IBM Software Group

Teleclinic: November 10, 2005

Business Events from CICS Transactions (DB2 & IMS) to publish and issue MQPUTs with no changes to existing applications

ON DEMAND BUSINESS

Speakers

- Pamela (PJ) Baron, Business Unit Executive / pbaron@us.ibm.com
- Chuck Bergmann, ESB Sales Executive Americas Websphere
- Cornell Keene, AD Tools Sales Enablement Specialist

Agenda

- IBM Event Publishers
- WebSphere for SOA
- CICS Business Event Publisher for MQ
- Customer Scenarios
- Polling Questions
- Open Q & A Session

IBM Event Publishers

IBM offers two strategic solutions

- CICS Business Event Publisher for MQ
- WebSphere II EP

Key Function of Event Publishers

- WS II EP for publishing DB2 & IMS data log extractions
- CICS Business Event Publisher for MQ for capturing
  - CICS transactions

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WebSphere for SOA

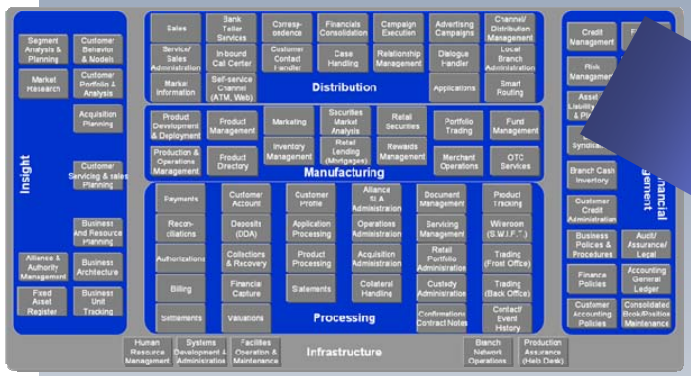
SOA on your terms and our expertise ….

Chuck Bergmann
ESB Sales Executive
Americas WebSphere

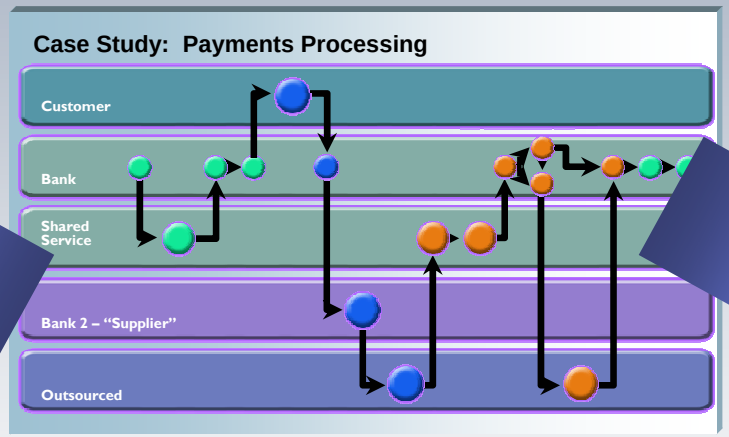
e business on demand.

Flexible business requires flexible IT

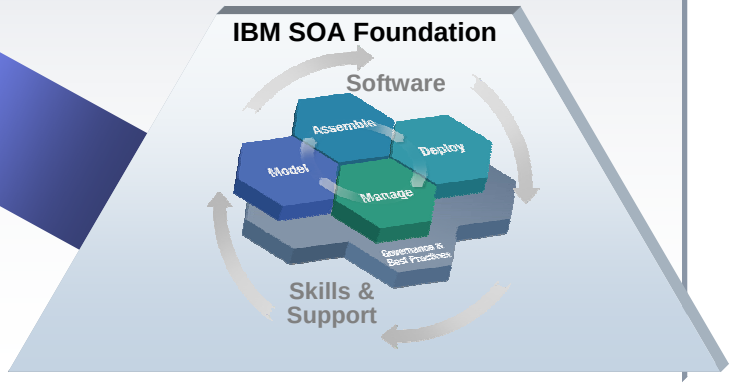
Full Business view



Process to optimize



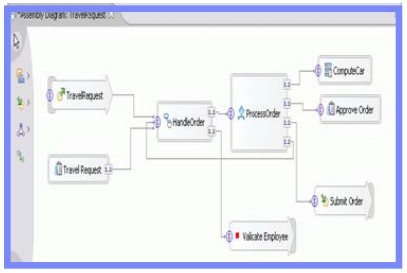
Creating IT flexibility



Managing Your Business Processes with a Service Oriented Architecture

Enabling complete life cycle of business process

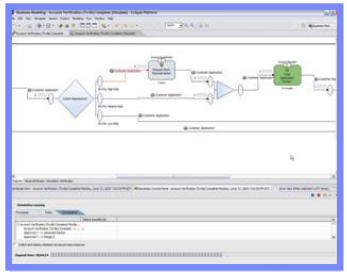
WebSphere Integration Developer

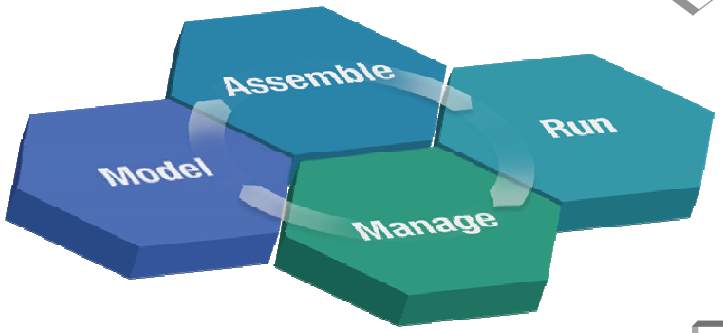


Clean hand-off from IT with Business Models, Metrics

Constructs for dynamic and adaptive business processes based on an integration platform

WebSphere Business Modeler

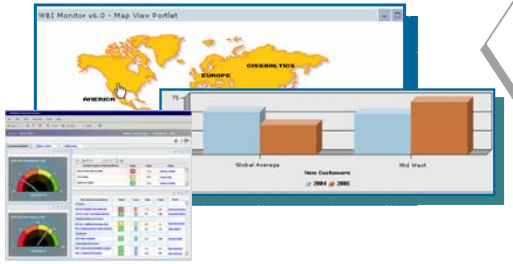




WebSphere Process Server

WebSphere ESB

WebSphere Business Monitor



Feedback for continuous improvement

Real time management of business processes

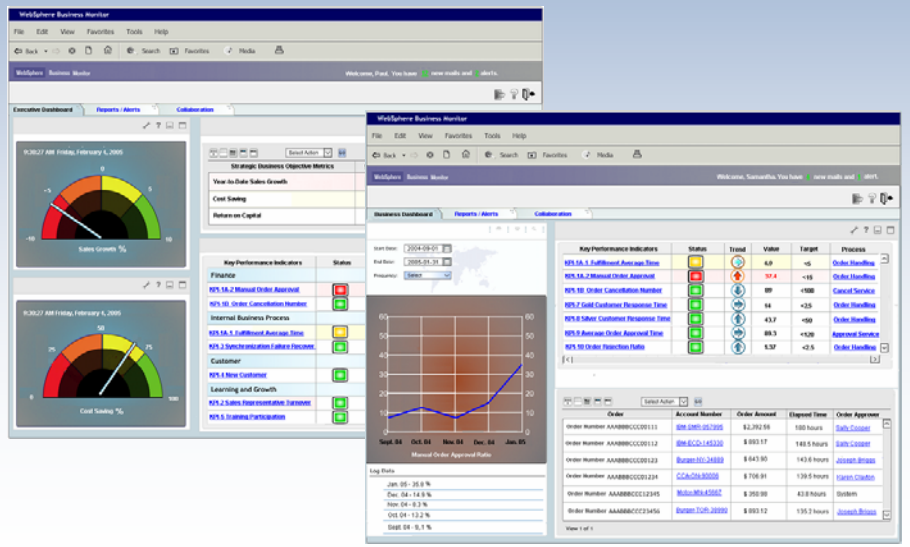
Real Time Visibility Into Business Performance

