SUNGARD HIGHER EDUCATION

www.sungardhe.com

Banner ODS Functional Training

Finance

Objectives

- **Define common database and table functionality**
- **Explain the concept, data, frequency and data sources involved in reporting views**
- **Identify primary keys used with specific Finance Entity Relationship Diagrams**
- **List reporting and slotted views**
- **Describe Finance report templates, including template parameters**

SUNGARD HIGHER EDUCATION

www.sungardhe.com   2

<u>E</u>ntity <u>R</u>elationship <u>D</u>iagrams*

- **ERD Cardinality**

  One to One

  - One to Many

  - Optionally One to Many

  - One to Optionally Many

  *SunGard HE refers to these as Business Concept Diagrams

SUNGARD HIGHER EDUCATION

www.sungardhe.com   3

Primary Key (PK) And Foreign Key (FK)

- A primary key is a unique identifier (made up of one or more persistent attributes) that distinguishes one instance of a class from all other instances of the same type. You use primary keys to define relationships and to define queries.

- A foreign key is a combination of one or more database columns that reference a unique key, usually the primary key, in another table. Foreign keys can be any number of fields (similar to a primary key), all of which are treated as a unit. A foreign key and the parent key it references must have the same number and type of fields.

Composite And Slotted Tables

- **Composite Table**
  - **Includes the main data that is extracted from source system and stored in Banner ODS**

- **Slotted Table**
  - **Stores data values for a specific code related to a base table**
  - **Optimizes the speed of queries**

Common Business Concepts

7 Entity Relationship Diagrams

- Event
- Institution
- Organization Entity
- Person Demographic*
- Person Role*
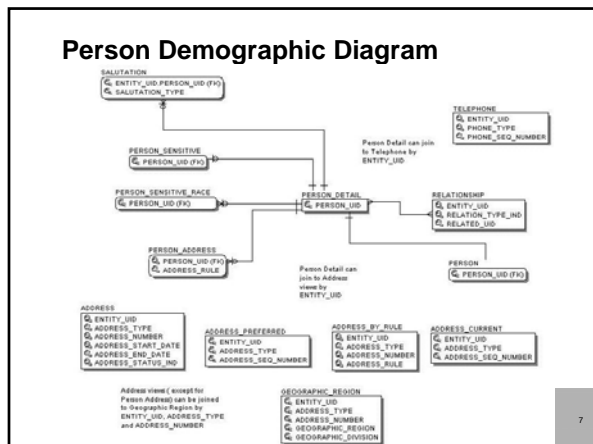- Person Supplemental*
- Relationship

*Pertain to Financial Aid

Person Demographic Diagram

Person Demographic Key Reporting Views

PERSON_DETAIL

CONCEPT: Contains demographic data common to a person across the ODS data model and the institution enterprise. The data is specific to a person independent of whether that person is a student, faculty member, or employee, alumnus, etc. Data reflects only the most current information; changes are not tracked in the ODS.
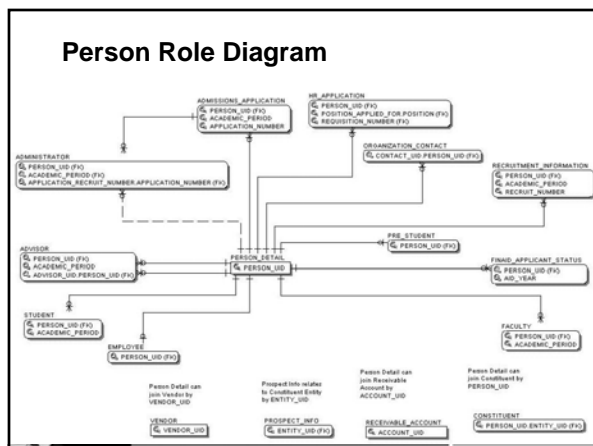
DATA: includes current name, Id, gender, birth date, tax id, international details, confidentiality indicator, etc.
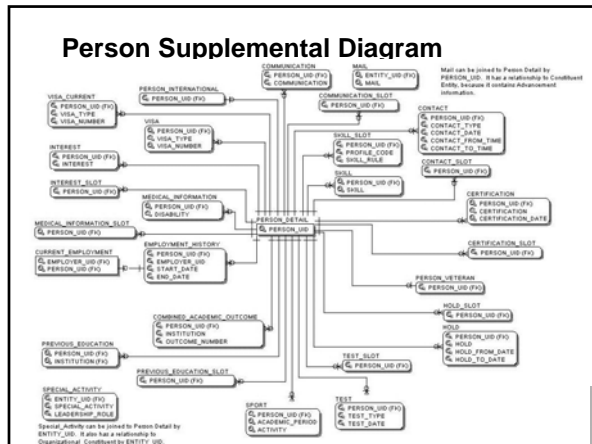
FREQUENCY: One row per person

