MARKET REQUIREMENTS DOCUMENT

Feature Name: Remote Build

Version: 4 **Date:** 05/18/04

Completed By: Leon Guzenda

Description of the Problem

SLAC and their partners on the BaBar project are likely to move the bulk of their new data to a homegrown "DBMS" (ROOT) over the next few years. Probably the prime reason for this is that it is difficult for everybody to keep their operating systems and compilers in sync. However, it can take us many weeks, or even months, to deliver our products on a new version of an operating system or compiler. The BaBar users want a DBMS that they can build for themselves. We would not want to sell our source to them as we could lose control of our IPR in such an open, International, academic environment.

Description of the Requested Feature

Functionality

We need to provide a mechanism or a service that will allow an appropriately licensed user to obtain a new version of an Objectivity product on a supported platform and known compiler in under three working days. In many cases, only the compiler version will change. In other cases both the operating system and the compiler version may change. The turnaround time will be longer if the new compiler version changes the physical structure of objects or if operating system interfaces are removed.

As we may not have access to the particular compiler and/or operating system version, we need a secure, efficient and reliable mechanism for running a remote product build and essential tests. The latter will be made easier when the new Test Harness goes into service, so the main issue is how to do the remote build, which requires that our source code be available to the compiler (and possibly other tools) on that machine.

One possible mechanism might be for the customer to provide a secure login to the remote machine and protected disk space. It might also be possible for the compiler to read the source code directly from our disks, rather than having to transport them to the user site. If source code is transported to the user's site then it must not be backed up or copied and it must be verifiably erased after the build. It must be possible for Objectivity to verify that it has sole access to the machine and files during the time that source files are in use.

Another mechanism would be to establish one or more target environments in an Objectivity or trusted third party site and to only permit Objectivity personnel access to the build machine.

Part of an existing feature or does it require another feature, if so, which one?

This facility will be very selectively licensed.

How is this problem being solved now, and why isn't that acceptable?

We currently support a limited number of platforms as it is too difficult and time consuming to continually test older operating system and compiler versions. We don’t have a production mechanism for rapidly building our products on a new platform.

What languages must this capability support?

- C++
- Java.

Which platforms must be supported?

- All currently supported platforms, starting with the ones that SLAC licenses.

Do any competitors already have this feature?

- Not Known. Unlikely.

Customers/Prospects who require this feature

- SLAC.
- Secure sites (possibly).

Revenue at risk, or which could be won

- Ongoing revenue from the BaBar sites.

When is this required?

- Release 9+.

Additional Notes

1. Third Party Solutions, particularly grid-enabled ones, such as Parallel Applications Development Environment [PADE] may be used to help implement this functionality.
2. We could charge for this service on an annual or a per-request basis.
3. We will need a special contract that will specify exactly how our source code and IPR is to be protected.
4. If the resource is to be hosted by Objectivity or a third party then it will have to be funded by the customers requiring this service.