IKV++ TECHNOLOGIES AG

IKV++ GmbH

m2c™ - Tools for the Model Driven Development of Next-Generation Distributed Systems

The provision of efficient techniques and tool support for development and engineering of distributed systems is a key enabling factor for the further evolution of Information Technology. Distributed systems consist of components which are distributed across networks and have to cope with concurrency, autonomy, synchronization, and communication aspects. The development of highly efficient and scalable distributed systems is a complex and complicated task. CASE tools will support all phases of the development process – from requirement capturing over design and implementation to integration, test and deployment.

Code generation out of object oriented design models leads to reusable, executable components. Such components integrate runtime environment and middleware platform technology dependent aspects with the enterprise specific object oriented design model. Using the same design models, particular code generators can be applied to derive components for different deployment and runtime infrastructures. In a manufacturing step, components will be assembled to build up the running solution – even that can be supported by generated deployment descriptors.

m 2 c ™ integrates object oriented design and component based manufacturing in a model centric approach.

The application of **m 2 c ™** for the development of distributed systems contributes significantly to a reduction of the time to market distributed applications and telecommunication services. An appropriate treatment of all kinds of communication aspects lies in the very nature of the targeted application domain. These aspects span from transactional requirements on object interactions over quality of service issues to security policies. Taking into account the broad acceptance of object middleware technology, middleware platforms provide an ideal implementation environment for such designs. **m 2 c ™** supports different middleware technologies, among them are plain CORBA®, CORBA Components and the distributed processing platform Enago is built upon.

m $_2$ c $_{TM}$ significantly contributes to the model driven architecture approach, recently introduced within the Object Management Group: *"Companies that adopt the Model Driven Architecture™ gain the ultimate in flexibility: the ability to derive code from a stable model as the underlying infrastructure shifts over time. Return Of Investment flows from the reuse of application and domain models across the software lifespan."*
[OMG document omg/00-11-05].