

# Automate! Lessons Learned to Improve Invoice Match to PO Process

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The invoice match to PO process within Oracle can be cumbersome and frustrating for Accounts Payable Specialist. Humana sought a solution to automate this payables data entry process to help create efficiencies and speed up the process within our Accounts Payable department. We also learned many lessons along the way which will be outlined in this white paper.

Upon conversion from our Mainframe Accounts Payable system to Oracle Accounts Payable, the Humana AP department required an upload process to expedite data entry due to the large volume of invoices processed on a daily basis. Two primary upload processes were initially developed. The goal of the first was to be able to upload standard non-PO related invoices that had Suppliers already set up in AP. The second was to create a Supplier and then add invoices for that Supplier. As the Procurement department began to expand its use of the Purchasing Module via iProcurement, the need quickly arose to find a way to automate this data entry as well due to the very slow and cumbersome process required to do the match to PO in the application.

Humana derived from these two uploads the third upload process that we call the “match to PO upload”. The Business Analyst working on this with an Oracle developer took the original invoice upload process and, using the Oracle Accounts Payable User guide and the Technical Reference Manuals, researched to determine the fields that are required to be entered as part of the upload process. From that research, we were able to build the shell of the Excel template that should be used to execute this upload (Appendix A). The following mapping was done using this information.

DATA MAPPING		
MATCH TO PO UPLOAD SPREADSHEET		SOURCE OF DATA
HEADER RECORD Field Name	Data Example	Notes (Populated as listed here; "<<<" indicates it is populated by the SUPPLIER XXX field to the right.)
Batch Number	070052007	Populated by Associate
Batch Control Total	9509.49	Populated by Associate
Accumulated Batch Total	9509.49	Formula in upload spreadsheet (Sum of Invoice Total column)
Batch Variance	0	Formula in upload spreadsheet (Batch Control Total -Accumulated Batch Total)
Batch Date DD-MON-YY	12-Jun-07	TODAY - Populated by macro (formatted dd-mmm-yy)
Accounting Period	Jun-07	TODAY - Populated by macro (formatted mmm-yy)
Batch Control Count	234	Calculated by macro (SUPPLIER XXX Total # of Records - 1) -- [SUPPLIER XXX's counts the header record, we don't] <<<
Accumulated Batch Count	234	Formula in upload spreadsheet (Count of Line Numbers)
Batch Count Variance	0	Formula in upload spreadsheet (Batch Control Total -Accumulated Batch Total)
Created by	ABC1234	Populated by Associate via macro

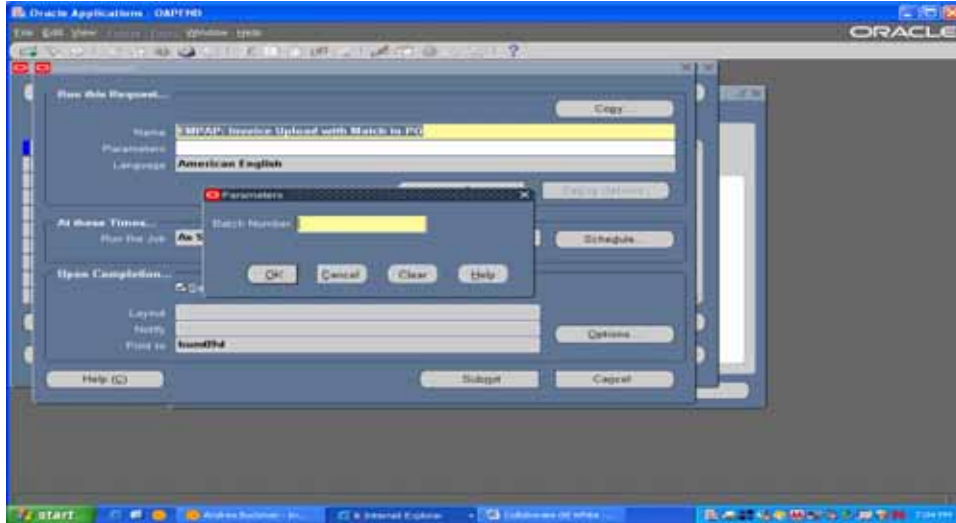
Invoice Count 74 Formula in upload spreadsheet (Count of Distribution line # 1)

