REXX ORACLE INTERFACE

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SLAC
## SLAC DB ENVIRONMENT

Currently support three mainframe database systems.

<table>
<thead>
<tr>
<th>System</th>
<th>Description</th>
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<tbody>
<tr>
<td>SPIRES</td>
<td>Stanford university product, hierarchical, acquired 1970, library, inventory etc.</td>
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<tr>
<td>NOMAD2</td>
<td>Must Software, acquired 1985, accounting type applications</td>
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<tr>
<td>ORACLE</td>
<td>Acquired 1989, all platforms, variety of applications.</td>
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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.