The QMF Family in 2000
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Topics

QMF in 2000: A Status Report

Extending QMF with QMF for Windows

How to Query Virtually All Your Data

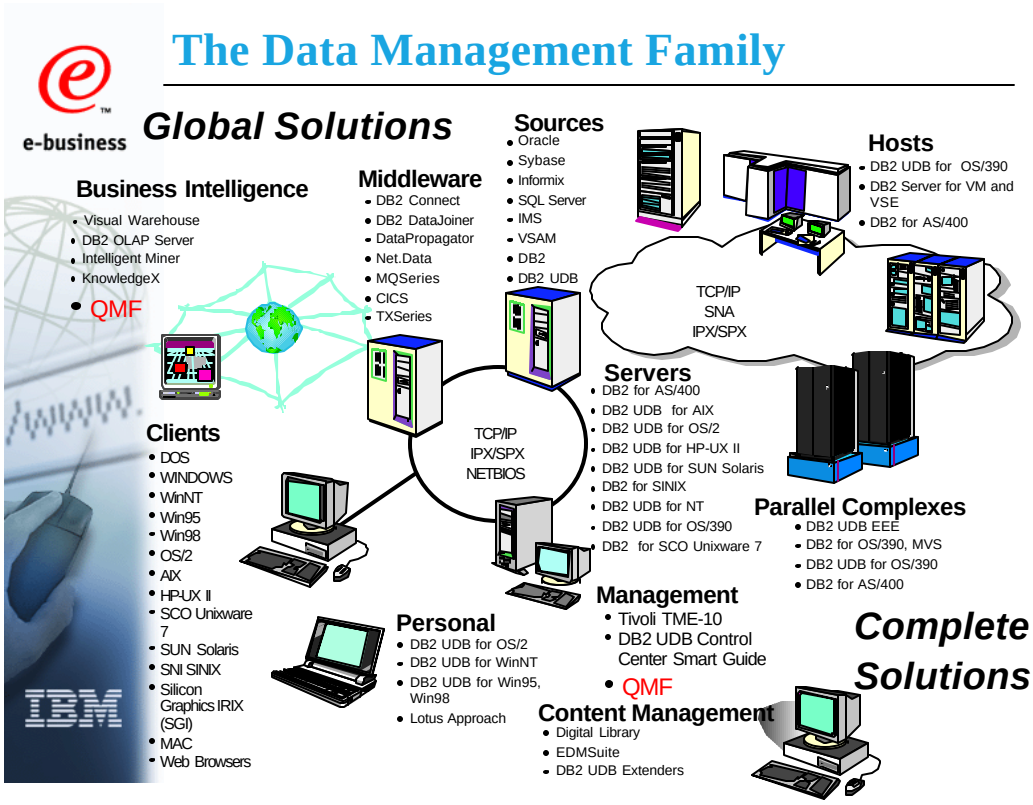
QMF Version 7 Enhancements

Data Warehouse/Data Mart - QMF's Role

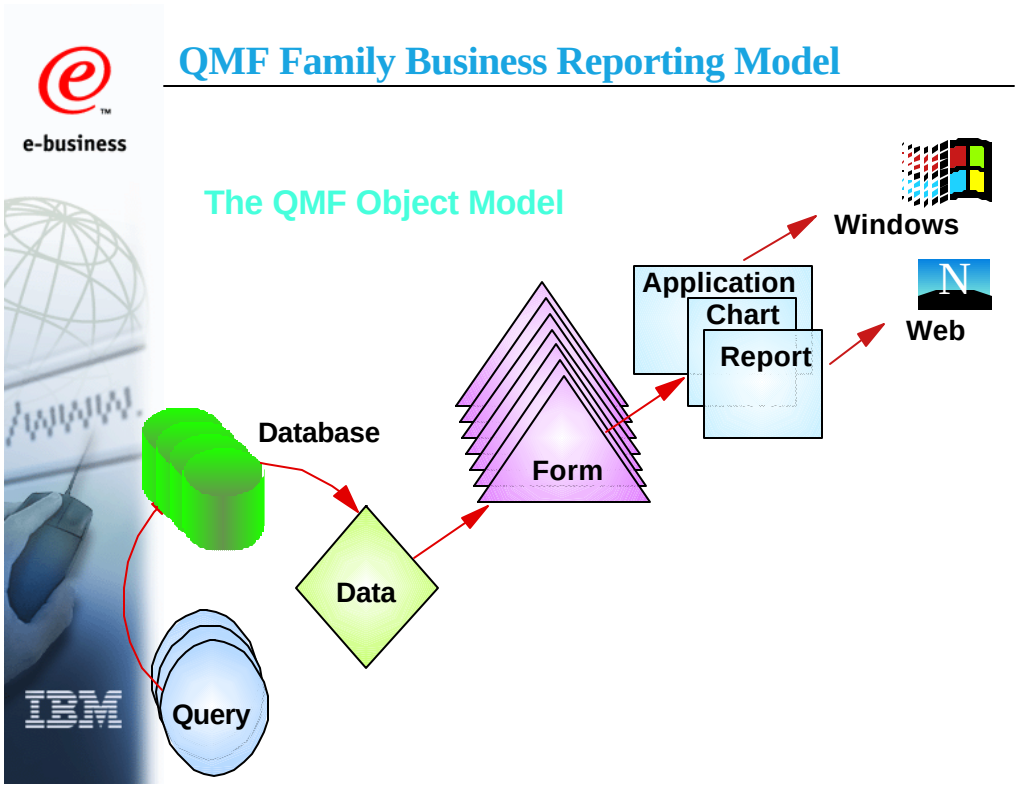
Application Scenarios

How to Assert Controls and Manage QMF Environments

The Data Management Family



QMF Family Business Reporting Model



QMF V7 Family Packaging

DB2 VM & VSE V7 (5697-F42)

- QMF VSE & VM Feature
- QMF for Windows VSE & VM Feature w/ QMF Prereq
- QMF for Windows VSE & VM Feature w/o QMF Prereq

- Feature of DB2
- Host & Workstation DB Access
- DB2 (MLC) Pricing Model
- Generally Available 9/29/00

Unlimited Number of Clients Throughout

QMF for Windows for DB2 Workstation DBs V7 (5697-G22)

- Standalone Product
- Workstation DB Access Only
- One Time Charge per DB2 Server and Any Additional Processors
- Generally Available 9/29/00

OS/2 Query Manager Migration offering available from Rocket Software

QMF V7 Family Packaging

DB2 UDB for OS/390 (5675-DB2)

- **QMF OS/390 Feature**
- **QMF for Windows Feature w/QMF prereq**
- **QMF for Windows Feature w/o QMF prereq**
- **DB2 Warheouse Mgr.**
  - **QMF**
  - **QMF HPO**
    - **Manager**
    - **Compiler**
  - **QMF for Windows**

- Feature of DB2
- Host & Workstation DB Access
- DB2 (PSLC) Pricing Model
- Generally Available TBA

Unlimited Number of Clients Throughout

Download a Free QMF for Windows 60-day
Try & Buy at: http://www.ibm.com/qmf

QMF V7 Family Packaging

QMF for Windows for AS/400 (5697-G24)

- Complementary Product
- Supports AS/400 V4R3 or later
- DB2 for AS/400 DB Access Only
- AS/400 Tiered Pricing Model
- Generally Available 9/29/00

Unlimited Number of Clients Throughout

IBM DB2 Query Manager/400 → **Rocket Query Manager/400 Migration Tool**

IBM Query/400 → **Rocket Query/400 Migration Tool**

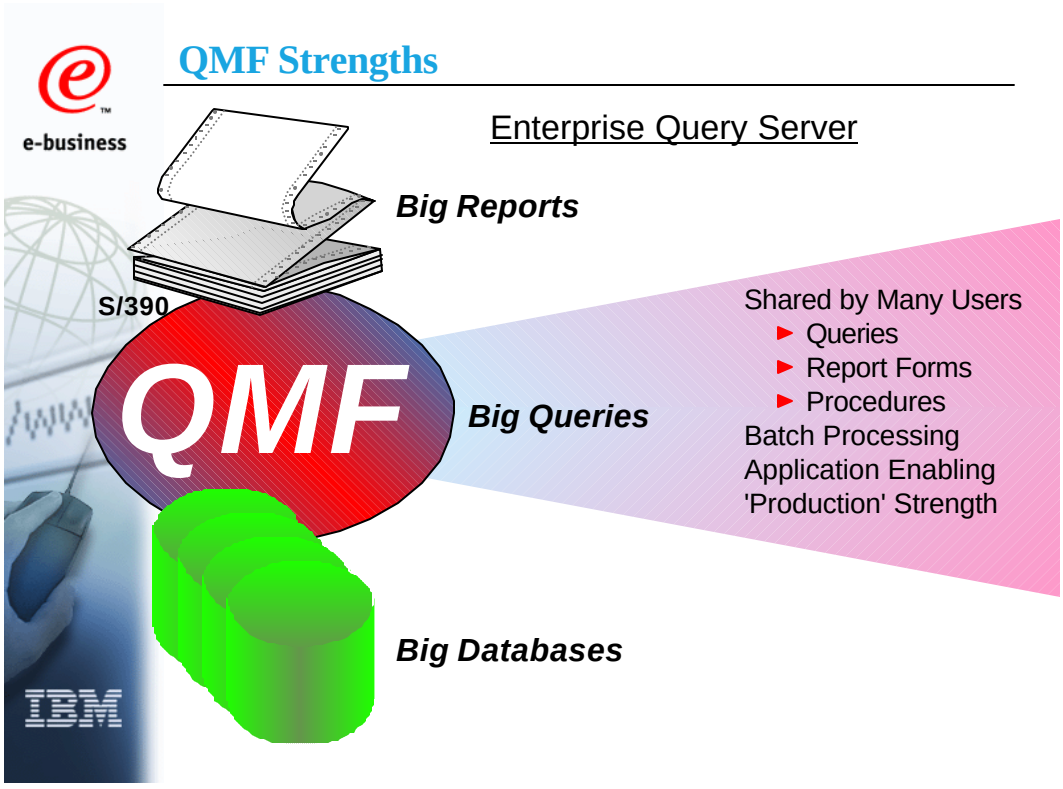
Download Free Migration Tools at:
http://www.ibm.com/qmf

QMF in 2000: A Status Report

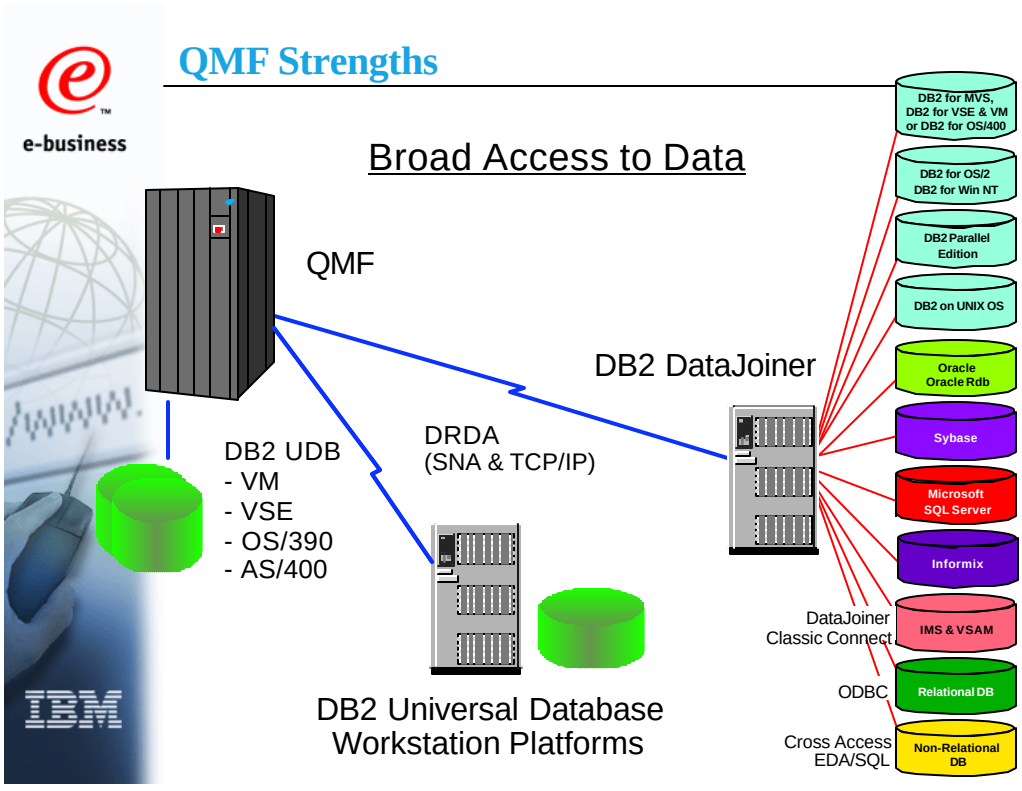
QMF Family Support:

- QMF V2.4, V3.1.1, V3.2, V3.3, V6.1 currently supported
- Service withdrawal of V2.4, V3.1.1 and 3.2
  - Announced: March 7, 2000
  - Service End Date: January 31, 2001

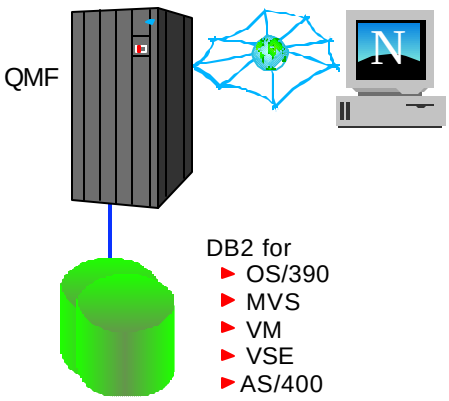
QMF Strengths



QMF Strengths



Web-to-Host Integration



IBM Websphere:

Host On-Demand
- Provides immediate green screen access to a standard QMF session from a web browser

Host Publisher
- Extends the reach of your mission-critical host information through HTML delivery to any Web user
- Integrate multiple sources of data into a single Web page with no change to back-end systems.

For more information visit:

http://www.ibm.com/software/webservers/hostondemand
http://www.ibm.com/software/websphere/hostpublisher

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Applicaton Scenarios

How to Assert Controls and Manage QMF Environments

Exploiting the Windows Environment

A variety of interfaces
to suit you needs!

QMF for Windows Interface

- Prompted Query
- SQL Query
- Table Editor

QMF for Windows

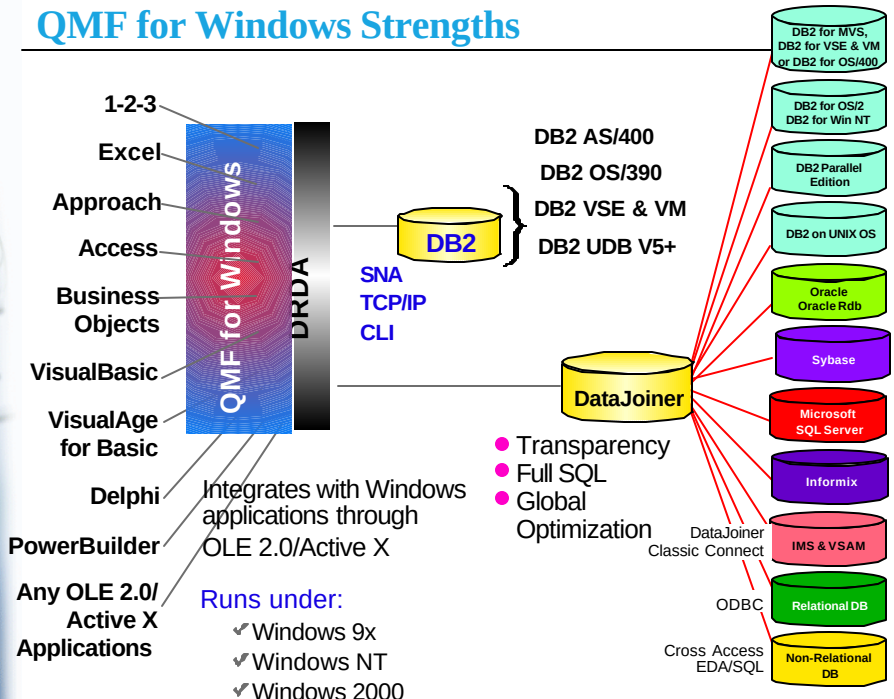
Web Browser Interface

- Java SQL Query
- View Existing Reports

Windows Application Interface

- Lotus 1-2-3
- Excel
- Access
- and more...