SOURCE: Data comes from the person identification (SPRIDEN) and person demographic information (SPBPERS)

Person Role Diagram

Person Supplemental Diagram

57 Reporting and Slotted Common Views

Activity	Event
Address	Geographic_Region
Address_By_Rule	Geographic_Region_Institution
Address_Current	Hold
Address_Preferred	Hold_Slot
Certification	Institution
Certification_Slot	Institution_Characteristic
Combined_Academic_Outcome	Institution_Demographic
Communication (Mailing)	Inst_Characteristic_Slot
Communication_Slot	Interest
Contact	Interest_Slot
Contact_Slot	Internet_Address
Cross_Reference_Slot	Mail
Current_Employment	Mail_Slot
Employment_History	Medical_Information
	Medical_Information_Slot

57 Reporting and Slotted Common Views

Organization_Entity	Salutation
Organization_Entity_Address	Secondary_School_Subject
Past_Employment_Slot	Skill
Person	Skill_Slot
Person_Address	Telephone
Person_Detail	Test
Person International	Test_Slot
Person_Sensitive	Validation
Person_Sensitive_Race	Visa
Person_Sensitive_Race_Slot	Visa_Current
Person_Veteran	Year_Type_Definition
Previous_Education	
Previous_Education_Attendance	
Previous_Education_Slot	
Relationship	

Address Reporting Views

Address information is contained in the following Common views:

- **Address**
- **Address_By_Rule**
- **Address_Current**
- **Address_Preferred**
- **Geographic_Region**
- **Person**
- **Person_Address**
- **Internet_Address**

Address Reporting Views

Address

- **Designed to allow the user to apply whatever rules they want to retrieve any address or series of addresses**
- **You must understand the rules of selection such as dates and statuses**
- **It will return multiple addresses**
- **This does not use the address hierarchy approach**
- **Advantage - lets you select addresses for future dates (those already coded to return active addresses use the SYSDATE as the date of currency)**

Address Reporting Views

Address_By_Rule

- **Designed to be the primary address view for use in day to day reporting.**
- **Will return one currently active address for entity, based on the current date.**
- **Utilizes the values defined within the MGRSDAX table to identify a hierarchy of addresses to select from, so that a user can get whichever hierarchy of addresses they choose based on the business need (one hierarchy for Admissions, another for Registrar, etc.).**
- **Set up to use the ODS profile selection, so that an individual can have their own hierarchy that overrides the address rule provided as the default.**

Address Reporting Views

Address_By_Rule (continued)

- All addresses retrieved by this view could have the parameter set up in the reports to allow for the hierarchy of 'ADMSADDR", but specific individuals, using their own profile, can get the same report, using the same parameters, but with an overridden address hierarchy.

- Most important and most frequently overlooked, is that the ADDRESS_RULE parameter MUST be supplied (along with the UID) or the resultant retrieval will appear as a Cartesian product.

Address Reporting Views

Address_Current

- Designed to allow user to get only current addresses

- Multiple addresses will be returned

- Does not use the address hierarchy approach.

Address Reporting Views

Address_Preferred

- Designed to return only the preferred, current address for an individual.

- Sets the preferred indicator in Banner, checking first in Advancement for a preferred address type, and then defaulting to a GTVSDAX value.

- Returns all preferred addresses that are active, regardless of address type.

