



Middleware Products Overview

June 2006



- > Top Graph'X
 - > French company dedicated to Ada since 1991
 - > XInAda – X11/Motif Ada implementation
 - > OrbRiver/Ada first full Ada95 ORB since 1997
 - > Ada ORB distributed worldwide by PrismTech since 2003

- > Recent facts:
 - > PrismTech acquires Top Graph'X (Oct. 2005)
 - > Top Graph'X becomes PrismTech France (Jan 2006)

- > Ada expertise center
 - > Ada recognised as a key technical competence to maintain
 - > French team becomes the Ada competence center for PrismTech

- > Top Graph'X products included in PrismTech product line
 - > OrbRiver becomes OpenFusion RTORB with :
 - > OpenFusion RTORB/Ada :
 - > *Corba 3.0 compliant, full Ada95 ORB*
 - > *Supports most Ada95 compilers, most native/embedded platforms*
 - > *High throughput*
 - > OpenFusion RTORB /Java
 - > *Supports both standard JVM (non RT mode), and RT JVM (RTSJ)*
 - > *JacORB compliant (non RT mode)*
 - > *High throughput*

- > Professionnal Services

- > Financially strong with seven successive profitable quarters
- > Global Coverage with over 50 professional engineers
- > “Fortune 500” client base in Telecommunications, Military/Aerospace & Financial Services
- > Track record of success over 14 years
- > Four product lines of leadership
 - > OpenFusion
 - > Spectra SDR
 - > OpenSplice
 - > Xtradyne

HQ Sites

Gateshead, UK
Burlington, MA, USA



Engineering Centers

Gateshead, UK
Saddle Brook, NJ, USA
Berlin, Germany
Paris, France
Hengelo, Holland

Field Offices/Distributors

Frankfurt, Germany
London, UK
Helsinki, Finland
Washington, DC, USA
Houston, TX, USA
Fort Wayne, IN, USA
Memphis, TN, USA
Seoul, South Korea
Beijing, China



Fortune 500 Global Customer Base

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Nokia



Lucent Technologies
Bell Labs Innovations



BAE SYSTEMS

NORTHROP GRUMMAN

Raytheon

GENERAL DYNAMICS

ERICSSON



ALCATEL

LOCKHEED MARTIN



HARRIS

SIEMENS



**Rockwell
Collins**



ITT Industries
Engineered for life

Deutsche Bank

THALES



Telcordia
Technologies

**NORTEL
NETWORKS**

ciena

Sprint



SES **ASTRA**



swisscom



tellabs



Tenix



LG

Deutsche
Telekom



SwissLife



JPMorganChase



NEC

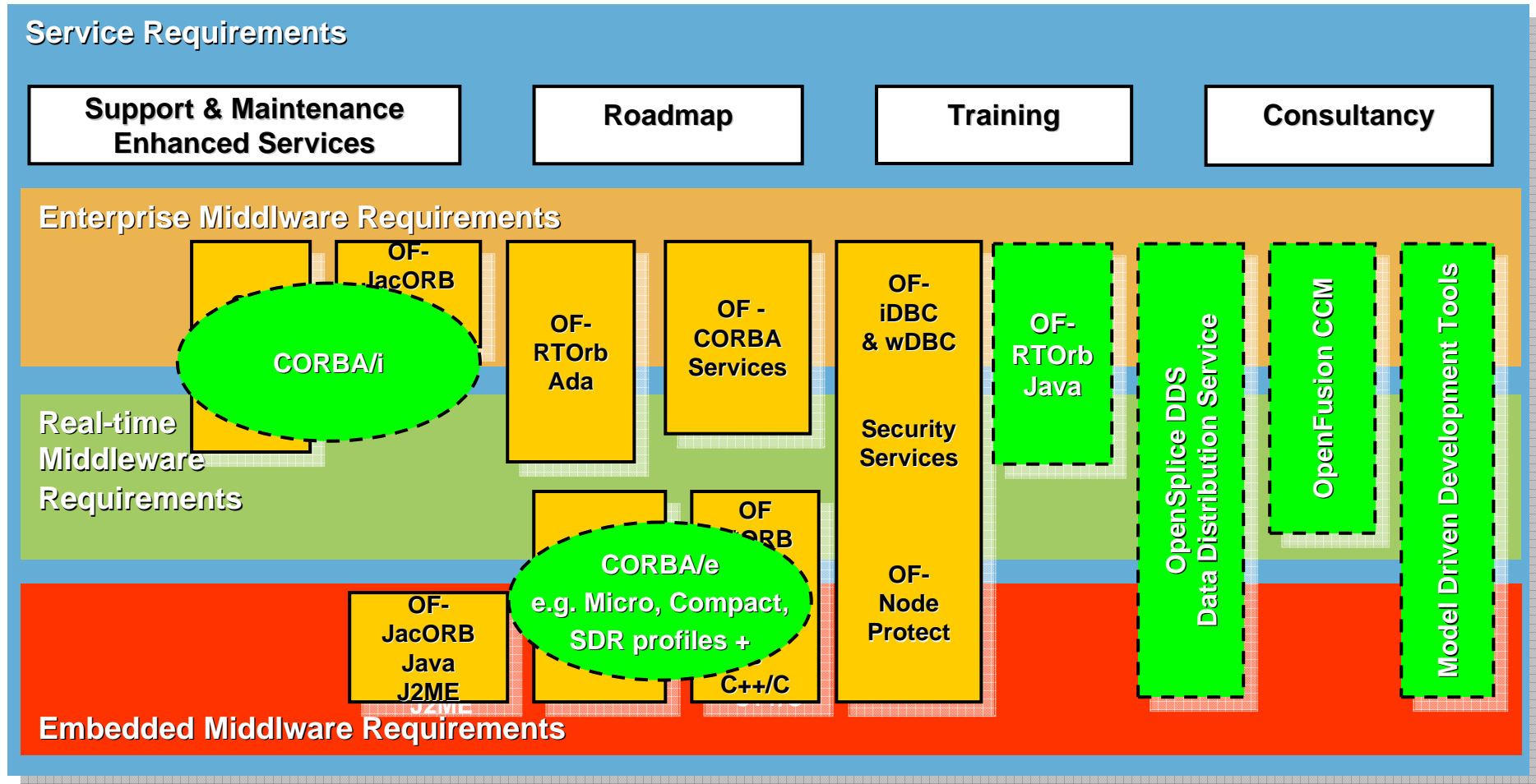
GAD
IT für Banken

france telecom

Lufthansa

- > Product line currently consists of:
 - > OpenFusion TCS – OpenFusion TAO, JacORB and CORBA Services
 - > OpenFusion e*ORB
 - > OpenFusion RTOrb Java & Ada Editions
 - > Xtradyne Security
 - > OpenSplice DDS

