

Switch from JSR-108 to JSR-275 for Units

Motivation:	JSR-108 has been replaced
Contact:	Martin Desruisseaux
Tracker:	http://jira.codehaus.org/browse/GEOT-1266
Tagline:	JSR-275 is ready

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Description

We make use of a Units library for keeping track of the difference between meters and feet etc... We have been making use of an official JSR-108 jar.

There were two replacements available once we upgraded to Java 5

- [JScience](#)
- [JSR-275](#)

The JSR-275 jar is now officially available:

- <http://download.java.net/maven/2/net/java/dev/jsr-275/>

Status

The work has been completed.

Voting results:

- [Andrea Aime](#) +1
- [Ian Turton](#)
- [Justin Deoliveira](#)
- [Jody Garnett](#) +1
- [Martin Desruisseaux](#) +1
- [Simone Gianecchini](#) +0

Tasks

This section is used to make sure your proposal is complete (did you remember documentation?) and has enough paid or volunteer time lined up to be a success.

no progress		done		impeded		lack mandate/funds/time		volunteer needed
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1. Fix the dependency in GeoAPI, and deploy a new jar
2. Fix any and all compile errors (mostly import statements; but may make use of the Quantity package with Java 5 generics and catch a few mistakes)
3. Update the user guide; there is very little documentation on Units use so this will not take long.

API Changes

Change the import; use Quantity package.

There is one additional change related to Converter. I will document it in this page when I will make this change in GeoTools. Since I don't think that many use Converter directly, it will probably impact few peoples.

BEFORE

```
import javax.units.SI;
import javax.units.NonSI;
import javax.units.Unit;
import javax.units.UnitFormat;
import javax.units.Converter;
import javax.units.ConversionException;

Unit PPM = Unit.ONE.multiply(1E-6);
UnitFormat.label(PPM, "ppm");
```

AFTER

```
import javax.measure.unit.SI;
import javax.measure.unit.NonSI;
import javax.measure.unit.Unit;
import javax.measure.unit.UnitFormat;
import javax.measure.converter.UnitConverter;
import javax.measure.converter.ConversionException;

Unit PPM = Unit.ONE.times(1E-6);
UnitFormat.getInstance().label(PPM, "ppm");
```

Note the class name change from `Converter` to `UnitConverter`.

Documentation Changes

We will need to change the following:

- Developers Guide references to JSR-108
- User Guide references to JSR-108