Database Management Systems (DBMS) Wrapup

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23 January 2002

NULL: How to Describe What Isn't There

Three-state logic:
- 1 + 0 = 1, but 1 + NULL = NULL
- TRUE <> NULL, FALSE <> NULL, NULL <> NULL

Cartesian Products: Why You Can't Leave Stray Tables in the Access Graphical Interface

From Unstructured Data to Enterprise Database Management:

Unstructured/Semistructured Data: Data embedded in narrative
Examples of Semistructured Data:
- Election 2000 Data on CNN
- Ice Cream Shops in Cambridge

Flat File:

- Text:
    - delimited free-format
    - fixed format
    - no datatypes (everything is text)
- HTML Table:
    - tabular structure
    - interpreted by many software packages, including web browsers
    - no data types (everything is text)
- dBase (DBF):
    - tabular structure
    - supported by many software packages
    - inefficient file storage (fixed width fields)
    - short (10-character column names)
    - no NULLs (usually; somehow ArcView stores them)
- Excel:
    - tabular
    - multiple sheets
    - basic database query and update functionality
    - single user
    - limited number of rows

Single-User Database: Access®
Multiuser Relational Databases:
- Oracle®
- Sybase®
- Microsoft SQL Server®
- IBM DB2®
- IBM Informix®
- MySQL®
- PostgreSQL®

Beyond Relational Databases:

Object-Oriented
Object-Relational