- PRIMARY_PREFERRED_ADDRESS_INDICATOR will be added In 3.0.1 or 3.1, so that user can limit the address to just one, with the highest address sequence number.

Address Reporting Views

Geographic_Region

- **Contains data about the geographic regions associated with the addresses of an entity.**

Address Reporting Views

Person

- **Contains the Preferred Address of the person as set by the preferred address of the institution**
- **Preferred Address of the institution is set in the GTVSDAX table - PREFADDR**

Address Reporting Views

Person_Address

- **Contains information used to add a mailing address to a report or print a mailing label. Since the main purpose of this reporting view is to support correspondence, only persons who are not deceased will appear in this reporting view. All organizations and companies that are active will be selected for this reporting view.**
- **This view is the primary address view indicated on metadata business concept diagrams.**

Address Reporting Views

Internet_Address

- **Contains all internet address data for entities in Banner ODS.**
- **Reporting views include Internet_Address and Internet_Address_Current to support a variety of reports.**
- **The primary Banner source for this data is the email table (GOREMAL).**

Finance Business Concepts

13 Entity Relationship Diagrams:

- Budget Availability Ledger
- Budget Detail
- Encumbrance
- Endowment Distribution
- Endowment Units
- Fixed Asset
- General Ledger
- Grant and Project
- Grant Ledger
- Invoice Payable
- Operating Ledger
- Purchasing Payable
- Transaction History

Finance Views

64 Reporting and Slotted Views:

Account_Attributes	Fixed_Asset_Item	Organization_Attributes
Account_Hierarchy	Fixed_Asset_Text	Organization_Hierarchy
Account_Index	FOAPAL_NO_Attributes	Program_Attributes
Account_Type_Attributes	Fund_Attributes	Program_Hierarchy
Activity_Attributes	Fund_Hierarchy	Proposal
Attribute_Sets	Fund_Text	Purchase_Order
Budget_Availability_Ledger	Fund_Type_Attributes	Purchase_Order_Accounting
Budget_Detail	General_Ledger	Purchase_Order_Item
Chart_Attributes	Grant_Applied_Payments	Purchase_Order_Tax_Rate
Encumbrance	Grant_Attributes	Received_Item
Encumbrance_Accounting	Grant_Billing_Detail	Returned_Item
Encumbrance_Ledger	Grant_Fund	Transaction_History
Encumbrance_Text	Grant_Fund_Slot	Vendor
Endowment_Attributes	Grant_Ledger	Vendor_Type
Endowment_Distribution	Grant_Receivable_Account_Detail	
Endowment_Summarize_Units	Grant_Text	
Endowment_Summary	Grant_View	
Endowment Units	Invoice	
Fixed_Asset_Accounting History	Invoice_Accounting	
Fixed_Asset_Accounting_Source	Invoice_Check	
Fixed_Asset_Adustment	Invoice_Item	
Fixed_Asset_Attributes	Invoice_Tax_Rate	
Fixed_Asset_Depreciated_Item	Invoice_Tax_Rate_Slot	
Fixed_Asset_Funding_Source	Location_Attributes	
	Location_Hierarchy	
	Operating_Ledger	

Budget Availability Ledger Shows

▪ Current budget and remaining balances for account distribution at any given point in time, based on the control keys set in Banner Finance

Budget Availability Ledger Diagram
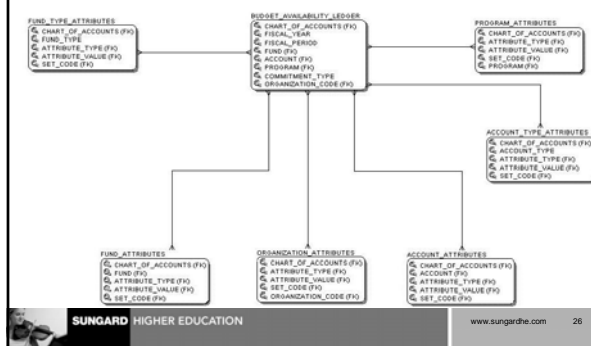
Budget Availability Ledger Summary

