

Seradex White Paper

A Discussion of Issues in the Manufacturing OrderStream

Batch vs. Real Time Transaction Processing

There are two basic philosophies on transaction processing in ERP systems – Real Time and Batch Processing. Our philosophy is that there is a time and place for each and typically the pro's and con's for each side are often distorted.

Seradex uses the batch processes in only three specific transaction sets – posting to the General Ledger, Accounts Receivable and Accounts Payable. All Sales Orders, Shipments, Inventory, Invoicing, Purchasing, Credit Limit Adjustment, Credit Holds, Late Orders, Receiving and Production is done real time.

There can be no argument that information such as credit limits, inventory on hand, production status, customer sales figures must and should be real time.

How about General Ledger Account Balances? Unpaid supplier invoices? Sales Tax Liabilities? These are typically less time sensitive and typically driven by weekly or monthly schedules.



Real Time vs. Batch

Advantages Claimed For Real Time Systems	Seradex Response
Single entry of ALL source documents	Well designed and appropriately used Batch systems also have single data entry
Check credit status at order entry level & Invoice	This is real time in Seradex
Simple	Posting Batches is not complex and can be easily automated
Fewer operator steps	The only extra step is to review the batch for QC purposes
Reliable - Always up-to-the-second	An incorrect entry posted quickly is reliable – but wrong!
Online printing of ALL documents when created - even after posting	Also available in batch transaction sets
Inventory, cash receipts, sales/service codes, history, etc. always reflect last entry anywhere on the system.	All operational transactions are also real time in Seradex systems
No cumbersome/time consuming END OF MONTH batch updates that shutdown everything including inquiries and work orders.	Batch Posting does not shutdown inquiries and typically is done in a few minutes. Batches are date sensitive so the new month can be started without delay.
Statements, up-to-second sales reports, etc. may be run at any time	Sales Reports are driven from Invoices which are real time
No blinders during posting! Everything on-screen. System updates data as entries are confirmed	Equally true in Seradex
On-Line inquiry for lists of inventory, service codes, repair codes, etc. during data entry processes	Equally true in Seradex

Internal Control Overview

As you probably know, President Bush signed the Sarbanes-Oxley Act in 2002. The SEC ordered that the CEO and CFO of each public company certify as to the truth of their company's SEC reports.

The Act requires that the CEO and CFO to personally certify financial statements.

Under the Act the CEO and CFO are responsible for:

Establishing and maintaining effective internal controls. They must disclose to the auditors and the audit committee of the board of directors all significant deficiencies in the design or operation of internal controls which could adversely affect the issuer's ability to record, process, summarize, and report financial data and have identified for the issuer's auditors any material weaknesses in internal controls and the signing officers have indicated in the report whether or not there were significant changes in internal controls or in other factors that could significantly affect internal controls subsequent to the date of their evaluation, including any corrective actions with regard to significant deficiencies and material weaknesses.

Internal Controls must receive top executive support and attention.

What do quality conscious industries as varied as pharmaceutical, automotive, aviation and electronics have in common? They all use batch production processing! Why? Simply, because batch processing is the only production method that facilitates the required level of quality control. ISO and QS9000

recommend lot production with material traceability and they do it for good reason.

Internal Control Principles

Internal Control Principles established by Professional Accounting Organizations include:

1. Separation of Duties - Duties are separated so that one person's work routinely serves as a check on another's work. No one person has complete control over more than one key function or activity (e.g., authorizing, approving, certifying, disbursing, receiving, or reconciling).

2. Authorization and Approval - Transactions are authorized when proper and consistent with company policy.

3. Custodial and security arrangements - Responsibility for physical security/custody of University assets is separated from record keeping/accounting for those assets.

4. Review and reconciliation **Company** accounting records are examined by employees who have sufficient understanding of the financial system to verify that recorded transactions actually took place and were made in accordance with policy and procedures. Accounting records are compared with accounting system reports and financial statements to verify their reasonableness, accuracy, and completeness.

Advantages of Batch Posting

Batches offer the following advantages:

- Users are able to correct errors before posting – less correcting journal entries
- Better traceability of transactions with full audit trails
- Segregation of duties – the person doing the transaction is not the person checking the batches
- Batch provides a quantifiable document to test, total, approve and file.
- Finding errors is easier in batch posting – you can quickly determine which batch was the source of the error leading to far fewer transactions to check.
- Provisional Posting – during year or month end it is common to “try on” adjusting entries and review the financial statements. This process often leads to multiple and reversing entries. Using provisional posting you can do this process until the final numbers are agreed on and make one posting

Seradex System Approach

Seradex uses the best of both worlds. Seradex uses batch processes in only three critical transaction sets:

- 1) General Ledger Posting
- 2) Accounts Receivable Posting
- 3) Accounts Payable Posting

These transactions are the critical transaction that feed Financial Statement Information and deserve the highest levels of internal control scrutiny.

All operational data including Sales Orders, Shipments, Invoicing, Purchasing, Receiving, Inventory Transactions and Production are done on a real time basis. This ensures users have real time credit balances, inventory on hand, costing and delivery due dates. On a periodic basis this information is batched into the accounting system. Common periodic processing for the three transactions could be as follows:

Ledger	Period	Comment
General Ledger	Weekly or Monthly	Financial Statements are pulled typically on a monthly basis
Accounts Receivable	Daily	Customer Accounts are updated at the end of each day
Accounts Payable		Weekly – Vendors can be put on weekly check runs

Each organization must evaluate their business processes, sensitivity to internal controls and information requirements.

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