Monitor your business

View performance and modify dashboards in real time

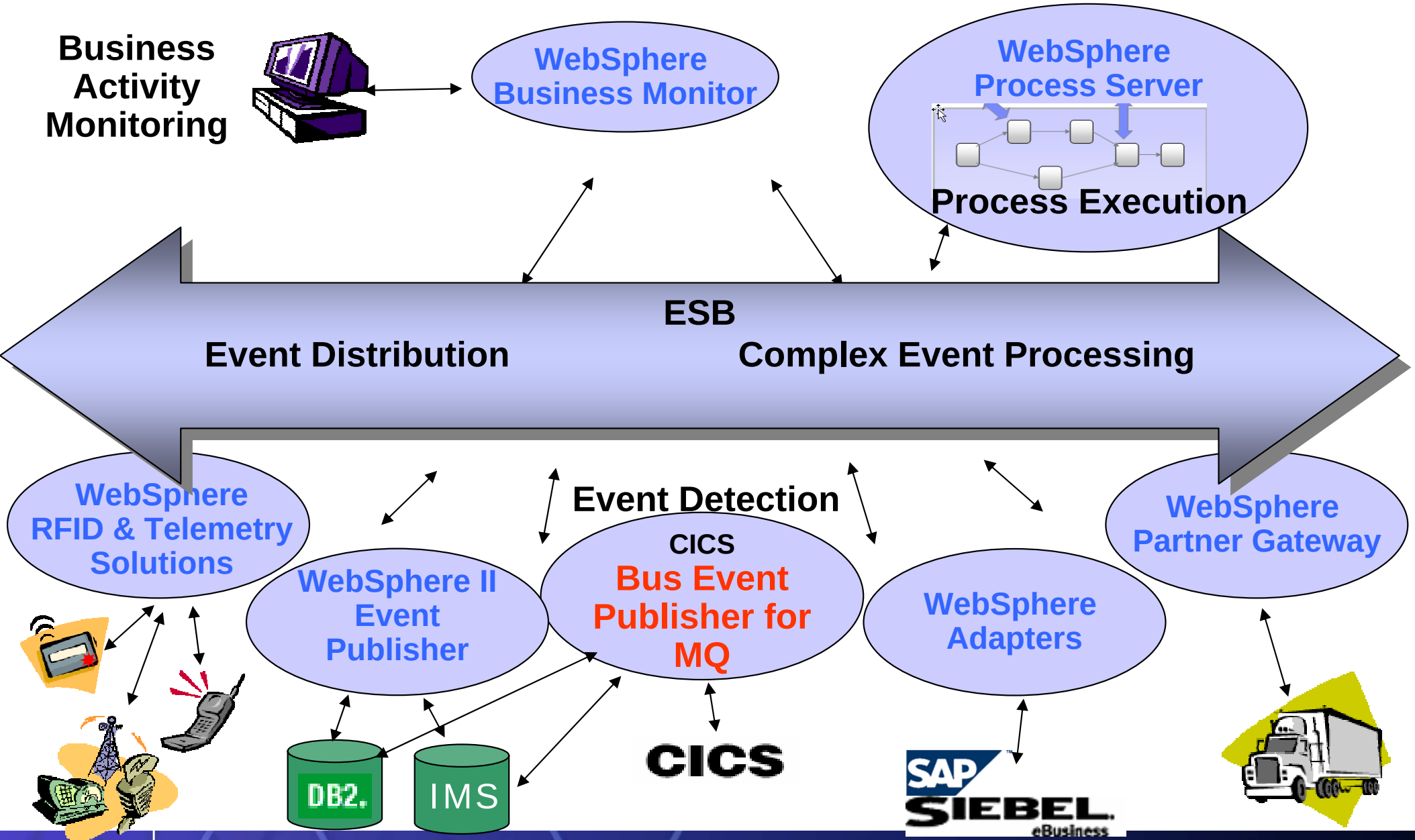
Intervention of in-flight processes

Support continuous process improvement



IBM WebSphere Business Monitor

IBM Solutions for Event Detection and Distribution



What is CICS Business Event Publisher?

CICS BEP is an Event Processor

- Monitors events emanating from CICS Apps, DB2 and IMS Databases
  - *based on user-specified selection criteria*
- Creates messages from associated data
  - *based on user-specified message content rules*
- MQPUTs messages to MQSeries queue
  - *user-specified*
    - queue name / queue manager name
    - MQSeries MQPUT options
- IBM Program number: 5655-J99

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CICS Business Event Publisher for MQSeries

Let mainframe applications and data drive your business processes

Cornell Keene
AD/CICS Tools
Sales Enablement Specialist Americas

e business on demand.

Enterprise Infrastructure Is Complex

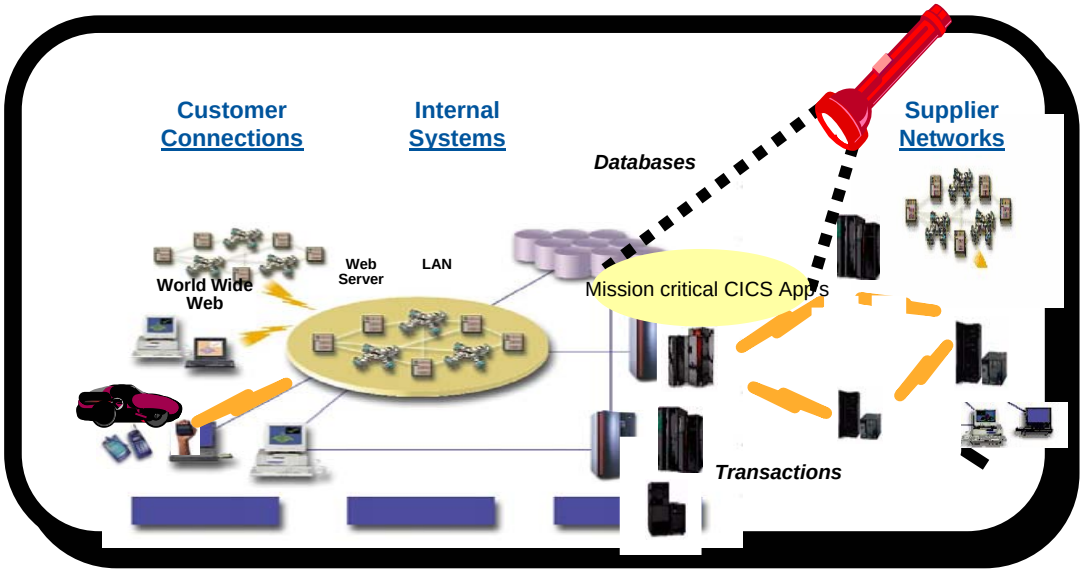
Companies want to reuse their core applications and data

Companies want to "extend" these applications.

Companies want to improve audit control and fraud detection on 'owned' data.