CONCEPT: Contains Available Balance Ledger accounting elements with hierarchical data and dollar information

DATA: Includes fiscal year, budget, actuals, budget reservations, encumbrances and balance

FREQUENCY: One row per fiscal year, per budgeting period per unique accounting distribution combination per commitment type
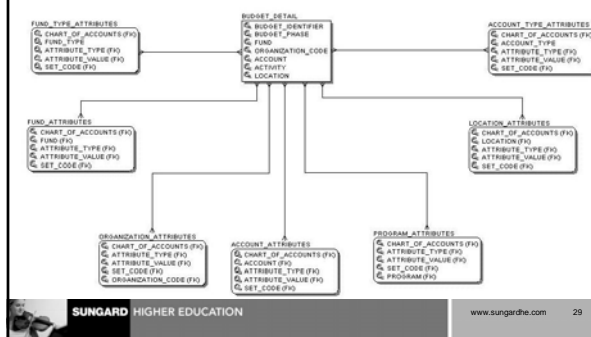
SOURCE: Budget Availability Ledger (FGBBAVL) with hierarchies built in for Fund, Organization, Account, and Program

▪ KEY REPORTING VIEWS: Budget_Availability_Ledger

Budget Detail Shows

- Budget detail accounting distribution lines items by budget id and budget phase with associated reporting attributes

Budget Detail Diagram

Budget Detail Summary

CONCEPT: Contains budgeted line items for a selected accounting distribution combination by budget id and budget phase. Additional reporting can be at the various hierarchy levels for fund, organization code, account, program and location.

DATA: Includes budget id and phase, budgeted FOAPAL and fiscal year, base budgeted amounts, current budget amounts and year to date activity, FOAPL hierarchy data and reporting attributes.

FREQUENCY: One row per budget ID per budget phase per budgeted line item (chart of accounts, fund, organization code, account, program, activity, location).

SOURCE: Budget Detail Line Item (FBBBLIN) and Budget Line Audit History (FBRAUDT).

- KEY REPORTING VIEWS: Budget_Detail

Encumbrance Shows

- Items and sequential account information on accounts that have been established, liquidated or adjusted

Encumbrance Diagram

Encumbrance Summary

CONCEPT: Encumbrance accounting for purchase orders, requisitions, labor and general encumbrances

DATA: Includes encumbrance, item number, sequence, chart of accounts, accounting distribution, and encumbrance status

FREQUENCY: One row per encumbrance document per item per sequence number

SOURCE: Encumbrance Item (FGBENCD)

- KEY REPORTING VIEWS: Encumbrance, Encumbrance_Accounting, Encumbrance_Ledger, Vendor, Purchase_Order

Endowment Distribution Shows

- Historical endowment fund distributions with default income accounting distributions, unrealized and realized gain and lost accounting distributions, and variance accounting distributions, reportable by income fund, account and account type hierarchies

Endowment Distribution Diagram
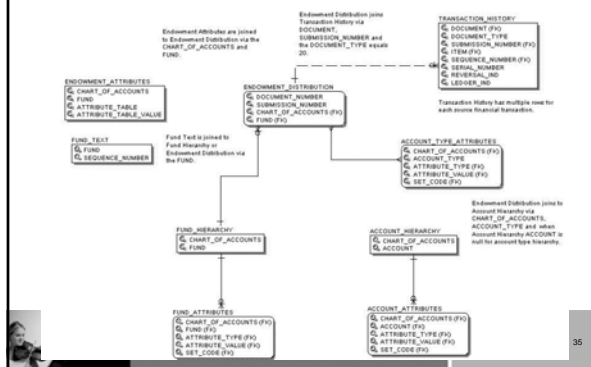
Endowment Distribution Summary

CONCEPT: Contains historical distributed spendable income for endowment funds by document.

DATA: Includes income accounting distribution, unrealized gain and loss accounting distribution, and gain and loss accounting distribution with each of their distribution frequencies. Fund hierarchy, account hierarchy, fund attributes, account attributes and endowment attributes.

