Data Distribution System (DDS) – Web Site Development

DDS Web Site

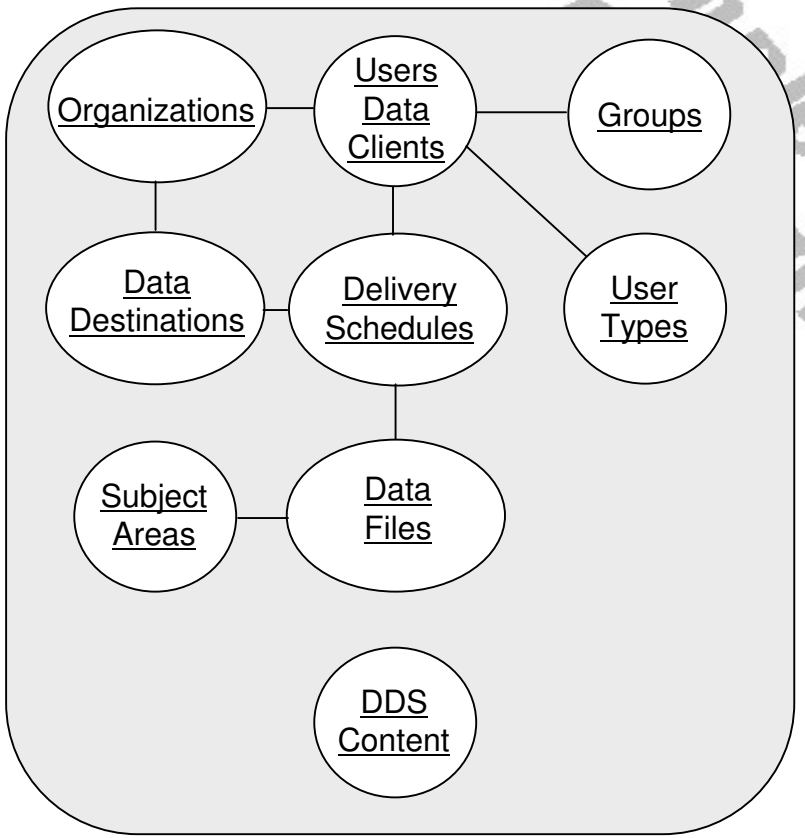
Oracle Schema & Tables

Data Posting Processes

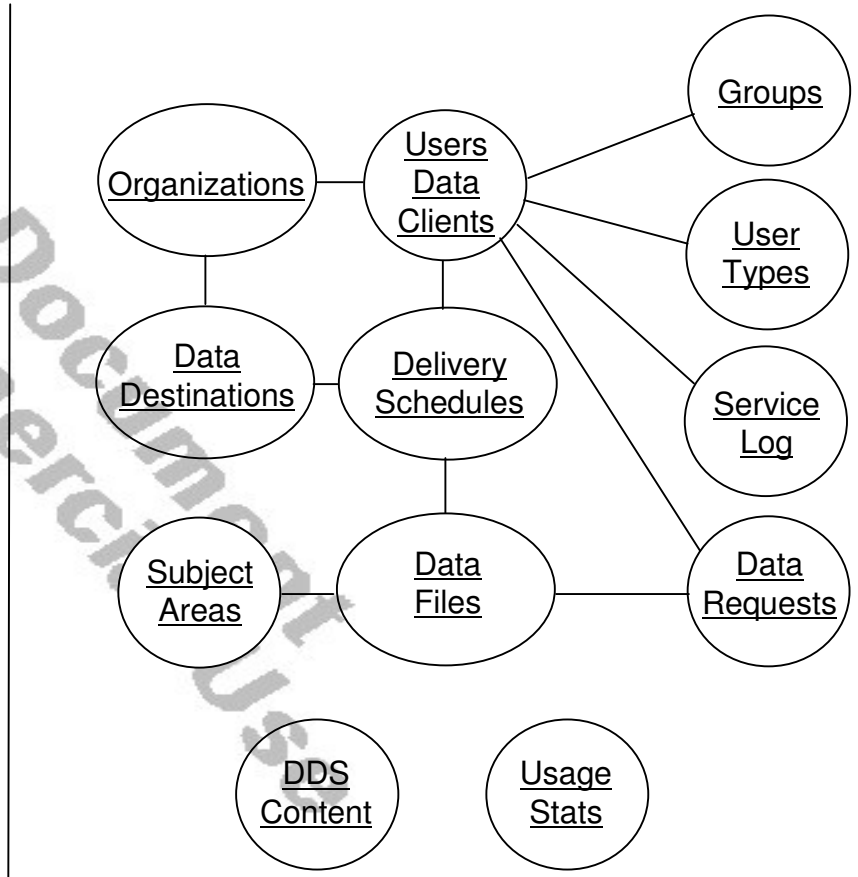
Data Distribution System (DDS) – Web Site Development