Responding to Increasing Demand for Advanced Middleware





OpenSplice DDS



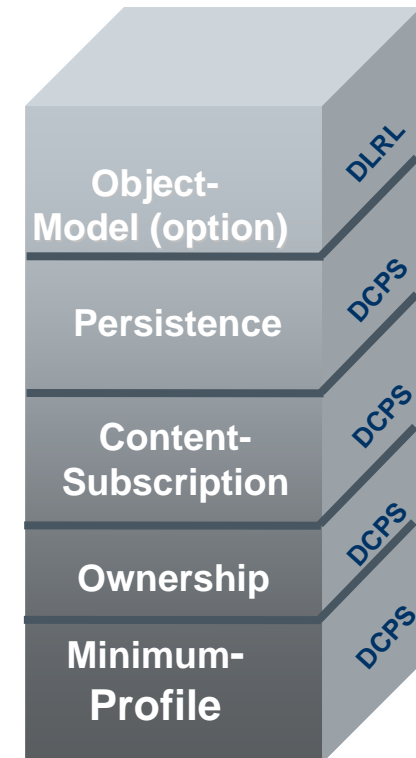
- > PrismTech is aggressively developing a standards compliant, high performance and reliable COTS implementation of the OMG's Data Distribution Standard (DDS)

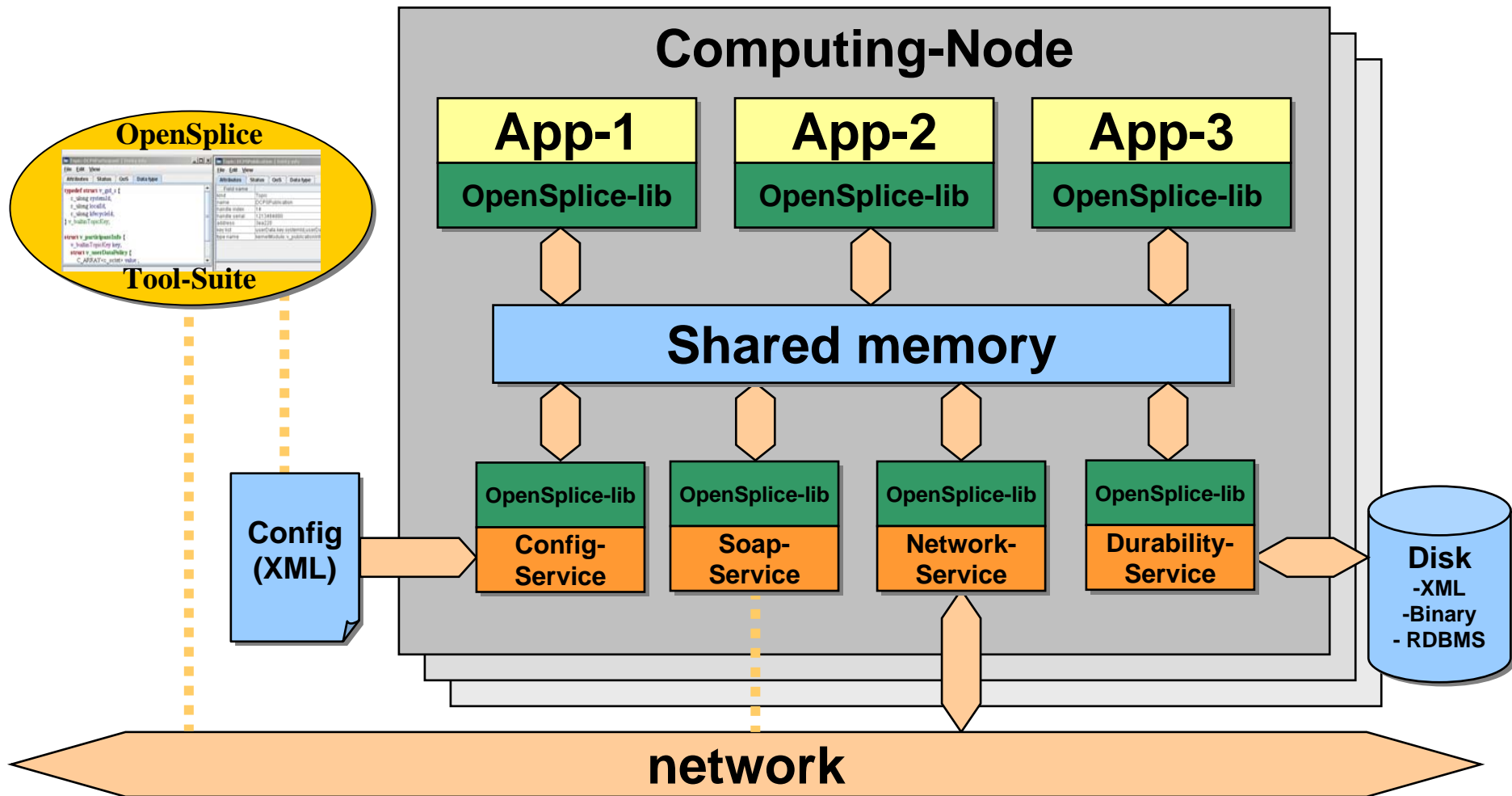
- > Recently hired team of leading DDS domain experts in order to complement existing PrismTech engineering team lead by Hans Van't Hag (former Thales Netherlands)

- > **OpenSplice** consists of the following major components:
 - > OpenSplice Developer Productivity Tools
 - > OpenSplice DLRL
 - > OpenSplice DCPS (a.k.a. SPLICE-DDS)

OpenSplice is an implementation of the OMG Data Distribution Service specification, with supporting tools facilitating its usability in a variety of system environments

- > **Core module: Pub-Sub Engine**
 - > Minimum + Ownership Profiles
- > **Information Management modules :**
 - > content subscription
 - > Persistence
- > **Object model module (DLRL)**
 - > OO-view on relational topic data
 - > Relationship management and object-navigation
- > **Productivity toolSuite**
 - > OpenSplice Information Modeller
 - > OpenSplice Application Modeller
 - > OpenSplice Tuner
- > **Value-add extensions and tools**
 - > Language bindings (e.g. Ada)
 - > Corba cohabitation
 - > DDS interoperability protocol



