

Provide Parsers in a consistent fashion

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|--------------------|---|
| Motivation: | Be consistent about parsing. |
| Contact: | Jody Garnett |
| Tracker: | http://jira.codehaus.org/browse/GEOT-1200 |
| Tagline: | lexify this (bad object pun) |

This page represents the **current** plan; for discussion please check the tracker link above.

Description

We have both some text parsing (CQL and WKT) and XML parsing (filter, gml) incoming. This proposal outlines how we can be consistent in terms of package structure.

- CQL - Catalogue Query Language - currently an unsupported module
- XML - Extensible Markup Language - we are forced to run our own parser due to scaling issues
- WKT - Well Known Text - we already support CRS definition, we need one for Parsing Geometry

How can we be consistent:

1. Make a "default" useful parser available as a utility class
 - CQL
 - CRS.parseWKT
 - JTS.parseWKT
 - Spatial.parseWKT (should be method compatible with JTS utility class)
2. Hide details in a parser package (that casual users do not need to import)
3. Be consistent with package names (not sure how to handle version differences)
 - org.geotools.filter.text.cql2 - parser code for CQL
 - org.geotools.geometry.text.wkt - parser code for WKT
 - org.geotools.filter.xml.filter1_0 - filter 1.0 bindings (requires gml2)
 - org.geotools.filter.xml.filter1_1 - Filter 1.1 bindings (requires gml3)
 - org.geotools.geometry.xml.gml2 - geometry bindings for latest GML2
 - org.geotools.geometry.xml.gml3 - geometry bindings for latest GML3

package names for the gory details

Of the format org.geotools.SUBJECT.PARSER.SPECIFICATION:

- SUBJECT - is the **output** being produced (ie style, geometry, referencing, feature, filter, etc...)
- PARSER - is the kind of "input" being considered (ie text or xml)
- SPECIFICATION - (optional) if you need to get more specific on the kind of "input" you can quote the specification here.

Please note this is for the gory details **only**; your users should not have to import anything from these packages. You may be stuck making some of the content public (especially for XML callbacks) - but none of your example/user code should be forced into an import.



Module breakdown of xml binding plugins is not in scope - we would need a separate proposal.

Status

Voting in process - closes April 2nd.

Discussed on the email list and in a weekly IRC meeting ([2007/03/19/IRC Meeting - 19 March 2007](#)).

Votes are currently being collected:

- [Andrea Aime](#) +1
- [Chris Holmes](#)
- Ian Turton
- [Jody Garnett](#) +1
- Martin Desruisseaux
- [Richard Gould](#) +1
- [Simone Giannecchini](#)

It would be nice to have this approved this week so the work can be in the release this month.

dynamictasklist: task list macros declared inside wiki-markup macros are not supported

Resources

| Name | Size | Creator | Creation Date | Comment |
|------|------|---------|---------------|---------|
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Tasks

| | | | | | | | | | |
|--|-------------|---|------|---|---------|---|--------------------------|---|------------------|
| | no progress | ✓ | done | ✗ | impeded | ⚠ | lack mandate /funds/time | ? | volunteer needed |
|--|-------------|---|------|---|---------|---|--------------------------|---|------------------|

A target release is also provided for each milestone.

| Milestone 1 | 2.4-M1 | |
|-------------|--------|---------------------------------------|
| | ✓ | Move cq1 to library |
| | ✓ | Added org.geotools.geometry.WKTParser |
| | | |
| | ✓ | test and release |
| | ✓ | update documentation |

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|--------------------|---------------|---------------------------|
| Milestone 2 | 2.5-M1 | |
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| | | |
| | | test and release |
| | | update documentation |
| Milestone 3 | 2.5.0 | |
| | | verify user documentation |
| | | include in release |

API Changes

BEFORE

This change introduces new API:

Example.java

```
public void exampleMethod( ... ){  
    Point point =  
    primitiveFactory.createPoint( 32.0, 32.0 );  
}
```

AFTER

Example.java

```
import org.geotools.geometry.iso.Spatial;

// holds the WKT parser but is not needed by
// client code
// import org.geotools.geometry.text.wkt

/**
 * Note geometryFactory includes CRS
 * information already
 */
public void exampleMethod( ... ){
    Spatial spatial = new Spatial(
    geometryFactory, primitiveFactory,
    positionFactory );
    Point = (Point) Spatial.parseWKT( "POINT
32 32" );
}
```

Documentation Changes

Website:

- Update [Upgrade to 2.4](#) instructions (if xml parsing packages are changed)

Developers Guide:

- Update description package convention to describe how additional parsers can be added.

User Guide:

- CQL examples look great!
- CRS examples needed
- Spatial examples needed

User Manual:

- Check with Acuster to see if demo can be updated

Issue Tracker:

- Close jira when completed