MATCH TO PO UPLOAD SPREADSHEET		SOURCE OF DATA
DETAIL RECORD Field Name	Data Example	Notes (Populated as listed here; "<<<" indicates it is populated by the SUPPLIER XXX field to the right.)
Batch Number 9	070052007	Populated by Associate via macro
Date Invoice Received	12-Jun-07	TODAY - Populated by macro (formatted dd-mmm-yy)
Invoice Date DD-MON-YY	4-Jun-07	<<<
Invoice Number 50		<<<
PO Line Number		<<<
PO Number	601053	Positions 1 through 6 of SUPPLIER XXX's PO Number <<<
Release Number	51134	Positions 8 through 14 of SUPPLIER XXX's PO Number <<<
Line Number	1	Populated by macro (sequentially assigned, beginning with 1 and restarting at 1 for each new invoice)
Quantity Billed	2	<<<
Unit Price	14.70	<<<
Shipment Num		Not populated
COID 5		Not populated
UDN / Acct 5		Not populated
Distribution Amount	29.40	<<<
State Tax (20810)		Not populated
County Tax (20811)		Not populated
Local Tax (20812)		Not populated
Sales Tax	0.00	<<<
Shipping and Handling	0.00	<<<
Freight	0.00	<<<
Supplier Site		Not populated
Distribution Description- 240		<<<
Comments -Invoice Description (Print on Check)		Not populated
Special Handle		Not populated
Pay Alone		Not populated
Terms		Not populated
Invoice Total	29.40	Formula in upload spreadsheet (Sum of Distrib. Amt., State Tax, County Tax, Local Tax, Sales Tax, Shipping & Handling, Freight)

Please note that Humana AP uses a separate Access database to derive the next available batch number that the AP Specialist uses to populate the spreadsheet. Oracle allows any combinations of alphanumeric characters in this field, but Humana required a naming convention be followed to facilitate the filing and easy retrieval of invoice batches.

Given the above mapping, our Oracle Developer was then able to start coding the upload. As noted in the presentation, the steps used to code followed that which was done for the two invoice upload predecessors. The upload file, once completed, is saved as a comma delimited file to a secured network directory within AP. A

common file name is used with the batch number appended to the end to ensure that multiple Associates can process uploads at the same time, with the batch number making each unique. Once the file is saved in this directory, the AP Specialist logs into Oracle AP. A custom program was created and assigned to this appropriate responsibility. Logic was built into the upload to validate the responsibility being used to the network directory. This validation was included because there is another division of AP in the company that uses this process, but had the requirement to save to their secured directory and have a separate responsibility. Once logged into Oracle, the AP Specialist submits a Single Request, with the Batch Number being the only required parameter to populate.

