

IfSQ Level-2 Inspection Report

Client	MinELenI
Principal	drs. R.L. Groenewegen
Reference	2013.OSQR.0014
Project	AERIUS-II
Date	February 18, 2013

Introduction

OSQR, The OSQR Group bv, was commissioned by Software Quality Measurement and Improvement bv (SQMI) on behalf of Ministerie van Economische Zaken, Landbouw en Innovatie to carry out an inspection of the Java source code delivered for inspection on February 4, 2013 during February, 2013.

Summary of Results

A total of 19,645 lines of code were inspected and a total of 138 IfSQ Level-2 Line Defects were recorded. This amounts to a ratio of c. 7 line defects per 1000 lines of code, which is grounds for an IfSQ Level-2 B-Rating.

Conclusions

It is clear that the software is still under development: there are a few strong indications that the software is not complete [WIP-1 and WIP-2]. The isolation of numeric literals also needs attention [SPM-1].

The presence of incomplete conditional statements has been closely correlated with missing program logic: attention should be paid to those "if" statements which do not have an "else" clause, particularly those with an "else if" clause [DP-3].

- **Objectivity**—The objectivity of these conclusions can be enhanced by conducting interviews with developers of the software.
- **Disclosure to Third Parties**—These conclusions are exclusively addressed to Software Quality Measurement and Improvement bv (SQMI) on behalf of Ministerie van Economische Zaken, Landbouw en Innovatie and must be interpreted in the context of the inspected source code and the notes and remarks which were recorded on copies of that source code during the inspection.

Signature

Signed,
Utrecht, February 18, 2013
The OSQR Group bv

Graham Bolton, Director

Results

Overall Summary			
Total number of line defects			138
Total number of lines inspected			19,645
Average number of line defects per 1000 lines			c. 7
IfSQ Level-2 Rating for the Inspected Software			B-Rating
Totals per Defect Indicator Category			
Work In Progress (WIP)			
WIP-1	Vague "To Do"	23 Line Defects	1+ per 1000 lines
WIP-2	Disabled Code	40 Line Defects	2+ per 1000 lines
WIP-3	Empty Statement Block	8 Line Defects	0+ per 1000 lines
Structured Programming (SP)			
SP-1	Routine Too Long	0 Line Defects	c. 0 per 1000 lines
SP-2	Nesting Too Deep	0 Line Defects	c. 0 per 1000 lines
SP-3	Routine Too Complex	0 Line Defects	c. 0 per 1000 lines
Single Point of Maintenance (SPM)			
SPM-1	Magic Numbers	58 Line Defects	c. 3 per 1000 lines
SPM-2	Magic Strings	0 Line Defects	c. 0 per 1000 lines
SPM-3	Copy/Paste Programming	0 Line Defects	c. 0 per 1000 lines
Defensive Programming (DP)			
DP-1	Parameter Not Checked	0 Line Defects	c. 0 per 1000 lines
DP-2	Status Ignored After Call	0 Line Defects	c. 0 per 1000 lines
DP-3	Unexpected State Not Trapped	9 Line Defects	0+ per 1000 lines

Subsystem Results

Results per Inspected Subsystem		Defect Indicators		Assessment
Name	Lines of Code	Line Defect Count	Per 1000 Lines	IfSQ Rating
wui	9445	91	10-	B
tasks	1808	17	c. 9	B
shared	2331	18	c. 8	B
common	1303	3	2+	A*
taskmanager	4758	9	2-	AA*

