1990 Worldwide Developers Conference

Data Access Manager

Data Access Manager

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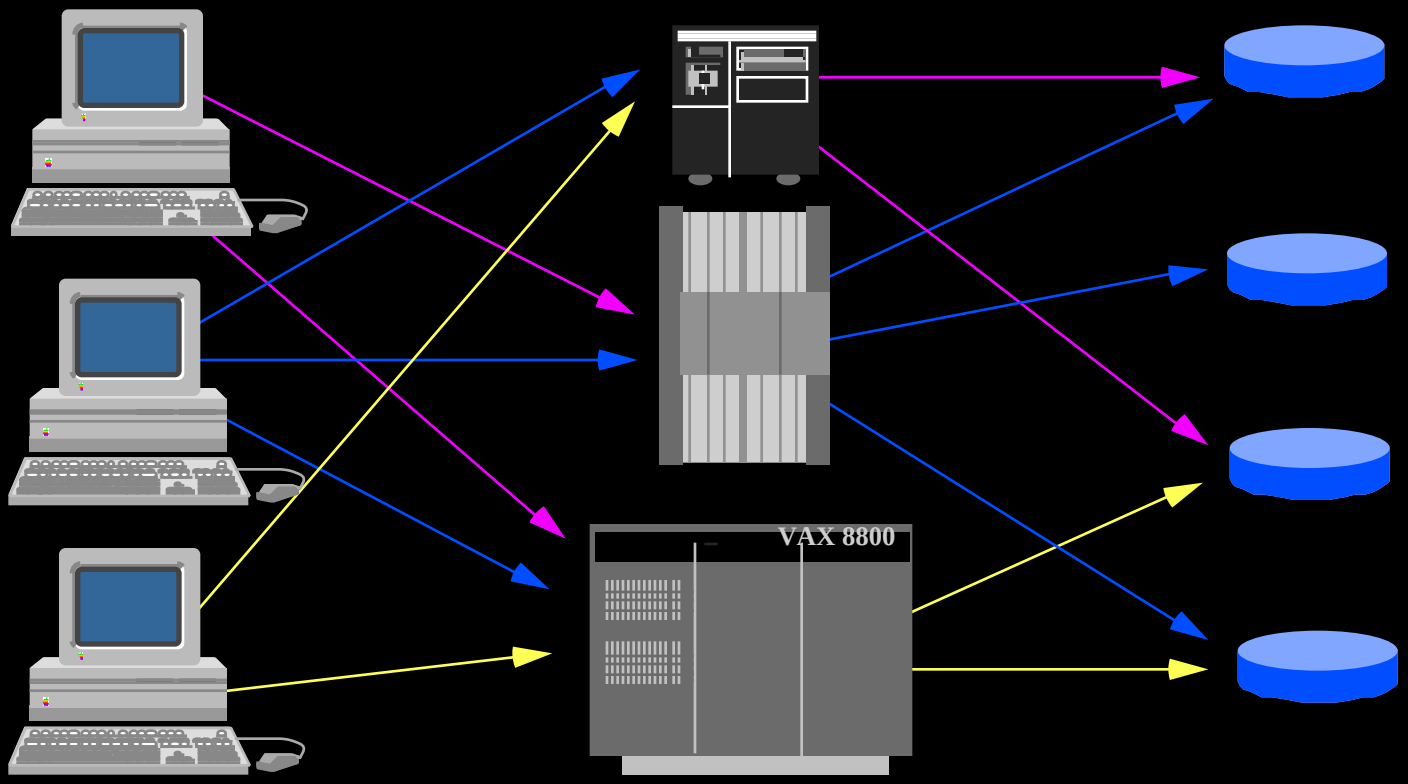
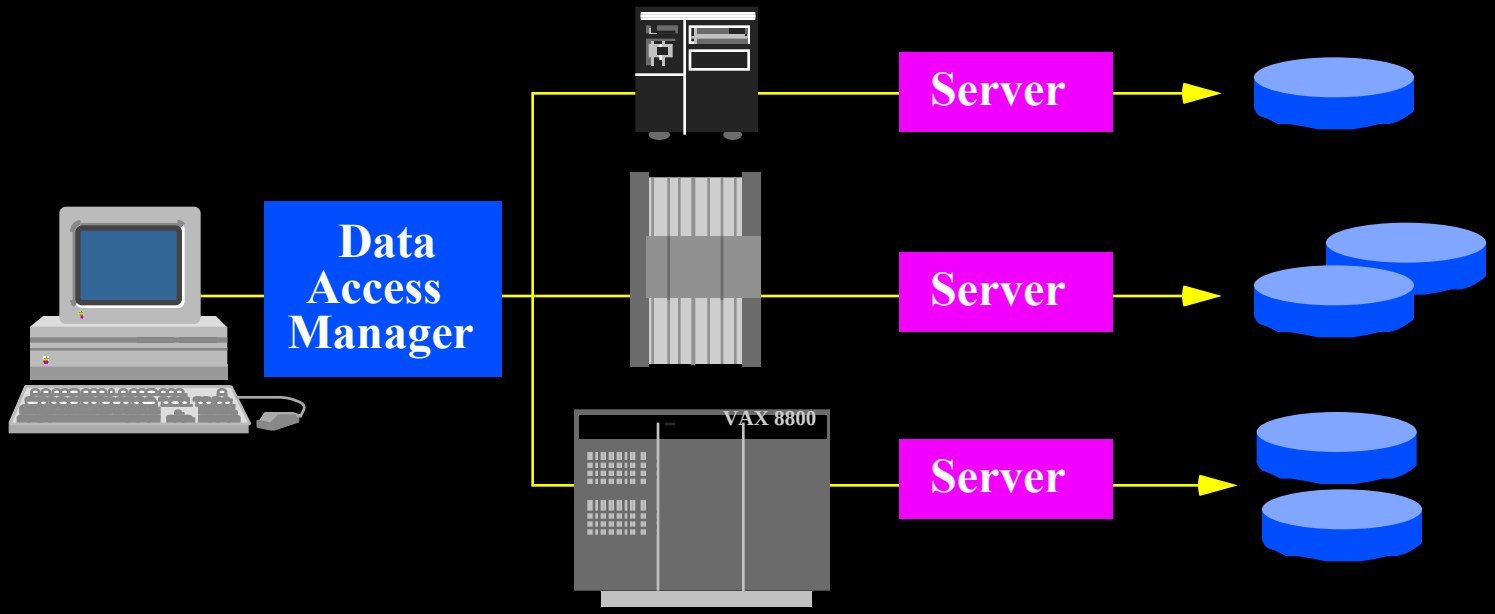
Overview