FREQUENCY: One row per document number per submission number per chart of accounts per endowment fund.
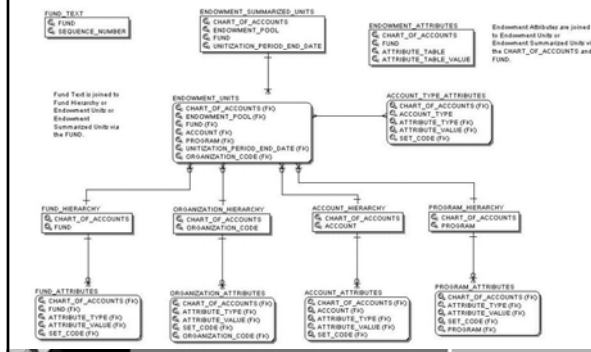
SOURCE: Endowment Fund (FNVENDW), Endowment Pool (FNVPOOL), Endowment Distribution Process History (FNBDSTH)

- KEY REPORTING VIEWS: Endowment_Distribution

Endowment Units Shows

- Endowment fund units and their value, including gains and losses

Endowment Units Diagram

Endowment Units Summary

CONCEPT: Contains unitized endowment funds within a pool for each unitization period end date

DATA: Includes units purchased, unit market value, book amount, chart of accounts, accounting distribution, pool, income accounting distributions, gain or loss accounting distributions, unrealized gain or loss accounting distributions, variance spending accounting distributions

FREQUENCY: One row per unitization period per chart of accounts per endowment pool per unique accounting distribution

SOURCE: Endowment Fund (FNVENDW), Endowment Pool (FNVPOOL), Endowment Unitization History (FNBUNTH)

- KEY REPORTING VIEWS: Endowment_Units, Endowment_Summarized_Units

Fixed Asset Shows

- Assets, funding source, account adjustments, capitalization and depreciation information

Fixed Asset Diagram

Fixed Asset Summary

CONCEPT: Contains all fixed assets at the institution

DATA: Includes general asset information, tag number, capitalization date, asset type, original cost, source information, general depreciation information

FREQUENCY: One row per fixed asset origination tag

SOURCE: Fixed Asset Master (FFBMAST), Capitalization Depreciation Accounting (FFRMASA)

- KEY REPORTING VIEWS**:** Fixed_Asset_Item, Fixed_Asset_Depreciated_Item, Fixed_Asset_Accounting_History, Fixed_Asset_Accounting_Source, Fixed_Asset_Funding_Source, Fixed_Asset_Adjustment

General Ledger Shows

- Ending and beginning balances of assets, liabilities, fund balances and control accounts for grants and programs

General Ledger Diagram
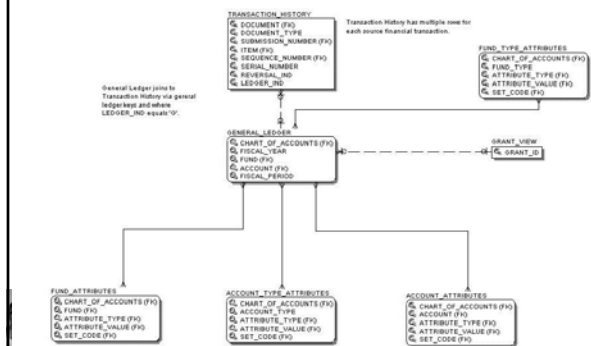
General Ledger Summary

CONCEPT: Contains general ledger funds and accounts for asset, liabilities, control accounts and fund balance with hierarchical data and dollar information to report upon any level of fund or account

DATA: Includes fiscal year, posting period, beginning balance, actuals, current balance and ending balance

FREQUENCY: One row per fiscal year per period per chart of accounts per fund per account

SOURCE: General Ledger (FGBGENL) with hierarchies built in for Fund and Account

- KEY REPORTING VIEWS**:** General_Ledger, Transaction_History

Grant and Project Shows

- Payments applied, attributes and billing details of grants and projects

Grant and Project Diagram
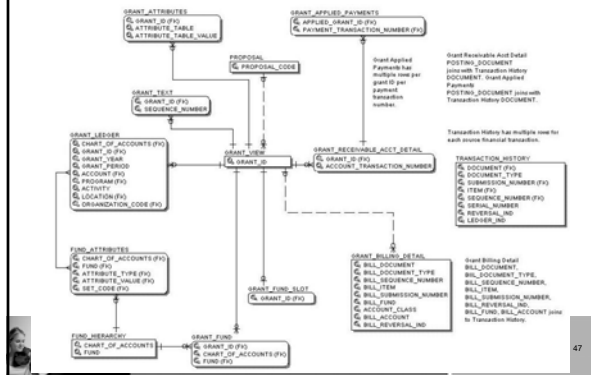
Grant and Project Summary

CONCEPT: Contains all general grant or project data

DATA: Includes grant title, principal investigator, agency and agency hierarchy, responsible organization and hierarchy, categories, project start date and end date, originating proposal, indirect cost and cost share codes
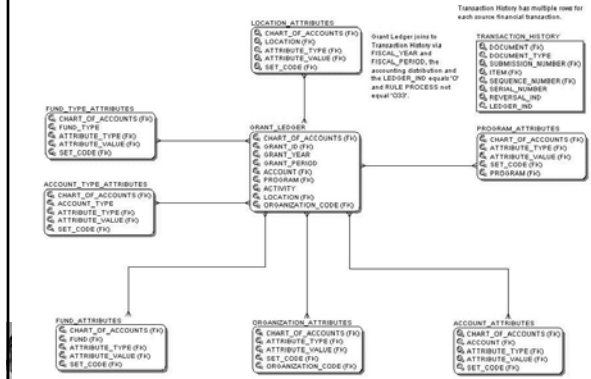
FREQUENCY: One row per grant or project

SOURCE: Grant project (FRBGRNT)

- KEY REPORTING VIEWS: Grant_View, Grant_Ledger, Grant_Receivable_Acct_Detail, Grant_Billing_Detail, Grant_Applied_Payments.

Grant Ledger Shows

- Distributions of present and inception to date

Grant Ledger Diagram

Grant Ledger Summary

CONCEPT: Contains grant ledger unique accounting distributions with hierarchical data and inception to date dollar information for revenue, labor, expenses, and transfers

DATA: Includes grant title year and period, fiscal year and period, current period amounts and inception to period amounts for budget, budget adjustments, actuals, budget reservations, encumbrances and remaining balance
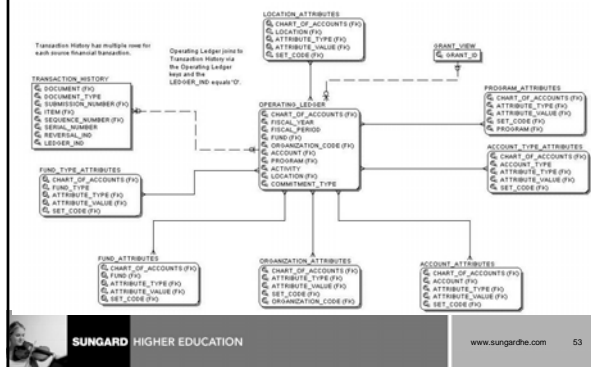
FREQUENCY: One row per grant per grant year per grant period per unique accounting distribution

SOURCE: Grant Ledger (FRRGRNL) with hierarchies built in for Fund, Organization, Account, Program and Location

Operating Ledger Shows

- Labor expenditures, revenue, transfers for fund accounting by FY

Operating Ledger Diagram

Operating Ledger Summary

CONCEPT: Contains operating ledger unique accounting distributions with hierarchical data and inception to date dollar information for revenue, labor, expenses, and transfers

DATA: Includes organization financial manager, unique accounting distributions, fiscal year and period, current period amounts and summary amounts for budget, budget adjustments, actuals, budget reservations, encumbrances and remaining balance

FREQUENCY: One row per chart of accounts per fiscal year per fiscal period per fund per organization per account per program per activity per location per commitment type

SOURCE: Operating Ledger (FGBOPAL) with hierarchies built in for Fund, Organization, Account, Program, and Location

