OpenCCM:
Status and Work plan

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http://corbaweb.lifl.fr/OpenCCM/
http://www.objectweb.org/OpenCCM/

ObjectWeb
Open Source Middleware

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OpenCCM Objectives

➔ **Be the 1st reference implementation of the CORBA Component Model (CCM)**
- Validate the current specification
- Contribute to next revisions
- Propose future extensions

➔ **Be the Open CORBA Component Model Platform**
- Open source
- ORB independent
- Adaptable, customizable, ...

➔ **Be a worldwide used platform dedicated to R&D activities around next Distributed Component Computing and Middleware technologies**

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Current OpenCCM 0.2

➔**1st public available implementation of the OMG CCM**

➔**Fully written in Java**
- ➢portability, maintenance and support
- ➢Linux, Solaris, and Windows supported
- ➢ORBacus 4.x, OpenORB 1.x, and VisiBroker 4.5 supported

➔**An open compilation & generation tool chain**
- ➢An OMG IDL3 Compiler
- ➢An OMG IDL3 Repository
- ➢A generator for equivalent OMG IDL2
- ➢A generator for extended Java skeleton classes

➔**A flexible distributed deployment & execution middleware infrastructure**
- ➢A generic Java server to host Java components
- ➢API to control component servers and download component archives
- ➢Deployment driven by OMG IDLscript

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Next OpenCCM 0.3

➔**Conformance to the finalized CCM specification**
- ➢OMG IDL 3.0
- ➢Interface Repository 3.0
- ➢Component model API
  - ●with minor improvements / corrections
- ➢Client-side IDL mapping
- ➢Local server-side IDL mapping
  - ●both monolithic & executor locator approaches supported
- ➢Part of new deployment API
  - ●excepts ServerActivator, AssemblyFactory, and Assembly

➔**Technically**
- ➢Java IDLscript embedded
- ➢Generators ~ scripted templates
- ➢Basic open container framework
- ➢Only ORBacus 4.1 supported (sic!)

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Next Features for Next Releases

- **Component Implementation Definition Language (CIDL)**
- **Persistent State Definition Language (PSDL)**
- **Component Implementation Framework (CIF)**
- **Containers for basic system services**
  - security, persistence, transactions, and notification
- **Packaging and deployment**
  - ZIP archives and XML DTDs
  - ServerActivator, AssemblyFactory, and Assembly interfaces
- **Various Graphical User Interfaces (GUI)**
  - for designing, assembling, deployment, and management
- **Generator and runtime for C++ components**
- **OMG IDL/CIDL/PSDL to XMI mapping (for UML tools)**
- **New ORB supported**
  - JacORB 1.4, Orbix 2000, MICO, TAO, omniORB 4, ...

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Work plan for 2002

- **Finalize next OpenCCM 0.3 (02/02)**
  - Stabilize current developments
  - Apply ObjectWeb project conventions (if any?)
- **Move to ObjectWeb (03/02)**
  - Web pages, mailing lists, GPL/LGPL, CVS, ANT
- **New developments to support**
  - CIDL / PSDL (05/02)
  - XML descriptors (06/02)
  - Basic system services (07/02)
  - C++ generator & runtime (08/02)
  - XMI generator & UML profile (09/02)
- **Provide intermediary releases and internal design documentations**
  - Open the OpenCCM developer community

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Status and Work plan Related to CCM Chapters

No	Chapter Content	OpenCCM Status and Work plan		
3	OMG IDL	0.3		
10	Interface Repository	0.3		
60	OMG CIDL		2Q 2002	
61	Component Model	0.3		
	Client side mapping	0.3		
615	CIF		2Q 2002	
	Server side mapping	0.3		
62	Container API		2Q 2002	
64	EJB interworking			2003?
69	Packaging		2Q 2002	
	Deployment API	0.3	2Q 2002	
695	XML DTD		2Q 2002	
70	IDL meta model		3Q 2002	
80	CIDL meta model		3Q 2002	