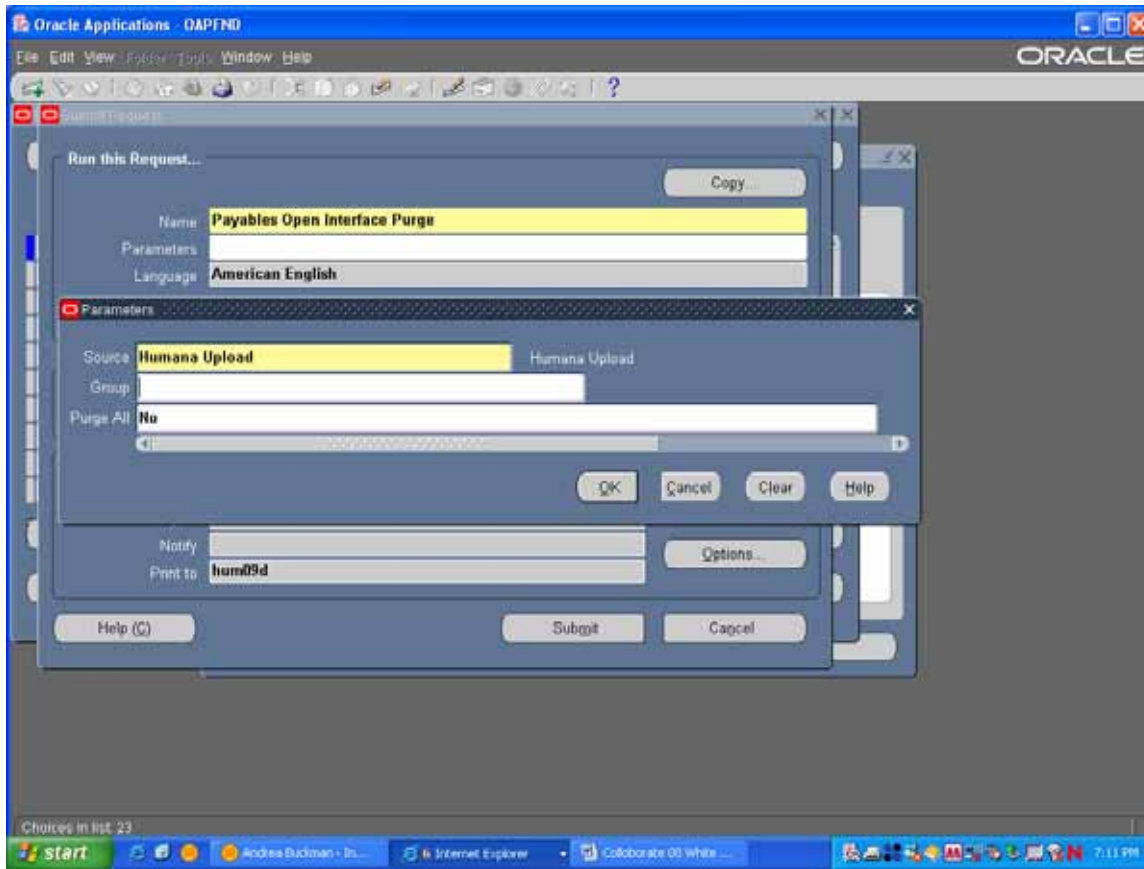


When the job is submitted, the program is coded to grab the file, matched by the Batch Number given, and pull it into a custom staging table. Once there, the staging table is used to validate the data in the upload to what is required in the Payables Open Import table. This is where the additional edits requested by the Business team are invoked. If any of these are violated, the job fails and an email alert is sent to the AP Specialist to inform them of the failure. The error logging in the log file becomes critical at this point in the upload. We have added additional error logging to help the AP Specialist resolve all issues at the same time so that the next attempt to upload the same batch is successful. This requires the program to do all validations at the same time on the file and display all errors in the log file. These errors are made easily visible by using the following symbol **\*\*\* ERROR**. See Appendix B for example of error log file.

Once all validations are passed, a second request is invoked as a child of the parent request and the Payables Open Import process as a second request. This second process actually imports the data into the Payables Open Import table.

Once in the table, there are additional Oracle standard edits that kick in and invoices can either be imported successfully or rejected. Reasons for rejection include such things as Invalid Supplier or duplicate invoice. In the event that invoices are rejected, the 'Payables Open Interface Purge' job must be run to remove these invoices. This job requires a

Source parameter to be input for which we use a custom source of "Humana Upload" which is tied to the program, the group parameter represents the Batch number, and the Purge All option is set to "Yes".



Once the purge job has run, the rejected invoices can be corrected and re-uploaded. We allow the AP Specialist to upload back into the original batch but it is optional according to your business requirements to allow or request a new batch is created.

Due to limitations within the match to PO process, several assumptions and requirements were added to be able to execute the upload. The ***Line number from the PO is the key element***. Humana now requires Suppliers to put this line number on the invoice when considering using them for this process. Without it, we cannot use the upload for the match to PO upload. A separate line for Tax Accruals is used on the upload sheet. Many lessons were learned through mostly a trial and error process to build this upload. The key, we found, was in the very detailed error logging and having all validations and edits run the first time the upload is attempted so that the AP Specialist has them identified, can update all at the same time, and then successfully upload upon the next attempt. This saves a great deal of time and frustration. Also key was to have the AP Specialist and business parties involved in the design and testing of the upload as you are able. This serves as another form of training, but also promotes ownerships and a 'subject matter expert' within the AP team. Since these are the team members actually using this process on a daily basis, they have the most detailed insight into all of the 'what if' situations.