- KEY REPORTING VIEWS: Operating_Ledger, Transaction_History

Invoice Payable Shows

- Invoiced items and sequential accounting information set up as direct pay invoices or invoicing off of General Encumbrances with vendor and check payment relationships

Invoice Payable Diagram
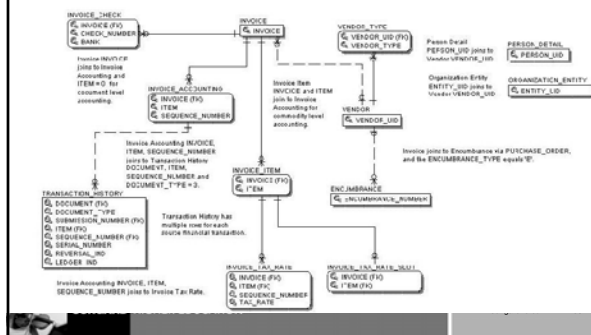
Invoice Payable Summary

CONCEPT: Contains all invoices and checks.

DATA: Includes invoice items with purchase order, and commodity information. This includes each base and converted amount for unit price, taxes, discounts and additional charges as well as approved quantity. Invoice taxes if applicable and checks.

FREQUENCY: One row per invoice item (Invoice_Item)

SOURCE: Invoice Item (FARINVC)

- KEY REPORTING VIEWS: Invoice, Invoice_Item, Invoice_Accounting, Invoice_Check, Vendor, Encumbrance, Transaction_History

Purchasing Payable Shows

- Purchase order item, checks issued, and invoices tied and not tied to it

Purchasing Payable Diagram
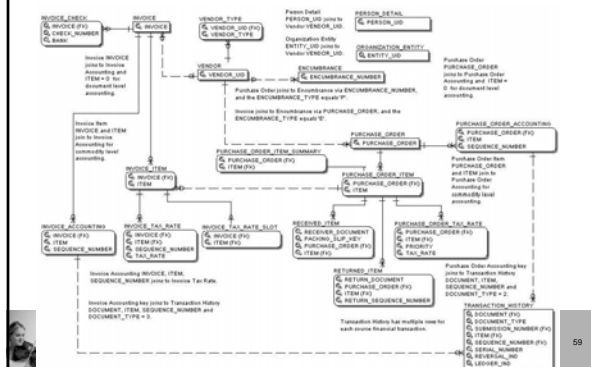
Purchasing Payable Summary

CONCEPT: Contains current Purchase Order Items

DATA: Includes purchase order, item, encumbrance status, commodity, ship destination, unit of measure, unit price, quantity ordered, discount amount, tax amount, additional charges amount, vendor reference number, requisition and bid numbers.

FREQUENCY: One row per purchase order and item

SOURCE: Purchase Order Item (FPRPODT)

KEY REPORTING VIEWS**:** Purchase_Order, Purchase_Order_Item, Purchase_Order_Accounting, Transaction_History, Invoice, Invoice_Item, Invoice_Accounting, Invoice_Check, Vendor, Encumbrance.

Transaction History Shows

- Detail for all ledgers. Place to research out-of-balance conditions. Largest and most important concept.

Transaction History Diagram
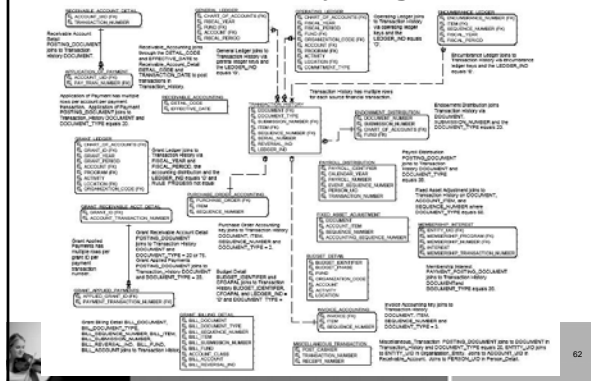
Transaction History – Ledger and Field Code

- **General Ledger = G**
  - Field Code = 01   D   Debits
  - Field Code = 02   C   Credits
- **Operating Ledger = O**
  - Field Code = 01   OBD   Original Budget
  - Field Code = 02   ABD   Budget Adjustment
  - Field Code = 03   YTD   Year to Date
  - Field Code = 04   ENC   Encumbrance
  - Field Code = 05   RSV   Budget Reservation
  - Field code = 06   ACT   Accounted Budget
  - Field Code = 07   TMP   Temporary Budget

Transaction History – Ledger and Field Code Cont.

