

MR2 Finance Analysis Document

Prepared by MR2 Team
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General Assumptions

Introduction

During the past months, the MR2 team has been analyzing the Banner Finance system to determine how USNH's financial reporting needs will be met in a future reporting environment. This document presents our findings and recommendations and is intended to serve as a starting point for discussions with key finance end-users such as the project's ESC, Team Leaders, the Finance Workgroup, and the chairs and members of the Finance Process Groups. The MR2 team needs these groups to validate our assumptions, tell us what is missing and where we went awry. The MR2 team will also work closely with USNH's key financial users to: 1) determine how these reporting needs will be met - either through existing Banner forms/reports or via the reporting environment; and 2) prioritize the development of specific reports within the reporting environment. This collaborative dialogue is critical to the success of MR2.

It is important to note that all of the analysis work completed by the MR2 team has been based on training and test data. The MR2 team has not yet had the opportunity to review or apply our approaches to any converted legacy data. Based on the Finance team's timeline, a sufficient amount of converted data should become available in the next few weeks. The MR2 team will then review our assumptions and recommendations in the context of actual USNH data. This review, as well as the finalization of the financial business processes, may require us to refine our recommendations or proposed approaches.

The analysis document contains sections for each of the major reporting areas:

- Net Assets/Balance Sheet
- Budget, Revenues, Expenditures and Other Changes
- Sponsored Programs Accounting and Billing
- Buy/Pay including document specific sections such as Requisitions, Purchase Orders, Invoices, A/P Checks as well as Vendor and Encumbrance Ledger related information.

Each of the content areas contain sections outlining our general assumptions, issues, outstanding questions, a list of tables recommended for inclusion in the reporting environment, a list of as yet undecided tables that are awaiting functional input as well as a list of tables that MR2 is not anticipating a need for in the reporting environment.

Outstanding Areas

The MR2 team has not yet reviewed Fixed Assets, the Approvals Process, Transfers, General Encumbrances, or Cash Receipts and will require additional time to do so. We would like to postpone our analysis of Fixed Assets until it coincides with the functional team's review of this module. As for the Approvals Process, we started our analysis of this area, but changed our focus in order to concentrate on more important areas. We will analyze Transfers once we have access to converted legacy data. In reference to General Encumbrances or Cash Receipts, we are not sure how/if these Banner components will be used and wait for functional input in these areas.

Data Dimensionality

Data dimensionality is an important component of a reporting environment. Data dimensionality refers to the supporting data elements that contain descriptions of other key data fields. Examples of data dimensions include the descriptions and validation information for FOAPAL elements, descriptions or full names of other relevant codes such as vendor code, and the FOAPAL hierarchy assignments, etc.

The reporting environment will leverage the Banner system to provide users with the most recent value for all dimensional data. Although we are not abandoning the use of effective dating in providing data dimensionality, reports

and queries will select the most recent dimension value and not capture the dimension value that was in effect at the time the transaction/document, etc. was processed.

The MR2 team explored the possibility of capturing historical dimension data to provide users with the data that was in effect at the time a transaction was processed. During our analysis we found that this approach significantly increased the complexity of the reporting environment, both from a technical and end user perspective.

The processes and data structures required to support historical dimension data would increase the overall load on the reporting environment and degrade performance. From an end user perspective, the availability of historical dimension data would limit some reporting functionality including summary level roll-ups and comparative reporting.

In addition to the pitfalls mentioned above, the MR2 team believes that the full spectrum of problems that could arise from the use of effective dating and data dimensionality has not yet been realized and that other possible ramifications may exist.

For more information on data dimensionality and the MR2 team's recommendation please see the Data Dimensionality Examples section on page 6.

FOAPAL Hierarchies

The Banner chart of accounts structure enables the population of hierarchies for all of its FOAPAL elements, except Activity. The hierarchies provide roll up capabilities allowing users to consolidate data at the summary levels present within each hierarchy.

The reporting environment has leveraged the hierarchies to provide access to FOAPAL elements within a hierarchical context (level 1, level 2, etc.) as well as a non-hierarchical view of the elements. These two options will allow users to produce reports that summarize data by the applicable hierarchy levels or reports that capture activity as it stands without inferring any hierarchical relationships. The following example depicts the two approaches. (Due to the test data available in the training environment, the following example uses a fund hierarchy. The MR2 team is aware that USNH has not implemented such a hierarchy.)

For this example, the following fund hierarchy exists –

Level 1 – NHGOVT
 Level 2 – NHHS
 Level 3 – CAFABC
 Level 4 – 14JULT

The level three and level four funds, CAFABC and 14JULT, are both data enterable and expenditures have been transacted against both funds. For fund 14JULT, \$1,660.42 has been expended against account code 071400. For fund CAFABC, \$490.00 has been expended against account code 071400 as well.

Using the reporting structures that leverage the fund hierarchy, a user could produce the following report by selecting data where fund level 3 equals CAFABC. The query will then select data transacted against the level 3 fund CAFABC as well as data transacted against its children or successor funds.

Expenditures as of Fiscal Year 2001, Fiscal Period 08:

<u>Fund Level 1</u>	<u>Fund Level 2</u>	<u>Fund Level 3</u>	<u>Fund Level 4</u>	<u>Account</u>	<u>YTD Exp</u>
NHGOVT	NHHS	CAFABC	14JULT	071400	\$1,660.42
NHGOVT	NHHS	CAFABC		071400	\$ 490.00

Using this same approach, if the level 4 fund is removed from the report, the expenditure amounts will summarize at the level 3 fund as shown below.

<u>Fund Level 1</u>	<u>Fund Level 2</u>	<u>Fund Level 3</u>	<u>Account</u>	<u>YTD Exp</u>
NHGOVT	NHHS	CAFABC	071400	\$2,150.42

In addition to the hierarchical view of the FOAPAL elements, the reporting environment will also provide users with the capability to select FOAPAL elements without leveraging any hierarchical context.

If a user wanted to see data that was attributed only to fund CAFABC, they could utilize the “no aggregate” view of the elements and select data when the fund equals CAFABC. This report would provide the following results.

<u>Fund</u>	<u>Account</u>	<u>YTD Exp</u>
CAFABC	071400	\$490.00

Since this view of the FOAPAL elements does not consider any hierarchical assignments it only selects the FOAPAL elements to which activity has actually been transacted and does not perform any rollup aggregation.

Attributes

During the fall of 2000, the MR2 team developed a reporting solution to enable SCT’s Attribute Solution to be accurately implemented in the reporting environment. The MR2 Attribute solution transforms the Banner attribute assignment tables so that individual data columns are dynamically created for each unique attribute type assigned to a FOAPAL element. This transformation eliminates the duplication of data (which lead to a misstatement of financial activity) that was inherent in the SCT design.

Although the MR2 Attribute structures provide a viable solution for the reporting environment, there are several considerations that must be followed when utilizing Attributes.

- The number of attributes per FOAPAL element should be limited to 100 attributes per element.
- The creation of new attribute types requires manual updating and maintenance of the BusinessObjects end user presentation layer.
- The creation of new attribute types should be tightly controlled.
- Attribute type names cannot utilize Oracle reserved words, contain blank spaces or include other invalid characters.
- Attributes are not leveraging the activity date that is included in the attribute type and value validation tables nor the begin and end dates that are included in the attribute value table as these dates do not have any effect on the actual attribute assignment tables.
- When attributes are provided for FOAPAL elements, they are available for both the hierarchical and non-hierarchical view of the elements.

Banner Validation Tables

Although this need was not captured in the Finance requirements document, we understand that there is a general need for reporting access to many of Banner’s base validation tables, such as FTVFUND. To date, the MR2 team has not specifically addressed this need and has instead focused on reporting areas that capture financial activity such as the General Ledger, Operating Ledger, etc. Data elements from validation tables have been included in the reporting environment to provide users with data dimensionality, e.g. fund descriptions, account code descriptions, etc.; however, the MR2 team has not included validation tables in their entirety, including all fields and historical data records, in a context that will allow users to report on all validation information.

The MR2 team does not consider this need a high priority, when compared to other reporting needs such as control and compliance reports, and would like to remain focused on providing reporting access to data structures that capture financial activity. Once we feel comfortable this need has been met, we will work closely with key financial users to identify needs in this area and prioritize the required validation tables.

Four Digit Fiscal Year

The Banner system captures the fiscal year as a two-character field. In the reporting environment we have chosen to store this data as a four-digit field. We also chose to display a four-digit year in the end user presentation layer. This approach is inconsistent with the Banner forms, but is widely accepted in reporting environments. Additionally, a four-digit year often provides greater utility in report creation when sorting or performing other summary functions on a value.

Security for Financial Reporting

The Executive Steering Committee's decision to utilize an employee's social security number as the employee/vendor identification number creates a new security requirement for the financial reporting environment. Before this decision was made, security in the financial reporting environment was "open" – meaning that a user with access to the reporting environment could see all available data for the University system. As a result of the above decision, security in the financial reporting environment now needs to prohibit a selected group of users from viewing or accessing the employee/vendor id while still providing the authorized group of users access to the employee/vendor id field.

The MR2 team would like to limit the work involved in creating and maintaining this security as well as the ensuing reports that will leverage the restricted field. In a best-case scenario, we would like to implement a security structure that allows us to create one version of the reports, that display the employee/vendor id, and be able to provide these same reports to both restricted and authorized users. Following this approach, when a user runs a report, depending on their security level, the employee/vendor id field would either be visible on or removed from the report's output.

The MR2 team analyzed the options available in BusinessObjects that could provide this type of security; one primary option is available. This option uses the BusinessObjects object level restriction and allows for security levels to be set on a specific database field. Using this approach, an object level restriction could be set on the employee/vendor id field.

The object level restriction works in concert with the security access level that is assigned to a user or group of users. Users who should have access to the SSN/ID field will have a security access level equal to or greater than the level assigned to the SSN/ID field.

The MR2 team attempted to implement the security as described above. Given our understanding of the security feature, we were hoping that the restricted object would be visible or invisible on the report depending on the user's security level. This did not happen. We found that users who did not have access to the restricted field were unable to run the report.

We have contacted BusinessObjects support to inquire about this functionality. BusinessObjects has responded to our inquiry indicating that the functionality we require will be available in the next service pack, scheduled to be released in March 2001. The MR2 team will need more time to test this functionality once the service pack has been delivered and installed.

If this functionality does not prove viable, there are other options the MR2 team will explore. These options include creating two sets of reports to support authorized and prohibited users, or leveraging the universe to provide objects that filter access to the SSN based on user security levels.

“The Learning Prototype”

The MR2 team has developed a “Learning Prototype” for the end user reporting environment. This prototype provides a development environment for the MR2 team and has enabled us to build structures to test our assumptions and provide proofs of concept for our recommendations. The “Learning Prototype” will be used to assist the MR2 team in discussing this analysis document with the finance workgroup, process groups and other key end users and to demonstrate the proposed reporting approaches as needed.

Data Dimensionality Examples

Proposed Approach

The logic that is being used to capture the dimension data selects the dimension data that has an effective date less than or equal to the current system date and a next change date greater than the current system date. So in effect, this logic picks the most recent, but not future dated, value of a dimension.

Below are two examples illustrating how the dimension data will be selected.

On December 22, 2000 fund "JMS" was created. On February 22, 2001, it was decided that the fund should be terminated. Using the record insert, record duplicate process, a new record was created for this fund with an effective date of 02/22/01 and a termination date of 02/22/01. When this record was saved the next change date on the original record was populated with a date of 02/22/01. Two records now exist for this fund. They are:

Fund	Effective Date	Next Change Date	Term Date
JMS	12/22/2000	02/22/2001	
JMS	02/22/2001	12/31/2099	2/22/2001

Using the MR2 dimension date logic that utilizes the effective date and the next change date, the second FTVFUND record would be selected since it is the most recent value.

It is important to note that the logic used to pull data dimensionality does not take into account future dated records, until they take effect, as the following example illustrates.

On October 18, 1988, Account code 713120 was created and titled Travel In-State. On February 23, 2001, using the record insert, record duplicate process, a new title was entered for this account code, Travel In-State – New Title, with an effective date of February 23, 2001. Also on February 23, 2001 it was decided that the title for this account code would change again and become Travel In-State Future Title beginning on March 1, 2001. Accordingly, a new record was entered for this account. The account code now has three records in the FTVACCT table.

Account	Title	Effective Date	Next Change Date
713120	Travel In-State	10/18/1988	02/23/2001
713120	Travel In-State New Title	02/23/2001	03/01/2001
713120	Travel In-State Future Title	03/01/2001	12/31/2099

Assuming that a report is run between February 23rd and March 1st, the logic in the management reporting environment will pull the second FTVACCT record since it provides the most recent, but not future dated, value. After March 1st, the reporting environment will provide the information stored in the third FTVACCT record since it will be the most recent record as of that date.

Examples

Account Description Example

Consolidated roll ups and summary level reporting based on dimensional data would become much more complicated, and perhaps misleading, if the dimensional data captured the value that was in effect at the time the transaction was processed (rather than the most recent dimensional information). The following example depicts this complexity by using the General Ledger as an example.

As of January 1, 2001, account code 1090 had a description of “Cash Interfund”. On February 1, 2001, the description for account code 1090 was changed to “Cash Interfund All” with an immediate effective date. Transactions were processed against this account during January and February.

When a user creates a report against this data and pulls in the account code and description, they will see different descriptions for the transactions entered in January versus February. Accordingly, the query will return two rows of data for account code 1090; one row containing the “Cash Interfund” description and the other displaying the “Cash Interfund All” description. This functionality will significantly hinder a user’s ability to group and subtotal data.