QMF for Windows Strengths

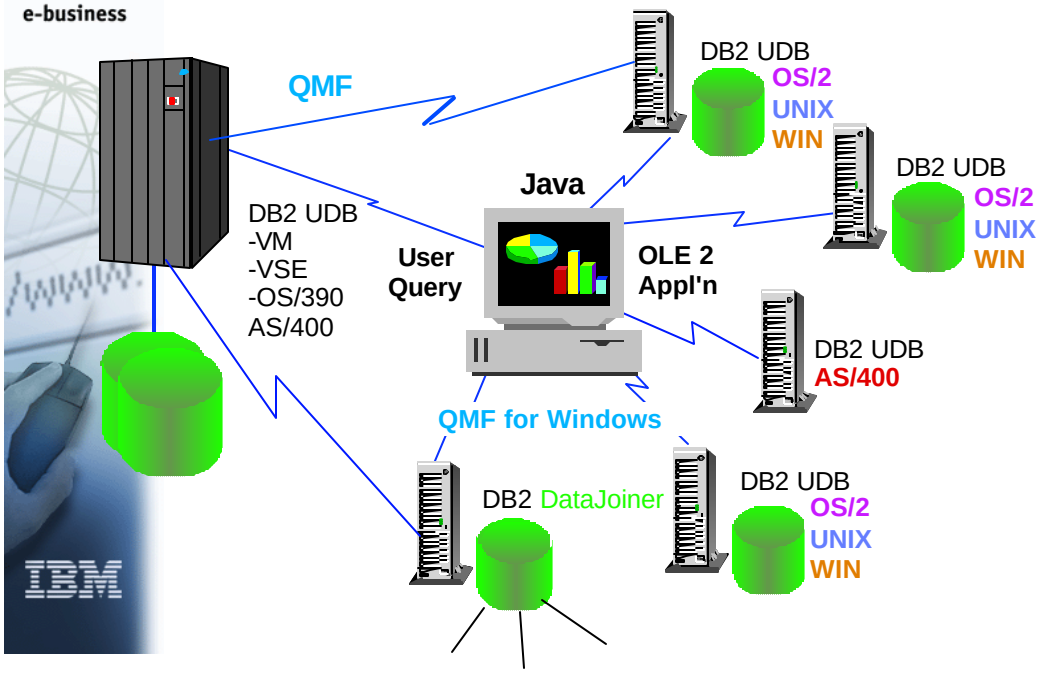


Integrates with Windows applications through OLE 2.0/Active X

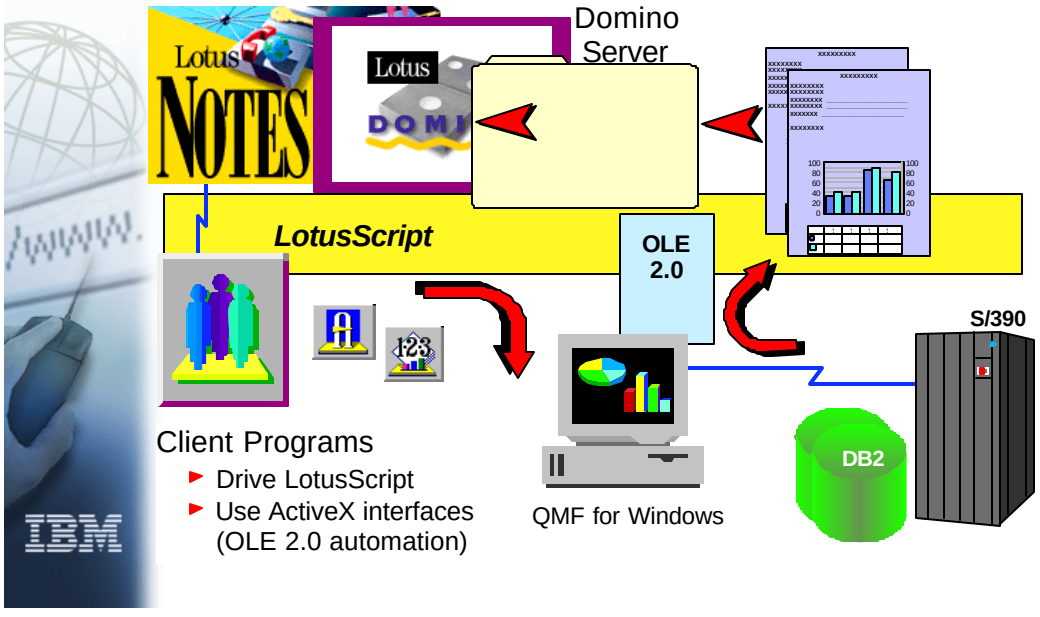
Runs under:

- Windows 9x
- Windows NT
- Windows 2000

Connecting users to all their DB2 data



Lotus Notes Integration



Client Programs

- Drive LotusScript
- Use ActiveX interfaces (OLE 2.0 automation)

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QMF S/390 V7.1 Enhancements

- **DB2 Access and Connectivity**
  - DB2 for VSE requester supported by the QMF CICS transaction
  - DB2 for AS/400 V4.4 server from all platforms
- **DB2 Exploitation**
  - Full ROWID datatype support
  - Limited LOB datatype support in:
    - - Table Editor (32K limit)
    - - Draw SQL Query (Casting functions employed)
    - - Prompted Query (Casting functions employed)
  - New DATE and TIME Report formatting edit codes
  - Cross-platform installation binding of QMF packages
    - Works with/still requires QMF V3.3, V6 or V7 at the remote platform

QMF S/390 V7.1 Enhancements

- **Usability**
  - Additional defaults added to QMF command syntax
    - RUN, SAVE, PRINT, EDIT, EXPORT, RESET, CONVERT
  - More flexibility and control added to QMF command Options
    - Comments for SAVE and IMPORT commands
    - Text for the MESSAGE command
    - Data for the CICS (transaction) command (Syntax restrictions eased, additional delimiter options - like RUN variables. Lengths extended)
  - Direct navigation to the QMF HOME panel with the SHOW command
  - Online help improved with upgraded command syntax diagrams, more task focused, standardized formats, defaults and minimum abbreviations shown
  - Larger Help panel sizes
    - Maximized format from the QMF HOME panel
    - Utilization of more area with larger size terminals -- 75% allocated to help panel rather than fixed 15 lines

QMF for Windows V7.1 Enhancements

- **End-user Support**
  - Point-and-click/drag-and-drop interface to QMF Form creation
    - Aggregation and grouping and formatting performed in the query results, then optionally save the query
    - Automatically create a QMF Form definition for re-use and sharing
  - Enhanced sorting
    - Sort results of a query on more than one non-contiguous column
  - Enhanced object list window
    - Add Windows tree control for more intuitive navigation and location of QMF objects
  - Windows "Personal Portal" dowload now built into the product called the Report Center
  - Java based SQL query from a browser
  - Human factors enhancements:
    - Menu of items displayed with query results
    - More toolbar buttons
  - Option to use DB2 Forms when Table Editor invoked
  - Support for Windows NT password function (remembers pwd)

QMF for Windows V7.1 Enhancements

- **Database/Connectivity for DB2 OS/390, DRDA, and CLI**
  - Support stored procedures that return multiple results sets via the CLI interface
  - Large object support (over CLI connections)
  - Large object support (over DRDA connections)
  - Enhancements to the server load-balancing algorithm (to support DB2's process of sending back unconnectable addresses)

QMF for Windows V7.1 Enhancements

- **QMF Host Compatibility**
  - Procedures with REXX logic
  - Added a toolbar/window in which single QMF commands can be entered and executed
    - Analogous to the command line in QMF host
  - Support of Form Detail variations
  - RESET GLOBAL command supported
  - Support of Form Column Definitions

QMF for Windows V7.1 Enhancements

- **National Languages**
  - UNICODE Support
  - Arabic BIDI
  - Traditional Chinese
- **CLI Connectivity Enhancements**
  - Add CLI-specific information to the Connection Details dialog box if the connection to the database server is via CLI
  - Add CLI tracing to the trace types that are supported; only valid for CLI connections

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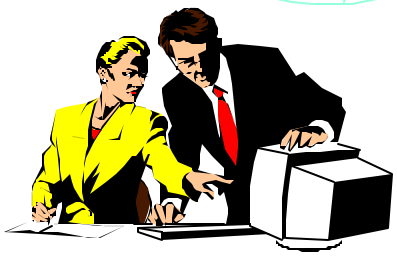
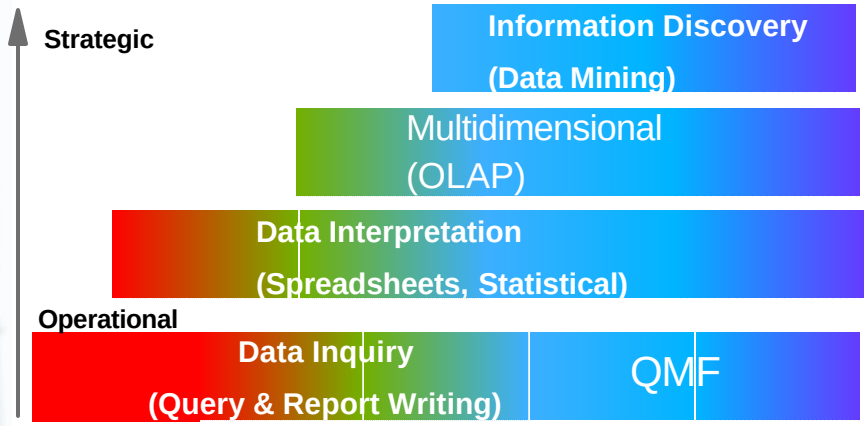
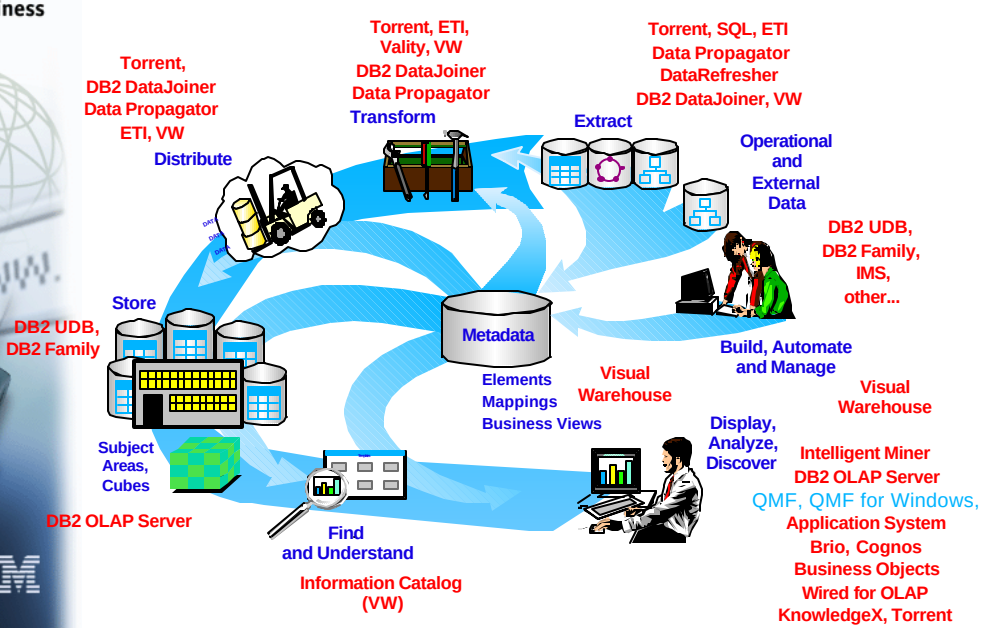


