



SQL And BASIS Products: It's All About Data

By John Schroeder

Developed by IBM in the 1960's, Structured Query Language, or SQL, has become the standard language for database access. It is available for virtually every database management system (DBMS) developed in the past 20 years.

We use SQL to access data. The primary functions of SQL are to retrieve, update and manage the data required to make an enterprise successful in the marketplace. Using a tool like SQL within the context of a Business Basic application provides a path outside the confines of Business Basic into industry-standard applications and databases. In our current products, BASIS offers the BASIS ODBC Driver® to provide access to BBx® files from external applications. The SQL engine in Visual PRO/5® provides access to external databases from within a BBx application.

SQL has several advantages, two of which are standardization and relative ease of use. Usually, standardization promotes physical database independence in terms of applications. In reality, each major DBMS has its own low-level implementation of SQL. While a particular SQL query will work on almost any DBMS, the low-level data access is different in different systems. So application programmers and system designers must design different code segments to deal with different database systems.

With the advent of ODBC and JDBC, standard database application-programming interfaces (APIs) are available, allowing application designers to deal with a DBMS as a black box that can be plugged into the application as requirements dictate. The BASIS ODBC and JDBC drivers incorporate these standards and make it possible and easy to share data with other applications. With BBj™, application designers will be able to have all the data for an enterprise reside in the same database.

The BASIS ODBC and JDBC drivers provide significant speed improvements for complex queries compared to previous versions of the BASIS ODBC Driver. And JDBC is available on UNIX platforms as well as Win32 platforms, giving JDBC-aware applications access to BBx files on any platform that supports a Java Runtime Environment. In addition, a JDBC interface from within BBj will allow a BBj program to query any external, JDBC-enabled database. Access to BBx data from outside the BBx environment and access to external databases from inside BBx applications are more fully supported in BBj and are supported across a wider set of platforms.

Extending the use of the JDBC interface will be the use of the JDBC API hook that enables BBj applications to use the native transaction-processing capability of third-party databases. Future releases of BBj will support transaction processing on BBj files as well as external data, making the dream of database independence a reality.

As we move forward into the world of integrated systems and formerly disparate systems sharing data and interfaces, SQL will be a significant tool for all developers. And it will be fully supported in BASIS products.