Oracle Schema – Logical View

PHASE I-A & PHASE I-B



PHASE x



Data Distribution System (DDS) – Web Site Development

Oracle Tables – Usage Notes

Phase	Table	Usage Notes
Phase I-A	Users / Clients "WHO"	• Every DDS web page user must have a user record in the DDS metadata or login to the DDS web page fails. • User Type field controls which DDS home page is displayed to user; either the user/client menu or the DW administrator menu. • A user record must exist to create a data delivery schedule; however, users can be defined that do not receive data, such as DW administrators. • The assignment of an organization, group or DW account manager is not required; however, if the user receives data, an organization must be defined and assigned to the user in order to define a data delivery destination and define a data delivery schedule record. • DDS web site login activity posted to user record. • Number of different data files and delivery destinations scheduled posted to user record. • Number of data file requests posted to user record if data requests are saved in a DDS request table (TBD).

Data Distribution System (DDS) – Web Site Development

Oracle Tables – Usage Notes

Phase	Table	Usage Notes
Phase I-A	Data Files "WHAT"	• One data file record is created for each 'inventoried' physical file in the DW. Base line objective of DDS is to inventory all physical files that are delivered to the DW from external sources and all physical files that the DW moves/copies and/or otherwise delivers by FTP, NFS, or FileSafe to a delivery destination, data path or referenced by the DataSender script function. • A data file record must exist before a data file delivery schedule record can be defined. • If the file is to be displayed on the DDS web site the Standard File field is set to 'Y', a Subject Area is assigned, a Web Display Name and Content Description is defined, and document link paths are set for the MetaData, Record Layout and Description Documents. • An Owner User ID can be optionally assigned to a data file record to indicate a file 'owner'. • A Subject Area can be optionally assigned to a data file record; Subject Area assignment required if file is displayed on the DDS web site. • Every file definition must include a data path. • A data file definition can also include the path and name of one related control data file. • If the data file is created from a DW process, then the Internal Source is set to 'Y'. Additional fields to identify the ETL or transmit scripts used to generate the data file, along with any script log file names, are optionally completed. • If the data file is received from an external source, then External Source is set to 'Y' and additional data source information fields are optionally completed. • In Phase-x the last date/time/file size fields are posted from the physical data files to the DDS metadata to show file status information. • In order to keep a sequence ordered record of file path and file name changes separate tables for 'previous' and 'next' files would be required to manage M:1:M source file(s):file:output file(s).

Data Distribution System (DDS) – Web Site Development

Oracle Tables – Usage Notes

Phase	Table	Usage Notes
Phase I-B	Destinations "HOW"	• One destination record is defined for each FTP and NFS connection, and may be used to define machine names and application groups for NFS file copy/move (TBD). • The objective of the destination table is to store connection parameters such as Host Name, Login and Passwords that would otherwise be repeated in the data delivery schedule table if included there with each file delivery definition. By having a destination table if a change is made to a login, then the change can be made in one place instead of across many occurrences if this data is stored with delivery schedule records. Fields should not be added to the Destinations table if the values in a field would change based on a particular data file or transmission/processing script. • Delivery destinations are 'owned' by the Organization table. The notion here is that a destination is typically a corporate resource and is not generally associated with an individual or data client. The Organization record must exist before a destination record is defined. • A User ID can be assigned to a destination record to indicate who the responsible person or technical representative is to handle questions for the delivery destination. • Each destination is required to have a Destination Name which is a logical identifier used as the display name of the destination on the DDS web site. • The Protocol Type field is required for destination definition and is used to display the type of connection on the DDS web site.