- Access to data
  - Network independence
  - DBMS independence
  - OS Enviroment independence
- Single programmatic interface

Avoiding the ‘Jumble’



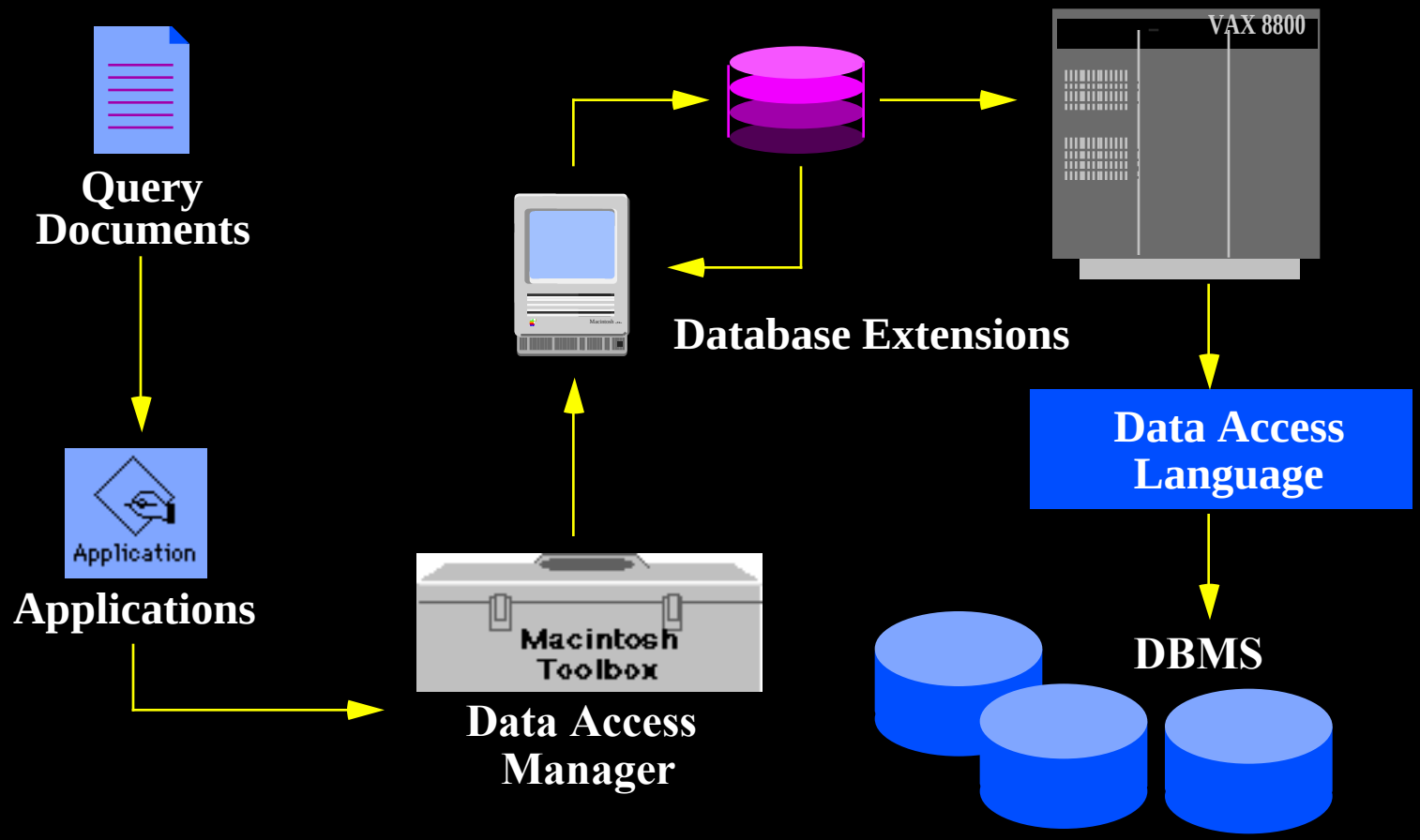
A Single Path to Data



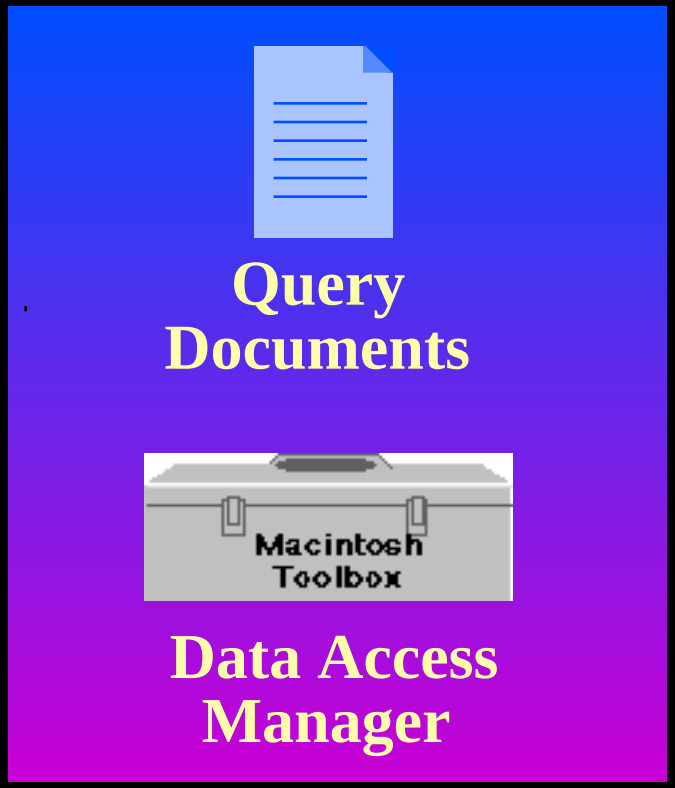
Application Usage

- Database Management Systems
- Decision–support applications
  - i.e. Spreadsheets, charting, statistical
- Database support tools
  - i.e. Database browsers, CASE, database administration
- Executive Information Systems

