

REXX ORACLE INTERFACE

GEORGE CRANE
SLAC

SLAC DB ENVIRONMENT

Currently support three mainframe database systems.

SPIRES	Stanford university product, hierarchical, acquired 1970, library, inventory etc.
NOMAD2	Must Software, acquired 1985, accounting type applications
ORACLE	Acquired 1989, all platforms, variety of applications.

INTERFACE TOOLS

- * All 3 DB products allow 3GL type interfaces via FORTRAN, PL/1, etc.
 - In reality (at least in the SLAC environment) they are used very little.
- * SPIRES additionally allows SUBCOM entry commands, very useful.
 - Issue any SPIRES command with Address SPIRES '....'
 - Data can be exchanged via stack, files, or Xedit in both directions.
- * Pro*Rexx for Oracle.

USER VIEW OF THE WORLD

- * Not everyone wants to learn a DB procedural language.
- * Existing Rexx exec's can be enhanced with DB capabilities.
- * Comfort level is higher within Rexx
- * Development faster than with 3GL
- * Large production systems can more easily migrate.

PRO*REXX IMPLEMENTATION

- * Command driven interface between Rexx and Oracle
- * Runs under VM/SP, VM/HPO, VM/XA
- * No 3GL language, No pre-compilers, No compilers, No linking , much less confusing.
- * Communicates with Rexx applications through Rexx variables.
- * Has built-in "control" RDBMS variables structures which are always available after a database connect.
- * Certain SQL statements are optimized to return data in Rexx arrays such as SELECT and FETCH.

PRO*REXX IMPLEMENTATION

- * Implementation almost identical to RX/SQL for SQL/DS.
- * Static and Dynamic SQL statements - allows building of SQL statement at runtime.
- * Supports concurrent Oracle connections & access to remote data bases via SQL*Net.
- * No data conversions are performed by Pro*Rexx, data is passed in CHAR format to and from Oracle.
- * All necessary RDBMS entities are "in line", what you see is what you execute.

EXAMPLE

```
/* Dynamic command to retrieve data */
```

```
RXS CONNECT userid/password
```

```
RXS PREP stmt SELECT * FROM table
```

```
RXS OPEN stmt
```

```
DO
```

```
    RXS FETCH stmt INTO OUTPUT.
```

```
END
```

```
RXS CLOSE stmt
```

```
RXS COMMIT WORK RELEASE
```

HOW SLAC IS USING PRO*REXX

- * As an interface tool between SPIRES, NOMAD and ORACLE
 - Refresh Oracle tables using a SPIRES table.
 - Update Oracle tables from data collected via non-Oracle screen tools such as Xmenu, GDDM and Xedit macros when database editors such as SQL*Forms are not practical.
 - As user exit routine via SQL*Forms to issue SQL commands normally prohibited in Oracle forms.
- * To update Oracle tables on multiple platforms.

ADVANTAGES

- * Multiple product functionality.
- * Eliminates need for multiple components.
- * Maintenance, documentation, debugging.
- * Work in familiar territory.