# Appendix A

Batch Number	Batch Control Total	Accumulated Batch Total	Batch Variance	Batch Date DD-MMM-YY	Account's Period	Batch Control Count	Accumulated Batch Count	Batch Count Variance	Created by
AKS11901	0.00	0.00	0.00	00000000	Nov-04	00	0	0	Andrea

Invoice Count	State Tax (20000)	County Tax (2000)	Local Tax (20000)	Sales Tax	Shipments and Handling	Freight	Supplier Site	Orderline Item Description	Orderline Item Price	Special Handle	Pkg Allow	Entry	Invoice Total	Tag Number	Serial Number
													0.00		

## Appendix B

Validating purchase order info..  
Standard Purchase Order :730965  
PO Header ID :250538  
PO Line ID :440663  
Shipment ID :713390  
\*\*\*Error: PO is not open.Closed code :CLOSED  
COID:Process point:80645:EFT  
Accounting Flexfield:HUMANA\_ACCOUNTING\_FLEXFIELD  
Invoice 00950423FEB20, Line 7, Vendor 1366237  
Non Asset...  
Validating purchase order info..  
Standard Purchase Order :732322  
PO Header ID :251908  
PO Line ID :444053  
Shipment ID :716980  
COID:Process point:49717:EFT  
Accounting Flexfield:HUMANA\_ACCOUNTING\_FLEXFIELD  
Invoice 00916928FEB20, Line 2, Vendor 1366237  
Non Asset...  
Validating purchase order info..  
Standard Purchase Order :732102  
PO Header ID :251688  
PO Line ID :443553  
Shipment ID :716444  
COID:Process point:45695:EFT  
Accounting Flexfield:HUMANA\_ACCOUNTING\_FLEXFIELD  
Invoice 00843611FEB20, Line 2, Vendor 1366237  
Non Asset...  
Validating purchase order info..  
Standard Purchase Order :732304  
PO Header ID :251890  
PO Line ID :443965  
Shipment ID :716884  
COID:Process point:11701:EFT  
Accounting Flexfield:HUMANA\_ACCOUNTING\_FLEXFIELD  
Invoice 00834221FEB20, Line 5, Vendor 1366237  
Non Asset...  
Validating purchase order info..  
Standard Purchase Order :732111  
PO Header ID :251697  
PO Line ID :443586  
Shipment ID :716481  
COID:Process point:88795:EFT  
Accounting Flexfield:HUMANA\_ACCOUNTING\_FLEXFIELD  
Invoice 00718916FEB20, Line 17, Vendor 1366237  
Non Asset...  
Validating purchase order info..  
Standard Purchase Order :697234  
PO Header ID :215782  
PO Line ID :349102  
Shipment ID :615450  
\*\*\*Error: PO is not open.Closed code :CLOSED  
COID:Process point:11701:EFT  
Accounting Flexfield:HUMANA\_ACCOUNTING\_FLEXFIELD

Invoice 00936341FEB20, Line 2, Vendor 1366237  
Non Asset...  
Validating purchase order info..  
Standard Purchase Order :732252  
PO Header ID :251838  
PO Line ID :443836  
Shipment ID :716753  
COID:Process point:80913:EFT  
Accounting Flexfield:HUMANA\_ACCOUNTING\_FLEXFIELD  
Invoice 00938454FEB20, Line 2, Vendor 1366237  
Non Asset...  
Validating purchase order info..  
Standard Purchase Order :732297  
PO Header ID :251883  
PO Line ID :443945  
Shipment ID :716864  
COID:Process point:49807:EFT  
Accounting Flexfield:HUMANA\_ACCOUNTING\_FLEXFIELD  
Invoice 00950423FEB20, Line 9, Vendor 1366237  
Non Asset...  
Validating purchase order info..  
Standard Purchase Order :732322  
PO Header ID :251908  
PO Line ID :444056  
Shipment ID :716983  
COID:Process point:49717:EFT  
Accounting Flexfield:HUMANA\_ACCOUNTING\_FLEXFIELD  
Invoice 00917065FEB20, Line 1, Vendor 1366237  
Non Asset...  
Validating purchase order info..  
Standard Purchase Order :732104  
PO Header ID :251690  
PO Line ID :443555  
Shipment ID :716446  
COID:Process point:45691:EFT  
Accounting Flexfield:HUMANA\_ACCOUNTING\_FLEXFIELD  
Invoice 00931921FEB20, Line 1, Vendor 1366237  
Non Asset...