Data Access Manager–Roadmap



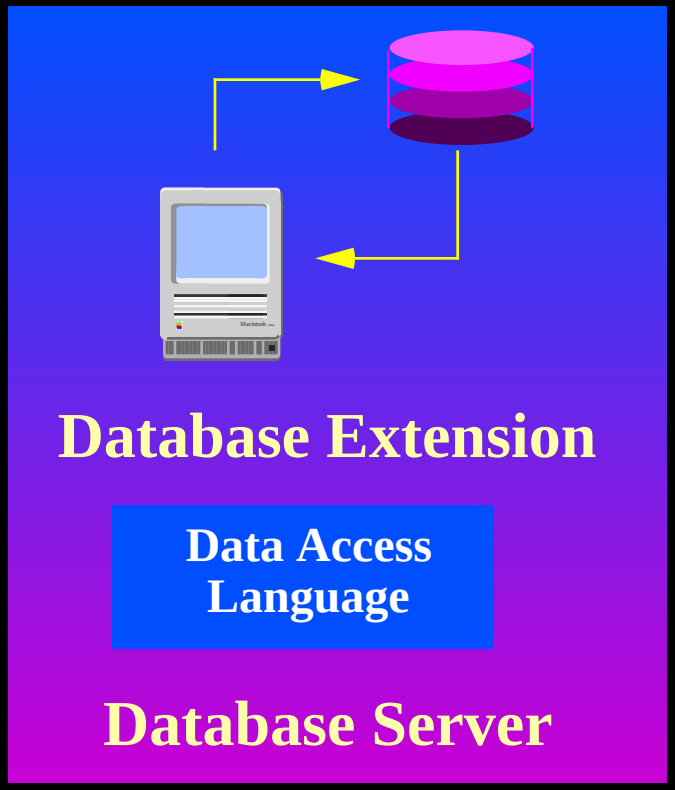
Components



- Database navigation scripts
- Code resources

- High level calls
- Low level calls
- Result handlers

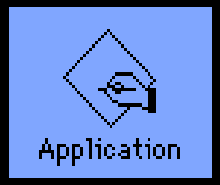
Components *(cont.)*



- Called by Data Access Manager
- Makes host connection
- Specific database server connection

- Connects to Database(s)
- Host resident

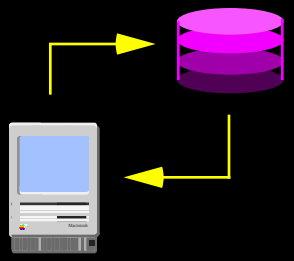
Architecture



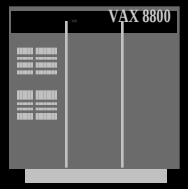
High Level Calls

Low Level Calls

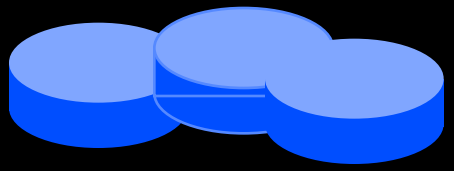
Data Access Manager



Data Access
Language
Extension



Data Access
Language
Server



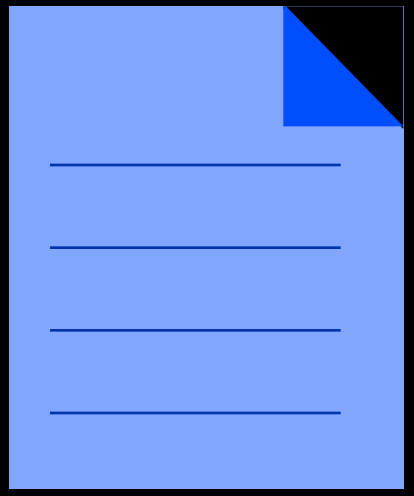
DBMS

Database Management Systems

Demo!