Results per Module

Results per Inspected Module		Defect Indicators		Assessment
Name	Lines of Code	Line Defect Count	Per 1000 Lines	IfSQ Rating
Results for wui	9445	91	10-	B
/aerius-wui-client/src/main/java/org/gwtopenmaps/openlayers/client/format/WMSCapabilitiesImpl.java	15	6	c. 400	FF*
/aerius-wui-client/src/main/java/org/gwtopenmaps/openlayers/client/control/ZoomOutImpl.java	20	6	c. 300	FF*
/aerius-wui-test/src/test/java/nl/overheid/aerius/wui/test/AbstractTestBase.java	185	11	c. 59	E*
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/calculator/geo/CalculationMarker.java	81	4	c. 49	D*
/aerius-wui-test/src/test/java/nl/overheid/aerius/wui/test/FunctionalTestBase.java	858	29	c. 34	D*
/aerius-wui-server/src/main/java/nl/overheid/aerius/server/servlet/SearchServiceImpl.java	104	3	c. 29	D*
/aerius-wui-server/src/main/java/nl/overheid/aerius/server/calculation/service/OPSTaskHandler.java	83	2	c. 24	D*
/aerius-wui-client/src/main/java/nl/overheid/aerius/geo/client/VectorInteractionLayer.java	49	1	20+	D*
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/calculator/geo/AeriusMarker.java	151	3	20-	C*
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/main/widget/NotificationPanel.java	174	3	c. 17	C*
/aerius-wui-test/src/test/java/nl/overheid/aerius/wui/calculator/LocationViewTest.java	61	1	c. 16	C*
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/calculator/popups/LegendPanel.java	126	2	c. 16	C*
/aerius-wui-client/src/main/java/nl/overheid/aerius/geo/client/NavigationWidget.java	138	2	c. 14	C*
/aerius-wui-server/src/main/java/nl/overheid/aerius/server/calculation/chunking/NitrogenAmmoniaSubstanceCalculator.java	76	1	c. 13	C*
/aerius-wui-client/src/main/java/org/gwtopenmaps/openlayers/client/layer/Vector.java	338	4	c. 12	C*
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/main/widget/progress/ProgressPanelBar.java	94	1	c. 11	C*
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/calculator/geo/CalculatorResultLayerWrapper.java	101	1	10-	B*
/aerius-wui-server/src/main/java/nl/overheid/aerius/server/calculation/chunking/LinearSegregationChunker.java	327	3	c. 9	B*
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/calculator/SourceDetailViewImpl.java	230	2	c. 9	B*
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/calculator/ProgressPresenter.java	131	1	c. 8	B*
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/calculator/CalculationPointPresenter.java	172	1	c. 6	B*
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/calculator/popups/LayerPanel.java	281	1	c. 4	A*
/aerius-wui-client/src/main/java/com/google/gwt/user/client/ui/CustomButton.java	1108	3	c. 3	A*
/aerius-wui-server/src/main/java/nl/overheid/aerius/server/calculation/service/development/AbstractAsyncListener.java	52	0	c. 0	AAA*
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/main/comet/AeriusAtmosphereGWTSerializer.java	27	0	c. 0	AAA*
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/main/util/AppAsyncCallback.java	48	0	c. 0	AAA*
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/main/ApplicationDisplay.java	37	0	c. 0	AAA*
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/main/ui/ApplicationDisplayImpl.java	65	0	c. 0	AAA*
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/calculator/processor/CalculationEventAgent.java	88	0	c. 0	AAA*
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/main/ui/overview/CalculationPointOverview.java	156	0	c. 0	AAA*
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/calculator/CalculationPointViewImpl.java	140	0	c. 0	AAA*
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/calculator/processor/CalculationProcessor.java	255	0	c. 0	AAA*
/aerius-wui-server/src/main/java/nl/overheid/aerius/server/calculation/chunking/CalculatorFactory.java	113	0	c. 0	AAA*
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/calculator/CalculatorMap.java	31	0	c. 0	AAA*

/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/calculator/geo/CalculatorReceptorLayer.java	66	0	c. 0	AAA*
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/calculator/CalculatorView.java	65	0	c. 0	AAA*
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/main/event/ConfirmEvent.java	73	0	c. 0	AAA*