Data Distribution System (DDS) – Web Site Development

Oracle Tables – Usage Notes

Phase	Table	Usage Notes
Phase I-B	Delivery Schedules "WHERE"	• One delivery schedule record is required for every file that is copy/moved or otherwise transferred to a delivery destination that can be either part of or external to the DW. • The objective of the Delivery Schedule table is to provide the 'TO' file path and name for a data file transfer. The 'FROM' file path and name is found in the Data Files table. • The delivery schedule should include references to script names used during the file move/copy/transfer process. • The delivery schedule record is the result of joining a Data File record, a delivery Destination record (if needed), and a User/Data Client record. • The delivery schedule has information fields to indicate if the control file for a data file should also be sent to a destination. • The delivery schedule has fields to track delivery controls indicating if a destination file should be overwritten or if empty files should be delivered. • The delivery schedule has fields to indicate if alert email messages should be sent if a data delivery is made, will be made late, or if a processing error will prevent delivery. Alerts are not supported in production at this time; these fields are for future use.

Data Distribution System (DDS) – Web Site Development

Oracle Tables – Usage Notes

Phase	Table	Usage Notes
Phase I-A	News & Content	• One content record is required for every DW alert, news or documentation item. • Content records are displayed according to display dates and content type. • Content records provide a subject line, descriptive text and the option for URL links to view or download content files such as Excel, Word or PowerPoint.
Phase I-B & Phase x	Fact Table(s)	• Fact tables are code/description tables which can be combined and filtered on a fact type code, or maintained separately. • Fact table subjects include organization, group, user type, subject areas, content categories, delivery protocols, request response codes, and service log actions.
Phase x	Usage Stats	• One usage statistics record is saved each time the job to post usage statistics is executed. • Usage statistics for DDS web site are kept for each user and updated at user login.
Phase x	Request & Service Log	• Data requests, responses and customer service log records are stored in the same table with a record type code used to filter the records for display on the DDS web site. • Request and service log records track interactions between DW data clients and DW administrators with dated request and response descriptions, actions, details and fulfillment personnel assignments. • From DW administrative view point request, response and service log records are identified and filtered with the DW account manager ID, and log records can be copied or reassigned/forwarded to different account manager ID’s to create a work flow capability.
TBD	Processing Logs (TBD)	• DW job logs can be imported into a DDS table to store the text of the logs for easy reference when reviewing data file status. Either one record can store the entire job log in a blob field, or a log record created for each line of text in a log file.

Data Distribution System (DDS) – Web Site Development

Oracle Tables -- Description

Phase	Table	Description
Phase I-A	Users / Clients	User ID, Organization ID, User Type, contact information, account manager assignment, active/inactive status, posted fields for stats.
Phase I-A	Data Files	File identification, type, source, description, related job names, link to MetaData document, business and technical owners, posted fields for last update date/time status.
Phase I-A	News & Content	Content Category Type, entry, display start and end dates, subject line, priority code (hard code), text, link to document(s).
Phase I-B	Destinations	User ID, Destination ID, description, transmission type and parameters.
Phase I-B	Delivery Schedules	User ID, Destination ID, File ID, posted fields for last update date/time status.
Phase I-B & Phase x	Fact Table(s)	Fact table or tables to store: (1) Organization ID, short and long names; (2) organization group codes and descriptions; (3) user type codes and descriptions; (4) data file subject areas; (5) DW content categories; (6) delivery protocol codes; (7) data request response codes and descriptions; (8) customer service log action codes and descriptions.
Phase x	Request & Service Log	User ID, Account Manager User ID, entry, follow-up and completion dates, data request and action type (hard code or fact table), status (hard code or fact table), description.
Phase x	Usage Stats	Month, DATE, daily stats for files processed, delivered, DW load completion time, number of requests, DDS web site usage. Posted by separate process for admin reporting.
TBD	Processing Logs (TBD)	Table for holding DW activity logs if date/time/size file stamps taken from log files instead of directly from file directory information. Fields TBD. Used for posting date/time/size status on file definition and delivery schedule records and possible log viewing.