Query Documents

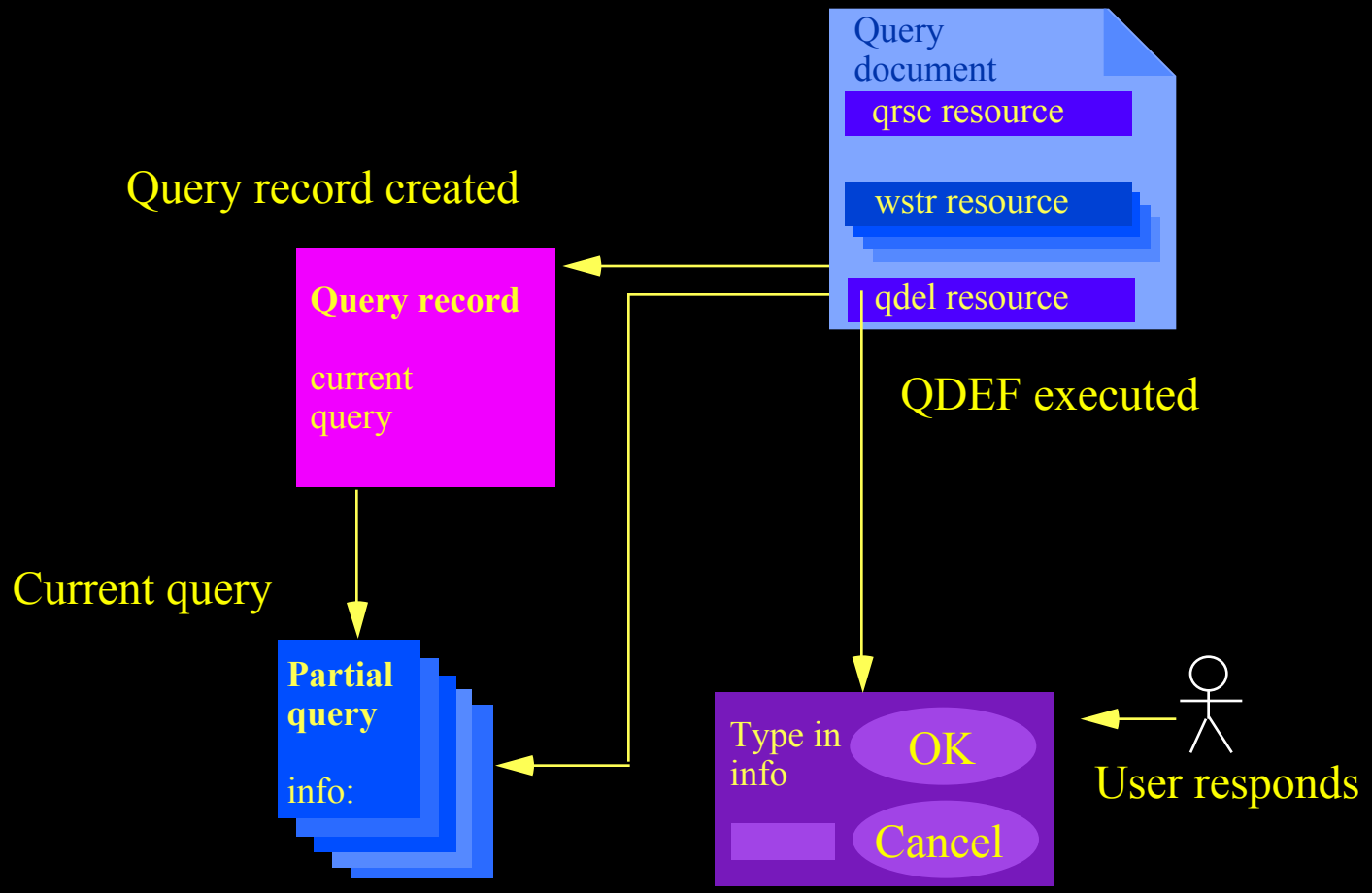
- Contains queries
- File type ‘qery’
- Must contain:
  - ‘qrsc’ resource
  - ‘STR#’ resource
  - ‘wstr’ resource
- Additional other resources (ie ‘qdef’, ‘BNDL’, ‘DLOG’, ‘DITL’)



