

# Switch from JSR-108 to JSR-275 for Units

<b>Motivation:</b>	JSR-108 has been replaced
<b>Contact:</b>	<a href="#">Martin Desruisseaux</a>
<b>Tracker:</b>	<a href="http://jira.codehaus.org/browse/GEOT-1266">http://jira.codehaus.org/browse/GEOT-1266</a>
<b>Tagline:</b>	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.

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	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