Leveraging the effective dating would also hinder prior year comparative reporting. It would be unclear what dimension value should be selected when different dimension values had been in place during the timeframe of a comparative report.

Vendor Name Description Example

This approach also affects non-FOAPAL related dimensions such as the vendor name. The reporting environment will provide the most recent vendor name or vendor code as indicated by the vendor PIDM in SPRIDEN. Following this logic, it will select the most recent vendor name, not the vendor name that was in effect at the time the transaction was processed.

Using this example, assume that a vendor was named “Vendor ABC” for all of calendar year 2000. In 2001 though, the vendor name was changed to “Vendor 123”. When reporting on activity for this vendor, for either year, the most recent vendor name will be utilized. Transactions that occurred in the year 2000 will show the vendor name as “Vendor 123” and not “Vendor ABC”.

FOAPAL Hierarchy Example

The FOAPAL hierarchy is also affected by this approach. The most recent record in the validation tables for the FOAPAL elements will be utilized to determine applicable hierarchies. Using the fund hierarchy as an example, on January 1, 2001 fund “CAT” had fund “BIG CAT”, a level 1 fund, assigned to it as its predecessor. Transactions were processed against this fund in January.

On February 1, 2001, the “CAT” fund record was changed and the “BIG CAT” predecessor was removed. Transactions were then processed against this fund in February.

Since the FOAPAL hierarchies are built off of the most recent values and relationships, as of February 1, 2001, the “CAT” fund is not part of a fund hierarchy and has, in essence, become a level 1 fund. Reports run against this fund will attribute all activity, including that which occurred in January, to “CAT” as a level 1 fund.

This functionality allows a user to reorganize reporting structures and relationships by changing the relationships in the hierarchy. Additionally, this methodology is consistent with the Banner FGIBDSR form. In this case, the ramifications of capturing and displaying the relationships that were in effect at the time transactions were processed poses a significant risk and would, in theory, not provide one hierarchical structure but would capture of all of the structures that existed during the range of data selected.

Net Assets/Balance Sheet

General Assumptions

- The General Ledger provides summarized balance information for specific account types including assets, liabilities, control accounts and fund balances.
- Information is stored by chart of account code, fiscal year, fiscal period, fund, and account code. The Banner system generates records for periods that have had activity transacted against it and tracks the periodic debits and credits by chart of account code, fund and account.
- The fiscal year and fiscal period fields have been captured in the reporting environment and derived fields will be created to calculate fiscal period beginning and ending balances, fiscal period to date net activity, and fiscal year to date figures.
- Fields providing two years of prior year comparatives will be available in the reporting environment.
- In order to provide two years of comparative data and other derived fields, the reporting environment will transform the General Ledger table and generate zero dollar records for periods that did not have any activity transacted against them.
- Descriptive information for the fund/account elements and required dimensions will represent the most recent information available. For more information please refer to Data Dimensionality in the General Assumptions portion of this document.
- Fund and account Attributes will be available in the reporting environment to be leveraged in association with the General Ledger data.
- The underlying transaction level detail for the General Ledger will be available.
- In addition to providing a reporting structure that captures transaction level detail for the General Ledger, a structure that captures all transaction level detail, regardless of ledger affiliation, will also be available.

Issues

- The MR2 team does not recommend providing access to the fund and account attributes in conjunction with the General Ledger transaction level detail that is contained in FGBTRNH and FGBTRND. We are concerned about potential performance degradation that could be caused by users performing extensive queries on the transaction level detail with related attributes. From a performance standpoint, it is not practical to join attributes to the related transaction level detail on the fly, as the data is queried, and receive adequate response time. Conversely from a design standpoint, we do not recommend incorporating the attribute assignments in the transaction level detail record as such a table would become unmanageable, containing hundreds of columns (assuming 100 attributes per each FOAPAL element).
- We do understand the need for users to see the underlying transaction level detail that support a summary level total, even if that summary level total incorporates attributes in the selection or grouping process. It is our intention to provide drill access from the summary level General Ledger records to the General Ledger transaction level detail. This drilling should include the ability to drill from the summarized General Ledger, which will provide the capability to leverage attributes, to the underlying transaction level detail records that comprised the summary level activity.

Outstanding Questions

- How will cash receipts be used? Are there specific reporting needs related to cash receipts in addition to the affects on the General Ledger?

General Ledger Tables

General Ledger Activity - FGBGENL – General Ledger Table

This table contains the activity for assets, liabilities, control accounts, and fund balances by fiscal year, fiscal period, fund and account. Notable fields include COAS Code, Fiscal Year, Fiscal Period, Fund, Account, Period Debits and Credits. As indicated above, the General Ledger table will be transformed in the reporting environment and zero dollar records will be created for periods that did not have transacted activity.

Supporting Dimension Information

FTVFUND – Fund Validation Table – to get related fund information.

FTVACCT – Account Validation Table – to provide related account information.

Fund/Account Attributes – to provide attributes as assigned to the funds and accounts contained in the General Ledger

FTVFTYP – Fund Type Validation Table – to provide information on the external fund types (levels 1 and 2) related to funds contained in the General Ledger.

FTVATYP – Account Type Validation Table – to provide information on the external account types (levels 1 and 2) related to accounts contained in the General Ledger.

Fund and Account Attributes - to provide access to the reporting attributes as assigned to data contained in the General Ledger.

General Ledger Transaction Level Detail – FGBTRNH & FGBTRND – Transaction Level History and Detail Tables

These tables have been utilized to provide the transaction level detail for General Ledger activity. Notable fields include the Document Code, Activity Date, Date of Entry, applicable FOAPAL elements, Transaction Amount, Transaction Description, User of Entry, etc. It is our recommendation that the transaction level detail should not be joined to the General Ledger summary data; however, it is our intent to provide drill capabilities from the summary level information to the transaction level detail.

Supporting Dimension Information

FTVDTYP – Document Type Validation Table – to get the document type description.

FTVFUND – Fund Validation Table – to get related fund information.

FTVACCT – Account Validation Table – to provide related account information.

FTVFTYP – Fund Type Validation Table – to provide selected information on the fund types, level 1 and 2, related to funds contained in the General Ledger.

FTVATYP – Account Type Validation Table – to provide selected information on the external account types, level 1 and 2, related to accounts contained in the General Ledger.

FTVVEND – Vendor Validation Table – to provide vendor code, vendor PIDM, vendor code and vendor name (from SPRIDEN).

FTVRUCL – Rule Class Validation Table – to provide description for rule class code.

Tables Not Anticipating Need for in Reporting Environment Related to General Ledger Transaction Level Detail

Fund/Account Attributes – as stated above in the Issues section.

FGBJVCD – Journal Voucher Detail – Journal vouchers documents are only stored in this table until they are posted to the ledger. Since posted information is captured in the ledger, we do not think that this table would provide reporting value to end users.

FGBJVCH – Journal Voucher Header – see comments for FGBJVCD – Journal Voucher Detail Table.

FGBAUTO – Automatic Journal Vouchers – not sure if table would provide reporting value.

FOBTEXT – Text Table – Text to support journal vouchers. Since voucher header and detail tables are not being recommended for inclusion, then this table is also being excluded.

FGBCSHD – Direct Cash Receipt Details – not sure how cash receipts will be utilized or if this table is needed.

FGBCSHH – Direct Cash Receipt Header – not sure how cash receipts will be utilized or if this table is needed.

Budget, Revenues, Expenditures and Other Changes

General Assumptions

- The Operating Ledger provides fiscal year to date, summary level budget, encumbrance, expenditure, revenue and transfer activity by chart of account code, fiscal year, fiscal period and FOAPAL.
- The Banner Operating Ledger table provides separate fields for each fiscal period and contains columns for fiscal months 00 through 14. For each fiscal month, fields exist to track the fiscal year to date operating activity such as adopted budget, budget adjustments, encumbrances, etc. The Operating Ledger contains eight columns for each fiscal period to track various activity.
- The reporting environment will provide fields that capture adopted budgets, budget adjustments, activity (revenue, expenditures or transfers), budget reservations, and encumbrance information. Based on conversations with the SCT Finance consultants, we are not recommending the inclusion of fields that capture the accumulated budget, temporary budget or grant activities.
- The Operating Ledger will be transformed to provide period to date, quarter to date and fiscal year to date activity as well as two years of prior year comparatives. Additionally, other derived fields such as total commitments (reservations + encumbrances), percent of budget available and percent of budget remaining will be included in the reporting environment.
- The Operating Ledger transformation will require that the table is “flipped” and that an individual record for each chart of account code, fiscal year, fiscal period, FOAPAL is established.
- The FOAPAL elements, including applicable hierarchies, will be available to provide supporting dimension information. Aggregate summaries and drilling capabilities will be available through the FOAPAL hierarchies.
- Descriptive information for the FOAPAL elements and other supporting dimensions will reflect the most recent information available. Please refer to General Assumptions section of this document for additional information.
- FOAPAL Attributes will be available for reporting in conjunction with the Operating Ledger.
- Supporting transaction level detail for the Operating Ledger will be available in the reporting environment.
- In addition to providing a reporting structure that captures transaction level detail for the Operating Ledger, a structure that captures all transaction level detail, regardless of ledger affiliation, will also be available.

Issues

- The MR2 team does not recommend providing access to the FOAPAL attributes in conjunction with the Operating Ledger transaction level detail that is contained in FGBTRNH and FGBTRND. We are concerned about potential performance degradation that could be caused by users performing extensive queries on the transaction level detail with related attributes. From a performance standpoint, it is not practical to join attributes to the related transaction level detail on the fly, as the data is queried, and receive adequate response time. Conversely from a design standpoint, we do not recommend incorporating the attribute assignments in the transaction level detail record as such a table would become unmanageable, containing up to 600 columns (assuming 100 attributes for each FOAPAL element).
- We do understand the need for users to see the underlying transaction level detail that supports a summary level total, even if that summary level total incorporates attributes in the selection or grouping process. It is our intention to provide drill access from the summary level Operating Ledger records to the Operating Ledger transaction level detail. This drilling should include the ability to drill from the summarized Operating Ledger, which will provide the capability to leverage attributes, to the underlying transaction level detail records that comprised the summary level activity.

Outstanding Questions

- Need to review final decision on transfers and proposed Banner implementation. Current understanding is that transfers will be limited to specific external account types such as external account type level 1 = 80 and external account type level 2 = 81.

Operating Account Ledger Tables

Operating Account Ledger Activity - FGBOPAL – Operating Account Ledger Table

This table contains the activity for operating accounts, by chart of account, fiscal year, FOAPAL. Fiscal year to date activity is captured by fiscal period for adopted budgets, modified budgets, activity (expenditures, revenues and transfers), encumbrances, and budget reservations. As stated above, the Operating Ledger table structure, as provided by Banner, will be transformed in the reporting environment into a structure more suitable for end user reporting.

Supporting Dimension Information

FTVFUND – Fund Validation Table – to provide related fund information.

FTVORGN – Org Validation Table – to provide organization dimensions such as org name, etc., as well as organization hierarchy levels.

FTVACCT – Account Validation Table – to provide account dimensions such as account name, account type, etc., as well as account hierarchy levels.

FTVPROG – Program Validation Table – to provide program dimensions such as program name, etc., as well as program hierarchy levels.

FTVACTV – Activity Validation Table – to provide activity dimensions such as activity name, etc.

FTVLOCN – Location Validation Table – to provide location dimensions such as name, etc., as well as hierarchy levels.

FOAPAL Attributes – to provide access to the reporting attributes as assigned to data contained in the Operating Ledger.

FTVFTYP – Fund Type Validation Table – to provide information on the external fund types, level 1 and 2, related to funds contained in the General Ledger.

FTVATYP – Account Type Validation Table – to provide information on the external account types, level 1 and 2, related to accounts contained in the General Ledger.

Dimension Tables Not Anticipating Need for in Reporting Environment

FGBBAVL – Budget Availability Ledger – this table is used in conjunction with FGRBAKO to perform Banner's on-line budget availability checking that takes into account both posted and non-posted documents. The MR2 team did not think that this table would provide reporting value since real-time budget availability is already available in the Banner application.

FGRBAKO – Bavl Posting Backout Table – This table contains documents that have not been posted but have been taken into account when computing budget availability. This table works in conjunction with FGBBAVL to provide on-line real time budget availability checking in Banner.

Operating Ledger Transaction Level Detail – FGBTRNH & FGBTRND – Transaction Level History and Detail Tables

These tables have been utilized to provide the transaction level detail for Operating Ledger activity. Notable fields include the Document Code, Activity Date, Date of Entry, Rule Code, Field Code Indicator, FOAPAL elements, Transaction Amount, Transaction Description, User of Entry, etc. It is our recommendation that the Operating Ledger transaction level detail should not be joined to the summary Operating Ledger; however, it is our intent to provide drill capabilities from the summary level information to the transaction level detail.

The Operating Ledger transaction level detail will also be utilized to provide detail on budget transactions. Unlike s1032, which contains separate structures for budget transactions, Banner stores detail on budget transactions in the same ledger as expenditures and other activity. Specific FBTRNH and FGBTRND fields including the Field Code Indicator and Rule Code can be used to select budget only transactions.

Supporting Dimension Information for Operating Ledger Transaction Level Detail

FTVDTYP – Document Type Validation Table – to get the document type description.

FTVFUND – Fund Validation Table – to get related fund information.

FTVACCT – Account Validation Table – to provide related account information.

FTVFTYP – Fund Type Validation Table – to provide selected information on the external fund types, level 1 and 2, related to funds contained in the Operating Ledger.

