

Table of Contents

0.1	About This Document	xxxi
0.1.1	Object Management Group.	xxxi
0.1.2	X/Open	xxxii
0.2	Intended Audience	xxxii
0.3	Need for Object Services	xxxii
0.3.1	What Is an Object Service Specification? . . .	xxxiii
0.4	Associated Documents	xxxiii
0.5	Structure of this Manual.	xxxiv
0.6	Acknowledgements	xxxiv
1.	Overview	1-1
1.1	Summary of Key Features	1-1
1.1.1	Naming Service	1-1
1.1.2	Event Service	1-2
1.1.3	Life Cycle Service	1-2
1.1.4	Persistent Object Service	1-3
1.1.5	Transaction Service	1-3
1.1.6	Concurrency Control Service	1-3
1.1.7	Relationship Service.	1-4
1.1.8	Externalization Service.	1-4
1.1.9	Query Service.	1-5
1.1.10	Licensing Service	1-5
1.1.11	Property Service	1-5
1.1.12	Time Service.	1-6
1.1.13	Security Service	1-6
1.1.14	Object Trader Service.	1-7

2.	General Design Principles.	2-1
2.1	Service Design Principles	2-1
2.1.1	Build on CORBA Concepts	2-1
2.1.2	Basic, Flexible Services	2-2
2.1.3	Generic Services.	2-2
2.1.4	Allow Local and Remote Implementations.	2-2
2.1.5	Quality of Service is an Implementation Characteristic	2-2
2.1.6	Objects Often Conspire in a Service.	2-2
2.1.7	Use of Callback Interfaces	2-4
2.1.8	Assume No Global Identifier Spaces	2-4
2.1.9	Finding a Service is Orthogonal to Using It	2-4
2.2	Interface Style Consistency	2-4
2.2.1	Use of Exceptions and Return Codes	2-4
2.2.2	Explicit Versus Implicit Operations	2-5
2.2.3	Use of Interface Inheritance	2-5
2.3	Key Design Decisions	2-5
2.3.1	Naming Service: Distinct from Property and Trading Services.	2-5
2.3.2	Universal Object Identity	2-5
2.4	Integration with Future Object Services.	2-5
2.4.1	Archive Service	2-6
2.4.2	Backup/Restore Service	2-6
2.4.3	Change Management Service.	2-6
2.4.4	Data Interchange Service	2-6
2.4.5	Internationalization Service	2-6
2.4.6	Implementation Repository	2-7
2.4.7	Interface Repository	2-7
2.4.8	Logging Service	2-7
2.4.9	Recovery Service	2-8
2.4.10	Replication Service.	2-8
2.4.11	Startup Service	2-9
2.4.12	Data Interchange Service	2-9
2.5	Service Dependencies	2-9
2.5.1	Event Service	2-9
2.5.2	Life Cycle Service	2-9
2.5.3	Persistent Object Service	2-9
2.5.4	Relationship Service.	2-10
2.5.5	Externalization Service.	2-10
2.5.6	Transaction Service	2-10

2.5.7	Concurrency Control Service	2-11
2.5.8	Query Service	2-11
2.5.9	Licensing Service	2-11
2.5.10	Property Service	2-12
2.5.11	Time Service	2-12
2.5.12	Security Service	2-12
2.6	Relationship to CORBA	2-12
2.6.1	ORB Interoperability Considerations: Transaction Service	2-12
2.6.2	Life Cycle Service	2-13
2.6.3	Naming Service	2-13
2.6.4	Relationship Service	2-13
2.6.5	Persistent Object Service	2-13
2.7	Relationship to Object Model	2-13
2.8	Conformance to Existing Standards	2-13
3.	Naming Service Specification	3-1
3.1	Service Description	3-1
3.1.1	Overview	3-1
3.1.2	Names	3-2
3.1.3	Names Library	3-3
3.1.4	Example Scenarios	3-3
3.1.5	Design Principles	3-4
3.1.6	Resolution of Technical Issues	3-5
3.2	The CosNaming Module	3-6
3.2.1	Binding Objects	3-8
3.2.2	Resolving Names	3-9
3.2.3	Unbinding Names	3-10
3.2.4	Creating Naming Contexts	3-11
3.2.5	Deleting Contexts	3-11
3.2.6	Listing a Naming Context	3-12
3.2.7	The BindingIterator Interface	3-12
3.3	The Names Library	3-13
3.3.1	Creating a Library Name Component	3-14
3.3.2	Creating a Library Name	3-15
3.3.3	The LNameComponent Interface	3-15
3.3.4	The LName Interface	3-15
4.	Event Service Specification	4-1
4.1	Service Description	4-1
4.1.1	Overview	4-1

4.1.2	Event Communication	4-2
4.1.3	Example Scenario	4-2
4.1.4	Design Principles	4-4
4.1.5	Resolution of Technical Issues	4-4
4.1.6	Quality of Service	4-6
4.2	Generic Event Communication	4-6
4.2.1	Push Model	4-6
4.2.2	Pull Model	4-7
4.3	The CosEventComm Module	4-8
4.3.1	The PushConsumer Interface	4-8
4.3.2	The PushSupplier Interface	4-9
4.3.3	The PullSupplier Interface	4-9
4.3.4	The PullConsumer Interface	4-10
4.4	Event Channels	4-10
4.4.1	Push-Style Communication with an Event Channel	4-10
4.4.2	Pull-Style Communication with an Event Channel	4-11
4.4.3	Mixed Style Communication with an Event Channel	4-11
4.4.4	Multiple Consumers and Multiple Suppliers	4-12
4.4.5	Event Channel Administration	4-13
4.5	The CosEventChannelAdmin Module	4-15
4.5.1	The EventChannel Interface	4-16
4.5.2	The ConsumerAdmin Interface	4-17
4.5.3	The SupplierAdmin Interface	4-17
4.5.4	The ProxyPushConsumer Interface	4-17
4.5.5	The ProxyPullSupplier Interface	4-18
4.5.6	The ProxyPullConsumer Interface	4-18
4.5.7	The ProxyPushSupplier Interface	4-19
4.6	Typed Event Communication	4-19
4.6.1	Typed Push Model	4-19
4.6.2	Typed Pull Model	4-20
4.7	The CosTypedEventComm Module	4-21
4.7.1	The TypedPushConsumer Interface	4-22
4.7.2	The TypedPullSupplier Interface	4-23
4.8	Typed Event Channels	4-23
4.9	The CosTypedEventChannelAdmin Module	4-24
4.9.1	The TypedEventChannel Interface	4-26
4.9.2	The TypedConsumerAdmin Interface	4-26

4.9.3	The TypedSupplierAdmin Interface	4-27
4.9.4	The TypedProxyPushConsumer Interface.	4-28
4.9.5	The TypedProxyPullSupplier Interface.	4-28
4.10	Composing Event Channels and Filtering	4-28
4.11	Policies for Finding Event Channels	4-29
Appendix A	Implementing Typed Event Channels.	4-30
Appendix B	An Event Channel Use Example	4-32
5.	Persistent Object Service Specification	5-1
5.1	Introduction	5-1
5.2	Goals and Properties	5-3
5.2.1	Basic Capabilities	5-3
5.2.2	Object-oriented Storage	5-3
5.2.3	Open Architecture	5-4
5.2.4	Views of Service.	5-5
5.3	Service Structure	5-7
5.4	The CosPersistencePID Module.	5-8
5.4.1	PID Interface	5-9
5.4.2	Example PIDFactory Interface	5-11
5.5	The CosPersistencePO Module	5-11
5.5.1	The PO Interface.	5-12
5.5.2	The POFactory Interface.	5-14
5.5.3	The SD Interface.	5-14
5.6	The CosPersistencePOM Module.	5-15
5.7	Persistent Data Service (PDS) Overview	5-18
5.8	The CosPersistencePDS Module	5-19
5.9	The Direct Access (PDS_DA) Protocol	5-21
5.10	The CosPersistencePDS_DA Module	5-21
5.10.1	The PID_DA Interface	5-23
5.10.2	The Generic DAOObject Interface	5-24
5.10.3	The DAOObjectFactory Interface	5-24
5.10.4	The DAOObjectFactoryFinder Interface	5-25
5.10.5	The PDS_DA Interface.	5-25
5.10.6	Defining and Using DA Data Objects.	5-26
5.10.7	The DynamicAttributeAccess Interface	5-28
5.10.8	The PDS_ClusteredDA Interface	5-29
5.11	The ODMG-93 Protocol.	5-30
5.12	The Dynamic Data Object (DDO) Protocol	5-30
5.13	The CosPersistenceDDO Module.	5-31