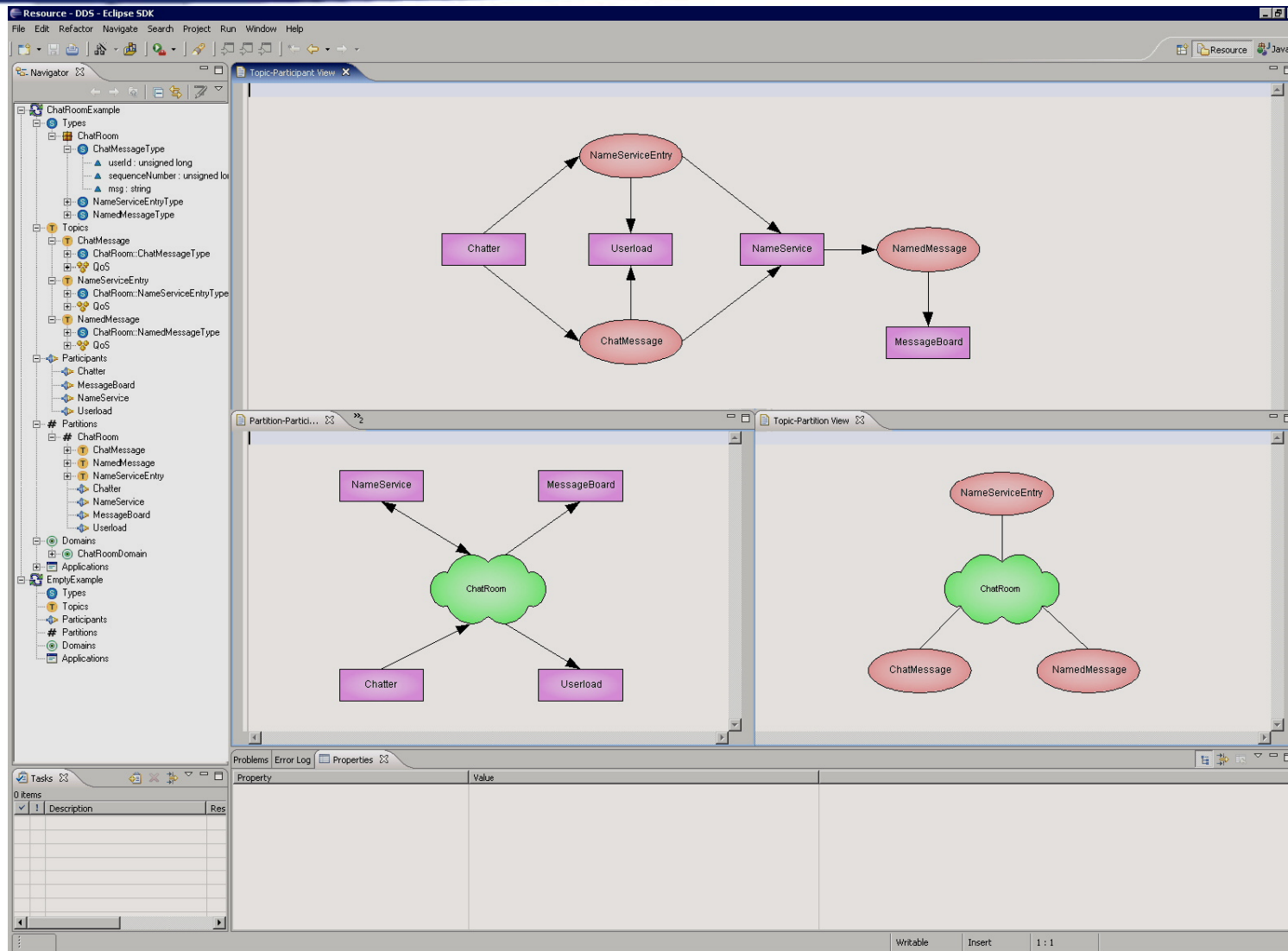


- **Purpose:** Facilitate DDS-based system development
 - Clearly distinguish between various 'scopes' and 'lifecycle stages'
 - Visual composition, configuration and round-trip engineering

- **Means:** Guidance, Frameworks, Code-generation, Monitoring
 - **Guidance** regarding overall DDS concept, patterns & best-practices
 - Well defined **hierarchical steps**:
 - Information modelling → topic definitions (idl), entity-generation (code)
 - Application design → application frameworks (code), DDS entities (code)
 - System deployment → DDS (network/durability) configuration (xml)
 - Real-time local/remote **deployment control**
 - System monitoring → application-level DDS entities, middleware services
 - System testing → dynamic DDS entity generation, data injection & logging
 - System tuning → statistical analysis, QoS fine-tuning

OpenSplice: Modeler snapshot

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Splice-Tuner:

TOTAL SYSTEM CONTROL:

- 100 % **Java-based**
- **Remote connect** via SOAP
- **Monitor & Control:**
 - all DDS-entities & relations
 - all QoS settings
 - all services such as:
 - communication
 - durability-service
- **Interactive browsing:**
 - inspect any data-cache
 - make cache-snapshots
 - view statistics
- **Reading/Writing data:**
 - create readers/writers
 - read/write any data
- **Multiple views:**
 - participant view
 - topic view
 - partition view
- **Dynamic creation of:**
 - readers (with filters/queries)
 - writers (with input validation)
- **Automatic discovery of:**
 - Partitions & participants
 - Topics with name/type
 - related publishers/writers
 - related subscribers/readers

The screenshot displays the Splice-Tuner application interface. On the left is a tree view of the DDS system structure. On the right are several windows showing the configuration and status of specific entities.

