Market Requirements Document

Feature Name: Physical Structure Fix-up Tool (oofix)

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Description of the Problem

We have seen various kinds of physical database file corruption over the years, ranging from hardware, operating system or Objectivity kernel malfunctions to damage caused by rogue application pointers, or a failure to use the update() method consistently. The Objectivity kernel ultimately detects many of these faults, often when a database tool is examining the contents of a file. However, there are very limited options for repairing a corrupt file.

This kind of problem also requires customers to upload their databases, which can be very large, to an Objectivity FTP site. Our customer support engineers then have to work on the fix, which is a time consuming process.

Description of the Requested Feature

There should be a tool (oofix), APIs and an Assist plug-in that have:

- The ability to fix invalid references. This might mean zeroing a bad REF, or removing a bad page and tidying up references to everything in it.
- The ability to drop corrupted indices.
- The ability to delete slots which have invalid types.
- The ability to delete orphaned VArray or association slots.

The tool must be capable of being run in several modes, including, at least:

- Check and report, but don't fix problems.
- Check, report and fix problems automatically
- Check, report and request verification before fixing each problem.

The tool must be able to look for selected or all known types of problem.

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

This is an additional tool, which will need some kernel support.

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

We have a few custom built tools for fixing problems discovered as the result of a System Problem Report from the field.

What languages must support this capability?

- The tool should be language independent, but the APIs need to be available in C++ and Java..

Which platforms must be supported?

- All platforms.

Do any competitors already have this feature?

- Unknown. However, many products have rollback/forward capabilities, which can be used to recover a database to a consistent state.

Customers who require this feature

- All

Revenue at risk, or which could be won

- This feature will help protect the reputation of our product.

When is this required?

- Release 10.

Additional Notes

1. We will also need:

- Marketing collateral.

- Updated Technical Publications.

- New QA material.