5.14	Other Protocols	5-33
5.15	Datastores: CosPersistenceDS_CLI Module	5-34
5.15.1	The UserEnvironment Interface	5-36
5.15.2	The Connection Interface	5-37
5.15.3	The ConnectionFactory Interface	5-37
5.15.4	The Cursor Interface	5-38
5.15.5	The CursorFactory Interface	5-38
5.15.6	The PID_CLI Interface	5-38
5.15.7	The Datastore_CLI Interface	5-40
5.16	Other Datastores	5-43
5.17	Standards Conformance	5-43
5.18	References	5-43
6.	Life Cycle Service Specification	6-1
6.1	Service Description	6-1
6.1.1	Overview	6-1
6.1.2	Organization of this Chapter	6-3
6.1.3	Client's Model of Object Life Cycle	6-4
6.1.4	Factory Finders	6-7
6.1.5	Design Principles	6-8
6.1.6	Resolution of Technical Issues	6-9
6.2	The CosLifeCycle Module	6-10
6.2.1	The LifeCycleObject Interface	6-11
6.2.2	The FactoryFinder Interface	6-13
6.2.3	The GenericFactory Interface	6-14
6.2.4	Criteria	6-17
6.3	Implementing Factories	6-18
6.3.1	Minimal Factories	6-19
6.3.2	Administered Factories	6-19
6.4	Target's Use of Factories and Factory Finders	6-21
6.5	Summary of Life Cycle Service	6-21
6.5.1	Summary of Life Cycle Service Structure ..	6-22
Appendix A	Addendum to Life Cycle Service: Compound Life Cycle Specification	6-23
Appendix B	Filters	6-47
Appendix C	Administration	6-51
Appendix D	Support for PCTE Objects	6-59
7.	Concurrency Control Service	7-1
7.1	Service Description	7-1

7.1.1	Basic Concepts of Concurrency Control	7-1
7.2	Locking Model	7-3
7.2.1	Lock Modes	7-4
7.2.2	Multiple Possession Semantics	7-5
7.3	Two-Phase Transactional Locking	7-6
7.4	Nested Transactions	7-6
7.5	CosConcurrencyControl Module	7-7
7.5.1	Types and Exceptions	7-9
7.5.2	LockCoordinator Interface	7-9
7.5.3	LockSet Interface	7-10
7.5.4	TransactionalLockSet Interface	7-11
7.5.5	LockSetFactory Interface	7-13
8.	Externalization Service Specification	8-1
8.1	Service Description	8-1
8.2	Service Structure	8-2
8.2.1	Client's Model of Object Externalization . . .	8-2
8.2.2	Stream's Model of Object Externalization . .	8-3
8.2.3	Object's Model of Externalization	8-4
8.2.4	Object's Model of Internalization	8-5
8.3	Object and Interface Hierarchies	8-7
8.4	Interface Summary	8-10
8.5	CosExternalization Module	8-12
8.5.1	StreamFactory Interface	8-12
8.5.2	FileStreamFactory Interface	8-13
8.5.3	Stream Interface	8-13
8.6	CosStream Module	8-15
8.6.1	Stream IO Interface	8-16
8.6.2	The Streamable Interface	8-17
8.6.3	The Streamable Factory Interface	8-19
8.7	CosCompound Externalization Module	8-19
8.7.1	The Node Interface	8-21
8.7.2	The Role Interface	8-22
8.7.3	The Relationship Interface	8-23
8.7.4	The PropagationCriteriaFactory Interface . .	8-24
8.8	Specific Externalization Relationships	8-25
8.9	The CosExternalizationContainment Module	8-26
8.10	The CosExternalizationReference Module	8-28
8.11	Standard Stream Data Format	8-29