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/calculator/geo/DepositionLayer.java	31	0	c. 0	AAA*
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/calculator/geo/DepositionLegend.java	47	0	c. 0	AAA*
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/calculator/popups/DepositionPanel.java	107	0	c. 0	AAA*
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/calculator/export/ExportDialogController.java	82	0	c. 0	AAA*
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/main/ui/source/FarmLodgingEditor.java	157	0	c. 0	AAA*
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/calculator/popups/HabitatTypeTable.java	71	0	c. 0	AAA*
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/calculator/popups/HabitatTypeVector.java	97	0	c. 0	AAA*
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/calculator/importer/ImportDialogPanel.java	101	0	c. 0	AAA*
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/calculator/popups/InfoPanelPresenter.java	112	0	c. 0	AAA*
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/calculator/geo/LabelledMarkerItem.java	74	0	c. 0	AAA*
/aerius-wui-client/src/main/java/nl/overheid/aerius/geo/client/events/LayerChangeEvent.java	126	0	c. 0	AAA*
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/calculator/popups/LayerPanelItem.java	178	0	c. 0	AAA*
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/main/widget/ListButton.java	157	0	c. 0	AAA*
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/calculator/LocationViewImpl.java	168	0	c. 0	AAA*
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/main/i18n/M.java	112	0	c. 0	AAA*
/aerius-wui-client/src/main/java/nl/overheid/aerius/geo/client/MapLayer.java	274	0	c. 0	AAA*
/aerius-wui-client/src/main/java/nl/overheid/aerius/geo/client/MeasureInteractionLayer.java	65	0	c. 0	AAA*
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/calculator/popups/NaturalMonumentInfoPanel.java	49	0	c. 0	AAA*
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/main/util/ParamUtil.java	38	0	c. 0	AAA*
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/main/widget/progress/ProgressPanelView.java	32	0	c. 0	AAA*
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/main/geo/ReceptorChangeEvent.java	82	0	c. 0	AAA*
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/main/ui/source/RoadEmissionsEditor.java	221	0	c. 0	AAA*
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/main/util/scaling/ScalingUtil.java	37	0	c. 0	AAA*
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/main/resources/SectorImageResources.java	111	0	c. 0	AAA*
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/main/widget/SingleSelectedValueEditor.java	55	0	c. 0	AAA*
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/calculator/SourceDetailView.java	79	0	c. 0	AAA*
/aerius-wui-server/src/main/java/nl/overheid/aerius/server/calculation/chunking/SubstanceCalculator.java	41	0	c. 0	AAA*
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/main/event/SubstanceChangeEvent.java	90	0	c. 0	AAA*
/aerius-wui-server/src/main/java/nl/overheid/aerius/server/servlet/UploadImportServlet.java	380	0	c. 0	AAA*
/aerius-wui-client/src/main/java/org/gwtopenmaps/openlayers/client/format/VMSCapabilities.java	35	0	c. 0	AAA*
/aerius-wui-server/src/main/java/nl/overheid/aerius/server/service/sld/VMSRule.java	117	0	c. 0	AAA*
Results for tasks	1808	17	c. 9	B
/aerius-tasks/src/main/java/nl/overheid/aerius/paa/runner/DepositionSummaryDataTable.java	177	7	c. 40	D*
/aerius-tasks/src/main/java/nl/overheid/aerius/pdf/format/PDFTableDepositionFormatter.java	53	1	c. 19	C*
/aerius-tasks/src/main/java/nl/overheid/aerius/pdf/format/PDFTablePostTextFormatter.java	55	1	c. 18	C*
/aerius-tasks/src/main/java/nl/overheid/aerius/pdf/format/PDFTablePreTextFormatter.java	55	1	c. 18	C*
/aerius-tasks/src/test/java/nl/overheid/aerius/paa/runner/PAAExportTest.java	189	3	c. 16	C*
/aerius-tasks/src/main/java/nl/overheid/aerius/pdf/format/PDFTableEmptyTextFormatter.java	70	1	c. 14	C*
/aerius-tasks/src/main/java/nl/overheid/aerius/pdf/cell/PDFCellProcessor.java	78	1	c. 13	C*
/aerius-tasks/src/main/java/nl/overheid/aerius/pdf/format/PDFTableDataFormatter.java	91	1	c. 11	C*
/aerius-tasks/src/main/java/nl/overheid/aerius/pdf/format/	101	1	c. 10	D*