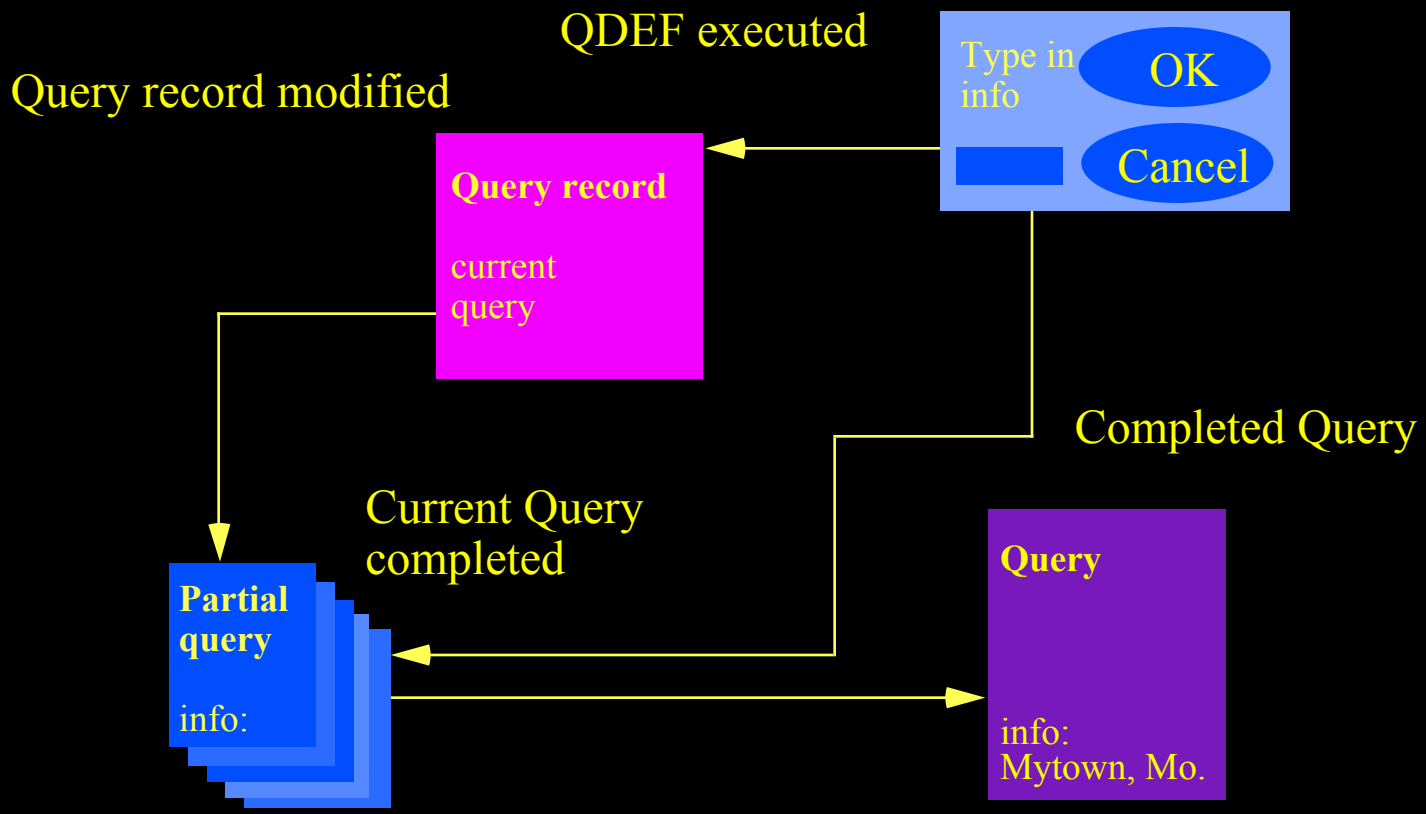
Query Records

- Query record
  - In memory template of ‘qrsc’
  - Modified by ‘qdef’
- ‘qdef’ function
  - Modifies query record
  - Code resource
  - Uses: dialog boxes

Query Record Building



Query Record Executed



Toolbox Calls

- Low level calls
- High level calls
- Result Handlers

Low Level Calls

- Compatible with API for Data Access Language
- Minor differences: Pascal function calls
  function names
- For complete interaction
  - (i.e. inserts, updates, deletes)
- Can be used with high level calls

High Level Calls

- Uses 12 low level calls
- Only four calls:

  DBStartQuery DBGetQueryResults

  DBGetNewQuery DBDisposeQuery
- Ideal for grabbing data
- Needs Query documents to work!

