

**Analysis, Modeling, and Design (AMD) Tools
Software Market Strategies, Market
Opportunities, and Market Forecasts,
2001 to 2006**

Table of Contents

**ANALYSIS, MODELING, AND DESIGN (AMD) TOOLS SOFTWARE
MARKET EXECUTIVE SUMMARY**

Software Business Process Tools	ES-1
AMD Market Forecasts	ES-3

**1. ANALYSIS, MODELING, AND DESIGN (AMD) TOOLS SOFTWARE
MARKET DESCRIPTION**

1.1 Software Business Process Tools Market Description	1-1
1.2 Industry Issues	1-3
1.3 Industry Challenges	1-6
1.4 Integrated Tool Solutions	1-7
1.5 Process Maturity	1-8
1.6 Software Teams	1-8
1.7 Target Users For Software Tools	1-11
1.8 Reduce Time -To-Market	1-11

AMD Market Table of Contents and List of Tables and Figures

1.9	Manage Change	1-12
1.10	Key Components Of Software Tool Strategy	1-12
1.11	Strategic Alliances	1-14
1.12	Industry Standards	1-14
1.13	Tools Market	1-15
1.14	Capacity Utilization	1-15
1.14.1	Top Down Internet Infrastructure Intelligence	1-16
1.15	Getting Products To Market Quickly	1-16
1.16	Localizing products	1-17
1.17	Mobile Workforce Requirements	1-17
1.18	Redefinition Of The Many Complex Relationships Among People And Processes	1-19
1.19	Internet Applications (IAD)	1-20
1.20	Java Servlets	1-21
1.20.1	Java Servlet Engines	1-21
1.21	Building Java Server Pages	1-23
1.22	Software License Product Pricing	1-23
 2. ANALYSIS, MODELING, AND DESIGN (AMD) TOOLS SOFTWARE MARKET FORECASTS AND MARKET SHARE ANALYSIS		
2.1	AMD Tools Market Definition	2-1
2.2	Market Driving Forces	2-1
2.2.1	AMD Market Shares	2-4
2.2.2	AMD Market Forecasts	2-7
2.3	Object Modeling AMD	2-12
2.3.1	Object Modeling AMD Market Shares	2-13
2.3.2	Object Modeling AMD Market Forecasts	2-15

AMD Market Table of Contents and List of Tables and Figures

2.4	Data Modeling AMD	2-16
2.4.1	Data Modeling AMD Market Shares	2-17
2.4.2	Data Modeling AMD Market Forecasts	2-18
2.5	Repository AMD	2-19
2.5.1	Repository AMD Market Shares	2-20
2.5.2	Repository AMD Market Forecasts	2-21
2.6	Analysis, Modeling, and Design Tools Regional Market Analysis	2-22
2.6.1	Rational Software Regional Revenue	2-23

3. ANALYSIS, MODELING, AND DESIGN (AMD) TOOLS SOFTWARE PRODUCTS

3.1	Software Tools Positioning	3-1
3.2	AMD Tools	3-4
3.3	Software Development Tools	3-6
3.3.1	Enterprise Java Beans	3-7
3.3.2	Creating EJB Client Applications	3-7
3.3.3	Create, Build, And Deploy A Session Bean	3-8
3.4	Rational	3-8
3.4.1	Rational Unified Process	3-8
3.4.2	Rational Integrated Solutions	3-9
3.4.3	Rational Rose Visual Modeling Solutions	3-9
3.4.4	Rational Suite	3-11
3.4.5	Rational Suite Analyst Studio	3-11
3.4.6	Rational Suite Development Studio	3-12
3.4.7	Rational Suite Test Studio	3-13
3.4.8	Rational Suite Content Studio	3-13
3.4.9	Rational Suite Enterprise	3-13