PDFTableNumberFormatter.java	101	1	10-	B
/aerius-tasks/src/main/java/nl/overheid/aerius/pdf/cell/ ColspanCellProcessor.java	41	0	c. 0	AAA*
/aerius-tasks/src/main/java/nl/overheid/aerius/paa/runner/ DepositionMarkerLayers.java	194	0	c. 0	AAA*
/aerius-tasks/src/main/java/nl/overheid/aerius/ops/runner/ ExecuteOPS.java	91	0	c. 0	AAA*
/aerius-tasks/src/main/java/nl/overheid/aerius/paa/runner/ FarmSourceDataTable.java	125	0	c. 0	AAA*
/aerius-tasks/src/main/java/nl/overheid/aerius/pdf/ PDFImageLayer.java	118	0	c. 0	AAA*
/aerius-tasks/src/main/java/nl/overheid/aerius/pdf/ PDFImageVMMLayer.java	87	0	c. 0	AAA*
/aerius-tasks/src/test/java/nl/overheid/aerius/ops/runner/ ResultDataFileReaderHelper.java	56	0	c. 0	AAA*
/aerius-tasks/src/test/java/nl/overheid/aerius/geo/ TMSLayer2ImageTest.java	126	0	c. 0	AAA*
/aerius-tasks/src/main/java/nl/overheid/aerius/worker/configuration/ WorkerConnectionConfiguration.java	61	0	c. 0	AAA*
/aerius-tasks/src/main/java/nl/overheid/aerius/worker/exception/ WorkerProcessException.java	40	0	c. 0	AAA*
Results for shared	2331	18	c. 8	B
/aerius-shared/src/main/java/nl/aerius_app/calculator/shared/service/shape/ EmissionShapeToPointConverterFactory.java	65	11	c. 169	F*
/aerius-shared/src/main/java/nl/overheid/aerius/shared/domain/binary/ BinarySearchUtil.java	76	2	c. 26	D*
/aerius-shared/src/main/java/nl/overheid/aerius/shared/domain/scenario/ ExportStatus.java	93	2	c. 22	D*
/aerius-shared/src/main/java/nl/overheid/aerius/shared/domain/geo/ AeriusLayerProperties.java	100	1	c. 10	C*
/aerius-shared/src/main/java/nl/overheid/aerius/shared/domain/source/ GenericEmissionsValues.java	107	1	c. 9	B*
/aerius-shared/src/main/java/nl/overheid/aerius/shared/domain/source/ EmissionSource.java	193	1	5+	B*
/aerius-shared/src/main/java/nl/overheid/aerius/shared/domain/ AverageUtil.java	39	0	c. 0	AAA*
/aerius-shared/src/main/java/nl/overheid/aerius/shared/service/ CalculateServiceAsync.java	42	0	c. 0	AAA*
/aerius-shared/src/main/java/nl/overheid/aerius/shared/domain/scenario/ CalculationInitResult.java	49	0	c. 0	AAA*
/aerius-shared/src/main/java/nl/overheid/aerius/shared/domain/scenario/ CalculationOptions.java	141	0	c. 0	AAA*
/aerius-shared/src/main/java/nl/overheid/aerius/shared/domain/deposition/ CalculationPointOPSCConverter.java	26	0	c. 0	AAA*
/aerius-shared/src/main/java/nl/overheid/aerius/shared/service/ ContextService.java	46	0	c. 0	AAA*
/aerius-shared/src/main/java/nl/overheid/aerius/shared/service/ ContextServiceAsync.java	32	0	c. 0	AAA*
/aerius-shared/src/main/java/nl/overheid/aerius/shared/domain/ DepositionEnum.java	95	0	c. 0	AAA*
/aerius-shared/src/main/java/nl/overheid/aerius/shared/domain/info/ DepositionInfo.java	48	0	c. 0	AAA*
/aerius-shared/src/main/java/nl/overheid/aerius/shared/domain/sector/ EmissionCalculationMethod.java	57	0	c. 0	AAA*
/aerius-shared/src/main/java/nl/overheid/aerius/shared/domain/source/ EmissionSourceOPSCConverter.java	93	0	c. 0	AAA*
/aerius-shared/src/test/java/nl/overheid/aerius/shared/domain/source/ EmissionSourceOPSCConverterTest.java	128	0	c. 0	AAA*
/aerius-shared/src/test/java/nl/overheid/aerius/shared/domain/source/ EmissionSourceTest.java	74	0	c. 0	AAA*
/aerius-shared/src/main/java/nl/overheid/aerius/shared/domain/info/ HabitatInfo.java	75	0	c. 0	AAA*
/aerius-shared/src/main/java/nl/overheid/aerius/shared/domain/binary/ HasId.java	27	0	c. 0	AAA*
/aerius-shared/src/main/java/nl/overheid/aerius/shared/domain/geo/filter/ HexagonGridFilterGroup.java	53	0	c. 0	AAA*
/aerius-shared/src/test/java/nl/overheid/aerius/shared/domain/geo/ HexagonUtilTest.java	94	0	c. 0	AAA*
/aerius-shared/src/main/java/nl/overheid/aerius/shared/ ImportType.java	43	0	c. 0	AAA*
/aerius-shared/src/main/java/nl/overheid/aerius/shared/exception/ InvalidInputException.java	51	0	c. 0	AAA*
/aerius-shared/src/main/java/nl/overheid/aerius/shared/domain/ops/ OPSOutputData.java	59	0	c. 0	AAA*
/aerius-shared/src/main/java/nl/overheid/aerius/shared/exception/ ServerErrorCodes.java	118	0	c. 0	AAA*
/aerius-shared/src/main/java/nl/overheid/aerius/shared/test/ TestId.java	150	0	c. 0	AAA*
/aerius-shared/src/main/java/nl/overheid/aerius/geo/shared/ VMSPProperties.java	87	0	c. 0	AAA*
/aerius-shared/src/main/java/nl/overheid/aerius/geo/shared/ YearRange.java	70	0	c. 0	AAA*
Results for common	1303	3	2+	A*
/aerius-common/src/main/java/nl/overheid/aerius/db/ ContextRepository.java	84	1	c. 12	C*
/aerius-common/src/main/java/nl/overheid/aerius/gml/v1_0/util/ GMLGeometryUtil.java	193	1	5+	B*
/aerius-common/src/main/java/nl/overheid/aerius/db/ ConstantRepository.java	207	1	5-	A*
/aerius-common/src/main/java/nl/overheid/aerius/gml/v1_0/source/lodging/ AbstractFarmLodging.java	40	0	c. 0	AAA*
/aerius-common/src/main/java/nl/overheid/aerius/io/ AbstractLineReader.java	134	0	c. 0	AAA*

