

---

## Index

<b>Executive Summary .....</b>	<b>I</b>
<b>List of Figures.....</b>	<b>VI</b>
<b>List of Tables .....</b>	<b>IX</b>
<b>List of Abbreviations .....</b>	<b>X</b>
<b>1 Introduction.....</b>	<b>1</b>
<b>2 Related Work .....</b>	<b>4</b>
<b>3 Methodology.....</b>	<b>7</b>
3.1 Collecting Tools for the Evaluation.....	7
3.2 Evaluation Criteria.....	7
3.3 Evaluation Procedure.....	10
3.4 Data Aggregation.....	12
3.5 Planning and Conducting the Evaluation.....	12
<b>4 UML Compliance.....</b>	<b>13</b>
4.1 Introduction to UML Compliance .....	13
4.2 Object Constraint Language .....	14
4.3 Compliance Level Calculation.....	15
<b>5 Findings per Tool.....</b>	<b>17</b>
5.1 Example Tool Characterization .....	20
5.2 Apollo by Gentleware.....	23
5.3 Arcstyler by Interactive Objects .....	25
5.4 ArgoUML by University of California, Irvine .....	27
5.5 ARIS UML Designer by IDS Scheer.....	29
5.6 Artisan Studio by ARTiSAN.....	31
5.7 Artiso VisualCASE by VisualCASE .....	33
5.8 Astade by Astade Team at Tigris.....	35
5.9 Blueprint Software Modeler by @-portunity B.V. ....	37
5.10 BOUML by BOUML Team .....	39
5.11 Cadifra UML Editor by Adrian & Frank Buehlmann.....	41
5.12 Concept Draw by Computer Systems Odessa .....	43
5.13 Dia by Alexander Larsson .....	45
5.14 Delphia Object Modeler by Atos Origin.....	47
5.15 Eclipse UML by Eclipse.org.....	49
5.16 Enterprise Architect by Sparx Systems .....	51

5.17	Essential Modeler by Jaczone .....	53
5.18	eUML2 Studio by Soyatec .....	55
5.19	Fujaba by Universities of Paderborn, Kassel, Siegen and Darmstadt .....	57
5.20	Gaphor by Gaphor Team at Sourceforge .....	59
5.21	Gliffy by Gliffy, Inc. ....	61
5.22	Green UML by University of Buffalo.....	63
5.23	Ideogramic UML by Ideogramic .....	65
5.24	Innovator by MID .....	67
5.25	Javelin by Step Ahead software .....	69
5.26	Jude by ChangeVision .....	71
5.27	MagicDraw by NoMagic .....	73
5.28	MEGA development by MEGA international .....	75
5.29	MetaEdit+ by MetaCase .....	77
5.30	Metamill by MetaMill.....	79
5.31	MyEclipseIDE by genuitec .....	81
5.32	Netbeans by SUN.....	83
5.33	Objecteering/UML by Objecteering Software .....	85
5.34	objectiF by Microtool.....	87
5.35	Omondo UML Plugin for Eclipse by Omondo .....	89
5.36	OODesigner by Tae Gyun Kim .....	91
5.37	OpenAmeos by Aonix.....	93
5.38	Papyrus UML by Papyrus UML Team .....	95
5.39	Poseidon by Gentleware.....	97
5.40	PowerDesigner by Sybase.....	99
5.41	QuickUML by Excel Software .....	101
5.42	Rhapsody by Telelogic.....	103
5.43	Rose by IBM/Rational .....	105
5.44	Rational Software Architect by IBM/Rational.....	107
5.45	Real Time Developer Studio by Pragmadev .....	109
5.46	Silverrun ModelSphere by Magna Solutions .....	111
5.47	Smartdraw by Smartdraw.....	113
5.48	StarUML .....	115
5.49	System Architect by Telelogic .....	117
5.50	Tangible Architect by Tangible engineering .....	119
5.51	Telelogic Tau by Telelogic .....	121
5.52	Telelogic Tau/Modeler Edition by Telelogic .....	123
5.53	Teuta by University of Vienna.....	125
5.54	Together by Borland .....	127

---

5.55	Topcased by Topcased.org .....	129
5.56	Umbrello UML Modeler by Umbrello Project Team at Sourceforge.....	131
5.57	UMLDiagrammer by Pacestar .....	133
5.58	UMLAUT by IRISA/CNRS .....	135
5.59	UMLed by Georg Kubitz.....	137
5.60	UMLet by UMLet group .....	139
5.61	UMLPad by Luigi Bignami .....	141
5.62	UMLStudio by Pragsoft Cooperation .....	143
5.63	Umodel by Altova.....	145
5.64	violet by C. S. Horstmann and A. de Pellegrin.....	147
5.65	Visible Analyst by Visible Systems.....	149
5.66	Visio by Microsoft.....	151
5.67	Visio with UML2 stencils by Pavel Hruby.....	153
5.68	Visual Paradigm for UML by Visual Paradigm .....	155
5.69	Visual UML by Visual Object Modelers Inc.....	157
<b>6</b>	<b>Results .....</b>	<b>159</b>
6.1	Realization of the UML at Large .....	160
6.1.1	Tool Capabilities.....	160
6.1.2	UML Compliance .....	161
6.1.3	Additional Aspects.....	162
6.2	Realization of the UML on Diagram Level .....	163
6.3	Additional Features.....	167
<b>7</b>	<b>Summary .....</b>	<b>169</b>
<b>A</b>	<b>Feature Hierarchy .....</b>	<b>171</b>
	<b>References .....</b>	<b>177</b>