High Level Calls–An Example

- /* Point to Query */
  SFGetFile(...);
- /* Create the Query Handle */
  DBGetNewQuery(rscId,&queryHandle);
- /* Start the query */
  DBStartQuery(&sessID, queryHandle, ...);

High Level Example - Cont'd

- /* Get the results */
  DBGetQueryResults(sessID, ...);
- /* Get rid of the Query Handle */
  DBDisposeQuery(queryHandle);

Result Handlers

- System–DBResultsToText

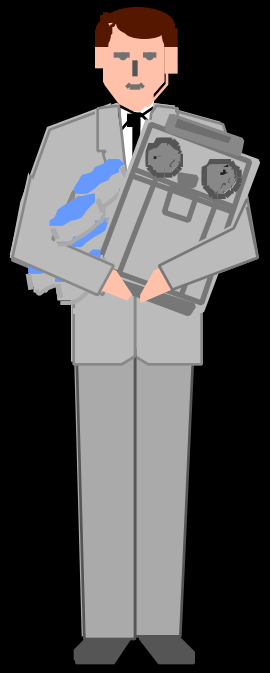
  Boolean, SMInt, Integer, SMFloat, Float, Char,VChar, Unknown, ColBreak, Row Break, Time, Timestamp,Date, Decimal, Money
- Customized–DBInstallResultHandler
  - System–wide or application only–up to you
  - Can be installed as an INIT in System Folder

Database Extensions

- Handles connection to database
- Can provide for asynchronous operation
- Implements low level functions

Who Will Use This?

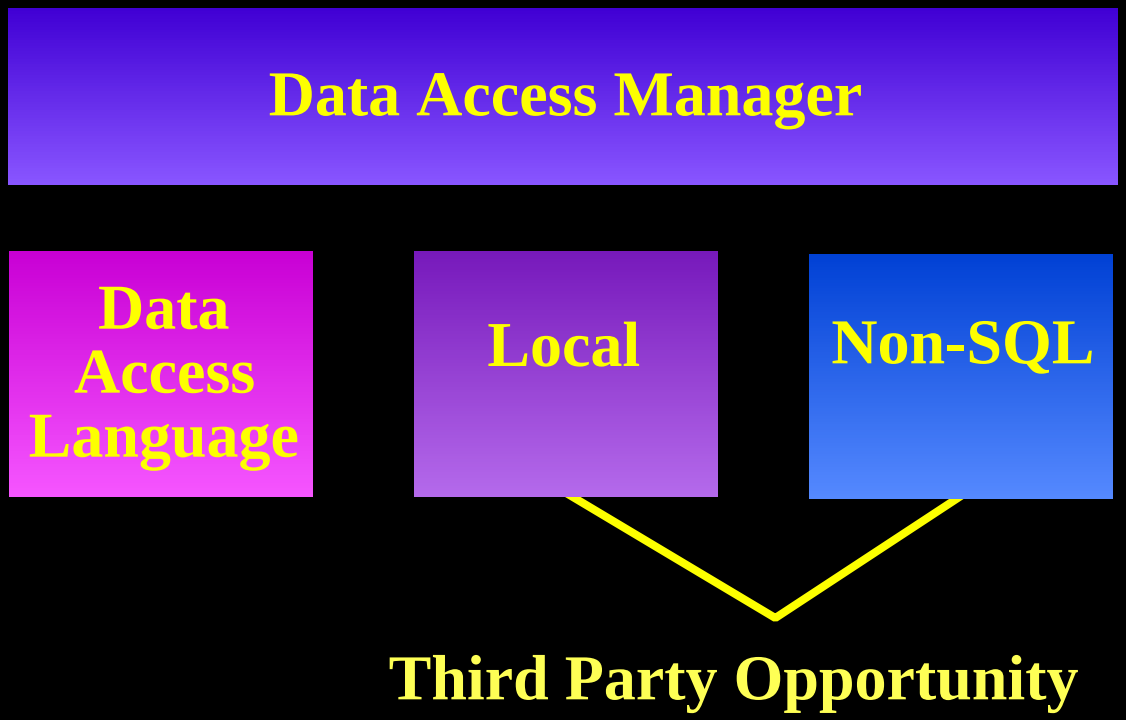
- Medium to large businesses
- Government
- Education



What you need to do

- Use Data Access Manager
  - Low Level - DBMSs, Forms processing
  - High Level - Spreadsheets, business graphics
- Developer opportunities:
  - Query Document builders
  - Database Extensions

Need for Additional Database Extensions



The power to be your best