/aerius-common/src/main/java/nl/overheid/aerius/gml/v1_0/CalculatorNamespacePrefixMapper.java	41	0	c. 0	AAA*
/aerius-common/src/main/java/nl/overheid/aerius/gml/v1_0/source/EmissionSourceCharacteristics.java	83	0	c. 0	AAA*
/aerius-common/src/main/java/nl/overheid/aerius/gml/v1_0/geo/GMLPoint.java	53	0	c. 0	AAA*
/aerius-common/src/main/java/nl/overheid/aerius/paa/PAAImport.java	86	0	c. 0	AAA*
/aerius-common/src/main/java/nl/overheid/aerius/paa/PAAIOException.java	61	0	c. 0	AAA*
/aerius-common/src/main/java/nl/overheid/aerius/gml/v1_0/geo/Point.java	43	0	c. 0	AAA*
/aerius-common/src/main/java/nl/overheid/aerius/ops/io/ReceptorDataFileWriter.java	62	0	c. 0	AAA*
/aerius-common/src/test/java/nl/overheid/aerius/ops/io/ReceptorDataFileWriterTest.java	74	0	c. 0	AAA*
/aerius-common/src/main/java/nl/overheid/aerius/mail/SendEmail.java	142	0	c. 0	AAA*
Results for taskmanager	4758	9	2-	AA*
/aerius-taskmanager-client/test/java/nl/overheid/aerius/taskmanager/client/AbstractMQTest.java	101	3	c. 30	D*
/aerius-taskmanager/src/test/java/nl/overheid/aerius/taskmanager/TaskManagerFlowTest.java	358	3	c. 8	B*
/aerius-taskmanager-client/src/main/java/nl/overheid/aerius/taskmanager/client/TaskManagerClient.java	294	1	c. 3	A*
/aerius-taskmanager/src/main/java/nl/overheid/aerius/taskmanager/mq/RabbitMessageQueueingImpl.java	390	1	c. 3	A*
/aerius-taskmanager/src/main/java/nl/overheid/aerius/taskmanager/db/ConfigurationRepository.java	462	1	2+	A*
/aerius-taskmanager/src/test/java/nl/overheid/aerius/taskmanager/mq/AbstractMQTest.java	115	0	c. 0	AAA*
/aerius-taskmanager/src/main/java/nl/overheid/aerius/taskmanager/scheduler/AbstractTaskSchedulerImpl.java	555	0	c. 0	AAA*
/aerius-taskmanager/src/main/java/nl/overheid/aerius/taskmanager/jmx/BeanUtil.java	91	0	c. 0	AAA*
/aerius-taskmanager/src/test/java/nl/overheid/aerius/taskmanager/configuration/ConfigurationManagerTest.java	119	0	c. 0	AAA*
/aerius-taskmanager/src/main/java/nl/overheid/aerius/taskmanager/exception/ConfigurationSaveException.java	34	0	c. 0	AAA*
/aerius-taskmanager/src/main/java/nl/overheid/aerius/taskmanager/exception/ConsumerAlreadyStoppedException.java	35	0	c. 0	AAA*
/aerius-taskmanager/src/main/java/nl/overheid/aerius/taskmanager/scheduler/consumer/ConsumerManager.java	99	0	c. 0	AAA*
/aerius-taskmanager/src/main/java/nl/overheid/aerius/taskmanager/scheduler/consumer/ConsumerManagerImpl.java	183	0	c. 0	AAA*
/aerius-taskmanager/src/main/java/nl/overheid/aerius/taskmanager/scheduler/MessageHandler.java	30	0	c. 0	AAA*
/aerius-taskmanager/src/main/java/nl/overheid/aerius/taskmanager/db/PMF.java	47	0	c. 0	AAA*
/aerius-taskmanager/src/main/java/nl/overheid/aerius/taskmanager/exception/QueueNotDefinedException.java	34	0	c. 0	AAA*
/aerius-taskmanager/src/main/java/nl/overheid/aerius/taskmanager/scheduler/ReplyMessageHandler.java	33	0	c. 0	AAA*
/aerius-taskmanager-client/src/test/java/nl/overheid/aerius/taskmanager/client/callable/TaskClientCallableTest.java	214	0	c. 0	AAA*
/aerius-taskmanager/src/test/java/nl/overheid/aerius/taskmanager/mq/TaskConsumerImplTest.java	247	0	c. 0	AAA*
/aerius-taskmanager/src/main/java/nl/overheid/aerius/taskmanager/domain/configuration/TaskManagerConfiguration.java	107	0	c. 0	AAA*
/aerius-taskmanager-client/src/main/java/nl/overheid/aerius/taskmanager/client/TaskResultConsumer.java	68	0	c. 0	AAA*
/aerius-taskmanager-client/src/main/java/nl/overheid/aerius/taskmanager/client/callable/TaskResultHandlerImpl.java	94	0	c. 0	AAA*
/aerius-taskmanager-client/src/test/java/nl/overheid/aerius/taskmanager/client/callable/TaskResultHandlerImplTest.java	181	0	c. 0	AAA*
/aerius-taskmanager-client/src/main/java/nl/overheid/aerius/taskmanager/client/callable/TaskWithIdClientCallable.java	98	0	c. 0	AAA*
/aerius-taskmanager-client/src/test/java/nl/overheid/aerius/taskmanager/client/callable/TaskWithIdClientCallableTest.java	219	0	c. 0	AAA*
/aerius-taskmanager-client/src/main/java/nl/overheid/aerius/taskmanager/client/WorkerClient.java	217	0	c. 0	AAA*
/aerius-taskmanager-client/src/test/java/nl/overheid/aerius/taskmanager/client/WorkerClientTest.java	206	0	c. 0	AAA*
/aerius-taskmanager/src/main/java/nl/overheid/aerius/taskmanager/scheduler/WorkerPool.java	74	0	c. 0	AAA*
/aerius-taskmanager/src/main/java/nl/overheid/aerius/taskmanager/mq/WorkerReplyConsumer.java	53	0	c. 0	AAA*