FTVACTP – Account Type Validation Table – to provide selected information on the external account types, level 1 and 2, related to accounts contained in the Operating Ledger.

FTVVEND – Vendor Validation Table – to provide vendor code, vendor PIDM, and vendor name (from SPRIDEN).

FTVRUCL – Rule Class Validation Table – to provide description for rule class code.

Tables Not Anticipating Need for in Reporting Environment Related to Operating Ledger Transaction Level Detail

FOAPAL Attributes – as stated above in the Issues section

Encumbrance Ledger

General Assumptions

- The Encumbrance Ledger is actually comprised of three tables, although FGBENCP is referred to as the ledger since it contains the original, adjustments and liquidation amounts for each encumbrance document summarized by fiscal year, fiscal period, and accounting sequence. The period amounts are not cumulative within a fiscal year.
- The Encumbrance Ledger will be the primary source of data used by MR2 when creating Open Purchase Order Reports, not the information stored in the underlying Requisition and Purchase Order Tables. This decision is based primarily on the fact that: 1. The Encumbrance Ledger Header Table contains a Status Indicator field that denotes whether the encumbrance is open or closed, while the underlying tables do not contain open/close indicators – it would take a combination of four different indicators in the base tables for a user to determine if a PO or Requisition was indeed Open; and 2. It is possible to have a situation where the detail transactions and the ledgers will store information that is inconsistent and conflicts with the data stored in the underlying Requisition and Purchase Order tables – the information stored in the ledgers is the basis of Banner and the MR2 team needs to leverage this data as it is more reliable than the information in the Requisition and PO tables (supporting documentation is available).
- Neither the Original Encumbrance Amount field nor the Summary Encumbrance Adjustments field will provide any reporting utility as stand-alone measures in the reporting environment. Used in conjunction they can provide the current amount of an encumbrance. The MR2 team intends to provide a Revised Enc Amount measure in the reporting environment that will sum the Original Amount field and the Summary Adjusted Amount field. MR2 recommends that this measure be used as the basis for Open Purchase Order Reports, not the Original Amount field (see Encumbrance Period Detail Table section below).
- The Encumbrance Ledger stores information from the most recent Purchase Order; however, there is no indicator in the ledger that denotes that a change order has been processed. When a change order is processed, the fields in the Encumbrance Ledger are updated to reflect the changes; however, there is no way to detect that this situation occurred.
- Requisition and Purchase Order information is not captured in the Encumbrance Ledger until they are completed, approved and posted.
- Users will rely on the base Requisition and Purchase Order Tables to report on documents that have not yet been completed or approved, to report on change orders processed against a PO or to query additional document information.
- USNH plans on using Document Level Accounting instead of Commodity Level Accounting when processing documents.
- Drill/aggregate functionality is not required for Encumbrance Ledger reporting since committed information at this level can be found in the Operating Ledger.
- Not using effective dating for any supporting dimension information, the most recent code or code description will be used, not the code or description that was in effect at the time the document was processed.
- The Encumbrance Ledger will not be joined to underlying Requisition or Purchase Order Tables.
- The Encumbrance Ledger detail transactions will not be needed in the reporting environment.

Issues

- MR2 plans on leveraging the Status Indicator field in the Encumbrance Ledger Header Table when creating reports on Open documents. The information contained in the reports may conflict with what is displayed by some Banner forms. A completed but unapproved PO will display as open on the Open Purchase Orders by Vendor Form (FPIOPOV) and a completed but unapproved requisition will display on the Open Requisitions by FOAPAL Form (FPIORQF); however, these documents will not be included on any reports based on the Encumbrance Ledger because unapproved documents have not yet generated any detail transactions.

Outstanding Questions

- Non-purchasing encumbrances (General, Labor, Memo on FGAENCB)? Currently, MR2 has only looked at the Encumbrance Ledger from a buy/pay perspective. We are not sure at this point how USNH plans to leverage the other types of encumbrances and if any reporting implications exist
- IDC Encumbrance and the reporting implications?
- Since requisitions will be more widely used once Banner is implemented, do users anticipate a need to have Open Requisition Reports as well as Open PO Reports?
- What vendor information is needed for reporting on these tables, if any? Vendor information will only be available if the document has been assigned a vendor. Currently, only Vendor Code and Vendor Name are available. Do users anticipate needing Vendor Type dimensionality with these tables?
- Do users anticipate needing FOAPAL Attributes in conjunction with reporting on the Encumbrance Ledger? MR2 has recommended that Attributes not be available for reporting on the Requisition and Purchase Order Tables. See Requisition and Purchase Order Sections for more information on this recommendation.

Encumbrance Ledger Tables

FGBENCH – Encumbrance Ledger Header Table

This table contains one row of data for each Encumbrance Number. The data stored in this table pertain to the document as a whole. Notable fields include: Encumbrance Number, User ID, Transaction Date, Type, Status Indicator, and Vendor PIDM.

Note: The Status_Ind field denotes whether the document is open (O) or closed (C). The Type field can be used to determine the type of encumbrance: R = Requisition, P = Purchase Order (other values are E = Encumbrance, M= Memo, L = Labor). Not using Activity Date for reporting, as it is not updated once the encumbrance is established in the table (for example, when a change order or invoice is processed against a PO). The Document Description field contains varying information depending the document type: for Requisitions, this field will display the Requestor's Name; for Purchase Orders, this field will display the Vendor Name; and in the case of Encumbrances, this field will contain the Encumbrance Title as entered on FGAENCB. Requisitions that were entered without a vendor will not have a vendor PIDM. Transaction Date is the date the transaction was processed, ESTAB Date is the date the transaction was established in the Encumbrance Header Table.

Outstanding Tables – need functional input – are these tables needed in the reporting environment

FTVVEND – Vendor Validation Table – with additional information from SPRIDEN via PIDM to get Vendor Code and Vendor Name where applicable.

FTVVTYP – Vendor Type Table

FTVVENT – Vendor/Vendor Type Table

FGBENCD – Encumbrance Distribution Table

This table contains one row of data for each Encumbrance Number, Item, Sequence Number combination. There is a one to many relationship between the Encumbrance Header Table and this table via Encumbrance Number. Notable fields include: Encumbrance Number, Sequence Number (of FOAPAL), User ID, Fiscal Year, Chart of Accounts, Fund, Organization, Account, Program, Activity, Location.

Notes: Since we are using Document Level Accounting, Item will be equal to zero. Not using Activity Date for reporting purposes – date is not updated to reflect any changes made to Purchase Orders. Posting Period is the period in which the transaction was originally established in the ledger; it is not updated (for example, if a PO was established in Period 06 and an invoice was processed against the PO in Period 07, the Posting Period will remain 06, even though the encumbrance has been liquidated in a subsequent period). Status Indicator – what is this? Approved Indicator is not

populated. MR2 will leverage the Status field in the Encumbrance Ledger Header Table, not the Status field contained in this table.

Supporting Dimension Information

FOAPAL element validation tables – to provide descriptive information only.

Time dimension information – to get period end date, etc.

Outstanding Tables – need functional input – are these tables needed in the reporting environment

FOAPAL Attributes – to provide access to the reporting attributes as assigned to data contained in the Encumbrance Ledger.

FGBENCP - Encumbrance Period Detail Table

This table contains one row of data for each Encumbrance Number, Item, Sequence Number, Fiscal Year, and Fiscal Period combination. The Fiscal Period totals are not cumulative within a fiscal year, users will need to aggregate all periods to get fiscal year to date totals. There is a one to many relationship between the Encumbrance Distribution Table and this table via Encumbrance Number, Item and Sequence Number. It is possible to leverage the Item to Item join between this table and the Encumbrance Distribution Table because when using Document Level Accounting the Item value in FGBENCD will equal zero and the Item value in FGBENCP will also equal zero. This join will also work if Commodity Level Accounting is used. Fields include: Encumbrance Number, Item, Sequence Number (of FOAPAL), Fiscal Year, Fiscal Period, Original Encumbrance Amount, Summary Encumbrance Adjustments, Summary Encumbrance Liquidations.

Notes: For Requisitions, the Original Encumbrance Amount field is the amount reserved by that line of the requisition; however, for Purchase Orders – the Original Encumbrance Amount field only includes the gross amount that was assigned to a particular FOAPAL – it does not include discount, tax, additional charge amounts or any change orders or cancellations that have been processed. The Summary Encumbrance Adjustments field stores only the sum of all discount, tax, additional charge and any changes made to the document for a Purchase Order. The Summary Encumbrance Liquidations field stores the amount of the document line that has been liquidated; in the case of a Requisition, it is the full amount of the Requisition (even if the amount was changed on the PO, provided you are using Document Level Accounting); in the case of POs, it is the amount that has been invoiced. This data is stored as a negative amount in the database and will be displayed as such on a report.

It is MR2's intention to derive and include two additional measures in the reporting environment to aid users in the creation of reports and to minimize the need for full-client functionality: Revised Enc Amount and Enc Balance. The Revised Enc Amount measure will be the sum of the Original Encumbrance Amount and the Adjustments Amount. MR2 plans to derive this measure since the Original Encumbrance Amount is not meaningful for reporting on Purchase Orders since the Original Amount does not include discount, tax or additional charge amounts entered on the PO. Enc Balance will be the sum of the Original Encumbrance Amount, the Adjustments Amount and the Liquidation Amount; this measure will display the balance remaining in a particular line of an encumbrance.

Supporting Dimension Information

None

Sponsored Programs Research Accounting and Billing

General Assumptions

- Grant proposal information will not be included in the reporting environment, as this information will be stored in InfoEd.
- Grants will be linked to their associated fund via FTVFUND. Fund attributes will be available for grant reporting via the Grant/Fund relationship.
- The Grant Ledger will provide inception to date information. The Operating Ledger will be leveraged to provide fiscal period to date, fiscal quarter to date, and fiscal year to date grant activity.
- In addition to providing reporting capabilities for sponsored programs, the grant header and grant ledger tables will capture all multi year accounting needs such as plant funds, etc.
- The FOAPAL elements, including applicable hierarchies, will be available to provide supporting dimension information. Aggregate summaries and drilling capabilities will be available through the FOAPAL hierarchies.
- Attributes, for all FOAPAL elements, will be available for Grant Ledger reporting.
- Fiscal period, quarter, and year to-date information will be available through the Operating Ledger.
- Transaction level detail for grants will be available.
- Reporting dimensions, such as descriptions of funds, account codes, etc. will reflect the most recent information.
- Billing information will be available for reporting purposes; however, it is not the intent of MR2 to reproduce Banner's billing process or produce bills. There was mention of MR2 providing an extract solution for the continuation page of the SF272. In order for this need to be met through the reporting environment (if still required), additional discussions with the Sponsored Programs Process Group will be necessary for MR2 to better understand the requirements.

Issues

- Have not yet developed solution to obtain the data required for "profile" type reporting that combines Grant Ledger information with open encumbrance and invoice detail. Payroll budget and expenditures are also required for this type of reporting.
- Based on conversations with Elsa Everling, SCT Grants Consultant, the MR2 team recommends using the Operating Ledger to provide fiscal period to date, fiscal quarter to date and fiscal year to date activity for grants. Data will be selected from the Operating Ledger based on the FOAPAL elements that comprise a selected grant. We are concerned though that situations may exist where activity has been attributed to the Operating Ledger but has not been captured in the Grant Ledger. There are two known examples of this type of occurrence in the TRNG instance.
 - Both situations were caused by an inconsistency in the effective dating of a fund's assignment to a grant and the transaction date of applicable transactions. Transactions were processed to the FSNOW fund on the same day the FSNOW fund was assigned to a grant. Because of Banner's effective date logic, the transactions were not captured in the Grant Ledger but were included in the Operating Ledger. It appears that this situation is a result of trial and error in the testing environment and should not occur in a production environment. It is certainly possible however to recreate this result, but it is our assumption that USNH would not want this situation to exist and would implement procedures to prevent this condition from occurring.
 - The MR2 team does not know if Banner's Grant Rebuild process would affect the situation described above and "fix" the problem by assigning the two transactions to the grant and updating the Grant Ledger.
- The MR2 team does not recommend providing access to the FOAPAL attributes in conjunction with the Grant Ledger transaction level detail that is contained in FGBTRNH and FGBTRND. We are concerned about potential performance degradation that could be caused by users performing extensive queries on the transaction level detail with related attributes. From a performance standpoint, it is not practical to join attributes to the related transaction level detail on the fly, as the data is queried, and receive adequate response time. Conversely from a

design standpoint, we do not recommend incorporating the attribute assignments in the transaction level detail record as such a table would become unmanageable containing up to 600 columns (assuming 100 attributes for each FOAPAL element).

- We do understand the need for users to see the underlying transaction level detail that supports a summary level total, even if that summary level total incorporates attributes in the selection or grouping process. It is our intention to provide drill access from the summary level Operating Ledger records to the transaction level detail. This drilling should include the ability to drill from the summarized Grant Ledger, which will provide the capability to leverage attributes, to the underlying transaction level detail records that comprised the summary level activity.

Outstanding Questions

- How will USNH implement Banner's Research Accounting module to capture other multi year accounting needs such as plant funds, etc.?

Research Accounting and Billing Tables

General Grant Information - FRBGRNT – Grant Header Table

This table contains one record for each grant. Notable fields include Grant Code, Title, Status Code, Agency PIDM, Primary Investigator PIDM, Project Start and End Date, Grant Type and Category, Indirect Cost and Cost Share Codes, etc.

Supporting Dimension Information

FTVFUND – Fund Validation Table – to get related fund information.

FRVFUND – Research Accounting Fund Repeating Table – to get fund information specific to the grant such as indirect cost and cost share codes. Table may contain multiple records per grant as effective dating is utilized. Reporting environment will present most recent record.

Fund Attributes – to provide access to fund related attributes via FTVFUND.

FTVAGCY – Agency Validation Table – to get related agency information such as contact name, phone, etc. PIDM stored in this table is used to gather additional information from SPRIDEN and SPRADDR.

FRRGRPI – Grant Personnel Repeating Table – to get grant personnel information such as name, address, etc. PIDM in this table is used to gather related personnel information from SPRIDEN. Multiple contacts can exist for each grant.

FRVGRST – Grant Status History Table – to gather detail on status changes to the grant; contains status, status date, etc. Table may contain multiple records per grant depending on number of status changes. Since the nature of this table is to show history, all related records will be available in the reporting environment enabling a view of all status changes per grant to be seen.

FRBGBIL – Research Accounting Grant Billing Table – provides billing information about grant such as billing exception code, billing minimum and maximum amounts, etc. Table contains one record per grant.

FRVPMSC – Payment Management System Code Validation – provides textual description of PMS code assigned in FRBGBIL table.

FRRGUSN – Grant User Defined Codes – provides user defined fields assigned to grants. Will also use FRVSDAT to pull textual descriptions for user defined field codes.

FRBEVNG – Grant Events Code Base Table – provides summary information on the events assigned to grants such as the from and to date, number of reminder days, etc.

FRREVNG – Sponsored Research Grant Events Status Repeating Table – provides the actual due dates for events assigned to grants including the responsible user, status, status date, etc.

FRVEVNT – Proposal Events Code Validation Repeating Table – provides a textual description for the event code, type of event, etc.

FRRGLOC – Grant Location Repeating Table – provides information on the locations assigned to grants. Multiple records per grant may exist.

FRVBASI – Base Validation Table – provides descriptions for basis code assigned to grant.

FRVCFDA – Catalog of Federal Domestic Assistance Codes Table – provides title and other descriptions for CFDA code assigned to grant.

FRVCSTA – Cost Share Credit Account Code Validation Table – provides description for cost share account code assigned to grant.

FRVSTD – Cost Share Distribution Code Validation Table – provides description for cost share distribution code assigned to grant.

FRVCSTR – Cost Share Rate Code Validation Table – provides description for cost share rate code assigned to grant.

FRVINDA – Indirect Cost Code Charge Account Code Validation Table - provides description for indirect cost account code assigned to grant.

FRVINDD – Indirect Cost Code Distribution Code Table – provides description for indirect cost distribution code assigned to grant.

FRVINDR – Indirect Cost Code Validation Table – provides description for indirect cost rate code assigned to grant.

FRVBECL – Billing Exclusion Validation Table – provide descriptions for billing exclusion code contained in FRBGBIL.

Dimension Tables Not Anticipating Need For in Reporting Environment

FRBBUDG – Grant Budget Header – effects of adopted/modified budgets can be seen in the Grant Ledger or transaction level detail. This information is also stored in InfoEd.

FRRBDGP – Grant Budget Proposal Line Detail - effects of adopted/modified budgets can be seen in the Grant Ledger or transaction level detail. This information is also stored in InfoEd.

FRRBUDG – Grant Budget Line Items - effects of adopted/modified budgets can be seen in the Grant Ledger or transaction level detail. This information is also stored in InfoEd.

FRBBASI – Base Header Table – shows the effective date and term date for the basis codes. Does not contain any textual descriptions or other dimensions.

FRRBASI – Base Repeating Table – shows the “apply to information” for the basis code such as account type code, account range, exclusion indicator, etc. Not certain that this table would add value to reports at this time since the code and description are available through the FRVBASI table.

FRBINDD – Indirect Cost Distribution Code Header Table – shows the effective date and term date for the indirect cost codes. Does not contain any textual descriptions or other dimensions.

FRRINDD - Indirect Cost Distribution Code Repeating Table – shows the distribution information for an indirect cost code. Not sure if users would want this info as they already have code and description from FRVINDD.

FRBINDA - Indirect Cost Charge Account Header Table – shows the effective date and term date for the indirect cost charge accounts. Does not contain any textual descriptions or other dimensions.

FRRINDA - Indirect Cost Charge Account Repeating Table – shows indirect cost code charge account, percent of charge, etc. Not sure if this information will be helpful in reporting environment.

FRRCSTR – Cost Share Rate Repeating Table – shows the cost share rate, memo rate, maximum amounts, effective dates, etc. Not sure if this information is necessary in reporting environment since users already have cost share rate and description.

FRBCSTA – Cost Share Credit Account Header – shows the effective date and term date for the cost share credit account. Does not contain any textual descriptions or other dimensions.

FRRCSTA – Cost Share Credit Account Repeating – shows the cost share credit account and the percentage of cost share amount. Not sure if this information is necessary in reporting environment since users already have cost share rate and description from FRVCSTA.

FRBCSTD – Cost Share Distribution Header Table – shows the effective date and term date for the cost share codes. Does not contain any textual descriptions or other dimensions.

FRRCSTD – Cost Share Distribution Repeating Table – provides cost share distribution code FOAPAL elements as well as cost share percentage.

FRVLCAC – Grants Labor Clearing Account Cross Reference Table – Not sure of this table’s use. No data is currently available in table.

FRVLCAT – Grants Labor Clearing Account Type Cross Reference Table – Not sure of this table’s use. No data is currently available in table.

FHRINDR – Indirect Cost History Rate – provides history on indirect cost rates.

FRRINDR – Indirect Cost Rate Repeating Table – provides history on indirect cost rates.

FRREVGG – Grant Grouped Events – stores group of events assigned to grant tables. Table does not seem particularly useful since actual event assignments are captured in the FRBEVNG table.

FRVEGRP – Events Group Validation Table – provides the textual descriptions for the event groups, not the actual events, that are assigned to grants.

FRREGRP – Events Group Repeating Table – provides a listing of the events that are assigned to a particular event grouping.

FRRPRXG – Grant Events Proxy User ID Repeating – shows proxy user per event type assigned to grant.

FRRBECL – Billing Exclusion Code Repeating Table – shows the account types, account code ranges, etc. to which an exclusion code applies.

FRRMEML – Grant Memo Ledger – shows amount attributable to indirect cost rates based on memo rate by grant period.

FRRGCSA – Cost Share Expense by Grant and Account – shows expenses that are eligible for cost sharing by grant, cost share basis and account code. Per Elsa, this is a worktable for processing purposes and will not provide additional value in the reporting environment.

FRRGCST – Cost Share Total Amount Per Grant – provides a running tally of cost share expenses incurred because of grant expenditures. This table may be important as it breaks down cost share amount by cost share rate code. This info can also be found by utilizing the designated cost share fund per grant, and then selecting the related org and cost share account code; however this may be the only place where the distinction by cost share rate code can be found. Per Elsa, this is a worktable for processing purposes and will not provide additional value in the reporting environment.

FRRGICA – Grant Expenses Towards Indirect Cost – shows expenses per grant, indirect cost basis code and account code that are eligible for indirect cost calculations. Per Elsa, this is a worktable for processing purposes and will not provide additional value in the reporting environment.

FRRGICT – Grant Indirect Cost Total Amount – shows amount of actual indirect cost charges attributable to grant by grant, indirect cost rate and account code. For the most part this info can also be found for the grant, e.g. on FRIGTD form, etc., by using account code designated for IDC charges; however, the breakdown by IDC rate seems to only be available within this table. Per Elsa, this is a worktable for processing purposes and will not provide additional value in the reporting environment.

FRRGAMT – Grant Invoice Amount – Per Elsa, this is a temp table that is used for processing and would not add any additional value to reporting environment.

Grant Activity - FRRGRNL – Grant Ledger Table

This table contains inception to date grant activity by grant year, grant and FOAPAL. The grant year is divided into 14 periods and each period contains cumulative amounts for adopted budget, budget adjustments, reservations, encumbrances and activity (expenditures or revenue). The Grant Ledger is joined to the grant header table via the grant code and chart of accounts code. These linkages to the grant header table provide reporting access to the grant dimensions described above in the FRBGRNT section.

In the reporting environment, the Grant Ledger has been transformed to provide inception to date reporting for grants. Fiscal year to date and period to date amounts will be available through the Operating Ledger.

Supporting Dimension Information

FTVFUND – Fund Validation Table – to provide fund dimensions such as external fund type, fund name, etc., and fund hierarchy information (if applicable).

FTVORGN – Org Validation Table – to provide organization dimensions such as org name, etc., as well as organization hierarchy levels.

FTVACCT – Account Validation Table – to provide account dimensions such as account name, account type, etc., as well as account hierarchy levels.

FTVPROG – Program Validation Table – to provide program dimensions such as program name, etc., as well as program hierarchy levels.

FTVACTV – Activity Validation Table – to provide activity dimensions such as activity name, etc.

FTVLOCN – Location Validation Table – to provide location dimensions such as name, etc., as well as hierarchy levels.

All FOAPAL Attributes – Attributes Reporting Table – to provide attribute types and values for each FOAPAL element. FRBGRNT and Associated Dimension tables – to provide access to grant header information, grant user defined fields, agency information, etc. via linkages through the FRBGRNT table.

Dimension Tables Not Anticipating Need For in Reporting Environment in Relationship to FRRGRNL

All dimension tables related to the Grant Ledger have been identified and are being recommended for inclusion in reporting environment.

Grant Transaction Level Detail – FGBTRNH & FGBTRND – Transaction Level History and Detail Tables

These tables contain the transaction level detail for grant related operating activity. Notable fields include the document code, activity date, user of entry, FOAPAL elements, transaction amount, transaction description, etc.

Supporting Dimension Information

FTVFUND – Fund Validation Table – to provide fund dimensions such as fund type, fund name, etc., and fund hierarchy information (if applicable).

FTVORGN – Org Validation Table – to provide organization dimensions such as org name, etc., as well as organization hierarchy levels.

FTVACCT – Account Validation Table – to provide account dimensions such as account name, account type, etc., as well as account hierarchy levels.

FTVPROG – Program Validation Table – to provide program dimensions such as program name, etc., as well as program hierarchy levels.

FTVACTV – Activity Validation Table – to provide activity dimensions such as activity name, etc.

FTVLOCN – Location Validation Table – to provide location dimensions such as name, etc., as well as hierarchy levels.

FRBGRNT and Associated Dimension tables – to provide access to grant header information, grant user defined fields, agency information, via linkages through the FRBGRNT table.

Dimension Tables Not Anticipating Need For in Reporting Environment as Related to FGBTRND & FGBTRNH

FOAPAL Attributes – please see Issues section above.

Grant Billing Information – FRRBDET & TRRACCD – the Grant Billing Transaction Detail and the Grant Billing Accounting Detail Tables

These tables contain billing and payment information for grant expenditures. FRRBDET contains grant expenditure information by grant and document code. Notable fields include Grant, Document Number, FOAPAL, Transaction Amount, Billing Status of billed, unbilled, hold, retainage withholding, etc., Invoice Number, Transaction Description, etc. The TRRACCD table contains information about Billed Charges and Payments. Notable fields include the Amount, Balance Amount, Bill Date, Bill Invoice Sequence number, Paid Invoice Sequence Number, etc.

Supporting Dimension Information

FTVFUND – Fund Validation Table – to provide fund dimensions such as fund type, fund name, etc., and fund hierarchy information (if applicable).

FTVORGN – Org Validation Table – to provide organization dimensions such as org name, etc., as well as organization hierarchy levels.

FTVACCT – Account Validation Table – to provide account dimensions such as account name, account type, etc., as well as account hierarchy levels.

FTVPROG – Program Validation Table – to provide program dimensions such as program name, etc., as well as program hierarchy levels.

FTVACTV – Activity Validation Table – to provide activity dimensions such as activity name, etc.

FTVLOCN – Location Validation Table – to provide location dimensions such as name, etc., as well as hierarchy levels.

FRBGRNT and Associated Dimension tables – to provide access to grant header information, grant user defined fields, agency information, via linkages through the FRBGRNT table.

TBBDETC – Detail Charge/Payment Code Definitions – provides textual descriptions for the detail code field found in the TRRACCD table.

Dimension Tables Not Anticipating Need For in Reporting Environment as Related to FRRBDET & TRRACCD

FOAPAL Attributes – See above Issues section.

FRRBDTH – Grant Billing Transaction Detail History – not sure if USNH is going to implement the tracking of billing history.

TRRAPPL – Grant Billing Application of Payments – provides information on actual recording of payments received. Do not think this table will be necessary as payment information updates the TRRACCD table as well to show remaining balance and payment info.

FRR134B – Billing Form 1304 Table – provides basic information on grants against which a 1304 billing format has been run. Notable fields include grant code, period from and to dates, bill amount, etc.

FRR269R – Report Form 269 Table - provides basic information on grants against which a 269 billing format has been run. Notable fields include grant code, period from and to date, billing amounts, date submitted, etc.

FRR270B – Billing Form 270 Table – provides basic information on grants against which a 270 report format has been run. Notable fields include grant codes, period from and to dates, and related billing amounts.

FRR272B – Billing Form 272 Table - provides basic information on grants against which a 272 report format has been run. Notable fields include grant codes, period from and to dates, etc.

FRRGENB – Generic Bill Table – provides information on grants against which a generic bill has been run. Notable fields include grant code, period from and to dates, invoice sequence number, billing amounts, etc.

FRR272R – Report Form 272 – provides basic information about grant billing reporting. Notable fields are grant code, period from and to date, check payment amount, gross disbursements, etc.

