Objectivity Case History

NOTE: This information is for reference purposes only – Do not reproduce. Call the Sales Rep prior to any customer contact.

Customer Information

Fisher-Rosemount
Process Control
Data Collection/Archival
System Test
NT
Visual C++ 5.0
DCOM

Batch Historian collects process data and events from systems such as DeltaV and potentially legacy process control products. Many industries, such as pharmaceuticals, have legal requirements for maintaining this type of information for up to 7 years. Other industries use this data for quality control and process improvement operations. The core of Batch Historian is a C++ application that records the results of a batch process control run. The second main piece of Batch Historian is the reporting side, built around Objectivity's SQL++ server, containing a variety of stored procedures linked in. The end reporting clients use ODBC connections to the SQL++ server to generate the required reports.

Buying Criteria

Scalability: Batch Historian is required to save the information from a batch process control run for many years. The resulting volume of data can grow quite large.

Why Objectivity

Used on DeltaV project, which is the prime monitoring target for Batch Historian.

SQL++ and stored procedures provide an effective means of speeding up reports by using a time-based index lookup to dramatically narrow the volume of data that must be processed on most queries.

Difficulties Encountered

Fisher has stressed our SQL interface more than any other I am aware of, and as a result, have uncovered several problems in it. In general they perceive Objectivity's SQL interface as a less mature, less important to Objectivity language binding that gets less attention than our other language bindings, and is typically even released later. 5.0 was the first release that the intent was to release SQL in concert with C++, which was appreciated, but even there, the maturity was significantly behind the C++ side and felt like "beta" to them.

Some of the more significant problems encountered:

- 1) Memory leaks (corrected)
- 2) 14 character limitation on ODBC name (months to debug)
- 3) Memory initialization errors when using stored procedures- required workarounds such as adding a dummy column
- 4) Single-user concurrency, i.e. one read-only query would block another read-only query
- 5) Result sets greater than 5000 rows would crash system
- 6) Security control did not work- i.e. all clients had to have same access privileges to work

Contact Information

Objectivity Rep: Steve Fox Customer Contact: Grant Wilson Phone: Email: