

# New Generation Software, Inc.

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## NGS-IQ™ Business Intelligence System ADVANTAGES OVER IBM QUERY/400 Incorporating OS/400 V5R1 Enhancements

### Satisfies the Full Range of iSeries 400 Users

- **Powerful, functional query development** for MIS professionals and power users (*IQ Server*)
- **Graphical user interfaces** for iSeries 400 and Windows (*Qport Builder*)
- **Windows multi-dimensional, on-line analytical processing (OLAP)** for business analysts (*Qport SmartView*)
- **Run-time module** for Windows users (*Qport Access*)
- **Optimal security management** for the system manager (*I.Q. SeQure on page 4*)
- **Data Warehouse/Mart development** for the database administrator (*Data Warehouse Manager*)

#### **Qport™ Builder** **Windows and Web Graphical User Interface (GUI)**

- **Develop queries in Windows or over the Web**—point-and-click, mouse-driven query development
- **Obtain all the function of IQ Server** in a GUI designed for Windows and Web users

#### **Qport™ SmartView** **Windows OLAP Analysis Tool**

- **Display multi-dimensional data**
- **Drill up, drill down** through multiple data layers
- **Pivot for multiple views** of your data
- **Highlight critical values** in your report
- **Graph, chart and print** your presentations
- **Work off-line** to minimize iSeries 400 workload

#### **Qport™ Access** **Windows Query Execution and File Transfer**

- **Run reports from Windows icons**—recurring reports may be assigned to Windows icons for easy selection
- **Direct output to popular desktop applications**—output query results to Excel and Lotus 1-2-3

spreadsheets; Microsoft Access tables; Word documents; SmartView

- **Use GUI interface**—enable Windows users to enter run-time criteria for calculations, selections and query output
- **Direct query output to Windows display**—output to Qport Access display, cut/paste into other applications
- **Output to PC, LAN and host printers**—Take advantage of faster host printing speed or higher quality PC printing, as your needs warrant

#### **Transfer to Host** **Data Collector for Uploads and Transfers**

- **Transfer data from Windows to your iSeries 400 in one step**—authorized Qport Access users can populate DB2 UDB for iSeries 400 with data from any ODBC-compatible source that can be read by Microsoft Access
- **Handles data conversion automatically**—your database is immediately ready for your use on your iSeries 400
- **Simplify database updates**—by authorized users only
- **Load externally collected data**—from third party sources to support management reporting and analysis

#### **E-Business Capabilities**

- **Provides secure access to build and run reports** across Internet connections
- **Output queries as HTML text** for viewing through most popular Web Browsers
- **Allows authorized users to run Qport Access remotely** using their existing Internet access account and modem
- **Operate Qport Builder as an iSeries 400 Java applet** for easy Web access

## *IQ Server (Interactive Query)*

### *Ease of Use*

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- **One-pass report writing**—eliminates the need to create multiple queries and work files to produce final reports
- **Pop-up windows**—iSeries 400 DDS features employed to enhance user interface and panel navigation
- **Timesaving copy option** when entering new fields, new field conditions and record selections
- **Run-time prompting** with personalized help text for new fields and record selection criteria
- **Personalized list of most recently used queries** helps you pick up where you left off
- **On-line tutorial** with sample database files and reports
- **Comprehensive on-line help** with clear, quick answers

### *Easier File Joins*

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- **“Join Wizard”**—remembers how you, or your selected database experts, join DB2 UDB files as your *NGS-IQ* queries are built and maintained. As others build queries over the same files, *NGS-IQ* instantly fills in the matching fields as they were previously joined
- **Meta Files**—joins up to 32 DB2 UDB files and then assigns the entire collection of joins a descriptive or “meta file” name. Your users no longer need to understand names of actual files and how to join them
- **Streamlined file join changes**—primary file and join type can be reassigned after the query is built
- **Easy file joins**—inner joins, partial outer joins and exception joins are handled in simple English
- **File joins that can be based on new or “derived” fields**—no need to create a temporary work file when the desired files cannot be joined on any of their existing fields
- **“One-to-many” relationships**—when you have multiple records joined to a single record, you can simplify report design by defining comparisons between a field’s value in the current record and the same field’s value in the previous record
- **DB2 UDB file member support**—file members may be selected within the query and changed at run-time
- **File union**—for a consolidated view of data stored in up to 32 files or file members with the same format

### *New Field Calculations*

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- Exponents
- Square roots
- Remainders
- Days elapsed (aging)—using numeric date fields
- System date in four different formats

- Extensive date arithmetic and time functions
- Absolute value
- Trimming—leading and trailing blanks

### *Conditional Calculations (In Result Fields)*

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#### **Conditional calculations (If-Then, Else)**

Examples:

- Calculate late charge based on age of receivable
- Calculate commission based on sales volume
- Replace code values with meaningful descriptions for management reports
- **Up to 32 conditions** allowed per new field
- **Sorts and selects** on conditionally calculated fields
- **Previous record support**—test a value in the previous record against a value in the current record and then condition the results
- **Counter resettable** based on sort field changes
- **“One-to-many” reports**
- **Unique occurrences counted**
- **Cumulative sums** or running balances
- **Record sampling**—use conditional new fields to instruct the query to skip records based on user-defined criteria; generate reports showing “top five customers,” “last week’s orders,” and useful ad hoc information
- **Two additional operators**—\*TCAT and \*BCAT—that let you concatenate alphanumeric fields together, strip off trailing blanks and place one blank space between fields

### *Run-Time Prompting*

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- **Display personalized help instructions** at run-time to assist users in making ad hoc record selections
- **Override new field expressions** on an ad hoc basis at run-time without changing the query
- **Enter algebraic expressions directly** into record selection statements at run-time to simplify date arithmetic and other variable selection criteria
- **Print variable information in report headings**

### *Analytical Reporting*

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- **Create tabular reports** showing patterns, trends, exceptions
- **Calculate running totals, running percentages of totals**
- **Rank and sort** by average and by sum of table class
- **Calculate individual percent** of total by table class
- **Calculate overall average** of all table classes
- **Use conditional new fields in tables**

### *Report Formatting*

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- **From a report layout panel:**
  - Format output for preprinted forms

- Place literals on heading, detail or total lines and place data next to field names
- Vary data/text within a heading
- Use up to 9 lines for column and report headings
- Include up to 112 lines of detail per record
- Use up to 12 lines per report break
- Include page headers and footers
- Modify subtotal and total labels
- Suppress blank lines within layout
- Use print conditioning for all new fields
- **Additional formatting:**
  - Print cover page, including record selection criteria (optional) to ensure correct data interpretation
  - Define company-wide standard report heading

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### ***Integrated PC File Generation***

- In a one-step process, create ASCII text files that users can access from their favorite PC applications
- Output results in ASCII comma-delimited text files in a shared folder for immediate access from users' favorite PC applications

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### ***Integrated iSeries 400 to iSeries 400 Data Propagation***

- Outputs query results as detail or summary DB2 UDB files on separate iSeries 400
- Can create, append to existing, or replace output files
- Uses APPC capabilities inherent in OS/400, not SNADS!
- Requires IQ Server installed on target iSeries 400
- Complies with OS/400 security so the user cannot create, append or replace unless he has authority to that function and object on the target iSeries 400

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### ***Program Exits for Custom Processing and Data Cleansing***

- Call and execute your user-supplied program before, during or after query processing and integrate the result of that program into the query result
- Provides unlimited custom program functions, e.g.:
  - Execute a custom data cleansing routine that you want performed as part of a query
  - Call a program that retrieves data from another system (including PC LAN and non-DB2 UDB databases)

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### ***Multi-Up Mailing Label Formats***

- Design and print "multi-up" label formats

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### ***Summary Calculations***

- Calculate at report breaks based on summaries  
For example:

- Summary Field A + Summary Field B
- Summary Field B / Summary Field A
- Summary Field C \* Summary Field A
- Additional summary functions:
  - Exponents
  - Standard deviation
  - Square root

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### ***Structured Query Language (SQL)***

- Provide alternative, easy-to-use SQL interface that complements IQ Server's menu-driven, procedural user interface
- Prompt on every command for easy query definition
- Simplify quick inquiries
- From, Join by, Select, Where, Group by, Having, Order by
- Toggle between SQL and menu-driven interface

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### ***Expanded Record Selection and Exclusion Features***

- Define complex record selections in one step using parentheses to establish the relationship and processing sequence for the selections
- Take advantage of greatly expanded potential for selecting records based on date arithmetic: Enter algebraic expressions directly into record selection values, with no need to create a new field in order to base the record selection on the result of a calculation
- Use full Boolean selection logic plus NOT IN RANGE test to exclude records as in exception reports
- Copy record selection criteria to save keystrokes when you need to restate nearly all the same tests following an OR relationship between selections

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### ***Meta-Data Feature***

- **Assign long alias file, field names and descriptions** to DB2 UDB files and fields
- **Reduce end-user training** by simplifying database comprehension
- **Customize directory of names** to support different business perspectives
- **Work directly with DDS**

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### ***Enterprise-Wide iSeries 400 Database Access***

Queries can include both local and distributed database files when OS/400 Distributed Database Management (DDM) is in use

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### ***Query Performance Management***

- Security Officer control of the execution environment:
- Declare IQ run environment (Batch/Interactive/Both)

- Set job time slice
- Set job priority

### **Ability to Change Fields:**

#### **Character to Character and Numeric to Numeric**

- Simplifies sub-stringing and concatenating
- Simplifies calculations and date arithmetic

### **Nested Reports**

- Link the execution of up to 99 queries so that completion of one triggers the execution of the next
- Use one query to create an output file required by the next query and submit them both in one step

### **Unique Key Processing**

- Retrieve only the last record having the unique key value, for example:
- Retrieve most recent order for customer
- Generate one mailing label per customer

### **Keyed File Output**

- Simplifies integrating output files into other applications
- Improves query performance if keyed file is used to perform subsequent queries

### **Management Audit Reports**

#### **Query Statistics Report**

Answer questions such as: Who created the query and when? Who ran it last? Who updated it last? When was it updated? How many times has the query been updated? How many times has the query been run?

#### **Query File Access Report**

Answer questions such as: What files does the query access? What queries must be updated if we change this file?

#### **Query Definition Template**

Display report definitions or query structure

#### **Output query status information to a database file that can be queried to identify:**

- Seldom or no longer used queries
- The creator of each query
- Date of last update
- Number of times executed

### **Integrated Report Distribution**

- Route copies of reports to users using RUNIQ command
- Pass routing information from CL programs

### **Display and Tailor Default Input/Output Values**

- **Report defaults:** print file, width, length, overflow, characters per inch, lines per inch, output queue, job description
- **Graphics defaults:** print file, width, length, lines per inch, characters per inch, format name, output queue
- **Output defaults:** file size, disk library, device, type
- **Option defaults:** format, printer, run environment, query description
- **Cover page, file, library, query library, spacing**
- **Custom global report heading**
- **Optional/changeable summary function labels** for minimum, maximum, average, sum, standard deviation

### **I.Q. SeQure™ Security Management System**

- In addition to iSeries 400 security you can establish file, field and record security and query security by user

### **Superior User and Technical Documentation**

- *IQ Server – Interactive Query User Guide*
- *IQ Server – Interactive Query Tutorial*
- *IQ Server – Interactive Query Technical Support Guide*
- *I.Q. SeQure User Guide*
- *Qport Builder Tutorial*
- *Qport Access User Guide*
- *Qport SmartView User Guide*

### **Toll-Free Support from Product Experts**

- NGS Support Representatives who specialize in understanding the DB2 UDB database and data retrieval environment
- Toll-free U.S. and Canadian Support: (800) 257-2442



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