All:

- *Quickly*
- *Without changes to existing code*



✓**There is a lot of important data and applications on mainframes**

Event Processing

Event Detection and Processing offers new paradigm for 'reusing' information

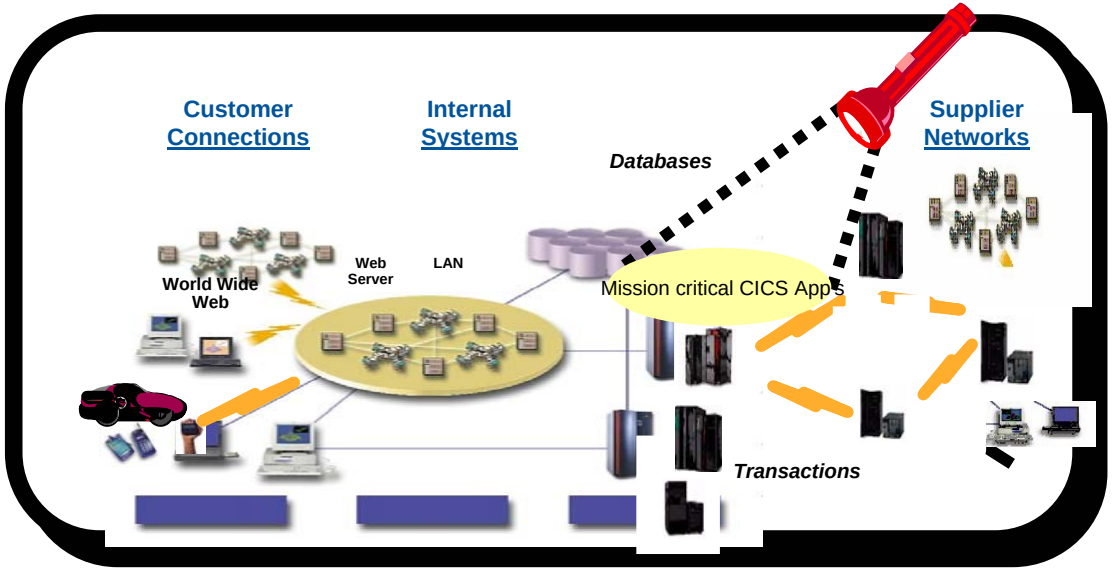
Provides immediate detection of changes.

Provides for immediate action to be taken.

Offers capability to improve audit control and fraud detection.

All:

- *Quickly and without changes to existing applications or data*



✓**Provides for safe and fast 'reuse' of information**

What is CICS Business Event Publisher for MQ?

CICS BEP is an Event Processor

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What is CICS BEP V1.2?

- Provides a new approach to enabling core applications and data to participate in new business processes
- Tool to easily ‘extend’ core applications and data
- Provides easy to use GUI for selection and rules creation
- No change to existing application programs
  - Savings over extensive application development effort
- Provides for real time action and results
- Provides for a low cost, low risk integration strategy

CICS Business Event Publisher : Events

- **Multiple Events monitored**
- **CICS TS**
  - VSAM File Control
  - Temporary Storage
  - Transient Data
  - Interval Control start
  - Program control (LINK) request
- **IMS – IMS/DB database events ***
  - Add/update/delete for IMS databases
  - Most database formats supported, including IMS Fastpath
  - From all sources (not just CICS)
- **DB2 – database events ***
  - Insert/update/delete for DB2 tables
  - From all sources (not just CICS)

* Note: DB2 and IMS support does not need CICS to be installed

CICS Business Event Publisher : Supported Software Releases

- **MQSeries :**
  - WebSphere MQ V6
  - WebSphere MQ V5
- **CICS TS :**
  - CICS TS V3.1
  - CICS TS V2.3
  - CICS TS V2.2
  - CICS TS V1.3
- **IMS :**
  - IMS Database Manager V9
  - IMS Database Manager V8
  - IMS Database Manager V7
- **DB2 :**
  - DB2 Universal Database for zOS V8
  - DB2 Universal Database Server for zOS V7
  - DB2 Universal Database Server for zOS V6

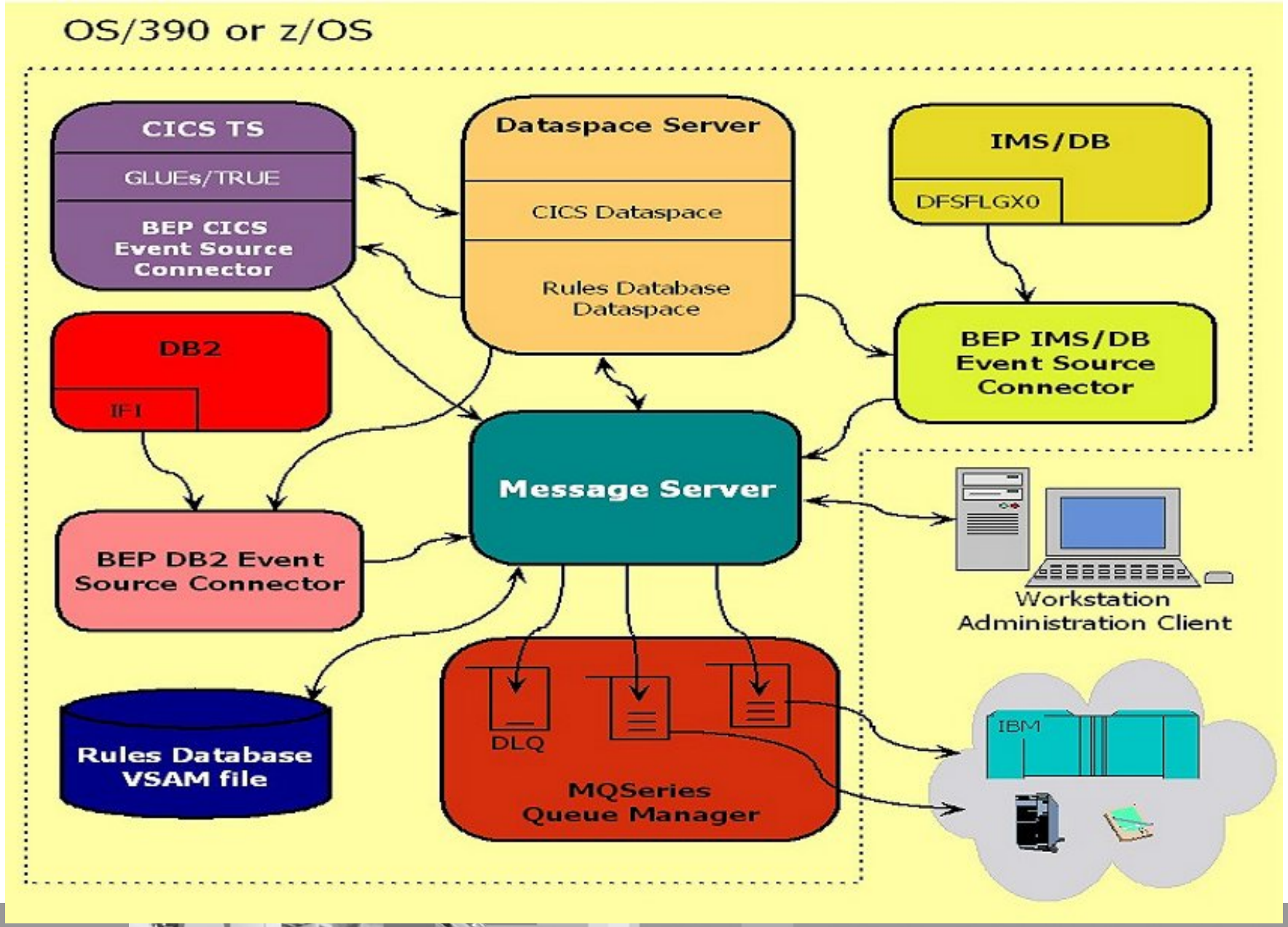
CICS BEP benefits

- Companies with unconnected infrastructure investments
  - want to integrate core systems with new business units
  - want to link packaged applications with core systems
- Companies want to reuse their existing zSeries applications
  - Reduce the cost of new application development
- Companies want to utilize new business environments
- Companies want to exploit new technology
  - E.g. Allow mobile users to be CICS users
- Allows for automation
  - Removal of latency from system – more efficient throughput
  - Removal of manual (error prone) actions
  - Improves accuracy and efficiency
- Streamline business processing
  - Action taken when event detected
  - ‘Real time action and results

Major Components of CICS BEP

- Workstation Administration Client
  - Microsoft Windows-based GUI
- Rules Database/Engine
- Message Server
- Data Space Server
- Event Source Connectors
  - CICS, DB2 and IMS

CICS BEP Architecture



Workstation Client (GUI) Introduction

- **How to Create Rules**
- **Rules Selection Criteria**
- **Message Options**

IBM CICS Business Event Publisher for MQSeries

File Edit View Help

CICS Business Event Publisher for MQSeries™

Group Lists and Rule Groups

- CICS Business Event Publisher
  - Group Lists
  - Rule Groups

To begin, you may use the toolbar or "File/New" menu option to create new Rule Groups or Group Lists. The same options may be used to create new rules and lists in Rule Groups and Group Lists, respectively.

Once you have created rules and lists, you can work with them by expanding Rule Groups or selecting Group Lists in the tree at the left. Then clicking a specific Rule Group or Group List shows you its members, and double-clicking one of those (or pressing Enter) lets you view the details, edit, delete, or rename it.

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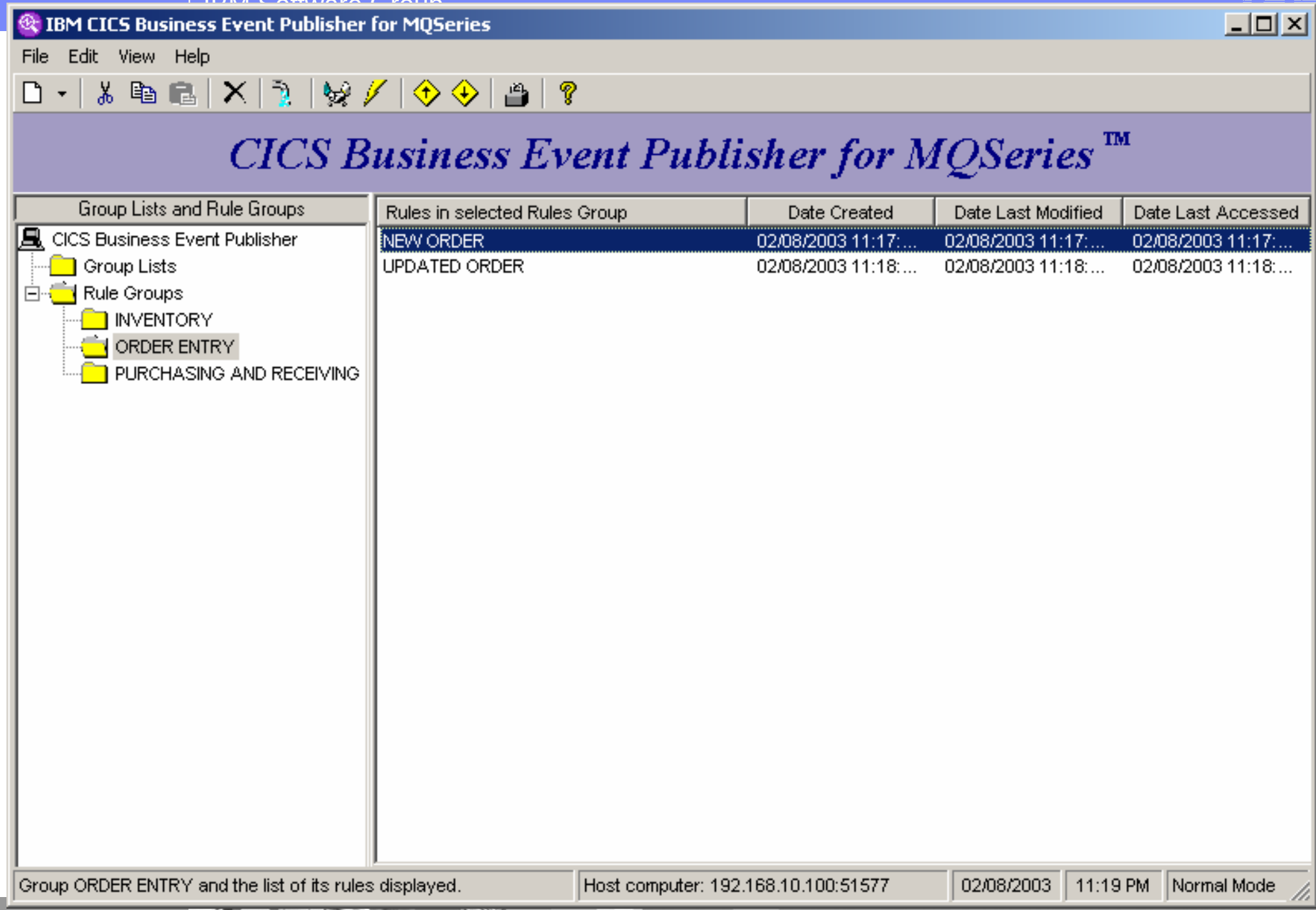
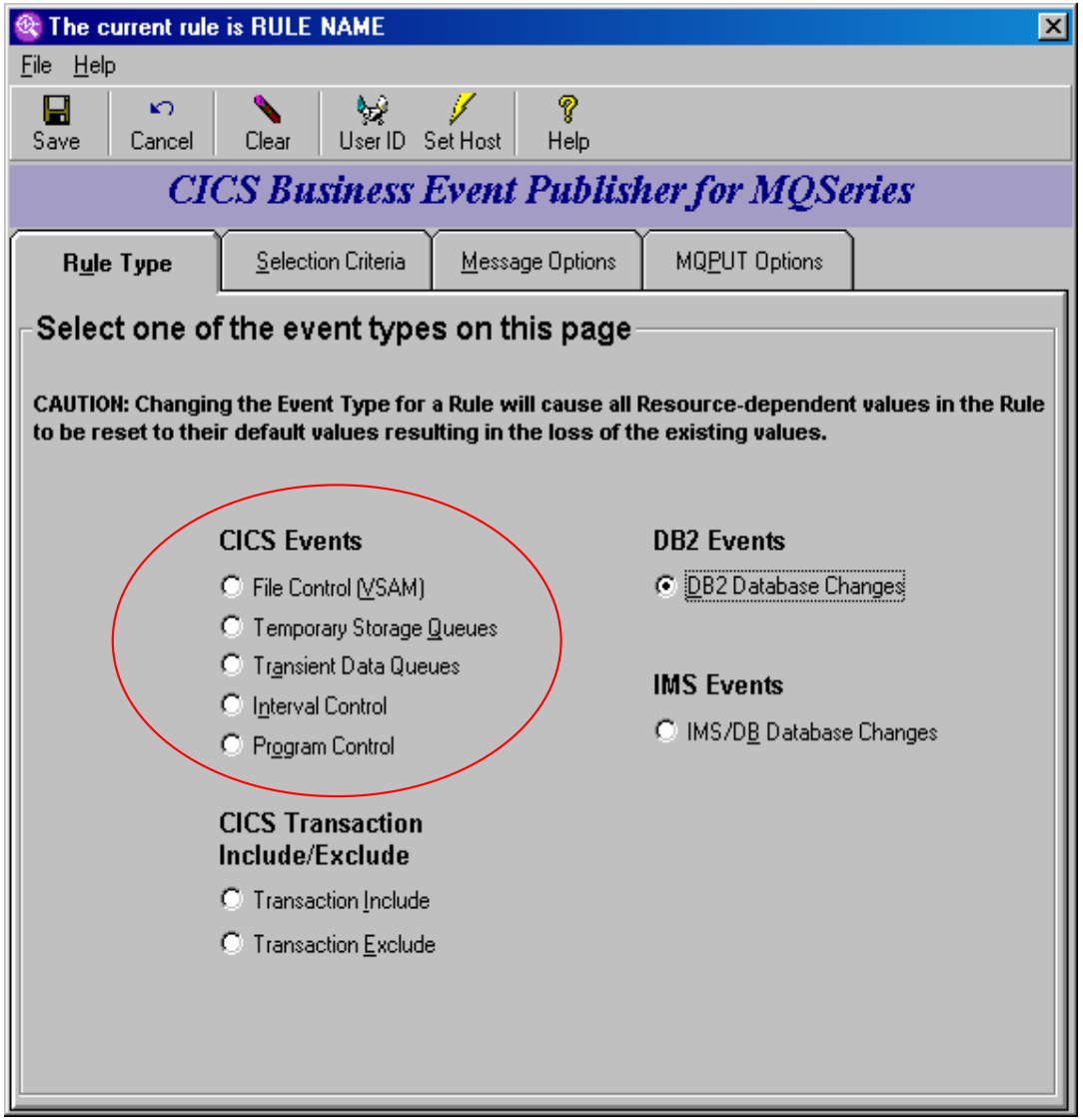


