Project ABng
UMM Progress Report

15th May 1998

1. A new ABng core software based on CORBA has been implemented and tested. Its evaluation is in progress. This software is based on the *view* concept as a key mechanism providing scalability. It is fully object-oriented and supports access to CORBA objects in dual form: by value and by references. The objects of the same type are collected in repositories of objects. Each change of properties of any repository or an object in a repository can be notified to an application via a scalable notification mechanism based on the observer-observed design pattern.

   ABng is a quite complex software system consisting in 9 repositories and 5 other modules. These modules contain together 40 000 lines of code written mostly in C++. Only two repositories have been implemented in Java. The common parts of the implementation have been built as C++ templates. Two basic templates have been developed: the repository and the notification template. The existing ABng software implementation is based on Orbix 2.2 and uses the Orbix Name Service.

2. Documentation of the ABng software implementation has been written.

3. Initial performance study of ABng has been performed.

4. Possibility of porting ABng core to omni-ORB has been considered in a preliminary study.

5. First applications over ABng core system have been implemented. They are:
   XAB,
   ABngwho - Web version,
   ABng Repositories Management Tools with graphic interfaces,

6. A new AB-poller written in omni-ORB has been implemented in Linux environment and ported on a small, single-board PC. Two such pollers already exist in the system at the moment. They inter-operate with the ABng core software which may serve as many pollers as needed from the application point of view. It provides a new mechanism of the system scalability. The system built with three pollers (Olivetti plus two new omniORB based pollers) is now operational.

   The omni-ORB poller serves Olivetti and ORL hardware by assumption, so it eliminates any gateway requirements between those two systems.

7. An environment for advanced ABng user applications called "Wonder-Room" has been further developed. At the moment it consists of:
   Control Events Scheduling Server for the ABng system,
   Teletext device design and implementation,
   Infra-red Controlled multimedia streams multiplexer,
   ABng Light Control System,
   Door Control System Visualisation Tool.

8. Internal Web Site decicated to aBng Project has been created.