FRRGENR – Generic Report Table - provides information on grants for which generic billing reports have been run. Notable fields include grant code, billing code, period from and to dates, and billing amounts.

TRRCOLL – Grant Billing Collections – provides information on grant collection information including grant code, collection status, invoice number, amount, etc.

FRRBEXC – Billing Exceptions – provides information on billing exceptions as created during the billing process. Table does not update itself if billing status changes. Based on this not sure if table will provide much reporting value to users and suitable on-line reports and processes are available.

Requisition Documents

General Assumptions

- The Requisition Tables will be included in the reporting environment only to provide users with a utility to view supplemental information from a requisition document that is not contained in the ledgers. These tables will be used to research documents that have been cancelled, that are incomplete or documents that have been completed but are not yet approved. The MR2 team strongly recommends that these tables not be used for aggregation of dollars by FOAPAL or other queries of this type. We recommend that Open Requisition Reports be based on data in the Encumbrance Ledger (see Encumbrance Ledger section for additional information).
- Users will have the capability to report/do research on closed requisitions since the data stored in the requisition tables does not get deleted once a requisition has been closed.
- USNH is not planning on using Stores Requisitions.
- It is our understanding the USNH is not planning on using Banner's Bidding Process; consequently, no Bid tables will be included in the reporting environment
- Document Level Accounting will be used instead of Commodity Level Accounting; all of the joins between the following tables will be based on this assumption. When using Document Level Accounting no relationship exists between the Requisition Commodity and Requisition Accounting Tables. The joins will be from the Requisition Header Table to the Requisition Commodity Table and from the Requisition Header Table to the Requisition Accounting Table. This means that it will be necessary to generate two separate queries both using the same criteria from the Requisition Header Table if data is needed from all three tables.
- Not using effective dating for any supporting dimension information, the most recent code or description of a code will be used, not the code or description that was in effect at the time the document was processed.
- Requisition Forms Print (FPARQST) will be used if requisitions need to be printed, this process will not be replicated in the reporting environment.
- Requisition Tables will not be joined to Purchase Order Tables, this functionality can be found using FOIDOCH.
- Requisition Tables will not be joined to the ledgers or underlying transaction level detail.
- MR2 recommends that FOAPAL Attributes not be used for reporting on data stored in the Requisition Tables. Attributes will be provided for reporting on the Encumbrance Ledger, if this functionality is required.
- It is our understanding that users do not need tax information; any tables that solely contain supporting tax information will not be available in the reporting environment.
- Users do not need converted amount fields for reporting; therefore, these objects will not be included in the reporting environment.

Issues

- Banner displays requisitions that have been completed but not approved as 'Open' when viewing them using the Open Requisitions by FOAPAL Query Form (FPIORQF). An un-approved requisition does not reserve funds since detail ledger transactions are not generated until the requisition has been approved; therefore, the requisition should not be considered as 'Open' at this point in time. Un-approved requisitions also appear on the Open Requisitions Report (FPRONPR). These requisitions will not appear on an Open Requisitions report that is based on the Encumbrance Ledger.
- When a requisition that has been closed by the system is 're-opened' (for example, if the assigned PO is cancelled) the Closed Date will remain populated in the Request Header Table (FPBREQH) while the Closed Indicator will be reset to indicate that the requisition is open. When viewing a requisition using the Requisition Inquiry Form (FPIREQN), only the closed date is shown on the form – thus leading users to believe that the requisition is closed, when in fact it is still open.
- Bombed the posting process when canceling a requisition. (Not sure why certain requisitions could not be cancelled). The requisitions were manually deleted from the approval table, and no detail transactions were processed. The requisition is flagged as being cancelled but the budget reservation was never liquidated.

- When viewing a requisition on the Commodity Supplemental Information screen of FPIREQN, the form uses the Ship To Code stored in FPBREQH to extract the address information; not the Ship To code stored in FPRREQD; therefore, the wrong Ship To address is shown for the displayed Ship To Code. We have talked to Ki Cheng about this issue, and he concluded that it is a bug in the form. The information is stored correctly in the tables and will therefore have no reporting implications.
- There is a bug in the Requisition Print Process (FPARQST). This report will aggregate the requisition totals when a user runs the report for more than one requisition. This error was reported on Banner's listserv (BPOST Digest - 31 Jan 2001 to 3 Feb 2001 (#2001-12)).
- There are problems when a requisition is copied and one of the original FOAPAL strings is deleted. Using Record-Clear while in the Accounting block of the Commodity/Accounting screen, in an attempt to delete a FOAPAL, will cause Banner to freeze. This might be because the record is still stored in the base tables and the total from that FOAPAL is still included on the requisition but the line is removed from the form. Using Record-Remove while in the Accounting block of the Commodity/Accounting screen will delete that FOAPAL string from the tables; however, depending on the FOAPAL string that was removed, the Requisition Inquiry: Commodity/Accounting screen of FPIREQN will show FOAPAL 2 of 1 even though there is only one FOAPAL assigned. Doing a Record-Clear or Record-Remove while in the Commodity block of the form will remove all commodity and accounting information from the tables. Then the desired commodity and accounting information will need to be re-entered, if the user wants to have the FOAPAL strings numbered correctly. (Doesn't this kind of defeat the purpose of copying the requisition in the first place).

Outstanding Questions

- Do users need access to Vendor Type information at this level? We do not anticipate users needing this functionality in the reporting environment, as we would prefer users to do this type of reporting using the Encumbrance Ledger, if possible.
- How much information is needed from the supporting dimension tables? MR2 anticipates that users will only require the textual descriptions of the assigned codes, plus the code and the description in the cases where vendor PIDMs are provided, in the reporting environment.
- Vendor Agreements – what specific information, if any, needs to be included in the reporting environment?

Requisition Tables

FPBREQH – Request Header Table

This table contains one row of data for each requisition entered using the Banner forms. The data stored in this table pertains to the requisition document as a whole. Notable fields include: Requisition Code, Transaction Date, Order Date, Delivery Date, Delivery Comment, User ID, Closed Indicator and Date, Cancel Indicator and Date, Complete Indicator, Approved Indicator, Text Indicator, Print Indicator, Vendor PIDM, Recommended Vendor Name, Requestor Name, Requestor's Chart, Requestor's Org, Discount Code, Ship To Code, Cancel Reason Code, Single Accounting Indicator, Requisition Type Indicator.

Notes: Post Date is not populated. Suspense Indicator is not correct (all rows are populated with 'N' even when the commodity or accounting sequences are in suspense). The Activity Date field is not updated to reflect Buyer or PO assignment; MR2 does not recommend that this field be used for reporting purposes per discussion with Ki Cheng. Banner will allow the completion of a requisition document with a vendor code, a recommended vendor name or with neither.

Supporting Dimension Information

FTVVEND – Vendor Validation Table – with additional information from SPRIDEN via PIDM to get Vendor Code and Vendor Name, if assigned.

FTVSHIP – Ship To Validation Table - to get textual description of the assigned Ship To Code.

FTVCRSN – Closed Document Reason Code Table - to get description of Cancel Reason Code.

FTVDISC – Discount Terms Table - to get textual description of assigned Discount Code.
 FOBTEXT – Text Table - to get document text if entered on a Requisition.

Outstanding Dimension Tables – need functional input – do we need these tables for reporting

FTVVTYPE – Vendor Type Table
 FTVVENT – Vendor/Vendor Type Table
 FOBCLAU – Clause Validation Table
 FORCLAU – Clause Text Table

Dimension Tables not anticipating need for in the reporting environment

FTVTRGP – Tax Group Validation Table
 GTVCURR – Currency Code Table

FPRREQD – Request Detail Table

This table contains one row of data for each commodity or commodity description entered on the requisition. There is a one to many relationship between the Requisition Header Table and this table via Requisition Code. This is the table that stores the buyer code once one has been assigned (FPAABUY) and the Purchase Order Code and item when one has been assigned (FPAPOAS). Other notable fields include: Commodity Code, Commodity Description, Unit of Measure Code, Quantity, Unit Price, Item, Description Change Indicator (to let user know if description of commodity code has been changed on the requisition), Vendor Agreement Code. Also stores Vendor PIDM, Vendor Reference Number (part number on vendor agreement), Recommended Vendor Name, and Suspense Indicator (of commodity only).

Notes: Post Date and Cancel Date are not populated. Activity Date is populated incorrectly, MR2 does not recommend that this object be used for reporting based on discussions with Ki Cheng. Chart and Orgn fields are not populated correctly in all cases. MR2 recommends that that Complete, Closed, and Cancelled Indicators from the Requisition Header Table be used for reporting, not the ones contained in this table. The description that is entered directly on the requisition (FPRREQD_Comm_Desc) will be provided in the reporting environment; not the commodity description from FTVCMM, if a commodity code is entered on the form.

Supporting Dimension Information

FTVVEND – Vendor Validation Table - with additional information from SPRIDEN via PIDM to get Vendor Code and Vendor Name only.
 FTVSHIP – Ship To Validation Table - to get textual description of the assigned Ship To Code.
 FTUVOMS – Unit of Measure Table - to get textual description of assigned Unit of Measure Code.
 FTVBUYR – Buyer Verification Table - to get textual description of assigned Buyer Code.
 FOBTEXT – Text Table - to get item text if entered on document.

Outstanding Dimension Tables – need functional input – do we need these tables for reporting

FPBAGR – Agreement Header Table
 FPRAGR – Agreement Detail Table

Dimension Tables not anticipating need for in the reporting environment

FTVCOMM – Commodity Validation Table
 FTVTGRP – Tax Group Validation Table
 GTVCURR – Currency Code Table
 FPRDELV – PO/Request Delivered Detail Table
 FPRRQTX – Requisition Commodity Tax Table
 FTVRQBD – Req Bid Intersection Table
 FTVRQPO – Request/PO Verification Table
 FTVCRPA – Closed Request/PO Audit Trail Table

FPRREQA – Request Accounting Table

This table contains the accounting information entered on a Requisition. There is a one to many relationship between the Requisition Header Table and this table via Requisition Code. MR2 cannot leverage the Item to Item join between FPRREQD and FPRREQA since when using Document Level Accounting all Item values in FPRREQA will equal zero while the Item field in FPRREQD will be a sequential number starting with 1 for each commodity/commodity description entered on the Requisition. Notable fields include: Requisition Code, Sequence Number (of FOAPAL), Fiscal Year, Fiscal Period, Chart, Fund, Orgn, Account, Program, Activity, Location, Amount (this is not the actual amount of the Requisition that has been assigned to the FOAPAL, it is only the gross amount, does not include discount, tax or additional charges), Discount Amount, Additional Charge Amount, Tax Amount, Suspense Indicator.

Notes: MR2 recommends that the indicators in the Requisition Header Table be used for reporting, and that the Approved, Closed, or Cancelled indicators in this table not be used. We also recommend that the Activity Date field not be used for reporting purposes, as this date is not updated once the transaction has been processed (use transaction date from Header Table). The actual amount reserved by each line (FOAPAL) of a requisition is not stored in the tables, and will need to be calculated. Although MR2 does not recommend that the Requisition tables be the primary source of data for FOAPAL aggregation, we will derive and include an additional object (Total Req Line Amount = amount – discount + tax + additional charge) in the reporting environment if users require this functionality.

Supporting Dimension Information

FOAPAL element validation tables – to provide descriptive information only (name, manager, etc.)

Purchase Order Documents

General Assumptions

- The Purchase Order tables are available in the reporting environment for the sole purpose of enabling users to query supplemental information from Purchase Orders and Change Orders that is not contained in the ledgers. These tables will be used to research all change orders associated with a Purchase Order, POs that have not yet been approved, cancelled POs, etc. MR2 strongly recommends that these tables not be used for aggregation of dollars by FOAPAL or other queries of this type since information stored in these tables may not accurately reflect the data in the ledgers
- Open/Closed Purchase Order reports will be based on information in the Encumbrance Ledger, not on data stored in the Purchase Order Tables (see Encumbrance Ledger section for additional information).
- Purchase Orders and Change Orders will be printed by a 3rd party software and MIS will modify the Banner forms printing processes as necessary to provide the output files to the third party software (see Position Paper TEC-B/P-011 – Distributed Forms Printing).
- Users will have the capability to query line item detail of purchase orders that have been closed since this data is still available in the purchase order tables. Once again, MR2 recommends that users only rely on data stored in the PO Tables if the information required is not available in the Encumbrance Ledger.
- User will have the ability to track all change orders associated with a purchase order in the reporting environment
- Document Level Accounting will be used instead of Commodity Level Accounting; all of the joins between the following tables will be based on this assumption. When using Document Level Accounting no relationship exists between the PO Detail and the PO Accounting Tables. The joins will be from the Purchase Order Header Table to the PO Detail Table and from the PO Header Table to the PO Accounting Table. This means that it will be necessary for users to generate two separate queries both using the same criteria from the PO Header Table if information is needed from all three tables.
- Not using effective dating for any supporting dimension information, the most recent description of a code or the code itself will be used, not the description or the code that was in effect at the time the document was processed.
- Purchase Order Tables will not be joined to the Requisition or Invoice Tables – this functionality can be found using FOIDOCH.
- Purchase Order tables will not be joined to the ledgers or underlying detail transactions.
- MR2 recommends that FOAPAL Attributes not be used for reporting on data stored in the Purchase Order Tables. Based on the fact that users are not encouraged to do aggregation of dollars by FOAPAL, there would be no need for Attributes. Attributes will be provided for reporting on the Encumbrance Ledger, if this functionality is required.
- It is our understanding that USNH will not be using Banner's Bidding Process; therefore, no Bid information will be available for reporting.
- USNH will not be using Banner's Receiving 3 Way Match Process; consequently, the process tables and supporting dimension tables involved in this process will not be included in the reporting environment.
- Not using Blanket Orders since they do not encumber funds; therefore, no supplemental Blanket Order information will be needed for reporting purposes.
- Not using Banner's Returning Process; therefore, the tables involved in this process will not be needed for reporting.
- Users will not need information from the Equivalency Table (FTVEQUL) for reporting.
- MR2 anticipates that users will not need tax information; consequently, these supporting dimension tables will not be available for reporting.
- Users do not need converted amount fields for reporting, these objects will not be included in the reporting environment