8.11.1	OMG Externalized Object Data	8-29
8.11.2	Externalized Repeated Reference Data.	8-30
8.11.3	Externalized NIL Data	8-31
8.12	References	8-31
9.	Relationship Service Specification	9-1
9.1	Service Description	9-1
9.1.1	Key Features of the Relationship Service	9-2
9.1.2	The Relationship Service vs. CORBA Object References	9-3
9.1.3	Resolution of Technical Issues	9-4
9.2	Service Structure	9-7
9.2.1	Levels of Service	9-7
9.2.2	Hierarchy of Relationship Interface	9-10
9.2.3	Hierarchy of Role Interface	9-10
9.2.4	Interface Summary	9-11
9.3	The Base Relationship Model	9-13
9.3.1	Relationship Attributes and Operations	9-14
9.3.2	Higher Degree Relationships	9-15
9.3.3	Operations	9-17
9.3.4	Consistency Constraints	9-18
9.3.5	Implementation Strategies	9-19
9.3.6	The CosObjectIdentity Module	9-19
9.3.7	The CosRelationships Module	9-20
9.4	Graphs of Related Objects	9-33
9.4.1	Graph Architecture	9-33
9.4.2	Traversing Graphs of Related Objects	9-35
9.4.3	Compound Operations	9-36
9.4.4	An Example Traversal Criteria	9-37
9.4.5	The CosGraphs Module	9-38
9.5	Specific Relationships	9-47
9.5.1	Containment and Reference	9-48
9.5.2	The CosContainment Module	9-48
9.5.3	The CosReference Module	9-50
9.6	References	9-51
10.	Transaction Service Specification.	10-1
10.1	Service Description	10-1
10.1.1	Overview of Transactions	10-2
10.1.2	Transactional Applications	10-2
10.1.3	Definitions	10-3

10.1.4	Transaction Service Functionality	10-6
10.1.5	Principles of Function, Design, and Performance	10-8
10.2	Service Architecture.	10-12
10.2.1	Typical Usage.	10-12
10.2.2	Transaction Context	10-13
10.2.3	Context Management	10-14
10.2.4	Datatypes	10-15
10.2.5	Exceptions	10-15
10.3	Transaction Service Interfaces	10-17
10.3.1	Current Interface.	10-18
10.3.2	TransactionFactory Interface	10-21
10.3.3	Control Interface.	10-21
10.3.4	Terminator Interface	10-22
10.3.5	Coordinator Interface	10-24
10.3.6	Recovery Coordinator Interface	10-27
10.3.7	Resource Interface	10-27
10.3.8	Subtransaction Aware Resource Interface.	10-29
10.3.9	TransactionalObject Interface.	10-30
10.4	The User's View.	10-31
10.4.1	Application Programming Models	10-31
10.4.2	Interfaces	10-32
10.4.3	Checked Transaction Behavior.	10-32
10.4.4	X/Open Checked Transactions	10-33
10.4.5	Implementing a Transactional Client: Heuristic Completions	10-34
10.4.6	Implementing a Recoverable Server.	10-35
10.4.7	Application Portability	10-36
10.4.8	Distributed Transactions.	10-36
10.4.9	Applications Using Both Checked and Unchecked Services	10-36
10.4.10	Examples	10-37
10.4.11	Model Interoperability	10-41
10.4.12	Failure Models	10-43
10.5	The Implementors' View	10-44
10.5.1	Transaction Service Protocols	10-45
10.5.2	ORB/TS Implementation Considerations	10-55
10.5.3	Model Interoperability	10-63
10.6	The CosTransactions Module.	10-65
10.6.1	The CosTSInteroperation Module	10-69

10.6.2	The CosTSPortability Module	10-69
Appendix A	Relationship of Transaction Service to TP Standards	10-70
Appendix B	Transaction Service Glossary	10-81
11.	Query Service Specification	11-1
11.1	Service Description	11-1
11.1.1	Overview	11-1
11.1.2	Design Principles	11-1
11.1.3	Architecture	11-2
11.1.4	Query Languages	11-6
11.1.5	Key Features.	11-9
11.2	Service Structure	11-10
11.2.1	Overview	11-10
11.2.2	Collection Interface Structure.	11-10
11.2.3	Query Framework Interface Hierarchy/ Structure	11-10
11.2.4	Interface Overview	11-11
11.3	The Collection Model	11-12
11.3.1	Common Types of Collections	11-12
11.3.2	Iterators	11-12
11.4	The CosQueryCollection Module	11-14
11.4.1	The CollectionFactory Interface	11-15
11.4.2	The Collection Interface	11-16
11.4.3	The Iterator Interface	11-18
11.5	The Query Framework Model	11-19
11.5.1	Query Evaluators	11-19
11.5.2	Queryable Collections	11-20
11.5.3	Query Managers	11-21
11.5.4	Query Objects.	11-21
11.6	The CosQuery Module.	11-23
11.6.1	The QueryLanguageType Interfaces	11-24
11.6.2	The QueryEvaluator Interface	11-25
11.6.3	The QueryableCollection Interface.	11-25
11.6.4	The QueryManager Interface	11-25
11.6.5	The Query Interface	11-26
11.7	References	11-27
12.	Licensing Service Specification	12-1
12.1	Background On Existing License Management Products.	12-1
12.1.1	Business Policy.	12-2