Defect Indicators per Module

Line Defect Indicators per Inspected Module	Line Defect Counts													
Name	WIP			SP			SPM			DP			Total	
	1	2	3	1	2	3	1	2	3	1	2	3		
/aerius-wui-client/src/main/java/org/gwtopenmaps/openlayers/client/format/WMSCapabilitiesImpl.java	0	6	0	0	0	0	0	0	0	0	0	0	6	
/aerius-wui-client/src/main/java/org/gwtopenmaps/openlayers/client/control/ZoomOutImpl.java	0	6	0	0	0	0	0	0	0	0	0	0	6	
/aerius-wui-test/src/test/java/nl/overheid/aerius/wui/test/ AbstractTestBase.java	0	1	1	0	0	0	8	0	0	0	0	1	11	
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/calculator/geo/CalculationMarker.java	1	0	0	0	0	0	3	0	0	0	0	0	4	
/aerius-wui-test/src/test/java/nl/overheid/aerius/wui/test/ FunctionalTestBase.java	0	10	1	0	0	0	18	0	0	0	0	0	29	
/aerius-wui-server/src/main/java/nl/overheid/aerius/server/servlet/SearchServiceImpl.java	0	3	0	0	0	0	0	0	0	0	0	0	3	
/aerius-wui-server/src/main/java/nl/overheid/aerius/server/calculation/service/OPSTaskHandler.java	0	0	1	0	0	0	0	0	0	0	0	1	2	
/aerius-wui-client/src/main/java/nl/overheid/aerius/geo/client/VectorInteractionLayer.java	0	0	0	0	0	0	1	0	0	0	0	0	1	
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/calculator/geo/AeriusMarker.java	1	0	0	0	0	0	2	0	0	0	0	0	3	
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/main/widget/NotificationPanel.java	2	0	0	0	0	0	1	0	0	0	0	0	3	
/aerius-wui-test/src/test/java/nl/overheid/aerius/wui/calculator/LocationViewTest.java	0	1	0	0	0	0	0	0	0	0	0	0	1	
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/calculator/popups/LegendPanel.java	0	0	0	0	0	0	0	0	0	0	0	2	2	
/aerius-wui-client/src/main/java/nl/overheid/aerius/geo/client/NavigationWidget.java	0	0	0	0	0	0	2	0	0	0	0	0	2	
/aerius-wui-server/src/main/java/nl/overheid/aerius/server/calculation/chunking/NitrogenAmmoniaSubstanceCalculator.java	0	0	0	0	0	0	1	0	0	0	0	0	1	
/aerius-wui-client/src/main/java/org/gwtopenmaps/openlayers/client/layer/Vector.java	4	0	0	0	0	0	0	0	0	0	0	0	4	
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/main/widget/progress/ProgressPanelBar.java	0	0	0	0	0	0	1	0	0	0	0	0	1	
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/calculator/geo/CalculatorResultLayerWrapper.java	0	0	1	0	0	0	0	0	0	0	0	0	1	
/aerius-wui-server/src/main/java/nl/overheid/aerius/server/calculation/chunking/LinearSegregationChunker.java	3	0	0	0	0	0	0	0	0	0	0	0	3	
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/calculator/SourceDetailViewImpl.java	0	0	0	0	0	0	2	0	0	0	0	0	2	
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/calculator/ProgressPresenter.java	1	0	0	0	0	0	0	0	0	0	0	0	1	
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/calculator/CalculationPointPresenter.java	1	0	0	0	0	0	0	0	0	0	0	0	1	
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/calculator/popups/LayerPanel.java	0	0	1	0	0	0	0	0	0	0	0	0	1	
/aerius-wui-client/src/main/java/com/google/gwt/user/client/ui/ CustomButton.java	1	0	0	0	0	0	0	0	0	0	0	2	3	
/aerius-wui-server/src/main/java/nl/overheid/aerius/server/calculation/service/development/AbstractAsyncListener.java	0	0	0	0	0	0	0	0	0	0	0	0	0	
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/main/comet/AeriusAtmosphereGWTSerializer.java	0	0	0	0	0	0	0	0	0	0	0	0	0	
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/main/util/AppAsyncCallback.java	0	0	0	0	0	0	0	0	0	0	0	0	0	
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/main/ApplicationDisplay.java	0	0	0	0	0	0	0	0	0	0	0	0	0	
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/main/ui/ApplicationDisplayImpl.java	0	0	0	0	0	0	0	0	0	0	0	0	0	
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/calculator/processor/CalculationEventAgent.java	0	0	0	0	0	0	0	0	0	0	0	0	0	
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/main/ui/overview/CalculationPointOverview.java	0	0	0	0	0	0	0	0	0	0	0	0	0	
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/calculator/CalculationPointViewImpl.java	0	0	0	0	0	0	0	0	0	0	0	0	0	
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/calculator/processor/CalculationProcessor.java	0	0	0	0	0	0	0	0	0	0	0	0	0	
/aerius-wui-server/src/main/java/nl/overheid/aerius/server/calculation/chunking/CalculatorFactory.java	0	0	0	0	0	0	0	0	0	0	0	0	0	
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/calculator/CalculatorMap.java	0	0	0	0	0	0	0	0	0	0	0	0	0	
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/calculator/geo/CalculatorReceptorLayer.java	0	0	0	0	0	0	0	0	0	0	0	0	0	
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/calculator/CalculatorView.java	0	0	0	0	0	0	0	0	0	0	0	0	0	
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/main/event/ConfirmEvent.java	0	0	0	0	0	0	0	0	0	0	0	0	0	