Data Distribution System (DDS) – Web Site Development

Oracle Tables – Users / Clients

CREATE TABLE DDS_user (

IDENTIFIERS	
USER_ID	VARCHAR2(50),
ORG_ID	VARCHAR2(50),
GROUP_ID	VARCHAR2(50),
ACCT_MGR_ID	VARCHAR2(50),
USER_TYPE	VARCHAR2(5),
CONTACT INFO	
SALUTATION	VARCHAR2(4),
FIRST_NAME	VARCHAR2(20),
MIDDLE_INITIAL	VARCHAR2(15),
LAST_NAME	VARCHAR2(25),
NAME_SUFFIX	VARCHAR2(10),
TITLE	VARCHAR2(50),
COMPANY	VARCHAR2(50),
DEPARTMENT	VARCHAR2(30),
ADDRESS_1	VARCHAR2(50),
ADDRESS_2	VARCHAR2(50),
CITY	VARCHAR2(35),
STATE	VARCHAR2(2),
ZIP	VARCHAR2(10),
PROVINCE	VARCHAR2(25),
COUNTRY	VARCHAR2(25),
WORK_PHONE	VARCHAR2(20),
HOME_PHONE	VARCHAR2(20),
CELL_PHONE	VARCHAR2(20),
FAX	VARCHAR2(20),
PAGER	VARCHAR2(20),
SECRETARY	VARCHAR2(50),

CONTACT INFO (cont.)	
EMAIL_1	VARCHAR2(50),
EMAIL_2	VARCHAR2(50),
COMMENT	BLOB(0,1),
STATUS	
START_DATE	DATE,
END_DATE	DATE,
ACTIVE_STATUS	VARCHAR2(1),
ACTIVITY COUNTERS	
FIRST_WEB_LOGIN	DATE,
LAST_WEB_LOGIN	DATE,
NUM_WEB_LOGINS	INTEGER,
NUM_FILES_SCHEDULED	INTEGER,
NUM_DESTINATIONS	INTEGER,
NUM_FILE_REQUESTS	INTEGER,
CHANGE CONTROL	
ADD_DATE	DATE,
ADD_USER	VARCHAR2(10),
UPDATE_USER	VARCHAR2(10),
UPDATE_TIME	TIMESTAMP);

NOTE: Review ODS tables for links to tables for Organization or Group, or locations for similar data possibly found in Persons table.

Data Distribution System (DDS) – Web Site Development

Oracle Tables – Data Files

CREATE TABLE DDS_datafile (

IDENTIFIERS

FILE_ID	VARCHAR2(50),
SUBJECT_AREA_ID	VARCHAR2(50),
OWNER_USER_ID	VARCHAR2(50),
STANDARD_FILE_YN	VARCHAR2(1),

FILE INFO

WEB_DISPLAY_NAME	VARCHAR2(50),
CONTENT_DESCRIPTION	VARCHAR2(500),
SOURCE_SYSTEM	VARCHAR2(50),
FILE_TYPE	VARCHAR2(15),
FILE_FREQUENCY	VARCHAR2(1),
FILE_ACTIVE_STATUS	VARCHAR2(1),
FILE_FORMAT	VARCHAR2(10),
FILE_ENCODING	VARCHAR2(10),
FILE_DELIMITER	VARCHAR2(1),
RECORD_SIZE	INTEGER,
FIELD_COUNT	INTEGER,
FILE_MAX_SIZE	INTEGER,
FILE_AVERAGE_SIZE	INTEGER,
FILE_MAX_RECORDS	INTEGER,
FILE_AVERAGE_RECORDS	INTEGER,
GRANULARITY	VARCHAR2(200),
FILTER_CRITERIA	VARCHAR2(200),
FILE_SPLIT_YN	VARCHAR2(1),
FILE_SPLIT_COUNT	INTEGER,
FILE_SORT_YN	VARCHAR2(1),
FILE_SORT_DESC	VARCHAR2(200),
FILE_HAS_HEADERS_YN	VARCHAR2(1),
FILE_HAS_TRAILERS_YN	VARCHAR2(1),
DESCRIPTION	BLOB(0,1),
COMMENT	BLOB(0,1),
TABLES_LOADED	BLOB(0,1),

FILE DOCUMENTATION LINKS

META_DOC_LINK	VARCHAR2(200),
RECORD_LAYOUT_LINK	VARCHAR2(200),
DESC_DOC_LINK	VARCHAR2(200)