Tree View Structure:

- Participant: Splice Tuner
 - Service: CMSOAP
 - Service: splicedemon
 - Publisher: Built-in publisher
 - Partition: __BUILT-IN PARTITION__
 - Writer: DCPSParticipantWriter
 - Topic: DCPSParticipant
 - Writer: DCPSPublicationWriter
 - Topic: DCPSPublication
 - Writer: DCPSSubscriptionWriter
 - Topic: DCPSSubscription
 - Writer: DCPSTopicWriter
 - Topic: DCPSTopic
 - Subscriber: __BUILTIN SUBSCRIBER__
 - DataReader: DCPSParticipantReader
 - View: DCPSParticipantView
 - Topic: DCPSParticipant
 - DataReader: DCPSPublicationReader
 - View: DCPSPublicationView
 - Topic: DCPSPublication
 - DataReader: DCPSSubscriptionReader
 - View: DCPSSubscriptionView
 - Topic: DCPSSubscription
 - DataReader: DCPSTopicReader
 - View: DCPSTopicView
 - Topic: DCPSTopic

Entity Information Windows:

- Writer: DCPSPublicationWriter | Entity info**

Name	Field	Value
STATE		0
LIVELINESS_LOST	total_count	0
LIVELINESS_LOST	total_count_change	0
OFFERED_DEADLINE_MISSED	total_count	0
OFFERED_DEADLINE_MISSED	total_count_change	0
OFFERED_DEADLINE_MISSED	last_instance_handle	null, null
OFFERED_INCOMPATIBLE_QoS	total_count	0
OFFERED_INCOMPATIBLE_QoS	total_count_change	0
OFFERED_INCOMPATIBLE_QoS	last_policy_id	0
OFFERED_INCOMPATIBLE_QoS	policies	[0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]
PUBLICATION_MATCH	total_count	0
PUBLICATION_MATCH	total_count_change	0
PUBLICATION_MATCH	last_subscription_handle	<NULL>
- DataReader: DCPSParticipantReader | Entity info**

Name	Field	Value
DURABILITY	kind	TRANSIENT
DURABILITY	service_cleanup_delay	0.0
DEADLINE	period	0.0
LATENCY_BUDGET	duration	0.0
LIVELINESS	kind	AUTOMATIC
LIVELINESS	lease_duration	0.0
RELIABILITY	kind	RELIABLE
RELIABILITY	max_blocking_time	0.0
DESTINATION_ORDER	kind	BY_RECEPTION_TIMESTAMP
HISTORY	kind	KEEPLAST
HISTORY	depth	1
RESOURCE_LIMITS	max_samples	-1
RESOURCE_LIMITS	max_instances	-1
RESOURCE_LIMITS	max_samples_per_instance	-1
USERDATA	value	null
TIME_BASED_FILTER	minimum_separation	0.0
READER_DATA_LIFECYCLE	autopurge_nowriter_samples_delay	0.0
- Topic: DCPSParticipant | Entity info**

```
typedef struct v_gid_s {
    c_ulong systemId;
    c_ulong localId;
    c_ulong lifecycleId;
} v_builtinTopicKey;

struct v_participantInfo {
    v_builtinTopicKey key;
    struct v_userDataPolicy {
        C_ARRAY<c_octet> value;
    };
};
```
- Topic: DCPSPublication | Entity info**

Field name	Field value
kind	Topic
name	DCPSPublication
handle index	14
handle serial	1213484880
address	3ea220
key list	userData.key.systemId,userData.key.localId,userData.key.lifecycleId
type name	kernelModule:v_publicationInfo



PrismTech Total Corba Solution



- > Growing trend in C4i has created high demand for global CORBA supplier with:
 - > Low-cost, yet comprehensive and progressive solution
 - > High quality products and associated services
 - > Long-term commitment to comply with evolving CORBA specifications
 - > Guaranteed security of supply with minimum vendor lock in

- > PrismTech's: Total CORBA Solution (TCS)
 - > Lowest cost-of-ownership for commercial grade solution through:
 - > High-quality ORBs: up-to-date and evolving, yet robust and proven technology either based on Open Source or acquired
 - > Market-leading OpenFusion CORBA services
 - > Professional maintenance and support service assuring reliable product suite

> Over 20 active customers worldwide, including

> Main European Customers:

- > Alcatel: the Historic Corporate Customer since 2001
 - > Support to over 60 projects in over 10 countries
 - > Model for TAO/JacORB initiated Alcatel's "Free (as in Freedom OpenSource Software (FOSS))" Program
- > Siemens – Telecom segment, multi projects, multi sites
- > Ericsson – major EMS & NMS
- > Nokia – major NMS
- > EADS – multiple projects
- > Swisscom, Swisslife
- > LogicaCMG
- > SES Astra

> Main US Customers

- > Lockheed Martin
 - > Gigantic DD(X) project (1,000' of users)
- > Raytheon
- > GE Aircraft
- > CISCO
- > Lucent
- > AT&T
- > Tellabs

> Major outsourcing deals

> Thales / Selex

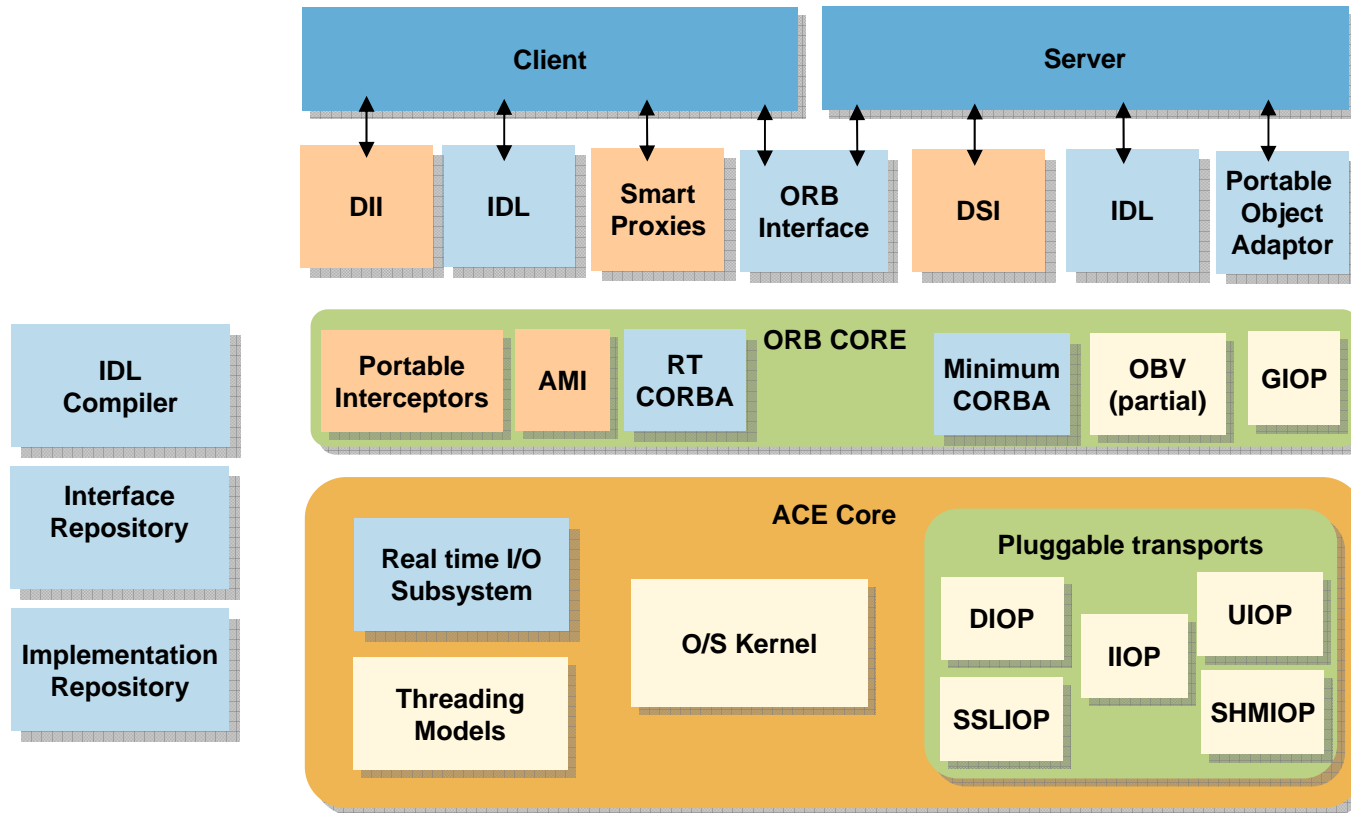
- > PrismTech part of CARDAMOM development team – ongoing development will be outsourced to PrismTech
- > Support to CARDEMOM platform developers and users
- > Multiple collaborations with Thales SC2 like joint participation in Compare EC project