Business Intelligence Tools

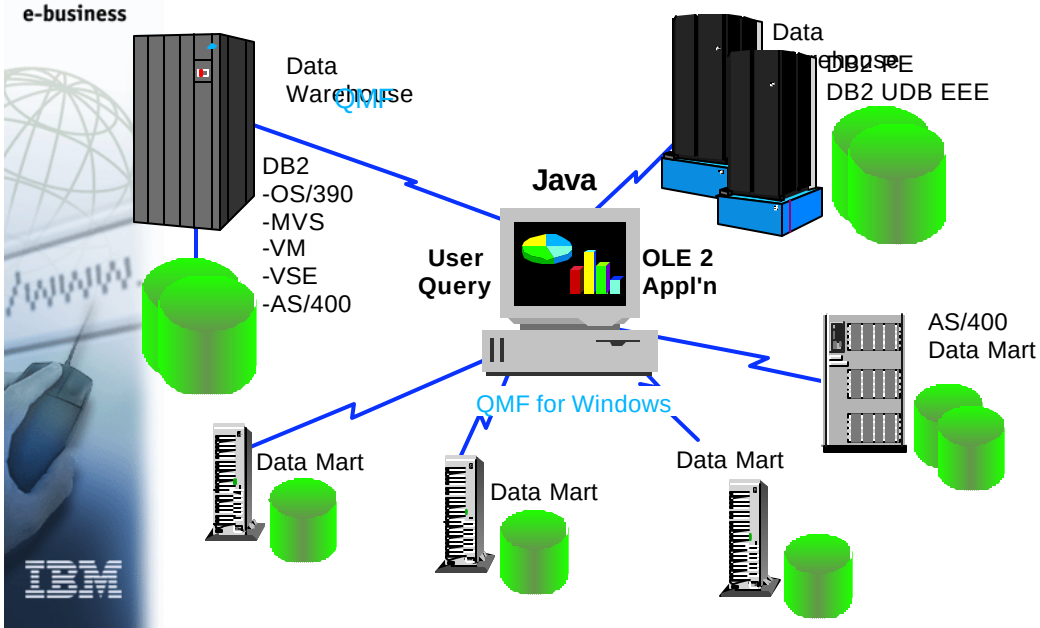


- QMFprovides general purpose query, report-writing and updating tools
- Easy to use, easy to customize
- Multiple development languages (Host and PC) for robust application development
- Scales from single Wintel database server to multi-node sysplex
- Developed in parallel with DB2, supports all DB2 platforms & existing QMF objects
- Server-based Licensing is ready for e-business

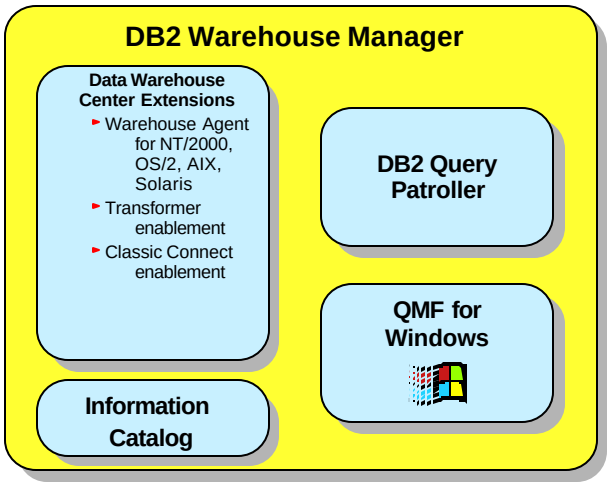
Business Intelligence Infrastructure



Exploiting Data Warehousing



DB2 Warehouse Manager for UNIX, Windows, OS/2



DB2 Data Warehousing

- DB2 delivers insights to users -- ***fast***
- DB2 Warehouse Manager extends the scaleability, manageability, and accessibility of DB2 warehouses
  - Data Warehouse Center facilitates building, maintaining, and automating your warehouse
  - Data Warehouse Center integrates with other tools using industry standard Common Warehouse Metadata Interchange from OMG
  - QMF for getting "up and running quickly"
  - Distributed query and advanced analytical SQL features simplify asking the hard questions
  - DB2 OLAP Starter Kit enables rapid deployment of analytical applications
  - DB2 OLAP Server scales to handle e-commerce and CRM applications
- DB2 scales to terabytes of data and thousands of connected users
  - And supports your growth -- even when you ***exceed your own expectations***

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- **Data Mart in a Box** - Quick Start Setup Guide to show a step-by-step quick datamart setup using QMF for Windows and DB2 for OS/390
- **Offloading Host Database Access** - a S/390 Example
- **Using JCL in the QMF Form** - Rick Levin, DB2 Development
- **Using HTML in the QMF From** - Shawn Sullivan, Rocket Software
- **Minnesota Department of Economic Security** Accesses and Modifies DB2 Data with QMF for Windows - DM Review August 1999
- **Life Cycle Consulting** Facilitates Iterative Query Development with QMF for Windows - DM Review March 1999
- **Fort Worth Police** Department Performs Crime Analysis with QMF and QMF for Windows - DM Review May 1998
- **Bank One** Accesses DB2 Tables with QMF for Windows - DM Review August 1998 - Migration from QMF & VM to DB2 & QMF for Windows
- **http://www.ibm.com/qmf**
- **S/390 Worldwide Support Specialist: Mike Biere mbiere@us.ibm.com 513-681-0924**

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Managing Increased Complexity

How to cope with:

Inexperienced users
Varied query load
Access security concerns
Resource constraints