12.1.2	License Types	12-2
12.1.3	A History of License Types	12-3
12.1.4	Asset Management	12-3
12.1.5	License Usage Practices	12-4
12.1.6	Scalability	12-4
12.1.7	Reliability	12-4
12.1.8	Legacy Applications	12-5
12.1.9	Security	12-6
12.1.10	Client/Server Authentication	12-6
12.1.11	Example: Application Acquiring and Releasing a Concurrent License	12-6
12.2	Service Description	12-7
12.2.1	Overview	12-7
12.2.2	Key Components of a Licensing System	12-8
12.2.3	Licensing in the CORBA Environment	12-10
12.2.4	Design Principles	12-12
12.2.5	Licensing Service Interfaces	12-13
12.2.6	Licensing Event Trace Diagram	12-14
12.3	The CosLicensing Module	12-16
12.3.1	LicenseServiceManager Interface	12-19
12.3.2	ProducerSpecificLicenseService Interface	12-19
12.4	References	12-21
Appendix A	Licensing Service Glossary	12-22
Appendix B	Use of Other Services	12-23
Appendix C	Producer Client Implementation Issues	12-27
Appendix D	Challenge Mechanism	12-30
13.	Property Service	13-1
13.1	Overview	13-1
13.1.1	Service Description	13-1
13.1.2	OMG IDL Interface Summary	13-3
13.1.3	Summary of Key Features	13-3
13.2	Service Interfaces	13-4
13.2.1	CosPropertyService Module	13-4
13.2.2	PropertySet Interface	13-9
13.2.3	PropertySetDef Interface	13-14
13.2.4	PropertiesIterator Interface	13-19
13.2.5	PropertyNamesIterator Interface	13-20
13.2.6	PropertySetFactory Interface	13-21
13.2.7	PropertySetDefFactory Interface	13-22

Appendix A	Property Service IDL	13-23
14.	Time Service Specification	14-1
14.1	Introduction	14-1
14.1.1	Time Service Requirements	14-1
14.1.2	Representation of Time.	14-1
14.1.3	Source of Time	14-2
14.1.4	General Object Model	14-3
14.1.5	Conformance Points	14-4
14.2	Basic Time Service	14-4
14.2.1	Object Model	14-4
14.2.2	Data Types	14-5
14.2.3	Exceptions	14-8
14.2.4	Universal Time Object (UTO)	14-9
14.2.5	Time Interval Object (TIO).	14-11
14.2.6	Time Service.	14-12
14.3	Timer Event Service.	14-13
14.3.1	Object Model	14-13
14.3.2	Usage	14-14
14.3.3	Data Types	14-14
14.3.4	Exceptions	14-16
14.3.5	Timer Event Handler	14-16
14.3.6	Timer Event Service	14-17
14.4	Conformance	14-18
Appendix A	Implementation Guidelines	14-19
Appendix B	Consolidated OMG IDL	14-21
Appendix C	Notes for Users.	14-25
Appendix D	Extension Examples	14-27
Appendix E	References	14-30
15.	Security Service Specification	15-1
15.1	Introduction to Security	15-1
15.1.1	Why Security?	15-1
15.1.2	What Is Security?	15-1
15.1.3	Threats in a Distributed Object System	15-2
15.1.4	Summary of Key Security Features	15-3
15.1.5	Goals	15-3
15.2	Introduction to the Specification	15-8
15.2.1	Conformance to CORBA Security	15-9
15.2.2	Specification Structure	15-10