AMD Market Table of Contents and List of Tables and Figures

3.4.10	Rational Software Configuration and Change Management	3-14
3.4.11	Rational RequisitePro	3-15
3.4.12	Project Configuration For Java	3-17
3.4.13	Rational Rose XML Support	3-18
3.4.14	Rational Rose Web Modeling Support	3-18
3.4.15	Rational Rose Data Modeling Support	3-18
3.4.16	Rational Rose Storage Modeling	3-19
3.4.17	Rational Rose / WebGain TOPLink	3-19
3.4.18	Rational Rose SQL Server 2000	3-20
3.5	Oracle	3-20
3.5.1	Oracle Internet Developer Suite	3-21
3.5.2	Oracle JDeveloper	3-23
3.5.3	Oracle9i JDeveloper,	3-25
3.5.4	JDeveloper Leverages J2EE Platform	3-29
3.5.5	Oracle Business Components for Java	3-29
3.5.6	Java, XML and SQL combination	3-30
3.5.7	XML Tools	3-31
3.5.8	SQL and PL/SQL Tools	3-32
3.5.9	Browsing Database Objects	3-33
3.5.10	UML Modeling	3-34
3.5.11	Class Modeler / Java Classes	3-34
3.5.12	Business Components for Java	3-35
3.5.13	Activity Modeler	3-35
3.5.14	Oracle Designer	3-36
3.5.15	Oracle Systems For Developing JSP Applications	3-36
3.5.16	Oracle Internet Platform	3-37

AMD Market Table of Contents and List of Tables and Figures

3.6	Computer Associates	3-39
3.6.1	CA Cool Solutions	3-39
3.6.2	COOL:Gen	3-40
3.6.3	COOL:Joe	3-41
3.6.4	Cool:Joe	3-43
3.6.5	COOL:Joe And Jasmine	3-44
3.6.6	eBusiness Process	3-47
3.7	Sybase PowerJ	3-48
3.7.1	PowerJ Supports Enterprise Javabeans	3-49
3.7.2	Stateful Beans	3-49
3.7.3	Creating EJB Components	3-51
3.7.4	Development of an EJB Component	3-52
3.7.5	Implementing A Servlet	3-53
3.7.6	EJB Development Roles	3-54
3.8	Aonix Lifecycle Solutions	3-55
3.8.1	Aonix's Software Through Pictures (StP)	3-57
3.8.2	Aonix Object ADA Real-Time Raven	3-61
3.8.3	Aonix Automated Design Review Tool	3-62
3.9	Embarcadero	3-63
3.9.1	Embarcadero Technologies Key Product Solutions	3-63
3.9.2	Embarcadero Database Administration Solution DBArtisan	3-64
3.9.3	Database Development	3-65
3.9.4	ER/Studio Database Design	3-66
3.9.5	GDPro Application Development	3-66
3.9.6	Embarcadero Unification of Application Development / Modeling	3-68

AMD Market Table of Contents and List of Tables and Figures

3.10	Telelogic	3-72
3.10.1	DOORS	3-72
3.10.2	Telelogic Tau UML Suite	3-73
3.10.3	Mission-Critical Stability	3-74
3.10.4	Shared Components And Reuse	3-74
3.10.5	Team Collaboration	3-74
3.10.6	Documentation Generation	3-75
3.10.7	Life Cycle Support	3-75
3.11	TogetherSoft ControlCenter	3-77
3.12	Automated Testing Solutions	3-82
3.12.1	Rational Test Factory	3-82

4. ANALYSIS, MODELING, AND DESIGN (AMD) TOOLS SOFTWARE TECHNOLOGY

4.1	Demand For Software Development	4-1
4.2	Unifying Development Teams	4-3
4.3	Enterprise Java	4-4
4.3.1	J2EE	4-5
4.4	Server Tier	4-7
4.5	EIS Tier	4-8
4.6	The J2EE Conceptual Model	4-8
4.7	Enterprise JavaBeans	4-9
4.8	Implementing A Servlet	4-9
4.9	Communicating Between Servlets	4-10
4.10	Building And Deploying Servlets	4-10
4.11	Creating Servlet Client Applications	4-11
4.12	Java Server Pages	4-12