Issues

- There is an inconsistency in how Banner forms display Purchase Orders that have been completed but not approved. When viewing such documents using the Open Purchase Orders by Vendor Query Form (FPIOPOV), they will be flagged as 'Open'; however, these Purchase Orders will not be found when using the Open Purchase Orders by FOAPAL Query Form (FPIOPOF) or the Open Purchase Orders by Buyer Form (FPIOPOB). Since an un-approved Purchase Order does not encumber any funds or liquidate any budget reservations, it is misleading for it to be considered 'Open' in any case. These Purchase Orders will not appear on an Open PO report that is based on the Encumbrance Ledger, since no detail ledger transactions are generated within Banner until the PO has been approved.
- When a Purchase Order that has been closed is 're-opened' for any reason (for example, if the invoice is cancelled, or the PO is opened using FPAEOD) the Closed Date will remain populated in the Purchase Order Header Table (FPBPOHD) while the Closed Indicator will be reset to indicate that the document is open. When viewing this PO using the Purchase Order/Blanket Order Inquiry Form (FPIPURR), only the Closed Date is shown on the form – thus leading users to believe that the purchase order is closed, when in fact it is still open.
- When a change order is processed, the Purchase Order Code will remain the same and a Change Sequence Number will be generated (beginning with 1 and incremented by 1 for each change order that is processed). The original PO will be saved with a Change Sequence Number of '0' and the revised PO will now have a null Change Sequence Number (this is the most recent version of a Purchase Order). When the original PO is saved when a change order is processed some of the information entered on the original purchase order is lost. See individual table sections below for the specific fields in each table that are not populated during the change order process.
- Banner will allow change orders to be processed even after a Purchase Order has been invoiced; thereby, causing the information stored in the ledgers to conflict with the information displayed on the Purchase Order. The information stored in the ledgers is correct, because Banner will compensate for any changes made on the PO, encumbering additional funds if necessary. In this situation, any reports generated from the Purchase Order tables may not accurately reflect the true accounting consequences of that document.
- A Purchase Order will remain open unless an F is entered into the Final Payment Ind field on the Commodity Information screen while processing an invoice (FAAINVE), even if the entire amount of the PO is paid on the invoice. The MR2 team realizes that this is part of Banner's process and that it is not a flaw; however, we are concerned about the implications this may have on reporting. Open PO Reports (although based on the Encumbrance Ledger) may include numerous purchase orders with a \$0 PO line balance that users may have thought were closed.
- When entering a PO using the Purchase Order Form (FPAPURR), a user cannot enter information into the fax extension field on the Requestor/Delivery Information screen (will get error message that says 'field is protected against update'). Once information has been entered in the commodity block of the Commodity/Accounting screen of FPAPURR, a user can then go back to the Requestor/Delivery Information block and enter the fax extension, if desired.
- There are problems when a Purchase Order is copied and one of the original commodities or FOAPAL strings are deleted. Unlike a requisition, the system will not allow a user to use Record-Clear to alter a commodity or FOAPAL string. However, the system will allow a user to use Record-Remove to delete a commodity or a FOAPAL string, depending on which block of the form the user is currently in. This will remove the commodity or FOAPAL string from the underlying tables; however, it does not renumber them. This can cause the form to show Item 2 of 1 in the commodity block or FOAPAL 2 of 1 in the Accounting Block of the Commodity/Accounting screen of FPAPURR and FPIPURR. It is therefore possible to have a Purchase Order with a sequence number of 2, without a sequence number of 1.

Outstanding Questions

- It has not yet been decided whether USNH is implementing EDI. If implemented, what implications, if any, will this have on reporting? We are only interested in what affects EDI will have on reporting against the base PO

tables and the necessary supporting dimension tables, we are not anticipating including the EDI tables in the reporting environment.

- Do users need access to Vendor Type information for reporting? Currently MR2 is not anticipating that users will require this functionality in the reporting environment; we would prefer users to do this type of reporting from the Encumbrance Ledger due to the fact that the information stored in the purchase order tables may not always mirror the information stored in the ledgers.
- How much information is needed from the supporting dimension tables? It is our understanding that only the textual descriptions of the assigned codes, plus vendor and carrier codes and descriptions where PIDMs are provided, will be required in the reporting environment.
- Vendor Agreements – what specific information, if any, needs to be included in the reporting environment – currently this information is not available.
- Are we using General Ledger Purchase Orders? G/L Purchase Orders do not generate any detail transactions nor do they encumber any funds when they are completed and approved. These Purchase Orders will not print on any report that is based on the Encumbrance Ledger, so the PO Tables will need to be used for reporting on these. What are the reporting implications of these, if any?
- Is supplemental buyer information needed for reporting? Currently, we are anticipating only including the Buyer Code Description from the Buyer Validation Table (FTVBUYR) in the reporting environment; any additional supplemental information from the Buyer Validation Table (FTVBUYR), Buyer/Commodity Table (FTVBUYC) or the Buyer/Organization Table (FTVBUYO) will not be available.

Purchase Order Tables

FPBPOHD – Purchase Order Header Table

This table contains one row of data for each Purchase Order, Change Sequence Number combination. The data stored in this table pertains to the PO document as a whole. Notable fields include: Purchase Order Code, Change Sequence Number, Transaction Date, Order Date, Delivery Date, Delivery Comment, User ID, Info about person submitting PO (Name, Chart, Org, email address, phone and fax info), Closed Indicator and Date, Cancel Indicator and Date, Print Indicator and Date, Complete Indicator, Approved Indicator, Vendor PIDM, Carrier PIDM, Buyer Code, Ship To Code, FOB Code, Discount Code, Text Indicator, Cancel Reason Code, Single Accounting Indicator, Rush Indicator, PO Type Indicator (Regular, Standing).

Notes: This table contains fields that pertain specifically to Blanket Orders: Blanket Order Indicator (to designate that the PO is a Blanket Order); Blanket Order Code (to reference Blanket Order Code on another PO); Blanket Expiration Date, and Document Control Indicator (T if blanket order control at Doc Level, I – control at commodity level). We are not planning on leveraging these objects since Blanket Orders are not being used in Banner. Suspense Indicator, Post Date and PMNT Code are not populated. The Activity Date field is not updated to reflect the most recent date an invoice has been processed against a PO, and is not recommended for reporting purposes per discussion with Ki. This table also contains an EDI Indicator, to denote whether a purchase order was sent via EDI (E) or not (N).

Banner does not provide an indicator to differentiate between a Purchase Order that has been revised (change order processed) and a PO that has never been revised (original PO), since in both instances the Purchase Order will have a null value for the Change Sequence Number. MR2 realizes that this is a valid need and intends to derive an object (Change Order Indicator with possible values of Y or N) in the reporting environment that will enable users to distinguish between the two.

FPBPOHD fields that are not 're-populated' with data from the original PO when a change order is processed: Chart, Orgn, Edit_Defer_Ind, Delivery_Comment, Email_Addr, Fax information, Attention_To, Vendor_Contact, Name (of Requestor), Phone information

Supporting Dimension Information

FTVVEND – Vendor Validation Table - for both carrier and vendor, with additional information from SPRIDEN via PIDM to get Vendor and Carrier Code and Name only.

FTVDISC – Discount Terms Table - to get textual description of assigned Discount Code.

FTVSHIP – Ship To Validation Table - to get textual description of assigned Ship To Code.

FOBTEXT – Text Table – provides document text entered on the Purchase Order, if any.

FTVCRSN – Closed Document Reason Code Table - to get Cancel Reason Code description.

FTVBUYR – Buyer Verification Table - to get textual description of assigned Buyer Code.

FTVFOBS – FOB Code Table - to get textual description of FOB Code assigned.

Outstanding Dimension Tables – need functional input – do we need these tables for reporting

FTVPCLS – Purchase Order Classification (hazardous substance, subcontracts, etc.)

FTVFTRM – Freight Terms Table

FTVVTYP – Vendor Type Table

FTVVENT – Vendor/Vendor Type Table

FOBCLAU – Clause Validation Table

FORCLAU – Clause Text Table

Tables not anticipating need for in the reporting environment

FTVTGRP – Tax Group Validation Table

FTVTRSK – Tax Risk Table

GTVCURR – Currency Code Table

FTVTRAT – Tax Rate Table

FTVBUYC – Buyer/Commodity Table (supplemental buyer info)

FTVBUYO – Buyer/Organization Table (supplemental buyer info)

FPRBLAO – Blanket Order balance process table – this table provides supplemental information on Blanket Orders.

FTVBDPO – Bid/PO Verification Table

FPBBIDH – Bid Header Information Table

FPBBIDS – Bid Summary Table

FPRBIDD – Bid/Vendor Information Table

FPRBIDV – Bid/Vendor Telephone Intersection Table

FPBRTRN – Returns Table

FPRRTRN – Returns Item Table

FTVRRSN – Return Reason Table – this table provides supplemental information on Return Reason Code in FPBRTRN.

FERPHST – EDI PO History Table

GXRTPID – EDI Trading Partner Table

FPRPODT – Purchase Order Detail Goods Table

This table contains one row of data for each commodity or commodity description entered on a Purchase Order or Change Order. There is a one to many relationship between the PO Header Table and this table via Purchase Order Code, Change Sequence Number. Notable fields include: Purchase Order Code, Change Sequence Number, Item, Commodity Code, Commodity Description, Unit of Measure, Unit Price, Quantity, Agreement Code.

Notes: MR2 does not recommend using the Activity Date field for reporting purposes based on discussions with Ki Cheng. MR2 will include the description that is entered directly on the Purchase Order (FPRPODT_Comm_Desc) in the reporting environment, not the commodity description from FTVCOMM, if a commodity code is entered on the form. Liq Amt is not populated. MR2 recommends using the Closed and Cancelled Indicators from the PO Header Table for reporting purposes, not the indicators stored in this table. Not using converted amount fields. User can change Ship To Code and Delivery Date that default in from the values entered on Document Information screen, although it is the Ship

To information and Delivery Date from PO Header Table that are printed on the Purchase Order, using Banner's PO Print Process.

FPRPODT fields that are not 're-populated' with data from the original PO when a change order is processed:
Desc_Change_Ind, Ship_Code, and Reqd_Date

Supporting Dimension Information

FTVUOMS – Unit of Measure Table - to get textual description of assigned Unit of Measure Code

FTVSHIP – Ship To Validation Table - to get textual description of Ship To Code assigned

FOBTEXT – Text Table - to get item text entered on document, if any

Outstanding Dimension Tables – need functional input - do we need these tables for reporting

FPBAGRH – Agreement Header Table

FPRAGR – Agreement Detail Table

Tables not anticipating need for in the reporting environment

FTVCOMM – Commodity Validation Table

FTVTGRP – Tax Group Validation Table

FTVRQPO – Request/PO Verification Table

FTVCRPA – Closed Request/PO Audit Trail

FPRPOTX – Purchase Order Commodity Tax Table

FPBRCDT – Packing Slip Header Table

FPBRCHD – Receiving Header Table

FPRRCDT – Receiving Detail Table

FTVRCMT – Receiving Method Verification Table- this table provides supplemental information on the Receiving Method Code stored in FPBRCHD.

FTVSTKL – Stock Location Table – this table provides ship to destinations for commodities.

FPRPODA – Purchase Order Accounting Detail Table

This table contains the accounting information entered on a Purchase Order. There is a one to many relationship between the PO Header table and this table via Purchase Order Code, Change Sequence Number. MR2 cannot leverage the Item to Item join from the PO Detail Goods Table to this table since when using Document Level Accounting all item values in FPRPODA will equal zero while the Item field in FPRPODT will be a sequential number starting at 1 for each commodity/commodity description entered on the Purchase Order. Notable fields include: PO Code, Change Sequence Number, Sequence Number (of FOAPAL), Amount, Discount Amount, Tax Amount, Additional Charge Amount, Fiscal Year, Period, Chart, Fund, Orgn, Account, Program, Activity, Location.

Notes: We do not recommend using the Activity Date field for reporting. Not using converted amount fields. MR2 recommends not using the Approval or Closed Indicators in this table; users should rely on the indicators in the PO Header Table for reporting purposes. Post Date is not populated. The Amount field stores only the gross amount that is assigned to a particular FOAPAL, it does not include discount, tax or additional charges. The actual amount encumbered by each line on a PO will need to be calculated. Although MR2 does not recommend that the Purchase Order tables be the primary source of data for FOAPAL aggregation, we will derive and include an additional object (Total PO Line amount = amount – discount + tax + additional charge) in the reporting environment, if users require this functionality.

There is no information lost from this table when a change order is processed.

Supporting Dimension Tables

FOAPAL element validation tables – to provide descriptive information only.

