

# Multi-vendor Interoperability Through SQL Access

*Scott Newmann  
Digital Equipment Corporation*

## Abstract

Several years ago, there was no general approach to providing widespread interoperability between databases and database tools from different sources. The interoperability solutions that did exist were primarily achieved through specific, point solutions that provided interoperability between a single pair of vendors. At the time, many companies were faced with the expensive and daunting possibility of creating and supporting a number of these pair-wise solutions.

The SQL Access Group was formed in order to provide common solutions to the multi-vendor interoperability and portability problems. Its primary focus is to accelerate existing efforts in official standards bodies, such as ANSI and ISO, by providing input to the standards process. Unique to the group, is the concept of prototyping and demonstrating these standards in order to ensure their viability.

The SQL Access Group is currently working in three areas: the SQL language (API), client-server formats and protocols (FAP), and a dynamic SQL-oriented, procedure call-based interface (CLI). A common definition for the SQL language is essential for application portability and for client-server interoperability, because SQL statements are communicated between client and server. The SQL Access embedded SQL definition is based on SQL-89 with extensions from SQL2, some of which were originally proposed by SQL Access. The specification is published by X/Open in cooperation with SQL Access.

Client-server communication is achieved through the use of formats and protocols that are based on the ISO Remote Database Access (RDA) standard over an OSI network. The SQL Access Group was instrumental in providing essential input into the RDA standard. The group is also finalizing a mapping of the formats and protocols for TCP/IP networks.

The SQL Access Call-Level Interface (CLI) is a procedure call-based interface that will shortly be published as an X/Open "snapshot" specification. It is intended to support the requirements of "shrink-wrapped" software vendors, and others wishing to use an alternative to embedded SQL.

SQL Access members are currently working towards products that implement one or more of the SQL Access standards. Digital Equipment Corporation is expecting to ship a SQL Access (FAP) Server in the near future. Microsoft Corporation has recently announced their Open Database Connectivity (ODBC) architecture, that has the SQL Access CLI at its core. They expect to ship ODBC in June 1992. Additional SQL Access-based products are expected from these and other sources in late 1992 and early 1993.

The talk will describe The SQL Access Group and elaborate on the areas in which the group is working. The relationship between the work of The SQL Access Group and the ISO SQL2 and Remote Database Access (RDA) standards will be explained, as well as their involvement with X/Open. In addition, some parallels with other significant remote database access approaches will be illustrated.