How to Assert Controls & Manage your QMF Environment

- **QMF For Windows Administrator**
  - Provides Management Components that Governs and Track Activity within the QMF environment
    - *"Who Is Using Which Queries?"*
    - *"Which Queries Can Be Removed from our Reporting Warehouse?"*
    - *"Which Queries Are Run Most Frequently?"*
    - *"Can we Make Use of Static SQL and Stored Procedures to Optimize Performance?"*
    - *"Can we cancel Idle Cursors and Connections that Impact our Warehouse Performance?"*
  - "This Is the Only Solution that Allows DB2 Data to be Easily Moved In and Out of Multiple Platforms, While Governing a Growing Number of Low Technical Level End Users with Confidence"

How to Assert Controls & Manage your QMF environment

- Protect DB2 from runaway queries and novice users
- Protect server resources with centralized control
- Rapidly locate QMF objects (queries, forms, and procedures) by multiple criteria such as frequency of use
- Adjust governing limits by:
  - Time of day
  - Day of week
  - User groups
  - Server
- Set governing thresholds to:
  - Warn users
  - Cancel queries and threads
- Limit by:
  - Rows fetched
  - Idle query timeouts
  - Server response timeouts
  - Idle connection timeouts
- Allow or disallow different SQL verbs and QMF commands

How to Assert Controls & Manage your QMF environment

- **Set:**
  - Maximum bytes to fetch
  - Maximum DB connections
- Restrict Access to:
  - The user interface
  - Export Data
  - Table Editor
- Allow/Disallow:
  - Running of saved queries only
  - Save Data
    - default tablespace option
  - Binding/Dropping packages
  - Isolation levels for queries/packages
    - Uncommitted read, etc.

How to Assert Controls & Manage your QMF environment

- Activity Log Tracking Options:
  - On/Off
  - Track by
    - Summary
    - Detail
    - Ad hoc
    - SQL
- Build a variety of reporting options, such as show only:
  - Queries/procs that ran more than * CPU seconds
  - Queries/procs run more than * number of times
  - Queries/proces that have ever been canceled
  - Queries/procs run by user (TSO ID)
  - Queries/procs that have not been run since yyyy-mm-dd
  - Queries/procs that have been run on or since yyyy-mm-dd
  - Objects that have not been used on or since
  - Objects that have not been run since
  - Objects that include the text listed below
    - Useful for locating queries that reference a specific table or column

Topics - where we've been...

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What's Next?

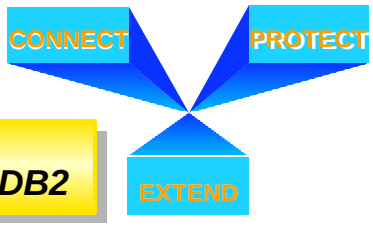
QMF Directions

- Exploit DB2 Family functions
  - for improved capability
- Broad access to Data
  - Multi-platform enterprise-wide accessibility
- Extend QMF's governing and query reach
  - for improved manageability and operations
- Further integrate QMF capabilities with workstation, warehouse tools & the Web
  - for improved access, usability and productivity
  - for richer, more powerful applications

QMF Directions

Results in:

- ✓ Protecting your investment in QMF applications
- ✓ Continuing to extend the applicability and usability of the QMF Family into new computing environments
- ✓ Providing a tightly integrated, powerful, reliable, scaleable query and reporting tool set for IBM's DB2 Family of database systems



QMF, the Universal Interface to DB2

QMF -- for all your Operational and Warehouse Query needs...

- ✓ **Easy to use**
- ✓ **Industrial strength**
- ✓ **Broad choice in capabilities**
- ✓ **Integrates with a variety of other tools**
- ✓ **Most flexible Multi-user, Multi-platform, Multi-database access query, reporting and updating toolset**
- ✓ **Cross-industry, multi-language product**
- ✓ **Feature of DB2, the best performing query engine**
- ✓ **Highly scalable & reliable**
- ✓ **Proven track record**

Appendix

Configuring Your Network

In an SNA network, QMF for Windows' basic requirement for connectivity is that it must be able to establish an LU 6.2 session between itself and DB2, using the CPI-C interface. This connectivity is not provided with QMF for Windows - you must have a third party product that implements it. Whatever product you use to provide connectivity must be installed, configured, and working before you proceed with installing or using QMF for Windows.

QMF for Windows has been tested with a variety of connectivity tools. QMF for Windows should work with most products that provide a WinCPIC interface.

To access a DB2 server via TCP/IP, QMF for Windows must be able to establish a TCP connection from the local host (the system on which QMF for Windows is running) to the remote host (the system on which DB2 is running) and remote port (the port on which DB2 is listening).

QMF for Windows requires a WinSock 1.1 interface to the installed TCP protocol stack. QMF for Windows has been tested with a variety of connctivity tools. QMF for Windows should work with most products that provide a WinSock 1.1 interface.

More About QMF...

Download a try & buy evaluation copy of QMF for Windows -- it's easy!
In your browser type:
http://www.ibm.com/qmf, and hit Enter. (click on downloads)

Connect the try & buy to a DB2 Universal Database test server over the Internet! (Instructions provided at the download site.) Register when you download for free tech support and more free desktop add-ins!

Experience our automated demo, also available at the above website. It installs on any Windows or WIN-OS2 PC. The dowload file is EXE type, and is a self-exploading and self-installing file. It has sections for the user, the programmer and the administrator!

Download the "QMF Reporter" Newsletter for the latest informtion and tips

Download free migration tools to migrate from other products to QMF for Windows at: http://www.rocketsoftware.com/qmf
Available from Rocket Software, Inc., an IBM Business Partner, Natick, MA.