/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/calculator/geo/DepositionLayer.java	0	0	0	0	0	0	0	0	0	0	0	0
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/calculator/geo/DepositionLegend.java	0	0	0	0	0	0	0	0	0	0	0	0
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/calculator/popups/DepositionPanel.java	0	0	0	0	0	0	0	0	0	0	0	0
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/calculator/export/ExportDialogController.java	0	0	0	0	0	0	0	0	0	0	0	0
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/main/ui/source/FarmLodgingEditor.java	0	0	0	0	0	0	0	0	0	0	0	0
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/calculator/popups/HabitatTypeTable.java	0	0	0	0	0	0	0	0	0	0	0	0
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/calculator/popups/HabitatTypeVector.java	0	0	0	0	0	0	0	0	0	0	0	0
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/calculator/importer/ImportDialogPanel.java	0	0	0	0	0	0	0	0	0	0	0	0
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/calculator/popups/InfoPanelPresenter.java	0	0	0	0	0	0	0	0	0	0	0	0
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/calculator/geo/LabelledMarkerItem.java	0	0	0	0	0	0	0	0	0	0	0	0
/aerius-wui-client/src/main/java/nl/overheid/aerius/geo/client/events/LayerChangeEvent.java	0	0	0	0	0	0	0	0	0	0	0	0
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/calculator/popups/LayerPanelItem.java	0	0	0	0	0	0	0	0	0	0	0	0
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/main/widget/ListButton.java	0	0	0	0	0	0	0	0	0	0	0	0
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/calculator/LocationViewImpl.java	0	0	0	0	0	0	0	0	0	0	0	0
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/main/f18n/ M.java	0	0	0	0	0	0	0	0	0	0	0	0
/aerius-wui-client/src/main/java/nl/overheid/aerius/geo/client/ MapLayer.java	0	0	0	0	0	0	0	0	0	0	0	0
/aerius-wui-client/src/main/java/nl/overheid/aerius/geo/client/MeasureInteractionLayer.java	0	0	0	0	0	0	0	0	0	0	0	0
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/calculator/popups/NaturalMonumentInfoPanel.java	0	0	0	0	0	0	0	0	0	0	0	0
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/main/util/ ParamUtil.java	0	0	0	0	0	0	0	0	0	0	0	0
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/main/widget/progress/ProgressPanelView.java	0	0	0	0	0	0	0	0	0	0	0	0
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/main/geo/ReceptorChangeEvent.java	0	0	0	0	0	0	0	0	0	0	0	0
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/main/ui/source/RoadEmissionsEditor.java	0	0	0	0	0	0	0	0	0	0	0	0
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/main/util/scaling/ScalingUtil.java	0	0	0	0	0	0	0	0	0	0	0	0
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/main/resources/SectorImageResources.java	0	0	0	0	0	0	0	0	0	0	0	0
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/main/widget/SingleSelectedValueEditor.java	0	0	0	0	0	0	0	0	0	0	0	0
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/calculator/SourceDetailView.java	0	0	0	0	0	0	0	0	0	0	0	0
/aerius-wui-server/src/main/java/nl/overheid/aerius/server/calculation/chunking/SubstanceCalculator.java	0	0	0	0	0	0	0	0	0	0	0	0
/aerius-wui-client/src/main/java/nl/overheid/aerius/wui/main/event/SubstanceChangeEvent.java	0	0	0	0	0	0	0	0	0	0	0	0
/aerius-wui-server/src/main/java/nl/overheid/aerius/server/servlet/UploadImportServlet.java	0	0	0	0	0	0	0	0	0	0	0	0
/aerius-wui-client/src/main/java/org/gwtopenmaps/openlayers/client/format/WMSCapabilities.java	0	0	0	0	0	0	0	0	0	0	0	0
/aerius-wui-server/src/main/java/nl/overheid/aerius/server/service/sld/WMSRule.java	0	0	0	0	0	0	0	0	0	0	0	0
/aerius-tasks/src/main/java/nl/overheid/aerius/paa/runner/DepositionSummaryDataTable.java	0	0	0	0	0	0	7	0	0	0	0	7
/aerius-tasks/src/main/java/nl/overheid/aerius/pdf/format/PDFTableDepositionFormatter.java	0	0	0	0	0	0	1	0	0	0	0	1
/aerius-tasks/src/main/java/nl/overheid/aerius/pdf/format/PDFTablePostTextFormatter.java	0	0	0	0	0	0	1	0	0	0	0	1
/aerius-tasks/src/main/java/nl/overheid/aerius/pdf/format/PDFTablePreTextFormatter.java	0	0	0	0	0	0	1	0	0	0	0	1
/aerius-tasks/src/test/java/nl/overheid/aerius/paa/runner/ PAASourceTest.java	3	0	0	0	0	0	0	0	0	0	0	3
/aerius-tasks/src/main/java/nl/overheid/aerius/pdf/format/PDFTableEmptyTextFormatter.java	0	0	0	0	0	0	1	0	0	0	0	1
/aerius-tasks/src/main/java/nl/overheid/aerius/pdf/cell/ PDFCellProcessor.java	0	0	0	0	0	0	0	0	0	0	1	1
/aerius-tasks/src/main/java/nl/overheid/aerius/pdf/format/PDFTableDataFormatter.java	0	0	0	0	0	0	0	0	0	0	1	1
/aerius-tasks/src/main/java/nl/overheid/aerius/pdf/format/PDFTableNumberFormatter.java	0	0	0	0	0	0	1	0	0	0	0	1
/aerius-tasks/src/main/java/nl/overheid/aerius/pdf/cell/ ColspanCellProcessor.java	0	0	0	0	0	0	0	0	0	0	0	0
/aerius-tasks/src/main/java/nl/overheid/aerius/paa/runner/DepositionMarkerLayers.java	0	0	0	0	0	0	0	0	0	0	0	0
/aerius-tasks/src/main/java/nl/overheid/aerius/ops/runner/ ExecuteOPS.java	0	0	0	0	0	0	0	0	0	0	0	0
/aerius-tasks/src/main/java/nl/overheid/aerius/paa/runner/FarmSourceDataTable.java	0	0	0	0	0	0	0	0	0	0	0	0
/aerius-tasks/src/main/java/nl/overheid/aerius/pdf/ PDFImageLayer.java	0	0	0	0	0	0	0	0	0	0	0	0

