OpenCCM: Status and Work plan

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ObjectWeb Architecture Meeting, Grenoble, 21 – 22 January 2002

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

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

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!)

www.objectweb.org
**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, ...

**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
**Status and Work plan Related to CCM Chapters**

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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
  - JORM 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
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