- Since launching TCS in September 2001 PrismTech has developed a strategy based on adding industrial strength to TAO and JacORB
- By applying software product company principles to leading Open Source offerings
- A model that customers understand and prefer:
 - Packaged solution
 - Formal testing and release management processes
 - Worldwide support & maintenance
 - Training & professional Services
 - Product roadmap including
 - **Customer enhancements**
 - **Operating System updates**
- The product principles that are core to OpenFusion products, PrismTech has also applied to TAO & JacORB.

Support & Maintenance Packages

Feature Description	Standard	Silver	Gold
Web based support system	•	•	•
Technical assistance	•	•	•
Knowledge base	•	•	•
Cover time	8x5	12x5	24x7
Update center for patches	•	•	•
Minor releases	•	•	•
Major releases	•	•	•
Service level establishment	•	•	•
Problem escalation	•	•	
Automatic problem escalation			•
Technical account manager	•	•	•
Problem acknowledgement and response times	•	•	
Premium response times			•
Continuous 8x5 effort on high severity issues	•	•	
Continuous 24x7 effort on high severity issues			•
On site assistance		•	•

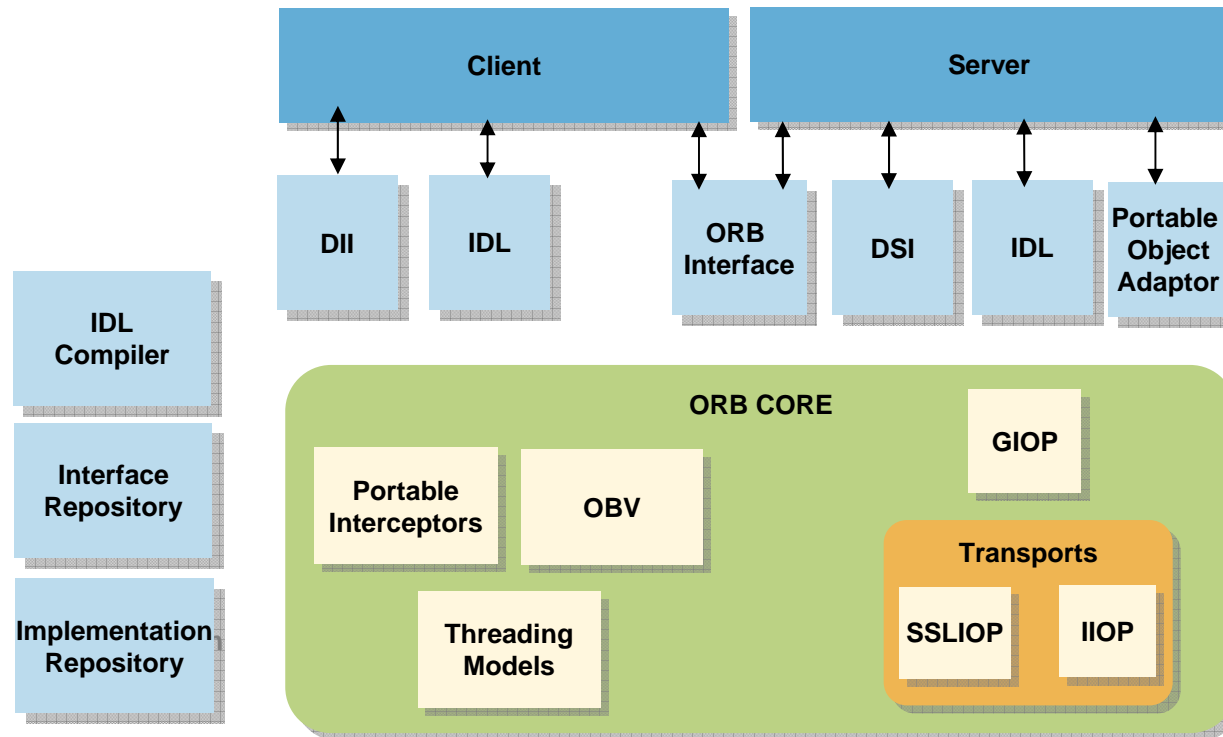
TAO Architecture & Features



- Complies with CORBA 3.0 standard
- C++ language mappings
- Fully multithreaded
- CORBA IDL compiler
- Real-Time CORBA
- Pluggable protocols
- POA
- Dynamic Any
- Implementation Repository
- Interface Repository
- Portable interceptors
- OBV
- CORBA Messaging
- Minimum CORBA