AMD Market Table of Contents and List of Tables and Figures

4.13	Setting J2EE-Specific Deployment Descriptor Elements	4-13
4.14	Web Server Extension Support	4-15

5. ANALYSIS, MODELING, AND DESIGN (AMD) TOOLS SOFTWARE COMPANY PROFILES

5.1	Market Participants in AMD Tools Software	5-1
5.2	Aonix	5-5
5.2.1	Gores Technology Group	5-6
5.3	Computer Associates	5-6
5.3.1	CA Acquisitons	5-8
5.4	Cyrano	5-10
5.5	Dirig Software	5-12
5.6	Embarcadero Technologies	5-13
5.6.1	Embarcadero Technologies Financials	5-14
5.6.2	Embarcadero Technologies Customers	5-15
5.7	Oracle	5-16
5.7.1	Oracle Revenues	5-19
5.7.2	Oracle Geographic Information	5-21
5.8	Popkin Software	5-21
5.9	Rational Software	5-22
5.9.1	Rational Business Alliances	5-25
5.9.2	Rational Revenue	5-25
5.9.3	International Sales	5-25

AMD Market Table of Contents and List of Tables and Figures

5.10	Segue	5-27
5.10.1	E-Business Strategies	5-29
5.10.2	Segue Customer Base	5-29
5.10.3	Segue Software Solutions	5-30
5.10.4	Segue Software Revenue	5-32
5.11	Sybase	5-33
5.11.1	Sybase As Supplier Of Portable Intelligence Solutions	5-34
5.11.2	Sybase Integrated Data Warehouse Technologies	5-34
5.11.3	Financial Solutions	5-35
5.11.4	Sybase E-Business Solutions	5-35
5.11.5	Sybase Customers	5-36
5.11.6	Market Focus	5-36
5.11.7	Business Units	5-37
5.11.8	Financial Fusion	5-37
5.11.9	Sybase / iAnywhere Solutions	5-38
5.11.10	e-Business Division	5-39
5.11.11	Business Intelligence Division	5-40
5.11.12	Enterprise Solutions Division	5-40
5.11.13	Sybase Customers	5-42
5.11.14	Business Intelligence Division	5-45
5.12	Telelogic	5-45
5.12.1	Telelogic Products	5-46
5.12.2	Telelogic Strategy	5-47
5.12.3	Telelogic Customers	5-47
5.13	TogetherSoft	5-47

AMD Market Table of Contents and List of Tables and Figures

List of Tables and Figures

Table ES-1	ES-2
Analysis, Modeling, And Design (AMD) Tools Objectives	
Table ES-2	ES-3
AMD Tools Market Forecasts, 2000-2006	
Table 1-1	1-2
Analysis, Modeling, And Design (AMD) Tools Objectives	
Table 1-2	1-4
Software Development Issues	
Table 1-3	1-5
Software Development Challenges	
Table 1-4	1-7
Principal Tool Categories	
Table 1-5	1-9
Software Teams	
Table 1-6	1-10
Software Development Stages	
Table 1-7	1-10
Organizational Improvement Of Software Development	
Table 1-8	1-11
Software Engineering Disciplines	
Table 1-9	1-13
Key Components Of Software Tool Strategy	

AMD Market Table of Contents and List of Tables and Figures

Table 1-10	1-18
Mobile Professionals	
Table 1-11	1-18
Use of Mobile Connections	
Table 1-12	1-20
Analysis, Modeling, And Design (AMD) Tools Software Internet Target Markets	
Table 1-13	1-22
Servlet Uses	
Table 2-1	2-2
Developer Constructs Used By AMD Tools	
Table 2-2	2-3
AMD Market Driving Forces	
Figure 2-3	2-4
AMD Tools Market Shares, 2000	
Figure 2-4	2-5
AMD Tools Market Shares, First Half 2001	
Table 2-5	2-6
Worldwide Analysis, Modeling, and Design Tools AMD Shipments Market Shares 2000 and First Half 2001	
Figure 2-6	2-8
AMD Tools Market Forecasts, 2000-2006	
Table 2-7	2-9
Worldwide Analysis, Modeling, and Design Tools Provider Shipment Segments, Dollars, 2000-2006	