[illegible]

Defect Indicators

The inspection was executed in accordance with the provisions set out in "IfSQ Level-2: A Foundation-Level Standard (2nd Edition, November, 2009)", published by IfSQ, Institute for Software Quality (www.ifsq.org).

The standard identifies the following *Defect Indicators*:

- **Work In Progress (WIP)**
 - WIP-1—**Vague "To Do"**: A programmer has left a note to himself or his colleague indicating that a piece of work needs to be done. However it is clear that the work has not been carried out, and there is no indication as to when the work needs to be done.
 - WIP-2—**Disabled Code**: Code has been written and the programmer has disabled it, or switched it off, without making it clear why it has been disabled, or when or whether it will be reenabled.
 - WIP-3—**Empty Statement Block**: The programmer has left a statement block or placeholder empty. When a programmer designs a program top-down he will often first outline the structure of the program in the form of statement blocks and fill in the content of each block in the course of his work. An empty statement block therefore indicates that there may be missing logic and that some extra code may be required.
- **Structured Programming (SP)**
 - SP-1—**Routine Too Long**: Routines longer than 150 lines (excluding comments and blank lines) have been shown to be less stable, more subject to change, and more expensive to fix than shorter routines.
 - SP-2—**Nesting Too Deep**: Studies have shown that few people can understand nesting of conditional statements to more than 3 levels.
 - SP-3—**Routine Too Complex**: Control-flow complexity has been correlated with low reliability and frequent errors.
- **Single Point of Maintenance (SPM)**
 - SPM-1—**Magic Numbers**: Numeric literals (other than 0 or 1) have been hard-coded into the program.
 - SPM-2—**Magic Strings**: A string literal has been hard-coded into a statement that influences the flow of a program.
 - SPM-3—**Copy/Paste Programming**: An identical or largely similar section of code appears in two or more places in a program or set of programs. Copy and Paste is considered by many industry experts to be a design error.
- **Defensive Programming (DP)**
 - DP-1—**Parameter Not Checked**: A parameter received by a program is used without first checking if its contents are present and within the expected range.
 - DP-2—**Status Ignored After Call**: Error status codes or exceptions from the run-time environment are suppressed or ignored, masking internal processing errors.
 - DP-3—**Unexpected State Not Trapped**: Part of a program that uses a value to switch between different branches does not trap unexpected cases.
- **Causes for Concern (CfCs)**
 - CfC-NC—**Not Complete**: Some element appears to be missing from the program.
 - CfC-WR—**Wrong Result**: Some part of the program looks likely to produce an incorrect result.
 - CfC-HtM—**Hard to Maintain**: The program looks likely to be unnecessarily difficult to maintain.

Rating Method

During the inspection, a count of *Line Defects* was produced. Line Defects are counted as follows:

- If a line of code takes part in one Defect Indicator, a single Line Defect is counted.
- If a line of code takes part in two or more Defect Indicators, a Line Defect is counted for each Defect Indicator in which the line takes part.

This means that it is possible for the number of Line Defects to exceed the number of lines of code which were inspected.

The IfSQ Rating for an inspection object is determined using the following table:

Number of Line Defects Per 1000 Lines of Code	IfSQ Rating	Description
Less than 1	AAA-Rating	Excellent
At least 1 but less than 2	AA-Rating	Very Good
At least 2 but less than 5	A-Rating	Good
At least 5 but less than 10	B-Rating	Reasonable
At least 10 but less than 20	C-Rating	Poor
At least 20 but less than 50	D-Rating	Very Poor
At least 50 but less than 100	E-Rating	Extremely Poor
At least 100 but less than 200	F-Rating	Bad
At least 200 but less than 500	FF-Rating	Very Bad
500 or more	FFF-Rating	Extremely Bad

Caution: Ratings marked (*) above should be used with caution—there are too few lines in the particular subsystem or module for it to be rated separately from other modules in the system or subsystem.

References

Information about the IfSQ Level-2 Standard can be found at
<http://www.ifsq.org/level-2.html>.

The full text of the standard can be downloaded from
<http://www.ifsq.org/resources/level-2/booklet.pdf>