

## **OpenCCM: Status and Work plan**

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**<http://corbaweb.lifl.fr/OpenCCM/>**  
**<http://www.objectweb.org/OpenCCM/>**



[www.objectweb.org](http://www.objectweb.org)



## **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 toolchain

- 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 **Server Activator, Assembly Factory, 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
  - Server Activator, Assembly Factory, 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 ORBs 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?)
- **Moveto ObjectWeb (03/02)**
  - Webpages, mailinglists, 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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No	ChapterContent	OpenCCM StatusandWorkplan	
3	OMG IDL	0.3	
10	InterfaceRepository	0.3	
60	OMG CIDL		2Q2002
61	ComponentModel	0.3	
	Clientsidemapping	0.3	
615	CIF		2Q2002
	Serversidemapping	0.3	
62	ContainerAPI		2Q2002
64	EJB interworking		2003?
69	Packaging		2Q2002
	DeploymentAPI	0.3	2Q2002
695	XML DTD		2Q2002
70	IDL metamodel		3Q2002
80	CIDL metamodel		3Q2002

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ObjectWeb Open Source Middleware		Work plan Related to ObjectWeb
<p>➔ <b>Reusing most of basic common component frameworks like MonoLog, etc.</b></p> <ul style="list-style-type: none"> <li>➤ Todo during 2002</li> </ul>		
<p>➔ <b>Integration with other ObjectWeb projects</b></p> <ul style="list-style-type: none"> <li>➤ Jonathan for its future CORBA 2.6 personality</li> <li>➤ JOnAS for its distributed transactions service</li> <li>➤ JORM for its generic persistence service</li> <li>➤ JORAM for its reliable asynchronous middleware</li> <li>➤ To start at 4Q2002</li> </ul>		
<p>➔ <b>Contributing to next common component frameworks</b></p> <ul style="list-style-type: none"> <li>➤ Open containers and application servers</li> <li>➤ Distributed deployment infrastructure</li> <li>➤ Component repositories</li> <li>➤ Todo during 2003</li> </ul>		

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## 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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