FILE LOCATION & NAME

FILE_PATH	VARCHAR2(200),
FILE_NAME	VARCHAR2(100),
FILE_SUFFIX	VARCHAR2(100),
CONTROL_PATH	VARCHAR2(200),
CONTROL_FILE_NAME	VARCHAR2(100),
CONTROL_FILE_SUFFIX	VARCHAR2(100),

DW DATA SOURCE INFO

INTERNAL_SOURCE_YN	VARCHAR2(1),
SCRIPT_TYPE	VARCHAR2(10),
SCRIPT_PATH	VARCHAR2(200),
SCRIPT_NAME	VARCHAR2(100),
SCRIPT_LOG_PATH	VARCHAR2(200),
SCRIPT_LOG_NAME	VARCHAR2(100),
SCRIPT_DATA_PATH	VARCHAR2(200),
SCRIPT_DATA_NAME	VARCHAR2(100),
SCRIPT_AUTOSYS_NAME	VARCHAR2(100),
PROCEDURE_TYPE	VARCHAR2(25),
PROCEDURE_PATH	VARCHAR2(200),
PROCEDURE_FILE_ NAME	VARCHAR2(100),
SYNCSORT_CONTROL_PATH	VARCHAR2(200),
SYNCSORT_CONTROL_FILE	VARCHAR2(100),

EXTERNAL DATA SOURCE INFO

EXTERNAL_SOURCE_YN	VARCHAR2(1),
HOST_TYPE	VARCHAR2(10),
HOST_JOB_NAME	VARCHAR2(100),
HOST_PROCEDURE_NAME	VARCHAR2(100),
HOST_DATASET_NAME	VARCHAR2(100),
HOST_TRANSMIT_JOB_NAME	VARCHAR2(100),
HOST_TRANSMIT_TYPE	VARCHAR2(10),
HOST_DELIVER_TIME	VARCHAR2(20),
HOST_LATE_TIME	VARCHAR2(20),
HOST_PROCESS_TIME	VARCHAR2(20),
HOST_TRANSMIT_TIME	VARCHAR2(20),

STATUS

DATE_LAST_UPDATE	DATE,
TIME_LAST_UPDATE	TIMESTAMP,
FILE_SIZE	INTEGER,

CHANGE CONTROL

ADD_DATE	DATE,
ADD_USER	VARCHAR2(50),
UPDATE_USER	VARCHAR2(50),
UPDATE_TIME	TIMESTAMP);

Data Distribution System (DDS) – Web Site Development

Oracle Tables – Destinations

CREATE TABLE DDS_destination (

IDENTIFIERS	
DESTINATION_ID	VARCHAR2(50),
ORG_ID	VARCHAR2(50),
USER_ID	VARCHAR2(50),
DESTINATION INFO	
DESTINATION_NAME	VARCHAR2(100),
PROTOCOL_TYPE	VARCHAR2(10),
NFS COPY PARAMETERS	
COPY_MOVE_FLAG	VARCHAR2(1)
MACHINE_NAME	VARCHAR2(100),
APPLICATION_GROUP	VARCHAR2(100),
FTP PARAMETERS	
FTP_HOST_NAME	VARCHAR2(100),
FTP_LOGIN	VARCHAR2(100),
FTP_PASSWORD	VARCHAR2(100),
FTP_TRANSMIT_TYPE	VARCHAR2(1),
FTP_LOG_FILE_YN	VARCHAR2(1),
FTP_LOG_FILE_PATH	VARCHAR2(200),
FTP_LOG_FILE_NAME	VARCHAR2(100),
NFS PARAMETERS	
NFS_NODE	VARCHAR2(20),
NFS_ID	VARCHAR2(20),
NFS_PASSWORD	VARCHAR2(20),
NFS_DCB	VARCHAR2(20),
NFS_SYS	VARCHAR2(20),
NFS_SPAC	VARCHAR2(20),
NFS_DISP	VARCHAR2(20),
NFS_STAT	VARCHAR2(20),
NFS_TRIG	VARCHAR2(20),
STATUS	
START_DATE	DATE,
END_DATE	DATE,
ACTIVE_STATUS	VARCHAR2(1),
CHANGE CONTROL	
ADD_DATE	DATE,
ADD_USER	VARCHAR2(50),
UPDATE_USER	VARCHAR2(50),
UPDATE_TIME	TIMESTAMP);

NOTE: Log file information is used here for default log file information. If a log file is specified in the delivery schedule, use the delivery schedule log file instead of the destination log file name.