Invoice Documents

General Assumptions

- The Invoice Tables will be the primary source of data for open invoice reports.
- Document Level Accounting will be used instead of Commodity Level Accounting; all of the joins between the following tables will be based on this assumption. When using Document Level Accounting no relationship will exist between the Invoice Commodity Table and the Invoice Accounting Table. The joins will be from the Invoice Header Table to the Invoice Commodity Table and from the Invoice Header Table to the Invoice Accounting Table. This means that it will be necessary for users to generate two separate queries both using the same criteria from the Invoice Header Table if information is needed from all three tables.
- Not using effective dating for any supporting dimension information, the most recent description of a code or the code itself will be used, not the code or code description that was in effect at the time the document was processed.
- It is our understanding that the Banner provided reconciliation process/reports will meet the users needs; therefore, the bank reconciliation tables will not be included in the reporting environment.
- Invoice Tables will not be joined to the Requisition or Purchase Order Tables, this functionality can be found using FOIDOCH.
- The Invoice Tables will not be joined to the ledgers or the underlying transaction level detail.
- The Invoice Header Table will be joined to the Invoice/Check Table (see A/P Check Processing).
- MR2 has focused solely on Direct Pay and Regular Invoices, as General Encumbrance Invoices are not applicable to the buy/pay process.
- It is our understanding that users will not need tax information; consequently, these supporting dimension tables will not be available in the reporting environment.
- MR2 anticipates that users will not need converted amount fields for reporting; these objects will not be included in the reporting environment.

Reconciliation Tables not including in the reporting environment

FABRCON – Bank Reconciliation Table

FABBKTP – Bank Tape Table

FARBKTH – Bank Tape History Table

Issues

- Banner will allow a user to process a direct pay invoice to a one-time vendor without completing the full address. During the batch or manual check process, it is possible to cut a check to this vendor containing only a zip code for the address. We spoke with Stephanie Eno regarding this issue; it was then brought to Anita's attention, who submitted this problem to SCT's Action Line.
- Banner provides no utility for users to research payments to one-time vendors. One-time vendor information is not available through Banner on-line query forms. Also, because there is no vendor PIDM stored, there is no validation for the Vendor Invoice Code; thereby, allowing a user to pay the same invoice more than once. One-time miscellaneous vendor information can only be obtained by running Banner's Vendor History Report (FARVHST).
- Problems found with Open/Paid Indicator on Document Status Window on Invoice/Credit Memo Form (FAAINVE). This field should not be data-enterable and yet the form will allow a user to change this indicator; thereby, marking an invoice as Paid when it has not been (this invoice will not be selected during the batch check process). The invoice cannot be altered or cancelled because the system thinks it has been paid. The encumbered amount is liquidated and there is YTD Activity populated in OPAL; although, no check has been cut. MR2 informed Stephanie Eno about this issue on 1/2/2001; Stephanie then brought the matter to Anita's attention, who submitted this problem to SCT's Action Line.

- It is possible to gray-out all of the options (the Options Panel on the left side of the screen) on the Invoice/Credit Memo Form (FAAINVE) if a user tries to save information entered on one of the supplemental screens when entering an invoice.
- When a user enters Carrier Route, Delivery Point and Correction Digit information on the Header Additional Information screen of FAAINVE, the information will be stored in FABINVH; however, this information cannot be viewed by the user once the invoice has been completed and approved – these fields do not exist on the Header Additional Information screen of FAAINVE. Do users need to see this information once the invoice has been processed? These fields also exist in FATCKIN; however, they are not populated during the batch or manual check process– are we planning on using these fields?
- When a user is viewing an invoice using FAAINVE, they will not be able to see the Income Type that was entered into the Income Type Code field on the Header Additional Information Screen of FAAINVE because this field does not appear in the Header Additional Information Screen of FAAINVE; however, the income type code that was entered on the Accounting Information screen can be seen when viewing this block on the inquiry form. This can be misleading if the user has changed the default income type code.
- Are you supposed to be able to add document text to an invoice on FAAINVE? I tried to add document text using the Document Text Option but clicking on this option does not take you to the text entry form like it does when processing other documents.
- When processing an invoice using FAAINVE a user has the option of entering a bank code on the Invoice Header Screen (this field can be null). However, Banner, requires that a bank code be entered for each FOAPAL assigned to the invoice on the Accounting Information Screen. The check process will first look to see if a bank code was entered on the Header Information Screen, and if a value exists, this is the bank code that will be used when the check is cut. If the value on the Header is null, then the bank code assigned at the FOAPAL level will be used in the check process. If more than one bank code has been assigned on the Accounting Information Screen (2 or more FOAPALs with different bank codes), an online check cannot be processed against that invoice; however, this invoice will be picked up during the Batch Check Process (FAABATC) and a check will be cut for the portion of the invoice that corresponds to the bank code that was entered as one of the parameters (per discussion with Anita). This impacts reporting since the bank code is stored in more than one base table; when a bank code is required on an Invoice Report, which bank code do users want to see?

Outstanding Questions

- PCard modification and its reporting implications?
- Do users need access to Vendor Type information for reporting?
- How much information is needed from the supporting dimension tables? We are only anticipating including the textual descriptions of the assigned codes, plus vendor and check vendor codes and descriptions where PIDMs are provided, in the reporting environment, unless otherwise specified by users.
- Do users anticipate needing Attributes for invoice reporting?
- What type of reporting is needed on recurring invoices, if any?
- Disbursement Group field equivalent in Banner?
- \$0 Invoice solution and its reporting implications?
- There are three types of invoices that can be processed on FAAINVE: Regular, Direct Pay and General Encumbrance. Buy/Pay only deals with Regular and Direct Pay Invoices. Still awaiting functional input on how/if USNH will be use General Encumbrances and General Encumbrance Invoices.
- Fixed Assets and its relationship to invoice tables?

Invoice Tables

FABINVH – Invoice Header Table

This table contains one row of data for each Invoice Code. The data stored in this table pertain to the Invoice document as a whole. Notable fields include: Invoice Code, POHD Code (equals Purchase Order Code if Regular Invoice, and

Encumbrance Code if General Encumbrance Invoice), Open/Paid Indicator, Vendor Invoice Code, Invoice Date, Payment Due Date, Transaction Date, Credit Memo Indicator, Discount Code, Cancel Indicator and Date, Approved Indicator, Complete Indicator, Bank Code, Reusable Invoice Indicator, Vendor PIDM, Check Vendor PIDM, one time vendor name and address, 1099 Indicator and ID.

Notes: Post Date, ADJT Code, and ADJT Date are not populated. Not using Activity Date for reporting purposes per recommendation by Ki Cheng. Suspense Indicator does not appear to be populated correctly – value of 'N', even when the commodity suspense indicator = Y. Text Indicator is not populated (maybe it would be if a user could enter text while processing the invoice). A user can add text on FOATEXT and reference the invoice – this will cause the checkbox on FAIINVE to be checked but the text indicator field in the Invoice Header Table will still have a null value.

This table stores an Invoice Type Indicator; however there are only two possible values: R = Regular and D = Direct Pay (includes both Direct Pay and General Encumbrance Invoices). MR2 realizes that users will have a need to differentiate Direct Pay Invoices from General Encumbrance Invoices. We plan on deriving and including two additional fields in the reporting environment to facilitate reporting: Invoice Type with possible values of R, D, or G; and Invoice Type Description with values of Regular, Direct Pay and General Encumbrance, respectively.

Supporting Dimension Information

FTVVEND – Vendor Validation Table - for both vendor and check vendor, with additional information from SPRIDEN via PIDM to provide Vendor Code and Vendor Name only.

FTVDISC – Discount Terms Table – to get textual description of assigned Discount Code.

GXVBANK - Bank Validation Table – to get textual description of assigned Bank Code.

FOBTEXT – Text Table – provides text that is associated with the Invoice document, if any.

Outstanding Dimension Tables – need function input – do we need these tables for reporting

FTVVVTYP – Vendor Type Table

FTVVENT – Vendor/Vendor Type Table

FTVITYP – Income Type Table – to provide Income Type Code and Income Type Code description.

FABRUIV – Reusable Invoice Table

Tables not anticipating need for in the reporting environment

FTVTGRP – Tax Group Validation Table

FTRTGTR – Tax group/Tax Rate repeating table

FTVTRAT – Tax Rate Table

FABREBT – Tax Rebate Maintenance Table

FARREBT – Multiple Tax Rebate Maintenance Table

GTVCURR – Currency Code Table

FARCKMC - Matching Report Collector Table - This table is used during the FABMATC process.

FABRCON – Bank Reconciliation Table

FABBKTP – Bank Tape Table

FARBKTH – Bank Tape History Table

FARINVC – Invoice Commodity Table

This table contains the commodity information entered on an invoice. There is a one to many relationship between the Invoice Header table and this table via Invoice Code. Notable fields include: Invoice Code, Purchase Order/Encumbrance Code, Item, Commodity Code, Commodity Description, Unit of Measure Code, Suspense Indicator, Hold Indicator, User ID, Vendor Invoice Code.

Notes: We recommend using the Open/Paid Indicator in the Invoice Header Table for reporting purposes, not the indicator in this table. Not using Activity Date for reporting per recommendation by Ki Cheng. Not using converted amount fields.

Hold Indicator and Suspense Indicator only pertain to the commodity; these are not indicators for the whole document. ADJT Code and Date are not populated- they are obsolete (as is FTVADJT – per Elsa and Ki). The description that is entered on the Invoice (FARINVC_Comm_Desc) will be provided in the reporting environment, MR2 is not pulling the commodity description from FTVCOMM, if a commodity code is entered on the invoice.

Supporting Dimension Information

FTVUOMS – Unit of Measure Table - to get textual description of assigned Unit of Measure Code.

Outstanding Tables – need function input – do we need these tables for reporting

FARVINV – Multiple Vendor Invoice Cross Reference Table

FARVICM – Multiple Vendor Invoice Commodity Collector Table

Dimension Tables not anticipating need for in the reporting environment

FTVCOMM – Commodity Validation Table

FTVTGRP – Tax Group Validation Table

FARINTX – Invoice Tax Allocation Table

FARINVA – Invoice Accounting Table

This table contains the accounting information entered on an Invoice. There is a one to many relationship between the Invoice Header Table and this table via Invoice Code. MR2 cannot leverage the Item to Item join between the Invoice Commodity Table and this table since when using Document Level Accounting all Item values in FARINVA will equal zero while the Item field in FARINVC will be a sequential number starting at 1 for each commodity/commodity description entered on the Invoice. Notable fields include: Invoice Code, Purchase Order/Encumbrance Code, Sequence Number, Fiscal Year, Period, Chart of Accounts Code, Fund, Orgn, Account, Program, Activity, Location, Approved Amount, Discount Amount, Tax Amount, Additional Charge Amount.

Notes: We do not recommend using the Activity Date field for reporting per discussion with Ki Cheng. MR2 also recommends that the Approved Indicator and Open/Paid Indicator in this table not be used; instead, the indicators in the Invoice Header Table should be leveraged for reporting purposes. Suspense Indicator denotes whether the accounting sequence is in suspense, not the invoice document. Approved Amount is not the actual amount of the Invoice that has been assigned to a FOAPAL, it is only the gross amount; it does not include discount, tax or additional charges. The actual amount of each line (FOAPAL) of the invoice will need to be calculated. MR2 will derive and include an additional object (Total Invoice Line Amount = Approved Amount – Discount Amount + Tax Amount + Additional Charge Amount) in the reporting environment, if users require this functionality.

When a credit memo is processed, the approved amount, tax amount, discount amount and additional charge amount will be stored in FARINVA exactly as they were entered on FAAINVE, the amounts are not reversed. A report developer would need to use the Credit Memo Indicator in the Invoice Header Table in concert with the amount fields in order to determine the total amount invoiced by vendor, etc. MR2 has discussed possible solutions to this problem in order to facilitate reporting and reduce the need for full-client functionality; however, we have reservations about altering the way the data is stored.

Supporting Dimension Information

GXVBANK - Bank Validation Table – to get textual description of assigned Bank Code.

FOAPAL element validation tables – to provide descriptive information only.

Time dimension information – to get period end date, etc.

Outstanding Dimension Tables – need function input – do we need these tables for reporting

FTVITYP - Income Type Table – to get Income Type Code and Income Type Description.

A/P Check Processing

General Assumptions

- A/P Checks will be printed by a 3rd party software, MIS will modify the Banner forms printing processes as necessary to provide the output files to the third party software (see Position Paper TEC-B/P-011 – Distributed Forms Printing).
- A/P Check Files (including any necessary zero dollar check files) will also be produced by the third party software and not replicated in BusinessObjects.
- It is our understanding that Banner's Check Register Report (FABCHKR) will meet the needs of the users and will not be reproduced in the reporting environment.
- Document Level Accounting will be used instead of Commodity Level Accounting.
- Users do not require reporting on ACH; therefore, these magnetic tape tables or direct deposit tables will not be included in the reporting environment.
- Banner's 1099 Reporting Process, reports and magnetic tape files will be utilized; these reports will not be duplicated in the reporting environment.
- Check Tables will not be joined to the ledgers or the underlying detail transactions.
- The Invoice/Check Table (FABINCK) will be joined to the Invoice Header Table to enable users to build check reports that also contain the vendor information from the invoice.
- Attributes are not required for reporting on data contained in the Check Tables.
- Not using effective dating for any supporting dimension information, the most recent description of code, or code in the case where PIDMs exist, will be used, not the code or the code description that was in effect at the time the document was processed.
- It is MR2's understanding that users do not need tax information; consequently, these supporting dimension tables will not be available in BusinessObjects.
- Users do not need converted amount fields for reporting; these objects will not be included in the reporting environment.