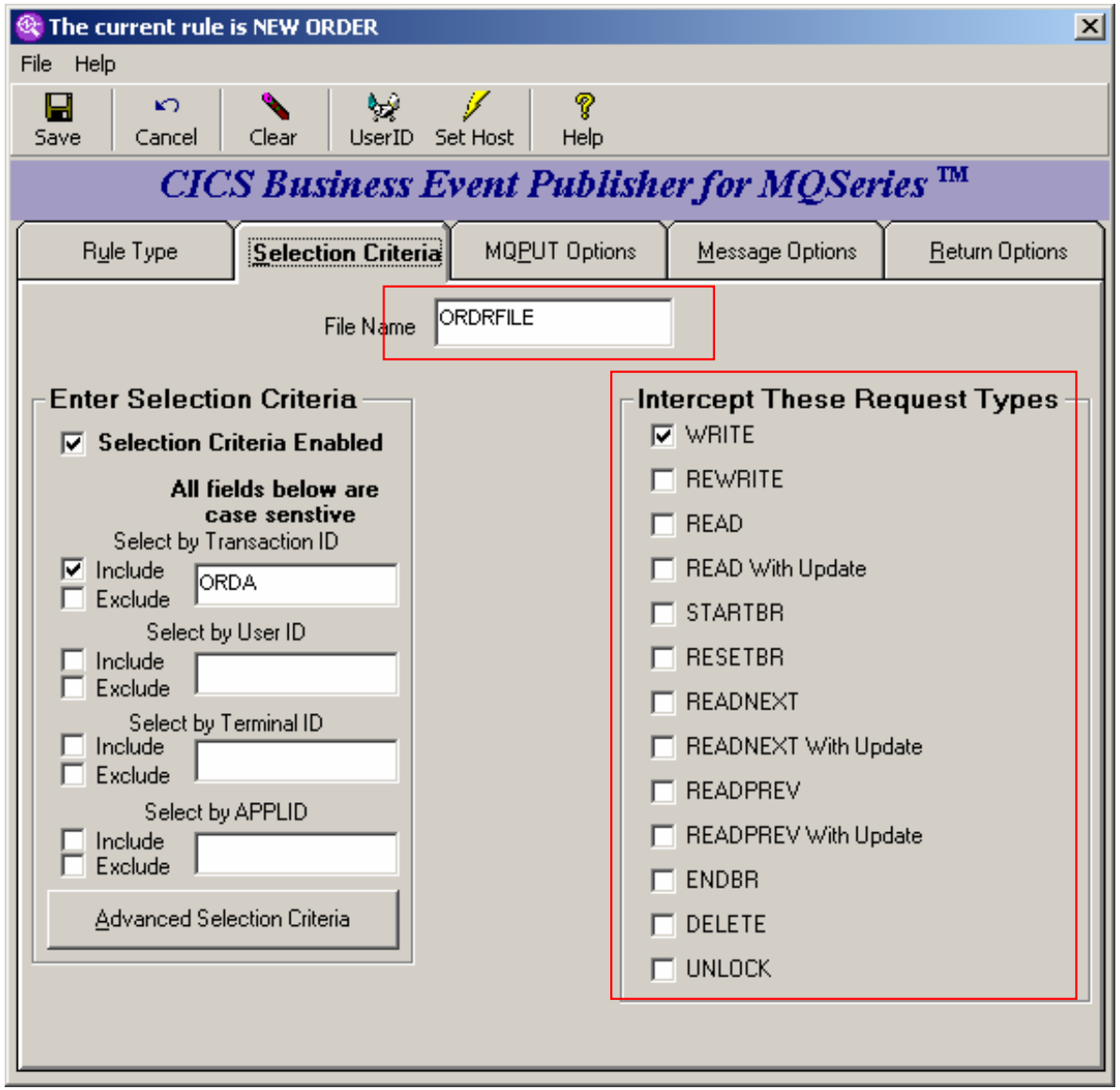
Workstation Client: DB2 Example

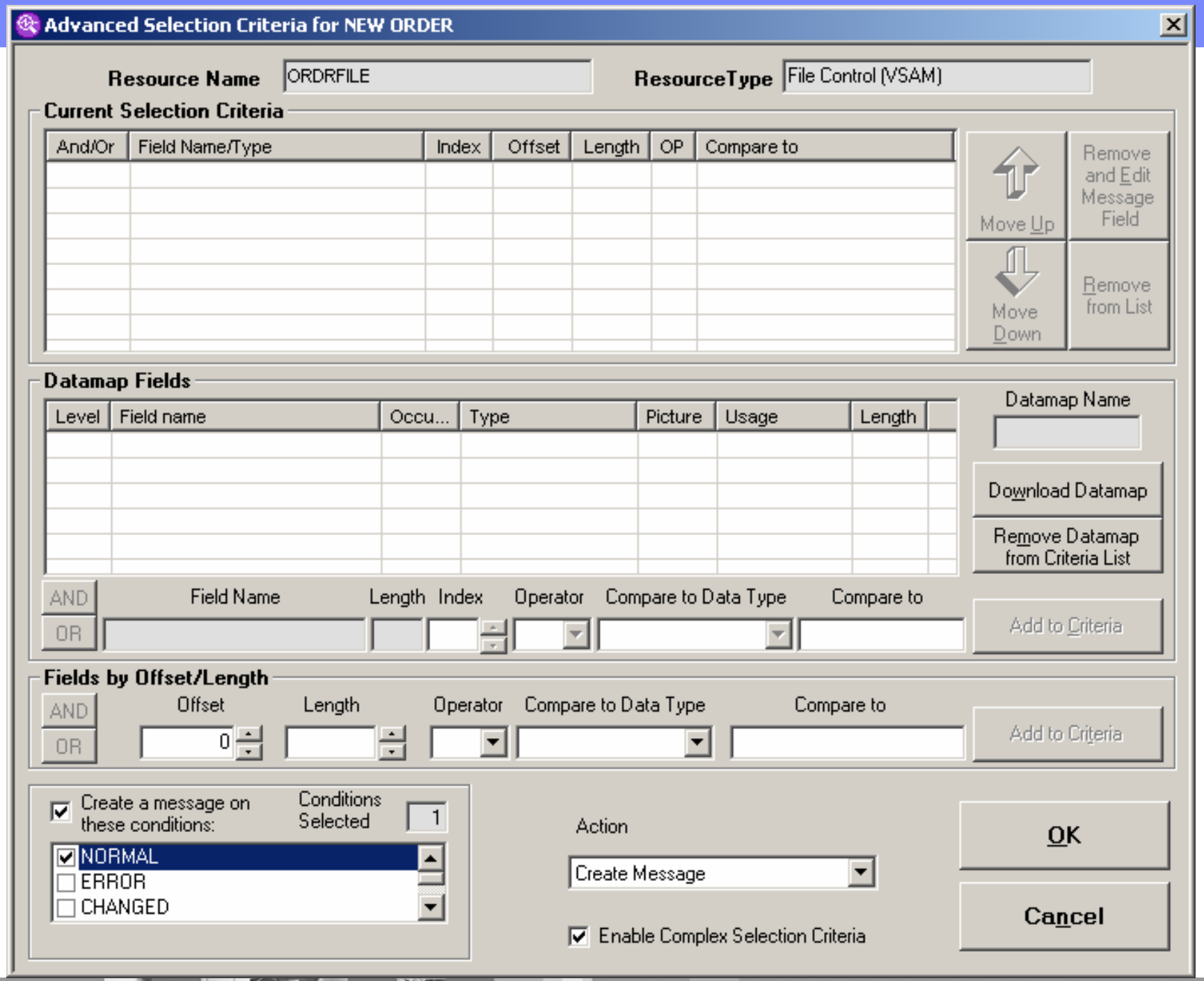
Rule Type Tab

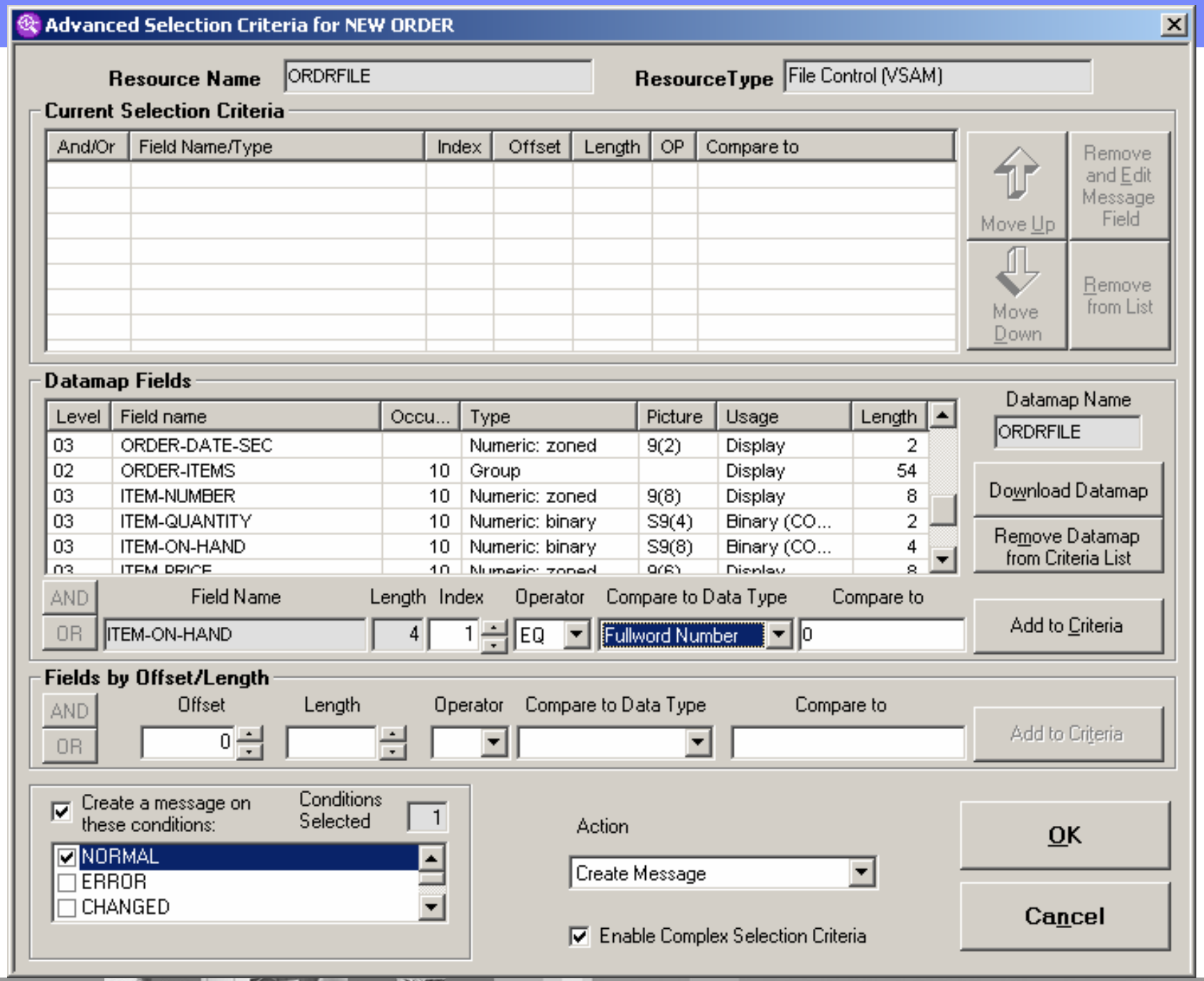
- CICS, DB2 and IMS categories
- For CICS;
  - User should select CICS File Control (VSAM)
  - Then click on Selection Criteria tab