NOTE: Some of the NFS parameters are probably file specific and belong in the data file record and not in the destination record. TBD.

NOTE: This table should not contain file specific information; only destination / connection information.

Data Distribution System (DDS) – Web Site Development

Oracle Tables – Delivery Schedules

CREATE TABLE DDS_schedule (

IDENTIFIERS	
SCHEDULE_ID	VARCHAR2(50),
USER_ID	VARCHAR2(50),
FILE_ID	VARCHAR2(50),
DESTINATION_ID	VARCHAR2(50),
SCHEDULE INFO	
SCRIPT_TYPE	VARCHAR2(10),
SCRIPT_PATH	VARCHAR2(200),
SCRIPT_NAME	VARCHAR2(100),
SCRIPT_LOG_PATH	VARCHAR2(200),
SCRIPT_LOG_NAME	VARCHAR2(100),
SCRIPT_AUTOSYS_NAME	VARCHAR2(100),
FREQUENCY	VARCHAR2(1),
DAYS_OF_WEEK	VARCHAR2(7),
DELIVERY_SLA_TIME	VARCHAR2(20),
SCHEDULE_DESCRIPTION	VARCHAR2(100),
FILE DELIVERY LOCATION & NAME	
TARGET_PATH	VARCHAR2(200),
TARGET_FILE_NAME	VARCHAR2(100),
ADD_DATE_TO_NAME_YN	VARCHAR2(1),
CONTROL_FILE_YN	VARCHAR2(1),
CONTROL_FILE_PATH	VARCHAR2(200),
CONTROL_FILE_NAME	VARCHAR2(100),
FLAG_FILE_SUFFIX	VARCHAR2(100),
FILESAFE PARAMETERS	
FILESAFE_DATASET_NAME	VARCHAR2(100),
FILESAFE _FILE_NAME	VARCHAR2(100),
FILESAFE _DATE	DATE,
DELIVERY CONTROLS	
REPLACE_FILE_YN	VARCHAR2(1),
TRANSMIT_EMPTY_FILE_YN	VARCHAR2(1),
ALERTS	
SEND_EMAIL_ON_DELIVERY	VARCHAR2(1),
SEND_EMAIL_ON_LATE	VARCHAR2(1),
SEND_EMAIL_ON_ERROR	VARCHAR2(1),
NOTIFY_DW_ON_ERROR	VARCHAR2(1),
STATUS	
START_DATE	DATE,
END_DATE	DATE,
ACTIVE_STATUS	VARCHAR2(1),
CHANGE CONTROL	
ADD_DATE	DATE,
ADD_USER	VARCHAR2(50),
UPDATE_USER	VARCHAR2(50),
UPDATE_TIME	TIMESTAMP);

NOTE: If REPLACE_FILE_YN is set to 'N', no option indicates what to do, such as rename existing file with a date/time suffix and retry sending target file.

Data Distribution System (DDS) – Web Site Development

Oracle Tables – Content

CREATE TABLE DDS_content (

IDENTIFIERS	
CONTENT_ID	VARCHAR2(50),
CONTENT INFO	
CONTENT_TYPE	VARCHAR2(1),
PRIORITY_CODE	VARCHAR2(1),
CONTENT_SOURCE	VARCHAR2(50),
SUBJECT	VARCHAR2(100),
SUBJECT_TEXT	BLOB(0,1),
FILE LOCATION & NAME	
CONTENT_PATH	VARCHAR2(200),
CONTENT_NAME	VARCHAR2(100),
CONTENT_NAME_SUFFIX	VARCHAR2(100),
DOCUMENT LINKS	
DOC_LINK1	VARCHAR2(200),
DOC_LINK2	VARCHAR2(200),
DOC_LINK3	VARCHAR2(200),
DOC_LINK4	VARCHAR2(200),
DOC_LINK5	VARCHAR2(200),
STATUS	
START_DATE	DATE,
END_DATE	DATE,
ACTIVE_STATUS	VARCHAR2(1),
CHANGE CONTROL	
ADD_DATE	DATE,
ADD_USER	VARCHAR2(50),
UPDATE_USER	VARCHAR2(50),
UPDATE_TIME	TIMESTAMP);