Tables not anticipating including in the reporting environment

FATTAXB – Magnetic 1099 Record B Table

FATTAXT – Magnetic 1099 Temporary Table

FARDIRD – Direct Deposit Transmittal Register Table

FOB1099 – 1099 Magnetic Tape Transmitter Information

GXRDIRD – Recipient Direct Deposit Information Table

GXVDIRD - Recipient Bank Validation Table

Temporary Tables used during the Batch or Online Check Process:

FATCKDT – Batch Check/ Invoice Detail Temporary Table

FATCKIN – Batch Check/Invoice Temporary Table

FATCKNO – Batch Check Number Temporary Table

Issues

- 1099 Reporting – When processing an invoice to a one-time vendor on FAAINVE, Banner will allow a user to check the 1099 Vendor box and enter a Tax ID into the 1099 TAX ID field on the Invoice/Credit Memo Header Screen. When a check is processed for this invoice, 1099 information will be stored in the 1099 Table (FAB1099) because the 1099 reportable box was checked on the invoice; however, this information cannot be viewed on FAA1099 (because there is no vendor PIDM) and is not printed on Banner's 1099 reports. If this table (FAB1099) is included in the reporting environment, access to one-time vendor 1099 data will be possible. Will this cause problems if users try to create 1099 reports, including invoice/check information, that can conflict with information displayed on Banner forms/reports?

- If a user enters a different Bank Code on the Invoice/Credit Memo Header than the one entered on the Accounting Distribution Screen, Banner will use the Bank Code stored in the Header Table and ignore the one entered with the FOAPAL when processing the check. This can cause potential problems since it may be possible for a user to enter a FOAPAL string from one campus and their bank code on the Accounting Information Screen and a bank code for a different campus on the Header Screen. This situation will cause the check to be cut from the wrong bank. This situation would also pose reconciliation issues. Incidentally, we also uncovered a defect in the system that will not have any affects on check processing at USNH since we are not using a multi-chart environment. If a user enters a Bank Code that is associated to chart B in the Header Information and a FOAPAL and Bank Code assigned to chart P in the accounting information on FAAINVE– the Header Bank Code default fund is validated against chart B while the Header Bank Code default account is validated against chart P. This resulted in the creation of lines in TRNH/TRND and the General Ledger against funds that do not exist in chart P. We spoke with Ki Cheng about this issue, he spoke with Anita, Anita then submitted this problem to SCT's Action Line.

Outstanding Questions

- What information will be needed to aid A/P staff in their research of one-time miscellaneous vendor payments for 1099 reporting?
- Do users need access to Vendor Type information for reporting?
- How much information is needed from the supporting dimension tables, currently only including the textual descriptions of the assigned codes, plus vendor and check vendor codes and description when PIDM are provided, in the reporting environment, unless otherwise specified by users.
- Do users need the Bank Code Description of the Bank Code stored in each of the following tables?
- Will the \$0 Invoice Solution have any implications on check reporting?
- What vendor information do users want to see on check reports: vendor or check vendor, if there is one, or both?
- Currently we are only providing the textual description for the Bank Code (Name of the Bank Account). We are not providing any information from SPRIDEN (Bank ID and Bank Name). Is this information needed in the reporting environment?

Check Tables

FABCHKS – Check Summary Table

This table contains one row of data for each Check Number. Contains all checks that are processed (check types = (B)atch, (M)anual, (O)nline, (V)oid, and (T)est Pattern). Notable fields include: Check Number, Check Type Indicator, Check Date, Check Amount, Cancel Date and Indicator, User ID, Activity Date, Recon Ind.

Notes: The Check Amount stored in this table is the total amount of the check that was processed. Potential reporting problems exist if a user creates a report that contains summary as well as detail information. We will have to do an outer join from this table to FABINCK in order to include Test Pattern and Void Checks (voided checks that have not been related to an invoice) on reports that also include invoice information.

Supporting Dimension Information

GXVBANK – Bank Validation Table – to get textual description of assigned Bank Account Code

FABINCK – Invoice/Check Table

This table contains the relationship between check and invoice; there is one row of data for each Invoice Code, Check Number combination. There is a one to many relationship between the Check Summary Table and this table via Check Number and Bank Code. There is also a one to many relationship between the Invoice Header Table (FABINVH) and this table via Invoice Code. This table contains Batch, Manual, Online and Voided checks only (no Test Pattern checks as they are not related to an invoice, and only the voided checks that have been related to an invoice). Notable fields include:

Invoice Code, Check Number, Bank Code, Check Type, Net Amount (this is the amount of the invoice, not the amount of the check), Cancel Date and Indicator, Invoice Transaction Date.

Notes: The join to the Invoice Header Table will enable users to include vendor information on check reports. This table actually stores the amount of the invoice; it does not need to be calculated. Credit Memo Invoices are stored as negative amounts so users will be able to sum invoices by vendor, check, etc without having to use the Credit Memo Indicator in FABCHKA or FABINVH.

Supporting Dimension Information

GXVBANK – Bank Validation Table – to get textual description of Bank Code.

FABCHKA – Batch Check/Invoice Detail Block Table

This table contains the detail information for each paid invoice. There is one row of data for each Check Number, Invoice Code, Invoice Item, Invoice Sequence Number combination. There is a one to many relationship between the Invoice/Check Table and this table via Check Number, Invoice Code, and Bank Code. Contains Batch, Manual and Online checks only. Notable fields include: Check Number, Check Date, Bank Code, Invoice Code, Sequence Number (of FOAPAL), Fiscal Year, Fiscal Period, Credit Memo Indicator, Gross Amount, Tax Amount, Discount Amount, Additional Charge Amount, Federal and State Withholding Amounts.

Notes: We do not recommend using the Check Type Indicator in this table for reporting since the Check Type Indicator = 'B' in all cases, even though the table contains Batch, Manual and Online Checks. This table does not include any actual FOAPAL elements, it only stores the Sequence Number.

Supporting Dimension Information

GXVBANK – Bank Validation Table – to get textual description of Bank Code.

FAB1099 – 1099 Tax Detail Table

This table contains information on vendors for 1099 reporting. There is a one to many relationship between the Check/Invoice Table and this table via Check Number, Invoice Code and Bank Code. Notable fields include: Vendor PIDM, Reporting ID, Reporting Year, Check Number, Bank Code, Invoice Code, Reporting Amount, Federal and State Withholding Amounts, Cancel Date and Indicator, Income Type Sequence Code.

Notes: The reporting year is on a calendar year basis. This table stores information for one-time vendor invoices/checks as well as for established vendors. Only the data relating to established vendors can be changed or updated using the 1099 Reporting Form (FAA1099). This table also contains 1099 information for checks that have been cancelled.

Supporting Dimension Information

FTVVEND – Vendor Validation Table, with additional information from SPRIDEN via PIDM to provide Vendor Code and Vendor Name only.

GXVBANK – Bank Validation Table – to get Bank Code description.

Outstanding Dimension Tables – need functional input – do we need these tables for reporting

FTVITYP – Income Type Table – to get Income Type Code and Income Type Code Description.

FTVVITYP – Vendor Type Table

FTVVENT – Vendor/Vendor Type Table

Vendor Information

General Assumptions

- It is the MR2 team's understanding that users require vendor history, in some form, in the reporting environment since Banner forms provide no utility for researching payments to miscellaneous one-time vendors.
- The MR2 team is relying on the users to specify the data elements that are required to support vendor history reporting.
- EDI information will not be available in the reporting environment.

Issues

- Banner does not contain a vendor history table, so at this time there is no vendor history information available in the reporting environment. Currently, the only utility to research one-time vendor payments is the Vendor History Report (FARVHST). Is this adequate for users?

Outstanding Questions

- Is it necessary to have a Vendor Class in the reporting environment, which contains the Vendor Validation and supporting dimension tables to facilitate vendor research? These tables would not be joined to any transaction or document tables. This class would contain the full vendor dimensionality, since the document table classes will only contain the Vendor Code and Vendor Name. How much supporting information is required?

Possible Tables for inclusion in Vendor Class, if required

FTVVEND – Vendor Validation Table - with additional information from SPRIDEN via PIDM (PIDM of vendor, PIDM of check vendor, and PIDM of vendor owner).

FTVVTYP – Vendor Type Table – this table contains the relationship between Vendor and Vendor Type

FTVVENT – Vendor/Vendor Type Table – provides the textual description of Vendor Type Code.

FTVITYP – Income Type Table – provides Income Type Code and Income Type Code description assigned to vendor.

FTVDISC – Discount Code Table – provides the textual description of Discount Code assigned to vendor.

Tables not anticipating need for in reporting environment

FOBTEXT – Text Table – provides text entered for vendor.

STVATYP – Address Type Validation Table – provides textual description of Address Type Code.

SPRADDR – Address Repeating Table – provides address information of each Address Type Code and Sequence Number.

SPRTELE – Telephone Table – provides telephone information for each of the vendor's Address Type Code, Sequence Number combination.

GOREMAL – Person E-mail Repeating Table – this table stores the Email Code and Email Addresses if entered on FTMVEND by PIDM.

FTRVTCL – Vendor Tax Collector Repeating Validation Table

FTVTRAT – Tax Rate Table

GTVCURR – Currency Conversion Validation Table

GTVNTYP – Name Type Validation Table – provides textual description of Name Type Code (can be entered on either FOAIDEN or FTMVEND, code is stored in SPRIDEN).

FAVVRCK – Vendor History View

This view is provided in Banner and is the basis for the Vendor History Report; however, it does not contain one-time vendor information. Would users like to have this view incorporated into the reporting environment, or does an entirely different structure need to be built in order to facilitate vendor history reporting? This view does not contain the reference Purchase Order, if one existed, or any FOAPAL information entered on the invoice. Fields include: Invoice Code, Multiple Invoice Indicator, Credit Memo Indicator, Vendor Invoice Code, Vendor Code, Vendor Check PIDM, Activity Date, Invoice Date, Check Number, Check Date, Check Amount (amount of invoice paid on check – not amount of check), Bank Code.

Encumbrance Open/Close Documents

These tables store data related to encumbrance open/close documents. If using a Banner generated number, these documents will begin with an asterisk. Documents generated using the Encumbrance Open/Close Form (FPAEOCD) and documents generated during the PO Batch Close Process (FPPPOBC) are recorded in these tables. FPAEOCD is the Banner form that allows users to close a requisition or requisition commodity, close a purchase order or PO commodity, or open a purchase order (essentially 're-open' a PO that had been closed).

SCT Warnings on the use of FPAEOCD (See Banner2000 Finance Release 4.1 Release Guide, Section V Addendum to the Finance 4.0 User Manual, Page 60)

1. Although it will not allow users to create out of balance entries or otherwise negatively impact the system, it will allow users to create entries that might adversely affect the use of the encumbrance
2. This form is only protected by form security – does not incorporate the use of fund/organization security, rule group security, or role security
3. This form does not route documents to approvals

General Assumptions

- After reviewing these tables, MR2 recommends that they not be included in the reporting environment due to: extremely limited access to FPAEOCD and FPPPOBC; and the fact that the pertinent information stored in these tables can be viewed using on-line Banner query forms.
- Supporting tables for the PO Batch Close Process will not be available for reporting; namely, the Purchase Order Batch Close Process Collector Table (FPRENC). - Not sure how/if this table is populated?

Encumbrance Open/Close Tables

FBPEOCD – Encumbrance Open/Close Header Table

This table contains one row of data for each Document Code. The data stored in this table pertains to the document as a whole.

FPREOCD – Encumbrance Open/Close Detail Table

This table contains one row of data for each Document Code, Item combination. (In this case, item refers to the number of encumbrance documents being referenced by a particular encumbrance open/close document code).

FPREOCC – Encumbrance Open/Close Commodity Table

This table only contains documents that open or close commodities on an encumbrance. Encumbrance Open/Close documents that are generated during the PO Batch Check process are not stored in this table.

FPREOCA – Encumbrance Open/Close Accounting Table

This table only contains the open/close documents that pertain to accounting information on an encumbrance. For example, Open/Close documents that open a PO will not appear in this table because opening a PO does not have any impact on the ledgers. The encumbrance item in this table is the same as the commodity item from the PO or Requisition commodity tables; however, all values will equal zero when using Document Level Accounting. The Encumbrance Sequence Number is the sequence number of each FOAPAL affected by the document.

Notes on Encumbrance Open/Close Documents

Once open/close documents have been processed and posted most of them can be viewed using the Document Retrieval Inquiry Form (FGIDOCR). Documents that only 're-open' a PO (no changes to accounting), will not generate any detail ledger transactions. Because there are no records in TRNH or TRND, these documents cannot be viewed using FGIDOCR. However, a user can view these open/close documents and the referenced Purchase Order on the Encumbrance Open/Close List Form (FPIEOCL). This form displays all open/close documents except the ones generated during the PO Batch Close Process.

FPAEOCD will allow users to add money to a Purchase Order that is being 're-opened'. When this situation occurs, the amount entered on FPAEOCD will be netted with the amount in the Sum_Encd_Liq field in the Encumbrance Ledger (FGBENCP) and no changes will be made to the Purchase Order (no data changed in PO Tables). If a user adds the full amount of the original PO when it is 're-opened' (the form will not allow users to increase an encumbrance amount to a level greater than its original amount), it will look like the PO was never invoiced on an Open PO report based on the Encumbrance Ledger. (Supporting documentation is available).

Purchase Order Reports based on the Encumbrance Ledger will show the correct balance remaining in the PO; however a user will not know that the PO has been 're-opened' and that additional money was encumbered. (A user would need to 're-open' the PO and then make any additions to the PO using a change order for the both the Encumbrance Ledger and the Purchase Order tables to reflect the changes. What is the functional reason why a user would add money to PO when they are 're-opening' it, instead of processing a change order after the PO is 're-opened'?