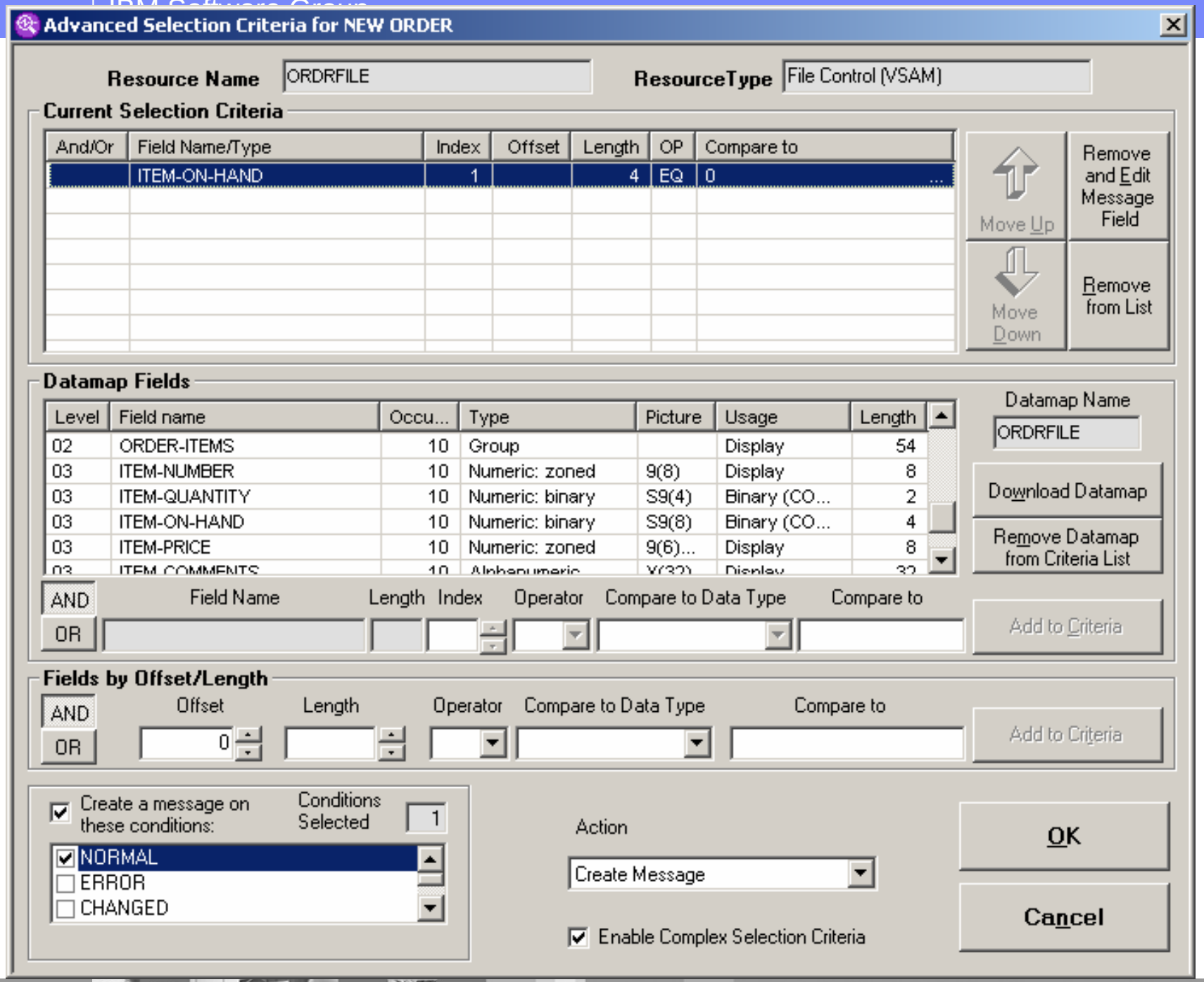


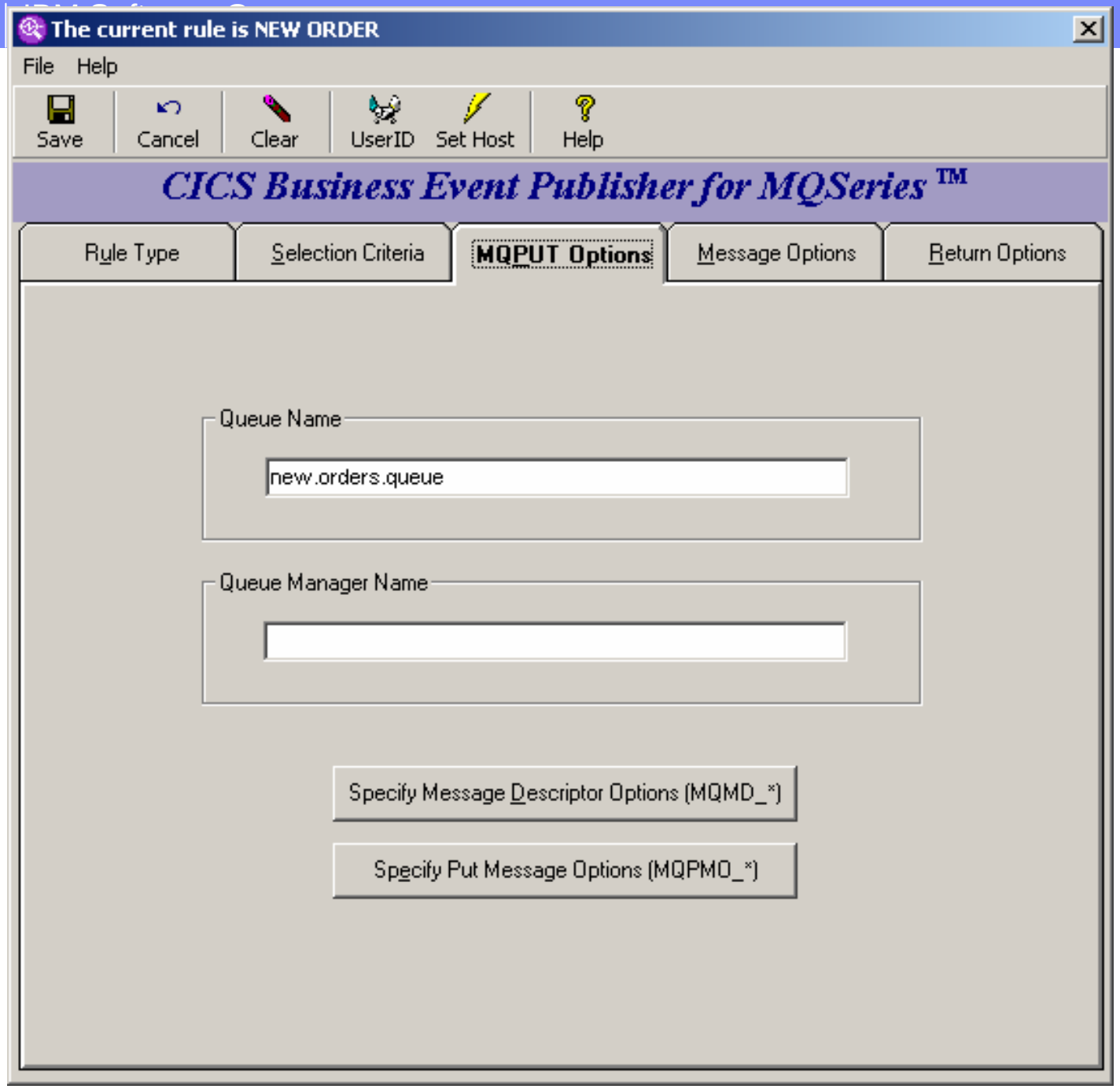
CICS BEP Workstation Client











CICS BEP – Possible Uses

- **Event notification** – new customer added, account = zero
- **Activity Audits** – who, what, when is accessing the file?
- **Error notification** – create message when error detected
- **Threshold notification** – stock running low
- **Automation** – removal of manual or latency in business process
- **Data source for Message Brokers**
- **Data transfer**
- **External logging or notification**
- **Auditing** – when is file accessed, by whom, what did they do? Support Sarbanes Oxley requirements

Customer Uses

Legacy Integration with new processes

Event driven

Event Examples

Price change to product or services
Bank account changes
Credit card account changes
Stock Triggers
Trading Volumes
Address changes
Name changes
Name add/delete
Date detection

Integration Enabler – WebSphere MQ

Link with new business process

e-mail, text, phone etc.

Improve customer satisfaction

Improve audit control

Improve image of company

24X7 Operations
Automating existing processes

Event Detection and Notification (to MQ)

Provide ability to re-route to target solution source immediately

e.g. support/maintenance personnel

Provide capability to remove batch operations

Provide capability to remove manual or latent processes

Achieve automation

Improve efficiency of company

Reduce costs

Customer Uses ...contd.

Maintenance and Support

- Error Detection & Notification (to MQ)
- Immediate Notification to support personnel
  - new process
  - e.g. text, mobile notification

Improved response time

Improved customer satisfaction

Application Development

- Detect calls to CICS applications and record source
- Detect changes to data and record source
- Immediate Notification

Improve debug capability

Improve testing efficiency

Improve overall application development time

Backup and Recovery

- Key Asset changes
- Immediate detection and notification
- Provides for immediate update
- Complements Backup and Recovery plan

Could provide data replication facility

Could complement full Disaster Recovery Plan

Improves efficiency and integrity of systems

Threshold Notification

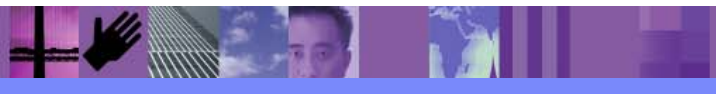
Improve Stock Control and Ordering

- Stock on hand falls below a certain value
- Stock on hand exceeds a certain value
- Provides for immediate action

Improves stock ordering process

Improves overall manufacturing process

Reduces overall costs and improves efficiency



Customer Uses …contd.

Activity Audit

Answers questions such as:

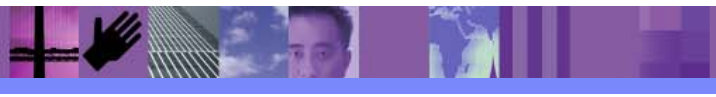
- Who uses what files and fields?
- When are they used?
- From what location, by which program?