JacORB Architecture & Features

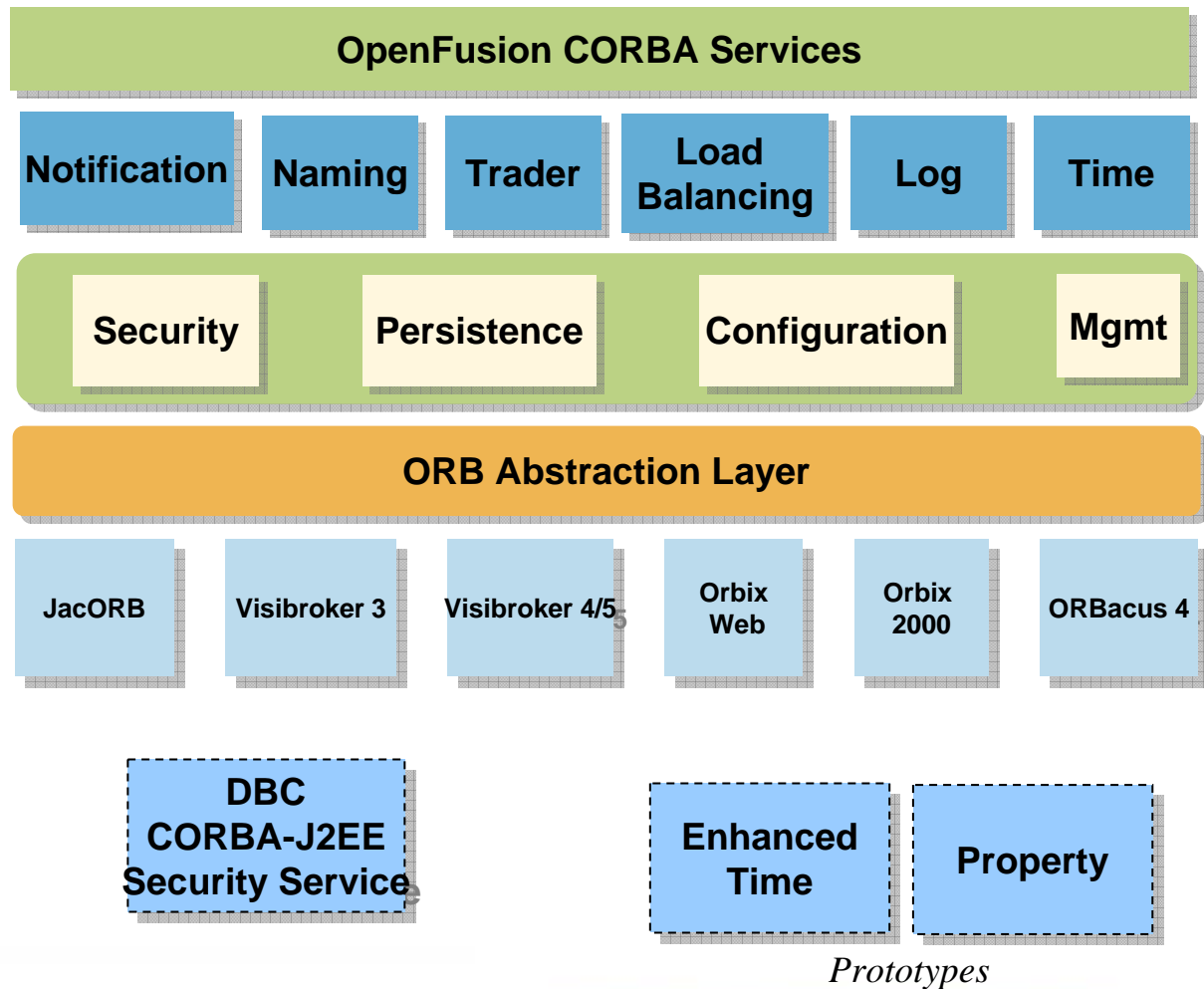
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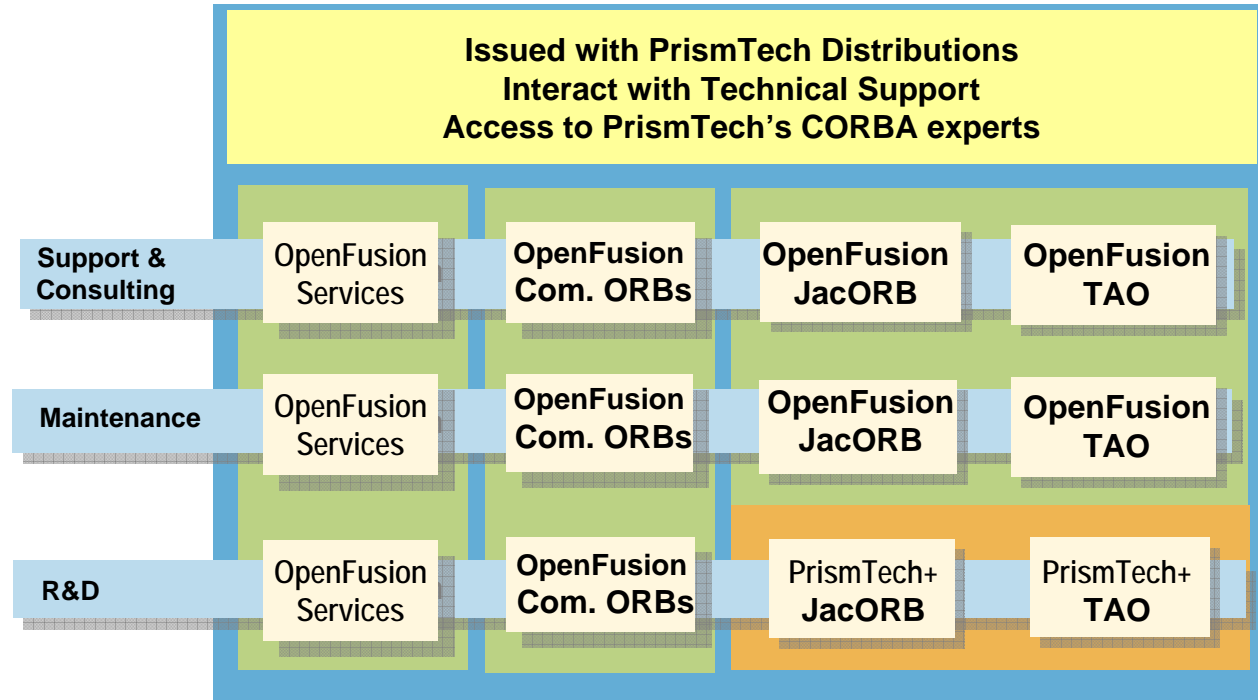
- Complies with CORBA 2.6 standard
- Java language mappings
- Fully multithreaded
- CORBA IDL compiler
- POA
- Dynamic Any
- Native IIOIP & IIOIP over SSL
- GIOP and bi-directional GIOP
- Implementation Repository
- Interface Repository
- Portable interceptors
- OBV

