iXSP INFORMATION ACCESS ACCELERATOR

PERFORMANCE EVALUATION   Information Builders Inc. recently conducted an information access evaluation to determine the performance improvement that could be obtained by adding an Information Access Accelerator to existing DBMS platforms. The objective was not an attempt to displace existing systems, but rather to complement the performance of in-place systems. The specific focus of the evaluation was on addressing end-user needs for timely information access. The two specific information access needs considered were:

[1] Total elapsed time from fresh data to usable report.

[2] Maximum number of hourly reports given optimized data.

The two commercial DBMSs chosen for the experiment were from IBM and Oracle.

iXSP   The *Information Access Accelerator* used in the evaluation is a software application that works synergistically with the same data used by existing systems. It is a *read only* facility that does not impact the existing system in any way. The key feature of iXSP software is that it suppresses the need for using index structures by relying solely on the intrinsic relationships embedded in every data representation.

PERFORMANCE IMPROVEMENT   The source data chosen for the evaluation was an industry standard used for comparing the performance of ad hoc complex decision support and data analysis applications. The specific report generated was executed against source data, each twice the size of the other, since *scalability* is an important concern for business intelligence. The report generated is typical of what might be expected in a business environment.

Total elapsed time required to preprocess data and generate initial report:

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          RECORDS      IBM        ORACLE       iXSP     IMPROVEMENT
        8 million    1h  6m      1h 54m          7m      9-16 times
       17 million    2h 16m      4h 21m         13m     10-20 times
       34 million    4h 10m      7h 37m         26m      9-17 times
       68 million      *           *            51m       infinite
      136 million      *           *           106m       infinite
                 * Index structures required more disk space.
```

Number of subsequent reports generated per hour given preprocessed data:

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          RECORDS      IBM        ORACLE       iXSP     IMPROVEMENT
        8 million     1.89        7.89       115.38     14-61 times
       17 million     0.88        2.12        66.67     31-75 times
       34 million     0.46        0.70        37.03     52-80 times
       68 million      *           *          19.50       infinite
      136 million      *           *          11.10       infinite
                 * Index structures required more disk space.
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TIMELY REPORTS   These results indicate that users of IBM and Oracle systems could maintain their existing applications and at the same time improve their overall information access needs by just adding an iXSP to their existing system. Similar results have been demonstrated on Informix systems and evaluations for other commercial platforms are planned.