Data Distribution System (DDS) – Web Site Development

Oracle Tables – Request / Service Log

CREATE TABLE DDS_request (

IDENTIFIERS

REQUEST_ID	VARCHAR2(10),
USER_ID	VARCHAR2(10),
ACCT_MGR_ID	VARCHAR2(10),
REASSIGN_YN	VARCHAR2(1),
ASSIGNOR_ID	VARCHAR2(10),
ORG_ID	VARCHAR2(10),
GROUP_ID	VARCHAR2(10),
FIRM_NO	INTEGER,
SUB_NO	INTEGER,
REP_CODES	VARCHAR2(100),
BRANCH	VARCHAR2(20),

REQUEST INFO & STATUS

REQUEST_TYPE	VARCHAR2(1),
REQUEST_STATUS	VARCHAR2(5),
REQUEST_FILE	VARCHAR2(50),
REQUEST_DATE	DATE,
REQUEST_DUE_DATE	DATE,
DUE_DATE_EXPLANATION	BLOB(0,1),
REQUEST_INSTRUCT	BLOB(0,1),
REQUEST_DELIVERY	BLOB(0,1),
REQUEST_REASON	BLOB(0,1),
ACTION_CODE	VARCHAR2(5),
PRIORITY_CODE	VARCHAR2(1),
SUBJECT	VARCHAR2(100),
SUBJECT_TEXT	BLOB(0,1),
COMMENT	BLOB(0,1),

REQUEST AUTHORIZATION

AUTHORIZED_BY	VARCHAR2(75),
AUTHORIZED_TITLE	VARCHAR2(75),
AUTHORIZED_DATE	DATE,

CONTACT INFO

SALUTATION	VARCHAR2(4),
FIRST_NAME	VARCHAR2(20),
MIDDLE_INITIAL	VARCHAR2(15),
LAST_NAME	VARCHAR2(25),
NAME_SUFFIX	VARCHAR2(10),
TITLE	VARCHAR2(50),
COMPANY	VARCHAR2(50),
DEPARTMENT	VARCHAR2(30),
ADDRESS_1	VARCHAR2(50),
ADDRESS_2	VARCHAR2(50),
CITY	VARCHAR2(35),
STATE	VARCHAR2(2),
ZIP	VARCHAR2(10),
PROVINCE	VARCHAR2(25),
COUNTRY	VARCHAR2(25),
WORK_PHONE	VARCHAR2(20),
HOME_PHONE	VARCHAR2(20),
CELL_PHONE	VARCHAR2(20),
FAX	VARCHAR2(20),
PAGER	VARCHAR2(20),
SECRETARY	VARCHAR2(50),
EMAIL_1	VARCHAR2(50),
EMAIL_2	VARCHAR2(50),

CHANGE CONTROL

ADD_DATE	DATE,
ADD_USER	VARCHAR2(50),
UPDATE_USER	VARCHAR2(50),
UPDATE_TIME	TIMESTAMP);

NOTE: Contact information included only if User ID is not specific and information about the requestor needs to be entered.

Data Distribution System (DDS) – Web Site Development

Data Processing / Table Posting

Phase	Process	Description
Phase I-A	Post Web Usage	When a user logs into DDS web site, the last date of use is updated if the date of login is greater than the previous date of use. Increment the number uses field once per day to show the number of different days of use.
Phase x	Collect & Post Data File Date/Time/Size	Either: (1) use file directory information or (2) collect DW log files, prepare and load to log table for posting date/time/size status to Data Files and Delivery Schedules tables. Must be able to associate date/time/size with a file name. Issue of when to do this – first pass can be at end of daily DW batch job, but ideally can be run periodically 24/7. Since date/time/size is overwritten, it does not matter if date/time/size collection process runs repeatedly every xxx minutes. DDS log table, or a temp version of it, can be a drop and load type table. If using log files, the log file name should be defined with a data file definition in order to post date/time/size.
Phase x	Post Stats	When requested by DW administrator, statistics (counts) are posted for monthly/daily activity into DDS Usage Stats table based on date stamps in other tables.