- **Encumbrance Ledger = E**
  - Field Code = 01   ORG   Original Encumbrance
  - Field Code = 02   ADJ   Encumbrance Adj.
  - Field Code = 03   LIQ   Liquidations

Transaction History Sequence Numbers

Transaction History Sequence Numbers

Sequence Number	Code	Description
1	REQ	Requisition
2	PO	Purchase Order
3	INV	Invoice
4	BID	Request for Bid
5	CCK	Check Cancellation
6	RCN	Reconciliation Items
7	RTN	Returns
8	CHK	Check Disbursement
9	FED	Federal 1099 Disbursement
10	ST	State 1099 Disbursement
11	CM	Credit Memo
12	IDR	Indirect Cost Rate
13	AGR	Agreements
14	COM	Commodity
15	PRJ	Project
16	IDC	Indirect Cost Charge
17	IDD	Indirect Cost Distribution
18	CSR	Cost Share Rate
19	CSC	Cost Share Charge
20	JV	Journal Document

Transaction History Sequence Numbers

21	ISS	Issues
22	RCV	Receiving Documents
23	PAK	Packing Slips for Receiving
24	TRN	Stores Transfers
25	ENC	Encumbrance
26	ADJ	Adjustments to Inventory
27	CSD	Cost Share Distribution
28	BAS	Basis Code
29	PRO	Proposal Code
30	PRP	Proposal
31	SRQ	Special Requirements
32	EVT	Research Accounting Events
40	STK	Stocks
41	STO	Stock Option
42	BND	Bonds
43	MKT	Money Market
44	CD	Certificate of Deposit
45	PTY	Appreciable Property
50	FND	Fund Records
51	GRT	Research Accounting Grants
52	CIP	Construction Projects
60	FAA	Fixed Assets Accounting Adjustments
61	FAS	Fixed Assets
62	TRF	Transfers

Transaction History Sequence Numbers

70	IMG	Investment Manager
71	BRQ	Budget Request
72	FTV	FTV Tables
73	FVD	Vendor Table
74	SUM	General Ledger Summary Records
75	GBL	Research Accounting Grant Billing
80	DCR	Direct Cash Receipts

Transaction History Sequence Numbers

Sequence Number	Code	Description
90	EOC	Encumbrance Open/Close Document
91	BFM	Grant Billing Format
98	PCD	Purchase Card
99	PMS	Payment Management System code

SUNGARD HIGHER EDUCATION   www.sungardhe.com   67

Transaction History Summary

CONCEPT: Contains all posted finance transactions for each true ledger

DATA: Includes journal type, accounting distribution, accounting distribution hierarchies, transaction amount and date, document reference number, type of transaction, vendor, bank, deposit number, normal balance, internal account type, internal account type description

FREQUENCY: Multiple rows per posted accounting transaction

SOURCE: Transaction History (FGBTRNH) and Transaction Detail (FGBTRND)

SUNGARD HIGHER EDUCATION   www.sungardhe.com   68

KEY REPORTING VIEWS:

- Transaction_History, General_Ledger, Operating_Ledger, Encumbrance_Ledger, Purchase_Order_Accounting, Invoice_Accounting, Fixed_Assest_Adjustment, Grant_Billing_Detail, Receivable_Account_Detail, Grant_Receivable_Acct_Detail, Membership_Interest, Payroll_Distribution

SUNGARD HIGHER EDUCATION   www.sungardhe.com   69

23

GTVSDAX – MGRSDAX

▪ **Finance**
  ▪ Address – VENDADDR

www.sungardhe.com 70

Questions and Answers

www.sungardhe.com

Thank you for your participation

www.sungardhe.com