> **OpenFusion, the premier implementation of CORBA Services:**

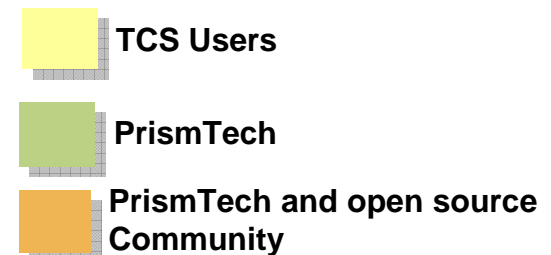
- > Full and fully compliant implementations
- > Highly performant, robust & reliable
- > Full interoperability between IONA, Borland and open-source ORBs
 - > thus easing the migration to lower costs without technical compromise
- > Enables broader integration through bridges to J2EE standard through OpenFusion JMS, JNDI bridges



- > One-stop-shop for all product line, division or corporate requirements
- > Lowest TCO with flexible pricing models
- > No technical compromise
- > Significant benefits of standardization
- > Evolving with CORBA®
- > Top-class support



PrismTech delivers the lowest TCO by combining its own advanced technology with re-packaged open source and top-class technical services to deliver a high quality, feature-rich, professional product at a very competitive price





Embedded CORBA



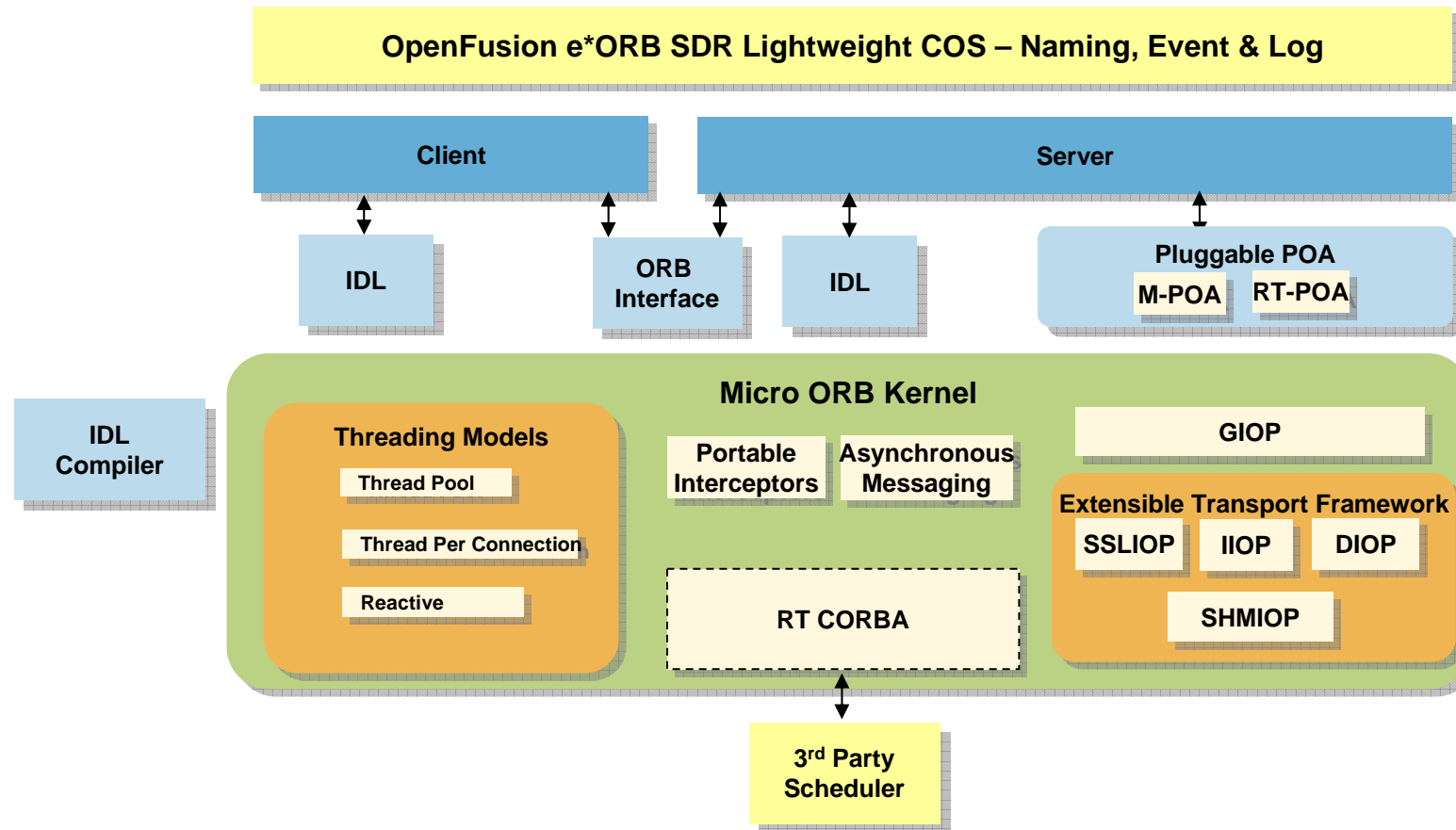
Benefits:

- > An ORB specifically designed for SDR (Software Defined Radio) and other resource constrained DRE (Distributed Real-Time Embedded) systems
- > Smallest footprint and memory overhead
- > More efficient use of resources
- > Highest throughput
- > The best ORB for SCA-compliant SDR development
- > Open and configurable architecture
- > Highly portable, scalable, flexible and reliable
- > An interoperable GPP and DSP solution in the same ORB family
- > Complimentary SDR products and wireless software solutions
 - > Key middleware component of the new PrismTech SDR products
- > Lost Total Cost Of Ownership – royalty free runtime pricing

Major Users:

- > **Defense** : General Dynamics, Raytheon, Harris, Northrop Grumman, BAE Systems, GCHQ, Rockwell Collins
- > **Avionics** : EADS
- > **Telecom**: CISCO, Lucent, Samsung, ETRI, Tellium, Telcordia