Benefits**:**

Improve audit capability without program changes
Notification of details causing change
Improves knowledge of core systems
Indicates what is important and what is not in legacy systems
Better understanding of key applications
Help model data access patterns
Help design of new system or solution

Audit Trail

- Key Asset changes
- Immediate detection and notification of cause of change
- Provides for immediate action
- Complements other audit support
- Immediate detection to limit impact
- Reduced Exposure
- Improved Fraud detection



Customer Scenarios

Improved Customer Service : Large NE Insurance Company

Customer Pain

Company has “in-house/home grown” claims application system that replicates IMS and DB2 updates to desktop users. Skill set are very low to maintain “in house system”. High overhead issues. Difficult to implement changes/updates into production. At times, not all DB2 and IMS updates were captured in a timely fashion (I.E. time lag).

The Solution

Customer selected CICS BEP to address the above issues. Customer saw a the value in CICS BEP to exploit and capture additional data.

The Benefits

CICS BEP has less overhead. Very user-friendly GUI (“Very simple/Point and click” – customer comments). Less time to implement new/updated business event rules into production. Automated process. Up to the minute capture of date in DB2 and IMS.

Improved Customer Service; Banking

Customer Pain

The bank's customers are unaware when they are about to go overdrawn and therefore incur banking charges and interest charges when they go into the red

The Solution

The bank's retail and business customers have accounts controlled by CICS, DB2 or IMS. With CICS BEP, the bank can now set up rules to detect when a customer account has reached a threshold. The customers themselves can decide on what this threshold should be. When this threshold is detected, CICS BEP will create an MQ message and send it to a pre-defined queue. The bank can then initiate a service to contact the customer, for example, create an SMS message to send text message to their cell phones.

The Benefits

Instant notification of account balance enabling customers to remedy any out of line balances before charges are applied. More satisfied customers who are less likely to move to another bank in the extremely competitive banking sector.

Improved Customer Service; Finance

Customer Pain

- Retail Bank was struggling to gain market share over the competition. They had always offered a traditional banking service and now realised that something new had to be offered to differentiate themselves from their competitors.

The Solution

- CICS Business Event Publisher enables events from transactions in CICS, IMS, DB2 to be published into WebSphere MQ. This opens up new opportunities, transactions can now be made available to different transports e.g mobile devices. Customers can receive account information on their mobile phone or PDA. Plus customers are notified should any abnormal behaviour occur on their credit card. e.g a customers card is used in five states in five days so the card is stopped, the customer receives a notification on his/her mobile phone and in turn can call the company to find out further information.

The Benefits

- Better service to customers, less administration for the bank (notification can happen automatically), increased customer satisfaction, increased competitive differentiation, increased flexibility, leverages existing infrastructure and investment, based on the industry defacto standard for messaging.

Improved Hospital Efficiency; Healthcare

Customer Pain

- Hospital is struggling with effectively managing the number of patients every day. Administration costs are due to highly manual orientated processes. Customer satisfaction is at an all time low due to the average waiting time between the various different departments that patients have to visit in one day.

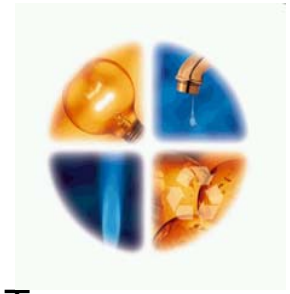
The Solution

- CICS Business Event Publisher detects changes to customer information and records (CICS, IMS, DB2) and publishes the details into MQ. Information can be immediately updated and forwarded in sequence to next department, thus automating the processes. The customers name can be instantly added to the waiting list before he/she even gets there. On arrival the customer can see exactly where they are in the queue as it is published on a screen (included estimated waiting time). The customer is happy as they are moved through the system quicker, and the doctors have to spend less time on administration.

The Benefits

- Improved processes, less administration, more automation, less margin for error. Better service to customers, increased customer satisfaction. Leverages existing infrastructure and investment.

Improved Customer Service; Utilities



Customer Pain

- Merging of two utilities company structures and processes. They have two different IT infrastructures on zSeries and are having difficulties merging the customer information to be able to provide single billing and unified support.

The Solution

- CICS Event Publisher takes customer useage information and records from CICS, IMS or DB2 in both companies and and publishes the details into MQ. MQ integrates the information so that there is a consolidated bill provided for customers, both on the web and by post. Built on the existing infrastructure, the two companies could improve their processes by utilizing new procedures like providing engineers with customer information on their PDA's so that as they visit houses to test/monitor meters, the information is right there in front of them. Should the engineers be called out in an emergency records can be sent out with no need to return to the branch or office.

The Benefits

- There is no need for a great deal of expense on creating a new infrastructure, this solution allows the companies to leverage what they already have. New business opportunities may arise from being able to publish information held in back end systems out to the extended enterprise.

Improved Customer Support; IT Organization

Customer Pain

IT manager and his staff are hearing about errors occurring within CICS applications too late. This results in lengthy application downtime and dissatisfied users

The Solution

All application errors are detected by a unique program which is linked to all other application programs. CICS BEP evaluates all the EXEC CICS Link commands in order to understand if the command has been issued for an application error. A "filter" CICS BEP exit routine is developed so that an "alarm message" is written to two MQ queues only if a given threshold of errors in a given time interval is exceeded. The first queue is then read by a, that sends the message to an "alarm console" and the second is read by computer/telephony integration layer which sends a SMS message to a specified cell phone. All these parameters (error codes, threshold, alarm and SMS messages, time interval, cellular number and so on) are defined in CICS BEP's rules engine and the MQ messages through the CICS BEP administration workstation so that they can easily modified and tuned without any programming effort.

The Benefits

Instant notification of errors in CICS applications, both at the alarm console and on cell phone(s).
Less application downtime, more satisfied users

Improved Operational Efficiency; Manufacturing

Customer Pain

Inventory of parts in a car manufacturing process are not keeping up with demand – result is reduced production, lost orders, dissatisfied customers, lost business.

The Solution

Inventory of parts and orders received are held in two different databases (IMS and DB2). CICS BEP is deployed to monitor the number of cars on order, and compare it with the level of parts inventory. If the number of cars to be delivered within a specified timeframe indicates that the parts inventory will be exceeded in the near future, CICS BEP recognises that event as exceptional. When the level of under supply reaches a minimum predefined level, CICS BEP generates an MQ message which takes the form of an order, which is sent to the appropriate supplier via the business to business systems that have been established between the car manufacturer and its suppliers.

The Benefits

Instant conversion of a depleted parts inventory situation into an order for resupply. No disruption to production process, less orders lost due to delayed delivery. Improved price performance and profits.

Summary

CICS Business Event Publisher for MQ provides a new approach to enabling core zSeries applications to participate in SOA and e-Business environments

- Allows existing zSeries applications to drive new business processes quickly, safely and without application changes
- Allows existing zSeries applications to be easily integrated into new applications
- CICS, IMS and DB2 support
  - IMS and DB2 support do not need CICS to be installed
- Fills the “hole” between core zSeries apps and message brokers/integrators
- Highly scalable, performance oriented design
- Allows capability to automate operations
- Allows capability to improve audit control
- CICS BEP detects the specific event(s) and creates the message
- WebSphere MQ provides the link to new business processes and new technology
- No Application changes
- Cost and time to market saving over application development effort

Polling Questions

- Would you like more information on Business Event Publisher for MQ?
  * 1 – Yes
  * 2 – No
- Would you like a FREE Cost Benefit Analysis (CBA) / Return On Investment (ROI) calculation ?
  * 1 – Yes
  * 2 – No
- What is your time frame for looking at this type of functionality?
  * 1 – within three months
  * 2 – three to six months
  * 3 – six to twelve months
  * 4 – more than 12 months

Q & A Session