Visit BI on the world-wide web

DB2INFO Data Mgmt (Presentations, Deliverables)	http://w3.software.ibm.com/sales/data/db2info
GBIS BI INFObriefs	
DB2INFObriefs	
Cyber Sales News	
AIMINFO AIM/AD (Presentations, Deliverables)	http://w3.software.ibm.com/sales/aim
Data Publications (white papers, brochures, news)	http://www.software.ibm.com/data/pubs
IBM SW Data (main site, downloads, demos)	http://www.software.ibm.com/data
IBM SWS Business Intelligence products	http://www.software.ibm.com/data/busn-intel/index.html
(Data Warehouse, Decision Support, Information Mining)	
IBM Data Management Partners	http://www.software.ibm.com/data/partners
IBM Visual Warehouse	http://www.software.ibm.com/data/vw
DB2 OLAP Server	http://www.software.ibm.com/data/db2/db2olap
QMF Family	http://www.software.ibm.com/data/qmf
Intelligent Miner	http://www.software.ibm.com/data/iminer/
IBM Business Solutions (by industry)	http://www.ibm.com/solutions
IBM Business Intelligence Home Page	http://direct.boulder.ibm.com/bi
IBM Software Solutions	http://www.software.ibm.com/solutions
WW Customer Reference Database	http://w3.ncs.ibm.com/ibmref.nsf
S/390 Solutions - BI	http://www.s390.ibm.com/bi
S/390 BI References	http://w3.ibm.com/server/sales
S/390 Intranet B.I. Site	http://w3.s390.ibm.com/bi
RS/6000 DSS Solutions	http://www.rs6000.ibm.com/solutions/decsupport
Internal RS/6000 DSS Web Site	http://www.pok.ibm.com/afs/aix/depts/decisionsupport/dssweb.htm
AS/400 B.I. Web Site	http://www.as400.ibm.com Search this Site for business intelligence

QMF V6

- **Generally Available December, 1998**
  - DB2 Universal Database, including TCP/IP for DB2 for OS/390 V5 and V6
  - DB2 V6 Predictive Governor Support
    - Warning Prompt
    - Error Message - Exceeded Limit
  - Additional DB2 Special Register Support
  - ISPF LIBDEF support for accessing multiple releases of QMF
  - New edit code to replace zeros with blanks in reports
  - LE/370 Support for QMF user-written edit codes
  - User control of the default QMF scroll amount
  - Enhanced SAVE command enables QMF to default to the current object type (query, form, procedure)

QMF V6, Continued...

- Column default for CHANGE mode in the Table Editor
- Ability to erase an alias name
- Euro currency symbol supported when formatting numbers
- The ability to run two different currency symbols in the same report

QMF for Windows V6

- **Generally Available December, 1998**
  - DB2 stored procedures
  - Support for DB2 for OS/390 server load balancing
  - DB2 V6 predictive governor support so you can set QMF for Windows to block queries that exceed the thresholds set by the DB2 administrator
  - .Ability to create and run QMF linear procedures (QMF host and Windows)
  - Command line parameters which allows you to more easily automate startup procedures and integrate with other applications, such as Visual Warehouse Scheduler or Internet Explorer Scheduler
  - Enhanced object tracking allows you to view a detailed run history for all QMF objects to:
    - Locate unused objects
    - Determine frequently accessed data sources (tables/columns)
    - Spot potential problem areas

QMF for Windows V6, Continued...

- Web publishing improvements allow you to convert a standard QMF form to full HTML for increased flexibility
- Specialized form variables for HTML publishing for building advanced web features into your QMF report, such as, hyperlinks, e-mail links, and embedding images in reports. A report preview feature is also included.
- Global Variables for use in QMF for Windows procedures, forms, queries and session variables
- QMF Form calculations (requires 32-bit QMF for Windows and IBM Object REXX)
- The most commonly used attributes of form components are now grouped together on a new form dialog for ease of use.
- Custom edit codes can be added to QMF. A sample user edit code routine that formats a phone number, social security number, and zip code is supplied.
- Euro currency symbol is supported

QMF for Windows V6, Continued...

- Control of formatting of date and time values in your QMF reports
- Multiple formatted reports displayed on your desktop at the same time, while performing other application functions
- Control over what tables and QMF objects are displayed when users view lists
- Import/Export data using the PC IXF format allows you to use your QMF query results to create new (or append to existing) DB2 workstation tables
- Users can change their host and workstation passwords from within QMF for Windows
- Queries can be scheduled to run using a native Windows scheduler, such as Internet Explorer
- QMF for Windows Version 6 is now available on CD only

QMF for Windows V6 Continued...

- **CLI Support**
  - CLI connectivity to DB2 UDB and DB2 for OS/390
    - Requires the DB2 UDB V5.2 client
    - Restrictions on executing a DB2 stored procedure that returns multiple result sets, and binding static SQL
- **DB2 Personal Edition**
  - CLI support provides access to DB2 Personal Edition
- **AS/400 Connectivity**
  - Access to DB2 UDB for AS/400 V4.3 or later
  - Licensed for DB2 UDB for OS/390 V6 and DB2 for VSE & VMV6
- **Natural Language Query**
  - Support for English Wizard from Linguistic Technologies
  - Provides a Natural language query interface to QMF for Windows, if English Wizard installed

QMF for Windows V6, Continued...

- **SEND TO Command**
  - Send query and report results to any application in your Windows Send To folder (e-mail, fax program, word processor, spreadsheet, web publishing wizard, etc.)
  - Use menu or procedure command SEND REPORT or SEND DATA
- **DATALINKS Data Type**
  - Allows you to return DATALINK values in a query window and launch the URLs contained in those values
- **Export Data Options**
  - Export data in the text format allows you to optionally update the schema.ini file with pertinent data type information for use by the Microsoft ODBC text driver
  - Allows you to specify the format to use for data and time values
- **BIND Options**
  - The ability of specify a wide variety of Bind options for installing packages and binding static queries

Thank You!

The QMF Family in 2000

WAVV Conference

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