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Work plan Related to ObjectWeb

➔ **Reusing most of basic common component frameworks like MonoLog, etc.**
- To do **during 2002**

➔ **Integration with other ObjectWeb projects**
- Jonathan for its future CORBA 2.6 personality
- JOnAS for its distributed transaction service
- JORM for its generic persistence service
- JORAM for its reliable asynchronous middleware
- To start at **4Q 2002**

➔ **Contributing to next common component frameworks**
- Open containers and application servers
- Distributed deployment infrastructure
- Component repositories
- To do **during 2003**

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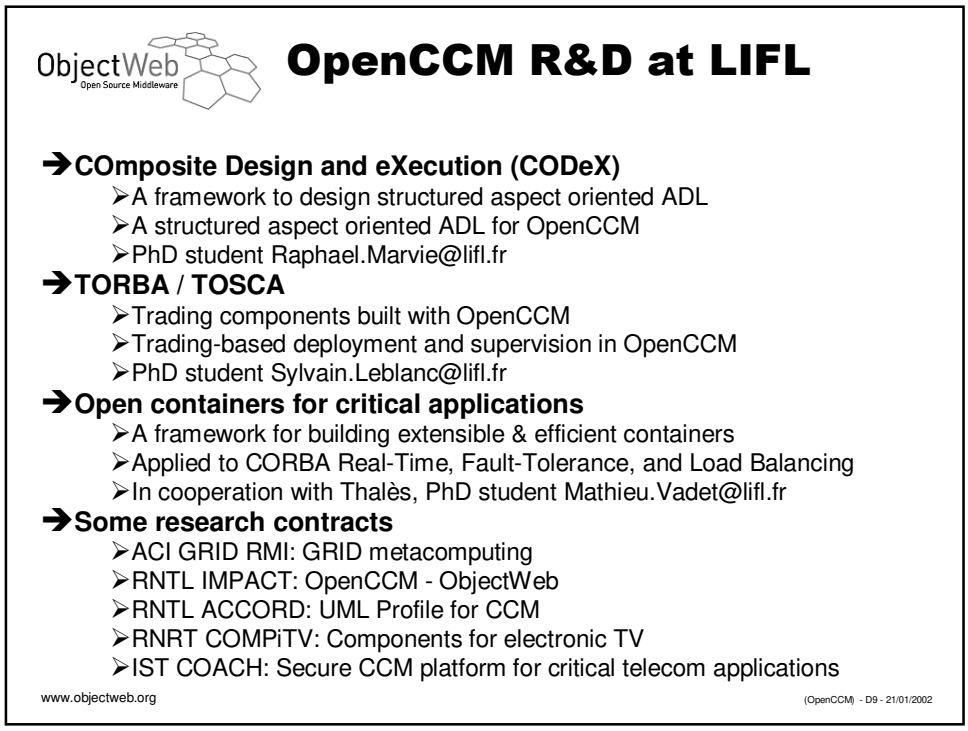
ObjectWeb
Open Source Middleware
OpenCCM R&D at LIFL
➔COmposite Design and eXecution (CODeX)
➢A framework to design structured aspect oriented ADL
➢A structured aspect oriented ADL for OpenCCM
➢PhD student Raphael.Marvie@lifl.fr
➔TORBA / TOSCA
➢Trading components built with OpenCCM
➢Trading-based deployment and supervision in OpenCCM
➢PhD student Sylvain.Leblanc@lifl.fr
➔Open containers for critical applications
➢A framework for building extensible & efficient containers
➢Applied to CORBA Real-Time, Fault-Tolerance, and Load Balancing
➢In cooperation with Thalès, PhD student Mathieu.Vadet@lifl.fr
➔Some research contracts
➢ACI GRID RMI: GRID metacomputing
➢RNTL IMPACT: OpenCCM - ObjectWeb
➢RNTL ACCORD: UML Profile for CCM
➢RNRT COMPiTV: Components for electronic TV
➢IST COACH: Secure CCM platform for critical telecom applications
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