Cleaning up dependencies between various modules and coverage

Motivation:	GeoTools codebas has some strange dependencies (main depends on coverage??) as well as some old unused code floating aroundl
Contact:	Simone Giannecchini
Tracker:	http://jira.codehaus.org/browse/GEOT-1148
Tagline:	a good main is hard to find

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

Description

This proposal is all about moving some code into a more appropriate module:

- coverage implementations in **main** move to **coverage** module
- mapcontext implementations in **main** go to **rendering** module
- move all the ImageIO plugins and GC plugins to its own directories
- old GridCoverageExchange implementations go to the recycle bin
- renderer is using a lot of classes that atually act as adapters between JTS gemetries and Java2D Shapes, my goal is to move this classes n module main in order to allow people to leverage on them.

I am planning on achieving these goals in two steps. First I want to finish the first four tasks which would just clean up and reorganize a bit code between core modules. Once this step pis done and reviewed, I would like to move all the JTS-to_Shape adapters to main in order to be able to leverage on them from other modules (like for doing Region of Interestes in Coverages).

This change is similar to the recent requests to break out **data** and **jdbc** modules from **main**; this time however an appropriate location is already available.

Status

This proposal has been submitted, simboss is working on it. Here below you can find a tasks list that can be used to track the advancement of this work.

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

Resources

File	Modified ▲
	No files shared here yet.

Tasks

	no progress	✅	done	❌	impeded	⚠️	lack mandate/funds/time	❓	volunteer needed

A target release is also provided for each milestone.

Milestone 1	**2.4-M0**	**Move to Coverage Module**
✅	Simone Giannecchini	Identify candidate coverage & test cases

		consult with module maintainer
		svn mv
		test and release
		update documentation
Milestone 2	**2.4-M0**	**Move to Render Module**
✅	Simone Giannecchini	Identify candidate coverage & test cases
⚠️	Simone Giannecchini	consult with module maintainer
		svn mv
		test and release
		update documentation

API Changes

Before	After	
org.geotools.data.coverage.grid.*	org.geotools.coverage.grid.io.*	
org.geotools.data.coverage.grid.file, org.geotools.data.coverage.grid.stream	**DISMISSED**	
org.geotools.coverage.io.AbstractGridCoverageReader.java, org.geotools.coverage.io.AmbiguousMetadataException.java, org.geotools.coverage.io.ExoreferencedGridCoverageReader.java, org.geotools.coverage.io.MetadataBuilder.java, org.geotools.coverage.io.MetadataException.java, org.geotools.coverage.io.MissingMetadataException.java	Moved under spike/exoreferenced waiting for Martin to review	
org.geotools.image.io.RawBinaryImageReader, org.geotools.image.io.RawBinaryImageReadParam	**DISMISSED**	
org.geotools.resources.image.CoverageUtilities	org.geotools.resources.coverage.CoverageUtilities	
org.geotools.image.imageio.*	org.geotools.coverage.grid.io.imageio.*	
org.geotools.image.io.SimpleImageReader subclasses	Moved to spike/simpleimagereader waiting for Martin to review	
org.geotools.map.*	Moved to renderer	
org.geotools.data.DataUtilities#wrapGc(GridCoverage gridCoverage), org.geotools.data.DataUtilities#wrapGcReader(AbstractGridCoverage2DReader gridCoverageReader, GeneralParameterValue[] params)	Moved to org.geotools.resources.coverage.CoverageUtilities	
ext/coverage_development/imageio/*	Move to spike/imageio/*	

Documentation Changes

Website:

- Update Module matrix
- Update Upgrade to 2.4 instructions

Developers Guide:

- Update description of layered architecture

User Guide:

- check

User Manual:

- check

Issue Tracker:

- Check for bugs against "main" that can now change to the "coverage" or "renderer" component.