Cooperative Processing Data Bases
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Abstract

This presentation will be about cooperative processing for the 90's using client-server technology; concepts of downsizing from mainframes and minicomputers to workstations on a LAN will be the main theme.
Traditional Online Applications

DBMS
Micro, Mini or mainframe

Application Programs

DumbTerminals
Cooperative Processing Applications

SQL DBMS
Minicomputer

SQL DBMS
Superserver

SQL DBMS
Mainframe

Local or Wide Area Networks

Application Programs

Application Programs
When application programs run on PC workstations but transparently access SQL databases which reside on mainframes, minis, or micro based data servers.
Graphical Front-Ends for SQL Back-Ends

What makes an application graphical?
Elements of a Graphical Application

- Bit Map Graphics
- Dialog Boxes
- Point Devices
- Windows & Scroll Bars
- Color & Fonts
- Text & Graphics
Graphical Programming for SQL

- Visual display of code
- Point & click drawing of objects
- Events & messages
- Procedural actions
- Explicit SQL coding
- Reusable functions
- Animated debugging
Graphical Front-Ends for SQL Back-Ends

Graphical programming for Windows and OS/2 PM
End-User Graphical Tools

- Primarily for decision support
- Ad-hoc query and reporting
- SQL must be invisible
- Integration with spreadsheets/WP
- Easy application generation
# PC DBMS Software in the Nineties

<table>
<thead>
<tr>
<th>Software</th>
<th>Benefits</th>
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<tbody>
<tr>
<td>Graphical PC tools for SQL databases</td>
<td>Improved people productivity</td>
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<tr>
<td>PC LAN client/server SQL systems</td>
<td>Downsize from minis and mainframes</td>
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<tr>
<td>Enterprise-wide PC to SQL cooperative processing</td>
<td>True integration of PCs into corporate data processing</td>
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Future of Graphical Interfaces

- Most PCs will go graphical within 3 to 5 years.
- Windows and OS/2 PM will be the dominant graphical environments.
- Graphical Front-Ends will drive Cooperative-Processing applications.
- Programmer tools will become more sophisticated, yet simpler.
- End-User tools will become more powerful.
The Significance of SQL

- SQL makes it possible to develop LAN database servers.
- SQL enables development of engine-independent application tools.
- SQL provides unified access to micro, mini, and mainframe databases.
We Open Windows to SQL

Gupta
TECHNOLOGIES INC.
Gupta SQL System

- Gupta SQLWindows
- COBOL and C
- Excel and Lotus 1-2-3
- Third Party front-ends
- Gupta SQLNetwork to DB2 and Oracle
- Third Party Database Servers
- Gupta SQLBase Server
PC to DB2 Connectivity with SQLNetwork
SQLNetwork for Oracle

VAX or other platforms

Oracle

DecNet or TCP/IP

Oracle Server

SQL*Net

SQLGateway/Oracle

OS/2 clients

Windows clients

SQLGateway/Oracle

SQLRouter/Oracle

SQL*Net

SQLRouter/Oracle

SQL*Net

C or COBOL

SQLVision

SQLWindows
Our Price: $15,000.00
Form Window: frmMain
- Title: Fast Car Auto Brokers
- Icon File: [none]
- Display Settings
- Menu
- Contents
  - Data Field: fldCarMake
  - Background Text: Make:
  - Data Field: fldModel
  - Background Text: Model:
  - Data Field: fldListPrice
  - Background Text: List Price:
  - Data Field: fldOurPrice
  - Background Text: Our Price:
- Data
  - Maximum Data Length: Dynamic
  - Data Type: Number
  - Editable? Yes
- Display Settings
  - Window Location and Size
  - Visible? Yes
  - Border? Yes
  - Format: Currency
  - Country: Default
- Message Actions
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**Title:** Fast Car Auto
**Icon File:** (none)

**Display Settings**

**Contents**
- Data Field: fldCar
- Background Text
- Data Field: fldMile
- Background Text
- Data Field: fldOut
- Group Box: Options
  - Check Box: ck1
  - Check Box: ck2
  - Check Box: ck2
  - Check Box: c3
  - Check Box: c4
- Group Box: Transmission
  - Radio Button: rb1
  - Radio Button: rb2
- Pushbutton: pbPrice

**Title:** Estimate Prices

**Window Location and Size**
Pushbutton: pbPrice
- Title: Estimate Prices
- Window Location and Size
- Visible? Yes
- Keyboard Accelerator: [none]
- Message Actions
  - On SAM Click
    - If SallisNull (fldListPrice)
      - Call SallisMessageBox
        - 'Please enter a price!'
        - 'Fast Car', Button: OK
  - Else
    - Set fldOurPrice = fldListPrice
- Pushbutton: pbCancel
- Window Variables
Application Description: SQLWindows version
• Design-time Settings
• Global Declarations
• Form Window: frmMain
  • Title: Fast Car Auto Brokers
  • Icon File: [none]
  • Display Settings
  • Menu
  • Contents
    • Data Field: fldCarMake
      • Data
      • Display Settings
      • Message Actions
    • Background Text: Make:
      • Window Location and Size
      • Visible? Yes
      • Justify: Left
    • Background Text: Model:
      • Window Location and Size
      • Visible? Yes
      • Justify: Left
    • Window Variables
    • Message Actions
    • Dialog Box: dlgAbout
**City:** Woodside  
**Area:** Skyline  
**Asking Price:** $1,200,000.00  
**Property #:** N24680  
**Lot Size:** 40X85  
**Bedrooms:** 4  
**Baths:** 2  
**Age:** 20

**Broker:** Houlihan Lawrence  
**Agent:** William Betts  
**Listed:** 10/14/88  
**Thru:** 12/14/89

**Description:**

**Database/Query Status**
DEMO  
DB2DEMO