Common Mirco Kernel Architecture Supporting Multiple Language Implementations (C & C++)





OpenFusion RTOrb Ada & Java Editions



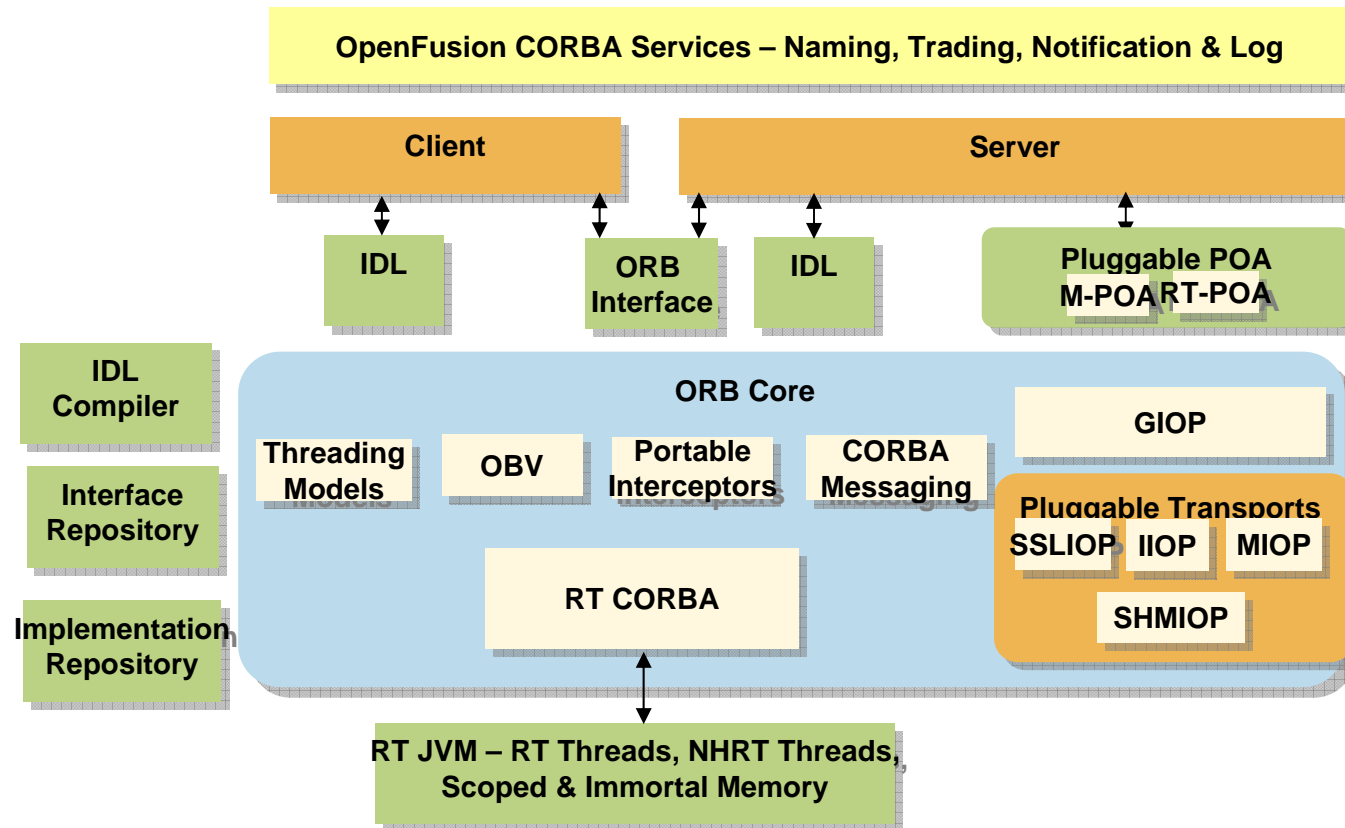
Benefits:

- > Multiple language support of CORBA 2.6 on a common technology (Ada & Java)
- > Rich CORBA implementation (Messaging, RT, MIOP, ROMIOP, multicast notification)
- > Fastest enterprise ORB on the market
- > **State of the art** : Java Real-time Corba on RT JVMs
- > Large number of platforms and compilers supported
- > Ada COS available on embedded systems

Major Users :

- > ATC : CENA, STNA, Barco
- > Defense : Raytheon, EADS, Lockheed Martin
- > Avionics : Northrop Grumman
- > TV : Canal +, Nagra
- > Banking : Swiss Post

A common Architecture for all Native Language Implementations



What is OpenFusion RTOrb Java Edition ?

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- > OpenFusion RTOrb Java Edition is PrismTech's Real-time CORBA compliant ORB for the Java platform
- > OpenFusion RTOrb Java Edition is the first commercially available Java ORB that can be used in hard real-time systems
- > Made possible through the recent emergence of RTJVM implementations based on the Real-time Specification for Java (RTSJ)
 - > E.g Sun's Java Real-Time System v1.0 (formally known as the Mackinac JVM)
 - > IBM J9
 - > AICAS Jamaica
- > OpenFusion RTOrb Java Edition can provide a unified solution for different needs and uses, supporting both hard real-time systems and non real-time enterprise applications in a single ORB

- > First commercial CORBA implementation that makes Real-time Java programming in a distributed environment possible
- > Compliant with key standards from the OMG and the JCP:
 - > CORBA 3 and Real-time CORBA v1.2 Specifications
 - > RTSJ (Real-time Specification for Java v1.0)
- > Full enterprise level CORBA functionality
- > Can be used as a Real-time ORB or general purpose Enterprise solution or both
 - > For systems with a mix of uses (both RT and non-RT) provides a single ORB solution
 - > Single ORB solution minimises ORB interoperability issues
 - > Developers only have to learn how to use one ORB
- > Low jitter (< 1ms)
- > High performance (excellent latency and throughput characteristics, as good or better than other Java ORBs, ultra fast CORBA::Any (notification))
- > Guaranteed interoperability with TAO and JacORB
- > RTOrb uses JacORB IDL compiler (bundled), this makes migration from JacORB to RTOrb much more straightforward

- > Bring PT teams experience to customers
- > Core activities
 - > Expertise on Distributed Architectures (CORBA & DDS)
 - > Audits
 - > Advice
 - > Design
 - > Training
 - > All ORBs
 - > DDS
 - > RT Java
 - > Solution developments
 - > Outsourcing
 - > Maintenance, further developments of proprietary frameworks