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# Web - Database Applications

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# Our Problem

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- ❑ How could a small group support enterprise wide access to its Data Warehouse ?
- ❑ We tried to support individual tools but the different versions and desktop platforms made our job extremely difficult
- ❑ We even built our own Windows/MAC tool so a free solution would be available, but support was still a problem
- ❑ So . . . what could we do ?

# Our Solution

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- ❑ We decided to develop a full-featured ad-hoc query builder for the Web
- ❑ It took one person about a month to complete the application
- ❑ Now we had a true cross-platform application that could be centrally supported
- ❑ And there was no expensive software to buy! (either for the server or the clients)

# Query Builder Features

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- ❑ Choice of ‘Point and Click’, ‘Free-Form’, or Saved Queries
- ❑ Built-in Data Dictionary entries
- ❑ Automatic JOINS and GROUP-BYs
- ❑ Row and Time limits
- ❑ Output to Excel, Lotus, DBF, and ASCII-delimited formats
- ❑ Report-Writer feature

# More Features

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- ❑ We require Sybase IDs and Passwords; security is handled by the database engine itself
- ❑ The Web Server machine is separate from the Sybase Server (added security)
- ❑ Result files can be compressed before they are downloaded (thus even queries with large numbers of rows can be run)
- ❑ Users can save as many queries as they wish and also delete saved queries

# The Reporting Template

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- ❑ We also needed a Web application that could run a large number of ‘canned reports’
- ❑ The template includes Web forms that help a user turn one or more ‘stored procedures’ (on Sybase) into a new ‘canned report’ on the Web
- ❑ Each report is defined by a small parameter file
- ❑ It’s now possible to go from SQL to a finished Web Report in about 15 minutes

# Reporting Template Features

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- Like the Query Builder, the template is written in REXX; it is currently running on both OS/2 and Windows NT (identical code)
- Results are formatted into Web tables, with choices for Font-Size and Alignment
- Results can also be downloaded as an ASCII-delimited file
- The Result Page can also be E-mailed or Faxed

# The Web Label Generator

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- Our latest project is a Web application that can access our 'Staff Demographics' database and produce PostScript mailing labels
- The PostScript file can either be downloaded or sent directly to an Internet-connected printer
- We can also produce a delimited text file suitable for our 'Addressing and Mailing' department
- We also supply freeware utilities to help both Windows and MAC users print PostScript files



# Future Plans

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- ❑ Our goal is to work with each ‘Data Custodian’ and produce a set of ‘canned reports’ for each of our 15 (or so) databases
- ❑ Our Query Builder will be improved but will hopefully get less usage as the ‘canned reports’ proliferate
- ❑ By using the Web (and our Reporting Template), maintenance and support costs should remain low

# Our Results So Far

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- Since the summer of 1995, about 17,000 queries have been built and run using our Web Query Builder
- Over 300 different users have actually built and run queries
- Our Reporting Template already runs about 30 different reports
- Our client-server platform (Sybase) now accounts for 66% of all Data Warehouse accesses (compared to 29% last year)

# Lessons Learned

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- ❑ We launched our IDEA (Institutional Database - Easy Access) effort about three years ago and the use of the Web has really put some meaning in that acronym!
- ❑ If we were to start over today, we would probably use one of the many 'Web-Database' tools available; but we would also leave room for 'custom' development

# Our Server's Address

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- ❑ You can connect to <http://notes.ais.umn.edu> and choose 'Queries and Reports' (you can also look at the 'Information' page)
- ❑ Under 'Queries' you can either view a 'Tutorial' of the Query Builder or build an actual query using the 'guest1' ID (you can build a query but it will not actually run)
- ❑ If you have comments or questions you can contact Bob Malos ([malos001@tc.umn.edu](mailto:malos001@tc.umn.edu))

# Also . . .

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- ❑ Look for the ‘Web / Database Interaction’ Web page (session WD13) on ‘webdev.indiana.edu’
- ❑ You should find Lotus Screen Cam ‘movies’ of the Query Builder, Reporting Template, and Label Generator in action (along with a free copy of the Screen Cam Player)