we could assume a prefix inappropriately (vi
a definePrefix) that may not be available due to an unbound variable.
```

#3 - 04/20/2007 05:30 AM - ronald -

```
This works for us. We tested the original query that lead to this bug report. Many thanks.
```