AMD Market Table of Contents and List of Tables and Figures

Figure 2-8	2-10
AMD Segment Market Shares, 2000	
Figure 2-9	2-11
AMD Segment Market Shares, First Half 2001	
Table 2-10	2-12
Worldwide Analysis, Modeling, and Design Tools	
Provider Shipment Segments, Dollars, 2000	
Table 2-11	2-13
Object Modeling AMD Market Driving Forces	
Figure 2-12	2-14
AMD Object Modeling Market Shares, 2000	
Figure 2-13	2-15
AMD Object Modeling Market Forecasts, Dollars, 2000-2006	
Table 2-14	2-16
AMD Data Modeling Market Driving Forces	
Figure 2-15	2-17
AMD Data Modeling Market Shares, 2000	
Figure 2-16	2-18
AMD Data Modeling Market Forecasts, Dollars, 2000-2006	
Table 2-17	2-19
Repository AMD Market Driving Forces	
Figure 2-18	2-21
AMD Repository Segment Market Shares, 2000	
Figure 2-19	2-22
AMD Repository Forecasts, Dollars, 2000-2006	
Table 2-20	2-23
Worldwide Analysis, Modeling, and Design Tools	
Regional Shipments, 2000	

AMD Market Table of Contents and List of Tables and Figures

Table 3-1	3-1
AMD Vendor Product Positioning Strategies	
Table 3-2	3-6
IDEs	
Table 3-3	3-10
Reverse Engineered Components	
Table 3-4	3-11
Rational Team And Analyst Support	
Table 3-5	3-16
Rational Rose Features	
Table 3-6	3-21
Oracle Business Intelligence Tools	
Table 3-7	3-22
Oracle Internet Developer Suite Internet Standards Supported	
Table 3-8	3-23
Oracle JDeveloper Features	
Table 3-9	3-24
Oracle JDeveloper Integrated Environment	
Table 3-10	3-25
Internet Rapid Application Development Constructs	
Table 3-11	3-26
Oracle JDeveloper Tools	
Table 3-12	3-26
Oracle JDeveloper Development Target Markets	
Table 3-13	3-27
Oracle JDeveloper Products	
Table 3-14	3-27
Tools Targeted To Make Application Development More Productive	

AMD Market Table of Contents and List of Tables and Figures

Table 3-15	3-31
Oracle XML Schema	
Table 3-16	3-32
Features For Managing Connections And Browsing Database Objects	
Table 3-17	3-33
Types Of Schemas Represented As Objects By Oracle	
Table 3-18	3-37
JDeveloper Wizards And Custom Tags	
Table 3-19	3-42
CA Cool Feature And Function Benefits	
Table 3-20	3-45
Cool Solutions	
Table 3-21	3-47
Computer Associates Hardware Platforms And Operating Systems Supported	
Table 3-22	3-48
Sybase PowerJ Functions	
Table 3-23	3-55
EJB Container Features	
Table 3-24	3-58
Aonix Software Lifecycle Phases Linked	
Table 3-25	3-59
Aonix StP Product Family	
Table 3-26	3-60
Project Artifacts Managed By StP Product Family	
Table 3-27	3-61
Key Features Of Aonix RAVEN	

AMD Market Table of Contents and List of Tables and Figures

Table 3-28	3-64
Embarcadero Technologies Key Product Solutions	
Table 3-29	3-65
DBArtisan Administration Phase Of The Database Lifecycle	
Table 3-30	3-67
GPro Features	
Table 3-31	3-69
Embarcadero Describe Benefits	
Table 3-32	3-76
Multiple Language Code Generation	
Table 3-33	3-78
TogetherSoft AMD Features	
Table 4-1	4-2
Organization Improvement Of Software Development	
Table 4-2	4-4
AMD Architecture Functions	
Table 4-3	4-6
Range of J2EE APIs Enterprise Java and Rational Rose	
Table 4-4	4-14
J2EE Components	
Table 4-5	4-15
How To Add An EJB Reference	

AMD Market Table of Contents and List of Tables and Figures

Table 5-1	5-1
Market Participants in Analysis, Modeling, and Design Tools	
Software Markets	
Table 5-2	5-17
Systems Software Internet Platform Functions	
Table 5-3	5-17
Systems Software Internet Platform Features	
Table 5-4	5-24
Rational Business Applications Customers	
Table 5-5	5-28
Segue Software e-business Positioning	
Table 5-6	5-31
Segue Software Solutions	
Table 5-7	5-33
Segue Software Customers	