15.3	Security Reference Model	15-12
15.3.1	Definition of a Security Reference Model . .	15-12
15.3.2	Principals and Their Security Attributes . . .	15-14
15.3.3	Secure Object Invocations	15-15
15.3.4	Access Control Model	15-19
15.3.5	Auditing	15-23
15.3.6	Delegation	15-25
15.3.7	Non-repudiation	15-31
15.3.8	Domains	15-33
15.3.9	Security Management and Administration . .	15-40
15.3.10	Implementing the Model	15-41
15.4	Security Architecture	15-42
15.4.1	Different Users' View of the Security Model	15-42
15.4.2	Structural Model.	15-46
15.4.3	Security Technology	15-51
15.4.4	Basic Protection and Communications	15-52
15.4.5	Security Object Models	15-54
15.5	Application Developer's Interfaces	15-84
15.5.1	Introduction	15-84
15.5.2	Finding Security Features	15-92
15.5.3	Authentication of Principals	15-92
15.5.4	Credentials	15-96
15.5.5	Object Reference	15-100
15.5.6	Security Operations on Current	15-104
15.5.7	Security Audit	15-109
15.5.8	Administering Security Policy	15-111
15.5.9	Use of Interfaces for Access Control	15-111
15.5.10	Use of Interfaces for Delegation	15-113
15.5.11	Non-repudiation	15-115
15.6	Administrator's Interfaces	15-123
15.6.1	Concepts	15-124
15.6.2	Domain Management	15-125
15.6.3	Security Policies Introduction	15-128
15.6.4	Access Policies	15-129
15.6.5	Audit Policies	15-138
15.6.6	Secure Invocation and Delegation Policies . .	15-140
15.6.7	Non-repudiation Policy Management	15-145
15.7	Implementor's Security Interfaces	15-147
15.7.1	Generic ORB Services and Interceptors	15-148
15.7.2	Request-Level Interceptors	15-149

15.7.3	Security Interceptors.	15-150
15.7.4	Implementation-Level Security Object Interfaces	15-155
15.7.5	Replaceable Security Services	15-163
15.8	Security and Interoperability	15-165
15.8.1	Interoperability Model	15-166
15.8.2	Protocol Enhancements	15-171
15.8.3	CORBA Interoperable Object Reference with Security	15-171
15.8.4	Secure Inter-ORB Protocol (SECIOP)	15-177
15.8.5	DCE-CIOP with Security	15-185
	Appendix A Consolidated OMG IDL	15-196
	Appendix B Summary of OCRBA 2 Core Changes	15-217
	Appendix C Relationship to Other Services	15-232
	Appendix D Conformance Details	15-235
	Appendix E Guidelines for a Trustworthy System	15-245
	Appendix F Conformance Statement	15-267
	Appendix G Facilities Not in This Specification	15-273
	Appendix H Interoperability Guidelines	15-281
	Appendix I Glossary	15-286
16.	Trading Object Service Specification.	16-1
16.1	Overview	16-2
16.1.1	Diversity and Scalability.	16-3
16.1.2	Linking Traders	16-3
16.1.3	Policy	16-3
16.1.4	Additional ObjectID.	16-4
16.2	Concepts and Data Types	16-4
16.2.1	Exporter	16-4
16.2.2	Importer	16-4
16.2.3	Service Types	16-4
16.2.4	Properties	16-7
16.2.5	Service Offers.	16-7
16.2.6	Offer Identifier	16-9
16.2.7	Offer Selection	16-9
16.2.8	Interworking Mechanisms	16-18
16.2.9	Trader Attributes.	16-21
16.3	Exceptions	16-23
16.3.1	For CosTrading module	16-23
16.3.2	For CosTradingDynamic module	16-27

16.3.3	For CosTradingRepos module	16-27
16.4	Abstract Interfaces	16-28
16.4.1	TraderComponents	16-28
16.4.2	SupportAttributes	16-29
16.4.3	ImportAttributes	16-29
16.4.4	LinkAttributes	16-30
16.5	Functional Interfaces	16-30
16.5.1	Lookup	16-30
16.5.2	Offer Iterator.	16-35
16.5.3	Register	16-36
16.5.4	Offer Id Iterator	16-45
16.5.5	Admin.	16-46
16.5.6	Link	16-49
16.5.7	Proxy	16-54
16.6	Service Type Repository	16-59
16.7	Dynamic Property Evaluation interface	16-67
16.8	Conformance Criteria.	16-68
16.8.1	Conformance Requirements for Trading Interfaces as Server	16-69
16.8.2	Conformance Requirements for Implementation Conformance Classes	16-71
Appendix A	CORBA OMG IDL based Specification of the Trading Function	16-74
Appendix B	OMG Constraint Language BNF	16-93
Appendix C	OMG Constraint Recipe Language	16-99
Index	Index-1

